CASTLES OF GOD
Fortified Religious Buildings of the World

Peter Harrison

CASTLES OF GOD

Fortified Religious Buildings of the World

CASTLES OF GOD

Fortified Religious Buildings of the World

PETER HARRISON

THE BOYDELL PRESS

Disclaimer: Some images in the printed version of this book are not available for inclusion in the eBook.

© Peter Harrison 2004

All Rights Reserved. Except as permitted under current legislation
no part of this work may be photocopied, stored in a retrieval system,
published, performed in public, adapted, broadcast,
transmitted, recorded or reproduced in any form or by any means,
without the prior permission of the copyright owner

The right of Peter Harrison to be identified as
the author of this work has been asserted in accordance with
sections 77 and 78 of the Copyright, Designs and Patents Act 1988

First published 2004

The Boydell Press is an imprint of Boydell & Brewer Ltd
PO Box 9, Woodbridge, Suffolk IP12 3DF, UK
and of Boydell & Brewer Inc.
668 Mt. Hope Avenue, Rochester, NY 14620, USA
website: www.boydellandbrewer.com

ISBN 1 84383 066 3

A CIP catalogue record for this book is available
from the British Library

Library of Congress Cataloging-in-Publication Data

Harrison, Peter, 1941 Apr. 17–
Castles of God: fortified religious buildings of the world / Peter Harrison.
p. cm.
Includes bibliographical references and index.
ISBN 1-84383-066-3 (hardback : alk. paper)
1. Fortress-churches. 2. Fortification. 3. Religious institutions. I. Title.

NA4800.H34 2004
736'.09'02–dc22
2004000372

This publication is printed on acid-free paper

Printed in Great Britain by
St Edmundsbury Press, Bury St Edmunds, Suffolk

CONTENTS

Illustrations
Figures
Acknowledgements
Introduction 1
1. Middle Eastern Origins 7
2. Ireland 23
3. The Crusades 38
4. Great Britain 66
5. Scandinavia 88
6. France 97
7. The Eastern Mediterranean and Eastern Europe 121
8. Central Europe 137
9. Italy 148
10. Russia 158
11. America and the Philippines 170
12. The Caucasus Region 191
13. Ethiopia 206
14. Islam I 215
15. Islam II 227
16. Iran and Syria 239
17. The Himalayan Region 250
Conclusion 276
Glossary of Terms 281
Bibliography 285
Index 291

ILLUSTRATIONS

Placed between pages 150 and 151

Monastery of St. Simeon, Aswan, Egypt
Resafeh, Sergiopolis, Syria
Glendalough, Ireland
Kells Priory, Co. Kilkenny, Ireland
Jerpoint Abbey, Co. Kilkenny, Ireland
Rock of Cashel, Co. Tipperary, Ireland
Crac des Chevaliers, Syria
Malbork (Marienburg), Poland
Marienwerder (Kwidzin), Poland
Lindisfarne Priory, Holy Island, Northumberland, England
Thornton Abbey Gatehouse, Lincolnshire, England
Saint-Pierrevillers, Meuse, France
Rudelle, Lot, France
Hunawihr, Haut-Rhin, France
Esqueheries, La Thiérache, France
Saint Junien, Nouaillé, Vienne, France
The Monastery of Gregoriou, Mount Athos, Greece
Sucevita, Moldavia, Romania
Putna, Moldavia, Romania
Fortified enceinte, Prejmer, Romania
Accommodation rooms, Prejmer, Romania
Cefalù, Sicily, Italy
Novodevichy Convent, Moscow, Russia
St Sergius lavra, Zagorsk, Russia
Monastery of the Saviour and St. Euthimius, Sudzal, Russia
Khor Virap, Armenia
Noravank Monastery, Armenia
Ananuri, Georgia
Alaverdi, Georgia
Manuscript illustration, Debra Maryam, Zeghie, Lake Tana, Ethiopia
Manuscript painting, Debra Maryam, Zeghie, Lake Tana, Ethiopia
Debra Berhan Selassie Church, Gondar, Ethiopia
Interval tower, inner curtain wall, Debra Berhan Selassie Church
Nador tower of the Ribat, Sousse, Tunisia
The fortified mosque, Sousse, Tunisia
Monastir, Tunisia
The fortified minaret of the great mosque, Kairouan, Tunisia
Sultan Han, near Kayseri, Turkey
Potala Palace, Lhasa, Tibet
The Jampa temple, Samye, Tibet
Yumbu Lagang, Tibet
Gyantse, Tibet
Paro dzong, Bhutan
Punakha dzong, Bhutan
Ta dzong, Trongsa, Bhutan

FIGURES

The religious settlements of the Essenes at Qumran, Israel	9
Coptic Egypt – the early fortified monasteries	11
The Coptic monasteries of the Wadi al Natrun, Egypt	13
The Monastery of St Catherine, Egypt	17
The Monastery of St Simeon Stylites, Syria	19
Chastel Blanc, Syria	45
Portugal	54
The Conventual Castle of Cēsis, Latvia	59
The fortified ecclesiastical buildings of England's northern Borderlands	67
The Church of St John the Baptist, Newton Arlosh, Cumbria	69
The Vicar's Pele, Corbridge, Northumberland	71
Fortified doors	72
Lindisfarne Priory, Holy Island, Northumberland	74
The Gatehouse, Alnwick Abbey, Northumberland	75
The fortified Carmelite Priory of Hulne, Alnwick, Northumberland	76
The medieval tower churches and castles of Gower, South Wales	82
The Church of St Cadoc, Cheriton, Wales	83
The fortified churches of the Baltic	90
The round tower fortress churches of Denmark	95
Beaumont-du-Périgord, France	102
Towers	106
Saint-Avit-Senieur, France	116
The fortified Abbey of Saint-Junien, Nouaillé, France	117
The monasteries of Mount Athos, Greece	122
The sky monasteries of Meteora, Greece	127
The fortified Saxon village church of Prejmer, Romania	132
Ecclesiastical fortresses in Rhineland-Palatinate, Bavaria and Baden-Württemberg	140
The fortified Spanish missions of San Antonio, Texas	171
The fortress Monastery of St Paul and St Peter, Tatev, Armenia	193
The fortified churches and monasteries of Georgia	197
The Church and Monastery of Dzvari, Georgia	200
The Cathedral complex at Ninocminda, Georgia	202
The fortress of the Dukes of Aragvi, Ananuri, Georgia	204
Enda Medhane Alem, Adua, Tigre, Ethiopia	213
The ribats of Islam	217
The ribats and fortified mosques of Tunisia	224
The Persian and Syrian castles of the Assassins	241
The monastery complex of Pelkhor Chode, Gyantse, Tibet	259
The Potala Palace, Lhasa, Tibet	262
Fortified dzongs and monasteries of Bhutan	269
Bhutanese dzongs	272

ACKNOWLEDGEMENTS

This book is the result of fifteen years of travel and research following the accidental discovery of the fortified churches of Transylvania in 1988. It would never have been possible without the kindnesses and generosity shown to me by so many people in so many countries and their patience in sharing with me their places of worship. I can never adequately express my gratitude to them in words.

I would also like to acknowledge the contributions of those architectural historians and writers who have pointed me in directions not only to travel but also to research. Their contribution has been invaluable and I could not have written this book without having access to their work.

I have been greatly helped by a number of people and I would like to thank the following who have made particular contributions: Peter Willey and his colleagues for information on Alamut, the valley of the Assassins, and Peter Presford, who shared, so willingly, his knowledge of ecclesiastical fortifications. Without his help there would have been no chapter on Italy. Similarly Dr Ann Catherine Bonnier provided much information on the fortified churches of Sweden. Dr Clive Tolley was faced with a Herculean task in bringing a sense of order to this far-reaching and disparate subject. He has gone beyond his role as copy-editor, offering direction and advice with great understanding and encouragement. I would like to thank Richard Barber and Caroline Palmer from Boydell and Brewer who have supported me and believed in my project from the outset.

Finally I would like to thank my wife Diane, who is not only a very supportive and uncomplaining travelling companion but who, having become adept at recognising remnants of fortification, especially in the churches of France, has also been indispensable in the fieldwork.

The opinions and views expressed in the book are my own, as indeed are any errors or mistakes.

For Diane

p.X (blank)

INTRODUCTION

Religion and fortification have been intertwined since antiquity. Yet the subject has been little studied or understood. Writers on religion, whether from a theological, historical or architectural perspective, make only passing reference; similarly writers on military architecture have tended to ignore religious fortifications and show little recognition of their role and importance. Military and religious architecture have, in the main, been treated as entirely different subjects. It is hard to understand why.

Large numbers of religious buildings with varying degrees of fortification still remain today. They are ubiquitous throughout the Old and New Worlds, the Orient and the Occident, their significance and role in history unrecognised and unrecorded.

Bernard Rudofsky through his book *The Prodigious Builders* first introduced me to the concept of a fortress church. He had set out to document 'non-pedigreed architecture', his book containing 'notes towards a natural history of architecture with special regard to those species that are traditionally neglected or downright ignored'.[1] A few pages were devoted to what he calls 'those least-known manifestations of peasant genius, the Transylvanian village fortresses', where he used as his examples the fortress churches of Harman and Prejmer in Romania, both of them churches surrounded by powerful fortifications.

An opportunity in 1989 to travel through Romania enabled me to visit some of these churches. I was immediately struck by their number, the vast energy and resources expended in their construction and, not least, the impact they made on the landscape. It was an inquisitiveness to know more about these fortress churches, which at that time I thought were unique, that provided the stimulus for further research that has resulted in this book. In writing it I have had, broadly speaking, two main aims: firstly to proselytise, raising awareness and interest, and secondly to encourage further examination and exploration.

So far my findings lead me to believe that the greater majority of the world's religious fortifications are Christian and that it was the dawning of monasticism which resulted in the need. It is thus appropriate to begin this study with the acceptance of Christianity as the official religion of the Roman Empire in 313, as it was not long before monasteries in Palestine and Egypt began to fortify. This led to an architectural process that was to continue for around 1500 years, finally ending in the late eighteenth and early nineteenth centuries when the mendicant friars fortified their missions in what are now the south-western states of America, and Russian colonists in Siberia surrounded their churches with wooden stockades.

Although Christianity is pre-eminent in the number and variety of its fortified religious establishments, adherents of other faiths, in particular Muslims and Buddhists, have felt the need to fortify some of their monasteries, and these will be discussed in this volume.

It is true to say that much research develops and expands due to chance discovery and good fortune, and mine has been no exception. However, it is, I feel, necessary to mention the

[1] Rudofsky (1977). This is his subtitle to *The Prodigious Builders.*

problems encountered in the gathering of the material over the last decade and the difficulties faced in the presentation of what appears to be such a diverse and disparate subject, not least in an endeavour to try to excuse those mistakes and errors that are inevitable in a book of this scope.

I am extremely fortunate that I have been able to visit many of the sites mentioned in the text. Fieldwork, however, has its own limitations. Great Britain has a high regard for its architectural heritage emulated until recently by few countries and has the will and finance to preserve its legacy from the past. In many countries the destruction and ruination of countless religious buildings has continued unabated, frequently due to the forces of nature (earthquakes in Armenia, fires in Bhutanese dzongs), or to the dictates of politics.

The literature

Few authors have concentrated exclusively on religious fortifications and the majority of those who have done so have tended to focus on a narrow regional or parochial viewpoint.[2] The concomitant linguistic problems, that in many instances are insurmountable, have led, even when there are brief English summaries, to an isolation of knowledge.[3] Additionally, the paucity and depth of literature published in English has resulted in a lack of accumulated knowledge so freely available to the ecclesiologist and the castelologist. There are signs that things are changing, and the bibliography shows that over the last few years more authors are turning their attention to aspects of ecclesiastical fortification. Paradoxically, the nineteenth and early-twentieth-century journals of intrepid Victorian and Edwardian travellers have proved unexpected but valuable sources, particularly for the fortified monasteries of the Balkans, Palestine, Egypt and Bhutan, not least because of the splendid engravings and early photographs they contain.

The study of Islamic architecture is still in its infancy, although writers are increasingly addressing the subject. In particular mention should be made of Robert Hillenbrand's book *Islamic Architecture* and that of his wife Carole who writes about the Islamic perspective of the Crusades. I have found both books stimulating and instructive. Of value too is *Architecture of the Islamic World*, edited by George Michell, the gazetteer being especially helpful as an aid to fieldwork.

Similarly, works on the architecture of Buddhist monasteries are few; however, the books by White, Hosla and Aris have proved invaluable.

[2] Sheila Bonde is, as far as I have discovered, the first academic writing in English to treat the subject in a challenging, wide-ranging and erudite way, looking as she does beyond her locality of south-western France. She devotes however almost three-quarters of her book (1994) to the discussion of three fortified churches.

[3] *The History of Armenian Architecture* by Varazdat Harlityunian, for example, is well illustrated with photographs and plans and was an invaluable aid with fieldwork in that country. Frustratingly, there is not a word in any other language than Armenian.

Presentation

In an endeavour to present the subject of religion and fortification in a meaningful way the needs and responses of three of the great religions of the world have to be identified and understood. The background diversity of the geography, politics, history and time scale all need to be examined, if often briefly, to make sense of the complexity of the subject, a complexity compounded by the variety of the architectural typologies that need to be described.

To try to give an understanding of this relatively unknown and increasingly complex subject the book is divided into three sections. Whilst each of the three religions under consideration is dealt with separately a common simplified basic typology can be followed in each case. Monasteries are found in Christendom, the lands of Islam and the Buddhist territories of the Himalayas, Tibet and China. Similarly some of the various orders, sects and schools developed their monasteries to provide for their specific needs. There are similarities of purpose.

Some understanding of the reasons behind the fusion of fortification with religion is mandatory. Space limitation necessitates brevity, but why religious buildings were fortified remains as important as how they were.

A chronological approach to each section has been adopted to give a historical understanding behind the decision to fortify and the differing approaches to achieve this. Necessary diversions, occasionally into isolated and fascinating backwaters, for example the enigmatic Irish monastic round towers and the eighteenth-century fortifications of much earlier churches of the Islamic Caucasus will, I believe, add to an understanding of regional variations.

As previously stated, the bulk of ecclesiastical fortifications are Christian and the greatest proportion of the book is devoted to them. The large numbers studied lend, at times, to a generic rather than specific approach. There is a disproportionate amount of material available for each religion and although typologically they stand comparison, the sheer numbers and regional variations that exist in Christian countries is not replicated in Islamic and Buddhist regions; there simply was not the necessity.

The approach to Islamic religious fortifications is more focused and specific; numbers are much less and choice limited. Much attention has to be given to the ribat and its Holy Warriors, not least because it was the forerunner of its genre. Consideration of the castles of the Assassins, the Nizari Ismailis, penetrates one of those backwaters previously mentioned.

The section on the Buddhist monasteries in the Himalayas and Tibet has been by far the most difficult to research and write about and epitomises all the problems previously mentioned.

The many hundreds of place names encountered in the course of research have presented particular problems, as sources are not only of disparate age and quality, but also contradictory, and reliable forms are often almost impossible to come by. The names have been checked as far as possible for accuracy and consistency, but imprecise forms are regrettably bound to persist to some extent.

General architectural features

The scope of this book precludes a detailed classification of the huge numbers of fortified religious buildings. There are, however, a number of generalisations that may be regarded as an early and embryonic attempt to categorise religious fortifications. Two main criteria need to be satisfied: the spiritual role of the building or complex must be at least as great as its secular and military role, and either archival or architectural evidence of fortification must be available or present.

The majority of religious buildings that were fortified by the addition of conventional military architecture of the relevant era can be subdivided into three main groups. Firstly there are religious buildings that themselves were not fortified but were surrounded by a defensive enceinte. Secondly there are those that were built originally without any attempt to fortify being made but were subsequently to receive fortifications with the addition of towers, battlements, loop-holes, fortified residences and other forms of military architecture. The third grouping contains those religious establishments that received a combination of both forms of fortification. In essence, the original ecclesiastical building or complex was first constructed without defence being a prime consideration. As a consequence almost every conceivable form of religious edifice can be found with evidence of fortification; moreover, almost all forms of military architecture were used in their fortification. Churches in particular lent themselves to be fortified in a great variety of ways, sometimes over long periods of time.

There are, however, a number of distinct architectural types that were developed specifically by each of the three religions in response to a perceived need for fortification. The result is a fusion of religious and military architecture. These new forms of architecture were designed and built to serve a specific purpose created by changing political circumstances. These distinct types will be considered in the course of the book.

The principles of selection

When choosing fortified religious buildings for description and discussion in some detail a variety of criteria were used and a number of difficulties encountered in their selection, not least the sheer numbers to choose from.

Paramount has been the decision to include only buildings where the religious role had at least equal prominence with any other function, especially the military use, and where, architecturally, the ecclesiastical edifice is subservient to the military. Thus the conventual castles of the military orders in the Holy Land, northern Europe and the Iberian peninsula are included. Many would argue that these fortifications are, in reality, castles. Certainly they satisfy the definition of a castle as 'a large building or set of buildings fortified for defence'.[4] What distinguishes them from the thousands of fortresses and castles to be found throughout the world is the role that Christianity and religion played in their design, construction, function and garrisoning. The Crac des Chevaliers is probably one of the most famous castles in the world, recognised by almost every student of military architecture for its mediaeval complexity.

[4] *Shorter Oxford English Dictionary.*

What is not usually appreciated is that the inner enceinte contains a monastic core of knights' hall, dormitory, cloister and chapel; here the warrior monk was totally isolated from the outside world and lived a life that could be separated from lay servants and mercenary soldiers. Similarly, in every instance where a castle is redefined as a religious fortification the castle or fortress commander was always a man of high religious standing with religion playing a pivotal role, whether the fortifications were built by Christians, Muslims or Buddhists.

The great majority of the various religious fortifications described in the narrative have been visited, with the exception of the New World and Scandinavia. This was a positive decision to understand the ambient nature of fortification when fused with religious architecture. Many book descriptions do not adequately convey this fusion of the two forms of architecture and the aura and power of ecclesiastical and religious fortifications. Exploration of the church of Saint-Pierrevillers, near Verdun in France, gives a tremendous insight into the way that the devout of this small farming hamlet tried to defend their community in the sixteenth century. Salvation needed to be as secular as it was religious. The hugely imposing dzong at Trongsa, in the middle of Bhutan, with its protective forts is an awesome fortification even today. Yet there is warmth and joy here, where the Buddhist monks welcome people to their service and transform their fortress into something sacred and soul-inspiring with their cymbals, drums, trumpets and chanting of mantras. It is hard to believe that this was not always the case. At the other end of the scale an afternoon of fieldwork and survey in Northumberland at the Vicar's Pele tower at Corbridge showed how this small defence tower in the churchyard was made as comfortable as possible for its occupants.

Where possible the best existing examples are described to demonstrate not only the fusion of ecclesiastical and military architecture, but also how one can harmonise and blend with the other. This is best seen in France where some of the Romanesque churches have late mediaeval military architecture imposed upon them. This is especially true in La Thiérache in the north where the marriage of redbrick defences and white limestone church is architecturally pleasing. There again, the austere and powerful fortress cathedral in Coimbra in Portugal does what it was intended to do, overawe and dominate not only its town but also its congregation.

Similarly where a generic type is instantly recognisable, as exemplified by the Irish round towers and the La Thiérache churches, differing forms have been chosen to demonstrate architectural variation within the genus. The same holds true when regional differences in the fortified churches of France are discussed.

Conversely when the remaining examples of the ribat are compared with recent archaeological discoveries in Monastir in Tunisia a uniformity of design and style is clearly demonstrated.

With the conventual castles of the military orders an attempt has been made to choose examples that show how the castle was adapted to the needs of a new type of garrison and how it developed further. They had to include the ecclesiastical buildings needed for this new type of Christian warrior which resulted in a prototype of a concentric castle reaching its final development in the Holy Land at the Crac des Chevaliers.

The historical context is also very important and a number of monasteries have been chosen for the role they played in national defence and determination at a time when a country

was at its lowest ebb. The first dzong built by the Shabdrung at Simtokha in Bhutan, the Mont St Michel in France and the monastery of the Holy Trinity and St Sergius at Zagorsk in Russia all proved very successful when these nations were under sustained attack. Others, especially in Crete and the Balkans, were involved in the wars of liberation against the forces of the Ottoman Empire.

A number of examples are included because they are unique. The Potala Palace of the Dalai Lama is one of the world's greatest buildings and combines monumental fortifications with the most powerful of religious imagery, mirrored perhaps only by the Vatican as the ultimate in ecclesiastical power. Many of the monasteries of Moldavia in Romania were fortified as part of a defensive chain to protect the region against the Turks and the Crimean Tatars. As well as being true fortress monasteries they are unique for the vibrancy and expressionism of the frescoes painted both on the inside and the outside walls of their monastic churches depicting mediaeval propaganda at its finest. Similarly, examples are included where their architecture contains unique features. The arcades introduced by David the Builder into his fortified palaces in Pembrokeshire in south-west Wales are limited to a very few buildings and not found outside the land holdings of the bishopric.

In a number of instances, surprisingly separated by centuries and on two continents, in addition to monastic defences, fortifications were added to those of the monastery for the specific protection of the local population under its physical as well as spiritual care. The finest example in Europe is to be found in Ireland at the Augustinian priory of Kells in Co. Kilkenny where the fortified enceinte of the priory has attached to it a huge outer bailey still surrounded by its curtain wall and tower-houses. In a similar way, but much less sophisticated and built centuries later, the missions in La Bahia in Texas had an attached fortified compound to protect native American converts from the Apaches and Comanches.

Many countries in the Christian West contain large numbers of fortified churches, especially France, Austria and Romania. From these countries exemplar churches have been chosen to show how and why these parish churches were fortified and to indicate the effort put in by the peasant and artisan communities to protect themselves when there was nobody else to do it for them. In addition the various forms of military architecture used, varying between the encircled churches of Transylvania and the fortified round-tower churches of Scandinavia are analysed to illustrate the differing forms of military architecture.

Some countries are covered in more detail than others in comparison to the number of ecclesiastical fortifications they contain: Armenia, Georgia and Ethiopia can be singled out. They warrant a disproportionate consideration because of the remoteness of their ecclesiastical fortifications, their lack of recognition, even in their own countries, and the almost total lack of literature available in English.

1
MIDDLE EASTERN ORIGINS

Origins

Roman persecution of Christians under the emperor Diocletian in the third century resulted in a way of life and a form of architecture which has not only endured to this day but has barely changed in concept and form. The deserts of Egypt and Palestine had long provided an environment where men and women could lead a life of isolation, seclusion and contemplation. This process of anchoresis (the leading of an eremitic existence, mainly for religious reasons) burgeoned when Diocletian, who, supported by the army, seized control of the empire in 284, sought to bring about reforms. These were not universally welcomed in all the provinces of the empire; Egypt in particular opposed them. Believing Christians to be the subversive element, Diocletian set about persecuting, to the extreme, the faith he believed responsible for this opposition. In Egypt and Palestine what had been a trickle of anchorites into the deserts became a flood.

Christian anchorites started meeting together on Saturdays, Sundays and holy days for spiritual guidance and communal services, returning to their isolated caves, cells and hermitages the rest of the week for solitary contemplation and meditation. Thus developed the laura, the origin of the Christian monastery. A meeting place, a central church, a kitchen and a refectory were needed and came to be grouped together. Even when all fear of persecution had been removed, few of these early monks returned to their previous lives and environments.

This laura system of monastic retreat was taken to Palestine, where it was to remain the favoured form of monasticism. In Egypt, however, there was a significant departure. Pachomius, a retired soldier from Thebes, in an endeavour to establish a pious, enlightened and self-sufficient community, an example to others developed the first monastery where his followers shared a communal life separated from the outside world by a walled compound containing communal buildings. The individual living quarters or cells were now close to each other, the refectory and the church. The necessary kitchen, store-rooms and workshops completed the complex and formed the coenobitical or communal-life monastery.[1]

This form of monasticism flourished and spread to Asia Minor, where, as in Egypt, it predominated. Building arrangements and structural relationships were haphazard, however, and never achieved the uniform and formalised characteristics of later Western European monasticism.

The enlightened emperor Justinian I, by granting to the monasteries the rights to endowments, legacies and gifts, encouraged the spread and development of monastic life, of which the full extent is only now becoming fully understood as a consequence of recent archaeological investigation of newly discovered sites.[2]

[1] Kamil (1996: 27). [2] Tribe (1996: 6–10).

Monasticism is not the preserve of Chritianity, however, and its development may well have been influenced by pre-Christian groups, especially the Essenes in Palestine, although the connection is not yet clear.[3] For some two hundred years the Essenes had a monastery-like settlement at **Qumran** in Judaea. Famed for the discovery in 1947 of the first of the Dead Sea scrolls in a cave above the settlement, Qumran came into existence around 150 BC as a centre, apparently for the Essenes, an ascetic and messianic Jewish group formed to oppose the Hellenistic influence upon Jewish temple rites. Devoutly religious, the Essenes devoted themselves to a life centred upon prayer, study of the Old Testament and purity of mind and soul. Whilst never gaining a wide following, the community was able to maintain its self-sufficiency and ascetic qualities until the Roman army dispersed the sect in AD 68 during the Jewish revolt against Rome.

Following the discovery of the Dead Sea scrolls R. de Vaux and his team of French archaeologists excavated the area between 1951 and 1956, when the settlement layout was exposed and further scrolls found. It is postulated that not only did the Essenes play an important role in preparing the Jews for the coming of Christ but also significantly influenced the rules affecting later monastic orders, eastern and western.

Perched on a small plateau above the north-west shore of the Dead Sea in the harshly beautiful rolling hills of the Judaean desert, the excavated settlement is trapezoidal in shape, covering an area approximately 100 x 80m. Although dry and arid today water played an important role in the daily life of the community and an aqueduct brought water from a dam constructed in the neighbouring Wadi Qumran. An ingenious system of settling tanks and connecting channels enabled clean water to be distributed throughout the settlement and stored in cisterns and reservoirs. Bathing was an important part of Essene ritual, and two baths at the opposing north-west and south-east ends of the settlement have been identified.

The largest, most substantial and imposing building in the commune is, however, the rectangular, two-storey defence tower measuring 16 x 12m, positioned in the middle of the northern boundary wall, the least defensible part of the site. Still standing to a height of almost 10m, the amount of masonry debris around the tower suggests that originally it arose to a far greater height and would have provided a vantage ground for the surveillance of the surrounding desert and a refuge for the community. It is the first indication that such communities needed a place of safety, in this instance from the surrounding nomadic population. Next to the refectory the archaeologists discovered a pottery workshop and kilns where the seven hundred plates, bowls and cups found in the refectory annex were made. Strangely the kitchen is located some distance away from the refectory. Located next to the council chamber, between the tower and the refectory, was the scriptorium, still containing inkpots when uncovered, and almost certainly where the Dead Sea scrolls were written. The settlement was enclosed on the south and west by the cliff edge of the plateau, and by walls to the north and east. The surrounding area is riddled with caves, and given the absence of houses or cells in the compound it is believed that many of the community utilised them to live in. Essentially a farming community, the presence of cattle and sheep pens suggests self-sufficiency. Used as a garrisoned fortress by the Romans during the siege of Masada until its fall in 74 and

[3] Badawy (1978: 35).

Image not available

again during the Bar Kochba revolt between 132 and 135, the site was abandoned shortly afterwards.

Qumran may well have influenced the coenobitical architecture that was to develop some two to three hundred years later. Hirschfeld describes the settlement of monks in fortresses that had been vacated by the Romans in Syria and Palestine and mentions that Anthony, one of the early monastic founders in Egypt, lived for a number of years in one such fortress. He postulates that the remote position, lack of ownership and an established water source were attractive to the early monks.[4] By these criteria Qumran would be attractive to early anchorites. In a similar way, and at the same time, the Egyptian anchorites were colonising abandoned Pharaonic and Roman buildings.

The fortified Coptic monasteries

The early Eastern coenobitical monasteries in particular varied in size from comparatively small units to huge complexes, but the basic plan is that of Qumran with the addition of churches, chapels and cells. Most were girdled with a wall but this was more for statement than defence; a symbol of rejection by the communal monastic population of the secular world outside, whose threat was perceived as moral and psychological rather than physical. And yet physical threat always existed, especially where, despite individual vows of poverty, the collective monastery became increasingly wealthy from legacies, donations, produce from its workshops and the increasingly lucrative pilgrimage trade. The more pragmatic communities recognised that a physical shelter and refuge was needed for their safety and that geographical isolation and the protection afforded by relics could not always be relied upon. As a consequence substantial towers, primarily for defence, are to be found in many of the early monasteries which still have physical remains.

That such towers were needed in Egypt is recorded in the Ethiopian *Synaxarium*, the book of saints, which tells of barbarians slaying the monks and plundering the monasteries of Sketis in Lower Egypt. It records that Abba John fled to the monastery of Abba Anthony in the desert of Kuelzem by the Red Sea. This perhaps implies that the former monasteries were indefensible but the later was not.

The whole of the Nile valley from Aswan to the delta contains many ruins of monasteries fortified in this way. The qasr, the final retreat and refuge (which predates the Norman keep by centuries), is either incorporated into or surrounded by a high and robust wall with a wall walk but rarely reinforced by corner or interval towers. The solitary narrow entrance is occasionally defended by a projecting box machicolation and barred by wooden beams or a wheel stone. These unsophisticated defences could never resist any determined or sustained assault by large numbers but they were efficient in protecting the monks against brigands and desert nomads.

In the desert of Upper Egypt, just inland from the west bank of the Nile, opposite the town of Aswan, lies the monastery of **St Simeon**. Although founded in the seventh century, the present ruins date from the tenth century. Despite being built on two levels the ground plan bears a similarity to that of Qumran in that it is trapezoidal in shape and of approximately

[4] Hirschfeld (1992: 47–9).

Image not available

the same size. In addition to a Christian church and chapels the enclosed courtyard contains the refectory, kitchen, store-rooms and workshops, and water channels lead to settlement tanks and cisterns. It is still surrounded by its defensive wall, over 6m high in places, and a huge defensive tower forms part of the northern defences. The solitary entrance is through a small tower in the eastern wall and the whole monastery has foundations and lower courses of stone with mud-brick superstructures.[5]

The monasteries of the Wadi al-Natrun

The monasteries of Sketis were founded by Makarius, a disciple of Anthony, around 330, and subsequently sacked by Berbers in 404, 434 and 444 (which may have given rise to the building of the first Christian qasrs). The region is now known as the Wadi al-Natrun, named after the various salts deposited in the valley and its lakes. It lies 75km north-west of Cairo and is a natural depression in the desert running diagonally south-east to north-west for approximately 50km, although never more than 8km wide. Although once heavily populated with monks in many monasteries and their dependencies, it has never recovered from the great plagues that struck Egypt in the fourteenth century. Today only four monasteries remain that are not utterly ruined, all located near to each other on the lower slope on the south-west side of the valley. The monastery of **St Makarius** lies in the east, followed by **St Bishoi's**, then the monastery of the **Syrians**, and lastly that of the **Romans** in the north-west of the valley. Each is fortified, shows a similarity of design and contains a qasr. As a result of further sackings both before and after the Arab invasion of the seventh century no remains earlier than the ninth century can be identified today. Following the destruction by the desert tribes in 817 the monasteries of the Wadi al-Natrun began to fortify themselves in earnest.

The four monasteries of the Wadi al-Natrun demonstrate the development of the qasr. Although dating is difficult, it is likely that the tower at the monastery of the Romans is the earliest and simplest and that of St Makarius the most sophisticated. All are strongly built either of stone or mud brick on a stone base and are the most substantial of all the monastic buildings. Usually three storeys high and either square or rectangular, access is via a narrow wooden drawbridge that when raised fits into the recessed masonry surrounding the first-storey doorway. Each storey with the possible exception of the uppermost contains a central corridor with barrel-vaulted chambers on either side, acting as store-rooms, dormitory and refectory. There was usually provision for a strongroom to safeguard the treasures of the monastery, relics and sacred objects; the basement well provided a water source. Every qasr had at least one chapel or church, usually on the uppermost floor, dedicated either to the archangel Michael, to one of the warrior saints, or to the Virgin Mary. The ground plan averages 20 x 15m and the walls are up to 2m thick; where present, windows are high, narrow and splayed. Between 15 and 20m high, the qasr dominates the monastery, the gateway and the enceinte. Last century archaeologists working in the valley uncovered the foundations of

[5] Although slighted on the orders of Saladin in 1173 in order to deny its use to Nubian Christians, who were intent on raiding southern Egypt, it still retains many of its buildings to their full height. The monastery gives great insight into the typology of early Egyptian monasteries, although many of the buildings of today are from the high Middle Ages.

Image not available

much smaller walled enclosures, each with an attached tower. They are believed to be the remains of mashubeh, small fortified dwellings for monks living separately from their mother monastery.[6]

Surrounded by farmland containing orchards, pastures and vineyards the monasteries became very wealthy, especially when the remains of the founding saints were identified. The patriarch of the Coptic Church was frequently chosen from one of the monastic abbots and the monasteries were kept in a good state of repair, especially during periods of persecution when they were used by the Church hierarchy as refuges.

At the monastery of **St Makarius**, always the most important foundation in the Wadi al-Natrun and probably in Egypt, Patriarch Shenudeh surrounded the principal church and the other monastery buildings with high towers and strong walls towards the end of the ninth century. The fortifications that remain today are almost certainly from this period. Like so many Egyptian fortified monasteries, it is trapezoidal in shape and originally measured 125 x 120m. Previously the largest of all the monasteries it now covers less than half the area it did when in its prime before the depopulation of the fourteenth century. Patriarch Shenudeh surrounded the monastery with walls high enough to deter the most determined of attackers and provide shelter for refugees. Inside was the monastic church, refectory, kitchen, workshops, a corn mill, oil press, a water supply and cells for the monks, together with a large qasr. Although the range of buildings in all the monasteries is very similar there is no formal arrangement and each monastery has its own internal layout. The refectory was not often used, except on special occasions, and dormitories were never built; the monks ate and slept in their own cells.[7] The enceinte was formed of random rubble and mud brick set in a mud mortar; usually 10 to 12m high and up to 2m thick, both inner and outer surfaces were coated with a lime plaster that hardened to provide a protective coating. The wall walk was provided with a shoulder-high parapet. A feature common to all four monasteries is the siting of the solitary entrance gate near to the defensive tower. The gatehouse contains a barrel-vaulted passage, two guard-rooms and a staircase to the chamber above the passage that leads to a trap door in the apex of the external arched recess of the doorway. Containing a windlass, this trap door could be used to hoist up visitors or supplies when the door was barred.[8]

The monasteries of Palestine

Two differing forms of the laura monastery, which predominated in Palestine and the Judaean desert, have been identified. Perhaps the most impressive are those which cling to the sides of

[6] Lythgoe (1975: 51). The ruins of twenty-seven such mashubeh have been identified within the environs of the monastery of St Makarius. Believed to have been abandoned in the fourteenth century, they were ruinous by the fifteenth.

[7] Lythgoe (1975: 3–16). Although the qasr is now incorporated in the east wall of the monastery, it was free-standing originally.

[8] Lythgoe also suggests that this mechanism could also be used to lift and lower either a portcullis or other form of defensive apparatus for the door. This arrangement is seen in some of the smaller fortifications of the military orders in the Baltic States.

cliffs, some of which appear almost sheer, in stark contrast to those lauras built on flat ground, found mainly in the Jericho valley; the cliff lauras are the most numerous. In contrast, most Palestinian coenobia are found on flat ground, but to complicate matters further one of the best cliff-side monasteries is the monastery of St George (the present-day monastery of **Choziba** in Wadi Qilt, near Jericho), founded in the fifth or sixth century; originally a laura, it was converted into a coenobium. Most of the present building is of nineteenth-century construction but it retains substantial remains from earlier periods and gives a good idea of the defensibility of these monasteries.[9] Even today access is difficult and somewhat perilous.

Although a number of Palestinian monasteries have been reoccupied and partially rebuilt to accommodate those wishing to live a contemplative life the vast majority have been destroyed and are ruinous. Hirschfeld has, however, excavated a number of monasteries in the Judaean desert. From his findings and observations it seems very likely that many Palestinian monasteries had an attached tower of a military nature, either built at their highest point or overlooking the gatehouse. Although, in comparison to the later qasrs of Egypt, they are comparatively slight, often little more than 5m square, they were probably of three storeys and used for a variety of purposes. Often used as dwellings by the monks they also served to demarcate the boundaries and holdings of the monastic community. Their main function, however, was to act as a place of refuge for the unarmed monks, forbidden to defend themselves or their monasteries and as a consequence totally reliant on passive protection.[10]

Justinian set in motion a huge building programme when he became emperor, seeking to defend the borders of his empire, particularly in the vulnerable east where the Sassanian Persians were ever ready to take advantage of weakness.[11] We are fortunate that Procopius, the court historian of Justinian, recorded the nature and extent of this mammoth project in his work *De Aedificiis*. It is clear that as well as military and secular works ecclesiastical architecture received his attention, and the evidence is that church building was revolutionised. A domed, brick-vaulted and centrally planned church, a form that was to spread throughout Eastern Christendom, replaced the basilica.[12] He sought to control the Eastern Church, both in Constantinople and the provinces, by combining barracks, church and travellers' lodgings inside a well-fortified enceinte; further control was exercised by insisting on firm adherence to monastic rules and by regularising the interior layout. This is reflected in Krautheimer's observation that although the early monasteries of Egypt and Syria had been surrounded by a

[9] It was abandoned after the Persian invasion of 614 and not rebuilt until 1179 when the Crusaders added a defensive tower to guard it and the road from Jerusalem to Jericho.

[10] Hirschfeld (1992: 171–5).

[11] Hirschfeld (1992: 171) says that there is no evidence to support the claim that fortress or fortified monasteries defended the borders of Byzantium against nomadic raiders. One of the few monastery fortresses in the heartland of Byzantium from this period still identifiable today can be found at Daphni, south of Athens. The remains of the fortified perimeter wall demonstrate the power of Justinian's work; interestingly, they now enclose a church from the eleventh century fortified by the Franks at a later date. Krautheimer suggests that these fortress monasteries became the norm even in peaceful areas.

[12] The basilica plan remained in place in the West beyond the mediaeval period.

wall, it was not until the sixth century that they became fortified, an innovation that must be credited to Justinian.[13]

One monastery that has survived, against all the odds, is the monastery of **St Sabas** in the heart of the Judaean mountains 20km from Bethlehem. Now occupied by Greek Orthodox monks, it claims the distinction of being the only continuously occupied monastery in Palestine. Founded in 492 by St Sabas, it was attacked and sacked by the Persians in 614. It was to achieve prominence when John Damascene, a Christian who had achieved high office as the representative of the Christian subjects of the Umayyad caliph in Damascus, renounced his secular life and entered the monastery in 716 to write the *Source of Knowledge*. Now the greatest of all the Judaean monasteries, it overlooks the River Kidron and climbs up the wadi side. Surrounded by a massive triangular buttressed defensive wall, a multi-storey watchtower was built at the highest point of the monastery at the apex of the triangular walls. These defences dominate totally the monastic compound and are further strengthened by the nearby, but isolated, tower of St Simeon, believed to date from the seventeenth century. Like all the monasteries in Palestine many of its buildings have been rebuilt over the centuries and the defensive walls have not been dated with any accuracy.

The monastery of **St Catherine** in the southern desert of Sinai still retains much of its defences from the sixth century against Arab nomads. The first church, that of the Virgin, was built over the reputed site of the Burning Bush on the orders of Helena, mother of Constantine, in 337. Despite its isolation and vulnerability it became a popular pilgrimage site and its importance was recognised by Justinian I who gave orders for the building of a replacement church for the Virgin followed shortly afterwards by the construction of the basilica of the Transfiguration in 537. Surrounding the monastery with strong walls he provided a garrison of two hundred soldiers drawn from Egypt, Greece and the Balkans, to serve and protect the monastic community and its pilgrim visitors.

Built on the side of a wadi of Mount Sinai, the Mount of Moses, it is an extraordinary sight, its high stone walls harmonising with the craggy mountainside. Only glimpses of the belfry and tiled roof give any hint of the monastic complex built inside. Originally named after the mother of Jesus it was renamed after St Catherine who had been martyred in Alexandria in the fourth century.

The ground plan is, once again, an irregular quadrilateral measuring 85 x 75m and the present walls are between 12 and 15m tall. Built out of massive granite blocks in regular courses, much of the wall, especially in the south-west, remains from the time of Justinian. Repairs after earthquake damage in the early part of the fourteenth century can clearly be seen by the change in the masonry style used. Reinforced by corner and interval towers, both round and rectangular, entry until comparatively recently was by a basket hoisted up to a gallery high in the northern wall. Entry today is via a small postern gate in the west wall of the monastery. Inside is a labyrinth of passages, stairs and buildings, both secular and religious, many of which, although of a later date, occupy the position against the walls of the original conventual and

[13] Krautheimer (1986: 260). The addition of the defensive wall coincided with a regularising of the interior, centred on the church. He also states that 'fortress and monastery were joined in a symbiosis strange only to us'.

Image not available

barrack buildings. Of particular note is the presence within the complex of a mosque. This was converted in 1106 from a hospice both to serve the Islamic servants of the monks and to appease the Muslim rulers in return for their toleration of this important Christian site in the Islamic Empire. The monastery now belongs to the Greek Orthodox Church, and the monks look after a library second only to the Vatican for the number of illuminated manuscripts it contains. It is one of the oldest and most famous of all Christian monasteries and served three functions, monastery, pilgrimage site and desert outpost designed to protect this part of Palestine from the increasingly powerful and bellicose Arabian tribesmen. It is the oldest fortress monastery in existence.

The fortified pilgrimage sites and the tower churches of Syria

Monasteries had been introduced into Syria from Egypt and followed the basic coenobitical form. Syria had become a prosperous and peaceful province due to the foresight of Justinian; only the borderlands with Persia required much in the way of fortification. More of a problem was the internecine theological conflict which had developed over the monophysite controversy; monophysitism had taken a firm hold in the Near East after its spread from Egypt in the fifth century, posing a substantial threat to the central government-controlled Church. Central government and the Orthodox Church in Constantinople endeavoured to regain full control of the dissident church by lavishing much effort and money in developing shrines to martyrs. Two of the most popular pilgrimage sites that were developed were the cruciform church and monastery of the ascetic St Simeon, near Antioch, and Sergiopolis (Resafeh), on Syria's eastern border, the seat of the cult of St Sergius. Both were fortified, but to different degrees, and became part of the frontier defences of Byzantium along with some of Justinian's fortress monasteries.

Early in the fifth century St Simeon Stylites attracted considerable attention amongst Christians throughout the empire, as much out of curiosity as piety. The emperor Zeno, after Simeon's death, found it politically expedient to pour State resources into the development of this extraordinary pilgrimage site. He built a cruciform church with a central octagonal and domed chamber to surround the stump of the column on top of which St Simeon had spent the last thirty years of his life meditating, musing and entertaining his devotees. Initially fortified in response to threats from the Persians and subsequently the Arabs (it was captured by them in 641) it was refortified when it once again returned to Byzantine rule in the ninth century. Even today in its ruined state it is a very imposing site, situated as it is on the slopes of the Jebel Sema'an, west of Aleppo. The remains of the fortifications are restricted to the lower courses of the enclosure wall and the foundations of a number of towers.

Much more impressive and on a far bigger scale is the fortified pilgrimage town of **Sergiopolis** near the Euphrates in north-east Syria. Originally a Roman frontier fortress built by Diocletian, it became the scene of the martyrdom of Sergius, a Christian Roman soldier who was tortured to death when he refused to sacrifice to Jupiter, Diocletian's preferred religion. His exceptionally brutal murder attracted widespread publicity and increasingly drew pilgrims. Such were the numbers who wished to visit this isolated fort, now containing the martyrium of Sergius, that it had to expand to accommodate the logistical requirements of the pilgrims.

Image not available

Located as it was on the frontier with Persia, it came increasingly under threat and received the attention of Justinian's military engineers who initiated an ambitious and, even today, impressive feat of military architecture. Fine ashlar replaced mud brick and advanced defensive techniques were incorporated into the extensive curtain wall which surrounded the town, now containing the martyrium, the church of St Sergius and three gigantic cisterns so necessary in this flat and arid land. Having escaped the attention of archaeologists, it remains much as it must have been like after its sack by the Mongols in the fourteenth century.

Little remains of the pilgrimage town with the exception of ruined churches and the extensive walls which form an uneven rectangular enceinte some 540 x 380m. Four round corner towers and some forty square or prow-shaped towers strengthen the defences. Running all round the inside under the parapet walk is an arcaded gallery giving access to splayed loopholes at mid-wall level between the interval towers to accommodate and allow usage of springals, or giant crossbows. Many staircases give access to this galleried chemin de ronde and to the wall walk and its now lost crenellated parapet. More or less centrally placed on each of the four sides of the town walls were the city gates. The north gate, with its triple entrance, is a particular fine piece of Byzantine architecture containing finely carved archways and a frieze supported by Corinthian columns. Military architecture gets few plaudits from architectural historians but this enceinte with its advanced design, fine ashlar masonry, high quality workmanship and superb gateway sculpture compares favourably with the ecclesiastical architecture inside.

Syria had long been a prosperous province first of Rome and then of Byzantium, and until the Arabs defeated the Byzantine army in 636, a comparatively peaceful backwater except on its exposed marches with Persia. This prosperity saw, in the fertile north between Aleppo and Antioch, the building of some seven hundred towns and villages together with their churches and monasteries. Located centrally is the previously mentioned monastery of Simeon Stylites. This populous, mainly urban and very Christian region rapidly declined after Arab conquest, when its population left for Asia Minor and remains undisturbed by post-Byzantine building. According to Ball the hundreds of ruins still visible are 'the greatest storehouses of Byzantine architecture to be found in the ancient world'. Largely unexplored, the region of these 'dead cities' provides evidence of early ecclesiastical fortification.[14] Substantial multi-storey towers are to be found in the ruins of some sixth-century churches; that at Qasr al-Banat is six storeys tall. The church of Bizzos was fortified with a western façade flanked by two towers, an arrangement seen at the church of Qalb Lozeh and indeed at the church of St Sergius in Resafeh. As these twin-towered façades flanking a central loggia only appeared at pilgrimage sites, it is believed that the loggia was used to display the holy relics of the church and provided a platform to address the pilgrims. The towers served as strongrooms for the safekeeping of the relics and the accommodation of their guards. Whilst the staircases in the towers gave access to the various storeys they also provided access to the stone roofs of the church aisles, a common feature of Syrian church towers whether placed on the western façade or built aside the aisles. The purpose of this arrangement is not understood but would provide access either for church

[14] Ball (1994: 141–58). The region of the Dead Cities lies approximately in the area between Aleppo and Antioch. Only stone-robbers and the forces of nature have disturbed the ruins.

maintenance or defence. The origin of these tall towers is also not understood and there has been little archaeological interest. However, they predate the flanking towers of Western church façades by centuries.

Survival and destruction in hostile environments

The consequences of the Arab conquests upon the Eastern Church in Syria and the Holy Land were catastrophic, and whilst the Coptic Church of Egypt fared better, the Church in North Africa was all but wiped out. The initial Islamic approach to Christianity was one of tolerance, but force of circumstances dictated that those Christian communities which survived in Syria and the Holy Land became increasingly marginalised from the Church in Constantinople. Only the Coptic Church was to gain any advantage from the new regime in Egypt; the Arab invaders allowed the church to develop more autonomy and remove itself from the control of the patriarch in Constantinople.

Where monasteries survived, especially in Palestine and the Middle East, the change in rulers had resulted in a different environment. The need for defence became increasingly paramount whether from desert tribes, brigands, a covetous and at times hostile populace and an indifferent local administration. Unfortunately archaeological evidence for fortification is scant before the ninth century, although extensive monastic remains are to be found all over the Middle East and Egypt.

In Egypt, where the monasteries had already been fortified, the Coptic Church spent huge sums on further defences. As previously described, the monasteries of the Wadi al-Natrun were further strengthened by Shenudeh I, the Coptic Patriarch of Alexandria, who replaced the existing enclosure walls with huge enceintes using as his template border fortifications erected earlier by Byzantine military architects. The desert monasteries of St Paul and St Anthony located in the desert east of Cairo near the Red Sea were further fortified after the Wadi al-Natrun monasteries had been sacked by the Berbers in 817. These fortifications represented a huge undertaking, with walls up to 12m tall and 2m thick.

The continuing existence of the Coptic Church and its monasteries was always precarious. For centuries threat was ever present whether from Bedouin raiders, local insurrections or persecution by the Islamic rulers of Egypt. The vast resources spent on fortifying the monasteries and their necessary and continuing upkeep was a direct response to these omnipresent threats. The monasteries were often used by the Church hierarchy as places of refuge when fleeing from unrest in Alexandria. The need for such fortifications has persisted until recent times; the walls of the Red Sea monastery of St Anthony go back to the ninth century but were rebuilt and restored by Abbot Kirillus IV in 1854, who gave the monastery perimeter walls 2km in length.

Whilst the walls and the qasrs have, in many instances, been continuously maintained and repaired over the centuries, the internal buildings were less fortunate and many suffered neglect. The renaissance of Coptic monasticism recently has seen a building programme that is substantially altering the internal arrangements that have existed for centuries. Today the ruins of the abandoned monastery of St Simeon at Aswan perhaps give the best insight into life and activities in the Middle Ages.

The presence of early fortified enclosures is confirmed by the excavations early last century carried out at the monastery of St Jeremiah (Saqqara), destroyed by the Arabs in 960, where the internal arrangements have been found to be very similar to those at St Simeon's.

By the beginning of the seventh century monasticism in the Holy Land and Syria was at its zenith. Pilgrims and aspiring novices travelled from as far afield as Western Europe as well as from all parts of the Byzantine Empire and Transcaucasia to visit the holy sites. The Persian incursion of 614 saw monastery after monastery pillaged and destroyed, and whilst there was some recovery initially the Islamic conquest of 638 in effect saw the demise of monasticism. Although there was little in the way of Arab persecution monasteries were abandoned as recruits and donations dried up, particularly as travel became perilous and pilgrims went elsewhere.

However, one pilgrimage site has survived almost intact for over two thousand years due to the reverence in which it was held by the three religions of the Book. The **cave of Machpelah** in Hebron is believed to be the burial place of the Prophet Abraham, his son Isaac and grandson Jacob, together with their wives, and over the centuries has become a pilgrimage site revered by Jew, Christian and Muslim alike. First fortified by Herod the Great (374 BC) the finely built walls fortify a quadrilateral enclosure measuring 65 x 35m. The great builder Justinian erected a church over the burial site that became the Haram el-Khalil or 'the shrine of the friend' following the Arab conquest, so called because Muslims regard Abraham as the friend of God. Recaptured by the Crusaders, the mosque was converted back to a church only to revert to a mosque once again, which it has remained to this day, when it fell to Baybars in 1267. The Arabs also added two minarets and the present battlements. The original Herodian fortifications remain and the size of the ashlar blocks are cyclopean, especially at the corners of the walls, where the largest measures 7.5 x 1.4m, contributing immensely to the strength of the fortifications. The otherwise plain external faces of the walls are broken by the inclusion of pilasters on all four sides. The only Crusader alterations were the addition of fortifications to defend the Herodian entrance. Like St Saba it is a rare example of ecclesiastical fortification still existing in Judaea. Both, however, give good insight into the efforts made by the early ecclesiastical bodies to defend their establishments.

2
IRELAND

Introduction

The invasion and the attempted occupation of Ireland in the latter half of the twelfth century by the Anglo-Normans conveniently divides the study of Irish ecclesiastical fortifications into two. Firstly, those built by the Gaelic Irish, in almost total isolation from the rest of the world, and secondly those that were constructed by the Anglo-Normans and their successors. The former produced structures unique to Ireland, the latter, adapting European influences, produced a typology whose function was not seen outside the island.

Prior to the arrival of the Vikings in the ninth century there were few Irish settlements of any size and the population followed a pastoral existence within a clan system. Feuds and cattle-raiding became endemic and the small rural communities responded by protecting themselves within ring-forts found from antiquity throughout Ireland, many thousands of them remaining today. Built mainly of earth and known as a rath, there was a departure in the west and amidst the Atlantic islands where the availability of easily split limestone resulted in the dry-stone ring-fort or cashel. It was into this environment that monasticism arrived, probably from Syria by way of Egypt. By the seventh century a great number of monasteries had been founded and were widespread throughout the island.

The early Gaelic monasteries

Although archaeological remains from this period are scanty, the western Atlantic coastal region and its islands contain enough stone-built monastic buildings to give a good insight into the nature of these ensembles, which show many similar features. Although there is no formal or set plan, each monastery contains at least one church, an oratory, stone slabs incised with crosses and one or more clochans, the circular beehive-shaped huts for the accommodation of the monks. There was usually a circumvallation to isolate the monastery from the outside world. In most of Ireland wood was used for these buildings and the precinct wall was little more than an earthen bank. In the west stone was used instead; of the surviving examples the finest is to be found on the island of **Inishmurray**, located 6.5km off the Atlantic coast in Co. Sligo. Here the monastic grounds of St Molaise are enclosed by a wall that today is still over 4m high and 2–3m thick. Carefully built of split but undressed limestone this vast dry-stone wall is roughly oval in shape, measuring 45 x 60m. It is very much a cashel, although there are five entrances rather than the usual solitary entry passage. Its interior contains a number of corbelled beehive huts, at least two churches and incised stone slabs, all in a remarkable state of preservation and separated from each other by four walls of varying length and height. It is not known whether the massive encircling wall is contemporary with the early buildings of the monastery and built by the monks or whether they occupied a cashel from an earlier period for

purposes of defence.[1] Certainly the wall construction, together with the interior staircases to the wall walk, is reminiscent of the stone forts of the Aran Islands. Dating techniques are too imprecise to date these stone enclosures with any accuracy and it may well be that abandoned cashels were utilised much in the same way as some of the early Judaean monasteries made use of abandoned Roman forts. The attraction to a founding abbot is clear to see.

These early, isolated and small monasteries, home to a small body of monks, are a far cry from the university monasteries of the eighth and ninth centuries, an era of comparative peace and prosperity which allowed Irish art to reach its apogee in the monastic workshops and scriptoria. Although fighting and cattle-raiding continued between the petty kingdoms, the fear of divine retribution still held a powerful sway and the monasteries were initially left alone.

The enigma of the Irish round tower

The relative peace disappeared after 795, when Viking raids began. The early annals of Ulster record many instances of the desecration and burning of ecclesiastical property with the slaying of monks and clergy. Fighting between the Vikings and the Gaels continued until the eleventh century. It is to this and the following century that the round towers of Ireland have been ascribed. Long believed to have been built as a response to Viking attacks for the defence of the monastic population this has now being challenged: they are now believed to have been built after the cessation of hostilities. The round towers are unique to Ireland, and are found throughout the land; many remain much as they were built a thousand or so years ago.[2] Free-standing, these tall, slim and elegant towers, once seen, are never to be forgotten. The simplicity of their architecture and the paucity of adornment are a striking reminder of Irish monasticism of a millennium ago. Until recently little interest has been shown in their functions and origins.

After travelling across the somewhat wild Wicklow Mountains, the appearance of the upper storeys of the round tower of **Glendalough**, soaring above the tree line, supports the theory that these towers functioned in part as beacons and signposts directing pilgrims to monastic sites. Built in the valley of the River Glenealo, approximately 4km west of Laragh, the tower dominates the monastery founded by St Kevin in the sixth century. Although the early monastic founders chose rural areas where natural features ensured self-sufficiency, at least in the early years, St Kevin excelled them all. The tranquil and isolated small valley with its two lakes and meandering river is today enclosed within woods. Only the tower suggests habitation. The monastic remains existing today date from the eighth to the twelfth centuries, with the tower from the middle of the twelfth. Rising to 30.5m, it is one of thirteen towers that still rise to their original height and can be regarded in nearly all respects as the archetypal round tower.

[1] O'Brien and Harbison (2000: 75). It was unable, however, to resist the Viking raiders who attacked and plundered the church in 802.

[2] There are, however, outliers, almost certainly built by Irish missionaries. One stands in the bailey of Peel Castle on the Isle of Man with others at Brechin and Abernethy near Dundee and Esilay in Orkney, all in Scotland. In Ireland Lalor identifies the remains of seventy-three round towers and is of the opinion that well over a hundred were built.

The slightly battered walls with their elegant taper rise to the conical cap reconstructed from the original stone slabs in 1876. Like all round towers, it not only lies within the monastic precinct but also totally dominates it. It is located to the north-west of the now roofless cathedral, an arrangement commonly seen whereby the door of the tower is in close relationship to the west door of the monastic church. The narrow doorway sill is approximately 3m above the ground floor. Well-built of mica-slate with interspersed granite blocks in a limestone mortar it lacks the usual offsets internally that supported the wooden floors of the six storeys. Instead four putlog holes, alternating in position at each floor level, provide for two beams to support the wooden floors, containing openings to allow access to each storey by wooden ladder. Spiralling round are four lintelled openings that light each of the four floors above the entrance floor. The sixth and top storey, now believed to have housed the monastic bell, is lit by four comparatively large openings under the cornice of the conical roof, pointing in the direction of the cardinal points of the compass. Each opening in the tower has a sill and a lintel with jambs inclining slightly inwards. The doorway similarly inclines inwards with granite boulders shaped to outline the frame extending through the thickness of the tower wall, that of the lintel chiselled to form a semi-circular arch. The diameter at the base is almost 5m, with the depth of the foundations, at 1m, being greater than that of most towers.

As well as the cathedral, St Kevin's church remains from the early period, and is interesting in that it has as a western belfry a smaller version of the round tower. Projecting through the stone-flagged roof of the church, entry is reached via a doorway from the church loft and is believed to be later than its neighbouring and much larger tower. Remains of a similar tower that fell in the early part of the nineteenth century have been identified at Trinity church 5km distant from the free-standing tower at Glendalough. Attached to the church, like the one at St Kevin's church it is too small to have a defensive role.

Although monastic remains are sparse, other than the round towers, monastic precinct walls with a gatehouse have all but disappeared. Fortunately there are remains of one of the enclosure gatehouses at Glendalough. Now of only one storey, the northern gate, almost certainly the principal entrance, is double-arched and paved. The architectural remains suggest a two-storey structure inserted into a precinct wall approximately 2m high.[3]

The monastery flourished between the sixth and twelfth centuries but there are many mentions in the annals of it being plundered by both the native Irish and raiders from overseas. Its decline started, however, when the European religious orders were introduced in the thirteenth century. Despite being attacked and sacked by English forces it continued as a monastery until the dissolution and as a pilgrimage site until the nineteenth century.

Of the towers that are still to be found throughout mainland Ireland and its islands both inland and coastally the largest concentration is found in the midlands. Although the generic pattern seems to have been followed closely, there are variations (albeit minor), as would be expected in a type of monument erected continuously for over two centuries. Height, batter, diameter and decoration vary from tower to tower but never enough to enable a classification to be attempted.

[3] Petrie (1970: 451) records a distinct resemblance between this gateway and the Newport Gate in Lincoln, England.

The role and origins of the Irish round tower

The fanciful notions of the Victorians that round towers were fire temples, astronomical observatories or homes for hermits living in the manner of Simeon Stylites were overturned when in 1845 Petrie wrote the first book exclusively about round towers. Surprisingly, there has been little other archaeological research to enhance our knowledge until very recently, though Craig regards the towers as 'having emerged from the fog of mystery in which they were shrouded for so long'.[4] Yet their function remains uncertain, and their origins even more so.

The round towers that exist today are a remarkably homogeneous group and show little variation in typology. Dating, however, is very difficult with any degree of accuracy, nor is it possible to identify any real development over the two hundred and fifty years during which they were built, with the possible exception of the Romanesque decoration around the doorframes. Petrie was of the opinion that they served a number of functions. The Irish name for these towers, repeatedly written in the annals, is 'cloicteach', literally 'bell-tower', and they undoubtedly served as such, housing the hand-bell of the monastic founder. Lalor is firmly of the opinion that this was the primary function and all others were subservient to this.[5] He discounts the belief that they were built for the refuge of the monastic population, particularly from pillaging Vikings, citing the fact that the majority of round towers were built after the raids had all but ceased. Whilst this is true, the monastic communities were constantly under threat from the native Irish in the tenth to the twelfth centuries. Of all the buildings in the monastic enclosure the round towers were the only structures that could offer any protection; certainly the earthen circumvallations would provide only feeble resistance. Lalor argues that the towers would be indefensible against a serious assault.[6] This, however, applies to almost all fortifications. Descriptions in the Irish annals of the firing of round towers, with the immolation of their occupants, shows that they were used as places of refuge, if not always successfully. The positioning of a solitary doorway 2–4m above ground level would add to the passive defences of the tower, increased when double doorways and iron sheathing were incorporated. Certainly this would make them less susceptible to fire. The traditionally held view of wooden access ladders being retracted into the tower is challenged by Lalor, who believes that in many of the towers this would not be possible. He is also dismissive of rope ladders.[7]

The seventh to tenth centuries had been a very productive period in the monasteries, and Celtic art had flourished in all its forms. As well as skill, much labour and effort went into the production of manuscripts and illuminated books. These were monastic treasures that needed a secure place to keep them safe. It was not only the general lawlessness of the time that necessitated this; manuscripts were very susceptible to attacks by vermin. All writers agree that this was a function that the round tower adopted. The provision of stone pegs jutting out from

[4] Craig (1982: 34).

[5] Lalor (1999: 13). This is a very recent book solely devoted to round towers and includes the most comprehensive gazetteer published. He also extends the typology to include towers integral to the church and others that were attached to churches as at Glendalough.

[6] Ibid. 68.

[7] The monks of the monasteries of Meteora in northern Greece used sectional and collapsible ladders to ascend to their eyries.

the walls of the second storey enabled leather satchels containing the monastic library to be hung well clear of the floor.[8] Interestingly, this storey frequently contains the largest opening in the tower and suggests that this floor served as the treasury for relics, church artefacts and the library.

The doorway in almost every instance faces that of its nearby church. Its elevated position would serve as a vantage point where the abbot and senior clergy could show the monastic relics to monks, pilgrims and lay congregations from on high and in safety. Furthermore, the interior of the tower may have been held sacred much in the same way as the neighbouring church; the increasing use of Romanesque decoration around the door would have added to the solemnity of entrance rituals.[9]

Finally, there is a general agreement that these lofty towers, reaching well above the tree line, had the dual function of serving both as lookout towers and as landmark beacons identifying the location of the monastery and thus providing guidance for pilgrims. This is something of a paradox, as the profane as well as the devout would be attracted.

The origins of the towers are unknown. Uniquely Irish, there is no clear evidence for their evolution. They just seem to have appeared, almost over night, in the middle of the tenth century. Some writers ignore the subject altogether whilst others tend to be speculative. Conant is of the opinion that they are of north European design and developed during the Carolingian period.[10] Lalor argues that they stem from the Irish tradition of building in the round, from the ring-forts and cashels to the beehive huts of the monks, influenced by the paired round towers that were making their appearance in Rhineland church architecture, the inspiration arriving in Ireland early in the tenth century.[11] It is of interest that he discusses the role that the Islamic minaret may have had as an influence, arguing that these high-rise towers had a similar function in announcing the hours of community prayer, the muezzin being replaced by the bell. He is of the opinion that the early minarets bear little resemblance to their Irish counterparts. This is not the case if we accept that the lookout tower of the ribats of North Africa also served as a minaret. The round tower of Ardmore, Co. Waterford, has much more than a passing resemblance to the towers of Monastir and Sousse on the coast of present-day Tunisia. Built in the mid to late twelfth century when the Normans were turning their attention towards Ireland, it deviates from basic tower typology in having the most pronounced batter of all, as it rises 29m to its conical roof. Built of well-dressed ashlar the base diameter of 5m narrows to just over 3m at the roof cornice. Three rounded cornices divide the external appearance into four unequal sections, the reason for which has not been explained. It is in a remarkable state of preservation and dominates the high ground overlooking Youghal bay.[12] Both the towers of Monastir and Sousse have a similar batter and string courses, rise to

[8] Such stone pegs are found in the round towers at Lusk.

[9] O'Keefe (2000: 130).

[10] Conant (1990: 710).

[11] Lalor (1999: 45–53).

[12] The tower and nearby church were held by the forces of the Irish Confederacy in 1642 and were besieged by the English. Upon surrender, mercy was not a consideration and 117 out of the garrison of 154 were hanged on the spot.

a similar height and are capped with a rounded cupola, in contrast to the conical roof. These are of an earlier date, and it is likely that any similarity is merely coincidental. However, there are provisos. Irish monasticism had its roots in the Middle East and Egypt whereas the ribats with their Nador towers date from the ninth and tenth centuries. Curiously, the cylindrical Nador tower at Sousse rises from a square base. At Kinneigh, Co.Cork, the round tower, uniquely amongst the towers that have survived, rises from a hexagonal base containing the basement and entrance doorway.

The arrival of the Anglo-Normans

The expedition of Richard de Clare, earl of Pembroke, in 1169, which landed a company of Anglo-Norman knights with their Welsh foot soldiers and archers in the south-east of Ireland, led to fundamental changes in Irish society. Their landing was followed by an attempt to conquer the unconquerable. Initial success could not be sustained and by the second half of the thirteenth century it was dawning upon the Normans that it could not be completed. The resultant clash of cultures between the Gaelic Irish and the Norman English produced an environment that remained for centuries in the grip of warfare. Coincidentally, the introduction of the continental religious orders led to a gradual decline of native Celtic monasticism and a cessation in the building of their hallmark round towers.[13] Although English settlement was mainly confined to the south-east, it was very patchy and resulted in a number of marchlands between native Irish and English areas.[14]

Warfare amongst the Irish had always been endemic. Added to internal feuds was the opposition to the attempted colonisation by the English. To complicate matters further the English settlers and their warlords adapted themselves to Irish ways and bickered amongst themselves. The resultant political instability and widespread threat of violence resulted in the building of fortifications on a massive scale, a need which extended beyond the end of the Middle Ages. The need for physical protection pervaded all strata of society. Towns were walled, Anglo-Norman lords built their castles and the lesser nobility and landholders their tower-houses. Ecclesiastical establishments were not slow to follow.

St Patrick's Rock and the town of Cashel, Co. Tipperary

The architectural remains of the small town of Cashel, together with the ecclesiastical complex built on top of a limestone outcrop just to the north-east of the town enable a composite picture to be drawn of Irish ecclesiastical fortifications from the eleventh to the seventeenth centuries.

[13] Gwynn and Haddock (1970: 117) point out that by the time of the Anglo-Norman invasion there were fifteen Cistercian houses in Ireland. By 1272 there were thirty-eight. This led to a struggle between Irish and Norman abbots.

[14] Bartlett and Mackay (1989: 77–100). The essay by Professor Rees Davies examines the Anglo-Norman invasions of Wales and Ireland in the twelfth to fourteenth centuries. He defines the Irish marches as the areas of uncertain control between the 'Land of Peace' under English control and the 'Land of War' under the Gaels.

St Patrick's Rock, named following a visit by the Irish patron saint, rises in isolation 60m above the Tipperary plain. Today the group of buildings on its summit make it a unique and powerful expression of ecclesiastical wealth and dominance. Used from the fourth century until the end of the twelfth as the seat of the kings of Munster its importance increased when Bishop Cormac MacCullinan, king of Munster, gave it to the Irish church authorities in 1101. This holy site, with its fortified ecclesiastical ensemble built and extended over many centuries, still exudes power, both spiritual and secular, despite being partially ruined. From every direction it dominates both the town and plain. From the flat top of the outcrop rise two cathedrals, one Romanesque, the other Gothic with a fortified crossing tower, a round tower and a tower-house for the bishop, all competing with each other for attention. Although the architectural composition varies depending on where the rock is viewed from, it is surprisingly harmonious, despite being built over many centuries and in differing styles.

Of all the buildings of this unique complex, the round tower is the oldest; Lalor dates it to the eleventh century.[15] This complete tower, of classical form, rises with a gentle batter to its conical stone roof 28m above ground level. With a ground floor diameter of over 5m, its round-headed doorway is, today, just over 3m above the ground and faces south-east. The uppermost bell storey has the four typical openings pointing in the cardinal directions. Putlog holes for scaffolding are still evident, showing how the tower was built. Originally free-standing, it now abuts the north-east corner of the north transept of the Gothic cathedral. A second doorway was opened between the mural passage of the transept and the round tower, enabling it to serve as the bell-tower and observation platform and to become part of the cathedral fortifications. Of its early associated monastery there are no remains above ground. The Romanesque cathedral, known as Cormac's chapel, was consecrated in 1134, only seven years after building commenced, probably for the Benedictines. A beautifully designed building of fine ashlar, string courses and blind arcades add to its attractiveness. For the first time square towers, attached to the north and south junctions of nave and chancel, make their appearance. Devoid of fortifications other than a passive defence provided by its narrow entrances, high lancet windows and a steeply pitched stone roof, accommodation is provided in the crofts or attic space above the stone rib-vault of the nave and chancel. Small windows above the eaves light these rooms.

The cruciform but aisleless Gothic cathedral, built in the thirteenth century (probably 1230–90), is, however, strongly fortified. Its walls, of rough-hewn limestone, contrast markedly with the neat, rectangular sandstone ashlars of Cormac's chapel. Altogether colder and somewhat menacing, even in its roofless state, it is a powerful fortress cathedral dominating all the other buildings on the rock. The side-walls of the truncated nave, transepts and chancel, despite the loss of their roofs, still retain battlements of a form peculiarly Irish, together with a wall walk that ascends and descends the gables of the transepts and chancel by a stairway. This is a feature of many Irish fortress cathedrals.[16] Putlog holes run all round the battlemented parapet but it is not clear whether these were to act as rainspouts or to receive the beams to support hoarding.

[15] The problem with dating is shown when radio carbon dates the mortar used to between 880 and 1260.

[16] Similar stairs occur in a number of French fortified churches containing a chemin de ronde.

In the fifteenth century the crossing was heightened with the addition of a tower that came to dominate the neighbouring round tower. Built at a time when many bishops and abbots were erecting crossing towers to their cathedrals and monasteries, it was battlemented in the typical Irish way and added significantly to the defensive nature of the cathedral.[17] At the junction of the nave and south transept is a staircase tower of the thirteenth century which was heightened to give access to the crossing tower and its battlements, along with the mural passages running all round the cathedral above window level.[18] There is a similar but smaller staircase tower at the northern junction of nave and transept that gives access to both mural passage and wall walk. It was built over the rock-cut shaft of the monastic well of the twelfth century, now reached by an outside passage.

The nave was originally much longer, but was truncated in the fifteenth century when the tower-house of the bishop was built, taking up most of the west end of the original nave. It is a powerful version of the ubiquitous fortified tower-house of the period. Its various floors are reached from a loop-holed western mural staircase. In addition, use was made of the upper storey of the nave to provide a hall that led to two rooms above the nave porch, each provided with a fireplace.

The perimeter wall that ran all round the edge of the rock provided additional fortification. This has been reduced in height in many parts, although the southern wall demonstrates just how powerful a fortress the rock had become. It incorporates the recently restored two-storey buildings of the hall and dormitory of the vicars choral, originally built in the fifteenth century. The external appearance is one of strength. Single-stepped merlons arise from the parapet and the windows more closely resemble loop-holes. Although the precinct is now entered through the hall, originally it was in the loop-holed wall to the west, reached from the town by a narrow and steeply rising pathway, dominated by the tower block of the vicars choral. It is not known how many perimeter towers originally existed, however; today only one remains at the western end of the enceinte.

The town of Cashel was founded on level ground to the south of the rock around 1200 and received a defensive wall shortly afterwards, reinforced by a number of defensive mural towers to shelter its inhabitants and the friars of the priory of St Dominic. As in many Irish towns, at least one of its richer burgers found it prudent to erect a fortified tower-house that still remains in the centre of the town. The defences were, however, much inferior and on the approach of one of the government armies of Cromwell, under the command of Lord Inchiquin, many of the town residents fled to the rock for protection, joining the garrison of the Catholic Confederacy. Mighty fortress though it had become, it could not withstand the furry of the onslaught of the Puritan army, and the storming was accompanied by the slaughter of defenders, clerics and refugees.

[17] These Irish battlements are generally believed to date from the fifteenth century. Their origin is unknown. The merlons rise in one or two steps and always have inwardly sloping tops. They vary from functional single stepping to highly intricate and elaborate battlements where decoration has replaced function as on the church in the town of Fethard.

[18] The crossing towers of the nearby Dominican friary and Cistercian abbey of Hore were also built at the same time as this crossing tower.

The Augustinian priory of Kells in Ossary, Co. Kilkenny

One of the largest monuments to remain from the mediaeval period, much of the fortified priory of **Kells** still exists today. The fortifications are peculiar to Ireland, not so much in their architecture as in their function and manner of erection. Here sacred and secular fortified enceintes are separate from each other but are conjoined.

Founded in 1193, the priory was built on flat land on the southern bank of the King's River, and had become enclosed within defensive walls by the fourteenth century. There was a water gate to the river and a fortified belfry protecting the western gate. The fortifications were typical of the period, with two exceptions: incorporated into the precinct defences were the western end of the nave together with the attached great storehouse adjacent to the cloister, and the south-western enclosure wall was of exceptional design. By digging a channel from the King's River and extending it in front of this wall to provide a mill stream, the priory mill of the thirteenth century projected out from the defensive wall over the stream, as did the reredorter of the infirmary. As a consequence, they were incorporated into the defences. The millstream acted as a source of power, as a drain and as a moat. Weakly garrisoned, the defences were not sufficiently strong to prevent the sacking of the priory in 1252, 1316 and again in 1327.[19]

The nearby town had no defences of its own, and although the townsfolk had access to the priory defences these were not sufficient to safeguard animals and chattels. Such was the threat in the middle of the fifteenth century that the priory embarked upon a vast and costly undertaking: the building of a fortified secular enclosure for the townspeople. Although the Augustinians were able to accept churches and tithes, Kells was never a rich establishment; originally established by four canons from Bodmin in Somerset, there were probably never more than ten residents in its heyday and its income and resources could never have covered the huge costs of building the fortifications.[20] That it built them is not disputed; the priors, elected from the local community, had assumed the responsibility of the absentee lords. It was only by the expansion of the Irish system of 'coign and livery' to include (as well as soldiery) carpenters and masons, that the additional range of fortifications called the Villa Prioris (or more commonly the Burgess Court) could have been built, where priory and town jointly sanctioned the development.[21] The townsfolk acted as unpaid labourers and provided both accommodation and wages for the masons and carpenters. That they were willing to do this is a measure of the threat, real or perceived, that both communities were under. Rapidly built in the period between 1460 and 1475, it covers an area of approximately 0.7 hectares. An irregular rectangle, with a curtain wall totalling 250m in length, it is attached to the southern defensive precinct wall of the priory. Inserted after the wall had been built were six tower-houses of typical Irish type, producing to all intents and purposes the equivalent of the outer

[19] The sacking in 1316 was by the Scots army of Bruce, who had invaded Ireland in an attempt to open up a second front against the English.

[20] Empey (1984: 138).

[21] Tietzsch-Tyler (1993: 7). 'Coign and livery' was a system devised by Irish Lords to billet, at no cost to themselves, Irish soldiers, or kerns, with their tenants. His booklet, intended to guide visitors round the priory and its fortifications, is comprehensive, scholarly and well illustrated.

bailey of a castle. Opportunity was also taken by the abbot to strengthen his priory church. Following the example of Cashel the crossing was heightened with a fortified tower, and a defensible tower-house was attached to the south-east wall of the church chancel.

Today, this tower along with four of the tower-houses of the Burgess is the best preserved of all the priory buildings. All are very similar, rising by five storeys to the fighting platform. Although many of the parapets are lost or ruinous, the remains indicate stepped battlements favoured in the fifteenth and sixteenth centuries. The first and second storeys were dimly lit by arrow slits and were used as store-rooms. The other storeys provided accommodation for priory residents or the small garrison of Kerns.[22] Although primitive by any standards, these rooms contained at least one fireplace, a garderobe and built-in cupboards. The curtain wall, now devoid for the most part of any wall walk or battlements, is loop-holed at ground-floor level. It contains two gatehouses, one in the east, the other in the west, both defended by machicolations, and an inner gatehouse in the fortified southern precinct wall of the priory.

Whilst the Burgess Court was a scene of activity in peaceful times, sheltering farm buildings, housing cattle and sheep pens, and providing a parade ground for the training of the local militia, it came into its own when the town and its outlying villages and hamlets were threatened. At the first sign of trouble the whole district would be mobilised. Livestock, farm implements, trade goods, food stores, in fact anything of value would be brought into the priory bailey along with the residents of the township and neighbouring farms and hamlets. The small garrison of professional soldiers ensured security by barring the gates and protecting the more vulnerable areas. Arms, stored in the towers, were supplied to the able-bodied population who then contributed to the defence of the priory. The size of both enclosures suggests that there was a large population to shelter. Now provided with crossing tower and tower-house, the priory church would serve as a keep, a place of final retreat.

Kells is not the only religious establishment to have commissioned fortifications of this nature. The nearby Augustinian priory of **Athassel**, now much ruined, has a similar secular fortified enclosure with a very impressive gatehouse. The diversion of the River Suir had the effect of converting the site into an island so that the gatehouse is approached by a multi-spanned bridge. The priory church is fortified much in the same way as at Kells. Other examples are found at Fore, Co. Westermeath, Navan in Co. Meath and Baltinglass in Co. Wicklow.

The crossing towers of the Cistercians

Although the Augustinians held the majority of ecclesiastical houses in Ireland, the Cistercian presence was considerable. An early statute of the order forbade the construction of stone bell-towers but by the end of the fifteenth century seventeen Cistercian abbeys were known to have substantial towers above the crossing, all built between 1440 and 1500. This concentrated building spell has never been satisfactorily explained. Like the round towers, however, they almost certainly were used for a variety of different purposes.

Jerpoint Abbey in Co. Kilkenny possesses the finest Cistercian monastery ruins in

[22] Although the number of resident canons was comparatively small there were in addition a number of lay administrators and servants, perhaps three or four for each.

Ireland, including a crossing tower in an excellent state of repair. Plain, almost stark, its militaristic appearance is reinforced by its slender Irish battlements. Defence was undoubtedly a consideration. Rising 21m to its battlements, with four corner towers adding further height, it is the tallest of the remaining crossing towers. Resting on four massive pillars, it has a very fine ribbed and groined vault. Like the contemporary tower-house it has walls that are slightly battered. Reached from the chancel vault by a staircase in its northern wall, its solitary room contains neither garderobe nor fireplace indicating that this room was unlikely to have been residential. Although ideally suited as a refuge room and as a sacristy or strongroom for the safekeeping of monastic relics, it is more likely that, at a time when the monastic orders were becoming increasingly secular, the crossing tower was built to demonstrate the status of the abbot. Jerpoint provides further evidence of fortification in the form of a machicolation added above the doorway in the northern wall of the nave and a fortified gateway and short stretch of wall attached to the abbey to the west of this machicolation. These are of a later period, built, it is believed, in response to local feuding.

That such towers were built with defence in mind is reinforced by the number that were converted into tower-houses after the dissolution of the monasteries and priories in the sixteenth century; others served as defensible barracks for Tudor garrisons.

The fortified residential attachments to churches within and without the Pale

The first half of the fourteenth century witnessed a number of events that affected both the Gaelic and Anglo-Irish societies. The invasion by the Scots in 1315–18 followed a number of poor harvests and coincided with the Great Famine. A further series of poor harvests and the arrival of the Black Death further weakened all strata of society.[23] The Anglo-Irish settlements were particularly affected, and further threatened by a resurgent Gaelic population intent on re-establishing Celtic influence and culture. The net result was a significant reduction in Anglo-Irish land-holdings and a retreat to their heartlands around Dublin. In order to protect themselves the Anglo-Irish erected on their borderlands an earthwork consisting of fosse and bank some 2m high designed primarily to prevent cattle-rustling. Acting as a boundary and defensive line, it defined the Pale, that part of Ireland occupied by the English and administered from Dublin. It was within the Pale, during the latter part of the fourteenth and the beginning of the fifteenth centuries, that some of Ireland's largest churches were built. Although simple nave-and-chancel churches, many had residential and defensive west towers attached.[24]

Of these towers that at **Lusk**, Co. Dublin, is today the most impressive. Situated on the Dublin to Skerries road the village of Lusk occupies the site of an early Irish monastery

[23] The Black Death reached Ireland between 1348 and 1349 and affected towns more than country regions. It was not until the fifteenth century that building activities recommenced.

[24] O'Keefe (2000: 157) points out that the English Pale had a distinct tradition of fortified tower-houses. He implies that the residential west tower may be a comparable tradition. Encouragement was given to settlers to build these towers by granting ten pounds for each from the royal exchequer for this purpose. Instituted by Henry VI in 1429, the aim was to ensure the defence of the Pale.

founded by St MacCuilin during the latter part of the fifth century.[25] Only the round tower survives from the earlier period, not surprisingly, as the monastery was sacked in 1069, 1089 and 1133. Rising almost 27m from the present ground level it has been incorporated in a most mysterious way into the fortified belfry and accommodation tower of the fifteenth century. The original church has long since been destroyed but was similar in plan to the fortified church of St Mary at nearby Howth, where the plan is one of a rectangular nave of two aisles separated by an arcade of seven arches. Now replaced by a nineteenth-century church, the belfry at Lusk retains its fifteenth-century appearance. Measuring 3.7 x 4.3m at its base, it has a slight batter with three contemporary towers incorporated into the north-west, south-west and south-east angles. They are integrated with the belfry and open into its main body. The round tower was used as the corner tower at the north-eastern angle. Although adjacent to and contiguous with the wall of the belfry there is no communication between the two and hence it is not a true corner tower. There is no archaeological or architectural evidence to suggest that entry into the round tower could be achieved from any of the four storeys of the belfry. The batter of the round tower also isolates it from the fighting platform and its only entrance is from the doorway that faces east into the churchyard.[26] Whatever the architectural merits of this fusion of the two structures, it is a curious arrangement. The belfry is undoubtedly fortified, as the many narrow loop-holes, putlog holes for hoarding and a crown of Irish battlements testify. The round tower adds nothing to this defensive capability. Although the four storeys would have been able to shelter a considerable number of people in times of trouble, no fireplaces or garderobes have been identified to make permanent residence likely.

Whilst Lusk is the finest example of a fortified west tower, many others were attached to churches throughout the Pale. McMahon regards it as a more ambitious work than the nearby tower at **Balrothery** where a similar belfry has a circular staircase tower at the south-east and it probably represents the end stage in the evolution of these towers.[27]

It is not possible to have an accurate picture as to how many of these towers were built in the late Middle Ages in the Pale. It has been estimated that approximately sixty, many ruined, can be found in north Dublin alone. None, however, form any relationship with the boundary wall of the Pale.

Churches with habitable and fortified west towers are found outside the Pale, although the numbers identified are far fewer. There are a number of explanations for this. Many mediaeval Irish churches are now so ruinous that they are overgrown, unrecorded and ignored. Others have suffered from neglect and stone-robbers or the hands of restorers.

A fine example is to be found in Co. Westermeath just south-east of Lough Derravaragh, approximately 11km by road north of the town of Mullingar. Here stands the disused church of **Taghmon**. Despite a lack of historical records this is an important church for two reasons; it is one of the very few churches that has undergone detailed archaeological examination and restoration, and its western defensible residential tower has all the hallmarks of the ubiquitous

[25] The plan of the double earthen circumvallation can still be made out if the curved street patterns are followed.

[26] It is now at ground-floor level due to the heightening of the churchyard.

[27] McMahon (1991: 9).

tower-house.[28] The annals record that it was attacked and burnt in 1452; the present fortified church appears to have been rebuilt later in the fifteenth century, although it was reported ruinous by Bishop Ussher during his tour of the parish churches of Meath diocese in the early part of the seventeenth century. Reputedly restored in 1847, it was surveyed and restored in 1928.[29]

Tower-houses have a number of features that are more or less constant throughout Ireland. Of rectangular form, there is usually a batter to the walls, frequently with a talus at the base; the accommodation rises storey by storey from the stone-vaulted basement. Frequently a second vault supports the fourth or fifth storey with its battlemented parapet. The ground-floor entrance is low and narrow and is frequently defended by an overlooking machicolation. Loop-holes, small and narrow, cover all approaches. The fortified appearance is unmistakable.[30] This arrangement is closely followed in the west tower of Taghmon church. Of a slightly later date than the nave and chancel, the rectangular tower, measuring 5.6 x 7.9m, has its shorter sides flush with those of the nave. It conforms to the above typology in every detail bar one: there is no projecting machicolation. There was no need, however, as the tower was entered from the church by a newel staircase that passed through all four storeys to the fighting platform. Built in the north-west angle of the tower, it spirals in a clockwise direction. The vaulted basement has a separate entrance from the church near the southern doorway of the nave, now blocked. The first two storeys, with wooden flooring between, accommodate a living room and a bedroom. The former contains a fireplace and two windows with an internal splay for seating, the latter a garderobe in a small room off. This bedroom is stone-vaulted and contains a third room over. Leask's plan indicates that the typically Irish battlements hid the line of the pitched roof. With walls that are almost 1.5m thick, the tower rises to a height of 14.5m.

The rectangular church is very plain, with an external measurement of 14.5 x 7.9m. The walls are of equal thickness to the tower. A slightly pointed barrel vault roofs the whole church and is surrounded by a parapet with stepped battlements, thus forming a fighting platform reached by a doorway from the newel staircase at third-floor level. The presence of corbels and a small window that runs through the lower part of the vault suggests that there was a room above the nave reached again from the tower staircase at first-floor level. Lit by two small ogee-headed windows in the northern and southern church walls, the outward appearance of the church strengthens the impression that this is a substantial fortification.

Although opinion is still open as to whether tower-houses had any attached buildings other than an enclosure wall or bawn, Taghmon mirrors closely **Coolhill Castle**, Co. Wexford.[31] This is one of a group of small castles in the south-east of Ireland where a fortified

[28] Craig (1982: 96) suggests that the tower-house was the most common form of stone building in Ireland. We should treat his figures of 200 in the Pale and 2800 in the rest of Ireland with some caution. They may however offer some explanation as to why the fortified church was less common outside the Pale.

[29] The study by Leask (1955–60) describes this survey in great detail. He records that local tradition has it that Cromwell slept in the church when he was besieging the nearby castle of Taghmon.

[30] Craig (1982: 71).

[31] McNeill (1977: 221–4) debates this issue.

hall is attached to a tower-house. There is a remarkable similarity in design between the two. That Taghmon was a castle converted into a church at a later date is unlikely as the tower here is a later addition. Coolhill dates from the sixteenth century and had its two-storey fortified hall added to its tower at a slightly later date. It is possible that Coolhill and its neighbours were, however, converted from fortified churches as there are a number of examples of churches being converted to secular fortifications.[32]

The preceptory of the Hospitallers at Kilteel, Co. Kildare

Both the Hospitallers and the Templars established their preceptories or commanderies throughout Ireland, with the exception of Connaught. Almost monastic in plan and organisation, they were military establishments serving a number of functions. Acting as recruiting and training centres for the religious orders, they were frequently fortified to aid Anglo-Norman subjugation of the Gaels. With increasing granting of land they became administrative centres for their estates. Unfortunately there are no remains of any significance, with the exception of the preceptory at Kilteel. This is an important fortification as it played a significant role as a border fortress in the later Middle Ages, located as it is in the south-west corner of the Pale, a strategic position between the Irish in Wicklow and the Anglo-Normans in Kildare and Dublin.

Granted to the order in 1212, today there are no remains earlier than the fifteenth century and these are confined to a tower-house and attached gateway, both structures now forming part of a farmyard. The tower-house is of classic type overlooking the gateway entrance. A spiral staircase reaches to the roof and barrel vaults cover the basement and fifth storeys. Nothing remains of the enceinte today but preceptories invariably had a surrounding fortified wall strengthened with towers and enclosing barracks, stables and a church. Suppressed in 1541, it fell into disuse and its neglected and ruinous appearance today gives little insight into the bustling efficiency of these Irish outposts of the Hospitallers of England.

Summary

Ireland is an island where both fighting and praying were essential components of life. Left behind is a vast array of differing ecclesiastical fortifications that date from the introduction of Christianity up to the dissolution of the monasteries in the sixteenth century. They were widespread throughout Ireland but sadly most have disappeared or are ruinous.[33] Few have received detailed archaeological examination and as a consequence our knowledge is very limited. Comparison between the priories of Kells and Athassel shows how much has been lost by neglect over the centuries. Both were of a similar design but the contrast is marked when their present state is compared. The continual use of graveyards, even those of ruined churches and monasteries, has precluded much archaeological excavation, but, paradoxically, may be the reason why so many round towers have survived for almost a thousand years.

[32] The church near the round tower at Timahoe was converted into a secular fortification.

[33] Craig (1982: 81) states that of the 160 priories known to have existed, fewer than fifty have any identifiable remains.

Widespread fortifications were needed on account of the inherent instability of the country. Endemic insecurity led to massive building programmes century after century, leading not only to buildings unique to Ireland but to solutions again uniquely Irish. Abbots and priors, acting in place of the absent or ineffective nobility, out of necessity created attached fortified complexes for civil and ecclesiastical communities through the efficient but unpopular method of 'coign and livery'. Cashel is an ecclesiastical ensemble that has, fortunately, survived in a good state of repair and gives tremendous insight into how military architecture became a necessary part of a religious establishment for centuries.[34]

The full extent of ecclesiastical fortifications will never be known. That so many remain leads to speculation. As Stalley writes 'the massive walls and towers at Kells may in fact be more typical than is often imagined'.[35]

[34] Even Cashel has received no specialised survey or detailed publication.

[35] Stalley (1987: 150).

3
THE CRUSADES

Introduction

The creation during the Crusades of the religious military orders with their communities of armed monks led to a new form of Western military architecture. The desire to live a celibate, religious and reclusive life had to be tempered with the demands of a military role. The orders needed castles, but the castle did not provide the monastic environment that the orders required. The resultant need for a building with two-fold function produced the 'domus conventualis' or conventual castle. Built throughout the Holy Land, the Iberian peninsula, the Baltic and Prussia the architectural form was influenced by military need, the resources available and the support given by Church and State.

For over three hundred years, the conventual castle adapted to changing situations but always maintained its monastic role as long as it was in the ownership of an order. Externally frequently indistinguishable from the secular fortifications of the period, it was the internal arrangements that differed markedly; the monastic plan was always adhered to as far as military considerations allowed.

Wherever the orders went the Church hierarchy was never far behind. When answerable only to the pope, the powers of the orders needed checking and the archbishops and bishops assigned to this task needed their own seats of power, leading, particularly in the Baltic, to the capitular castle or fortified residence of the bishop and his canons.

An offshoot of the Crusades in France and the Iberian peninsula was the fortification of huge cathedrals by their bishops, either as part of a defensive system or as an expression of power.

Finally, in the wake of the Crusades came the re-establishment of the pilgrimage. Often located in vulnerable regions, especially in the Holy Land, the pilgrimage sites needed physical as well as spiritual protection, usually provided by the monastic order entrusted with their safekeeping. Fortification was one of the ways in which this was achieved.

Each of the chosen Crusader regions and periods needs to be examined in turn as, although the basic need for ecclesiastical fortifications was similar, there were considerable variations in the reason, development, manner and style of their construction.

The Holy Land

For centuries pilgrimage to the Holy Land had been very popular amongst Christians and, on the whole, the Islamic rulers were tolerant, not only of these Western pilgrims, but also of the minority indigenous Christian population. From time to time, however, there were rulers who attempted to interfere with Christian access to the pilgrimage sites. One such was the Fatimid caliph al-Hakim, who destroyed many churches, including the church of the Holy Sepulchre

in 1009. Building over the rock of Calvary and the tomb of Jesus caused much shock and distress in Europe, and anger simmered, especially as more and more sacred monuments were destroyed. During Roman and Byzantine times many of the important Holy Places had churches built over them; many now became desecrated.

Coincidentally, the Byzantine emperor, increasingly fearful of the Seljuk Turks after the Byzantine defeat at the Battle of Manzikert in 1071, and without the resources necessary to protect his empire, appealed in March 1095 to Pope Urban II for help.[1] The timing could not have been more fortuitous for Urban.

In the Iberian peninsula Christians had fought Muslims for centuries. The capture of Toledo in Spain in 1085 by King Alphonso VI of León was to prove a turning point in the Christian Reconquest.[2] The opportunity to mobilise Europe against Islam in the Holy Land and the Iberian peninsula was one that Urban quickly seized; he made his 'call to arms' by proclaiming the First Crusade on the 27 November 1095. Such was the enthusiasm of the Christian West to make war on Islam that the first army left for Palestine in early 1096. Reverses and hardship were such that, by the time Jerusalem was captured on 15 July 1099, the granting of mercy was not a consideration for the Crusaders: the Muslim and Jewish populations were brutally massacred.

The origins of the military orders of the Templars and the Hospitallers and the development of the conventual castle

After the capture of Jerusalem, many members of the conquering army went home, leaving the remnant occupying a small area of the Middle East, surrounded on all sides by a hostile and wounded Islamic world. Supplies had to be obtained locally or imported by sea, so helping to re-establish the pilgrim trade. Despite being an occupying force, Christian manpower to defend their acquired lands was woefully short; pilgrimage to Jerusalem remained perilous.

The establishment of Christian states in Palestine and Syria after the First Crusade had not made the roads safe, and the need to protect pilgrims, arriving in ever increasing numbers, led to the formation of the first of the military orders in 1118 by Hugh de Payens. His order of knights combined a protective role towards pilgrims with a strict and celibate religious life. The appropriation of the third-most sacred site of Islam, the Dome of the Rock (Templum Domini, the Temple of the Lord) and the neighbouring Aqsa mosque for the headquarters of the order led it to become known as the Order of the Knights of the Temple, or simply the Templars. The rules of the Cistercians were adopted and the order given papal approval in 1128.

A charitable brotherhood had already existed in Jerusalem before the First Crusade; based at the hospital of St John the Almoner, it served to provide shelter and succour to pilgrims, especially those who became sick. It soon became an independent military order, that of the Knights of St John of Jerusalem, more commonly known as the Hospitallers.

Both orders rapidly acquired both wealth and recruits. The knights became elite, disciplined, highly skilled and permanent brotherhoods of warrior monks. By the middle of the

[1] Haldon (2001: 110) points out that it was not so much the military defeat that made Byzantium vulnerable, but rather its civil war that followed the battle.

[2] Riley-Smith (1990: 32).

twelfth century, they had assumed an important role, beyond that of helping pilgrims; the defence of the Holy Land had become paramount. Along with the soldiery of the occupying nobility they protected the roads and borders of Outremer, the Christian Middle East, against an increasingly belligerent caliphate.

Alliances and treaties were constantly made with neighbouring Islamic rulers to try to establish a peaceful co-existence, but the need for tangible forms of defence resulted in skilful and systematic fortifications.

Although castles of the nobility appeared throughout Outremer, the castles of the knightly orders departed from the classic plan of the period. They were to result in a form of castle building that was to reach its apogee in the conventual castle of Marienburg, built in the Christian northern marches of present-day Poland by the Teutonic Knights during their crusade in the north.

The vows and rules of the orders necessitated a communal monastic lifestyle. Their castles needed to cater for this; although they bought their first castles, the riches they acquired enabled them later to adapt and build castles to their own design.

In general, the Templars built on pilgrimage routes; the Hospitallers chose sites of strategic importance, in contrast to the minor nobility, who tended to build in the middle of their estates. Wherever possible, sites where natural defences could be utilised were selected.

Kennedy has pointed out that both the Templars and Hospitallers favoured the rectangular enclosure-type fortress 'because their castles were fortified cloisters'.[3] Examination of four of the early castles of the Hospitallers demonstrates how the military role of the castle was adapted for the religious needs of the order. The castles at Calansue and Bethgibelin had been acquired by the second quarter of the twelfth century. The former was a Frankish tower to which was added a hall and a curtain wall, the latter a simple enclosure castle which was reinforced with corner towers. The Hospitallers then constructed their first castle at Belmont where the rectangular enceinte, some 115 x 100m, contained no donjon or projecting towers, but had, running all round its inner aspect, a vaulted passageway supporting a refectory, chapel and dormitories. Recent archaeological examination of the interior of Belvoir Castle has demonstrated how the development of the conventual castle became perfected.

Belvoir, built on the western edge of a spur overlooking the Jordan valley to protect part of the Jaffa to Jerusalem road, is surrounded on all sides, with the exception of the eastern aspect where the scarp falls away steeply, by a dry moat measuring 20m wide by 12m deep. The excavated stone was used to build the castle. The outer enceinte, measuring 145 x 110m, was reinforced with corner and interval towers, rising from splayed bases, and contained on its inner aspect the vaulted passage introduced at Belmont, together with a huge cistern to store rain water. The switch-back road to the gatehouse in the south-east corner was protected by a huge eastern tower. Of significant importance has been the recent discovery of an inner enclosure wall containing corner towers and a large interval tower on its western aspect. This inner enclosure was for the exclusive use of the Hospitallers and contained all the requirements for a monastic life, with the addition of stables and a cistern in the central courtyard. Here were the refectory, dormitories, cloister and, over the gateway in the western tower, the chapel. Not

[3] Kennedy (1994: 57).

only is this castle likely to be the prototype for the conventual castle of the eastern Crusaders but it also demonstrates a stage in the development of the concentric castle.[4] Besieged after the disaster at the Horns of Hattin, it held out until January 1189, falling only when miners brought down the eastern barbican tower. The castle was finally demolished in the early part of the thirteenth century.

Spiteri on the other hand claims that when the castle was sold to the Hospitallers in 1168 it had already acquired its final form and that the 'popular hypothesis accrediting the concentric enceinte to the influence of a religious order' is not correct.[5] He is firmly of the opinion that the design of concentric castles was based purely on military defensive considerations. He makes the point that the castle is architecturally a 'homogenous entity' and that the inner ward could not have been built by the Hospitallers. If he is right, then the view that the concentric castle, at least in the Holy Land, enabled the minority Christian Crusaders to isolate themselves from the larger garrison of potentially unreliable levies and mercenaries is purely coincidental. That they would choose to do so is irrefutable.

Recent excavations under the eighteenth-century Ottoman citadel at Akko (Acre) has revealed the earlier conventual castle of the Hospitallers. Containing the usual chapel, refectory, cloister and hospital, the Halls of the Knights have been discovered, one for each of the seven 'langues' or nationalities represented in the order: Auvergne, England, France, Germany, Italy, Provence and Spain. The military architects of the orders had adapted the castle to accommodate the formal plan of the Western monastery.

As the two orders attracted more recruits and became increasingly wealthy, the rectangular conventual castle was replaced with much larger castles where natural defensive features became a priority consideration.[6] The conventual castle was to lose its regularity of form in order to follow the configuration of the chosen site. Halls, cloisters, refectories and dormitories were retained where possible and substantial chapels became part of the fortifications themselves.

The acquisition by the Hospitallers, in the twelfth century, of two quite exceptional castles in Syria resulted in the final development of the concentric conventual castles of the brotherhood in the Holy Land. Both remain today in excellent states of preservation and demonstrate how the skill of the Crusader military architect, together with the necessary finance, compensated, to a significant degree, for the chronic lack of military manpower.

The hill-top castle of **Crac des Chevaliers**, described by Boase as 'the supreme example, one of the great buildings of all times', stands sentinel over a fertile landscape of rolling hills.[7] Built of limestone varying in colour from white to yellow, its tranquillity and benign air belie today its turbulent past. It is altogether different from the brooding Margat, built of black

[4] These castles are not the earliest of the conventual castles. As will be shown later, the castles of Sancho Ramírez, built during the Reconquest of Spain, predated them.

[5] Spiteri (1994: 22).

[6] As will be mentioned later, this was not the case in Portugal, where the rectangular conventual castle, with the addition of a keep, remained the chosen castle of the Hospitallers: the castle of Amieira is one example.

[7] Boase (1967: 52).

basalt on top of its mountain crest. Ceded in 1142 to the Hospitallers by Count Raymond II of Tripoli, it lay on the exposed border of the County of Tripoli, and fulfilled both an active and defensive role. In the early part of the thirteenth century it had a garrison of two thousand knights, men-at-arms and archers, prepared to carry out raids into Muslim-held territory. Such was its power and apparent impregnability that the order transferred both its headquarters and administrative centre to the castle.

The Hospitallers kept possession of the castle from 1142 until it fell to Baybars in 1271, constantly adding to its fortifications. Whilst the castle is a very powerful expression of military architecture, with strong towers, box machicolations, loop-holed merlons and a well-defended entrance, it is the inner of the two concentric rings which is of greater interest. After earthquake damage in 1170, the Hospitallers rebuilt and remodelled the defences to provide a chapel, halls, the tower block of the Grand Master and a cloister/loggia in front of the great hall, all opening onto a central courtyard. The chapel, like its sister at Margat, is an integral part here of the inner enceinte. The architecture of the great hall and its cloister with ribbed vaulting and arches contrasts sharply with the surrounding plain and functional military architecture, demonstrating a strong French influence. During the summer months it must have been a welcome haven from the relentless sun. Elsewhere, delightful friezes, bosses and capitals soften the façade of the central courtyard. This monastic area of the castle has been compared favourably with Cistercian monastery buildings in Europe, although it has lost their rigidity of form.

The castle was invested by Baybars and his troops in February 1271 and such was the assault by his siege engines that the Hospitallers capitulated and surrendered the castle in return for safe passage to Tripoli. Repaired and strengthened, it remained a powerful fortification into the late Middle Ages.

Margat, built on top of a mountain overlooking the Syrian coast, combines a concentric castle with its neighbouring walled town. Bought by the Hospitallers in 1186, the ground plan of the inner enceinte suggests that this was adapted and altered by them, to become their exclusive domain within the fortified complex of town and castle. The large chapel with its flat loop-holed chevet is an integral part of the western defensive wall and abuts a large hall of two storeys adjacent to the round donjon. Kennedy suggests that it was built soon after the Hospitallers had acquired the castle and that there were constant additions and alterations to the castle over the century it was in Crusader hands.[8] Müller-Wiener examined the castle and worked out the ground plan, which identifies a number of halls and the foundations of what he believed to be the chapterhouse.[9] All the buildings of this inner enceinte are integral parts of the castle's inner defences and contain arrow loops to defend the outer courtyard and its perimeter wall.

Margat remained in Crusader hands until 1285 when it was besieged by a Muslim army. Following the successful mining of the tower on the southern spur, the garrison once again surrendered on favourable terms. It proved to be the last time that a Crusader castle was to

[8] Kennedy (1994: 173).

[9] Müller-Wiener (1966: 57). This is an exceptional book on Crusader castles with a gazetteer providing architectural details, a brief history and clear and detailed plans.

undergo a sustained and determined siege in the Holy Land, so ending an era where small garrisons in sophisticated castles endeavoured to protect the Crusader lands against a far more numerous and determined enemy.[10]

Castle monasteries of the Templars are unfortunately far more ruinous than those that belonged to the Hospitallers, possibly because their positioning has made them susceptible to stone robbers. Kennedy argues that they too favoured the enclosure castle, similarly providing a monastic core. Pringle cites the castles of La Fève and Latrun as being probably of this type.[11]

The return of the Holy Land to Islam, following the fall of Acre in 1291, resulted in the expulsion of the military orders. The Hospitallers, retreating at first to Rhodes and then to Malta, continued to be prodigious builders of fortifications.[12] The Templars were suppressed by Pope Clement V in 1312, and their possessions given to the Hospitallers. The Germanic Order of the Teutonic Knights, very much in the shadow of the two senior orders in the Holy Land, went on to develop conventual castles during their crusades in the north-east of Europe; culminating in the magnificent brick-built fortifications of Prussia, now part of Poland.

Fortified churches, pilgrimage sites and monasteries in Outremer

The revival of the pilgrimage to the Holy Places coincided with an attempt by the kingdom of Jerusalem and its neighbouring principalities to attract settlers from the West. Whilst the knightly orders took care of their temporal needs, there were too few churches and cathedrals to provide for the spiritual requirements of new arrivals from Europe; indeed it has been estimated that approximately four hundred churches were built or rebuilt during the period of Frankish rule. Churchmen from the West were installed as the patriarchs of Jerusalem and Antioch, with the establishment of archbishoprics and bishoprics throughout the conquered lands.

Necessity had brought about a change in church architecture by the Franks; the gabled roof of the West was replaced by flat roofs overlying stone vaulting; a consequence of the shortage of suitable timber for roof supports. Power rather than decoration was the trend in these early churches, reflected in the passive defence of thick walls.[13] The best remaining example of these defensive churches is to be found in the village of **Abu Ghosh**, built on the valley side opposite to the castle of Belmont, approximately 15km from Jerusalem. Built by the Hospitallers in 1142, it is a rectangular triapsidal church measuring 22 x 30m with walls up to 3m thick. The central nave and apse rises above the flat roofs of the side aisles and the narrow lancet windows are typical of a defensible church. Originally the internal walls were covered in frescos in the Byzantine style now much destroyed. Built over the reservoir of a Roman

[10] Kennedy (1994: 179).

[11] In the introduction to Lawrence (1988: xxxii).

[12] Spiteri (1994). This book deals in great depth with all the fortifications of the Hospitallers from 1136 to 1798 and includes details of the arms and armour of the knights, the two great sieges of Rhodes and Malta and how the castles were garrisoned.

[13] Boas (1999: 123–4).

legionary fortress, the architect incorporated the spring into his church. Although in use as a church for only a short time, its solid construction has ensured its survival.[14]

The contemporary cathedral church of **Tortosa** (now the small Syrian coastal town of Tartus) has more active fortifications. Famed because it was built over the reputed site of the first altar built in honour of Mary, it regained its popularity as a pilgrimage site when the church once again enclosed the sanctuary of the Virgin. Recently restored, the austere loop-holed exterior still points to its obvious military role as a garrison church of the Templars. Conceived from the outset as a fortress church, it has heavily buttressed walls and a western façade in the manner of Abu Ghosh. The plain functional exterior hides an interior that is a splendid example of early French Gothic architecture. Captured by Saladin in 1188 and subsequently converted into a mosque, it was regained by the Crusaders and pilgrim donations enabled the nave and western façade to be rebuilt with the same thick walls and narrow lancet windows of the earlier twelfth century eastern apsidal façade. Such was the importance of this pilgrimage site that a decision was made by the Templars to enhance its defences, and Notre Dame of Tortosa was enclosed within the newly built town walls. When Tortosa was threatened by a perceived Mamluk invasion in 1265 the town defences were strengthened and two purely military loop-holed towers were built on either side of the triapsidal eastern frontage of the church subsequently incorporated into the town walls. To no avail, however: Tortosa fell after a brief siege in 1291 and the knights fled to Cyprus, taking with them the reliquary of the Virgin.

The massive donjon of **Chastel Blanc** rises above the coastal hill-top town of Burj Safita in southern Syria. In visual contact with the neighbouring castles of Crac, Margat and Tortosa, it was originally the donjon of a Templar castle on the border between the County of Tripoli and the mountainous lands of the Assassins. Dating from the early part of the thirteenth century, repairs were carried out by the Templars after the earthquake damage of 1170 and 1202. Only the donjon remains of the castle, now obliterated by the enveloping township, epitomising the fusion of religious and military architecture designed from the outset to combine church with keep.

Rising 27m from its base to the remaining crenellations, it is the tallest of the surviving Crusader donjons. Of two stories, the ground plan measures 30 x 18m with walls 3m thick. A staircase, in the thickness of the wall at its north-west corner, leads to the first storey and the flat roof that served as the fighting platform; surrounded by loopholed merlons, grooved to receive wooden shutters for the protection of archers, war engines could cover all approaches to the donjon.

The solitary western entrance, originally defended by a barbican in the inner ward, is further protected by a murder hole in the barrel-vaulted ceiling of the ground floor that is occupied by a simple apsidal church, lit by high and narrow lancet windows. The upper floor, roofed with groin vaults and divided by a central row of pillars, served as the twin aisled hall of the knights, again lit by narrow windows used as arrow slits. Although the castle well is found in the barbican, the first bay of the church covers a large rock-cut cistern.

Although the military architecture belongs to the early thirteenth century – there are, for

[14] During the Ottoman rule of the nineteenth century it became home to a bandit of the Abu Ghosh clan who extracted protection money from pilgrims travelling to Jerusalem.

Image not available

example, no putlog holes for wooden hoarding, or evidence of machicolation – this is a mighty donjon church, and demonstrates the architectural symbiosis combining the Templar need for powerful fortification with monastic retreat. Although increasingly sophisticated donjon churches continued to be built in France during the ensuing centuries, the sheer power of Chastel Blanc was never equalled.[15]

Rural settlement by Western Christians was not successful and those few villages built for immigrants were abandoned as indefensible when Saladin invaded in 1187. For safety Crusaders preferred to live in fortified towns or in the lee of their castles.[16]

Few monasteries remained from the Byzantine era and these, under the auspices of the Orthodox Church in Constantinople, were in Galilee, Judaea and Sinai. New, Catholic, monastic communities were established to take responsibility for the Holy Places, involving all the major European monastic orders; along with fortifications, the construction of religious buildings had become a priority. Enough archaeological and architectural evidence remains to show that fortifications were more likely to be incorporated into the fabric of monasteries than of churches, most of which were built in urban areas. In contrast, many of the Holy Places were in exposed or isolated spots; fortification became mandatory.

Well outside the protection of the city walls of Jerusalem, built at the foot of the slope of the Valley of the Cross, is the fortified monastery of the **Cross**, so named because legend says that the True Cross was made from a tree once growing here. Such is the height of the buttressed walls that only the silver dome of the church and the later belfry indicate the religious nature of this Crusader shrine. Built on the ruins of a fifth-century church, it was destroyed by the Persians in 614 and rebuilt in the twelfth century, receiving a fortified perimeter wall in view of its vulnerability. Entered through a low portal in the eastern wall the courtyard is surrounded by staircases and pathways leading to the monastic buildings arranged against the massive walls. The central twelfth-century Crusader church has a vaulted ceiling and a dome above the altar, although the tower is baroque.[17]

Mount Tabor, rising 600m above the plain of Jezreel 10km east of Nazareth, has been associated since the fourth century with the Transfiguration of Jesus, an event of extreme and mystical importance to the Eastern Church. Whilst Tabor is not specifically mentioned in the relevant biblical passages it became established tradition when Cyril of Jerusalem, writing in 348, firmly placed the Transfiguration as occurring on the mount.[18] Originally, the mount was fortified during the Jewish revolt against Rome, but the first church was not built until the early Middle Ages. This early Byzantine Church was probably in ruins by 1099 when Tancred encouraged the Benedictines to re-establish the mount as a pilgrimage site. Attacked by the

[15] Cruas, in Ardèche, and Rudelle, in Lot, are examples from the thirteenth and fourteenth centuries and show how arch and box machicolations were incrporated in the defence of these donjon churches.

[16] Riley-Smith (1990: 40).

[17] Believed to have been given to the first Christian king of Georgia by Constantine, it remained in Georgian hands during the Crusader and following Islamic period until the eighteenth century when the Greek Orthodox Church acquired it. This monastery, together with the Georgian monastery on Mount Athos, helped to sustain Christianity in the Caucasus during times of great tribulation.

[18] Matthew 17; Mark 9, 2–13; Luke 9, 28–36.

Seljuks in 1113 the monks were massacred and their buildings destroyed. Undeterred, the Benedictine response was to rebuild the church and monastery, surrounding the buildings with a wall reinforced with twelve towers. Although they proved strong enough to resist a siege by Saladin in 1183, the disaster at Hattin necessitated its capitulation four years later. Further fortifications were added in 1212, on the orders of the caliph of Damascus, in response to the threat of the Fourth Crusade. The provocation posed by the presence of this Islamic fortification on the Mount of the Transfiguration was to lead to the Fifth Crusade. Although a siege of seventeen days in 1217 by the Crusaders failed to take the fortress monastery, the caliph, realising how antagonistic his actions had been, ordered the defences to be slighted; substantial portions remain, however.

The fortification of religious buildings was a direct result of repeated Muslim raids that produced a precarious and threatening environment for Christians determined to protect and guard their revered Holy Places. They were, on the whole, successful until the loss of the Holy Land.

The Iberian peninsula

The Reconquest of the Iberian Peninsula was a desultory process taking over six hundred years. It resulted, however, in the building of hundreds of walled towns, castles great and small, and cathedrals and monasteries to protect a constantly changing but always exposed frontier.

The Berber army that had crossed into Spain from North Africa in 711 had met with little resistance from the Visigothic kingdom. Pushing Christian refugees north, the Berbers had within two decades occupied the whole of the Iberian peninsula, with the solitary exception of a small Christian enclave. This tiny Christian kingdom of Asturias, initially occupying a mountainous region no greater than 65 x 50km around the present-day city of Oviedo in northern Spain, almost immediately began the campaign to regain the lost lands, under the Christian banner of St James. Progress was very slow, taking two hundred years for the Christian forces to reach the River Douro. By 914 most of Galicia, León and northern Portugal had been reclaimed for Christianity. Between the lands of the two opposing cultures and religions lay a dangerous, depopulated and uncultivated no man's land. Resettlement began to be organised by monasteries, individual nobles and a free peasantry.[19] Settlements were built in easily defended places where the population combined an agrarian role with soldiering.[20]

The fragmentation in 1002 of the independent caliphate centred upon Cordoba reduced substantially the ability of the Moors to resist renewed Christian advances.[21] Replaced by 1031 by thirty disparate Taifa petty states, often at odds with each other, Alphonso VI, king of León, seized his opportunity and captured the important city of Toledo from the Moors in 1085,

[19] Riley-Smith (1990: 32) points out that warrior settlers were organised from abbeys and names Sahagun in particular.

[20] Bartlett and Mackay (1989: 49–74) describe in detail the resettlement and organisation of the ever-changing frontiers in Iberia. The settler-soldier role became imbued in Spain's approach to frontier settlement and continued in the frontier region of Spanish North America centuries later where the soldiers of the frontier presidio forts were also settlers of the region.

[21] The name 'Moors' is generic to Berber and Arab settlers originally from North Africa.

galvanising the Taifa leaders into asking for help from the Almoravid rulers of north-west Africa. Their response was rapid; Alphonso was defeated at Sagrajas in 1086 by the Almoravid caliph Yusuf ibn-Tashfin, who united the weak Taifa states and incorporated Muslim Iberia into the Almoravid Empire, now ruled from Cordoba. Resistance increased and the Christian Reconquest stuttered.

The Christian north was becoming increasingly prosperous and wealthy, however. Frankish merchant adventurers were beginning to settle in the towns springing up north of the River Douro; Cistercians arrived to build their monasteries. The biggest stimulus to the economy, however, was the increasing popularity of the pilgrimage to Santiago de Compostela; here the relics of the Apostle James were kept in the cathedral built over his supposed tomb. This pilgrimage soon became the third-most important after Rome and Jerusalem; this latter had become increasingly hazardous and many pilgrims from France and northern Europe chose Santiago as their preferred destination. Whilst Pope Urban II channelled most of his preaching in Europe towards the launching of Christian armies in a crusade against the occupied Holy Land, he was well aware of what was happening in the Iberian peninsula.

Sancho Ramírez and the origin of the conventual castle

Although the region between the Rivers Douro and Tagus had been secured before the end of the eleventh century, the crossing of the River Elbro in the north-east of the peninsula south of the small kingdoms of Navarre and Aragon still eluded the Christians. The papacy saw its opportunity and offered its support to Sancho Ramírez, the king of Aragon, and to any European knights and foot soldiers prepared to help him regain lands lost to Islam. Thousands of French adventurers, motivated by a combination of religious zeal and materialistic opportunity, joined Sancho and his army. As a consequence, the acquisition of the Moorish emirate of Saragossa together with the unification of Aragon and Catalonia resulted in a kingdom that by the middle of the twelfth century rivalled that of its neighbour, the powerful kingdom of León.

Sancho, as he progressed southwards, acquired and built castles as he went along. The acquisition from the Moors before 1070 of the castle of **Loarre** brought about a fundamental change in the design of castles when he installed as custodians a community of Augustinian monks, at first sight a strange decision. Sanctioned by a papal bull of Alexander II of October 1071, the king, with the aid of the abbot of San Juan de la Pena, now had to provide for both monk and soldier in his castle. The castle now had a monastic role to fulfil, anticipating that of the conventual castles of the military orders of the Templars and the Hospitallers in the Holy Land.

Examination of this Romanesque castle shows how this was achieved. First mentioned in 1030, it was probably built by the Moors; following its capture by Sancho it was the most exposed outpost of the expanding kingdom of Aragon and was in need of new and stronger fortifications. By rebuilding, Sancho produced one of the finest castles in Spain, a supreme example of military architecture, incorporating lodgings for his monks and a church that was to become one of the best examples of Spanish Romanesque ecclesiastical architecture.[22]

[22] Whitehill (1968: 249) claims that the church of Loarre, the Silos cloister and the cathedral of Santiago are the 'greatest achievements of Romanesque Spain, worthy of comparison with the best contemporary monuments of any country'.

The site of the castle was an important consideration for Sancho. It was built on the top of a great rocky outcrop in the foothills of the Pyrenees, 40km north-west of Huesca. Thus it dominated the plain of Aragon, still occupied by the Moors, and was opposed by their castle of Bolea, one of a series of castles built by the Moors to protect their great city of Huesca.[23] Loarre is well preserved and unadulterated by later additions; it is a homogenous building of the late eleventh and early twelfth centuries. The natural defensive features of the rock are used in the construction of the castle. From the stonework two distinct building periods can be identified; the earlier western part of the castle containing the keep is built of small-sized rough-hewn stone; the eastern buildings are later. Built of fine ashlar, the magnificent castle church is found in the south-eastern corner of the castle. Entirely of one period, the semi-circular apse together with the dome of the crossing harmonises with the much more austere fortifications and proclaims that the church, like the castle, is impregnable, home to both the zealous Spanish knight and his Augustinian brother.

Sancho Ramírez built other conventual castles in which he installed Augustinian monks and although there are scant remains today, the role that **Montearagon** played is significant. Huesca, as long as it remained in Moorish hands, posed a threat to the territorial ambitions of Sancho. He started to build the castle of Montearagon in 1085 on a hill overlooking the city. Completed within three years, it imitated Loarre in containing a church and conventual buildings for the complement of Augustinian monks installed by Sancho in 1089. This highly symbolic castle and church affronted Huesca and was used as the siege castle by the Aragonese king. He was not to see the successful outcome, however, as he died shortly after the siege began; his remains were initially interred in the castle church, but his enduring legacy is the castle of Loarre.

The conventual castles of the military orders in Spain

Following the capture of the city of Toledo, in the very heart of the peninsula, the Almoravids made repeated attempts to retake it from the Castilians. These unsuccessful and costly expeditions sapped the vitality of the Muslim leadership, which was overthrown by the heretical Almohads from north-east Africa in 1140. The next decades were to witness significant changes in the Iberian peninsula. Muslim upheaval was mirrored in the Christian kingdom of León, resulting in its division into the kingdoms of León, Castile and the embryonic kingdom of Portugal. The pope encouraged King Alphonse VII of Castile to equate the ongoing Reconquest with a second crusade; finally the international orders of the Hospital and the Temple were invited into the peninsula to aid the crusade, with the promise of estates and castles. The great age of castle-building in Spain and Portugal was about to begin.

By around 1320 most of the Almohad possessions in Spain and Portugal had been lost to the Crusaders and a string of castles stretched from the Eastern Mediterranean coast to the Atlantic; only Granada remained in Muslim hands.[24] Wherever sited and however impregnable

[23] Glick (1995: 17) describes a 'system' of castles in the Huesca region including the six castles of Ayerbe, Bolea, Sen and Men, Santa Eulalia la Mayor and Labata that protected the north of the city. All provided fortified accommodation for a refugee population.

[24] Bartlett and Mackay (1989: 74) describe the Christian 'defence in depth' achieved by the strategic siting of their castles.

and powerful, they differed from the castles of the king and his nobility in two fundamental ways; women were not allowed to stay in the castle precincts and rooms resembling those of a monastery were provided for the warrior monks. As in the Holy Land, refectories, dormitories and chapter houses were ubiquitous; cloisters, with rare exceptions, had been sacrificed for reasons of defence. There was no difference, however, in the application of military architecture, other than as constrained by finance and geography.[25]

Although the Templars and the Hospitallers had established an early presence in the north, protecting pilgrims on their way to Santiago, the situation in the Holy Land limited the number of knights available to participate in the Reconquest. Their influence and inspiration were, however, enormous and led to the formation of the Spanish military orders of Calatrava, Santiago and Alcántara in the second half of the twelfth century.[26] By the end of the thirteenth century they had become owners of many castle convents throughout central and southern Spain and Portugal.[27] Of all the castles built by the military orders in Spain, two, the conventual castles of Calatrava la Nueva and Miravet, serve as examples.

Built by the order which gave it its name, the castle of **Calatrava la Nueva** was started shortly after the Christian victory in 1212 of Las Navas de Tolosa, and became the 'Sacro Convento' or new seat of the Knights of Calatrava. Probably completed by 1226, the conventual castle crowns a steep-sided hill 25km south of Almagro, and protects an important pass into Andalucia; although partially ruined, it keeps many of its early-thirteenth-century features. Built from coursed but rough-hewn volcanic stone of varying hues, the whole castle imparts a yellow-orange glow in sunshine, softening what is a powerful but architecturally plain fortification when viewed from the foot of the hill.

The trapezoid outer enceinte skirts the rim of the plateau that tops the rocky hill and is formed by a double wall on all but the western side. The bailey is extensive, containing in its south-east corner an inner enceinte surrounding the keep, home to the Grand Master, the monastic buildings and the church. Built in the style of thirteenth-century Cistercian architecture the church, like the fortifications, is of volcanic stone, again coursed with imaginative use of brick in the façade. Supported by round corner and semi-circular buttress towers either side of the arched portal, the rose window, so typical of the Cistercian church, now lacks its tracery. The central nave with aisles on either side leads to the central hexagonal apse of the chancel with neighbouring semi-circular apses of the side aisles. The roof is constructed of rib-vaulting with a red brick infill. The monastic buildings lie adjacent to the church and comprise a refectory, a chapter house and a brick-built cloister dating from the fifteenth century when the Reconquest was coming to a close. This is a large and very powerful conventual castle and was the base for further expeditions against the Moors. Of all the conventual castles Calatrava la Nueva exemplifies best the marriage of monastery and castle. It

[25] Tejada (1999: 25).

[26] Weismüller (1967: 190–223) gives a succinct history of the Spanish orders.

[27] The different orders had their own spheres of control and operation; the Hospital was mainly active in Aragon, Calatrava in central Castile, Santiago in the south and west of Castile and southern Portugal and the Templars in Aragon and central Portugal. Their boundaries were not fixed, however, and the distribution of the castles indicates a significant degree of co-operation.

remained in the hands of the order until they were forced to abandon it in the early nineteenth century.

During the middle years of the twelfth century the Reconquest, down the eastern seaboard of Catalonia, waged successfully by Berenguer IV, count of Barcelona, received significant aid from the Templars. The Moorish castle of **Miravet**, despite the Christian conquest of the surrounding area, held out until 1153. This castle together with others was given to the Templars, who completely rebuilt it in the later twelfth century. Occupying a strategic position on the north bank of the River Elbro, inland from the estuary town of Tortosa, it departs from the usual Templar plan. The rocky hill on which it is built slopes downwards west to east and the castle adapts to the geographical contours. The higher, western part, is occupied by the exclusively Templar fortified convent, where the rectangular pattern with corner towers is followed. Built of ashlar blocks, the exposed western wall, still 20m tall without its crenellated parapet, is reinforced with a central rectangular tower. The enclosed courtyard, 50 x 33m, contains the barrel-vaulted church dedicated to Our Lady of Grace, the refectory, dormitory and chapter house. Departing from the concentric plan, two baileys, one below the other, run down eastwards; the upper contains the angled gateway, protected by the north-eastern tower of the citadel, and a huge cistern. The lower bailey has weaker fortifications but has natural protection from the steep sides of the hill. Again, the Templars were able to lead their isolated monastic life, separated from castle servants and men-at-arms.

The fortress monasteries of the kings

The tradition of fortress monasteries begun during the Reconquest continued after the Moors were expelled. Although the fortifications of many were maintained and updated the function of a number of these monasteries changed. The kings of Spain and the ecclesiastical hierarchy had closely co-operated together for centuries during the Reconquest and wherever territory had been regained fortress monasteries were built to ensure military and spiritual permanence and security. It is not surprising therefore to find that a number of these powerful fortresses had royal palaces built within the fortified enceinte.

In some instances, especially in the early years, the monastery and palace were built together and fortified, symbolising not only the interdependence of State and Church but also proclaiming royal domination. Oviedo was the capital of Asturias at the commencement of the Reconquest and had been fortified at the start of the ninth century by Alfonso the Chaste (791–812) against the Arab threat. His enceinte enclosed not only the town but also his palace and a monastery.[28] Cathedral and palace were as one.

Although there are no remains from the complex built by Alfonso Spain has a number of fortress monasteries to which were added palaces and residences for the king and his entourage. The supreme example is to be found at **Poblet** in Catalonia. Ramon Berenguer IV, king of Catalonia, gave thanks to God after his defeat of the Moors and the recapture of Catalonia by founding the monastery in the middle of the twelfth century. It developed and was added to over the centuries, under continuing royal patronage to become the massive fortress seen

[28] Braunfels (1972: 192) describes it as the 'antigua acropolis religioso-politico'.

today. Used by successive kings as they travelled around their domains and as a religious retreat, the walled complex contains the Cistercian monastery, laid out on classical lines, royal apartments, churches and a lay settlement. St Maria de Poblet consists of three enclosures each surrounded by a fortified wall. The outer perimeter wall, over 2km long and reinforced by twelve towers, protected the peasants and workmen employed by the monastery. Here were built the monastic grange, workshops and habitations. Religious needs were not forgotten. The chapel of St George was built in 1452 for use by layworkers.

An avenue leads to the fifteenth-century fortified Golden Gate where the king dismounted to kiss the relics of the True Cross presented to him by the abbot before entering the second enclosure. This contains some of the monastic dependencies and the thirteenth-century chapel of St Catherine. The Royal Gate, flanked by two huge machicolated towers, is part of the 600m long fortified wall, built by the Catalan king Peter the Ceremonious in 1366 to enclose the monastery and royal apartments. The community prospered for centuries but decline set in in the seventeenth century, and it suffered particularly during the Napoleonic Wars. When religious orders were suppressed in Spain in the first quarter of the nineteenth century its riches were sold. Restored in the twentieth century, it returned once again to the Cistercians.

The ultimate fusion of monastery and palace was achieved by building the Escorial in Madrid, again in celebration of a victory, this time by Philip II over the French in Flanders in 1557. Fortifications were, however, superflous.

Portuguese independence and the establishment of the kingdom: castles and cathedrals

The establishment, between the Rivers Minho and Douro, of the Portucalenese county, given as a dowry by Alphonso IV, when his daughter Teresa married Henri of Burgundy in 1095, led to the formation of the kingdom of Portugal. In 1140, their son, Alphonso Henriques, threw off his vassalage bonds imposed by the king of León and Castile. The fortuitous passage down the Atlantic coast of ships carrying East Anglian, Flemish and German reinforcements for the crusade in the Holy Land, which stopped off and helped him capture Lisbon in 1147, enabled Alphonso to extend his kingdom at the expense of the Moors.[29]

The invitation given to the Hospitallers and the Templars by the king of Portugal to aid him in his drive south resulted in the building of many conventual castles in central and southern Portugal. The period from 1170 until the conquest of the Alentejo plains and the final expulsion of the Moors from the Algarve in 1248 was an especially prolific period of fortress construction.

The castle of **Amieira**, built in the second half of the fourteenth century by Don Álvaro Pereira, prior of the Hospitallers, is typical of these grim and utilitarian castles. The influence of the East is seen in the rectangular plan, favoured by the international orders in the early years of the crusade to the Holy Land and continued in Portugal. Square towers reinforce the

[29] Anderson (1980: 150–1) gives an account of the siege and the engineering feats of these northern recruits to the Holy Land. A graphic account is given of the Moorish sally and attack upon a stranded and isolated English siege tower.

corners; that at the north-east angle was built larger and taller than the others and served as a keep and residence of the commander. The donjon tower now becomes part of the fortified enceinte of the convent.[30] A square barbican, enclosing the later chapel of St John, encloses the outside walls of the keep and the nearby entrance to the castle. Built of coursed, roughly dressed granite, with large ashlar blocks as quoins, the castle dominates the attached township and the neighbouring countryside. The courtyard, now devoid of any internal structures, still contains the spring-fed cistern, and would have contained the chapel and conventual buildings, constructed from wood. The wall walk of the crenellated parapet passes through each of the four corner towers. This simple enclosure castle, devoid of any sophisticated defences or embellishments, demonstrates a swift and pragmatic approach by the Knights of the Hospital in the need to speedily build purely functional castles to protect newly acquired lands and attract Christian settlers.[31]

The Reconquest was a national effort; the nature of the crusade ensured that Church and State were unified against the infidel. As the conquest slowly advanced southwards and the military orders built new frontier fortresses, defence of the newly created kingdom encompassed the clergy, who built a series of **fortress cathedrals** from Braga in the north to Évora in the south. Although the cathedrals of Braga and Oporto have lost most of their fortifications, enough remain at the other cathedrals to understand the nature of the fortifications and the effort put in to build these bastions of the church.

Where geography allowed, they were built on high ground to dominate the town and all had a ground plan similar to that of the cathedral in Santiago, although the size and number of bays varied. The basic plan was one of a double-towered western façade with a deeply recessed doorway leading into a twin-aisled nave. The central crossing, occasionally without transepts but usually with a tower, is replicated throughout all the cathedrals and the central semi-circular apse has similar smaller apses on either side corresponding with the aisles of the nave. Ornamentation is limited to the recessed portal and colonnaded windows of the first-floor gallery; elsewhere there are narrow lancet windows.

Today **Coimbra**, **Lisbon** and Évora retain their fortified look and were probably built by the master masons Robert and Bernard. Although Coimbra was the first capital of the kingdom, the cathedral in Lisbon is probably the oldest, started by the victorious Portuguese after the capture of the Moorish city in 1147, possibly on the site of its demolished mosque.

Both western façades have corner towers of a purely military nature; both have deeply recessed arched portals, replicated above a row of corbels at Coimbra by a recessed Romanesque window; the façade of the cathedral in Lisbon is occupied by a rose window, again above a row of corbels.[32]

[30] Tuulse (1958: 75–6).

[31] Glick (1995: 105–13) describes the building of castles in newly conquered Catalonia, ascribing approximately fifty per cent to the orders, monasteries and senior clergy. Each castle protected the settler town built in the lee of the castle. The greatest density lay in the centre, rather than on the borders of Catalonia.

[32] Many French churches have a machicolated fighting platform above the western portal running between the two towers; there is no evidence today that the corbels supported one in either Coimbra or Lisbon.

Image not available

The towers, façade, nave and, where present, the transepts are surrounded by a crenellated parapet with pointed merlons typical of Moorish military architecture. Above the side aisles runs a gallery serving as a chemin de ronde for the defence of the cathedral church. The nave roofs are barrel-vaulted and support the fighting platform; access to both gallery and roof is reached by two staircases at Coimbra: one in the south-west tower of the façade: the other near the northern joining of the nave and crossing. Both cathedrals have attached cloisters; that at Lisbon is enclosed, in part, with a battlemented wall still remaining and indicating that the cathedral fortifications included the cloister.

Coimbra was completed in 1180, but building work at Lisbon continued into the fourteenth century, following the earthquake of 1340. Whilst expressing the power of archbishop and bishops they played important roles in the defensive system of the kingdom, acting as the citadel of the town where none existed.

The crusades against the Cathars and the great cathedrals

The dualist beliefs of the heretical Cathars, or Albigensians, who believed that there were two gods, one good, the other totally evil, rose to prominence in south-west France, especially Languedoc, in the twelfth century. By the commencement of the thirteenth century so great was the following amongst the populace, tacitly supported by some noble families and even supposedly orthodox churchmen, that the pope needed to act to counter this threat to the Church of Rome. Catholic supremacy and religious control over a vast tract of land stretching south of a line from Béziers in the east to Bordeaux in the west needed to be re-established.

So great was the perceived threat that when Pope Innocent III called for a crusade in 1208, he exhorted orthodox Christians to 'attack the followers of heresy more fearlessly even than the Saracens, since they are more evil'.[33] Led by Simon de Montefort, the crusading army sacked Béziers, killing Christian and Cathar alike, destroying Cathar churches and strongholds before entering the domains of Count Raymond of Toulouse. The crusade ebbed and flowed over the next two decades until, in 1226, King Louis VIII of France saw his opportunity and invaded the county of Toulouse forcing Raymond to sue for peace, thus ensuring his overlordship of Languedoc. He was quick to encourage orthodox Christian settlers to his new domains, dispossessing the nobility with Cathar sympathies and supporting Cathar persecution by the Inquisition. Whilst these measures contributed to the demise of Catharism in the fourteenth century, the initial response to these actions resulted in a hostile environment, one in which the Church of Rome had to re-establish its authority, both secular and spiritual, in the Cathar heartland. This was achieved in the Languedoc by the building of the great fortress cathedrals of Albi, Narbonne, Lombez, Lodève and Elne, together with the fortified residences of the bishops at Albi and Narbonne.

The red brick town of Albi 'la Rouge', built on the eastern bank of the River Tarn in central Languedoc, is still dwarfed by the great **cathedral of St Cecilia**; a lasting monument to Bernard of Castenet, the second cleric appointed by the pope to the see of Albi. Despite the attention of nineteenth-century restorers it remains today the most complete of these fortress cathedrals.

[33] Barber (2000: 107).

Although not completed until the turn of the fourteenth century, the plan dates from around 1280 and was built beside an earlier Romanesque church. Situated on the highest part of the town, it is one of the most memorable Gothic monuments of the Midi. Built from brick and rising from a grand talus which surrounds the cathedral, the single-aisled church with its semi-circular apse is of monumental proportions, measuring 100 x 30m. Conceived from the outset as a fortress, the walls are supported, not by flying buttresses, but by solid half cylindrical towers rising to roof level. Each is matched internally with a narrow rectangular buttress reaching into the nave, pairs of which accommodate small side chapels. The intervening walls of the nave are pierced by pairs of windows, the lower of which are much the smaller and narrower serving to illuminate the chapels. The only entrance from the town was by a southern doorway protected by a tower and a machicolated and battlemented gallery running between it and the south wall of the nave. Originally, a drawbridge provided further protection; no trace remains today.[34]

The massive western tower, originally no higher than the nave, was heightened in the fifteenth century with the addition of three further storeys, detracting from the original squat fortifications. What form the roof took is not certain, although Fino argues that, like the earlier coastal cathedrals of Agde and Maguelonnee, there were probably arch machicolations running between the buttresses and that the roof was a fighting platform protected by a crenellated parapet.[35] Funds to pay for such a massive undertaking came not only from the central church exchequer, but also almost certainly from the confiscated wealth of Cathars convicted by the Inquisition.

That the environment was hostile to the bishop, appointed after the end of the crusade, is shown by the effort that Durand de Beaucaire and his two successors put into fortifying the nearby episcopal palace between 1228 and 1308.

The fortified residence of the bishops of Albi, known as the **Palais de la Berbie**, is a puzzling building, influencing as it does the architecture of the neighbouring cathedral.[36] Like the cathedral it is built of brick, somewhat rare in French fortifications of the thirteenth century.[37] Comprising three elements built over a period of eighty years, the end result was a fortress palace that was later to influence the architects of the Palace of the Popes at Avignon.[38]

The earliest building was an unfortified grand hall with the addition of chambers for Durand de Beaucaire; his insecurity was such, however, that by 1250 the powerful tower of St Michael had been constructed. Almost 40m tall, it had two circular towers attached to its western façade. To the east, containing the earlier hall, is a courtyard, 50 x 30m, enclosed by a simple wall, and subsequently considerably enlarged both in height and strength by Bernard

[34] Although drawbridges are a common feature of mediaeval castles and town fortifications, they were rare in ecclesiastical fortifications. Although a few have been recorded, there are none existing today, although there are remains at the churches of Beaune-la-Rolande in Loiret, Beauvoir in Yonne and Evron in Mayenne.

[35] Fino (1977: 240).

[36] The name 'Berbie' is believed to have derived from a colloquial term for bishop.

[37] The contemporary cathedral in Toulouse, also fortified, is likewise brick-built.

[38] Mesqui (1997: 17).

de Combret between 1254 and 1271. The gateway, located in the southern wall facing the cathedral, is flanked by two solid semi-circular buttress towers, in style very similar to those supporting the nave of the cathedral. A new bishop's residence was built against the north wall of the courtyard, separated from the River Tarn by some 50m of open land. It was during this period that the arch machicolations between the towers and buttresses of the gateway and tower of St Michael were constructed. These solid, semi-circular buttresses are also uncommon and it is difficult to understand their origin.[39]

The third addition was made by Bernard de Castanet, who added the multi-storey tower of St Catherine; measuring 23 x 16m, it is flanked by four strong round corner towers (the north-east containing the staircase tower), between which ran arch machicolations. The northern wall was further strengthened at the same time with more semi-circular buttresses and arch machicolations. Originally 40m high, this episcopal residence is now much reduced in height. In the fourteenth and fifteenth centuries the open space between the fortress palace and the river was enclosed with a fortified perimeter wall strengthened by six circular drum towers, further adding to the strength of the palace. The fortified wall along the river frontage is again buttressed with solid, semi-circular towers, today devoid of any arch machicolations.[40]

These powerful ecclesiastical fortifications were further strengthened, probably at a later date, when the church of Saint Salvi, to the south-east of the cathedral, received a chemin de ronde above the nave and transept, and the fortified bell-tower a tall, cylindrical lookout tower.

Whilst the external appearances of the cathedrals vary – Saint Just in Narbonne, for example, has flying buttresses rising from angular buttresses supporting the nave and chevet – all are single-nave churches. Bonde argues that the hall plan was adopted as these churches were destined to become fortified from the outset, arguing that the absence of side aisles together with 'wrapping round' the church with arch machicolations enabled the walls to be better observed and defended.[41]

The cathedral church of **Saint-Nazaire in Béziers** is extensively fortified and supports Bonde's argument. The roof of the original church collapsed when it was fired during the Crusader siege of July 1209 and the whole church rebuilt during the second quarter of the twelfth century.[42] It is not certain whether the earlier church was fortified, but machicolations on the cloister remains of the same period would suggest that it was. Certainly the rebuilt church was fortified from the start. The chevet is crowned with arch machicolations, and a crenellated parapet incorporating a similar machicolation runs between the fortified twin side

[39] Debate has long gone on in looking for connections between the castles and fortifications of the Muslims and Crusaders in the Holy Land and those of Western Europe. As will be discussed later, similar buttresses occur in Arab fortifications but to suggest a connection with Albi is tenuous in the extreme, although Bonde (1994: 141–56) argues the case for an eastern origin of the arch machicolation.

[40] At the end of the wars of religion the Edict of Nantes ended its role as a citadel. The enceinte was converted into a garden and the palace now houses a museum devoted to Toulouse-Lautrec.

[41] Bonde (1994: 137–8).

[42] The Crusaders were instructed to kill all that had taken refuge in the church, Christian and Cathar alike, with the exhortation that 'God will know his own'.

towers of the western façade above the rose window and recessed portal. To the north of the choir is a *clocheur donjon* or fortified bell-tower.

Bonde further argues that as the churches were fortified on all sides, despite the protection of fortified claustral buildings, the intention was to utilise the church in the manner of a castle keep: a final retreat.

These fortress churches built or rebuilt after the Albigensian Crusades dominate both the towns in which they were built and the surrounding landscape. The theme is again replicated; Christianity not only dominates but is now permanent. It is no coincidence that the builder of the first of the fortress cathedrals, Bernard de Castanet, was also the Dominican head of the Inquisition and would be aware the threat that a revival of Cathar beliefs would pose.

The northern crusades

The Brethren of the Sword and the Teutonic Knights

Although the northern crusades are mainly associated with the Teutonic Knights, it was a small military order of warrior monks in Livonia which was the first to defend Christian missions amongst Germanic merchant settlements on the banks of the River Dvina.[43] Founded in 1204 by Albrecht, bishop of Riga, the Schwertbrüder, or Bretheren of the Sword, had by 1230 conquered and pacified the previously pagan land of the Livs.

Although the order possessed few castles or commanderies they became adept at fighting in a physically hostile environment – swamp lands foetid in summer and frozen in winter, interspersed with dense deciduous forests, ideal for concealment and ambush. Initially using strategically placed wooden blockhouses as depots for advances into both Estonia and Lithuania, their crusading zeal and ambition for power were their undoing. Recruitment barely kept pace with the losses they sustained fighting the pagan tribes and the loss of the Grand Master and half of the Brotherhood in 1237 resulted in the end of the order as an independent institution. United with the Teutonic Knights, who now annexed Livonia, they were to pass on their castle-building skills. The wooden blockhouse became a palisaded tower, either free-standing or part of the gateway, soon to be replaced with stone. This was to lead to the development of the conventual castles of the Teutonic Knights, the capitular castles of the bishops, and the ultimate Crusader fortress, the Marienburg, the castle of Mary, war goddess of the order.

Recent archaeological excavations in the Baltic countries suggest that the development of these fortifications owe much to their origins in old Livonia. Examination of the conventual castle of **Cēsis**, almost certainly the earliest one built, which was excavated between 1974 and 1993, demonstrates how these conventual castles were developed from a common source.[44] Occupied by warrior monks from the early thirteenth century until it was abandoned in 1561,

[43] Livonia, the land of the Livs, equates, approximately, with the territory of the modern Baltic country of Latvia.

[44] Aluve (1993: 95–8). The English summary, although somewhat critical of Soviet restoration and reconstruction, supports the view expressed by Tuulse (1958: 108) that these northern European castles developed 'more or less' independently of outside influences.

Image not available

there are remains from many periods. The original form is, however, representative of the conventual castle of north-eastern Europe. Building commenced between 1207 and 1209 when the Brethren of the Sword used boulders and rubble set in mortar to build firstly the northern range of hall and chapel, followed later by the south, east and west ranges, producing a fortified monastic quadrangle. The huge square western tower, a direct descendent of the wooden blockhouse and solitary stone tower, was incorporated in a fortified monastic quadrangle. Known in Livonia as a 'stock', this Teutonic conventual castle was replicated over the centuries throughout the whole of Livonia and Prussia, with local variations according to needs. It contained the essentials for a military and monastic life: refectory, dormitory, chapel, chapter house and a secular range for an armoury, stables and stores.[45] The solitary southern entrance leads into the great hall of the castle. Protected by the great tower, recent excavations have revealed the foundations of the later drawbridge and barbican, fortifications much favoured by the Teutonic Knights.

This original quadrangular conventual castle, with buildings against all four sides, was altered over the centuries, but always kept its inner core much as when it was first built. It became the residence of the Master of Livonia and underwent considerable rebuilding under Wolter von Plettenberg (1494–1535), who adapted the defences to the age of gunpowder by building two round artillery towers on the southern corners of the stock and a further gun tower in the north. It was surrounded by two baileys. It was significantly damaged during the Livonian war of the late sixteenth century. Even in its ruined state its robust and stark appearances today reflect the austerity under which the warrior monks lived on a grim frontier rarely free of warfare.

Teutonic Knights and their brick-built conventual castles of Prussia

Formed around 1190 by merchants from Lübeck and Bremen during the Crusader siege of Acre as the Germanic Order of St Mary's Hospital of Jerusalem, the Teutonic Order was overshadowed by the Templars and Hospitallers in the Holy Land and the Iberian peninsula. Ignominiously thrown out of Transylvania by the king of Hungary, who accused them of being too autocratic, the order demanded and obtained a substantial degree of self-determination when invited in 1230 by Conrad, duke of Mazovia, to defend his northern border against the heathen Pruzzi peoples of Prussia.

The conditions in Prussia and the newly acquired land of Livonia were totally different to those they had experienced in the Holy Land and Iberia. First and foremost, they were fighting against tribal pagans, in lands never previously Christian; military skills, discipline and physical and mental toughness were necessary to endure campaigns and garrison duty during the long, dark and harsh winters. The knights had also to contend with the power exerted by German merchants and the bishop-missionaries who were responsible for the souls of heathen converts, especially in Livonia. Unlike the other orders, new members were originally recruited from outside the knightly classes; military skills were highly prized, ensuring a steady stream of entrants.[46]

[45] Christiansen (1997: 218–20).

[46] Although recruits came mainly from the Germanic states, the order was open to others, especially Danes and Poles.

Starting out from Toruń in 1230, they had within the first hundred years captured much of Pomerania, Prussia and Livonia. Following the example of the Brethren of the Sword, wooden and captured castles were originally used but by the middle of the thirteenth century onwards the conventual castle was increasingly being built. Fusion of castle with monastery was much more rigid in Prussia than in the Holy Land; the domus conventuales now replaced the temporary camp-castles with their houses of wood. Stability, autonomy, riches from estates in the Holy Roman Empire together with the skills of Danish and north German brickmakers and bricklayers ensured a steady increase in the numbers of quadrangular fortified convents. Built almost entirely of red brick, the four wings contained chapter house and chapel, refectory, dormitory and hall garrisoned by a commander, the Komitur, and twelve warrior monks. Although frequently accommodating an earlier defence and lookout tower, each side was of the same height, differentiating them from the square Rhenish castle. No attempt was made to build concentric castles as the Hospitallers and Templars had done in Palestine, although on occasions a simple fortified outer enclosure wall was added. The domus conventuales were here as elsewhere distinguished by their duality of function. Usually built on flat ground near a river to facilitate support and supply, they were able to keep to a geometric rigidity, frequently square but occasionally rectangular, and were almost always moated. The absence of stone for ashlar and the need to build quickly as the crusade eastwards was pursued necessitated the use of brick, easily made at the site chosen for construction. Tuulse dates their development to 1260–90; sadly little remains from this period and most of those which exist today date from the middle of the fourteenth century, long after the conquest had been completed.[47]

It is apposite to consider the great castle of **Malbork** (Marienburg) in detail, as it demonstrates, in Tuulse's words, a 'survey of the whole architecture of the order'.[48] Paradoxically, it was the fall of Acre that saw this conventual castle develop into the finest castle built by Crusaders. Once driven out of the Holy Land, the order initially chose Vienna as their headquarters, relocating, in 1309, to the castle of their patroness, the Marienburg in Malbork, Poland. Their aim was to further pursue their desire to convert a resistant pagan population in north-east Europe. The power, wealth and self-assurance of the knights, probably never numbering more than a thousand, was to see the early conventual castle develop into one of the largest, strongest and visually stunning Gothic fortresses in Europe, a permanent expression of the achievements of the order.

Construction began around 1274 as a typical conventual castle. Built on the eastern bank of the River Nogat, a branch of the Vistula, along which the Teutonic Knights had advanced during their conquest of Prussia, the original castle was completed in thirty years. This square convent contains the necessary rooms for the knight brothers, and is reinforced with corner towers. Around the central courtyard run three tiers of galleries, giving access to the many rooms; the central gallery served as the cloister. Known as the Hochschloss, or high castle, it remains the central building of the complex.

[47] Tuulse (1958: 106).

[48] It is important to bear in mind that so many of the buildings of the Teutonic Knights have undergone many changes of use, and have been altered as a consequence. Often significantly damaged in wars, particularly the Second World War, many have undergone major restoration with varying results and degrees of accuracy.

The second building period, between 1310 and 1330, resulted in the building of the Mittelschloss, the middle castle. The name is a misnomer; here were concentrated inside a vast brick-built Gothic exterior the chambers of the Grand Commander, guest-rooms, a hospital and the great refectory, or Hall of the Knights, all skilfully decorated. As Christiansen points out, it was from here that the fashion for 'elaborate painting, carving and tile-work spread' throughout the ecclesiastical and secular buildings of the knights' domain.[49] In addition the south-east corner of the high castle was extended to become the castle of the church of the Virgin, the polygonal apse of which contained a mosaic statue of the Virgin and child, 8m high, dominating the surrounding countryside.[50] From the south-west corner an enclosed passageway leads to a huge and isolated tower, built not primarily for defence, but to serve as a latrine tower or Dansker; this is a feature of many conventual castles and is not found outside Prussia.[51]

The finest building, constructed in the last quarter of the fourteenth century, is the Hochmeister Palast, the palace of the Grand Master, containing two refectories, one for summer, with two tiers of large windows, the other, with a single row of smaller windows, for winter usage. Both are roofed with delicate brick-built star-vaulting springing from solitary slim granite columns. Even today, with tourists replacing the Teutonic hierarchy and their servants, this palace echoes the splendour of northern Teutonic Gothic art and architecture and the splendour in which the Grand Master lived.

Defences were not neglected. To the south lay the walled town reinforced by many round and square towers and a massive southern gateway. Much damaged in the Second World War, only the church of St John and the town hall remain from the town of the knights. Seen from the western bank of the Nogat, the river frontage, almost 500m long, is defended by a single wall and a twin-towered river gate. Although dominated by the majestic internal buildings, this defensive wall is loopholed, crenellated and roofed, and further strengthened by a number of curious box machicolations, not seen elsewhere. To the north of the middle castle is a large bailey, the Unterschloss, containing the barracks, brickworks, foundries, smithies and secular buildings need to provide for the military role of the knights. Christiansen quotes Sire de Lannoy, who visited this massive castle in 1412 and reported that it contained enough provisions and arms for 'a garrison of a thousand persons for ten years or ten thousand for one year'.[52]

Both the northern and eastern aspects of the Marienburg are defended by a double row of walls containing many square and octagonal interval towers rising above the wall walk. Separated by a dry moat, two interesting defensive features were added by the knights. Arrow loops at ground floor level in the inner wall cover this moat, and a loop-holed wall, with the appearance of an early caponier, connects the two defensive walls where the middle castle and

[49] Christiansen (1997: 220).

[50] It was destroyed without trace by shelling during in 1945. There are plans to replace the original statue at some stage.

[51] Large latrine blocks, or reredorters, as extensions of dormitories, were located over water channels in monasteries. I have been able to locate only one outside Poland that was reached by an arched gallery. The fortified island abbey of Inchcolm, in the Firth of Forth, has a latrine tower reached by an arched gallery, allowing the sea to wash waste away. Silting up of the islet was the reason for its construction.

[52] Christiansen (1997: 219).

the bailey meet. A tributary of the river looping round the northern and eastern approaches provides further defence. Although much of these defences are now ruinous their power and strength are still evident.

In Marienburg, the Teutonic Knights had invested immense wealth in developing a monastic city combining monastery, palace, administrative headquarters, arsenal and fortress in one huge expression of power. Bathed in sunshine, it is a glorious fairytale castle; covered by dark clouds it is sombre, foreboding and awesome.

If the Grand Masters had the wealth to build one of Europe's greatest fortifications, the bishops were not too far behind. At Kwidzyn, approximately 40km south of Malbork, is the capitular castle of **Marienwerder**, the seat of the prince bishops of Pomerania from 1254. Work began in the middle third of the fourteenth century and was completed within three decades. Unfortunately partial demolition of the castle in 1798, restoration in the second half of the nineteenth century, and more recent war damage has significantly altered its appearance. Archival records, however, give a clear indication of the form of the castle when first completed. The square conventual castle was of standard form (today only the north and west ranges remain), uniquely attached to the massive fortified cathedral, containing a loop-holed chemin de ronde under the eaves. The neighbouring episcopal town was surrounded by a crenellated and roofed wall, strengthened by lofty towers, and pierced by three-towered gateways in the north, east and south of the enceinte. The most spectacular building to be seen today is the huge Dansker tower, reached from the western range of the conventual castle by a covered gallery carried on five tall brick archways. Of immense proportions, it straddled a stream that ran through the middle of this latrine tower. Whilst acting as a forework it also expresses the abhorrence the Teutonic Knights and their clergy felt towards bodily functions. A rectangular but smaller enceinte was built to the north of the castle and cathedral but no trace remains today. Like Marienburg, Marienwerder was built entirely of brick with the exception of some of the lower courses of the western town wall.

Despite massive brick walls some attention could be given to lessening the severe appearance of the fortified residence, or capitular castle of the bishops. At **Lidzbark Warmiński** (Heilsberg), 100km east of Gdansk, the alterations inflicted over the centuries upon the original Pruzzi castle, captured around 1245 by the Teutonic Knights, are today evident. The plain and utilitarian, square conventual castle, built by the knights, was acquired by the Warmian bishops as their principal residence; they then proceeded to enlarge the windows and add fanciful corner towers in the fourteenth century. The first-floor cloisters received frescoes and in the sixteenth and seventeenth centuries bishops added residential buildings and gardens to the north and south. A period of decline led to a variety of uses and significant neglect; finally the building fell into the hands of the restorers in the 1920s, with mixed results.

The capitular castles of the bishoprics in Livonia

Although there was rivalry between the knight brothers and their clergy in Prussia, they belonged to the same order. This was not the case in Livonia where the relationship between the Church of Rome and the Teutonic Order was always a thorny one. The original agreement between the pope and the Grand Master gave newly conquered lands to the order in return for

Christian instruction and freedom to the conquered pagan population. This was rescinded in Livonia when conquest by the sword was reconsidered in light of the autocracy of the knights. When the responsibility for the spiritual welfare was transferred to the bishops and the Dominican Order, one third of Livonia was ceded to the bishoprics.

Although the borders with pagan Lithuania had become stabilised, protected by a chain of conventual castles garrisoned by the Teutonic Knights, the bishops and the mendicant order felt so threatened that they built a significant number of residences throughout Livonia. Recent archaeological evidence indicates that by the fifteenth century they had built thirty fortified ecclesiastical residences in the third of the country in their control, demonstrating the insecurity they felt, whether from Lithuanian raiders, native uprising or Teutonic animosity.[53]

The archaeological and architectural examination, followed by careful restoration of the episcopal capitular castle of **Kuressaare**, seat of the bishop of Saar-Laane on the southern coast of the Estonian island of Saaremaa, gives an excellent insight into the development and typology of these ecclesiastical strongholds. Although most of these fortified residences are little more than ruins today, enough evidence remains to show that there is little deviation from the plan found at Kuressaare, whose survival is in no small measure a result of becoming part of much grander fortifications from the sixteenth to eighteenth centuries. The square capitular castle, built in whitish-grey dolomite, measures 44m on each side with buildings arranged against all four sides; the small central courtyard is cloistered. The 20m high battlemented walls are crenellated and strengthened with towers at each corner of the southern wall. That at the south-west is a 30m tall stone watchtower of 1260, entered via a wooden drawbridge 10m above ground. The south-east defence tower is of a later date, probably the fifteenth century. Squat and powerful, it defends the solitary entrance, which is protected further by an unusual portcullis arrangement: running between grooves attached to the outer wall either side of the doorway, the portcullis is raised and lowered by a mechanism housed in a wooden hoarding built on top of the battlements and abutting this defence tower. Aligned against the walls are the ranges; the dormitory and refectory on the west, chapel and great hall to the north and the offices and lodgings of the bishop to the east. Their roofs slope down towards the courtyard and rise fractionally above the battlements, separated by the wall walk.

Built of well-coursed but rough-hewn stone, openings externally consist of high and narrow windows; the ground-floor gun ports were inserted later. The internal rooms are spring-vaulted in Gothic style with basic adornment, although the climate of Estonia is reflected in the number of large fireplaces throughout the building.

Excavation has revealed that the original fourteenth-century capitular castle was surrounded by a moat, in turn surrounded by a wall reinforced with semi-circular and round towers.[54]

[53] Aluve (1993: 120) points out that in comparison, the Teutonic Knights held sixty-one conventual castles. Fortified monasteries, outside those of the order, number only four.

[54] Conjectural drawings by Aluve show the fortified residence, its inner moat and outer reinforced enceinte was further provided with a sea moat and harbour, replaced in the eighteenth century by a typical bastioned enceinte of the period with horn works facing landwards. To the north a sea wall separates the fortress from the harbour.

Similar in construction to the conventual castle of the knights, the capitular castle was occupied by clergy forbidden to carry weapons; defence must have rested in the hands of armed servants or hired mercenaries combined with the passive defence afforded by high walls and a well-protected solitary entrance.

Summary

Whatever the outcomes of the crusades and the manner in which they were waged, the fortifications built by the knight brothers were amongst the finest of the period and remain a physical testimony to their beliefs. From the simplest frontier fort to the mighty fortifications of the Grand Masters a determined effort was made to accommodate the warrior monks in a monastic environment and adopt the monastic plan wherever possible. The sheer numbers of conventual castles built are a witness to the vast sums of money available to the military orders, which enabled them to employ architects well versed in the art of fortification who could successfully combine this with the monastic ideal.

Quick to learn from military architects both of the East and West, they built their fortifications as expressions of power; to signify permanence and to proclaim the ultimate triumph of Christianity. As well as being sited where natural defensive features could be utilised many were positioned where they could physically dominate the surrounding area; beacons proclaiming the advancement of Christianity and the power of the Catholic Church in Europe: symbols of permanence in the Holy Land. The fortified cathedrals built in the wake of conquest are just as expressive, again proclaiming Christian militancy and determination.

Like all fortifications, they experienced mixed fortunes from a military standpoint, especially in the Holy Land where a chronic shortage of manpower negated the skills of the military architect.[55] That so many exist today is a legacy of the vision and skill of their builders, many remaining as fortifications until recent times.

Anybody who today comes upon Crac des Chevaliers, which was always in the middle of Crusader activity, can instantly recognise the sophistication of its military architecture and envisage the cost of its construction both in money and manpower. It fell to the Arabs only through a lack of knights to defend it.

Loarre, with its mighty Romanesque church, is an early demonstration of the determination shown by the Spanish over many centuries to reconquer the Iberian peninsula and proclaims that Church and State were to be united for ever.

The cathedral in Albi today dominates physically the surrounding countryside much as it must have done in the thirteenth century. To the Cathars it would also serve as a visual reminder of their spiritual subjugation to the power of the Church of Rome. Marienberg, with its many changing faces, is, without doubt, the most splendid and powerful of all these Crusader fortifications. Far removed from this magnificent monastic city is the stark and utilitarian castle-monastery of Amieira; a castle, however, which today gives great insight into the Spartan devotion and dedication of the warrior monk and his perilous lifestyle.

[55] Kennedy (1994: 148) quotes Hugh Revel, Master of the Hospitallers, who in 1268 had only 300 brothers under his command in the East.

4
GREAT BRITAIN

The English Marches

Although the border between England and Scotland was fixed by treaty in 1237, it proved difficult to defend or police. Warfare and raiding, by both sides, became commonplace for centuries. For the agriculturists of the lowlands and the pastoralists of the highland Cheviot Hills life was, at best, difficult and precarious. For centuries they had to contend with both English and Scottish armies, followed in the high Middle Ages by the Border reavers, the feared and lawless bands of cattle-rustlers who owed allegiance to nobody but themselves.[1]

Border conflict was so commonplace that the centuries until Anglo-Scottish union have become known as the time of the Three Hundred Years War. Not surprisingly there is not a building in the region that does not show evidence of fortification, from the humble fortified farmhouse of the fells and river valleys, the peasant bastle house, to the vastly expensive Elizabethan fortifications of the town of Berwick-upon-Tweed.[2]

The buildings of the Church did not escape the attentions of the military architect and much effort went into their fortification. Abbeys, priories and cathedrals were fortified to varying degrees on both sides of the border, not least because they were used as bases for the assembly of armies and the storage of campaign supplies.[3] As a consequence they were likely to be attacked in retribution.

Although the bishops and nobility were prepared to defray the cost of the provision of fortifications and pay for any reconstruction that was necessary this was not the case with the parish church.

The marches were impoverished regions and the population had to be hardy to survive. That many turned to cattle-raiding is not surprising and that the resulting retaliation and feuding necessitated some form of protection for the peasant population is evident. In the absence of civil fortifications in the sparsely inhabited countryside they were left to fend for themselves. Upland farmers built their bastle houses to shelter their few animals and their

[1] Also known as moss troopers, the Border reavers were Scottish at their will and English at their pleasure. Their motto was simple, 'take or be taken, kill or be killed'. When law was re-established in the seventeenth century, many were transported to Ireland and the Americas.

[2] Many bastle houses remain from the period and are unique to the Border region. Designed for passive defence, with only an occasional gun-hole covering the first floor entrance, they were small two-storey rectangular farmhouses. Usually vaulted, animals were kept in the ground-floor room, the door of which was heavily barred. A small opening allowed the farmer to ascend via a ladder to the family room above. Small shuttered windows and the narrow entrance with its heavily barred door proved effective in protecting the farmer against reavers.

[3] Durham Cathedral was known as 'half fortress against the Scot'.

Image not available

family, while the minor nobility and land-owner built scores of tower-houses, or peles, to protect their households. Many villages turned to their parish church. It is only recently that the extent to which northern churches were fortified has been recognised, although many writers in the past have recognised a handful of churches in the marches as being fortified.[4] The patient and detailed research by Brooke has demonstrated beyond doubt that the peasant populations on both sides of the border relied on the fabric of the church for protection. They were also willing to contribute their meagre resources for the provision of defensible west towers, barrel-vaulted naves and chancels and stone-flagged roofs.[5] Such was the fear engendered by the plunderers that it was not only the churches of the Borders that received fortifications and were used as places of safety and refuge; many parish churches as far south as York were fortified in response to Scottish incursions. One such church is to be found in the small market town of Bedale in North Yorkshire. Positioned at the northern end of the main street, it is an example of how its Yorkshire parishioners took the Scottish threat seriously. The external appearance of the huge western tower, rising 30m to the battlemented parapet, now belies the defensive intention of its fourteenth century builder after the Battle of Bannockburn. Now softened by the insertion of large Gothic windows in each storey and a bell house, this was a serious fortification. Strengthened by buttresses to counter the thrust of the first floor stone vaulting, the newel staircase is located in the south-east corner of the tower. It is of particular interest in that the doorway still possesses its portcullis groove in front of the doorway with its narrow iron-studded door.[6] The rooms above were provided with facilities indicating occupation by watchmen – the second-floor fireplace and garderobe. Although the tower was safe from fire and the staircase provided barred access to the upper storeys, the presence of battlements running all round the nave roof and the presence of a large draw-bar hole in the door jamb for a substantial beam suggests that the church itself was fortified. Located at the northern end of the town, it was ideally positioned to warn the inhabitants of approaching danger.[7] Like many towns and villages in the northern counties it also protected with two contiguous rows of houses enclosing a wide main street and presenting blank façades to the exterior.

Perhaps the best northern example of a fortified church in a rural hamlet is to be found in the village of Newton Arlosh, near Carlisle, in Cumbria. Here the monks of nearby Holm Cultram Abbey fortified their abbey and built a fortified church in 1304 for the families of the local militia called to oppose Scottish incursions from across the Solway Firth. The church today, despite restoration and enlargement in 1844 and 1894 still retains its original fortifications. Tower and nave were built as one; rectangular in shape, measuring 15.8 x 6.4m with walls 1.2m thick, the square tower occupying the western third. Entrance to the nave is

[4] Those often quoted are Great Salkeld, Newton Arlosh and Burgh-by-Sands in the English Western March and Ancroft and Edlingham in the Eastern.

[5] Brooke (2000: 365–7) lists ninety-six parish or collegiate churches and monastic establishments that he considers to have been fortified to some degree. Not all exist today, however.

[6] Unfortunately, the portcullis was removed when it fell during a storm in 1830.

[7] Preliminary inspection reveals that many churches in Yorkshire and Durham were probably fortified and a survey on the lines of Brooke is overdue.

Image not available

from a very narrow doorway at the southern junction of nave and tower. Defence is further enhanced with the provision of only three high and narrow lancet windows provided with shutters, some 2.2m above ground level. The tower of two storeys was originally entered from a narrow, barred doorway from the nave with a newel staircase built into the thickness of the south-east corner. The first floor contains a fireplace, the flue of which passes through a projecting turret on the south side of the battlemented parapet. Tunnel vaulting over the ground floor and a nave roof of stone flags provide further protection. A doorway in the eastern wall of the second storey of the tower, now blocked, suggests that there may have been an attic refuge room.

The pele towers

A new form of ecclesiastical fortification was developed in the marches and remained confined to the north of England. Built to protect the village priest and occasionally priors, the remains of fourteen vicars' pele towers and four for priors are found between Carlisle and Newcastle.[8] The vicar's pele built in the English Eastern March, in the small town of Corbridge east of Hexham in Northumberland, is of particular interest. It was built in St Andrew's churchyard in the early fourteenth century in response to the destructive Scottish raids of 1296, 1311 and 1313. Although partially ruined it demonstrates the way these towers, intended for clerical occupation, were fortified. The tower is of three storeys measuring 11m to the crenellations of the fighting platform, and has a steeply pitched roof; some of the merlons are preserved. Each corner of the platform was provided with square corner turrets or bartizans resting on corbels with machicolations, now much ruined. Entry to the rectangular tower, measuring 8 x 6m, is through a narrow arched doorway in the north-eastern corner holding a double-planked door reinforced with bands of iron and a draw bar. It opens into the barrel-vaulted ground-floor basement provided with an archer's loop-hole in the southern and western wall; the straight, narrow staircase runs in the thickness of the eastern wall to the first floor of the tower. This was the living room of the incumbent and is not only spacious, measuring 5.4 x 3.8m, but is provided with a garderobe, a fireplace, a washroom with a stone table and sink and niches in the walls for books. Splayed windows in the north and south walls are provided with benches. In spite of the narrowness of the windows and the solitary loop-hole, it is surprisingly light and airy; a book rest near to the small window in the west wall is so positioned as to gain maximum lighting from the northern winter sun. Stairs run again in the thickness of the east wall to reach the top-floor bedroom; spartan in comparison with the living room it too is well lit. Access to the fighting platform is by means of a wooden ladder from an ante-room in the thickness of the eastern wall.

Examination of the nearby church, part of which is of pre-Norman date, reveals no direct evidence of any active defences and it appears that the vicar's pele stood alone as a defensive tower. So far little attention has been paid concerning the role these towers played. Certainly the clergy were threatened by the Scots, but so were the rest of the inhabitants of this small

[8] The term pele is somewhat contentious. Believed to originate from palisade, it has come to denote a solitary fortified tower in the north of England.

Image not available

Image not available

township; only the defensible tower at the east end of the main street, built later in 1552, offered any form of protection. Why the pele was built in the churchyard, the only one to have been so, is not known. It is postulated that they were for the protection of church property and the clergy themselves, not from the terrifying Scots but from their congregations.[9]

It is appropriate to return to the door of the pele as it is a form of fortified doorway found in a number of churches (and in some secular buildings) that is confined to the northern marches. Many church doorways throughout Britain still exhibit original ironwork to varying degrees and patterns covering the outer face of the oak panelled door. From Saxon times doors had been reinforced with ironwork to protect against attack by marauders and the practice has continued since, albeit more for decorative purposes over the last few centuries.[10] In the Borders the use of iron for the protection of doors was perfected. Out of the double-planked door, studded with bolts and the tracery of hinges, developed a door with a latticework of iron bands running horizontally on the inside and vertically externally. Loops were provided on the back of the vertical bands through which ran the horizontal band. The whole was bolted firmly together; in effect it was riveted and clasped alternately to the door frame which followed the contour of the doorway. The spaces were filled with oak planks running vertically and horizontally and also bolted together. Known as yatts, these doorways were of immense strength, and the positioning of their pintles ensured that even if the wood was burnt they could not be lifted off their hinges. The finest surviving examples are to be found in Cumbria at the parish church of St Cuthbert in the village of Great Salkeld and at Burgh-by-Sands on its northern coast.[11]

Monastic fortifications in the north of England

Many monastic foundations in the English Marches received substantial fortifications. There are substantial remains at Tynemouth to be discussed later, and a spectacular gateway at Alnwick. Two are, however, worthy of particular mention.

Off the Northumberland coast, south of the border town of Berwick-upon-Tweed, lies **Lindisfarne** or Holy Island, the site of the founding of a Christian mission in 634. Always subjected to attack whether by Vikings, Scots or North Sea pirates the Benedictine priory received its first fortifications in a variety of ways starting in the fourteenth century. The twelfth-century cruciform Romanesque church was itself fortified when the nave and chancel walls were vaulted and elevated to provide a fighting platform. The only remains today are at the western entrance where there are remains of a parapet above a rib of the stone vaulting of the nave now vanished. Into this parapet were built two splayed cruciform loopholes for

[9] Many northern rural clergy were uneducated and heartily disliked by their parishioners.

[10] Cook (1954: 215).

[11] They are of a different construction from the Scottish yett, which was also an iron grill where the bars were forged so that horizontal and vertical pieces penetrated or formed sockets, thus alternately being clasped or clasping as the bars meet each other. The grill was left open and was placed in front or behind the wooden door. Many church doors were sheathed in iron in continental Europe. I have found no trace that church doors in Britain were reinforced in this manner.

Image not available

Image not available

Image not available

crossbows. It is a reasonable conjecture that the whole of the western, northern and chancel walls received a crenellated and loop-holed parapet and that use was made of the two twelfth-century western towers to cover the solitary entrance. Uniquely in ecclesiastical military architecture, the southern entrance to the cloister was protected by a barbican, of which only the foundations remain. They suggest that the fortifications were very similar to the barbican of Prudhoe Castle built contemporaneously to the south. The presence of two parallel walls, each over a metre thick and provided with grooves, indicates that there was a fortified gatehouse built into the south wall of the cloister, protected by a portcullis. Built at the same time as the barbican, walls ran south from each end of the cloister to enclose an outer court containing domestic and guestrooms. Further protection was given to the eastern side of the cloister with the building of a fortified prior's pele, balanced on the western side with a fortified kitchen and bakery block.

Although the monks pleaded with Richard II to be allowed to remove these defences, this was rejected. The building of further defences on the island in the form of a fifteenth-century fortlet to protect the harbour, and in the following century by an artillery fort on the south-east corner of the island demonstrated that both priory and island needed continuing defences. It had become a munitions and supply base for expeditions against the Scots.[12]

Approximately 30km to the south of Lindisfarne is **Alnwick**, a small fortified town attached to the mighty castle of the dukes of Northumberland. Two monastic establishments lie within its estate; of these only the gatehouse of Alnwick Abbey remains, although those of Hulne priory are substantial. The priory was built on high ground, 3km north of the town and castle, overlooking the River Aln. Built and fortified by the Carmelites it still retains its fifteenth-century enceinte. The foundations and ruins of the usual monastic layout lie in the centre of the strangely irregular defensive wall still 3.6m high despite the loss of its parapet; it originally only contained one gate in the southern wall. This gatehouse contains a narrow barrel-vaulted passage and guardhouse or porter's lodge with a room overreached by an external staircase and provided with a gun-loop. There is no evidence of any flanking towers, although there are vestigial remains of turrets on the corners of the walls to the north and west. Further protection was provided with the erection of a prior's pele, built on the instruction of Sir Henry Percy in 1486. Barrel-vaulted at ground-floor level, it retains its battlements and gives an excellent insight into the nature of these fortified towers. The enceinte is something of a mystery; it covers an area far larger than it needed to, enclosing orchards, gardens and the monastic cemetery. There is nothing to suggest that it ever received the attention of the Scots, although it may have been fortified to shelter neighbouring farmers and their animals, much in the way that Kells did in Ireland.

The ecclesiastical fortifications of the Scottish Marches

Although the conditions in the Scottish Marches were akin to those of England, remains of ecclesiastical fortifications are much less common. There are a number of reasons for this, not least the virulence of the English invaders and the effects of the reformation in the sixteenth

[12] Brooke (2000: 75).

century. Although many churches remained in use, most were eventually replaced or remodelled to such a degree that the mediaeval architecture was lost. Many are now ruinous or have simply disappeared.[13] Fortunately, enough documentary evidence and architectural features remain to indicate that the Scots fortified many of their ecclesiastical buildings, although the presence of many gun-loops would suggest that the troubles of the sixteenth century provided the stimulus. Like the English borderlands, those of Scotland were divided into three marches, west, middle and east.

The Western March covers a substantial area around Dumfries, across the Solway Firth from Carlisle. Of the thirty-nine parish churches of the Middle Ages only three survive to the present day. That churches were fortified is shown by an account of the siege of Annan and the architectural remains at the collegiate church of Lincluden.

Annan is a small town across the Solway Firth almost opposite Newton Arlosh. It has now totally lost all traces of its mediaeval church. Documentary evidence indicates that in 1547 it was garrisoned by Scots with both the body of the church and the western tower receiving fortifications. Besieged by the English, it resisted for forty-eight hours before it fell as a result of a cannonade and the exertions of sappers. It is recorded that eighty prisoners together with their 'ordnance and munitions' were sent to Carlisle.[14]

There are significant remains at **Lincluden**, 1.5km north of Dumfries, from the fifteenth and sixteenth centuries. Originally a Benedictine nunnery, by the end of the fourteenth century it had become home to reavers, to the extent that Archibold the Grim, the third earl of Douglas, petitioned the pope for its suppression. On obtaining the fabric of the nunnery the earl and his descendants fortified the church with the addition of a residential block running north from the side-wall of the chancel and the provision of a refuge and strongroom above the vaulting of the chancel.[15] The fortified domestic range is a rectangular building measuring 60 x 15m, with walls almost 2m thick. Containing five vaulted basement rooms reached by narrow doorways from the west, each eastern wall was pierced by barred and narrow lights 1m above ground-floor level. Entry to the second floor was by means of a staircase tower built into a five-sided defensive entrance tower extending outwards from the middle of the wall to the west. Gun-loops in the angled faces of the tower cover all approaches. Some time in the sixteenth century, the northern end of the range was heightened with the addition of a further storey to produce a tower-house provided with gun-loops to protect the northern approach. The final form of the fortified church complex is not known, however, and as it stands the church itself appears indefensible. The foundations of a further domestic range from the north-west angle of the ruined nave add to the perplexity of the defences.

The ruins of the Cistercian **Sweetheart Abbey** lie some 7km to the south of Dumfries. There is a huge monastic enclosure covering 12 hectares, protected on its north, west and east sides by an impressive precinct wall. Built out of boulders, removed when the monastic site was

[13] Fawcett (1994a: 216).

[14] Brooke (2000: 331).

[15] The provision of these strongrooms for the safekeeping of relics, church treasures and for the protection of monks is a ubiquitous feature of many crossing towers. Here, as at Brinkburn and Tynemouth Priories in Northumberland, it was built over the chancel.

being cleared for building, the wall is still very impressive and rises in places to over 3m, with an average thickness of over 1m. The southern boundary of the monastic enclosure was determined by a water-filled ditch. The complex was entered through two gates: one in the centre of the west wall and the other towards the southern end of the eastern wall. The monks took the opportunity to safeguard their security further by ensuring that the upper storeys of the central crossing were difficult to enter, with narrow defensible mural passages and a battlemented fighting platform. The Reformation led to the downfall of the monastery and its ruined appearance today is in large part a consequence of it being used as a stone quarry.

The Middle March is the least hospitable and most troubled of the three marches; today there are only vestigial remains of any ecclesiastical fortifications. In the march lay four of the principal Scottish monasteries of the Borders. All are now ruinous, and all were subjected to numerous assaults by English armies from the end of the thirteenth century to the middle of the sixteenth.

The Augustinian **Jedburgh Abbey**, strategically placed on the invasion route to the central lowlands, was repeatedly attacked. In 1464 both transepts of its church were so damaged by the English that they had to be rebuilt. In addition the church was burnt on three occasions in the first half of the sixteenth century.[16] Brooke is of the opinion, based on archaeological evidence, that defensible towers reinforced the boundary wall, three of which protected the monastic gates, and that the abbey also received earthwork defences during the sixteenth century and a possible artillery bastion in the south-western corner.[17]

Some idea of the original extent of such monastic fortifications can be gleaned from the remains at **St Andrew's Cathedral** on the east coast of Fife, north of Edinburgh, that retains almost all of its fortified precinct wall intact. It is the most imposing and complete in Scotland. The earlier fourteenth-century walls were heightened in the first decades of the sixteenth, and still retain thirteen round and square flanking towers, many of which are not only pierced by gun-loops but also contain niches for religious statuary, rarely seen elsewhere. Of the gates, the Pends Yett gatehouse is the main entrance to the precinct; its passageway extends for five bays almost in the manner of a barbican. Its outer arch, surmounted by blind arcading, is very similar to the entrance of the cathedral. The Sea Yett, or Watergate, facing the small monastic harbour is protected by one of the curtain towers; the neighbouring curtain wall has the remains of corbels, suggesting that there may have been a machicolated battlement. This perimeter wall is very similar to that of St Mary's Abbey in York that also contains towers. Some of the merlons of the battlements are grooved to receive the pintles of wooden shutters, enabling them to be opened and shut rapidly, thus protecting crossbowmen.

The Eastern March also has few ecclesiastical fortifications. That at **Ladykirk** is enigmatic; few dispute that it is fortified, but its position, function and the role of its patron have not been explained. Built on a rise on the northern bank of the Tweed that demarcates the border, it overlooks the English castle of Norham. Known as the Kirk of Steill until 1550, it was built between 1500 and 1504 at the expense of James IV of Scotland. Although the top half of the

[16] Dent and McDonald (2000: 37–40) describe border warfare and the attack on Kelso Abbey by the troops of the earl of Hertford in 1545.

[17] Brooke (2000: 207–8).

western tower has been replaced, the rest of the tower and the church remain much as they were when first built. Fine ashlar is used throughout, and the nave, transepts and chancel are tunnel-vaulted and roofed with stone flags. The cruciform church is heavily buttressed to counter the lateral thrust of the heavy roof. Entry is via a western porch leading through the lower storey of the vaulted tower where access to the upper storeys is by means of a newel staircase in its north-western corner, entered from the nave. Draw bar holes, iron-studded doors and the presence of meuretières, or murder holes, in the tower vault complete the fortifications. It would present little opposition to any invading army, unlike the castle of Norham with its artillery defences. Its purpose is unknown; the height of the tower with evidence of occupation and its position above the Tweed suggest that it may have contained a small garrison of watchmen.

Finally a number of fortified tower-houses were built to shelter the commendator, the uniquely Scottish secular head of an ecclesiastical property appointed in place of an abbot. They are found in abbeys throughout Scotland and were secure and defensible tower-houses of the sixteenth century; that at **Dryburgh Abbey**, 12km north of Jedburg, reinforced the western defences.

Church fortifications of the Anglo-Welsh border and the Southern Marches

Although the Normans had subjugated England within twenty years of arrival, their invasion and colonisation of Wales was to prove difficult and take ten times as long. The border between England and Wales was not clearly defined, although Offa's Dyke and the River Wye had been generally accepted as the delineation.[18]

It was to this border that William the Conqueror despatched ambitious barons and battle-hardened warlords who, in return for the protection of the western border of England, could obtain lands for themselves from the Welsh princes. For two hundred years until Edward Longshanks invaded north Wales in 1277 and again between 1282 and 1283, desultory warfare was waged between the Norman settlers and the native Welsh. The string of monumental castles built by Edward I finally subjugated the stubborn Welsh and divided Wales into the Crown lands of the north and centre and the March of Wales to the south, controlled by some of the major baronial families. It corresponds to today's lowland areas of Gwent, Glamorgan, Gower and Pembroke. It is in these regions together with the English border counties of Shropshire and Herefordshire that evidence of ecclesiastical fortifications exist.

As elsewhere, many secondary sources describe a number of churches as being fortified, but Kelland has looked at documentary evidence as well as examining many of the churches that are understood to have become fortified places of refuge. He concludes that although there is a paucity of documentation on parish churches, any church or monastery might be

[18] Built by Offa, the king of Mercia, who reigned between 757 and 796, the dyke stretches from the Dee estuary on the north Wales coast, to the River Wye, a distance of approximately 190km. It comprised an earthen bulwark approximately 25m high with a western ditch.

incastellated, i.e. modified structurally for military use, especially during times of political instability.[19] The tendency of the Victorians to replace mediaeval naves and chancels does, however, limit examination to a large degree to the western tower, invariably retained.

The western towers of the marcher villages

The no man's land between conquered England and independent Wales was ruled by the Norman Marcher Lords who were powerful, entrepreneurial and bellicose. The political instability resulted in a huge number of castles being built on the border and in the marches; the density is the highest in Britain. Whilst the lord and his retinue enjoyed the safety of substantial castles, and attracted merchants, tradesmen and artisans to settle near their walls, the settler peasantry and minor land-holders were much more vulnerable in their isolated and small agrarian communities.

Immigration had been encouraged from England and other parts of Europe, and the introduction of feudalism and farming technology had resulted in an alien peasantry being favoured at the expense of the native Welsh. Parts of south Wales became divided into the Englishry and the Welshry, particularly in Gower and Pembrokeshire. It is particularly in these two areas, subject to considerable periods of open warfare and cross-border raiding, that the military-looking western tower makes its appearance in the twelfth and thirteenth centuries.

Of the defensible church towers of the south-west march of Wales, those of Gower, the strikingly beautiful south-coast peninsula west of Swansea, are the most impressive. Although difficult to date, a number of churches have powerful, purely military western towers; all are in the Englishry, the fertile coastal low ground. That at **Llanrhidian** is a typical example. Keeping watch over the Burry estuary, the slightly battered tower rises through three storeys to its corbelled and battlemented fighting platform and beacon turret. Now blocked, a doorway led from the first storey into a possible nave attic, long since removed.

Further inland, 3km to the west lies the church of **Cheriton**. Even today it has the unmistakable appearance of the mediaeval fortress churches of France, conceived from the start as both church and peasant castle.[20] It is not hard to see how the addition of battlements and hoarding round the top of the tower (the putlog holes are still present) would transform this into an eminently defensible refuge.[21]

All the Gower church towers are rudely built with outer and inner wall faces of reasonably well-coursed rubble. The use of ashlar is minimal. There are no buttresses but the towers have a batter, especially at the base where there is almost a talus. Western doorways were added

[19] Kelland has explored this subject very well and has studied many of the marcher churches of England and Wales.

[20] Harrison (1995: 15–23) compares the defensive nature of the Gower churches with some of those in France, particularly the Cogentin peninsula.

[21] Hoarding resulted in an overhanging wooden gallery thrown out from a wall surface protected by boarding at the front. It provided greater protection for defenders, a greater scope for archers and an ability to defend the tower base and the entrance.

Image not available

Image not available

latter, as the only original entrance to the towers was from the nave. At **Oxwich**, **Oystermouth** and Llanrhidian there is a projection to accommodate a staircase tower. Windows are almost non-existent, although there are varying numbers of utilitarian arrow-slits and loop-holes in every tower.

Little study has been made of the tall, narrow and tapering towers of the Pembrokeshire churches. In the Englishry, the typical manorial village consisted of grouped farm houses, cottages, occasionally a manor house and the church, a significant number of which were provided with battlemented towers disproportionate to the size of nave and chancel. They are in marked contrast to the churches of the Welshry that are rarely towered, having only a tiny bell-cot. The inference that the towers of the Englishry were built as refuges, lookouts and beacons for an immigrant population under threat is easily made. However, no work has been carried out in the way that both Brooke and Kelland approached the churches they examined. Although a number of ground floors are vaulted a detailed study needs to be carried out before it can be said that these towers provided anything other than passive defence. This is particularly the case with the military-looking west towers of Gwent and Glamorgan.[22]

The arcaded parapets of Bishop Henry of Gower

The monastery of St David had been established in a remote corner of south Wales, on a windswept coastal valley of the River Alun, north-west of Haverfordwest, before the arrival of the Normans. Although it was, and still remains, a revered pilgrimage site for the Welsh, it was turned into a bishopric and developed into an episcopal township behind its enclosure walls. Owning vast estates throughout south-west Wales, the bishopric had a great income. As a result its bishops became rich and powerful religious and secular rulers; the end of the thirteenth century and the whole of the fourteenth witnessed building on a grand scale to provide the bishops with fortified palaces and castles.

Henry of Gower was appointed bishop in 1328 and held the see until his death in 1347. His tenure coincided with the most extensive period of building. His master mason introduced a form of military architecture at the palaces of **St David** and **Lamphey** and the castle at **Swansea** not seen anywhere else. To the great halls of his palace and castle he added crenellated and loop-holed parapets supported on arcades, so arranged that the wooden roof beams slotted into the pillars of the arcades. They served a dual function: elevated walkways and a fighting platform was provided for the episcopal men-at-arms, and torrential rainwater ran away rapidly from the sidewalls. Known as the 'building bishop', Henry of Gower spent large sums on these arcaded parapets, especially on his great hall at St David's where he combined decorated, and novel, military architecture with powerful religious symbolism. To the parapet, corner towers and the end gables he added a checkerboard veneer of different coloured stone – local purple sandstone contrasting with white spar found on the neighbouring beaches. The walls were rendered with plaster and painted deep red. Additionally the columns that carry the arches of the arcades were supported by a double row of carved corbels: human heads inside, and

[22] Salter (1991: 10–12) lists 230 mediaeval churches in Gwent and the Vale of Glamorgan with over two-thirds possessing western towers.

grotesque animal heads and mythical beasts facing the external approach to the hall. Here was Henry's proclamation of the 'monstrous faces of darkness' opposed by 'order and light'.[23]

The military towers of the Anglo-Welsh borders

Of the many military-type western towers in Shropshire and Herefordshire that of the church of **St Michael at Garaway** in Hereford is among the most significant. It is one of six churches attribute to the Knights Templar. In 1308, the preceptory and church passed into the hands of the Hospitallers and became part of their preceptory. The defence tower was free-standing to the north-west until connected to the church by a narrow passage three hundred years ago. Dating from the last quarter of the twelfth century, it is still today an impressive fortification. Measuring 8.6m x 8.5m, it rises by three storeys to its present height of 21.5m but has lost its battlements to a quadrangular pitched roof. Interestingly, the doorway from the vaulted ground floor to the staircase tower can be barred internally. It is hard to believe that it is anything other than the defensive tower of the preceptory defences that belonged to two military orders for centuries.

It is replicated elsewhere on the Anglo-Welsh border. Other towers of a similar size that may have placed a defensive role are widespread. There are loopholed battlements at **Old Radnor** in Radnorshire, a vaulted basement and putlog holes for hoarding (**Clun**, Shropshire) and crenellations and draw bar holes to secure the entrance at **Kerry** in Powys. Until a detailed study is carried out, however, how far churches were used as places of refuge and defence cannot be known.

The monastic gatehouse

Henry of Gower was not the only grand cleric to lavish resources on displays of power either spiritual or secular. Although few monastic gatehouses were fortified to the same extent as were those of walled towns and castles, there were exceptions, especially if the precinct walls were to offer any serious defensive role as for example at St Andrews.[24] Designed to give access to the monastic enclosure, they had to accommodate gateways large enough to admit carts carrying monastic produce, and hence were vulnerable to attack. As a consequence a number received powerful defences whilst at the same time presenting an ornamental façade to the outside world, proclaiming the wealth and power of the monastic establishment.

The best example of these gatehouses is at the remote **Thornton Abbey**, an Augustinian house on the flat Lincolnshire coast south of the River Humber. Although the enclosed buildings suffered greatly at the dissolution of the monasteries, the western gateway stands to

[23] Coldstream (1999: 10–12) examined these sculptures; of the beasts she describes the grylli as being grotesque hybrids of human heads, bats wings and animal claws. Together with monkeys and owls they represented evil. She concludes that Gower was proclaiming to his guests that having 'tamed the creatures, he was now vested with their powers'.

[24] Morant (1995: 22–4) mentions the great gate of Bury St Edmunds and the gate houses of Michelham, Alnwick and Battle Abbey. His book is the definitive work on monastic gatehouses.

its full height, more or less intact. Built of brick and stone, the central three-storey gatehouse of the fourteenth century is flanked either side by plain brick walls containing loop-holed galleries terminating in southern and northern slim, loop-holed cylindrical towers adjoining the brick precinct walls. The abbot was given permission to crenellate in 1382 and the façade is a curious mixture of decorative loops for cross bows and saintly statuary; it also served as the lodgings of the abbot. Above the main entrance are three statues representing the Virgin, the patroness of the abbey, St John the Baptist to her left and an unknown bishop on her right. There is documentary evidence that the battlemented parapet was embellished with statues. These were of soldiers, brandishing swords and pole-arms, all overlooking the entrance gate. It towered above the brick-built defensive enclosure wall that was further protected by moats and a lake. Although much adorned and decorated the gatehouse and abbot's lodging could offer serious defence but to whom is uncertain. It was built at a time of peasant unrest and when French and Scottish pirates were active. The recorded history is uneventful and it appears that the gatehouse defences were never tested. Intriguingly, a brick-built barbican was constructed across the western moat in the sixteenth century. Strangely set at an angle of almost 70 degrees to the gate façade, it runs for 38m and terminates in two round towers. It contains gun-loops as well as those for cross bows, and, somewhat bizarrely, a garderobe.

The most powerful of all ecclesiastical fortifications are, however, to be found at the coastal priory of **Tynemouth**, north of Newcastle, built on a prominent headland. The defensible nature of the site had been recognised before the founding of the priory and there were fortifications here before the priory was given licence to crenellate in 1296, long after the priory had been built. Of the fortification built by the priors, the gatehouse with its barbican and the mediaeval wall running all round the headland remain; most defences are, however, from later periods. Earthworks, dug across the headland reveted in stone, are Elizabethan, contemporary with the defences of Berwick to the north. Over the ensuing centuries it was constantly updated as a coastal artillery fortress and served as such through the Napoleonic and First and Second World Wars, finally losing its guns in 1956.

Summary

Britain has the remains of a considerable number of ecclesiastical fortifications, one of which, the vicar's pele, is only found in the north of England. Almost all the recognised fortified religious buildings are found in the marches but much work needs to be done in Yorkshire, the Anglo-Welsh borders and south Wales to understand the extent to which churches, in particular, were fortified and used as refuges. The round tower churches of East Anglia have not been included as it seems highly unlikely that they had a defensive role. For a similar reason Saxon towers have been excluded.

A number of monasteries were fortified on the south coast, especially during the Hundred Years War, for protection against the French navy, but not as part of any coastal defensive scheme.[25]

There are a number of ecclesiastical fortifications in the hinterland of England that were

[25] The solitary exception is at Tynemouth, which became part of Henry VIII's coastal defence scheme.

fortified, usually in response to localised situations. Bishop Ralph of Shrewsbury, during his quarrel with the city, built the walls, gatehouse and moat of his palace at Wells in Somerset and the great gatehouse at Bury St Edmunds was built to counter threats posed to the abbots by the townsfolk.

Apart from the Anglo-Scottish Borders, however, the need to fortify ecclesiastic buildings had ended by the fifteenth century. A number of churches were nonetheless pressed into service during the English Civil War (e.g. Clun), which was used as a strong point, and at Bradford, where the cathedral was protected by bales of wool.

5
SCANDINAVIA

Introduction

The period between 1170 and 1240 was a particularly violent time for the island communities of the Baltic. Although Scandinavia had become Christian, a large part of the southern and eastern Baltic region remained pagan. The piratical activities of the inhabitants of Couronia, occupying the peninsula between the Baltic Sea and the Bay of Riga, and of the island of Saaremaa to the north, ensured that the island populations of Gotland, Öland and Bornholm, together with the eastern littorals of Scandinavia, were particularly vulnerable. Lying on trade routes that were increasingly being developed by the Hansa, they were regarded as a continuing source of booty.

The view that many stone churches of these islands, the Kalmar coast of Sweden lying opposite Öland, and the islands and the east coast of mainland Denmark were fortified in response to these piratical raids has long been held,[1] but is now being challenged by some Scandinavian scholars who dispute the role played by church towers and elevated naves. They hold the view that, rather than acting as defensible places of refuge, they were built in response to the burgeoning trade of the region as a form of ecclesiastical warehouse. The ground floor served the religious needs of the community and the rest of the building was used to house valuable trade goods, sometimes protected by armed guards.[2]

The church in Scandinavia had taken two centuries to become established, and the first stone churches did not make their appearance until the last quarter of the eleventh century, followed shortly afterwards by the first monasteries. Christianity had not, however, reduced the warlike activities of these converted Vikings and the Church, through some of its bishops, became involved in local defence arrangements, particularly in Denmark, and the building of the first castles at the end of the twelfth century along the east coast of Sweden.[3]

The increase in trade had resulted in an increase in conflict. The emerging Rus had become a trading nation in the East, with Denmark controlling both imports and exports from the Mediterranean and England in the west. The emergence of the Hansa, chambers of commerce in the northern German coastal trading towns, facilitated movement throughout the Baltic, which was facilitated by the emergence of the cog, the northern merchant ship.[4]

[1] Professor Laske published his paper on the round churches of Bornholm in 1902 and was clearly of the opinion that they were fortified and from time to time garrisoned.

[2] Both Dr J. Wienberg, reader in archaeology, University of Lund, and Dr Ann Bonnier of the Swedish Heritage board point this out in personal communications.

[3] Anderson (1980; 164–5) and Tuulse (1958: 110–12). There were no walled towns or private fortifications built before 1130.

[4] The cog made its appearance on the Frisian coast around 1200 and became the preferred merchant ship of the Hanseatic League. Clinker-built with high sides and a flat bottom to the hull, it proved

Christianity had not pacified the Baltic; warfare was endemic everywhere. It was not until the last outposts of heathendom were converted on the island home of the Ösel (Saaremaa) pirates in 1227, followed by the conquest of Courland by the Teutonic Knights in 1231, that some semblance of peace appeared. Isolated raids rather than concerted attacks were to continue until 1240, however. The period 1100 to 1240 had seen the Baltic embroiled in full-scale wars involving vast military resources.[5]

The free-standing fortified church towers of Gotland

Lying approximately 90km from the Swedish coast in the centre of the Baltic, Gotland is the largest of the Baltic islands. It became a target for both pagan pirates, slave-traders and the Hanseatic League, which founded **Visby** at a natural harbour on the west coast of the island. It became one of the major trading ports of the Baltic and was walled in the second half of the thirteenth century. The only substantial fortification on the island, it was built for the protection of the merchants and their goods, rather than for the indigenous population. Left to themselves they had used their churches to protect themselves decades earlier. Scattered throughout the island are over ninety churches that remain from the Middle Ages; eleven of these contain visible and archaeological evidence of fortification. Although remains are scanty, there is evidence that three different methods were used in their fortification.

The most common form of defence was the building of a free-standing tower in close proximity to the western end of the church, of which there are the remains of nine today. Although most are in advanced stages of ruination, the tower at **Lärbro**, found in the north of the island 50km north-east of Visby, is in a good state of preservation. This is almost certain because it was converted into a free-standing belfry of the neighbouring church when its role as a defensive tower became obsolete. The tower has four storeys and measures 9.6m square, rising to a height of 16.8m to the overhanging roof of the belfry steeple. The basement has a fireproof stone-vaulted roof, and the walls diminish in thickness as they ascend, in order to provide offsets to receive the wooden beams of the upper floors. Although there is a ground-floor entrance to the basement, there is, today, no discernible access to the upper floors other than by a first-floor doorway on the east. Access to the different storeys is by means of a staircase running clock-wise in the thickness of the walls. There is no evidence of any active defensive features and its conversion into a belfry has removed any evidence for the nature of its fighting platform. Although the tower at **Gammelgarn**, the only other one that still stands to its full height, has retained its stone vaulted roof its battlements have been lost. These towers are built of rubble and are very basic. Each storey is provided with narrow apertures but there is nothing to indicate that they were provided with fireplaces and privies.[6]

The church at **Näs** was one of the few churches on the island that was completed in its

seaworthy, capacious, economic and defensible against pirates, especially when high fore and aft castles and the top castle of the solitary mast were added in the thirteenth century.

[5] Christiansen (1997: 46).

[6] It was not only churches that had these free-standing towers in their yards. There are the remains of three towers attached to farms on the island.

Image not available

entirety in one building period in the middle of the thirteenth century. A simple country church with furnishings from later periods, the attached tower is loop-holed, possibly from the thirteenth century, and is the only western tower to be so. The west tower of the church of Bunge is similar to the free-standing defence towers and is crenellated under the spire, very much in the manner of a number of Öland churches, again suggesting that the church had been fortified in the first half of the thirteenth century. The rebuilt Gothic nave and chancel contains rich wall paintings, one of which depicts a battle between Teutonic Knights and Mecklenburg pirates who had occupied the island in 1398. This is interesting because the cemetery wall, now much ruined and reduced in height, contains loopholes for crossbows and retains part of its coping of tilted slabs very similar to the town walls of Visby.[7] So far, there has been no archaeological examination of the churches and their environs to determine whether any other churches received fortified cemetery walls.

The parish forts of Öland and their archers' galleries

The island of Öland lies just off the Kalmar coast of south-east Sweden and to the south-west of Gotland. This long and narrow island runs approximately north to south, and measures 140 by 17km at its widest part. Given over to agriculture, its southern third, the Stora Alvaret, is mainly scrubland and heath.

Following the introduction of Christianity, the first churches were constructed out of vertical timbers, usually oaken planks, driven into the ground or attached to sills. Known as stave churches they were replaced by churches built out of limestone and sandstone, many of which remain from the mediaeval period, although now much altered and sometimes unrecognisable as being mediaeval. Fortunately, many sketches and drawings that remain from the mediaeval period until the eighteenth century show that there was little change in the external architectural form until comparatively recent times. These sketches show the churches to be dramatically different from their appearance today. However, it has been possible, using the sketches, archaeological discoveries and architectural features still remaining, to reconstruct, diagrammatically at least, the churches as they appeared in the twelfth to thirteenth centuries.

From these conjectural reconstructions it is possible to set out some generalisations regarding the ten churches believed to have been fortified between 1170 and 1230. Apart from Vickleby, which lies on the west side of the island in its southern half, all are a slightly inland in the richer northern part on its eastern coast, connected by the road that runs the full length of the island. All have attached towers, many of which have lost their upper storeys since the seventeenth century. The barrel vaults separating the different storeys are invariably arranged so that they run in alternating directions, east–west and north–south, as the floors ascend, which neutralises the thrust of the vault and adds stability to the tower as well as making it almost fireproof. There are no external entrances and the majority have doorways at first-floor level facing the nave. Where not part of an eastern tower the chancel, as well as the nave, was

[7] Söderberg (26–7).

vaulted and their walls were elevated to produce one or sometimes two attic rooms reached from the towers. Both the top storeys of the towers and the attics contained huge crenellations. The rooms were known as archers' galleries. Porches were not added until later when the need for defence was over.

Fortification was a gradual process, usually covering a period of between twenty-five and thirty years, and the churches were fortified in a number of differing ways. No church received fortifications after 1250, however. The examination of the architectural features, together with archival material, of the churches at Böda, Källa and Föra demonstrates how fortification was achieved.

The church at **Böda**, on the northern tip of the island, is depicted in drawings of 1634 and 1673 as a fortified, square hall-church of three storeys without either a western or eastern tower and with crenellations under the eaves of the steeply pitched tiled roof. This appearance is the one believed to have resulted from the rebuilding of the church after pirate raids in the first quarter of the thirteenth century. The original semi-circular apse, narrower than the nave, was demolished and replaced with a chancel as wide as the nave with a flat chevet but with higher side walls. The nave walls were elevated to the height of the enlarged chancel to provide defence rooms above the vaulted ground-floor church. The walls were then further raised to produce an additional upper storey, forming an archers' gallery with its 2m crenellations.

These fortifications remained until both the northern transept and the southern porch were added in the more peaceful fourteenth and sixteenth centuries. Subsequent rebuilding, beginning in 1698, has significantly altered the appearance of the church, which has now lost its upper storeys and its barrel vaulting. Today only the 1.5 to 2m thick northern and eastern walls, containing part of the original staircase to the upper storeys, remain from the twelfth and thirteenth centuries.[8]

The neighbouring church at **Källa**, 18km to the south-west of Böda, although much ruined and derelict, still retains its three storeys but has lost the nave vaulting. It is a rectangular building, measuring 28 x 8.8m and rising 10m to the roof eaves. Fortifications were added in a somewhat different way. First a five-storey defensive tower was added to the earlier, unprotected, stave church which was soon to be replaced by a stone nave with a narrower chancel. When, in the last decade of the twelfth century, raids became more frequent, the nave and chancel were altered in the same manner as at Böda, initially with one refuge room above the vaulting. This room had no defensive features and defence was conducted from the fighting platform of the tower. The final stage of development came at the same time as at Böda when the nave and chancel were further heightened to add an archers' gallery. At the same time the tower was lowered so that crenellations were provided for the defenders around all four walls of the church. The parish fort church thus comprised a ground-floor church, passively defended, a first-floor refuge and storage room and a second-floor defence room providing both active and passive defences.[9]

Although the church at **Föra** is only 20km from that at Källa it was fortified in a completely different way, although at the same time as all of the fortified churches on Öland.

[8] Boström (1968: 164–5).

[9] Boström (1969: 382–4).

Seventeenth-century engravings depict the church with both western and eastern towers rising above the nave, which nestles between the two. This appearance, reminiscent of the saddle of pack animals with its high pommel and cantle, resulted in the fort church becoming known as a 'pack-saddle' church. The west tower and the nave, bonded together, were built around 1170 and the thick walls suggest that fortification was uppermost in the minds of the builders. The walls of the chancel were later strengthened to support the east tower, which probably also served as the belfry, and the nave walls heightened to provide a refuge gallery, although the vaulting is of a later period. The result was a powerful parish fort able to offer a substantial resistance and shelter a large number of villagers. That the west tower was also used as a habitation is confirmed by the presence of a garderobe.[10]

Although archival paintings and prints show many churches surrounded by substantial cemetery walls with a solitary entrance gate, there is no indication that any received fortifications and Boström makes no mention of any defensive role for the cemetery wall.

The churches of Kalmar

The adjoining Kalmar coast, in the Swedish mainland province of Småland, contains a number of Romanesque churches that were altered in the early thirteenth century. It is these churches that are coming under the scrutiny of Swedish architectural historians who are challenging the view that the alterations were built more for trading purposes, especially warehouses, than for defence. There are, however, many similarities between a number of these mainland churches and those deemed to be fortified on Öland. **Kläckeberga**, **Ryssby** and **Söderakra**, all coastal churches, appear to be of three storeys like Böda and Källa. **Halltorp** appears to be saddle-pack church and possesses a doorway 3m above the ground. The two round-tower churches of **Hagby** and **Voxtorp** show great similarities to those found today in Denmark. Their plan is so similar that they have to be considered as fortified if it is accepted that those on Bornholm are fortified churches.

The fortified round-tower churches of Denmark

In Denmark today are seven churches of a unique design that were built from the outset with defence in mind. Known as the round churches, four are found on the Baltic island of Bornholm and the remaining three in Jutland (Thorsager near Århus), Sjælland (Bjernede), and at Horne, on the island of Fyn, all on or near the Baltic Sea. They were all built in the middle of the twelfth century at a time when Bornholm in particular and the eastern seaboard of Denmark to a lesser extent were subject to organised and repeated raids by Slavic Wends.

Bornholm, lying halfway between Sweden and Germany, was particularly vulnerable due to its position as a staging post on the trans-Baltic trade route. It had to look to its own devices for protection. Perhaps because the economy of Bornholm has never been as strong as that of the coastal regions of Sjælland and Skåne, alterations, rebuilding or reconstruction have not

[10] Boström (1972: 623–4).

occurred to any significant degree. As a consequence many of the original architectural features remain; all the churches are instantly recognisable as a type. A huge, originally three-storey, round tower served as the nave and connected to a smaller, more oval than circular, chancel, itself attached to a semi-circular apse. All have retained their fortress-like aspect and are impressively solid and massive. Whilst the centuries have seen repair and slight alterations, the basic church fortress remains, although the conical roofs and buttressing are later additions, as are the porches and attendant bell-towers.

Østerlars church is Bornholm's largest round church, and, although the most sophisticated, serves to show how the original church fortresses would have been constructed. The name Østerlars refers to its patron saint, St Laurentius (Lars in Danish); the church dates from around 1150. The stonework is of rough-hewn and split boulders, with the exception of door and window surrounds that are limestone ashlar. The circular nave, some 15m in diameter, has three storeys, the uppermost having a smaller diameter than the others, and the chancel had two of equal size whilst the apse is single-storey. The walls are up to 2.5m thick and as a protection against fire the storeys have ring-shaped barrel vaulting with a huge hollow central pillar providing support for the weight and stresses produced by this form of roofing. Originally the nave and chancel had flat roofs and would have been surrounded by a crenellated parapet, so providing the fighting platform necessary for active defence. Putlog holes remain and there may have been a wooden hoarding erected at times of particular threat and danger. The central supporting pillar projected above the third storey and served as a watchtower. Although some 3km from the sea, the church is built on a ridge 100m above sea level and excellent views of the coastal areas would have been obtained from this tower.[11] Access is via two ground floor doorways to the nave, one for men and the other for women. From the north-west corner of the chancel a narrow stairway leads up to the upper two nave storeys with a doorway into the middle storey. There is architectural evidence that there was an outer doorway in the middle storey that facilitated the hoisting of trade goods and valuables for storage and safety. The fortified chancel roof was reached from the wall walk of the third storey of the nave, whilst a door with descending steps led to the chancel loft.

There is a cohesiveness about these fortress churches: the mediaeval architects successfully combined church, massive fortifications and, it is believed, a warehouse, to produce buildings capable of resisting all but the most determined of besiegers. It is, however, as churches that they have survived and functioned.

Sweden has the remains of two round-tower churches; that at **Hagby** near the Kalmar coast is the best preserved despite only the outer walls and chancel vault surviving. The ground floor plan is very similar to that at Østerlars. It has a larger diameter of twenty metres, however, and has only one narrow entrance, although there is a similarly placed staircase and pillars for a central tower.[12]

Finally mention needs to be made of a small group of churches surrounded by moats and walls in the fourteenth century in Jutland near Århus; **Malling** is the best remaining example.

[11] Laske (1901: 34).

[12] Iwar Anderson examined it in 1965, and concluded that it was designed for defence as much as for religious purposes.

Image not available

Here a Romanesque church is surrounded by an irregular rectangular defensive wall, some 2m thick, enclosing a churchyard 70 x 50m, further protected by a moat and a round tower at the south-eastern corner guarding the solitary entrance. The defences were built at a time of unrest and civil war in Denmark, almost certainly by the local parishioners.

Summary

The massive architectural form of the church defences provide a fascinating legacy of the troubled times of the mediaeval Baltic. The three islands chose to build ecclesiastical fortifications of differing forms, designed to defend the local parish communities against raiders seeking booty and slaves rather than invaders in search of conquest. In view of the massive resources expended in their construction the numbers built give an indication of the perilous nature of twelfth-century island existence. The increasing role that the islanders of Öland and Bornholm played in the Baltic trade is shown by the use of many of the fortress churches as warehouses, a function attracting increasing attention in Scandinavia. Whether they were used to store goods produced locally or as distribution stores has not yet been determined, although the receipt of goods from Rus to the Mediterranean would suggest the latter.

How such disparate buildings as the saddle-pack and round churches were arrived at is unknown, although there is a remarkably similarity in the vertical construction of each; ground-floor church, middle-storey warehouse and top-storey guard house and fighting platform. The distribution of the round-tower fortress churches is intriguing. If they were built solely by their parishioners it is hard to understand their distribution. Financial provision by a mercantile group employing a specific group of masons is a more likely explanation. The apparent success of the round churches, built in the middle of the twelfth century, led to the development and building of the rectangular churches on Öland.

6
FRANCE

Introduction

Ecclesiastical fortifications are to be found in almost every region of France. They are an integral and enduring part of French mediaeval history; they played an important role in the promotion of religious bodies and the protection of religious and lay communities, and contributed to the development of military architecture.

A number of hurdles have to be overcome before a composite picture of the scale and extent of religious fortification can be obtained. Charles-Laurent Salch has performed a Herculean task in gazetteering over thirty thousand castles and fortifications in mediaeval France, of which approximately twelve hundred are religious fortifications. However, this is almost certainly an underestimate of the true number. Salch relies on architectural remains, published monographs and notifications from reporting correspondents.[1] Despite his admirable efforts many churches today go unrecognised as having been fortified. The reasons are threefold.

During the Hundred Years War, many churches were fortified in haste and in a temporary, utilitarian way, often without waiting for royal or ecclesiastical permission. When danger passed these temporary fortifications were demolished and often never rebuilt.[2] In other instances, where churches had been surrounded by a fortified cemetery wall, this was demolished. Both may well explain the discrepancy between maps produced by Wright.[3] These indicate that during the Hundred Years War there were twenty-eight fortified churches in a small area south of the forest of Fontainbleau in 1367 and over sixty in Saintonge, and yet Salch lists none in the former and only thirty-five in the latter.

Churches are living buildings and, in the main, have been in continuous use by the parish communities since they were built and have undergone alterations and frequent reconstruction and repairs. In La Thiérache only two, Dohis and Vigneux-Hoquet, out of over sixty fortified churches still retain evidence of fortifications from the Hundred Years War, fought with such ferocity in this region. During the turmoil that enveloped north-east France in the sixteenth and seventeenth centuries these churches underwent substantial modifications, turning many into veritable fortifications and destroying any building work from an earlier era.

In other instances where vestigial remains of fortifications exist they frequently go unrecognised and unrecorded. There are many churches with very scanty remains, only an

[1] No criticism of Salch's work is intended; it is indispensable. However, as Brooke has shown, it is only by carefully examining churches that have architectural remains from before the nineteenth century that numbers can be accurately established.

[2] Barbier (1968: 434).

[3] Wright (1998: xi–xii).

elevated roof, blocked loopholes or a single corbel remaining to suggest a defensive role.[4]

Barbier lists a number of monasteries and churches, now devoid of fortification, that were fortified during the Hundred Years War and the Wars of Religion that followed later. The evidence is archival; there is much documentary evidence, often contemporary, of village populations taking refuge in the church. Little study has been made of these voluminous archives that, paradoxically because of the security such churches offered for their safekeeping, have remained from the Middle Ages.[5]

Geographical distribution is uneven; although fortified monasteries, abbeys and priories are widely and equitably spread throughout France this is not the case with other ecclesiastical fortifications. Fortified cathedrals are exclusively found in the south with the exception of Saint Brieuc and Dol-de-Bretagne in Brittany, and are a consequence of the Albigensian Crusade. The rest of the country is bereft. Fortified churches have a very uneven distribution and although they are found in every region and most departments of France they are mainly found in the north-east, the Loire valley and Poitou-Charentes, the south-west and Languedoc-Roussillon. In comparison few are found outside these regions.

The historical context perhaps offers the best explanation, although Barbier suggests that in Normandy and Brittany peasant protection was provided by many of the castles (château-forts) found in these regions. He argues that many churches that may have been fortified were reconstructed after the devastating Wars of the Ducal Succession between the Blois and the Montfort families in the fourteenth century. He also suggests that the profusion of castles in the east of France, Burgundy, the Île-de-France and the central regions was the reason for the absence of fortified churches. He believes that there would not have been the need for these peasant defences.[6] Certainly in the north-eastern borderlands the absence of seigneurial protection in castles and the scarcity and inconvenience of towns for shelter support this theory, as there is a profusion of fortified churches.

From the earliest times until the end of the seventeenth century religious and lay communities were constantly under threat throughout France from one source or another. This is reflected in the sheer numbers of religious buildings fortified at one time or another over seven centuries; indeed the last church to be fortified was that at Archon in La Thiérache in 1699.[7]

Vikings, pirates, Islamic raiders and heretics

Viking raids into the north of France and the Atlantic seaboard resulted in the need for ecclesiastical defences, as the shallow-draught long boats enabled them to penetrate significant

[4] Such unrecognised fortified churches in Meuse include Floigny, Trondes, Senonville, Erize-la-Brulée, Bonnet and Erize-Saint-Dizier.

[5] Wright (1991) demonstrates the value of contemporary documents when writing about the fortified church at Chitry in northern Burgundy. The fortified cemetery wall was demolished long ago.

[6] Barbier (1968: 409).

[7] Salch lists 919 churches, 105 monasteries, abbeys and priories and 20 cathedrals, the greatest density in Christianity. This is a significant increase on Barbier who suggests a figure approaching 600.

distances inland. Although there are no remains from this period it is likely that the monastery of **Mont-Saint-Michel** received its first fortifications in response to this Nordic threat. The present fortifications date, however, from the thirteenth to fifteenth centuries.

Similarly the Mediterranean coastal region was always vulnerable to pirates and Saracens, the raiders from Islamic North Africa and Spain, attracted by the wealth the monasteries were accumulating; it may well be more than coincidence that the remaining Islamic ribats are situated in Tunisian sea-ports. The vicissitudes experienced by the island monastery of **Saint-Honorat** on the Île-de-Lérins opposite Cannes testify to this: in 732, the abbot and five hundred monks were massacred when attacked by Saracens.[8] The threat was ever present, and in 1073 Abbot Aldebert had the monastery fortified. Such was the need for defence that the fortifications were repaired, renewed and added to over the ensuing centuries. Devastated and rebuilt over the centuries, the monastery today has few remains from the Middle Ages; only the Trinity chapel and the chapel of Saint Saviour retain their original façades. Of the monastic defences there are substantial coastal remains of the crenellated defensive wall and on a rocky outcrop in the sea overlooking the monastery is a huge donjon built over three distinct periods. The original tower, from the early part of the thirteenth century, was enlarged in 1295 and received its final form in the early fifteenth century. The quadrangular keep has a huge vaulted cistern and the vaulted first floor contains a strongroom for the monastic relics. Provided with a large fighting platform, vaulted to bear the weight of missile-throwing engines, this was a powerful coastal fortification, and it is not surprising that, against the wishes of the abbot, the king of France installed a garrison here in the fifteenth century.

The Romanesque fortress churches of the south of France

Revenues received by monastic houses and churches in the south of France became immense, whether from donations, legacies, husbandry, the sale of indulgences or the increasingly lucrative pilgrimage trade, a result of the importance placed on relics. These riches attracted not only outsiders but also received the attention of local nobility, always at odds and frequently at war with each other and whose wealth was increasingly lagging behind that of the Church. To compound matters further the region was becoming increasingly influenced by heresy, especially in Languedoc-Rousillon, that threatened the spiritual and physical fabric of the established Church. As a consequence the clergy, in order to safeguard themselves, their wealth and their relics, started to fortify. By the twelfth century the bishops and abbots had become more powerful and wealthy than the local barons and nobility. In addition they enjoyed greater status and influence that, perhaps inadvertently, saw them play a major role in the early development of the art of fortification and military architecture. Romanesque stone churches with their large western bell-towers straddling the porch had long been used to safeguard church treasures. Their upper storeys had been adapted to act as strongrooms for church valuables and as refuge rooms for the clergy. Fortification was passive, however. Barbier is convinced that many of the Romanesque churches in Languedoc and Burgundy were fortified churches. He used his own observations and the views of Rey, basing his opinion on

[8] Braunfels (1972: 21).

the height and bulk of the bell-towers, which he believes are clocheur-donjons, or bell-tower keeps. Situated either over the crossing between the nave and chancel or at the west end of the church where the ground floor acts as an entrance porch, they are huge, multi-storey and have a crenellated parapet at their summit, so he deems them to be fortified.[9] Whilst undoubtedly they could offer at the very least passive defence for their parishioners more research needs to be done before they can be classified as fortress churches.

The construction of the fortress cathedral at **Maguelonnée** in Hérault was a major stepping stone; it is a landmark building. It suited King Louis VII to grant the wealthy bishop (and others) permission to fortify their cathedrals.

The cathedral church, standing in the middle of a flat islet off the Mediterranean coast near **Montpellier** has lost most of its fortifications and those of its earlier monastic buildings. Fortunately archival and archaeological evidence, together with architectural remains, demonstrate the earlier extent of fortification. The church itself was powerfully fortified and acted as a donjon. The roof-top fighting platform was surrounded by a battlemented parapet running on arch machicolations that spanned the church buttresses, thus enabling defenders to cover the wall base without exposing themselves to attackers; it was a significant advance on the wooden hoarding then used in castles for the same purpose. Further defences were provided by towers built above both transepts enclosing chapels and a tower built against both the nave and southern transept reached by a series of stairs and galleries, enabling all parts of the defences to be reached by the defenders. The monastic complex was fortified by surrounding concentric walls reinforced by flanking towers. Both machicolation and concentric walls were a feature yet to be incorporated into secular military architecture.[10]

The cathedral of nearby **Agde** and the abbey of **Saint-Pons-de-Thonières**, also in Hérault, were similarly fortified in the later twelfth century. Together with **Saint-Honorat-de-Lérins**, the fortified abbey of **Saint-Victor** in Marseille (much altered by Pope Urban in the fourteenth century), and a number of interposed fortified churches, formed the first of organised Christian ecclesiastical defensive systems.[11] This system of defence guarding the littoral of both Provence and Languedoc contained military architecture much in advance of that of the contemporary secular fortifications of the nobility. The technology had almost certainly arrived in the south of France as a direct consequence of ecclesiastical connections in the Holy Land.

The bastides

More or less at the same time as the rich and powerful bishops of the Languedoc were building their cathedral fortresses other major building works were being undertaken in both the west and south-west of France. The region was about to embark on a period of short-lived

[9] Barbier (1968: 456–8).

[10] Bonde (1994: 66–83) describes at length the archaeological evidence and the architectural remains and argues the case for these twelfth-century fortifications predating those of secular castles.

[11] The preserved Romanesque church of Sainte-Léocardie at Vic-la-Gardiole and the church of Espira-de-l'Agly in Rousillon were part of this system and still have their fortifications.

prosperity, followed by a century of conflict resulting in a devastated countryside subjected to repeated episodes of pillage and violence.

The Albigensian Crusades in the first half of the thirteenth century had led to the despoliation of much of the more fertile parts of south-western France, and a period of reconstruction was necessary. Alphonse of Poitiers (1249–71), the brother of St Louis (Louis IX), the king of France, had become count of Toulouse and he needed to stabilise and repopulate his lands. In an endeavour to encourage settlers from more populous areas he began a programme of town planning that was to result in many new towns south of the River Dordogne. These 'plantation towns' became known in France as bastides.[12] The English-controlled Aquitaine and Gascony, from the Pyrenees almost to the River Gironde, also saw the rise of many bastides between 1220 and 1350. Bastides are characterised by their grid pattern of streets, with a central island reserved for the market, onto which the town hall and sometimes church fronted. Castles were rarely found, and often there was no church.[13] It does not appear that bastides were originally intended to be fortified, but the Hundred Years War saw fortifications being provided in many instances.[14]

We know that the church entered into partnership with the kings in the founding of almost thirty bastides. It seems logical that, with a neighbouring history of ecclesiastical fortification, some of the bastide churches would have received some form of fortification. Today eleven such churches still retain substantial evidence of fortification and others have some portion of their structure incorporated in town walls.

At **Beaumont-du-Périgord** in the Dordogne the bastide was founded by Edward I in 1272 on top of a hill, surrounded by fertile farmland. It received a fortified enceinte in 1320, roughly rectangular in shape and measuring 340 x 140m. The parapeted and battlemented wall was further strengthened with round and square flanking towers and the apse of the church of Saint-Font was incorporated into the north-eastern wall.[15] It is highly likely that the church was always intended to be the final retreat for the besieged townsfolk and was designed as a fortress church from the start. It dominates the town and surrounding countryside in all directions and combines austerity with power. The rectangular building, measuring 60 x 18m, has four square corner towers and northern and southern transepts. The towers of the flattened chevet, originally containing crenellated parapets, are contiguous with the town walls. The fortified western doorway, flanked by two square towers, dates from 1330. The chemin de ronde was destroyed during the restorations of 1869. The south-western corner tower contains

[12] Hiorns (1956: 122–6).

[13] Beresford (1988) points out that townsmen who wished to found a new church faced significant difficulties as the new town would invariably be located in an existing parish. Indeed, the founding kings often sought senior church, often papal, support to avoid conflict with the local church hierarchy.

[14] Beresford (1988: 179–90) devotes a whole chapter to town security. He states that only a third of the bastides in Gascony received any form of fortification. Today there are remains of fortifications in about thirty.

[15] The walls remain in good repair and one tower remains, along with two gates, one of which, La Porte de Luzie, is defended by a bretache, portcullis and barbican.

Image not available

a staircase to the first floor, ladders subsequently providing access to the chemin de ronde and the fighting platform of the tower, which is roofed, crenellated and built on projecting machicolations. A flight of stairs, in the nave by the west wall, leads down to a well: a further indication that the citizenry regarded their church as serving as the town citadel.

The chevets of other churches form part of the town walls at **Sauveterre-d'Aveyron**, **Fleurance**, **Monflanquin** and **Saint-Pastour**, whilst the south wall of the churches of **Montréal** and **Miradoux** form part of the town ramparts.

There is no formal arrangement between the fortified church of a bastide and any other fortifications that it may have. At **Molières**, near Bergerac in the Dordogne, a small English bastide was established at an important crossroads in 1284. Only the Gothic church, set a little off the regular line of houses and near the town square, received fortifications, with solid nave and chancel walls. The western, solitary and narrow doorway was fortified with the addition of two massive square towers originally connected by a crenellated gallery. The church was damaged in the Wars of Religion and has been substantially rebuilt. The side walls of the church and the north tower remain from the thirteenth century and show just how big and powerful this church was, far bigger than would have been required for religious purposes. It contained store-rooms and could accommodate the whole population of the bastide, which never exceeded 1200.[16]

Other fortified churches lie free-standing within the town defences. At **Beaumont-de-Lomagne** the fourteenth-century church occupies an insula near the market place. Its considerable bulk was fortified with a machicolated chemin de ronde, corner towers and a crenellated fighting gallery on the bell-tower. The twelfth-century church at **Vianne** had been included within the enceinte of the bastide founded by Edward I in 1284 on his Agenais frontier, opposite the French town of Lavardac. Overlooking the north gate the church was actively fortified with a tall crenellated bell-tower.

These fortified bastide churches demonstrate a close co-operation between the Church and the laity, the king, the founder and the townspeople, whereby substantial economies of expenditure and labour could be made in producing buildings which served temporal as well as spiritual needs.

The fortified rural parish churches of the south and west of France and the 'scourge of God'

The stimulus to fortify remote and often isolated rural parish churches in France was the war that developed between England and France. It began in 1337 when Edward III claimed the throne of France and continued until 1453 when the English finally lost Bordeaux. In the interval the rural peasantry had to contend not only with the depredations of the warring factions but also with the Great Plague and famine. Although some protection was offered by the bastides, the rural hamlets and villages had to fend for themselves, and it was the nature of warfare during this Hundred Years War that resulted in the fortification of probably thousands

[16] A start was made in 1314 to build a castle keep to the north of the town but it was never completed.

of churches. Although it was an intermittent war with few pitched battles, it affected every aspect of life in both the English and French regions. Whilst the main impact and consequences were felt in north-eastern France, where the English armies invaded via Calais and its Pale, and the south and south-west, where English possessions in Aquitaine were used to launch raids and invasions, other areas were not free of warfare. Using the conflict as an excuse, many of the nobility in other regions took the opportunity to settle feuds.[17] The agrarian peasantry was greatly affected on two counts; for decades they had to strive for survival when food was scarce and cope with warfare. In the main, English armies were small, rarely numbering more than a few thousand unless a major expedition was led by the king. It was instead the activities and tactics of the grand or free companies and the routiers that was to have such a devastating effect.

The English invented the chevauchée, literally a ride or cavalcade, wherein bands of mercenary soldiers, all seasoned veterans, banded together under a captain to undertake rapacious raids into enemy territory.[18] More frequent, however, were lightning hit-and-run tactics of the smaller free companies of professional soldiers. Whilst these soldiers came from all over Europe they were usually led by English captains, many of whom amassed substantial fortunes. The virulence and violence of these raids led to tremendous fear amongst the suffering civil population. The free companies gained a reputation as the 'scourge of God'.

The countryside could only provide so much booty, however, and there were significant periods when the soldiery were confined to garrison duty or disbanded. Many then joined lawless bands, preferring a life of pillage and freedom to one of poverty and serfdom. These bands installed themselves in minor castles and forts and systematically reduced the surrounding countryside to desolation. Once installed, the routiers were difficult to dislodge.

French peasant response was first directed towards survival by any means.[19] They faced stark choices. They could submit and become destitute, frequently losing their lives; they could flee to the dense forests then covering much of France, taking with them what they could; they could seek shelter in the larger towns or seigneurial castles until danger had passed; or they could defend themselves, either passively or actively.

The fortifications of the rural population

English armies and garrisons were never very large and those communities that decided to try to defend themselves against the depredations of the avaricious soldiery had to find the will and resources to do so. The larger fortified towns and castles were safe from English attack. It was the smaller towns, villages, hamlets, farming communities and the rural monasteries and

[17] Curry and Hughes (1994: 103–14).

[18] Some idea of the nature and consequences of such a raid is given by the Great Chevauchée led by Edward the Black Prince. Comprising a great company of mounted archers and men-at-arms, it left Bordeaux in October 1355 and in the space of two months reached Narbonne in the Languedoc, a distance of 900km. The sole aim was to capture, plunder and destroy towns and villages along the way. Such a chevauchée became known as a route and the participating soldiers as routiers.

[19] Wright gives a good insight in the relationship between soldier and peasant in the Hundred Years War.

priories that were most at risk, and it was here that fortification in earnest began in those regions at risk.

Rural villages and hamlets rarely had a building of any size that could be fortified, with the exception of the church – often a substantial stone building with a bell-tower. It could be economically adapted for defence in a variety of ways, sometimes speedily and within the resources of the populace. The numbers that remain demonstrate the popularity and necessity of such fortifications. Equally they may indicate that there was no alternative and any defence was better than none.

The manner of church fortifications

A papal bull of 1059 had offered protection to churches, their cemeteries for a distance of thirty paces in all directions, and other consecrated ground, by the threat of excommunication. Although revived in the twelfth century, it had ceased to offer much protection against the routiers and lawless bands that roamed through much of France in the fourteenth and fifteenth centuries. Spiritual defence needed to be augmented by a pragmatic approach of using the church to provide a safe refuge. When a community decided to fortify its church permission was required from royal, ecclesiastical or municipal authorities.[20]

Many factors influenced the fortification of a church, not least the resources of the parish community. Examination of extant examples shows that there was a huge variation in the degree, style and combinations of defensive features; in addition regional variations produced differing military architectural styles. Perhaps the most common way a church was adapted for refuge and defence was by the elevation of the walls and roof to provide rooms for shelter and active defence above the ceilings of the nave and chancel. These rooms could be loopholed, or provided with box machicolations to produce a salle de défense. As well as protecting the villagers, their chattels, provisions, animals and implements when attacked some churches provided in their elevated refuges rooms to be occupied by village families at night, when there was significant real or perceived threat. They were rented for generations. The church of **St Radegoude** in Rouergue is one such example, where in addition to the elevation of the nave and chancel the side chapels of the transepts were converted into multi-storey defence towers. The salle de refuge contains some forty rooms for parish families, two of which contain fireplaces, almost certainly for the village captain and the parish priest. In some of the larger churches a covered, crenellated gallery would run all round the church, chevet, choir, transepts, nave and western façade, thus enabling defenders to have easy access to any part of the church defences. Where the church had an attached tower its summit would be provided with a crenellated parapet or received a wooden hoard. The intervening storeys were sometimes provided with fireplaces, chimneys and garderobes. The towers were used for lookout and the bells to signal a warning. The simple hoarding around the top of the tower was replaced by more sophisticated machicolations on corbels. The earlier arch machicolations that first

[20] Unlicensed or adulterine fortifications were subject to debate by church councils, who felt that such defences were open to abuse, and a number of statutes were issued prohibiting such building works and functional alterations.

Image not available

appeared on the coastal churches of Provence were built well into the fifteenth century.

The various openings in the walls of the church were fortified and defended in a variety of ways. The doors themselves were usually of double-planked oak clamped together with iron bolts and sheathed with iron plates to protect against axe and flame. One or more draw bars further strengthened the door against battering. When the entrance was via the western façade it was frequently defended by a crenellated and machicolated gallery running between defence towers placed at the southern and northern angles of the façade. In other instances a box machicolation or bretache overlooked the door. There are, rarely, remains of grooves for a raised drawbridge or portcullis and archival evidence of a barbican. In some instances the inside door to the nave from a porch entrance would be overlooked by a similar structure to a bretache, known as an assommoir.

Windows would be bricked up, defended by stout iron bars and grilles often overlooked by a bretache and shuttered from the inside. Loopholed towers, both square and round, were added onto the church in a variety of ways, and frequently smaller round towers or echauguettes were built at the corners of the church. They were usually corbelled out from the buttresses and are found at the west end of the nave, on transepts and occasionally at the chancel end.

The church at **Saint-Pierrevillers**, near Spincourt in Meuse, still has most of its fortifications and shows the sophisticated way in which a simple parish church was transformed into a maison-fort, the stronghouse of a farming community. Perched upon a grassy knoll in the centre of a farming hamlet the original church consisted of a simple western tower, nave and chancel. Some time in the fifteenth century it was totally remodelled to protect its parishioners. The nave, probably in response to an increase in population, was remodelled in 1530, and the chancel heightened to provide a defence room containing loopholes and box machicolations also loopholed for firearms. Sixteen bretaches were placed to overlook every opening of the church, be it door, window or defence opening. The roof of both nave and chancel was stone-vaulted with meuretières at the rib crossings providing observation of the body of the church. Both sides of the narrow tower were boxed in to run flush with the nave walls and to provide a fortified western façade. Entry to the church was by a single doorway in the northern wall of the nave with its fortified door.[21] The defence rooms were reached by means of the northern extension to the tower that contains a wooden spiral staircase, where, however, the bottom six steps are stone. At the side of the door to the staircase is a gun-loop covering the nave and the entrance to the church. Thus anybody breaking into the church would be subjected to fire from the salle de défense and the staircase tower. A cemetery wall surrounds the church, still to a height of 2m, and the bretaches are so arranged that they cover both churchyard and all approaches from the hamlet.

Some villages were fortified with walls and towers, with the fortified church forming part of the enceinte. Partially ruined, the walled village of **Cruas** in Ardèche crowns a promontory dominating the Rhône valley. The roughly quadrangular enceinte dates from the fourteenth century and is reinforced with rectangular towers to the north, east and south. Steep sides

[21] When first visited in 1992, the double-planked and studded door still contained half of its iron sheathing. At a repeat visit a decade later the door had been repaired and all traces of its iron façade removed.

further protect the northern and southern approaches. Found on the vulnerable western boundary of the village the church was converted into a huge donjon with the addition of two loopholed storeys, corner towers and a fighting platform with arch machicolations. Outwardly it has the stark appearance of a rectangular keep. The walled village contains the remains of approximately sixty buildings, suggesting a population of around three hundred, although there were probably village houses outside the walls.

At **Rudelle**, near Figerac in Lot, there is a similar church donjon standing in isolation of any other fortifications. Here the twelfth-century Romanesque church was elevated with the addition of two storeys of a purely military form. The crenellated fighting platform also contains projecting bretaches overlooking the western entrance doorway and the narrow lancet windows of the ground floor church. The middle storey contains only cruciform arrow loops. Both church donjons are similar to that built at Safita in the Holy Land.

In other instances the central fortified church was surrounded on all four sides with contiguous housing, whose outer walls, pierced only by narrow and high windows, provided a first line of defence. **Brigueil** in Charente is fortified in this way. Built on a knoll, the central church of Saint-Martial received fortifications from the twelfth to the sixteenth centuries; it has a crenellated salle de défense and a bell-tower containing gun-loops, although the church underwent restoration in the nineteenth century when many defensive features were lost. Although the external blank walls of the surrounding houses formed part of the enceinte the two entrance gateways were reinforced by drum towers and a portcullis. The defences were not sufficient to resist a besieging English army in 1356, however.

Whether fortified or not, churches were on occasion protected by a defensive cemetery wall. The small Alsatian village of **Hunawihr**, in Haut-Rhin near Ribeauville, is set amongst rolling vineyards and is overlooked to the north by its church encircled by a cemetery wall. Although the church is of a later date – nave and tower are from the fifteenth and sixteenth centuries – the polygonal fortified cemetery wall dates from the twelfth century and has been kept in a good state of repair. Reinforced by six open-backed semi-circular flanking towers, the wall is 1m thick and today is devoid of battlements. Equipped with archery loopholes, some of which have been adapted for use by handguns, the enceinte is entered from the north via a simple gatehouse provided with embrasures for small cannon. Although a number of churches were defended by cemetery walls in Alsace, the churches themselves were not fortified; this is in contrast to neighbouring Lorraine where both church and cemetery were fortified.

In the Ariège region of the Midi-Pyrenéés, the church of the small village of **Seintein** remains surrounded by a fortified cemetery wall. Extending for 200m, it still retains three of the original six four-storey towers that defended the churchyard; altered over the centuries, the fortified appearance is still very striking. Although fortified cemetery walls are found throughout the country, the great majority that still exist, in varying states of disrepair, are to be found in the north and east of France. Many have been demolished and the numbers can only be guessed at.

Churches continued to be designed and built as fortresses until the seventeenth century. Built in 1624 by the villagers, with the help of Claude de Joyeuse, count of Grande, the church of **Saint-Juvin**, near Vouziers in the Ardennes, is one such church. Situated in the centre of the village on a small knoll, the rectangular church measures 32 x 16.5m. It was

built to shelter the villagers and contains a well and storage cellars for provisions. The western façade has a bretache over the entrance and contains three tiers of gun-loops between the circular echauguettes built on top of the rectangular corner buttresses. Stairways in both sides of this façade lead to the towers and the chemin de ronde that ran all round the church under the eaves. The chevet is similarly defended, although the echauguettes are pentangular and rest on corbels. Both the northern and southern walls of the nave have a row of gun-loops from the chemin de ronde running under the eaves. The southern doorway is overlooked by a bretache. Although the narrow lancet windows of the north wall appear original, the windows in the south look like replacements, possibly from when the church interior was restored after the First World War. The brick vaulting, supported by stone rib vaults branching from ten piers in the twin-aisled nave, is roofed with slates. Dominating the village, the church is in reality a powerful peasant fort capable of providing shelter and a stout defence for large numbers of villagers.

Souterrains

A number of churches were provided with souterrains by their parishioners, entered from either the cemetery or the church itself. These underground refuge rooms connected by tunnels vary in extent, some running underground for up to 100m, and contain an average of five rooms. It is postulated that the spoil from their construction was used in building the church or its defences. Endeavours were made to camouflage the entrance, always located in a well-defended part of the church or cemetery. They further demonstrate the insecurity of peasants in many parts of the country and the efforts and resources that some parish populations put into defending themselves.

The entrance gallery runs steeply downwards and requires any entrant to stoop. This gallery led to a central passageway from which the refuge rooms were excavated. It was defended in two ways. Firstly, at the bottom of the entrance gallery a deep pit with steep sides was cut down into the rock, into which the unwary fell. Steep sides made climbing out difficult. This pit was overlooked by a spy hole from a small guard-room and a loophole was strategically inserted, through which a pike could despatch any attacker thus trapped. Secondly, the entrance into the refuge itself was protected by a thick door fastened flush with the rim of the pit, which would be closed and barred once the wooden bridge used by the villages to cross the pit had been retracted into the souterrain. Walls of logs inserted into rebates in the passageways provided further obstacles to any intruders. Once inside the individual refuge rooms could only be entered from very narrow tunnels, or gulots, through which the occupants had to wriggle. Rarely more than 50cm in diameter and around 1.5m long, they sloped downwards so that anyone crawling through had to put both arms on the ground and was thus unable to protect himself against a defender. The refuge rooms were aerated by means of carefully designed ventilation shafts, which, like the escape exit, were carefully disguised where they emerged on the surface.[22]

[22] Triolet and Triolet (1995: 81–9) describe in detail souterrains in France. Interestingly, of the six examples of these underground refuge rooms which are entered from a church or its cemetery yard, only one, at Compreignac in Haute-Vienne, is mentioned by Salch.

The souterrain had a number of distinct advantages. The dark and disorientating passages produced an environment of fear, especially when the pit-trap and probing pike were encounted. The barking of ferocious guard dogs would similarly act as a deterrent. Designed to be the last place of refuge, entered if the church was about to fall to attackers, souterrains provided an excellent deterrent to roving bands, who would, hopefully, go in search of easier pickings. Even if the disguised entrance or exit was discovered access was all but impossible for any assailant.

There was the added advantage that, unlike many temporary village and church fortifications that were dismantled on the orders of the clergy or local nobility when danger had passed, once built they were permanent. Although there are many examples of souterrains under towns, villages and castles in France, the number that were added to churches will remain unknown. Most new discoveries have been accidental.

The souterrain at **Petosse** in Vendée follows the classic form. It was built towards the end of the sixteenth century. It is now entered from the nave, but the original entrance was from the cemetery. As approximately half of the refuge rooms lie under the floor of the cruciform church it was probably constructed when the church was rebuilt following the sacking by the Calvinists in 1562. Running downwards, it leads to the pit-trap overlooked by a guard-room. From the central gallery at least three cruciate refuge rooms are reached after passing through gulots. Each wing measures approximately 5 x 2m and is excavated to allow the occupants to stand. Niches for lamps are provided, together with benches. The whole complex extends for approximately 100m under both church and cemetery.

Regional variations

France has a rich heritage of churches which like their counterparts elsewhere have been much damaged, altered, rebuilt or restored over the centuries. The attempt to classify regional variations is limited to churches that still today show evidence of fortifications and where photographic and pictorial archival material is strong. In addition there is often an overlap of styles from region to region and some specific features occur only in a few churches, often found close together.

Northern France

Normandy

All of the fortified churches have tall bell-towers, usually fortified with a crenellated parapet on false machicolations and often with a saddle-back roof to the tower as at **Créance** and **Surville**. Built of rough coursed granite, they are austere and functional with minimal decoration or embellishment. Found mainly in coastal regions and particularly in the Cotentin peninsula, they sheltered their parishioners from the piratical raids of the Hundred Years War.[23] The most impressive is found at **Portbail** near Barneville-Carteret. Here the twelfth-century

[23] There is some similarity between them and certain churches in Gower in south Wales, although no connection can be made.

Romanesque chapel of Saint-Nicholas-de-Pierrepont had attached to its south-eastern aspect, in the fifteenth century, an enormous five-storey fortified bell-tower crowned with a crenellated fighting platform on blind arcades. It was the lookout tower, and part of the harbour defences of this small port.

Aisne

Fortified churches are widespread in this north-eastern frontier of France and the most impressive are to be found in **La Thiérache**, an area of the region that lies between the Rivers Oise and Serre, that contains sixty-eight fortified churches whose defences date mainly from 1550–1650. Meuret has described three distinct architectural styles. Some churches were only altered in appearance by the addition of active defensive features, including the heightening of the nave or chancel, the addition of echauguettes on corner buttresses and the provision of loopholes and bretaches. The basic structure of the church is easily recognised and good examples are found at **Morgny-en-Thiérache** and at **Moncornet**. Here the Gothic stone-built cruciform church of the thirteenth century, built in the centre of the small town, was fortified in the sixteenth century by its inhabitants. The western porch, flanked by two tall cylindrical towers containing tiers of loopholes, was overlooked by a fortified platform that ran between the towers and contained meuretières. The lower half is built of stone and embrasures for small cannon overlook the entrance steps. A plaque commemorating the builders dates the work to 1546–7. Each angle of the transept and of the choir carried a loopholed echaugette. Overlooking the partial blocked window of the chevet is a bretache and the row of loopholes under the eaves indicates the presence of a chemin de ronde or salle de défense. As well as providing efficient protection for the townsfolk, the church is also an expression of the prosperity of the town.

The church at **Englancourt** dominates the valley of the Oise and also received its fortifications in the sixteenth century. The rectangular stone-built Romanesque church, measuring 25 x 7m had two brick echauguettes added to the western entrance to the nave, provided with loopholes to cover the entrance. It is very similar to the façade of the church of **Marly Gomont** on the opposite side of the valley. The nave was elevated, also in brick, to provide a salle de refuge, but it was the choir that received the greater part of the fortifications. The chancel was almost completely rebuilt in brick to produce a large square tower, rib-vaulted and provided with two corner towers at each end of the flat chevet, both of which contain four tiers of loopholes that covered all aspects of the church, other than the western end. The square salle de refuge above the vaulting of the choir has few external openings and is reached by a narrow, easily defended staircase within the thickness of the wall. These were counted as fortified churches by Meuret.

Fewer in number are his donjon or fort churches. Here the earlier Romanesque or Gothic church has vast brick, and usually square, towers attached to the western end of the church, out of all proportion with and totally dominating the church and village houses. These towers are purely military in design and function and were immense undertakings. **Prisces**, **Saint-Martin-de-Jeantes** and **Burelles** are amongst the finest examples of this group of twenty-four churches. Built in the middle of a small farming hamlet, Prisces has a Romanesque nave and choir of the twelfth century. Stone-built, it is devoid of all traces of fortification, although a

salle de refuge was built into the roof space. In place of the porch or bell-tower a huge donjon, 25m tall and 7m square, was built onto the nave. Of four storeys, two multi-looped cylindrical towers were added at alternate corners to serve as staircase towers and defence rooms. The basement acted as the porch and was vaulted whilst the three spacious rooms above were provided with chimneys and two narrow windows originally protected by bretaches. The top storey has on each side a number of windows used by marksmen to cover all approaches to the church, although the chevet was ill-defended.

Finally Meuret describes fortress churches, conceived from the outset to combine the functions of church and castle. Brick is used almost exclusively and many contain brick patterns of uncertain purpose on their external wall. The change from the purely fortified exterior to the warm and welcoming church interior is quite startling. The best examples are to be found at **Saint-Algis**, **Plomion**, **Esqueheries** and the rebuilt church of **Beaurain** destroyed in the First World War. Esqueheries, the most northerly of the fortified churches of La Thiérache, is built of brick on a small knoll in the centre of the village. Like many fortress churches it was designed from the outset as a stronghouse for the protection of the population. A rectangular drum tower was placed at each of the four corners of the church, thus flanking both the chevet and the western façade; that in the north-east contains an embrasure just above floor height for a substantial piece of artillery. The choir was of two storeys and contained a salle de refuge. The comparatively large windows of the nave and chancel were added later when the church lost its defensive role and many of the loopholes have been blocked. Certainly there is nothing in the body of the church to indicate any fortifications now.

All were built in response to threat of Spanish invasion from the Low Countries, during the Thirty Years War and the period of the Fronde when disaffected noblemen rebelled against the king of France and allied themselves with the Spanish. Peace was always short-lasting in the region and from the ascent of Francois I in 1515 until the last invasion in 1712 by the Dutch General Growestines, La Thiérache was subject to constant threat, widespread pillage and occasionally widespread destruction.[24] The military power of some of these churches rivals some of the smaller conventual castles of the Teutonic Knights built in Poland somewhat earlier.

The rest of L'Aisne contains many simple village churches showing evidence of fortifications from the fourteenth to the seventeenth centuries, as the evidence of loopholes for arrows, crossbows or firearms testifies. Many are built of soft sandstone ashlar. **Saint-Pierrevillers** is the best example of these fortified peasant churches.

Soissonais

Around the small town of Soissons on the banks of the River Aisne are two groups of churches where a definite typography can be identified. Both groups served as refuges for their parishioners and were fortified. Unfortunately damage caused to the churches during both World Wars has obliterated many of their fortifications; fortunately many photographs remain to show how these churches were fortified.

The Romanesque church in the village of **Laversine** was fortified during the Hundred

[24] Harrison (1994: 3–24).

Years War. Although the church itself was only passively fortified, the large Romanesque bell-tower was fortified by the addition of a crenellated chemin de ronde running on arches between the corner buttresses, providing a high fighting platform. This church was much damaged during the First World War and has been heavily restored. There are still remains of the lower courses of the parapet at third-storey level running across the arches built between the buttresses. Photographic evidence points to corner towers. A number of neighbouring churches were fortified in this manner.

The second group is better preserved. Its churches were fortified during the Wars of Religion. **Bucy-le-Long**, again near Soissons, is typical. The church itself is passively fortified and has a four-storey bell-tower, of which the ground floor acts as the church porch and the top storey contains the bells. The two intervening towers have only one narrow window each and were used as refuge rooms. The newel-staircase tower projected above the tower roof and served as the lookout post. Most protection was given by the cemetery wall, of which little remains. The nearby church of **Mortefontaine** still retains its fortified cemetery wall, containing many loopholes for handguns. The entrance to the churchyard is by a steep staircase between two overlooking loopholed walls. The church itself has had some of its windows blocked and has been crudely loopholed at ground and first-floor level, evidence of emergency peasant defences.

The Ardennes

The Ardennes region of north-east France contains many churches fortified mainly in the fifteenth and sixteenth centuries. Most of the churches date from the late Gothic period. Although bretaches and echauguettes are encountered they are rare. Gun-loops have been inserted frequently at ground-floor level; the multiple and rustic gun-loops define them as a group.[25]

At **Nouvion-sur-Meuse**, near Sedan, the sixteenth-century church of Notre Dame is fortified in this way. All four walls of the church were given a double tier of loopholes for handguns so splayed that each covers an angle of ninety degrees. The lower tier is just above floor height whilst the second row is located just under the eaves. Only a solitary bretache, over the northern doorway, remains today from any window defences and all traces of fortification have been removed internally. It is particularly interesting in that, probably uniquely, a two-storey salle de défense has been added to the south-eastern aspect of the chancel. Although there is an external window on its southern face, this is a later addition; the only openings to the outside were by the loopholes inserted into all four walls. That of the eastern wall contains sixteen such gun-loops arranged in five tiers, some splayed to cover the vulnerable angles of the building. The appearance is as much a blockhouse as a church. Although the rebuilt western bell-tower dates from the eighteenth century the entrance porch has a stone vault and there appears to be the remains of an assommoir protecting the internal porch door.

[25] They are also an indication of the number of handguns available to the peasantry, a response to the perennial insecurity of the region.

The south of France

The twelfth-century fortified monastic churches with their arch machicolations have already been described. Along with the fortress cathedrals built after the Albigensian Crusade they form two specific types of ecclesiastical military architecture to be found in the south of France. There are also a number of churches in Provence and the Languedoc that follow the design of the superb fortress church of **Saintes-Maries-de-la-Mer** situated in the heart of the Camargue. Building began in 1144 in the Provençale Romanesque style with Lombardic arcading. This pilgrimage site did not have its fortifications added until the fourteenth century, although its external appearance gives the impression that it was built at one go. It is a large rectangular church with a semi-circular apse, and measures externally 34 x13m with its walls rising 15m to the roof. The nave is heavily buttressed internally and both nave and apse are crowned with a crenellated and machicolated parapet, the machicolations running on the buttresses of the nave and on corbels on the apse and western façade. Above the chancel there is a polygonal crenellated tower that abuts the three-gabled bell-cot arising from the eastern end of the stone-roofed nave. Staircase towers are found at the western façade and on the north where the nave meets the chancel. The whole is once again what both Barbier and Meuret describe as a fortress church; ten churches in the region have been identified as following to varying degrees this plan.

Poitevine fortifications

These are found in the Charente and Vienne departments of Poitou-Charentes and are identified by the manner in which buttresses at the western end are carried up to support corner towers on corbels often connected by a crenellated parapet. The church at **Esnandes**, near La Rochelle, is one such church and as well as the machicolated corner towers and crenellated fighting platform has bretaches extending outwards to defend the three eastern windows and those in the nave wall. An interesting feature is the provision of cross-shaped loopholes in the merlons of the parapet and the bretaches. It is also one of the few churches provided with an assommoir. Although the church dates from the twelfth century it did not receive its fortifications until the end of the fourteenth. The present-day appearance suggests that the large windows were inserted in the nineteenth-century restoration. Decoration was not neglected: the western door is surrounded by an intricately arched portal, carved and recessed; however, the condition is so good that it appears to be a restoration. A very similar church is found at **La Boupère** in Vendée, although the western corbellated towers have pepper-pot roofs and are connected with a roofed and crenellated gallery.

The Dordogne region of Aquitaine in south-western France

This region contains a large number of fortified churches, not surprisingly as it was constantly fought over during the Hundred Years War. A number of contrasting styles can be identified.

There is a group of Romanesque country churches where the chancel is raised to become a roofed and crenellated two- and sometimes three-storey fortified tower. At **Bouteille-Saint-Sébastien**, near Perigueux, the Romanesque church had its chancel elevated into a three-storey tower loopholed and provided with a roofed fighting platform. The refuge room was built

above the nave. A similar arrangement is found at **La Chapelle-Pommier**, whilst the simplest and most austere is to be found at **Festalemps**.

The fortified churches of the bastides, already referred to, have well-defended western façades comprising two flanking towers connected by one, or sometimes two crenellated, machicolated galleries to protect the western doorway. This arrangement has been adapted and simplified in a number of rural parish churches but is not found elsewhere. **Saint-Avit-Sénieur**, near Bergerac, is the most powerful example and is modelled on the fortified bastide church of Beaumont-du-Périgord. Although part of a fortified monastery, the western façade is defended by two square towers between which runs a roofed and crenellated gallery above the machicolated parapet of the western portal. The church is further defended by a crenellated chemin de ronde and a fortified cloister pierced with gun-loops.

Finally, a constant feature of the churches of the Dordogne is the military nature of the flat chevet. Both Urval and Tayac demonstrate admirably how simple architectural alterations can change a parish church into a powerful defensive building.

Urval is a small valley village in the Dordogne near Bergerac. The church occupies the village centre and the nave and chancel have been elevated to provide both refuge and defence rooms. Devoid of any openings at ground floor level, with the exception of the western portal with its Gothic arch surround and a solitary loophole in the northern wall of the nave, the flat chevet is continued up above the pitched chancel roof. It would have presented a solid masonry wall to any attacker with only a single opening to the refuge room breaking the mass of masonry. The three-storey western defensive tower contains cruciate loopholes and an iron staircase leads to a first floor entrance doorway in the north wall. Squat and tall, the appearance is one of a powerful donjon church.

The nearby twelfth-century church of **Eyzies-de-Talac** has a similar raised and flat chevet 2.5m thick. It contains a small staircase tower on its southern aspect that leads to a roofed and crenellated defensive gallery added in the fourteenth century. At the western end the raised bell-cot is crowned with a similar roofed and crenellated gallery. Between the two elevated eastern and western walls is the rectangular body of the church lit only by narrow archery loopholes.

Monastic fortifications

The ecclesiastical exchequer spent vast amounts of money building and garrisoning their monastic retreats. No other country in the Christian West went to the same trouble and fortified to the same extent, almost exclusively in response to the dangers posed during the Hundred Years War. Three monasteries of contrasting styles and fortunes warrant particular examination.

Near Poitiers in Vienne, in the picturesque valley of the River Miosson, lies the majestic and romantic monastery of **Nouaillé**, now belying a past that, between periods of prosperity, has seen it repeatedly pillaged and damaged, mirroring the tribulation and recovery of so many French monastic houses. The rectangular moated and walled enceinte, now populated with water lilies and much narrower and shallower than when first dug, was supplied supplied by the River Miosson. Measuring 120–50m east to west and just over 300m north to south, the

Image not available

Image not available

monastery was already fortified by 1356 with the Romanesque monastic church and bell-tower being defended by a crenellated and machicolated parapet. The monastic close was walled, and the southern gateway, placed between two round towers, contained a drawbridge. Following the defeat of King Jean II le Bon by the Black Prince at the Battle of Poitiers in 1356, the monastery was sacked and the defences slighted by the English. It was not until the end of the fifteenth century that the monastery was refortified, to be followed by a hundred years of prosperity before the Wars of Religion broke out, which were pursued with a particular virulence in the area. Led by Admiral Coligny, Protestant troops attacked the monastery in 1569, pillaged its treasures and set alight both ecclesiastical and secular buildings. It was nearly eighty years before reconstruction began and the chancel, roof, and dormitories date from this period. A seventeenth-century print in the church shows the monastery restored to its former glory. The defences that have survived are those remaining from the fifteenth century with the addition of the fortified abbot's lodgings in the north-west corner of the monastic enclosure and a new entrance in the north-east.

Mont-Saint-Michel, in Manche, is not only a famous pilgrimage site but also one of the best-known ecclesiastical complexes in Western Europe.[26] Now one of France's most popular tourist attractions, its imposing situation on a huge rock in the bay of the same name is somewhat different from when it was fortified after the start of the Hundred Years War. Much of the bay has become silted up over the centuries and a causeway from the mainland was constructed in the nineteenth century, whilst the original Romanesque abbey and its attendant Gothic claustral buildings have undergone significant changes. The defences have remained the same, however.

In 1357 the abbots were made titular captains of the garrison, which lodged in the village straddling the southeastern face of the rock, and began their fortification against the English. The abbey was fortified and made impregnable (except at its eastern entrance) with the construction of the Châtelet, completed in 1393; it is a powerful combination of twin towers, machicolations, barbican, a guardhouse and steep steps. Despite the purely military nature of these defences the use of pink and grey stone enables it to harmonise with the monastic church. The importance of the Mount and its symbolic value to the French was not lost on the abbots and they spent considerable sums on building huge cisterns under the flags of the nave, chancel, crypt and almonry in case of being cut off from the mainland. Fed by an intricate system of rainwater channels and a filtration system, they provided water supplies for the Mount and its inhabitants until very recently. Considered too steep to assail, even if soldiers could be landed on the rocky shore, the northern part of the rock remained unfortified, although the rest of the shoreline received powerful defences to protect the village and southern approaches to the monastery. Dating from the fourteenth century, they proved successful in resisting many English attempts to storm the Mount. Helped by the citizens of St

[26] The cult of the Archangel Michael, one of the warrior saints, arrived in Europe from the East. Believed to be the champion of the forces of good over evil, and the dispenser of justice, his abbey received many pilgrims throughout the Hundred Years War. Although the English frequently isolated the Mount from the mainland their entrepreneurial instincts allowed pilgrims to cross on payment of a fee.

Malo and a garrison of knights, it remained French throughout the Hundred Years War. The heroic defence of the abbey and islet by Louis d'Estoutville and his hundred and nineteen knights in 1425 was to become a symbol of French resistance.[27] Viollet-le-Duc when he visited the Mount in 1835 thought that 'No place could be more beautiful or savage, nowhere more grandiose or melancholy'.[28]

Of all the fortified ecclesiastical buildings in France the **Palace of the Popes** in Avignon remains the most powerful statement of ecclesiastical might both in its symbolism and in the strength of its fortifications. Although only occupied by the popes for forty-three years until Gregory XI took the papacy back to Rome in 1377 it is a monumental ensemble of two fortresses built next to each other by two successive popes during a period of eighteen years. Today they remain much as they were when first built, although further additions and alterations were made by a number of succeeding papal legates.[29]

The first papal fortress, the Old Palace, was built as a symbol of pontifical power and to protect the pope, church treasures and archives from feuding nobility and opportunistic brigands. Started in 1334 by the Cistercian Pope Benedict XII it took just eight years to build. Modelled on the Cistercian monastic plan, with the addition of fortifications on a massive scale, the quadrangular Tour Trouillas, measuring 20 x 17m and rising to a height of 50m, dominates the fortress from the north-east corner of the fortified cloister. Crowned by a crenellated parapet with machicolations supported by corbels, this is powerful military architecture. The cloister was fortified in the manner of the monastery churches to the south with a chemin de ronde running on arch machicolations between buttresses. The eastern cloister with its attached consistory was extended to the south to include the first defensive tower erected, that of the Tower of Angels.

This extension was incorporated by Clement VI (1352–62) when he added the New Palace, an altogether different building. Using as his architect Jean du Louvres, he added two further wings. The first ran westwards from the Tower of Angels and enclosed the great audience chamber with the Chapel of Clementine above: the second ran from the western end of this wing northwards to join the south-west corner of the Old Palace, thus enclosing the Grand Courtyard. The altogether softer façade of the New Palace reflects the difference between the austere Cistercians and the more exuberant Benedictines. The end result was two palaces forming one monumental building constructed of fine white Burgundian ashlar. It was described by the mediaeval chronicler Froissart as the 'strongest and most beautiful in the world'. Of particular interest is the latrine tower that may have been a forerunner of the Dansker towers of the Teutonic Knights. It encroached on the north-eastern tower of Trouillas but was separate from the living quarters. Two storeys connected to two of the cloister galleries were exclusively latrines. The upper latrines occupied the whole floor, while the lower occupied

[27] Braunfels (1972: 187).

[28] Le-Duc was a nineteenth-century mediaevalist who oversaw the rebuilding of many mediaeval ruins. His monument is the restored walled southern city of Carcassonne. By the time of his visit the Mount had become a prison, and this combined with the inclement weather of March suggest factors other than the architecture may have influenced his opinion.

[29] It was restored in the nineteenth century by Viollet-le-Duc along with the city walls.

only part of the floor, the rest being open to the pit 17m below. Drains from the kitchens acted as irrigation channels to flush refuse into the river.[30]

Before the arrival of the popes Avignon was a town of some size, occupying a strategic site at the confluence of the Rivers Rhône and Durrance, although the first defences had been destroyed after the siege conducted by Louis VIII in 1226. The intention of the popes to make the city their pontifical capital was not only realised by the expense incurred in building their palaces but also by the refortification of the city with a monumental enceinte erected between 1355 and 1377, stretching almost 6km round the city. The walls, 2m thick and with an average height of 8m, were reinforced with ninety-two flanking towers, each open-backed with wooden flooring, providing three fighting platforms. Drawbridges crossed the 20m wide moat at seven places and to the north the Rhône was crossed by the fortified Pont d'Avignon, now partially destroyed with only four spans reaching into the river. Although the fortifications are very impressive examples of the epoch, there are no real innovations other than perhaps the speed at which they were built and the expense incurred by the ecclesiastical exchequer; a remarkable feat for the fourteenth century. Events proved that they were built for little purpose.

Summary

France contains the greatest number and variety of ecclesiastical fortifications. The stimulus to fortify came from two sources: rural peasant communities, occasionally with seigniorial or ecclesiastical financial help, and the powerful church hierarchy. They range from the humble parish church with the solitary remains of a single loophole or a corbel to the massive fortress of the popes in Avignon. Every type of ecclesiastical edifice was subjected to fortification, whether church, cathedral, abbey, monastery, priory or bishop's palace. The extent and manner of fortification varies considerably and continued for centuries, with many buildings receiving fortifications in more than one epoch. Although the frontier regions contain most of the fortifications identifiable today they were probably built throughout France; many remain to be identified either by fieldwork or by archival research. Such studies as have been undertaken concentrate on particular regions; a detailed overview remains to be written.

[30] Gagniere (1965: 62).

7
THE EASTERN MEDITERRANEAN AND EASTERN EUROPE

Introduction

The rapid advances of the Ottoman Turks in the fourteenth century and the first half of the fifteenth led to the occupation of Asia Minor and part of the Balkans, culminating in the fall of Constantinople in 1453 and the subsequent demise of the Byzantine Empire. The Eastern Orthodox Church was faced with its greatest threat since the iconoclastic crisis centuries earlier and its monastic communities struggled to survive, with varying degrees of success. The monasteries of Asia Minor were the least able to survive Islamicisation, whilst those of the Greek Islands and the Eastern Mediterranean initially received protection from the trading states of Venice and Genoa, and the Knights Hospitallers. The firm establishment of monasticism in Greece and the Balkans within an environment that remained essentially Christian enabled many monasteries not only to survive but also to prosper and keep alive Eastern Orthodox traditions and arts. That they could do so was helped, in no small measure, by Ottoman tolerance and the Islamic immigration policy of settling mainly in the towns. The extraction of tribute, an important source of revenue, was also an important consideration. Monasteries became centres of learning and teaching and many were ultimately to play an important role in the liberation of occupied territories in the nineteenth century.

Many monasteries had sought to protect themselves by physical means before the arrival of the Ottomans. The fifteenth and sixteenth centuries, however, were to witness a massive increase in the building of ecclesiastical fortifications in response to perceived Turkish threat and the lawless nature of the borders of Eastern Europe and the Eastern Mediterranean where piracy by all nationalities remained endemic for centuries. The scale and success of these fortifications varied widely but such was the wealth of monastic communities in many areas that there are many fine examples extant today, whether built in isolation or as part of defensive systems.

Mount Athos, the Holy Mountain

The best known of any monastic settlement, Mount Athos occupies the most easterly peninsula of Khalkidiki in north-eastern Greece. Although its fortunes have waxed and waned over the centuries, it has survived as a continuing monastic community since the foundation of the first monastery in 963.

Separated from the mainland by a comparatively narrow isthmus, the peninsula is approximately 80km long and 15–20km wide. A mountainous spine runs the length of interior rising to its southern peak of Mount Athos, 2030m above sea level. The site is inhospitable;

Image not available

access is difficult whether by land or sea and the land is not suitable for cultivation. Scattered throughout the southern two thirds of this peninsula are twenty monasteries, mostly built in coastal areas, although four are to be found inland. The peninsula was open to attacks and raiders, the coastal monasteries being particularly susceptible.[1] As a consequence attempts at some form of defence were made from the eleventh century onwards, usually in the form of protective towers, but it was not until the end of the fifteenth century that the fortifications surrounding the monastic complexes now occupying the peninsula were started. Although the size of the monasteries and the scale of their fortifications varied, they follow a similar typology; all became massive fortresses.

The monasteries had become very rich by the time the Ottoman Turks captured Thessaloniki in 1430. The communities offered to submit to Turkish overlordship if they were allowed to keep their properties and revenues, paying an annual tribute in return.[2] Initially Turkish demands for tribute led to monastic impoverishment. Such was the threat from pirates, however, that from the end of the fifteenth century and through the sixteenth any revenues available were spent on the building of substantial fortifications round every monastery, by strengthening existing fortifications or by the addition of walls and towers.[3]

Where possible, the general arrangement followed a horizontal axis. Where the contours of the peninsula prohibited this, a vertical format was followed, resulting in a smaller courtyard for the katholikon, the main church of the monastery. The necessary cells and service rooms were provided for by increasing the number of storeys that lined the enclosure wall.

The **Great Lavra** on the south-eastern headland became the largest of the monasteries; it was also the earliest, being founded by Athanasios in 963 and completed in 1004.[4] It acted as the template for many of the other Athonite monasteries. The rectangular courtyard is enclosed within fortified walls of great strength, reinforced by fifteen towers. Along the inside of these defensive walls range the many rooms required by a working monastery, serving as cells for the monks, administrative offices, the abbot's lodgings, guest rooms, the hospice and store and workrooms, arranged on three storeys reached by open passageways. As is usual in Athonite monasteries, the katholikon sits firmly in the centre of courtyard, and retains its frescoes from 1535. The first church to be built on the peninsula, it also served as a role model for the later churches. Immediately opposite the western entry of the church is the trapeza or refectory, cruciform in shape. Like the church it is free-standing within the courtyard. Other free-standing structures are the treasury together with the library and the philae, a basin used for holding holy water. In the refectory there are tables and seating for many hundreds of

[1] As well as the ever-present threat of pirates the peninsula was subject to raids by Turkish expeditionary forces on five occasions between 1325 and 1344.

[2] Revenues for the larger monasteries were huge and were obtained from three main sources; from their metokhia (large estates and land holdings), from donations by the aristocracy and the pious, and from the zeteies or collection trips throughout the Orthodox countries, where the monks exhibited the relics of their monasteries.

[3] Hellier (1995: 46). The favoured position of the monastic communities of Mount Athos was replicated by the Ottoman sultans elsewhere at one monastery only, that of St John on the island of Patmos. Elsewhere, monasteries struggled and became impoverished, especially in urban areas.

[4] Hetherington (1991: 78).

monks; the apsidal western end contains the high table of the abbot surmounted by frescoes depicting the Last Supper painted by Cretan artists in the sixteenth century.

In the south-west of the enceinte rises the tower of **Tzimiskis**, the largest of all the fortifications, but like perimeter walls and the other towers the battlements are somewhat primitive and suggest a date earlier than the fifteenth century, although the barbican protecting the southern entrance is later.

The monastic fortifications vary; some like those of **Zographou** and **Simonopetra** relied on the sheer height of their external walls for defence; others placed their faith on a huge keep with box machicolations and machicolated galleries built out beneath the battlements on each side as at **Karakalou**. All would have been more than capable of resisting pirate attacks.

A unique feature of the Athonite monasteries is the fortified port or arsanas. The isolated and exposed position of the peninsula with its large population of monks and lay brothers necessitated substantial supplies being provided by sea from their monastic estates abroad; boats were also used for communication between monasteries.

The arsanas of the monastery of **Iviron**, 20km north of the Great Lavra, was built with both accommodation and defence in mind. Dating from 1625, somewhat later than most of the fortified boat houses, a substantial tower rises two storeys above its entrance, all built as a single unit. The first floor is a spacious hall with a fireplace, niches and a corridor leading to a machicolation that served as a garderobe. Roofed by a domed vault, this room contains an artillery embrasure in its eastern wall to cover the shore and anchorage. The second floor, also domed, contains two rooms, one a chapel; the corridor separating them leads to loopholed galleries that run on machicolations; in the absence of battlements this served as the fighting platform. Both storeys also have loopholes for hand guns and crossbows.[5]

Theocharides describes other small, fortified complexes that have survived on Mount Athos (such as metokhia, or dependent monasteries). A tower, frequently from the Byzantine era, is further fortified by walls that surround at least one and frequently two of its sides, producing an enclosure with subsidiary structures ranged against the inside of the curtain wall. Often of three storeys, they contained a church and a trapeza together with cells. He gives, as his example, what he calls the ‘seaside fortress’ of the monastery of Karakalou where the machicolated and crenellated Byzantine tower had a trapezoidal crenellated wall attached to the north-east and north-west corners, sheltering two ranges of rooms three storeys high. Box machicolations project from the uppermost storey and the basement contains canonieres, again to cover a seaward approach.[6]

The fortress monasteries of the islands of the Aegean Sea and Crete

For centuries during the Middle Ages and beyond, life on many of the islands of the Eastern Mediterranean and Aegean Seas was as precarious as it was perilous. They belonged to no one State or religion and were repeatedly subjected to attacks by adventurers, such as Venetian, Genoese, Catalan and Corsican pirates, Barbary and Saracenic corsairs or the forces of the

[5] Theocharides et al. (1992: 37).
[6] Ibid. 33–7.

Turkish sultans.[7] Many islands had been colonised by the trading states of Venice and Genoa and many of the islands of the Dodecanese, off the south-west coast of Turkey, were occupied by the Knights Hospitallers after their expulsion from the Holy Land in 1291. Their headquarters were established on Rhodes, after a brief sojourn in Cyprus.

Each island had to fend for itself and the smaller ones in particular had more to fear from freebooters than from the Ottoman Empire. Their response was to build fortifications for refuge and lookout towers to warn of attack.[8] Whether occupied by Venetians, Turks or Greeks, many islands contained monasteries, some being fortified from their founding, others being fortified in response to the perceived or pervading threat. Others were simply abandoned.

Patmos is the most northerly of the Dodecanese chain of islands. A narrow isthmus connects the two parts of the island, each measuring little more than 5 x 5km. It was famed as the supposed place of exile of St John the Evangelist who, it is claimed, composed his Book of Revelation here. It was a thousand years, however, before a monastery was founded in his name by Khristodoulos of Bithynia (in Asia Minor). Work started in 1088 and continued until 1093. Fortifications were included from the outset to safeguard its precious library, and were further strengthened in the twelfth century before the arrival in 1207 of the Venetians, who ruled the island until it fell to the Turks in 1537. Neither occupier interfered with the autonomy of the monastery, whose fortunes enabled it to expand continuously. It became the most famous monastery in the Aegean region and was the only one outside Mount Athos to receive favourable terms from the sultans in Istanbul. Extensive fortifications were added in the fourteenth century and again in the aftermath of the earthquake of 1646. Erected on the summit of the southern part of the island, the use of the talus to support the many rectangular, round and multangular towers turned the monastery into one of the most powerful bastions of the region, able to protect the whole population of the island against any attacker.

The physical limitations placed upon monastic development and expansion by these massive fortifications have resulted in a cramped and crowded monastery, especially as an upturn in fortunes resulted in the addition of many chapels in the sixteenth and seventeenth centuries. The earthquake of 1956 caused considerable damage to the monastery and the township at the foot of its walls, founded to house the families of monastic lay brothers and servants. The opportunity was taken to restore, as accurately as possible, the monastery to its former appearance of the high Middle Ages by removing disfiguring structures of recent times. It so dominates the island that it can be seen from the sea in all directions, with the grey mass of the monumental fortifications contrasting with whitewashed houses clustering around its foot. Only the belfry, holding five bells, advertises the presence of a religious establishment.

In marked contrast is the tiny rural monastery of **St Panteleimon** on the island of Tilos, also in the Dodecanese. Built on a terrace, in an isolated and exposed position overlooking the sea, it is now deserted. Founded in 1470, it is difficult to understand why it was built in the shrub-coated coastal ravine, especially as it would be indefensible against any significant force,

[7] Hetherington (2001: xix–xxiii) discusses the extent of piracy and the Ottoman attitude to the islands of the Eastern Mediterranean.

[8] The Hospitallers established an early warning system across the Dodecanese to warn of Turkish approaches. The islands became interdependent in both attack and defence.

as its only defence is a high enclosure wall and a solitary tower containing the entrance passage. Of four storeys, it is little more than one of the many defensive towers scattered throughout the Mediterranean but its attachment to walls may classify it as one of the 'seaside monastic forts'.

The monasteries of Crete

The island of Crete has played an important role in the history of Greece and has had many occupiers, two of whom, the Venetians (1204–1669) and subsequently the Ottomans (1669–1898), were antagonistic to the Eastern Orthodox beliefs of the indigenous population. Greek Orthodoxy survived, however, in the mountainous regions and many monasteries were fortified, with the approval of the Venetians, as part of the island's defences.[9]Although modelled on the Athonite pattern, it is for their role in the numerous Cretan revolts that they are noteworthy, rather than for their architecture. Indeed most were rebuilt, after they had been set on fire by the Ottomans, when the Greek War of Independence spread to the island. Following rebuilding, further damage occurred during the revolts of 1866 and 1898.

Built as a fortress monastery during the Venetian era, the monastery of **Arkadi** has passed into Cretan and Greek folklore for its defiance of the Turkish occupiers. Located on a mountain plateau, 25km from Rethimnon, it is of typical Athonite form. A double row of cells and service rooms lined three sides of the austere and featureless enclosing defensive wall with the communal buildings ranged against the northern wall. In the centre of the enclosed courtyard stands the twin-nave church of Sts Constantine and Helen with an impressive façade and belfry dating from the sixteenth century. Originally a centre of learning and book production its activities were curtailed on the arrival of the Turks, although it was allowed to continue with its monastic role. Like many other monasteries on the island it became involved in the Cretan War of Independence to its cost. When revolution was declared in 1866 it became the meeting place for Cretan revolutionary leaders. Hearing of this, the Turkish commander sent a message with the bishop of Rethimnon to the monastery indicating that he would destroy it unless the revolutionaries dispersed. Defying his threat, three hundred fighters and their families garrisoned the fortress monastery and awaited the Turkish onslaught. The siege was short. Ishmael Pasha had an army of 15,000 men and his artillery soon breached the perimeter walls. Rather than surrender, Kostis Gamboudakis, on the instruction of Abbot Gabriel, blew up the powder magazine in the north-east corner of the monastery, killing many of the defenders. Although this revolution failed, the heroic defence is regarded as one of the greatest feats in Cretan history.

The sky monasteries of Meteora

Of all the regions of the world chosen by ascetics in their attempts to escape from the world into an environment that is not only isolated but also secure, that of the Plain of Peneios in western Thessaly in Greece is amongst the most bizarre and beautiful. Arising from the fertile

[9] The monastery of Toplou, Turkish for cannonball, was provided with artillery by the Venetians, who regarded it as a Christian outpost against Islam.

Image not available

flat land lying in the lee of the Pindos Mountains are a series of gigantic rocks soaring between 100 and 400m into the sky; isolated from each other they have weathered into abstract shapes.

Although hermits had occupied their crannies from the eleventh century, it was not until the fourteenth that Greek monks sought to build their monasteries on the flat tops. By the beginning of the sixteenth century twenty-four monasteries had been established on the peaks of these astonishing conglomerate formations.

Following the pattern established on Mount Athos, a central katholikon is surrounded by the cells, offices and chapel of the monastery. The size of the monastery varied with the surface area available for building on; some covered an area approaching half a hectare and provided enough space for a monastic garden; others were much smaller and the monastic walls rose from the very edges of the rock pillars. Unlike the monasteries of Mount Athos and the islands, high walls and battlements were unnecessary; the monks were in sole control of access to the monastery. Each monastery could only be reached by means of rickety ladders, the uppermost being lowered from the monastery entrance, or by means of a net lowered from a windlass overhanging the monastic entrance.[10] Although by the sixteenth century the monasteries were popular, receiving many Christian refugees, and were becoming increasingly rich, the beauty and isolation did not produce the peace and tranquillity sought. Decline set in as a result of internecine squabbling; rivalry produced power struggles between the abbots such that by the beginning of the seventeenth century only eight monasteries remained occupied. Paradoxically, the isolation and security offered by the peaks of Meteora, making them almost impregnable, also contributed to the final downfall of the monasteries. They had always attracted refugees and exiles, but throughout the nineteenth century many monasteries also attracted revolutionaries, becoming a base for the guerrilla activities of the klephts, Greek freedom fighters striving to overthrow Turkish domination. Turkish reprisal led to the monasteries being sacked, looted and abandoned.[11] Despite support from Christian rulers beyond the Danube, one by one the monasteries were abandoned. In recent years four have been reoccupied, but a continuous occupation has proved elusive.[12]

Perched on top of the Platus Lithos, or broad rock, at a height of almost 400m lies the monastery of the Transfiguration of the Saviour, more commonly known as the **Great Meteoron**, founded in 1362 by Athanasios, a monk from Mount Athos. It became the largest and most powerful of all the monasteries of Meteora; the power and political intrigues of its abbots led, in part, to the decline of many of its neighbours. Its appearance has changed little since its completion in the sixteenth century. The church apse and sanctuary date from its foundation and still contains fifteenth-century frescoes. A narthex and apsidal transept, along with the refectory, was added in the halcyon days of the sixteenth century. Lacking space, there

[10] It was not until the 1920s that steps and tunnels were cut, on the order of the bishop of Trikala, to ease access.

[11] During the Second World War they were occupied by partisans and were once again attacked and damaged by Italian troops, and the monastery of St Stephen was shelled by German artillery. They became embroiled again in the Greek civil war of 1947.

[12] The monasteries of the Great Meteoron, Varlaam, Holy Trinity and St Stephen are today each populated by a handful of monks.

was a departure from the Athonite plan and the refectory, together with its wine store, had to be placed to the north of the church instead of its usual position to the west of the narthex. The ensemble is completed with a sacristy, library, cloister, cells for fifty monks, two chapels and four huge cisterns. Although today reached by steps, a five-storey tower built onto the rock face still houses the hoist previously used.

The painted monasteries of Bukovnia, 'the country of beech trees'

Much further to the north the Moldavians were threatened not only by the Turks to the south, but by the Poles to the north and the Tatars and Cossacks to the east, all intent upon seizing the riches of this small country, now split between the north-eastern part of Romania and Moldova. Monasticism had long been established in this wooded region; the monasteries of Bukovnia had been rebuilt in the fifteen and sixteenth centuries to serve two purposes. They were constructed as part of a national system of defensive fortresses, whilst at the same time proclaiming Christianity by means of frescoes, painted, not only on the church interior walls, but also, uniquely, on their exterior.

All the monasteries were built within a relatively short time and to a similar design at a time when the Moldavian princes were striving to maintain the independence of their country. Two monasteries, those of Moldovita and **Sucevita**, after undergoing careful restoration, are much the same as when first built; others have retained their frescoes but have few remains of their fortifications. The monasteries of **Voronet**, **Arbore** and **Humor** are such monasteries. Some have substantial fortifications but no external frescoes as at **Putna** and **Dragomirna**. All are found within a 50km radius of the north-eastern Romanian town of Suceava and provide a unified system of refuge and defence in a rural, agrarian region where secular fortifications were absent, forbidden or dismantled.

The monastery of **Moldovita** is an outstanding example, built by Prince Petru Rares during his opposition to the Turks. The central church of the Annunciation, measuring 38 x 8.5m, has an open porch at its western end. Built in 1532, it was painted in 1537 with hundreds of frescoes, both inside and outside, depicting personages, historical events and biblical scenes such as the Last Judgement. Those on the outside cover the walls from the overhanging eaves to the church footings. Of particular interest is the fresco depicting the siege of Constantinople, an event that had occurred a century before the commissioning of the frescoes. Even in the half-light and drizzle, the still-rich colours enhance the animated composition, where Turkish janissaries and their artillery pound the walls, opposed by a spirited and defiant Byzantine population.[13]

The defensive wall surrounding the church measures 65 x 70m and, like all the fortress

[13] Vasile Dragut has published many of the frescoes from painted churches. Although influenced by Byzantine, Serbian and Russian artists, a definite Moldavian style can be identified. The naturalism and vivacity of many of the frescoes, especially the 'Rivers of Fire', must have had a frightening impact upon the uneducated and illiterate serfs and peasants for whom they were intended. The religious propaganda and interpretations are superb; the Last Judgement leaves the viewer with no doubt as to the price of sin.

monasteries in Bukovnia, each corner is reinforced with either a round or square tower and a gate-tower, usually of three storeys, in the middle of the eastern wall. Occasionally these gate-towers contained a small chapel in the first storey. Although the curtain walls reach a height of 6m, they lack today the enclosed and roofed wall walk with its loopholed parapet found at both Sucevita and Dragomirna. All the remaining fortifications are serious works of military architecture. Rubble from the nearby river beds provided building materials, and monastic serfs provided the labour, supervised by professional masons, stone cutters and carpenters. The style is reminiscent of neighbouring Transylvania.

The internal buildings of the monasteries are of standard Eastern Orthodox form with the addition of a further building, the princely house or diaconiconum, peculiar to Moldavia, and found in almost every monastery. Placed adjacent to the north-western wall of the monastery of Moldovita, it is a substantial building, measuring 22 x 7.5m and is of two storeys. Built to house the monastic founder and his family during church festivals it also served as a reception hall and repository for church vestments, embroideries and manuscripts.[14] It parallels the secular seigniorial manor house and dates from 1610.

The monastery played a vital role in the defence of the region and the abbot co-ordinated defence forces recruited from the monastic serfs and the free peasants of the valley villages.

In an area where each monastic church vied with its neighbour in the excellence of its architecture, the beauty of its frescoes and the power of its fortifications, Moldovita stands supreme, not least because of the wonderful mediaeval propaganda of the scene of the Fall of Constantinople. Executed on the orders of Prince Petru Rares, at a time when he was trying to prevent Islamic incursions into his country, it served to act both as a warning and as a rallying call.

The Saxon fortress and fortified churches of Siebenland in Transylvania

The beautiful, undulating and forested land of Transylvania, occupying the central part of Romania, contains over two hundred village churches fortified in differing ways.[15] They were built by Rhenish Saxons and their descendants in the centre of compact village settlements. They have developed as religious, civil and military focal points designed with the specific purpose of sheltering this minority German immigrant population over many centuries of danger and open warfare. All are significant fortifications; they served to shelter the whole of the village population during times of troubles, at the same time functioning as the village church. There are two main types: either the church was surrounded by fortifications, but remained unfortified itself, or else the church received fortifications in addition to those surrounding it. There are, amongst the great variety of military architectural forms, many features shared by these rural defensive structures. Natural defensive sites were used where available.

[14] Despite its small size, Moldavia was host to schools of embroiderers, illuminators and precious-metal workers as well as fresco painters.

[15] Fabini and Fabini (1985: 245–6) list all the Saxon churches that received fortifications and have produced an elaborate classification of the differing types.

The Saxons first arrived in Transylvania in 1150 at the request of the king of Hungary to defend his eastern border against Tatar invasions. Successive waves of settlers arrived from Flanders and the Rhineland, bringing with them trading, building and farming skills. From the outset they needed to fortify their settlements and chose to do so around the nuclear church. The arrival of the Ottomans into the region acted as a further stimulus to the Saxons and their fortified churches reached their zenith around the fifteenth and sixteenth centuries, resulting in villages with comparatively small populations receiving powerful and complex defences around their churches. What differentiates them from the church defences of feudal Western Europe is that free men built these ecclesiastical fortifications. They used only their own resources and designed and built fortifications able to resist considerable forces, and sheltered the whole of the village population, their animals and chattels, for an extended period of time.

Although fortifications continued to be maintained and added to until the eighteenth century, the threat to the Saxons, after imposition of Turkish suzerainty, came from within Transylvania. Granted significant autonomy in return for huge annual tributes, this ethnic minority faced danger from actual and potential peasant unrest and resentment. Ever industrious, the Saxons maintained and extended the role of their fortress churches. Towers and bastions became store-rooms for grain and preserved foods, the larger towers became village halls and courts, and schools were incorporated into the enceinte.

Culturally and physically isolated from their neighbouring Magyars, Romanians and Moldavians, but still maintaining links with their fellow Germans, the Saxons poured vast resources into their village citadels. **Prejmer** (its German name is Tartlau), 20km north-east of Braşov (Kronstadt), is amongst the most impressive of Europe's several thousand fortified churches, rivalled only by neighbouring **Harman** (Honigberg).

Prejmer is extraordinary; its defences evolved over four centuries, from the fifteenth to the eighteenth. The earlier thirteenth-century church received its first defences in the fifteenth century, consisting of a roughly circular defensive wall with a diameter of 60m and a height of 15m, further strengthened by four round towers and a powerful gatehouse containing a portcullis and triple doors. The towers and walls were given pitched roofs and were defended by tiers of loopholes for hand guns, double in the curtain wall, treble in the towers, together with machicolations. All round the enceinte ran two connecting passageways opening into the fighting galleries. Along the inside of the enceinte ran three, or sometimes four, rows of small rooms opening onto wooden balconies supported by wooden scaffolding and reached by many ladders. Each room had a heavy wooden door and a small window that opened onto the courtyard. Altogether over three hundred line the churchyard perimeter and each was allocated to a village family when refuge was needed. Provided with wells, garderobes and all the trappings of village life, the Saxons simply sat tight until danger passed.

In the sixteenth and seventeenth centuries a barbican was added to the southern entrance tower. This houses the town hall and presents an ornamental façade with blind arcades and artillery embrasures above box machicolations. The fortifications were completed in the eighteenth century with the provision of a wall from the barbican to the south-west tower; the enclosed space, known as the Bakers' Yard, was lined by a further double row of accommodation rooms. There was originally a moat; the drawbridge has now been replaced with a roofed arcaded entrance passage.

Image not available

It is easy to see how the village and neighbouring farming community of approximately one thousand could be sheltered with enough supplies in the ample store-rooms for a long and protracted siege.[16] That grain, preserved hams, vegetables and fruits were permanently stored in their fortress churches by the ever prudent Saxons bears witness to the troubled centuries before and during Turkish suzerainty.

The thirteenth-century church, unfortified, is in use. Its steeple, added later, rose way above the enceinte and was used as a permanent lookout tower, the church bells signalling the first sign of danger.

Although these rural refuges were provided with impressive fortifications, the towns of the Saxon merchants were also enclosed within powerful fortifications. Such was the degree of militarism that pervaded this minority population of central Romania that they were able to raise an army of seventeen thousand men and defeat a much larger advancing Ottoman army in 1437.[17]

The fortified monasteries of Bulgaria, Serbia and the Dalmatian coast

Although the fall of Constantinople opened the way to further Turkish expansion westwards and the Balkans had been rapidly overrun and added to the Ottoman Empire the survival of Christian monastic fortifications was quite different in the rest of the Balkans from Greece, Transylvania and Moldavia. Bulgaria and the western Balkans were almost certainly comparable with Greece in the number of monastic foundations before the arrival of the Turks. Their survival was more difficult, however. Not only had they to survive the Ottoman advance and the many ensuing Habsburg–Ottoman conflicts, but also the Turkish retreat, partially a result of the rise of Balkan nationalism in the nineteenth century.

1393 had been a tragic year for Bulgaria; the Ottomans, with their disciplined and unstoppable war machine, had overrun the country and many of its monasteries had been pillaged and destroyed. Recovery was slow but gradual. The resurgent monasteries were to play a vital role in the preservation of Bulgarian Christianity, its arts and culture, culminating in the Bulgarian national revival of the eighteenth and nineteenth centuries when old monasteries were restored and new ones built. As a result of this massive rebuilding, most traces of former fortifications were removed and few monasteries today have a fortified appearance.

When Father Paisi wrote his history of the Bulgarian Slavs in 1762 he pointed out that of all the monasteries in Bulgaria only that at **Rila** was left intact. The best known of all Bulgaria's monasteries, its history mirrors the fortunes of almost all of the country's monastic establishments. The monastery that exists today is comparatively new, dating from the middle of the nineteenth century, following a disastrous fire of 1833. Founded in the ninth century, it was damaged by avalanche and fire in the fourteenth century and was rebuilt on its

[16] This was in 1988, before the fall of Ceausescu. Emigration to Germany had already begun and over the last twelve years most of the ethnic German Romanians have left. As a consequence these fortress churches are at risk from neglect, indifference and vandalism.

[17] Ogden (2000: 11, 15) charts the ebb and flow of the German settlers during the period after Ottoman withdrawal and their involvement in two world wars.

present site in 1334–5 by Dragovol Hrelyo. It was repeatedly attacked by the Turks, particularly in the fifteenth and sixteenth centuries, and only the defence tower remains from the Middle Ages.

The site chosen for the monastery is impressive; it lies in an isolated position above the fertile valley of the River Riska and below the beech and pine forests cladding the Rila Mountains. The four walls of the monastery, almost rhomboidal in shape, built out of granite and with a patchy coat of whitewash, appear at first sight austere and fortress-like. The presence of so many windows would undermine any defensive role, however. Based on the Athonite plan, the central church is surrounded by storey upon storey of monastic cells and rooms. There is a departure, however, from monastic design, one not seen anywhere else in Bulgaria. In the centre of the monastic courtyard is the huge fourteenth-century Hrelyo Tower, the sole surviving building from before the nineteenth-century rebuilding.[18] Rising, in five storeys above its basement to a height of 23m, it is rectangular in shape, measuring 8.25 x 7.75m. Built of well-coursed granite and sandstone rubble, three buttresses on each side are joined below the uppermost storey by semi-circular brick-built arches resulting in arch machicolations. The top storey contains the chapel of the tower and is gently domed. Surrounding the chapel is a fighting gallery incorporating the arch machicolations. Both the chapel and gallery roofs are battlemented to provide, in addition, a fighting platform. Entrance is from the first storey and the staircase runs clockwise in the thickness of the walls to the chapel. An impressive fortification, with few loopholes to light individual storeys, it stands, incongruous, amongst the ornate and seemingly luxurious monastic buildings of five hundred years later.

Although there remains little evidence of fortification in most of Bulgaria's seventy-six monasteries, many played a vital role in the attainment of Bulgarian independence. Writers, plotters and revolutionary leaders were sheltered and protected; the monastery at **Etropole** for example sheltered, for a considerable time, Vassil Levski, Bulgaria's 'Apostle of Freedom', in a specially built hideout.

The situation in Serbia was somewhat different; many powerful fortifications remain from the Middle Ages, and suggest that considerable resources were used in the defence of many of its monasteries. The turbulent history of Serbia, and its frequent role as a battleground between Habsburg Austria and the Ottoman Turks has resulted in the ruination and dismantling of many monastic fortified enceintes.

Monumental remains of its fortifications remain at the monastery of **Manasija**, demonstrating how mediaeval Serbia fashioned monastery and castle as one. Dedicated to the Holy Trinity, it was founded by the despot Stephan Lazarevic at a time when the Turks were threatening Serbia. It soon became enveloped in the massive fortifications that remain today in an almost intact state. The architecturally complex church is dwarfed by the mediaeval enceinte, reinforced by eleven towers. Eight are rectangular, one serving as the keep, while one is square and two hexagonal. Originally moated, the defences were not sufficient to prevent

[18] Whether it was built in the centre of the original monastery is unknown. Careful examination of this unique defensive tower does not reveal any evidence to suggest that it has ever been attached to or bonded with any other building.

capture by the Turks in 1439. Despoiled by them in 1456, it was recaptured along with the rest of northern Serbia by the Habsburgs in 1718. Although the powder store, kept in the narthex by the Austrians, blew up in 1735, the church still retains many of its early frescoes, including some of the warrior saints armed in the manner of the Serbian knights of the fifteenth century. The church was further damaged in 1804 just before the Serbian uprising, but has subsequently been restored. Of the other monasteries that received a similar enceinte none remain as complete as at Manasija.

Although the Dalmatian coast had been prey to the Ottoman navy and Saracen corsairs, the Battle of Lepanto in 1571 effectively broke any naval supremacy they had in the central Mediterranean, and much of the Adriatic remained safe for Venetian shipping. Isolated settlements were, however, still at risk from raiders, especially the fierce Uskok pirates who used the Croatian port of Split as their base. Allying themselves with the populations of the islands of Hvar and Brac, in the sixteenth century they supported both Turks and Venetians, depending on the way the conflict was going. In addition, they were not averse to opportunistic freebooting, and many coastal settlements and island towns along the Dalmatian Coast became extensively fortified.

Churches and monasteries were not immune. On the Croatian island of **Mljet**, the Benedictine monks, despite the protection of Venice and the Republic of Ragusa in Dubrovnik, thought it prudent to fortify their monastery and church of St Mary, despite its isolated position on a rocky islet in a sea loch. Although much of the islet would be difficult to assault because of its rocky nature, the western half, containing the monastic buildings, was vulnerable and it was here that the Benedictines concentrated their defences. A fortified harbour, high walls, large defensible towers and a fortified church with machicolations and gun-loops provided substantial defences against opportunistic raiders. This was a substantial monastic establishment founded in the twelfth century. The many agricultural terraces nearby and the construction of a water mill at the entrance of the narrow tidal channel to the inland lake of Veliko Jezero demonstrate the industry of the monks. The nature and typology of the fortifications indicate that the monks maintained and added to the defences over the centuries. Once the headquarters of the Benedictine monks from Dubrovnik, it changed to secular usage in 1869. Derelict by the middle of the twentieth century, its conversion into a hotel and restaurant has altered its appearance, although its strength is still apparent.

Summary

That so many Christian ecclesiastical fortifications still survive in lands occupied or under the suzerainty of Muslim Ottomans, seems at first sight somewhat paradoxical, especially as they had a policy of destroying secular fortifications not occupied by their army or settlers. That monastic and church defences were not only allowed, but could be kept in a good state of repair is due, not so much to Islamic tolerance, but rather to the Ottoman desire to extract as much tribute as it could from its conquered peoples. Monastic communities were very good at raising tribute in return for their continuing existence. The lawless nature of much of the countryside and coastal regions meant that these producers of wealth needed protection from brigands, warbands and pirates. The Turks realised that it was easier and cheaper for the monks

and Saxons to protect themselves rather than divert part of their own forces, required to defend a border that stretched in the west and north for almost 2000km.

Although monks were in the main forbidden to bear arms, they increasingly did so and certainly many acted as watchmen on church fortifications and towers. The monasteries also had dependent peasant workers and they were used to provide guard service and act as the monastic garrison in return for sheltering their families; they could also provide the money necessary to hire professional guards and soldiers.[19]

The fortress and fortified churches of Transylvania were built in a unique and enduring situation. They were granted special privileges by the king of Hungary in return for the protection of his eastern borders against Crimean and Ukrainian Tatars. Turkish suzerainty barely troubled them but they developed a siege mentality, justified by events over centuries, that has resulted in these magnificent fortifications being maintained and manned for centuries.[20]

Finally, mention has been made of the occupation of the Dodecanese by the Knights Hospitallers until they retreated to Malta. Certainly there were none of the conventual castles that they had developed in Palestine and Syria on Rhodes and examination of the plans drawn by Spiteri suggest that this form of fortress monastery had been abandoned. Only the sea castle of Naryngia on Kos bears any resemblance to the conventual castle with its double enceinte. There are, however, no remains of any monastic buildings.

[19] Bartusis (1992: 314–19) describes this arrangement in the monasteries of the Byzantine Empire and there is no evidence to suggest that this changed after the Turkish conquest.

[20] When I visited Prejmer in 1988, the church constable told me that it had served as a place of refuge, always successfully, on at least fifty occasions over the centuries. This is easy to understand as bandits and small foraging parties would simply bypass such powerful fortifications.

8
CENTRAL EUROPE

Introduction and historical background

The threat to Central Europe had nearly always been from the East. The Mongols in the thirteenth century had attacked both Poland and Hungary, defeating the armies of both countries. After crushing defeats, only the death of the Great Khan Ogedi saved Christian Europe. Although there was to be respite for two hundred years the rise of the Ottoman Turks and their seemingly unstoppable advance through the Balkans and eastern Europe in the fifteenth and sixteenth centuries once again posed a very real threat to the area, which remained even after the Turkish siege of Vienna in 1683. The result was the building of extensive fortifications in the marches with Turkish-occupied Europe especially, in the Austrian Habsburg territories of Bavaria and Moravia. These fortifications included a number of notable examples built by Catholic authorities, and one type not seen elsewhere to the same degree.

Although the prince bishops of Germany had from the outset fortified their episcopal palaces, the Wars of Religion fought throughout Central Europe and France between 1517 and 1648 ensured that the Catholic bishops needed powerful fortifications to safeguard themselves against Protestant militancy. This was a tradition that had been set a hundred years earlier when the peasants and minor nobility of Bohemia rose against their German rulers following the burning at the stake of Jan Hus, who was attempting ecclesiastical reform.[1] Such was the virulence of the Wars of Religion that many ecclesiastical foundations received massive fortifications able to resist sieges by large armies. The fortification of parish churches was, however, comparatively rare; other than Austria and one area of Germany it centred upon an area of Bavaria north of the Danube.

The episcopal palaces of the prince bishops

All attempts to develop a logical classification of German castles have proved impossible, such is their disparity and individuality. There is one criterion, however, that the builders of castles in Germany held dear: whenever possible defensible sites on the tops of hills or mountains were utilised.[2] At a time when 'dangerous bastions of powerful individuals' were being built in the German Holy Roman Empire the bishops started to acquire and adapt castles to exert their ecclesiastical authority.[3] Physical dominance was paramount, whether over an established town or the settlement growing in the lee of these ecclesiastical fortifications. Where the bishop held ecclesiastical fortifications overlooking his episcopal see he was able to

[1] He was later to be recognised as the first martyr of the Reformation.

[2] Anderson (1980: 159).

[3] Tuulse (1958: 84).

exert suzerainty over the civil population. This was certainly the case at Bamberg, Chur, Eichstätt, Freising, Passau and Würzburg in Germany and Salzburg, now in Austria, where all these cities were under the autocratic rule of the bishop.[4] The development of the bishops' fortified palaces followed. The established tradition of German castle-building was followed. The princes had used piecemeal fortifications to protect residential buildings when sequentially built; as a consequence castles were remodelled and extended as required. The prince bishops followed this pattern, although the church was always the central building, and when monastic buildings were introduced they had to adapt to the space available, at times sacrificing the rigid layout of centuries.

The bishop's palace of **Coburg** in Bavaria admirably demonstrates all of these features. It is not only one of the largest fortresses in Germany but also one of the most powerful. The dominating position on top of a hill ensures that it can be seen from afar. Although the original castle dates from the twelfth century little remains from this period and most of the fortifications and ecclesiastical buildings are from the sixteenth century and beyond. The central Baroque church, measuring 14.5 x 74m, lies in the middle of triple concentric fortified walls with the conventual buildings arranged against the innermost. The cloister is attached to the western end of the church with the dorter attached to the north and the refectory to the south. The abbot's lodging is part of the inner enceinte to the north with the gatehouse to the east of the church and the chapter house built abutting the southern transept. Somewhat unusually the gatehouse tower contained a chapel dedicated to St Michael. The outermost third defensive wall, reinforced with six interval and angle towers, was built between 1562 and 1575 and survives almost in its entirety. Although the enceinte appears at first sight robust and defensible, with a covered chemin de ronde loopholed at intervals, no provision had been made to accommodate the artillery of the period. This is strange, especially as the solitary entrance has complex defences, including a barbican.[5]

Much in the same manner, many centuries of building produced the fortified palace of **Marienburg**, the seat of the archbishop, overlooking Würzburg. This is far more a fortress than a palace and there are few remains, other than a solitary thirteenth-century round tower, before the extensive remodelling carried out between 1650 and 1750 by three succeeding bishops, all members of the Schonborn family. As a result the palace was converted into an ecclesiastical fortress. This was achieved by surrounding the sixteenth-century residence with a bastioned trace 200 x 414m together with outer defences to the north, south and west. Only on the east is there a solitary defensive wall where the River Mainz separates this ecclesiastical fortress from the fortified town below. In both instances the contours of the hill top dictated the ground plan and the form of fortification, although major defences were concentrated around the gate and its approaches.

Not all episcopal palaces were built on high ground both physically and spiritually dominating the lay population in the towns and cities below. Archbishop Baldwin was appointed to the see of Trier in 1307 at the age of twenty-two. He soon indulged himself in a

[4] Braunfels (1972: 182) points out that where a town was built on flat land as at Cognac, Strasburg and Worms the free status of a town ruled by its burgers was the norm.

[5] When the bishop's palace was turned over to secular use artillery bastions were added.

spate of castle-building centred round a fortified residential tower. The finest example is still in an excellent state of repair and is found in the small town of **Eltville**, 15km west of Mainz on the right bank of the River Rhine. Here a huge tower, with a base 14.5m square was built at the south-east corner of a fortified quadrangular enclosure enclosing a small courtyard and surrounded by a ditch. The south-east corner of the tower contained the octagonal staircase tower. A covered and loopholed gallery, carried on machicolations, ran all round the saddle-backed roof and connected the staircase tower with three polygonal corner turrets. On its completion in 1345 it served as the residence of the bishops of Mainz for over a century.

Archbishop Baldwin did not limit his fortifications to residences and castles, however. Although church landholdings brought in great revenues there were other avenues to explore. The River Rhine had become an important trading artery and was dotted with small islands. Upon one of these, downstream from his residence at Eltville, he built the **Pfalzgrafenstein**, a unique building serving as both customs post and toll booth to control and watch over river traffic.[6] It rises from its island home in two stages. The central pentangular tower was completed in 1327 within the space of a year, with its apex facing upstream. The surrounding hexagonal fortified enceinte 12m high followed a number of years later. Interestingly a covered and loopholed gallery ran all round this enceinte opening into a number of echauguettes or corner turrets much in the manner of the gallery on the tower-house at Eltville. It is an attractive building not diminished with the addition of an artillery bastion much later. Together with nearby Gutenfels Castle overlooking the fortified town of Kaub it acted as a powerful military barrier in the Rhine valley.

The fortified monasteries

As well as episcopal strivings for power both monasteries and towns sought independent status. As Braunfels points out where monastery and town became rivals there were a number of different outcomes. The town could triumph, severely limiting the power of the abbot; town and monastery could co-exist either harmoniously or in a state of tension and disunity; finall, the monastery could come out on top and dominate the town. Just as political and secular power had been obtained when the bishops built their episcopal castles in dominating positions, the same principle was adopted by monastic communities whenever possible. The general rule prevailed: for monastic supremacy in or over a town it was invariably necessary to dominate it physically.[7]

The monastery of **Melk** in lower Austria is famous for a number of reasons. One of the few monasteries never to have been secularised, it is still a working monastery. A prime example of the Baroque architecture of Austria, it was completely rebuilt at the beginning of the eighteenth century.[8] Built on a rocky outcrop overlooking the River Danube, its site is

[6] Tuulse (1958: 92).

[7] Braunfels (1980: 183).

[8] The enormous wealth of the monastery enabled Abbot Berthold Dietmayr to rebuild the entire complex. The master builder Jakob Prandtauer achieved this within the short space of thirty-four years.

Image not available

spectacular. Made over to Benedictine monks in 1089, the cliff-top site was not fortified until the fourteenth century when Duke Frederick I gave permission for the monks to add to their monastery walls, towers and bastions. Engravings from the seventeenth and eighteenth centuries show how these defences were remodelled, added to or removed. In typical German fashion the solitary eastern entrance was powerfully defended; double walls reinforced with towers and a ditch protected the only gateway. With the advent of gunpowder a huge artillery bastion to cover the approach from the town was added to the south-eastern corner of the monastic complex.[9] Although the engravings show that the town, established to the south of the escarpment, expanded during the seventeenth century and acquired its own defences in the shape of a town wall with interval towers and fortified gateways, the physical, political and spiritual power always lay with the monastery. Such was the strength of the site with its powerful defences that it was able to resist a siege by Mathias Corvinus, king of Hungary, both peasant and Protestant armies and finally the Turks. Today most of the fortifications have been removed, although the natural strength of the complex is evident. Only two small defensive towers either side of the eastern entrance and a defensive tower to the north-east remain today.

Further to the north in Baden-Württemberg, in central Germany, is the twelfth-century Cistercian monastery of **Maulbronn**, now surrounded by the modern town. A World Heritage Site, it is considered one of the best-preserved monastic complexes from the Middle Ages north of the Alps. Neither dominating nor dominated by any surrounding civil settlement, the monastic precinct wall enclosed a religious community concerning themselves solely with monastic affairs. In the seclusion of the Salzach valley it survived from its founding in 1147 until the dissolution of the monasteries in Germany almost four hundred years later. The fortified enceinte surrounds a rectangular enclosure 180 x 350m containing the monastery and its dependant buildings. Constructed between the twelfth and fourteenth centuries, the main buildings illustrate transitional Romanesque-Gothic architecture. This is especially true of the thirteenth-century porch. Fortunately all the monastic buildings have escaped any Baroque transformation. The cloister and the service rooms of the monks lying to the north of the church are in a remarkable state of preservation as are those of the lay brothers to the west. Here are arranged all the buildings necessary to enable the monastery to maintain its self-sufficient independence. This monastic grange contains a multi-storey storage barn, stables, a cowshed and granary together with workshops for coopers, blacksmiths and bakers. Almost uniquely they were all enclosed within the fortified enceinte. The solitary fortified gatehouse still remains in the south-east corner. In addition the monks excelled themselves in constructing an elaborate network of drains, irrigation canals and reservoirs that still function. The combination of architectural and functional excellence is a result of a monastery that evolved from within and constantly remodelled and enlarged as needs dictated.

The mendicant orders rarely fortified any of their monasteries. The preaching orders built their establishments just outside towns or within the shelter of their walls. In a number of instances, particularly in a newly built town as at **Hagenau** in Germany and **Wiener Neustadt**

[9] Braunfels (1980: 182–3) reproduces the engravings of Merian and Engelbrecht.

in Austria, the monastic complex added its bulk to the defences of the town and the monks were responsible for the maintenance and defence of their neighbouring stretch of wall.[10]

The fortified churches of Germany

In an area of northern Bavaria between Fulda to the north, Nuremberg and Rothenburg ob der Tauber to the south, Aschaffenburg to the west and Beyreuth to the east there are to be found over a hundred churches fortified in the fifteenth and sixteenth centuries. The stimuli were almost certainly the Wars of Religion and the perceived Turkish threat from the East.

Although as elsewhere the degree of fortification remaining varies greatly, a number of generalisations can be made before the specifics of these fortified churches are examined. Almost all are surrounded by a defensible enceinte; the church itself is rarely fortified other than a few that received a fortified tower over the chancel. The fortified western tower, so commonly found elsewhere in Europe, is infrequently encountered and where present is probably from an earlier period than the one under discussion. Gatehouse towers are ubiquitous and sometimes contain lodgings for the church caretaker or custodian. The interval towers that so frequently reinforce the enceinte can be round or square but are invariably roofed either with a pepper-pot roof in the former or a saddle-back in the latter. Many churches contain within the churchyard a number of buildings both for accommodation and for storage, the external surfaces of which present a blank façade to the outside; frequently wells were dug. Loopholes, whether inserted in the church, wall or towers, are varied in design but all are intended for use by firearms. All of these fortified churches were built by their congregations, almost invariably in rural hamlets and small villages. In many respects they are similar to those built in Austria and Transylvania.

Ostheim, to the west of Fulda, is one of the best examples of these fortified churches and exhibits most of the features described above. There are, however, two concentric quadrangular enceintes, the outer today having lost its crenellations and wall walk. Despite many of its towers now being reduced in height this wall still gives the impression of powerful peasant defences. The round south-east corner tower survives to its full height and possess a pyramidal shingle roof. The interval towers, one in the middle of each side, are open-backed and much of the eastern wall has disappeared. Fortunately the inner wall has fared much better, almost certainly because its outer surface is formed by the outer walls of almost forty buildings ranged round the church. Somewhat strangely the corner towers are round on the east and square on the west; the reason is not apparent. All four are slim, rising to five storeys, and contain multiple loopholes, that to the south-east being designated as the gatehouse, although the gateway to the inner courtyard is cut through the adjacent curtain.

The church at **Kraftshof** a few kilometres north of Nuremberg is still surrounded by its pentangular curtain wall reinforced by five three-storey round towers at the angles. The church itself is unfortified, however. Engravings from the sixteenth century, 1620 and 1908 are of value in showing that there has been little in the way of alteration to either the church or its defences over the centuries. All three engravings show that this fortified church was built in

[10] Money for building Wiener Neustadt came in part from the ransom paid for Richard Lionheart.

open countryside with only scattered farmsteads in the vicinity. Only the south-west gatehouse has altered; originally a simple opening in the curtain wall, it now runs through a three-storey building built between the two south-west towers. There is no access to the wall walk from the churchyard: it must have been reached from staircases in the towers. Covered by a pitched shingle roof supported by the parapet and wooden beams, it remains open to the inside. It is representative of the curtain walls of these fortified churches where splayed loopholes are preferred to crenellations.

By contrast, the churches at **Heustreu St Michael**, south of Ostheim, and **Steinbach**, north of Nuremberg, are surrounded by circular walls both devoid of towers and any form of active defence. Both churchyards lack any buildings other than the church. Most of the remaining fortified churches have enceintes that contain towers, gate-towers or belfries, or are formed by the external walls of encircling houses and store-rooms.

Although the fortified tower over the choir is present in less than a quarter of the churches there is a superb example at **Wächtersbach**, north of Aschaffenburg, where the tower dates from 1530. There is more than a passing resemblance to the residential tower of Archbishop Baldwin at Eltville. The four-storey tower, barrel-vaulted at first-floor level, is surmounted by a crenellated gallery running under the eaves of a pyramidal roof between corner echauguettes. The number of towers now containing vestigial echauguettes perhaps indicates that these towers were previously more ubiquitous.

Although the density of fortified churches in this region is quite high, actual church fortifications are uncommon and only one church can be considered a fortress church. The parish church of St Walburg at **Bad Steben** is a hall church of four bays. Although there are now four comparatively large lancet windows in the south, west and east walls, that to the north contains the entrance staircase tower leading to the fighting platform built above the barrel vaulting of the nave and chancel. Gun-loops cover all approaches to the church. In addition the centrally placed bell-tower, now with a Baroque roof, is also loopholed and the church is very reminiscent of some of the fortress hall churches of Transylvania.

Ecclesiastical defences in Poland

With the exception of the conventual castles of the Teutonic Knights there is little architectural evidence available today to indicate that Poland fortified its monasteries and churches in any significant numbers. Those that were fortified are notable and monumental examples, however.

Prince Mieszko encouraged his subjects to embrace Christianity in 963 and chose the Western Church in preference to that of Byzantium. As a result ecclesiastical architecture had a strong Western European influence from the outset, particularly French and German following the establishment of monastic daughter houses in Poland. Fortifications were not added, however, until the later Middle Ages and beyond.

'A defiant third-rate fortress; a chicken coop'

These words are attributed to the Swedish general Müller when he first saw the fortress monastery of **Jasna Góra**; he came to rue them. Now lying in the Polish industrial town of

Czestochowa in the south of the country, the monastery was founded by Paulite monks in 1382.[11] Already a popular pilgrimage site by the early fifteenth century on account of the miraculous icon of the Black Madonna it became a powerful symbol of Polish independence in the seventeenth and eighteenth centuries. Built on top of the Jasna Góra, or Bright Hill, the church of the Assumption and of the Finding of the Holy Cross was first fortified in the fifteenth century together with the monastic buildings. The wealth generated by the lucrative pilgrimage trade enabled the monks to refortify the monastery in 1620 with a quadrangular enceinte reinforced by diamond-shaped artillery bastions designed by the military architect Andrzej del' Aqua. Although somewhat simple and unsophisticated, the fortress monastery was defended by Prior Augustin Kordecki and a garrison of three hundred in November and December 1655, an event that was to prove a turning point in Polish history.[12] At a time when almost the whole of the Polish-Lithuanian commonwealth was under Swedish or Cossack control the resistance proffered by the occupants of the monastery for over a month, combined with dreadful weather conditions, resulted in the raising of the siege. It was the start of Polish resistance which ultimately led to liberation from the Swedes.[13]

The walls and bastions that surround the monastery today are more extensive than those that endured the siege. Damage caused by the Swedish artillery, particularly in the south-west, required substantial repair and the opportunity was taken to enclose the remaining walls and bastions with an outer shell 2m thick. Plans from the time of reconstruction show that the southern entrance gateway, reached by a bridge over the dry moat, was to be protected by an elaborate barbican. In typical Polish fashion two advance gateways were fortified and surrounded by earthworks.

The fortified monastery was tested further over a century later in 1770 when soldiers of the Anti-Russian Confederation defended the monastery, again successfully, against a Russian army of Empress Catherine II.

A response to the Turkish threat

The mediaeval town of **Paczków** in the border region of Silesia has kept its town walls together with most of its towers and gates.[14] Within the fourteenth-century elliptical enceinte and overlooking the wall in the south-east is the parish church of St John the Evangelist. Built in the second half of the fourteenth century it was refashioned in the sixteenth century as a fortress church in response to the Turkish threat from the south. The sombre brick-built church has all the appearances of a powerful fortress. The square walls are heavily buttressed

[11] The Paulite Order was founded in the Hungarian capital of Buda in 1215.

[12] The prior recorded many of the details of the siege in his letters and diary and the story of the siege has been told by Henry Sienkiewicz, translated by W. S. Kuniczak, in his novel *Potop* (The Deluge). The Prior records that his garrison consisted of 160 foot soldiers, 70 monks and 20 noble knights and their lackeys; 50 artillerymen served 12–18 light canon and 12 twelve-pounders. Against him was a Swedish army of 9000 men under General Müller together with a siege train.

[13] It was the only fortification besieged by the Swedes that did not fall to them during their invasion of Poland.

[14] Nineteen out of twenty-four fourteenth-century semi-circular towers together with three fortified gateways of the fifteenth century survive intact.

and the few windows are both high and narrow. Above the brick vaulting of the Gothic interior is a powerful fighting gallery provided with gun-loops on each side and surmounted by a parapet defended with swallow-tail merlons, an indication of the influence of Italian military architects. Solid and powerful, it is typical of a number of such fortress churches built in the border region with Slovakia. Most have been altered out of all recognition, however.

Ecclesiastical fortifications in the Czech and Slovak Republics

At the very hub of Central Europe, the Czech and Slovak nations have had a turbulent past and have suffered greatly at the hands of their more powerful neighbours. Straddling the trade routes between Eastern and Western Europe and from the Mediterranean to the Baltic, they have struggled to maintain their separate cultural identities, not helped by the destructive wars caused by religious divides, especially the Hussite challenge to Catholicism in the fifteenth century. Although these wars affected mainly Czech Bohemia and Moravia, Slovakia did not escape involvement in the Thirty Years War and was constantly under threat from the Ottoman Turks after the Battle of Mohács and the capture of Buda, the Hungarian capital. As a consequence many mediaeval monasteries, convents and churches were destroyed. It was not until the end of the Thirty Years War and the stability produced by Habsburg rule that the Catholic Church began to re-establish itself and began to rebuild its churches and monasteries. The State had now become responsible for the defence of its citizens and individual fortifications were no longer needed. As a consequence there are few ecclesiastical fortifications in either country.[15] Enough examples remain, however, to suggest that as in other European countries, fortified monasteries, convents, cathedrals and churches played a part in the defence of the civil population and the ecclesiastical hierarchy.

Of the fortified monasteries, that to be found in the small town of **Vyssí Brod**, in a wooden region of southern Bohemia, epitomises the difficult and turbulent past experienced by religious communities. The monastery was founded by Peter Vok of Rozmberk, chancellor to the Czech king. It became very rich through patronage and the selling of indulgences; enough funds were accumulated to fortify the monastic ensemble with walls and towers in the fifteenth century. In 1422 and again in 1433 the monastery was besieged by the Hussite armies. It only escaped destruction when the Cistercians paid them off with a huge ransom. Its fortunes revived and by the sixteenth century it owned the towns of Vyssí Brod and Horice together with over a hundred villages. However, it had to defend itself against a peasant revolt in the same century and was attacked in the Thirty Years War. Of the fortifications there are substantial remnants of the walls, towers and fortified gates, although the monastery was substantially remodelled in the nineteenth century, and has recently been restored to its monastic role by the Cistercians.

In the gold- and silver-mining region of Slovakia the town of **Banská Stiavnica** began to fortify itself in the sixteenth century in response to the Turkish threat following the fall of Buda. Amongst the fortification works was the conversion of a church into a castle. The

[15] The Slovaks had defended their homeland both in the towns and in the countryside by building kastiele, small fortified castelets.

Romanesque basilican church, dedicated to the Virgin, had in the period between 1497 and 1515 been converted into a Gothic hall church with a surrounding defensive wall. Between 1556 and 1559 the vaulting of the nave was demolished and the arches between the nave and the aisles filled in and the outer walls of the church reinforced. In addition corner towers were built. The nave now became the castle courtyard and the rampart previously built round the church was reinforced with five towers. It was here that the gold and silver obtained from mining were deposited. Known as the Old Castle, it still dominates the town and is one of the rare examples where a church was not only fortified but also lost its religious function into the bargain.

In contrast the castle of **Strakonice**, built on a rocky spur above the confluence of the Olava and Volynka Rivers and one of the oldest castles in Bohemia, dating from the first quarter of the thirteenth century, was transformed into a commandery of the Knights Hospitaller of St John, becoming their headquarters in Bohemia and remaining so until 1694. The eastern part of the triangular site was donated to them in 1243 by Bavour the First who had not only taken part in the Third Crusade but had become an enthusiastic patron of the Hospitallers. Over the centuries the castle was altered and added to and has become a mixture of Gothic, Renaissance and Baroque architecture. Much of the early castle, including the massive round Rumpal Tower, remains; the church of St Procopius was added in the thirteenth century along with the cloister between the church and the hall of the castle.[16] Further additions were built by the Hospitallers to include a hall for the chapter and a residential tower built above the sacristy, which was incorporated into the castle defences. By the beginning of the fifteenth century the Hospitallers owned the whole castle compound and had transformed it into a conventual castle. It remained the residence of the Bohemian Grand Master all through the Hussite wars until 1534.

The fortified churches of Austria

The sweep through the Balkans, the defeat of the Hungarians at the Battle of Mohács in 1526 and the appearance of the fearsome and disciplined Turkish army outside the walls of Vienna in 1543 must have terrified the peasants of Eastern Europe in a way not experienced for generations. As elsewhere, particularly in France and the unsettled marcher regions of Europe, the rural peasantry had, in many instances, to fend for themselves. Their fear was very real; although to some extent the events in Persia had sidetracked the Ottomans away from Europe, raiding parties from both sides repeatedly crossed the marches in search of booty.[17]

Austrian churches had first become fortified as a response to the war against Hungary but

[16] In the nineteenth century wall paintings in the church, cloister and chapterhouse from the fourteenth century were uncovered and restored.

[17] Stoye (1964: 35) points out that many Turkish border commanders relied on income from stolen livestock, goods and prisoners. Although there was peace between Vienna and Istanbul between 1606 and 1663 and 1665 to 1683 this was not the case on the western marches where depredations continued unremittingly.

it was the Turkish threat between the end of the fifteenth century and the end of the seventeenth that witnessed their wholesale fortification. No region of present-day Austria was exempt, although there was great variation in the extent of fortifications and of their remains today. Karl Kafka indicates that over five hundred Austrian countryside churches contain identifiable remains to suggest that they were fortified to a significant degree. He does not attempt a classification; this is understandable given the tremendous variety of ecclesiastical fortifications in such a small area over such a long period of time. Unlike France, little in the way of regional variation can be detected; neither can the cohesiveness found in Transylvania with its distinctive military architecture.

Rohrbach, in upper Austria, resembles the Saxon church to some extent in that the fortified enceinte had residential buildings backing onto it. Although the defensive wall has not survived in the east, the fortified wall, enclosing an area 80m square, has houses ranged against its inner aspect with a gate-tower of two storeys above the fortified entrance passage. Much more common than elsewhere in Europe was the use of earthworks to surround and defend the village church. In the province of Salzburg, the village of **Neumarkt am Wallersee** surrounded its church with a double bank of earthworks and ditches. Bastions protected each of the cardinal points of the rectangular enceinte and a further bank and ditch protected the vulnerable southern approaches. The only entrance to the enclosure, measuring 100 x 40m, is through the entrance passage in the stone and brick tower that straddles the two eastern banks. There is no evidence to suggest that these banks received any additional defences, although their defensibility would thereby have been increased, as it was at church at **Bad Pirawath** in lower Austria, where the surrounding earthwork was capped with a stone-built defensible wall. A large number of those churches described by Kafka were fortified by a loopholed cemetery wall. There was a considerable variation in their strength, however. The church at **Weissenkirchen** in the Wachau received a churchyard wall with sophisticated defences. Built in the first half of the sixteenth century, round and loopholed corner towers connect the pentangular curtain walls. Not only are they crenellated, and in part roofed, but they contain a row of keyhole gun-loops, providing a double layer of defence.

As in France, where churches were fortified at differing periods over a number of centuries, all forms of military architecture are found; iron-sheathed doors, machicolations, walls, moats and the elevation of naves and chancels are common. Gun-loops are, however, a feature of almost every church, confirming the date of erection of these peasant fortifications and giving an idea of the large numbers of expensive handguns available to the rural population.

9
ITALY

Background

Despite the many wars, conflicts and invasions that Italy suffered during the Middle Ages, together with the long-standing quarrel between the papacy and the Holy Roman Emperors, ecclesiastical fortifications are comparatively rare in Italy despite the vast numbers of monastic communities that had been established in the country.[1] The reasons are not clear, but there are a number of circumstances peculiar to Italy that may help explain matters.

By the middle of the twelfth century the towns and cities of Italy, especially those in the north, were self-governing and responsible for the protection of their citizens. As a consequence most cities began to surround themselves with strong walls. They were in the main constantly maintained and replaced as the science of siege-craft developed. The power previously wielded by bishops and the aristocracy had been replaced by that of the citizen; the nobility chose to live in the cities and built their fortified houses and towers behind the protection of the city walls.[2] The castles that had been built in the countryside and in the south belonged to foreign occupiers and their descendants.

In the countryside the agrarian and pastoral populations built communal fortifications either on hill tops or on mountainsides, to which they could retreat with their animals and grain stores when danger threatened. It was within these protective walls that the church was built, ultimately to become the fortified villages and the hill-top towns that are ubiquitous today in Italy.

The predilection of the mendicant orders to build their monasteries within or near to protective walls obviated in most instances any need for fortification. In addition the permission given to Cistercian monks to retreat to their town houses during times of great strife removed some of the danger that their isolated monasteries exposed them to, many of which were from an earlier age and too extensive to fortify. As a consequence they were not immune to attack and many monasteries suffered greatly. For example the monastery of Monte Cassino, the cradle of the Benedictine Order, has been totally destroyed and rebuilt four times during its existence.[3] Where religious establishments or their hierarchy chose to fortify themselves they did it with the same gusto as in other European countries, and none more so than the popes.

[1] Braunfels (1980: 129) states that in 1316 the Italian provinces contained 567 Franciscan friaries and 198 nunneries. In comparison there were 247 and 47 respectively in France and 203 and 47 in the German states.

[2] Anderson (1980: 167).

[3] The last occasion was in 1944 during the Allied advance through Italy.

Monastic fortifications

Of the many locations available for the establishment of a daughter monastic community the one chosen in 1045 by Benedictine monks from Monte Cassino appears strange. In choosing the Adriatic island of **San Nicola**, in the archipelago of Tremiti 22km to the north of the Gargano peninsula, they exposed themselves to attacks by corsairs and pirates; indeed the abbey was sacked by passing Crusaders in 1194. As a consequence the island was abandoned until the arrival of the Cistercians in 1237, who immediately started to build fortifications to protect themselves. These were not strong enough, however, to stop pirates sacking the monastery in the fourteenth century, resulting once again in abandonment, this time for over a century.

In 1412 the Lateranesi, Lateran regular canonical monks of San Frediano of Lucca, repopulated the island and began to fortify their monastery in earnest. By the middle of the sixteenth century almost two-thirds of the island were enclosed within powerful fortifications. A curtain wall, reinforced with powerful round towers, surrounded the monastery, and the rock upon which they stood was artificially scarped to produce a talus. Covering an area of 40 hectares the fortified monastery covered the high ground in the centre of the island, although the fortifications were extended to include the south-west of the island where four juxtaposed parcels of land were enclosed with defensible walls and corner towers. A drawing of the fortifications in 1630 by Giuseppe Roma suggests that these fortified areas enclosed the monastic gardens and the grange. They had proved sufficiently strong to resist a determined attack by an Ottoman fleet in 1567. The fortunes of the monastery were to decline in the succeeding centuries and the buildings allowed to decay to the extent that they are mainly ruinous today.

Far away to the north-west, near Novara in Piedmont, is the small fortified monastery of **San Nazzaro Sesia**, built out of bricks curiously mixed with pebbles and set in mortar in a herring-bone pattern. Here the church together with its southern cloister and detached campanile is well maintained. The abbey was originally founded in 1049 by Bishop Riprando from Novara and fortified later in response to the lawlessness of a region subjected to repeated looting by roaming mercenary bands.[4] Adjacent to the north-east corner of the apse the square campanile or bell-tower rises eight storeys and is of typical Lombardic form. The ambience is one of tranquillity but the presence of surrounding defensive walls indicates that this was not always the case. Built almost entirely of brick the roughly rectangular walls with their swallow-tailed merlons, suggesting a date in the fourteenth or early fifteenth century, are reinforced at each corner with drum towers now in varying degrees of ruin. The fortified gatehouse is next to the north-western corner tower and is still inhabited, whilst around the inner aspect of the wall, especially in the west, beside a square interval tower are the cells and buildings normally found in small monasteries. Further protection to the north-east and to the west is given by a moat, now little more than a stream. Although not part of any organised defensive line or organisation the defences were an ecclesiastical response by a vulnerable monastery that had the resources to build fortifications much in the way that many small villages were.

[4] The cloister still contains the frescoes painted in 1460 depicting stories around the life of St Benedict.

Town defences provided by the mendicant orders

Mention has been made of the vast numbers of monasteries built by the mendicant orders either adjacent to city walls or just outside them. Whilst the majority were devoid of fortifications, a number in Italy, as elsewhere, particularly the Holy Roman Empire, lent their bulk to the town defences and acted as bulwarks. Here was a synergy between town and monastery in the mutual defence of their populations. In **Siena** both the Franciscans and the Dominicans built their churches to abut the city walls, that of the former near the east gate and that of the later to protect the western. Both are imposing buildings, although the restoration of the nineteenth century has removed the militaristic façade of the basilica of San Francesco.

Of these monastic bulwarks the finest example, without doubt, is to be found at **Assisi**, the city of St Francis. Viewed from the air two monastic enclosures rise on buttresses from the western aspect of the city. The attached building, to the east, is in fact two churches one built on top of the other, overlying a crypt. The ensemble has something of the air of Albi about it. The upper church, of basilican form with a single nave, protruding transept and single apse, has round towers either side of the apse and semi-circular buttresses at intervals supporting the nave walls. The town of Assisi is built on a hill arising from the plain below Mount Subasio and its mediaeval core is still surrounded by its fortified walls. To the north, at the highest point of the hill, the mediaeval castle of Rocca Maggiore was built for the pope in 1367. Seen from a distance the castle, walls and bulwark of the western complex of churches and monastery appear impregnable.

Cefalù, Sicily, a fortified cathedral

The gradual return of Sicily to Christianity following its conquest from the Saracens by the Normans during the eleventh and twelfth centuries was marked by the building of magnificent cathedrals incorporating Arab architectural features. Of these imposing buildings the golden sandstone cathedral at **Cefalù** is, perhaps, the finest built by the Normans and their successors, though constructed over two different periods and in two distinct styles. The small fishing port is found on the northern coast of the island and is sheltered by a rocky promontory. It was here that Roger II, the Norman king, started the cathedral in 1133 following a vow that he made when he was in danger of being shipwrecked. First to be built was the apse with its two side chapels, followed by the transept. They are wonderful expressions of power and although there is no active fortification the roofs of the apse and its chapels have stone vaulting, as does the greater part of the transept. To the north of the church was added a cloister for the Augustinian canons who served the church. Although completed by 1148, the nave and western façade was not finished until almost a hundred years later when the Norman rule had been replaced by that of the Hohenstaufen emperors of the Holy Roman Empire. The contrast is dramatic, especially when seen from the side. The nave, dominated by the eastern range, is much less ornate, more austere and decidedly militaristic. The western façade is flanked by two battlemented towers 10m square, similar but slimmer to the powerful minarets of the fortified mosques of Tunisia. Although the openings in the upper storeys are decidedly Romanesque, the merlons of the towers and the side aisles of the nave are Arab in style and are similar to

those found on Arab fortifications. The defensive qualities of this striking building are apparent. Although the solitary entrance is sheltered by an open narthex it is covered by arrow loops in the first two storeys of the flanking towers and in the covered gallery running between them. It lends itself to an arch machicolation similar to those at Lincoln. Similar powerful cathedrals were also built at Monreale and Palermo and have a fortified appearance and Arab architectural influences.

Although a secular fortification, the castle of **Ursino** at Catania on the east coast of Sicily bears a striking resemblance in its ground plan to the ribats of North Africa. This castle originally stood on a spit of land jutting out to sea. The eruption of Mount Etna in 1669 enveloped the base of the walls and towers in lava, and the thirteenth-century fabric was not exposed until detailed examination and restoration of the castle was carried out in the 1930s. The original castle, 50m square, was strengthened at the corners by round towers. Semicircular interval towers were added to the middle of all four walls. The internal arrangements are also very similar, with two-storey service rooms with ribbed vaulting aligned against the curtain walls enclosing a small central courtyard. The castle was begun in 1239 by Riccardo da Letini on the orders of Frederick II and was much altered in the fifteenth and sixteenth centuries. Only two corner towers and one interval tower have survived.[5]

There is also evidence that the Arabs built ribats during their conquest and occupation of Sicily and that urban ribats existed in Palermo in the twelfth century.[6]

Fortified churches and the cortinas of Friuli

Fortified churches are rarely found in either the towns or countryside of Italy probably a result of the changes in the tenth to thirteenth centuries that saw open settlements change to those within fortified walls. As a consequence most churches were built within fortified villages, towns and cities, some becoming part of castle enceintes.

In the north-east of Italy in the region of Friuli, bordering Slovenia, there are a number of peasant defences still surviving, known as cortinas; a few of which contain churches. The north Italian pastoralists constructed their shelters by building platforms of earth, usually 5m high with an average diameter of 100m, and surrounded them with a ditch and vallum on top of which was erected a wooden palisade. Never originally intended for permanent occupation, only three have any remains of buildings.

In many of the hamlets and villages of Europe the church was one of the few buildings worthy of protection and it would seem logical to build the church within the cortina. This is the case at **Carpenteo** near Pozzuolo. Here the earthworks contain the sixteenth-century church of San Michele with its high Gothic windows and in a departure from normal practice the wooden palisade has been replaced by a curtain wall. The tower, which dwarfs the church, guards the solitary entrance reached by a bridge across the ditch. The early peasant defences

[5] Anderson (1980: 174) is of the opinion that Islamic influences in the castles built by Frederick in Sicily stemmed from the caravanserai. As the templates for the ribat and the caravanserai are interchangeable this mistake is understandable.

[6] Hillenbrand (2000: 332) quotes the twelfth-century Arab geographer ibn-Hauqal.

were to become powerful community defences. Sketch maps also show similar fortifications built within the cortinas of the neighbouring villages of Di Flambro and Di Sedegliano. Of interest is the differing form of earthwork excavation. However, they are in their early form the simplest of defensive walls and could only offer protection against small bands. They were widespread in Friuli and many have been built over and remain as countryside villages today.[7]

The fortification of the Vatican

The planned return of the papacy in 1377 from its temporary home in Avignon had a significant effect upon the development of the art of fortification and the role of the military engineer. The popes commissioned huge works of military engineering, spending vast sums of money over a period of three hundred years in an endeavour to ensure the safety and independence of the established Church and its representatives. They also aimed to ensure that Rome remained its temporal home. To understand how this came about it is necessary to have some background knowledge about the defences and fortifications of Rome and the development of the Borgo, that part of the city destined to become the permanent seat of the pope.

In 270 the soldier Lucius Domitius Aurelianus became the emperor of Rome and the following year began work on a completely new defensive wall to protect his capital. One bridge, the Pons Aelius, could not be conveniently enclosed within these walls and so the mausoleum built in 135 by Hadrian that conveniently overlooked the bridge was fortified to form a tête-du-pont. It was ultimately to become the powerful Castel Sant'Angelo, the final retreat of the popes in the Middle Ages.

Coincidentally the area to the west of the mausoleum was attracting the attention of Christians where a small church had been built over the tomb of the martyr Peter. With the increasing acceptance and popularity of Christianity it became an important pilgrimage site and the tomb became enshrined within a large basilican church built by Constantine, able to accommodate thousands of pilgrims. As a consequence a community was established to provide for the temporal and spiritual needs of the devout, whether pilgrim, monk or nun. Known as the Borgo, this area became enclosed in a defensive wall in view of its vulnerability, demonstrated when Arab raiders landing at Ostia marched inland and sacked St Peter's. Built in 850 by St Leo IV of Rome, the head of the Western Church, it enclosed a rectangular area approximately 1600m east to west and 400m north to south. It was bounded on the east by the River Tiber and protected by Castel Sant'Angelo, whilst the exposed western approaches were reinforced by round towers. The area enclosed was not to become home to the popes until much later and few additions were made until the time of Innocent III.[8] His greatest achievement was the establishment of the Papal States in central Italy during the conflict between the Church and the Holy Roman Empire. Nicholas III, pope between November 1277 until his death in 1280, decided to build a new pontifical palace, almost certainly

[7] Ulmer (1999: 32–4).

[8] The popes lived in the Lateran Palace, an unfortified building constructed by Leo III at the beginning of the ninth century and located near St John's gate.

fortified, in the Borgo. By the beginning of the fourteenth century Rome had become a dangerous place to live and the election of Clement V, the French archbishop of Bordeaux, to the papacy in 1305 led to the papacy relocating to Avignon in 1309. The stay, despite the building of the Palace of the Popes at great expense, was comparatively short-lived. The return was carefully planned and successfully achieved in 1377, in no small measure aided by the campaigns and castle-building of Cardinal Albornoz. As part of the conditions for the return of the papacy the Castel Sant'Angelo, the key to the control of Rome, was to be handed over to the pope.[9]

Although Rome had become a fractious and impoverished place, the papal exchequer was rich enough to allow Nicholas V (1447–55) to begin a building spree that was to last for almost two centuries. He first turned his attention to the Borgo and within it St Peter's basilica, the pontifical palace and the fortified mausoleum of Hadrian. He strengthened the Passato, the northern long wall stretching from the palace to the Castel, and converted it into a fortified passageway to enable safe access for the popes to their fortress of Sant'Angelo. He also built a huge tower in the walls to the west of the papal enclave to dominate the surrounding countryside.[10] His commissions did not stop at the erection of fortifications, however, and he is better remembered for his initiation of the rebuilding of St Peter's and his contribution to the renaissance of the buildings and city of Rome in an attempt to return the city to its former glory.[11]

Four events took place in the early part of the sixteenth century that had lasting effects upon the architecture of fortification. The great age of fortification was about to begin in Italy. It was a consequence of the devastation brought about by the highly mobile siege train of Charles V. The damage wrought by his artillery both in the field and against castles and walls, built for an earlier form of warfare, posed a challenge to Italian military architects. They had, fortunately, broken away from mainstream architecture to become professionals in their own field of expertise and included exponents of great ability. The bastioned trace was about to replace the high towers and curtain walls of the Middle Ages that had become redundant through the increased use of gunpowder and artillery.[12]

The sacking of Rome in 1527 by the soldiers of Charles V was followed by the appearance, in 1534, of the sultan of Turkey's fleet off the mouth of the Tiber. These events so alarmed Pope Pius III that he sought the help of Antonio da Sangallo the Younger, one of the most able of the new generation of military engineers.[13]

[9] D'Onofrio (1994: 24). Not only did the popes quarrel on the world stage but at times had a very uneasy relationship with the commune and people of Rome.

[10] Presford (1999: 9–13). The tower still remains, overlooking the Porta Pertusa gateway built in the later enceinte.

[11] Nicholas claimed on his deathbed that it was 'for the greater dignity of the Apostolic See that such buildings were conceived in mind and spirit' rather than any self-glorification.

[12] Hughes (1974: 103–49) covers the early development of the bastion from its early confident introduction at Tartaglia to the immense complicated systems devised by the French genius of military architect, Vauban, and his contemporaries in the seventeenth century.

[13] Antonio da Sangallo the Younger (1485–1546) belonged to an architectural dynasty that specialised in fortification. He worked on the fortifications with Michelangelo until there was a disagreement.

The plan was monumental in concept and design. Much of Rome enclosed within the Aurelian walls was derelict and deserted; the plan involved reducing the circumference of the defensive walls by half from 18km to 9km and incorporating the most up-to-date military architectural developments and ideas. By 1542, however, only the Ardeatine bastion had been completed.[14] As Pepper points out, the design of this bastion was the most advanced of any in Europe. It contained everything then known about the science of fortification, together with Sangallo's innovations. Built of narrow but lengthy bricks the bastion was double-flanked and contained two gun platforms. The uppermost or cavalier platform, open to the elements, covered the casemated gallery below. Protected gunpowder magazines, bomb shelters and flues aided the work of the artillerymen. The provision of basement galleries and shafts enabled sappers to countermine if necessary. Even well shafts were dug. Paradoxically its innovation and depth of defence was its weakness; the cost of completing the city walls with these bastions was prohibitive and like so many projects involving fortification became much scaled down. The fortification of the Borgo was, however, completed after 1542, almost certainly to the design proposed by Sangallo for Paul III. It still retained part of the Leonine wall of the ninth century and ultimately became connected to the fortifications of Rome built by Urban VIII to the west of the Tiber in the second quarter of the seventeenth century. Most of the sixteenth-century fortifications remain around the Vatican City, although internally access is restricted. The walls shelter an area of 44 hectares and are roughly triangular shaped, with the apex to the west near the great tower of Nicholas V and the base to the east measuring 760m across with a depth of 1000m from east to west. Although the fortifications are inferior to those of the Ardeatine bastion they are substantial defences. In addition there is evidence that at least one of the buildings in Vatican City received fortifications. Under the roof of the Sistine Chapel there appears to be a crenellated chemin de ronde built onto narrow Italianate machicolations.

Castel Sant'Angelo

The Castel Sant'Angelo had always been part of the defences of the Borgo. Regarded as the most powerful fortification in Rome, it was held to be the key to the control of the city. As a consequence it has been altered and remodelled on many occasions so that the fortifications that remain today are from many different periods and in contrasting styles. The description to be given must, in essence, be an overview.

Although the Vatican did not own the wall, Nicholas III in 1277 built a corridor along the northern Leonine wall to provide rapid access for anybody fleeing from the papal palace. The handing over of the castle in 1377 when Gregory XI brought the papacy back to Rome was more than symbolic and the castle underwent adaptation for the use of early firearms. It was the work of Nicholas V that transformed the fortifications with the addition of four round corner towers to the quadrangular encircling curtain wall together with papal apartments. Under Alexander VI, pope between 1492 and 1503, the leading expert in fortification of the time, Antonio the Elder, father of the engineer who built the Ardeatine bastion, updated the defences. The round corner towers were remodelled and surrounded by hexagonal artillery

[14] Pepper (1977: 33–49) describes the whole scheme and what was achieved.

bastions and the interval curtain walls provided with gun-loops between the crenellations and the machicolations. He built a 15m high artillery bastion surrounded by a moat to the rear of the fortress to cover the approach from the city over the bridge it was originally built to protect. He linked this bastion to the two angle towers he had recently remodelled.

A quarrel with the Spanish Crown led to the hasty erection of pentangular earthworks and corner artillery bastions. Although a Spanish army did not materialise the Tiber found these defences wanting when it burst its banks and washed them away. They were, however, replaced with earthworks reveted in brick and stone by Pius IV in 1561. The pentagonal design with corner angle artillery bastions was retained and a new wall constructed from behind the Castel to the bastion designed by Michael Angelo below the Vatican walls.[15]

The succeeding centuries have seen the appearance alter significantly. The outer enceinte has lost its sharp outline and is covered in trees. The defences facing the bridge have been lost and the lower 3m of the walls are covered in the debris of centuries and now carry a road. The central round mausoleum tower containing chapels, papal apartments and an artillery gallery rises 24m to the square tower erected by the popes on the roof.

The Castel was put to the test in 1527. Pope Clement VII overreached himself in opposing the emperor Charles V, who responded by breaching the walls of Rome and the Borgo. The pope just managed to reach the Castel by way of the fortified passageway along the Passato; the Castel resisted a siege of seven months until he was forced into a humiliating surrender. The fortifications had, however, resisted everything thrown at them.

The pontifical castles of the Papal States

During the temporary sojourn of the popes at Avignon not only Rome suffered. Although the powerful city-states to the north enjoyed independence, prosperity and comparative peace the same was not true of the Papal States. They were constantly threatened by roving bands of mercenaries, employed by all sides and a lack of a central authority contributed to the developing anarchy. Prior to the return of the papacy to Rome some degree of protection was required and authority needed re-establishing over the papal lands. The papal representatives were not idle; a great keep had been erected in 1320 at Benevento but it was the military brilliance of Cardinal Albornoz that contributed most to a successful return. Entrusted with the task he undertook a series of military campaigns in the papal lands lost to the rule of powerful local families.

The **Rocca Maggiore** at Assisi had been rebuilt in 1367 and the great Umbrian hill-fortress of **Spoleto** was strengthened by the addition of towers between 1362 and 1370, designed by Matteo Gattopone. Although an imposing fortress, it firmly belongs to the pre-gunpowder era with its high walls and square towers. It had a unique water supply: somewhat strangely for a castle in that it could easily be cut off, an aqueduct was built by Gattopone on the remains of one built by the Romans, the Ponte delle Torri, 230m long, carrying water across the gorge of the River Tessino.

He also built castles in strategic positions to ensure that his conquests would remain

[15] It is now the Piazza Risiorgimento.

under papal rule. At the town of **Narni**, key to central Umbria, he built a castle to command a gorge of the Tiber. The square towers here have more than a passing resemblance to those at Avignon. A second was built at **Viterbo** in Latium. Although the Cardinal died before Gregory returned from France, his conquests and castle-building ensured that the papal lands, at least in the vicinity of Rome, were secure.

By the middle of the fifthteenth century papal revenues had recovered sufficiently to enable more castles to be built to control expanding papal land holdings. **Rocca Pia** at Tivoli was built by Pius II in 1452 to protect Rome's eastern approach and keep a firm grip on any unwilling subjects in the region. Seventeen years later Sixtus IV built his sombre fortress at **Ronciglione** near Lake Vico to the north. Members of the Sangallo family were employed as military engineers and architects. Antonio the Elder built Civita Castellana within six years by 1500. He introduced the concept of the bastion to the castle and built a central octagonal artillery redoubt.[16] He was also entrusted with the building of the bastioned fortress of **Nettuno** to guard the southern coastal flank of Rome. In an endeavour to protect Rome from an attack from the sea the coastal port of Rome, **Civitavecchia** was provided with an artillery fort designed and completed by Michelangelo and Antonio the Younger at the end of the fifteenth century with a similar fort at Ostia built by Julius II. The danger here was not from the city states to the north or the great families but from Barbary and Ottoman corsairs, an omnipresent threat. Finally Pope Paul III had fortresses built in the rebel cities of **Perugia**, capital of Umbria, and **Ascoli** in the marches. Although both were powerful fortresses, they were built as much to dominate and humiliate the population as to protect papal interests.

An oddity

Among all the ecclesiastical fortifications in Italy those built in the small town of **Loreto**, 20km south-west of Ancona, are quite exceptional. Here legend mixes with unique religious architecture.[17] The town is built upon a spur and is enclosed within brick ramparts loopholed for handguns and reinforced by artillery bastions appropriate to the time. The magnificent church of the Sanctuary of the Holy House (Santuario della Santa Casa) was designed by Florentine architects and building began in 1468. The dome, designed by Giuliano da Sangallo, was built in 1500 and the side chapels of the semi-circular apse added a decade later. The trefoil shaped apse is an intriguing building. Unquestionably well proportioned and stunning to look at, the crenellated and machicolated fighting platform under the eaves and on top of high walls is difficult to understand, especially as the church is enclosed in a salient of the town walls. It is far more suited to the cathedrals of the south of France three centuries earlier. It is nevertheless a most impressive architectural ensemble and the view from the east of the artillery bastion with the fortified apse towering above is one of a militant and powerful church.

[16] The castle became, at one stage, the home of Cesare Borgia. It became infamous in the eighteenth century when it was used as a prison for the political prisoners of the Papal States, earning the sobriquet 'the Bastille of the popes'.

[17] A famous and popular pilgrimage site, it is where the House of Mary was transported from Nazareth via Dalmatia by angels at the end of the thirteenth century.

Summary

Ecclesiastical fortifications are comparatively rare in Italy and those that do exist were built in the later Middle Ages. Friuli to the north-east contains a few simple peasant fortified churches and a number of fortified monasteries, built almost certainly in fear of the Turks. The vast sums spent by the papacy upon the Borgo, the Vatican, Castel Sant'Angelo and Rome produced fortifications of monumental proportions. They played an important role in the development of forts and walls capable of withstanding assault by armies increasingly using firearms and artillery in the fifteenth and sixteenth centuries. Chronological examination of the fortifications and castles built by successive popes after their return from Avignon demonstrates how these static defences developed, for example with the introduction of Italianate machicolation and the swallow-tailed merlon, more decorative than functional.

10
RUSSIA

Introduction

Many of the fortress monasteries to be found in Russia today are in a remarkable state of preservation and are magnificent expressions of the artistic and technical abilities of their architects and artisans. The marriage of the science of fortification with a style of ecclesiastical architecture and symbolism developed over centuries and unique to Russia has produced buildings that combine exceptional beauty with powerful functionalism. These fortress monasteries evolved over a period of five hundred years, reaching the typology we see today in the seventeenth century, with their origins lying in the early wooden monasteries erected throughout Russia from the eleventh century onwards.

Christianity was introduced comparatively late when Vladimir, ruler of the principality of Kiev, invited the Byzantine Orthodox Church to become the official religion, according to tradition in 988. The introduction of Byzantine Church rituals together with ecclesiastical building techniques and architecture was to have a profound influence in European Russia.

Kievan Rus, however, was repeatedly assailed by nomads from the East, and could not withstand this relentless pressure. With the migration of its population into the wooded regions, Rus split into a number of principalities. One of these, the principality of Vladimir–Suzdal, was to move its capital to a small village at the confluence of the Moskova and Neglinnaya Rivers in the middle of the twelfth century. The initial growth of the new capital of Moscow received a severe setback when the Tatar army of Genghiz Khan invaded. Following the defeat of the army of the Russian princes in 1223 most Russian towns and cities were sacked and destroyed by the Golden Horde led by Baku, grandson of the Great Khan. Only Novgorod and Pskov in the north-west were able to resist. Russia was to remain isolated from the rest of Europe for two hundred years. The Tatar invasion heralded almost five centuries of constant warfare against the eastern khanates, especially that of Kazan. During this period Russia was also variously engaged in battles, initially against the Germanic Teutonic Knights and then the Lithuanians and Poles to the west, the Turks and Tatars to the south and the Swedes and Norwegians to the north.[1] It is against this background that fortresses and defensive lines were built and the Russian fortress monastery evolved. From the outset they were to differ from their counterparts in Western Europe.

[1] Opolovnikov and Opolovnikov (1989: 87) state that between 1200 and 1450 Russia fought 160 major battles of which 45 were against the Tatars, 41 against the peoples of the Baltic region, 30 against the Teutonic Knights and their German allies and the rest against Swedes, Poles, Hungarians and Bulgars.

The defences of Moscow, the Kremlin and the fortress monasteries

Until the invasion of Russia by Napoleon in 1812 and the last great fire in the city, Moscow was essentially built out of wood with only its churches and fortifications being of stone or brick, the earliest of which date from the fourteenth century. The ample, constant and cheap supply of timber ensured that secular and religious buildings were constructed out of wood and fortified by wooden stockades and towers. It was not until the fifteenth century that these fortifications began to be replaced by brick or stone; all were completed by the end of the seventeenth century, outside Siberia.

Fortunately the few surviving wooden examples, now preserved in architectural museums, together with a number of engravings and State records have enabled the development of wooden fortifications to be more fully understood. As wooden fortifications were still being built in Siberia as late as the nineteenth century and the surviving examples are from this part of Russia it is appropriate to consider how timber was used in military architecture with the Russian exploration and expansion out of Europe.

The Opolovnikovs point out that the wooden monasteries, built as Christianity spread throughout the Russian plain, incorporated defensive features; they quote Abbot Daniil, who described the early-twelfth-century monasteries as 'being built as fortresses'.[2] The original settlement of Moscow, the **Kremlin**, was built on the Borovitsky hill at the confluence of the Moskova and Neglinnaya Rivers and fortified with wooden walls and towers. Further defences were provided by a ring of these fortress monasteries, initially built on its south and east borders where the developing capital was particularly vulnerable to attacks by the Tatars.[3]

Although under the hegemony of the Golden Horde, the Kremlin replaced most of its wooden stockade walls with limestone in 1367. Started by Dimitri Donskoi, who inflicted the first major defeat upon the Tatars in 1380, they were not completed and the Tatars were able to capture the Kremlin in 1451, forcing an entry through the only part of the enceinte still fortified with wooden defences. Economic recovery, however, was sufficient to allow Ivan III, the Great, to commission an expensive and ambitious plan to refortify the Kremlin and build within its walls cathedrals, churches and palaces befitting a capital of an enlarged and unified state. Pskov and Novgorod had been annexed and all the northern territories east of the Urals had been incorporated. Moscow's territory had quadrupled. Yet the Russian State was far from secure, and Ivan III invited Italian architects to advise his Russian architects in this huge undertaking. They became motivated by military, defensive, architectonic and not least ideological considerations.[4] Work began in 1458 and was completed by 1516; the Kremlin became, and has remained, the monumental, religious and secular centre of Russia.

Although some of the towers have been rebuilt over the ensuing centuries and have had

[2] Ibid. 84.

[3] Smith (1993: 22) mentions that fortified monasteries were part of strategic defensive networks especially around Moscow, Pskov and Novogrod. Her paper is concerned with the huge defensive lines built to protect sixteenth-century Muscovy from raiding Crimean Tatars.

[4] Faensen and Ivanov (1975: 405).

their original wooden tent-shaped roofs replaced, the fortifications are essentially as built, although many of the defensive features have been hidden behind later constructions. Built of fired red brick with a limestone core, the walls are of mammoth proportions; the circumference of the triangular shaped wall is 2230m long, varies between 5 and 8m in height and between 3.5 and 8m in thickness. It is reinforced with eighteen towers, of which five contain gateways to the interior. Their thick oak doors were iron-sheathed to protect against fire and were further protected by a portcullis. All the towers are rectangular with the exception of the three massive round corner towers containing wells. All dominate the connecting curtain wall. Both walls and towers contain tiers of galleries provided with casemates for the artillery of the period. Parapets protect the wall walk externally and internally, although only the outer is battlemented. The swallow-tailed merlons, showing Italian influence, are separated by narrow embrasures and are alternately pierced by one or two loopholes. Under the wall walk runs a barrel-vaulted gallery enabling the garrison to move unseen to any part of the fortress. Surrounded on the south and north-west by the Moskova and Neglinnaya Rivers, the eastern approach was moated by cutting a channel between the two. The whole was built to protect five cathedrals, and numerous other churches, palaces and offices.

One of the great fortresses built at the end of the fifteenth and beginning of the sixteenth centuries, the Moscow Kremlin was to act as a template for the large numbers of fortress monasteries that were rebuilt or founded in the sixteenth and seventeenth centuries.

Once the Kremlin had been completed attention turned to the defences of the expanding capital. As well as the encircling walls of the city, the wooden fortifications of the northern and south-eastern ring of fortress monasteries began to be replaced with brick and stone. Originally defended by a vertical palisade of oak or pine, three logs thick, the vulnerability of the city led to monastic defences being constantly reviewed and new fortress monasteries built in vulnerable locations.[5] The northern defensive ring of nine monasteries ran in an arc north of the Kremlin and the River Moskova. They became enclosed within the Beligorod (White Town) walls. They are nowhere near as well preserved as the six fortress monasteries that protected the southern and eastern approaches to the city. All were to have brick and stone defensive walls reinforced with substantial towers and although there are remains of most of these fortress monasteries to varying degrees today the supreme example is provided by Novodevichy, the New Convent of the Virgin.

Novodevichy, the New Convent of the Virgin

Founded in 1524 in honour of the return of Smolensk to Russian rule, the cathedral was dedicated the following year to the icon of the Virgin of Smolensk. Its appearance today is due to the patronage of Sofia, half-sister to Peter the Great.[6] She oversaw the transformation of the stark fortifications, alterations to the gateways and the building of the isolated bell-tower.

Built on flat ground near the southern bank of the River Moskova as it makes a loop

[5] Berton (1997: 55).

[6] The tsarina Sofia was banished to the convent in 1689 by Peter who believed she was plotting against him. She had been regent during Peter's infancy.

through the south of the city, it is, with the possible exception of the Kremlin, the finest ensemble of buildings, and probably the most beautiful, to be found in Moscow. Still maintaining all of its fortifications, although they have somewhat mellowed, its polygonal walls, a kilometre in length, enclose monastery grounds measuring approximately 310 x 220m. The power of this fortress monastery is made abundantly clear with round corner towers and rectangular interval towers dominating all approaches. Provided with gate-churches by Sofia, the brick-built walls are now whitewashed, in contrast to the roofless red-brick decorative upper storeys of all twelve interval towers, again the work of Sofia. Arcades and gables rise from the machicolations and whilst pleasing to the eye they serve no defensive function.

The parapet protecting the wall walk of the curtain wall rises from the machicolations that overlook the base of the wall and is battlemented in a very similar way to the Kremlin, although the machicolations are a developmental feature. Alternate swallowtail merlons are pierced with loopholes and the whole arrangement is designed to give maximum protection to the defenders together with wide-ranging fields of fire. The wall walk, built on casemates, runs through all the towers and gateways with reinforced doors provided to isolate towers and sections of the curtain wall. The arched casemates, although provided with embrasures for artillery pieces on two levels, are now devoid of any inner floors. These defences are dominated by the gate-churches built by Sofia after the monastery had lost its military role.

The almost centrally positioned church of the icon of the Virgin of Smolensk is the oldest building in the monastery and was modelled on the cathedral of the Assumption in the Kremlin. Rising above its defences, the white cuboidal church is surmounted by four green cupolas overshadowed by the central larger and gilded onion dome so typical of Russian church architecture. To the south-east of the cathedral rises a 72m bell-tower, where each of the octagonal six storeys has its own form of decoration picked out in red and white brickwork dating from the end of the seventeenth century.

The monastery was significantly damaged in 1612 during the 'Time of the Troubles' between 1584 and 1613. At its peak it was very rich; a major land-owner, it owned over thirty villages and 15,000 serfs worked its estates. Today its sombre fortifications are enlivened by the additions of Sofia, who transformed this powerful fortress into a fairy-tale castle with the use of imaginative brickwork and skilful whitewashing, framing the golden domes of its churches and cathedral. Its reflection in the pond to the north enhances this. Along with remains of the austere fortifications, it is the supreme example of the many fortress monasteries built not only to defend Moscow but also to impress its citizens and foreign visitors.[7]

The Russian gate-church

The gate-church is a form of ecclesiastical architecture peculiar to the Russian Orthodox Church, frequently found in the fortress monasteries of the seventeenth century. It is not, however, confined to monasteries, but is also found in town walls as well as the Kremlin in Moscow. The concept is very simple; a church is built on top of one of the entrance

[7] The attached cemetery contains the tombs of famous Russian and Soviet leaders, composers, writers and artists, including Krushchev, Chekhov and Prokofiev.

gateways of a fortified enceinte. It even makes an appearance in the wooden architecture of Siberia.

It made its first appearance in Kiev where Byzantine architects incorporated a church in the Golden Gate of the city, now destroyed, and in the Pechersk Lavra, the Monastery of the Caves.[8] Here the twelfth-century **Trinity gate-church** is an integral part of the monastic fortifications. Restored in 1734, when the exterior of the gateway and the interior of the church were repainted by Kievan artists, in its original form it straddled the three archways of the main entrance to the monastery. Like many gate-churches it is square with one central dome.[9]

Of all the gate-churches found in the fortress monasteries that of **St Nicholas**, in the Monastery of the Caves in Pechory near Pskov demonstrates best how these churches were integral parts of the fortifications. Dating from 1565, it was built on the instructions of Abbot Kornilyi and was originally directly incorporated into the powerful defences of the monastery and further strengthened a short time later during the Livonian War. A semi-circular, two storey artillery tower is connected by a short length of curtain wall to the Holy Gate, so increasing the defences against repeated attacks from Lithuanians, Poles and Swedes. Like most gate-churches, it is square in plan with the addition of a semi-circular apse and a western bell-gable.

An icon in the St Nicholas gate-church shows a wall running south-westwards to connect with the prison tower south of the Holy Gate. This resulted in defences of some depth. Any enemy forces breaking through the Holy Gate would have to face the fire of the defenders of this inner wall before they reached the angled entrance of the gate-church leading to the monastic precinct. These defences were sufficient to enable the monks and their servants to heroically resist a siege by the king of Poland. Subsequently Peter the Great reinforced the monastic defences with a further circle of ramparts and artillery bastions.[10]

The fortress monasteries of the Golden Ring

Although by the sixteenth century Moscow had become enclosed within a triple ring of walls and a circle of fortress monasteries, further defences, again in the form of fortress monasteries, were constructed to the north and east to deter incursions from the ever threatening khanate of Kazan.

Built in cities and towns that date from the early years of the emerging Russian State they lie roughly in a semi-circle between 70 and 300km from Moscow. All are located near or on the banks of rivers or lakes in the flat grasslands. Each monastery contains buildings from the early years of a united Russia and many have been carefully and accurately restored to their former glory in recent decades following a period of neglect after the Russian Revolution.

The cities of the aptly named Golden Ring contain sixteen fortress convents and

[8] It has been restored as near to the original as can be determined.

[9] Faensen and Ivanov (1975: 335).

[10] Ibid. 393. The monastery had great strategic value and played a great part in the war against the Livonian Order and its allies. It returned to its monastic function on the cessation of hostilities.

monasteries, most retaining their considerable fortifications. Whilst all are meritorious in some way or other, the monastery of the Holy Trinity and St Sergius in **Zagorsk**, 70km north-east of Moscow, stands supreme. Known to the Russians as the 'jewel amongst jewels', it is a magnificent ensemble of palaces, cathedrals and churches all nestling inside powerful fortifications. It is today guardian of the largest and richest collection of Russian art treasures outside the Hermitage and traditional golden domes and spires rise above the whitewashed defensive walls and towers. It is firmly established in the Russian consciousness for its heroic resistance against the invading Poles and Lithuanians who had overrun Russia during the first decade of the seventeenth century. It was besieged for sixteen months between 1608 and 1610 by an army of 33,000 under Herman Sapietia and Jan Lisowski. Its mainly peasant defenders, aided by the monks, resisted until the siege was raised when the Russian commander Skopin-Shinsky defeated the besieging army on 12 January 1610.[11] The cost to the defenders was enormous. Over two thousand lives were lost, and when relieved the monastery contained only two hundred defenders capable of bearing arms.

Of the original fortifications there are no remains. The monks had replaced the original wooden stockade between 1540 and 1550; their brick-built defences were modelled on the Kitai-Gorod walls of Moscow.[12] Opportunity was taken to enlarge the monastic site and its internal arrangements were altered. Added to the ensemble was the Dormition Cathedral, built by Ivan the Terrible in 1559–85 as the focal point of the monastery.[13] It was to become a pilgrimage site to the relics of St Sergius and a national symbol of the unity of Church and State. It was these new walls that the Poles attempted to breach. Repair to the damage inflicted to the defences during the Polish siege commenced in 1630 and it is from this period that the walls seen today date.

The fortified polygonal wall is 1370m in length and varies in height between 10 and 14m. This wall is a fine example of military architecture and comprises three tiers of galleries. The lowest contains isolated casemates for artillery pieces whilst the middle, open to the courtyard, runs all round the enceinte and is loopholed for small arms. The upper gallery provides a wall walk built on machicolations. The parapet contains wide, loopholed, merlons separated by narrow embrasures and is provided with a sloping roof to protect against the heavy snowfalls of the Russian winter. This powerful enceinte is further strengthened with eleven rectangular or octagonal towers, two of which, the Krasnaya (beautiful) and the Kalichya (Pilgrim) are gate-churches. All the towers are roofed, some with the traditional wooden tent roof together with its lookout turret, others with more elaborate superstructures. The Utichua (duck) tower incorporates an ornate bell-tower, but of a later date. Each tower contains many embrasures for small artillery pieces and firearms and is a powerful fortification in its own right. The skilful use of brickwork, producing colonnades between string-courses and loopholes, contributes to the architectural style of these fortifications that is replicated throughout all the monasteries of the Golden Ring. Seen from a distance the ensemble of the monastery of the Holy Trinity and St Sergius is a magnificent and inspiring composition with a multiplicity of gilded domes rising

[11] Milovsky (1986: 83–4).

[12] These enclosed the civil settlement to the east of the Kremlin between 1535 and 1538.

[13] It was built to celebrate the capture by Ivan the Terrible of the Tatar cities of Kazan and Astrakhan.

above the whitewashed fortifications and capping the many churches and cathedrals within. This is the most powerful of the fortress monasteries of the Golden Ring, and its military architecture is replicated to differing degrees in the majority of its neighbouring monasteries. It was in this monastery that Peter the Great sought refuge in 1682 when the Russian army rose in rebellion against him.

The fortified monastic town of **Suzdal**, 195 kilometres east of Moscow, departs from the pattern of fortress monasteries built in isolation in that it contains a number of fortified monasteries and convents in close proximity and interdependent on each other. The arrangement is intriguing.

Once the political and religious centre of mediaeval Rus after the fall of Kiev, Suzdal was attacked and destroyed by the Tatars in 1238. Recovery was very slow and it was not until the sixteenth century that this town of churches and monasteries was rebuilt.[14] Of the five monasteries that were built, there are today scant remains of the monastery of St Basil, enough, however, to show that it was fortified. Of the others, all were fortified to a substantial degree and are located within close proximity to each other in the south-east quarter of the town. Much stone building was carried out, especially in the monasteries, with funds provided by Grand Prince Vasily III and his son Ivan the Terrible. Even the calamitous events of the early part of the seventeenth century when the town was raided by both the Polish-Lithuanian Confederacy and by Crimean Tatars, followed by plague in 1654–5 which severely reduced the population, did not stop this building campaign. It was around this time that the monasteries received their defensive walls.

Of the monasteries, the defences of the monastery of the **Saviour and St Euthimius** on high ground above the River Kamenka are the most substantial; even today, in their partially ruined state they appear impregnable. The monastery has not received anything approaching the attention lavished by restorers on Zagorsk.[15] The fortifications and many monastic buildings are, however, intact. It ranks with the town defences of Smolensk in the east, the Kremlin in Moscow and Zagorsk in the Golden Ring as being amongst the finest examples of monumental military architecture in Russia. Of a similar size to the monastery of the Holy Trinity and St Sergius, with a perimeter wall extending to 1200m, the polygonal enceinte is similarly reinforced with multi-faceted and rectangular towers of three and four storeys. Entrance is via an enormous square gateway, rising to a height of 22m, one of the most elegant of Russian fortifications, that leads directly to the gate-church of the Annunciation with its decorated brick patterns. Amongst the monastic buildings is the gleaming whitewashed cathedral of the Transfiguration. Built onto the earlier church of St **Euthimius** in 1594, it was influenced by the cathedral of the Dormition in the Moscow Kremlin. Although its military prowess was never put to the test, the monastery achieved notoriety by becoming an ecclesiastical prison

[14] Milovsky (1986: 209) states that there were seven churches in the Kremlin, fourteen within the earthen city walls and twenty-seven located within the various monasteries. Interestingly, the churches were often built in pairs; a larger, decorated church for summer, a smaller, more practical church that could be heated for winter usage.

[15] When visited in 1996 the internal structures lining the inner wall of the fortifications had an air of dilapidation and neglect about them.

from the time of Catherine the Great until the October Revolution. Here were incarcerated, and often forgotten, people who were perceived to have committed crimes against the Faith.[16]

Less than 500m to the north of the monastery, situated in the middle of a lush water meadow nestling in a bend of the River Kamenka, is the sixteenth-century **convent of the Intercession**. Although surrounded by loopholed walls and provided with octagonal towers and a gate-church of the Annunciation, it does not have the strong fortifications of its neighbouring monasteries in Suzdal. Inside the convent walls are the five-domed church of Sts Peter and Paul (1694) and the single domed church of St Nicholas (1712), the first of Suzdal's paired churches. The convent also achieved notoriety by becoming a place of banishment for the wives of the Russian nobility including Solomonia, the first wife of Vasily III. The position of the monastery together with its low walls would make it difficult to defend, however, and it needed the protection of the neighbouring fortress monasteries of the Deposition of the Robe and of St Alexander.

The fortress monasteries of Russia's European borderlands

The success of the monastery of the Holy Trinity and St Sergius in resisting the Polish-Lithuanian siege was a stimulus to build more monasteries to protect the borders of Russia. Continually assailed by Sweden to the north, Lithuania and Poland to the west and south, the khanate of Kazan in the east and Turkey and the Crimean Tatars to the south, border defences were a necessity. Although many were located several hundred kilometres from Moscow, they were considered a vital and integral part of the defences of the heartland of Rus. Throughout the later sixteenth century and the whole of the seventeenth, monastic defences were constructed on a massive scale on the borders. This was particularly the case in the north-west where Swedish threat was omnipresent. Of the many built, two are worthy of consideration for different reasons; the monastery of St Cyril at Belozersk and the island monastery of Solovetsky, the former on account of its massive fortifications, improved and extended over a considerable period, the latter for its history and audacity over centuries and its final infamy.

The **Solovetsky Islands** form an archipelago in the White Sea between Karelia and Archangel and on the largest a monastery was founded by the monk Savvati in the fifteenth century. The commercial enterprises of the monks in setting up a fishing industry from the well-stocked waters, obtaining the monopoly of the fur trade and the production of salt resulted in immense revenues. They were able to replace their wooden buildings with stone, starting with the fortified cathedral of the Transfiguration, built between 1558 and 1566 with four corner chapels built on the roof connected by a chemin de ronde. Other buildings in the monastic range followed and between 1584 and 1594 the whole became enclosed in walls and towers constructed out of cyclopean boulders, some weighing around 8000 kilograms. The roughly pentangular enceinte had walls between 4 and 6m thick and reached a height that varied between 8 and 11m. Reinforced by towers, these immense fortifications resisted Swedish

[16] It also served to confine the German fieldmarshall von Paulus after his surrender at Stalingrad in the Second World War.

attacks in 1571, 1582 and 1611. The fortress monastery became the organising and co-ordinating headquarters for the defence of the whole of the north-west march. Over the sixteenth and seventeenth centuries there developed a symbiotic relationship between the coastal fortresses and settlements overseen by the monastery. Of these the stockaded town of Kem contained a daughter church of the monastery and the citadel of Suma had as its sea-gate a gate-church that acted as a direction beacon for merchant ships. Although built of wood, both fortifications were strong enough to resist Swedish attacks in 1590 and 1591.

The schism in the Church in the middle of the seventeenth century led to the monks of the monastery breaking away from the reformist centralised church, preferring to continue under the old rule. To the monastery and its landholdings flocked many Old Believers, and so successful was the ecclesiastical rebellion that the Tsar despatched an army to besiege and root out the troublemakers. The heroic defence by the monks and their supporters, together with the strength of the fortifications and its island position, enabled them to hold out from 1668 until January 1676, when treachery led to the fall of the monastery and the slaughter of all of its defenders. Returning to the control of Moscow, it became a monastery of the reformed Orthodox Church. It maintained its defences in sufficient order to be able to resist an assault by British warships during the Crimean War.[17]

The blackest period of its history occurred during Stalinist times, when it became one of his infamous concentration camps, where the treatment of prisoners in the punishment cells is described in Solzhenitsyn's book, *The Gulag Archipelago*. It received the attention of the restorers in the 1960s, who returned it to the island monastic fortress of earlier days.

Halfway between Moscow and the White Sea is the Beloye Ozero (White Lake), the source of the River Sheksna, one of the most important trade routes from the forested north to the River Volga. A site of great strategic importance, the monastery of St Cyril at **Belozersk** was founded here over six hundred years ago. Initially remote and inaccessible, it played an important role in the spread of Russian Orthodoxy and in the defence of the northern territories regained by Russia. By the sixteenth century it had become second in size only to the monastery of Zagorsk. Of all the Russian monasteries there are few more imposing sites than the monastic fortifications of St Cyril with its huge buttressed lakeside walls reinforced by enormous square, rectangular and round towers containing tier upon tier of loopholes. The fortifications were originally constructed of wood; the earliest of its stone buildings is the cathedral of the Assumption which dates from 1497. Slowly the wooden defences were replaced by masonry from the first quarter of the sixteenth century. Monastic expansion resulted in the attached, but smaller, monastery of John the Baptist becoming enclosed within defensive walls by the end of the century. Despite being of sufficient strength to resist a prolonged siege by Lithuanians and Poles in 1612–13, the defences subsequently underwent considerable remodelling and rebuilding. The walls seen today date from this period and include the fortifications of the new town erected between 1633 and 1679 to house the lay servants and their families. With three tiers of defensive platforms and a perimeter extending

[17] In July 1854, the British warships HMS Eurydice, Brisk and Miranda were looking for an anchorage for a British fleet. There was an exchange of cannon fire and according to monastic history one of the flotilla was sunk. The British version is somewhat different, however.

over 1400m reinforced by thirteen towers it became the finest defensive system of the seventeenth century in Russia's northlands.

The wooden fortress monasteries of Siberia

The replacement, with brick and stone, of the wooden fortress monasteries of European Russia coincided with the exploration, annexation and colonisation of Siberia, that part of Asia lying to the north of the Islamic khanates of the Golden Horde and reaching to the Arctic seas. The first Russian expedition, a private venture led by Yenuak, had crossed the Urals in 1581.[18] Such was the attraction of the East that in less than a hundred years the Pacific coast had been reached and most of Siberia had been comprehensively surveyed and incorporated into the Russian Empire. It resulted in the mass migrations of Russian peasants in order for the State to exploit the natural resources of this vast wilderness.

To ensure control of these eastern acquisitions by Moscow, the central government oversaw the establishment of fortified custom posts and the tried and tested fortress monasteries. Whereas the continuing wars in the north and west had led to the building of massive fortifications there was no equivalent need in Siberia as the pagan and semi-nomadic tribes, with their primitive weaponry, offered little opposition. The wood-built fortress monasteries were to suffice until they were no longer needed and were then simply allowed to rot away.[19]

Fortunately there are in architectural museums enough remains of these wooden structures to give some idea of their form and construction methods. Archival sources and contemporary illustrations suggest that wooden fortress monasteries closely followed a set typology decreed by Moscow that initially enabled rapid construction of these outpost fortifications. They were built and replaced continuously in Siberia until the middle of the eighteenth century and continued to be so in the Arctic regions until the nineteenth. The last to be built was on the banks of the River Malyy Anyuy, a tributary of the Koloma, in 1840.[20] Usually built at estuaries, along important river trade routes, they proved to be unassailable by the Siberian tribes who did not have firearms.

Examination of the gate-tower, preserved from the monastery of **St Nicholas Korelsky**, erected on the northern bank of the estuary of the River Dvina near Archangel, demonstrates the complexity and culmination of the centuries-long development of wooden monastic fortifications. First mentioned in the archives in the fifteenth century when Russia, isolated from Europe, was trying to establish northern ports to develop a timber trade, it has been rebuilt many times. Unlike many of the wooden buildings of Siberia from the late Middle Ages it has managed to survive. Restoration towards the end of the nineteenth century enabled the fortifications to survive, at least in part, until the gate-tower was transferred to the open-air

[18] It was the conquest of the khanate of Kazan, in 1552, which allowed the Russians to penetrate Siberia and exploit the lucrative fur trade of the region. The discovery of mineral deposits, especially copper and silver and rich fisheries contributed to its rapid colonisation.

[19] Hamilton (1983: 165) points out that although many churches have been preserved from the seventeenth and eighteenth centuries, their fortifications have been allowed to rot away.

[20] Opolovnikov and Opolovnikov (1989: 86).

architectural museum of Kolomenskoye in Moscow, where it was restored together with a stretch of the stockade wall. It is known that the two stone churches of the monastery, built between 1667 and 1674, were originally enclosed within a wooden stockade reinforced with six towers around 1691 and it is believed that the gate-tower was one of these.

By this period stockade walls were constructed in rectangular units composed of two parallel walls of logs placed horizontally one on top of another and separated by an infilling of earth or rubble. Vertical and transverse logs, jointed with the horizontal, secured each section to its neighbour and ensured strength and stability. Although the individual section or gorodnya was occasionally loopholed, the log-built parapet rising from the wall walk was always loopholed round its perimeter. Invariably provided with an overhanging roof to give protection against the cold and snow of the Siberian winter and to deflect rain water and melting snow away from the foundations of the wall, they were further strengthened by corner and interval towers. A photograph from the turn of the twentieth century shows that the fortifications of the St Nicholas Korelsky monastery appeared to have been constructed in this manner, with rectangular tent-roofed corner towers arising above the stockade.[21] The restored gate-tower may well have contained a gate-church. The rectangular ground floor storey, built on a raft of logs, contains an arched entrance passage above which rises an octagonal storey surmounted in traditional style with a turreted tent roof. As the Opolovnikovs point out, it is 'faithful to the principle on which most wooden churches and bell-towers were built in old Russia'.[22] Despite the strength of the tower and its stockade, decoration is not neglected and the roofs of the successive storeys have intricately carved wooden shingles at their overhanging cornices.

Although this monastery and the nearby fortified wooden monastery of **St Michael the Archangel** are representative of the most powerful ecclesiastical fortifications in Siberia, and are late examples of the earlier European wooden monastic fortifications, most monasteries and churches had much simpler fortifications. A photograph of the Malyy Anyuy fortress taken at the end of the nineteenth century shows a single palisade of horizontal logs and it is likely that most small monastic communities and churches were fortified in this way. The Opolovnikovs, on the basis of examination of archival plans, drawings, photographs and the few scattered remains, postulate that many palisades were constructed of vertical logs. Whatever the palisade construction, all were reinforced by corner and gate-towers.[23] Many of these religious outposts had civil settlements attached and received fortifications contiguous with and indistinguishable from those of the ecclesiastical compound. Sadly, almost all have disappeared and are far too remote to have attracted the attention of archaeologists.

[21] Ibid. 140.

[22] Ibid. 141.

[23] In many respects they are reminiscent of the wooden forts of the USA; the distinction is that these housed cavalry barracks and stables instead of the churches, monks and clergy of Siberia.

[24] The stubbornness of the Russian defenders of the monastery of the Holy Trinity and St Sergius in Zagorsk has permeated the Russian character and has been replicated many times since, especially during the bloody siege of Leningrad (St Petersburg) in the Second World War.

Summary

Although Russian fortress monasteries were very successful ecclesiastical fortifications, rivalled only by those of the Teutonic Knights in the Baltic, they were an invention of the State. Designed initially to protect the approaches to Moscow, they were later built to protect the expanding borders of Russia and establish powerful fortifications in newly acquired territories. This was particularly so in the north-west where almost constant warfare against Sweden and the Baltic countries had seen Russia isolated from the rest of Europe for centuries during the later Middle Ages. To the east, the fortress monasteries of the ancient Russian cities of the Golden Ring served to protect Moscow from the Tatars of Kazan. To the south few were built to act as bulwarks against the Turks and Crimean Tatars as Russia prefered the three-tiered zaseka system.

These powerful and massive monastic bulwalks combined the most advanced features of Russian military architecture with the finest of church and cathedral buildings. Artistic splendour adorned both. The fusion of the sacred with the secular also played a vital role in uniting the vast territories of the Russian Empire under the central control and authority of Moscow. They also served to keep a check on the power of the Russian Orthodox Church, ensuring that although the church had a significant impact upon the civil population and settlements, it was always under the control of the State, represented by the Tsar and his ministers.

The monastic population, whether monk, lay brother or serf, were expected to act as the garrison of their fortress monasteries and thus formed a borderland militia. They rarely contained professional soldiers except when they served as prisons or housed those exiled to the provinces.

The successful resistance to prolonged and determined sieges during the Wars of the Troubles underlines the strength of monastic fortifications and the courage and loyalty of their monks and Russian peasant defenders.[24]

The Russian tradition of building in wood can only be followed from earliest times with difficulty and some degree of speculation. It was the increasing use of firearms and cannon that saw the need to replace wood with brick and stone, although the architectural styles conceived and developed by the carpenters were preserved.

The fortress monasteries should not be seen as fortifications in isolation. They were part of a massive system of defence developed and refined over centuries to preserve Russian independence and protect its Muscovy heartland.[25] It comprised fortresses, walled towns and cities, fortress monasteries and forts, all part of frontier defences extending thousands of kilometres involving, in addition, natural features such as swamps, forests and rivers. Monasteries often served as co-ordinating and command centres. There was strength in depth and it proved remarkably successful in its aim. It was only achieved, however, by the use of peasant labour achieved by the State-control of its serfs for centuries.

[25] Smith (1993: 21–7) describes the defensive lines developed to defend the south of Russia from the seemingly annual forays by the Crimean Tatars.

11
AMERICA AND THE PHILIPPINES

Introduction

Fortuitously, the fall of Granada in 1492 coincided with the discovery by Columbus of Hispaniola in the West Indies. The crusading fervour of the Spanish, imbued over centuries, had not been satiated by the reconquest of the Iberian peninsula and Spain now turned its attention towards North Africa and its new territories in the western Atlantic. Although achievements in the former were limited to a few small territorial gains, Spain had phenomenal successes in the New World. By 1515 the occupation of the West Indies was complete and by 1521, two years after first making contact, Cortes had destroyed the empire of the Mexica in Central America.[1]

The success of Cortes and his small army of Conquistadores resulted, in part, from their superiority in weapons and tactics. A smallpox epidemic in 1521 and a lack of will had weakened Mexican resistance and the cruelty of the Mexica and their incessant search for victims for human sacrifice had alienated many of their neighbouring peoples, who readily allied themselves with Cortes and his band of adventurers.[2] The combination was unstoppable, particularly as the empire of the Mexica possessed great wealth.[3] Cortes replaced Moctezuma and his ruling elite with Spaniards, and settlers from Spain began to arrive in increasing numbers. Expeditions, the armed entradas, spread out in all directions, not only eagerly searching for more riches, but in an endeavour to find a way to the East Indies.

The resultant acquisition of large areas of the Americas and the desire to convert the indigenous population to Catholic Christianity was to lead to a new development in religious architecture. Although owing much to the Gothic and Moorish influences of Spain, many churches and missions needed to be adapted by the missionary architects to the local needs. In many instances this involved the incorporation of military architecture. Defence was considered necessary for a variety of reasons, differing in each of the regions to be examined.

The fortress monasteries of New Spain

Although many of the adventurers who accompanied Cortes coveted the wealth and gold of the Aztecs, there were pious men who saw it as their duty to see that the indigenous pagan

[1] Although more commonly known as the Aztecs, the ruling tribe of what is today central Mexico called themselves the Mexica.

[2] Neill (1986: 144).

[3] Parry (1977: 84) makes the point that as well as a greed for gold and the wish to convert heathens for Christ, a tradition established over centuries, Spanish ambition now included a ‘love of great deeds for their own sake’.

Image not available

peoples were introduced to Christ.[4] It was the belief of Cortes and Charles V of Spain that the most appropriate missionaries to complete this task would come from the reformist mendicant orders. The first to arrive, in May 1524, were the Franciscans, followed by the Dominicans in 1526 and finally by the Augustinians in 1533. The original twelve Franciscans who had sailed from Spain were subsequently joined by many others. In general the Franciscans were active in the central and western provinces, the Dominicans to the south of Mexico City, the Conquistador capital of New Spain, and the Augustinians to the north and west.

The first task of the friars was to oversee the destruction of temples and ensure the proscription of pagan rituals, at the same time building churches and their dependencies for themselves and the converts they hoped to obtain. Although a number of architects were sent out from Spain, Gothic ecclesiastical architecture could not be transplanted without adaptation to the specific requirements of New Spain. Evangelisation in Mexico had been on a massive scale and the sheer numbers of converts could not be accommodated in churches in their existing form. The solution was remarkably simple: an open chapel was added to the church. The years between 1524 and the beginning of secularisation towards the end of the sixteenth century were to witness a prodigious building activity, resulting in monumental religious complexes.[5] Although the native population was well versed in stone masonry and sculpture, European techniques were now to be introduced by the friars. It was the labour and skills of the natives, closely supervised by the early Christian missionaries, that were used in the erection of what were to become fortress monasteries. Basic architectural styles were developed and replicated throughout New Spain; even though the different mendicant orders had their own spheres of influence there was little departure from the basic design.[6]

The central and always the most imposing building was the church. The powerful but plain and comparatively unadorned exterior suggests that defensive considerations were envisaged and needed from the start.[7] Although the natives accepted the Spaniards as their de facto rulers and were readily converted to Christianity, the Spanish were still a tiny minority who did not yet trust the passivity of the natives and continued to regard their new environment as hostile.[8] First to be built, the church was always a massive structure without aisles, although the number of bays in the nave varied. Both lateral walls and the polygonal apse

[4] A papal Bull of 1493 by Alexander VI had given all the lands discovered by Columbus to the Catholic kings of Spain in return for the 'propagation of the Christian faith and the conversion of the inhabitants'. The pope alone had the power to allocate to particular Christian communities, whether kingdoms or religious orders, the missionary rights amongst heathen peoples and regions.

[5] Kennedy (1993: 17) claims that within fifty years almost 400 missions had been built in New Spain. He regards it as the most prodigious building campaign in such a brief period of time in the history of Christianity.

[6] Sanford (1947: 148–9) points out that the Augustinians put more of an emphasis on external and internal decoration than the Franciscans.

[7] Kubler (1940: 29) quotes the request by Viceroy Mendoza in 1531 that the proposed cathedral at Pueblo should be built as a fortress church at Etzatatlan in Jalisco to protect against the nomadic natives of the mountains. He also makes the point that defensive considerations led to the adoption of the single-aisled church.

[8] Neill (1986: 145) mentions that there were numerous uprisings by the natives, particularly in the west

were heavily buttressed to counter the thrust of the roof, invariably battlemented. The majority of church roofs were tiled and rested on the barrel or rib vaulting of the ceiling, although occasionally wood was used.[9]

Many churches were built without western towers with bells housed in simple bell-cots or belfries built on top of the façade, as at **San Agustín Acolman** and **Huejotzingo**. At other monasteries towers were erected at the northern corner of the façade, as for example at the Franciscan monastery of **Tecamachalco**, or at the Augustinian monastery of **Actopan**, attached to the southern corner. Occasionally the façade received twin towers, as is the case of the massively buttressed fortified church at **Tepoztlán** built between 1560 and 1580.

The monastic ranges were attached to the southern wall of the church and surrounded a central courtyard, bounded on all four sides by a two-storey arcade and with open galleries leading to many rooms. Those on the ground floor were used as the refectory, kitchens and workshops for the instruction of native converts learning the various crafts chosen by the friars; the upper rooms served as the dormitory for the friars, their library, scriptorium, hospital and classrooms for the education of native children. These cloister walls were frequently fortified with battlements.

The friars were remarkably adept at preaching, and their Catholic zeal combined with an acquiescent population soon resulted in thousands of converts from the neighbouring villages, forming a congregation far too large to be accommodated in the church proper. A radical solution was achieved by holding services from a large open chapel, with the congregation in an open courtyard, the atrio, attached to the western façade of the church and with a large stone cross in its midst. Delineated by a wall, often crenellated, each corner of the atrio contained a small shrine, dedicated to the various saints, called a posas. Together with the atrio, it is a uniquely Mexican creation. The main entrance to the atrio always faced the façade and the door to the church.

One of the earliest of these venerated fortress monasteries is to be found in the small town of **Huejotzingo** on the road to Puebla, south-east of Mexico city. Begun shortly after the conquest, under the supervision of Fray Juan de Alameda, the stone-built fortress monastery took forty years to complete (1529–70). Despite recent restoration it still retains its fortress aspect with its passive defences reinforced by a crenellated parapet and an iron-spiked door. As is typical of the Mexican fortified church, there are no aisles, and the walls are supported by heavy buttresses. A simple bell-cot houses a single bell on top of the façade. Outwardly plain, the internal Gothic rib vaulting is exceptionally fine. A notable feature, rarely seen in Mexico, is a twin-arched Romanesque entrance from the atrio to the porch in front of the gateway to the monastic cloister. Finely carved, the arches feature interlocking chain links and intricate lozenges supported by a central round colonnade, also richly carved. The wall of the atrio is crenellated, the merlons of which are topped by pointed caps reminiscent of Moorish military architecture. The atrio still contains two corner shrines, with elaborately carved Romanesque archways on the two inner sides. Below the pointed roofs are many carved coats-of-arms.

and north of Mexico, resulting in the massacre of a number of friars and their new converts. After 1550 the nomadic Chichimec natives were particularly hostile.

[9] The cedar beams supporting the roof of the church at Tlaxcala exhibit very fine native carvings from the sixteenth century.

The large Franciscan church at **Tepeaca**, 25km from Puebla, measuring 60 x 18.5m and dating from around 1530, is intriguing in that its defences have a decidedly French influence, with a double chemin de ronde, one at window level and the other running under the eaves. Access to these loopholed passageways, which permit a free gangway all round the church to its defenders, is by two stairways at either end of the south wall of the nave. A notable feature is the provision of echauguettes or lookout towers built at intervals along the parapet on top of the buttresses. Both are features of French churches from an earlier age. Indeed the French church of Saint-Pons-de-Thomières, measuring in the twelfth century 80 x 15m, was defended by an elaborate two tiered system of galleries forming chemins de ronde.[10] Perhaps this is not so surprising, however, when the talents of the friars are recognised and it is realised that many were from France. It seems highly likely that a crenellated parapet would have surrounded the pitched roof at Tepeaca.

Examination of two Augustinian fortress monasteries demonstrates the consistency of monastic design with only minor but interesting departures from the basic typology of the Franciscan plan.

San Agustín Alcoman, to the north-east of Mexico City, is together with Huejotzingo one of the finest Gothic churches in Mexico. Although it has been damaged by floods over the last two centuries, archaeological evidence shows that the basic plan follows that of the generic fortress monastery. Begun in 1539, it took twenty-one years to complete. Built of well-coursed ashlar with heavy buttresses and the ubiquitous pointed merlons, it is the façade that attracts attention. From its centre rises a plain bell-cot housing three bells, and, although towerless, the staircase rises in the thickness of the wall to the south where the monastic range is attached. Of all these fortress churches this façade is the most ornate, with a richly carved portal of a style which has been called Plateresque.[11] The monastic range contains individual cells, almost certainly for study as Augustinians lived communally. Each has a built-in alcove, a window seat and a stone footstool. In 1580 it was occupied by twenty-four monks, five being full-time evangelists amongst the natives. **Actopan**, approximately 120km north of the capital, was built as an outpost fortress mission in the land of the Otomi. Started in 1546 under the guidance of Fray Andrés de Mate, the severe and massive fortified church has an attached tower that rises above the pitched roof of the façade and dominates the neighbouring town. More of a defensive tower than a belfry, it adds much to the fortifications and probably also served as a lookout tower. The Augustinian love of decoration resulted in the Plateresque portal, the only external architectural feature to soften this sombre fortified frontier church. Although native artisans were responsible for the sculpture, the friars allowed little latitude in their creativity and it is almost entirely European in influence. As at Alcoman, the cloister contains individual cells for study.

The friars of the three mendicant orders were prodigious builders even if it was the conquered natives who provided the labour. By the end of the sixteenth century approximately

[10] Bonde (1994: 105 and 123–70) describes this church in great detail.

[11] Sanford (1947: 149) defines Plateresque as a 'fusion of Gothic with Moorish flavouring and the beginnings of the Renaissance'. The elaborate decoration was deemed to resemble the work of the silversmith or platero.

four hundred fortress monasteries had been built throughout New Spain, a number of which have survived in a way that shows their uniformity and the manner in which these ecclesiastical complexes were fortified. Not only was the church itself fortified both for active and passive defence, occasionally, as at Tepeaca, in a sophisticated way, but the surrounding cloister and atrio was also enclosed with crenellated walls. The influence of fortified churches, built centuries earlier in Iberia and southern France, can be detected in the use of chemins de ronde, echauguettes and crenellations.[12] The provision of a two-storey cloister gallery leading to the monastic rooms is an uncommon feature in Western Europe and was a result of the teaching and mentoring role of the mendicants.[13]

Designed to serve a number of functions, these fortress monasteries were not monastic retreats for monks who wished to lead a life of asceticism and contemplation.[14] The mendicant friars built vibrant monastic schools to instruct the natives not only in Christian theology but also in church liturgy and to produce musicians and choristers; the initial aim was to train some natives in missionary work.[15] Secular skills were not neglected and the friars played a role in the Hispanicisation of the natives, but only to a level thought appropriate to their development.

The fortified monasteries were built not only for the natives but also in fear of them. As New Spain expanded its borders, particularly with the discovery of silver in the north, the fortress monastery moved away from the valley of Mexico and assumed a more militant role as the protector of the mines and newly established borders. With the expansion of the Spanish empire into what are now the south-western states of the United States of America, the fortress church and its missionaries were to adopt new roles.

Little has been written so far about the character and qualities of the early friars. That many were polymaths is unquestioned. Intelligent and pious, they had been well prepared for their missionary role in Spain and they won over many native Americans by their care, compassion and devotion, in stark contrast to the civil and military authorities and the Spanish settlers. Ensconced in their Christian strongholds, they laboured hard to educate and protect the native converts. Accomplished and creative teachers, they were physically and emotionally robust; qualities that were required when their usefulness in Mexico was considered over in the last quarter of the sixteenth century. Two choices were open to them: they could either retreat into their convents or take their missionary ideals into the lands north of Mexico.

The missions of Spanish New Mexico

The extensive entradas of Vaca and Coronado between 1528 and 1542 in what is now the American South-west had led to the discovery of the Pueblo civilisation where a sedentary

[12] There are similarities with the great cathedrals of Béziers in France and Coimbra and Tuy in Portugal and Spain.

[13] Multi-storey galleries are, however to be found in the conventual castles of the Teutonic Knights in the eastern Baltic.

[14] Sanford (1947: 156) describes the ruins of a monastery south-west of Mexico City built for Carmelite hermits.

[15] Neill (1986: 148–50) discusses the role of native Americans in the church.

farming and trading people lived in complex stone and adobe multi-storey defensible communal villages, called pueblos. Although no sources of wealth for the Spanish exchequer had been discovered, royal orders relating to the new discoveries offered the friars a new and challenging role: the pacification and conversion of the pueblo-dwellers, a far cheaper option than military conquest.[16] Progress was such that when Franciscan reinforcements were sent into Spanish New Mexico in 1629, fifty churches and missions had already been established amongst the pueblo-dwellers.[17] This apparently successful idea of pacification by conversion rather than military conquest was not to last. Tensions between the missionaries and the Spanish civil authorities over the handling of the natives together with Franciscan insistence that their old beliefs should be totally eradicated led to the Great Pueblo Revolt of 1680. Churches were sacked and destroyed, almost thirty friars murdered and the surviving Spanish military and civilian populations expelled. It was only in 1692 that the Spanish succeeded in the reconquest of their lost territory, which was now to be held and policed by military outposts or presidios. Firmly subjugated and decimated by diseases of European origin, the Pueblo peoples turned to the Spanish to protect them from the savage raids of the nomadic Apaches and Navahos.[18] Pueblo-dwellers now formed a military alliance with the Spaniards against their mutual enemies.

Where the population had become dispersed the friars encouraged a return to the comparative shelter of the pueblos and a communal lifestyle was established in the rebuilt mission. Like their predecessors of the early seventeenth century, the friars served as the architects, although they used the pool of skilled builders available amongst the pueblo-dwellers.[19]

From the outset the churches built by the friars had been fortified. Unfortunately there were scant remains from before the Great Revolt.[20] The returning friars had to start all over again. Today many of the churches have been abandoned and are in various stages of ruin; those remaining have been repaired and altered over the centuries. However, a generic form can be identified, whether of stone or adobe. All are of massive construction and follow the single-nave pattern of Mexico with the addition of shallow transepts during the early period of rebuilding. The thick walls are windowless with the exception of one wall, usually the southern. There are never more than three widely splayed windows placed high up and sometimes glazed with selevite. Buttresses are not as pronounced as in Mexico and the flat roof is a wood and

[16] Weber (1992: 95).

[17] Spanish New Mexico comprised the present day southern American states of New Mexico and Arizona, together with parts of Colorado, Utah and Nevada.

[18] Coinciding with the northward expansion of the Franciscan missions was the southern migration of these two tribes. When Franciscan and native first came into contact relations were friendly; it was the depredations of slave-traders that soon turned these nomadic natives into implacable enemies of the Spanish.

[19] Women and children were the labourers and builders, the men limiting their contribution to carpentry. They were volunteers, perhaps reluctantly at times, as the Spanish did not have the power to force labour upon the natives.

[20] Kubler (1940: 18) describes these early churches as being of massive construction with crenellated parapets.

adobe construction. Along the Apache and Navaho frontiers many were provided with single lookout and signal towers, accessed by ladders. The morphological relationship with the pueblo varied but they were always part of the defences. Although there were rarely more than two incumbents at each mission there was an extensive range of buildings for the use of the friar priest and his servants. On occasions soldiers were stationed at the mission to safeguard the friars. The water supply was obtained from streams or wells or stored in cisterns. The surrounding land was farmed.

Of the churches built before the rebellion of 1680 only that of **San Esteban del Rey** at the Acoma mission remains in any substantive form.[21] The pueblo at Acoma, approximately 90km south-west of Albuquerque in the state of New Mexico, is built on top of a mesa that rises 120m above the surrounding valley. First visited by Hernando de Alvarado, an officer accompanying the expedition of Coronado in 1540, its resistance to Spanish rule resulted in it being sacked in 1599, when many of its warriors were slain and most of the surviving population enslaved. It was to this depopulated pueblo that Fray Ramírez was sent to found his mission in 1629, where he commenced building the church of San Esteban del Rey. Detailed examination of this church, built over a period of eleven years, enables the typology of these early churches to be understood. The church has been in constant use for almost four hundred years, apart from the years of rebellion. It is built on top of the mesa to the south of the pueblo but separated from it by an open space, perhaps indicating the early hostility of the pueblo survivors.[22] Measuring 30.5 x 12m, with twin bell-towers 10.5m high flanking the plain façade and solitary entrance, it is a massive single-aisled church built of adobe and field sandstone of varying size embedded in an adobe mortar. Like the churches built in Spain much earlier by Sancho Ramírez, it dominates the pueblo and the surrounding valley. Interestingly the nave and sanctuary walls differ in thickness: the north wall averages 2.35m and the south just over 1.5m. Kubler is of the opinion that this difference in thickness, found in many churches, is a result of a fulcrum being needed for the hoisting of the huge roof beams. Both walls taper slightly to the parapet and remains of crenellations are to be found on the parapet of the southern wall, a feature now absent from many churches of Spanish New Mexico. Early photographs, however, confirm that many churches were battlemented in the Mexican tradition.[23] The parapet runs all round the flat roof and is punctured by wooden rainspouts that project from the external surface. Recent examination of the roof has revealed a simple and effective structure. Wooden beams span the church from north to south supported on wooden corbels, frequently finely carved. Cedar twigs, in a herringbone pattern, fill the spaces between the beams, above which is a layer of hardened plant fibre surmounted by rammed

[21] Its priests, Fray Maldonado and Fray Figuerosa, were not so fortunate in the revolt: they were murdered by the natives, who threw them off the top of the mesa.

[22] Kubler (1940: 18) describes the various locations of churches in pueblos and postulates that the varying relationships were determined by the mutual agreement of the friar and his potential congregation.

[23] A photograph from 1881 shows the plain chevet of San Miguel in Santa Fe to be crenellated, not for defence against natives, but against the civil Spanish authorities. Similarly the church at Zia had extensive remains of crenellations around 1910.

adobe. Openings are limited to two high windows in the south wall of the nave and a window to the choir loft above the doorway in the façade.[24] Access to the choir loft is by means of a staircase in the north wall and to the roof and belfry via a spiral staircase in the thickness of the southern tower of the façade. In the majority of churches, however, access to upper storeys and the roof was via ladders.

Whilst the atrio of Mexico is absent in Spain's northern colonies, attached to the church are the quarters for the friar priest and his lay brothers. Although called a convento they are not conventual buildings in the strict sense. **Acoma** has a number of rooms attached to its northern wall arranged around a square courtyard. Although there were rarely more than two friars at any one time inhabiting the mission, accommodation was provided for over twenty visitors.

The church at Acoma is fortified in isolation from the pueblo, both of which gain additional protection from the steep sides of the mesa. At **Pecos**, 40km south-east of Santa Fe, the church is part of the pueblo fortifications and forms the southern bulwark, where it still dominates the pueblo. Once an important trade centre between the plains dwellers to the east, especially the Comanches, Kiowas and Apaches, and the Pueblo communities along the Rio Grand, both church and pueblo are now ruinous. Unlike Acoma, the early church was destroyed during the rebellion and the ruins of the present church date from around 1720, a time when the population of the pueblo was at its greatest. The mission church of **Nuestra Señora de los Angeles de Porciuncula** is larger than the church at Acoma and measures 45 x 12m. The massive walls are up to 6.5m thick and are buttressed. This transeptual church occupies the southern end of a ridge rising from the Pecos valley and is separated from the pueblo buildings by an open space, although the defensive perimeter wall of the pueblo is attached to the northern wall of the church. To the south and therefore outside the defences of the church and pueblo were the extensive buildings of the convento. Pueblo and church were abandoned in the early part of the nineteenth century when the fortunes of the pueblo declined as a consequence of increasingly damaging Comanche raids. The multi-storey communal housing has now collapsed and the church has been stripped of its wooden beams.

The exploration of Spanish New Mexico had failed to reveal the riches hoped for. Spain had acquired a sparsely populated and impoverished land peopled by builders of communal multi-storey defensible villages. To these villages came Franciscan friars committed to converting and pacifying the indigenous population. Their job, in contrast to that in Mexico, was made difficult by the wish of the natives to keep to their own beliefs. Of immense strength, many churches were fortified to protect the population from attacks from the nomadic tribes. The missionary friar priests introduced European farming techniques, crops and stock rearing. Unfortunately the Spanish settlers also introduced European diseases, notably smallpox, measles and typhus, with a resultant significant decline in population. This, together with increasing Americanisation following the collapse of Spanish America in the early 1800s, led to

[24] Kubler (1940: 57) explains that the separation of the choir from the sanctuary is a feature of Spanish religious architecture. Many churches in New Mexico have an external balcony running between the twin towers of the façade, allowing the choir to serve outdoor services. San Estaban is atypical in not having such a balcony.

the abandonment of many pueblos and their fortified churches to the elements. Despite the ruination of many of the churches and the continual restoration of others, the sheer size and bulk of these primitive rural fortified churches are a testimony to the Franciscan desire to protect and convert a civilisation assailed on two fronts. Spain threatened from the south and warring nomadic tribes from the northern plains.

The missions of Texas and their relationship with the presidio

Although the fortress monasteries of the Mexican valley had served to protect Spanish settlers and their native allies, Cortes had ordered the building of a number of fortified houses with defensible towers during the rebuilding of the captured Aztec capital. The discovery of silver deposits in the northern mountains and the commencement of commercial mining led to a further series of fortlets to guard the road from Mexico City. Missions were established in the mining regions and guarded by military outposts or presidios, garrisoned in a similar way to the borderland castles of the Iberian Reconquest, not by Spanish regular soldiers but by a settler militia.

Although these settler-soldiers had frequently escorted the friars on their missionary journeys and were often stationed in their frontier missions, the rebellion of 1680 had shown that pacification through conversion and Hispanicisation needed more in the way of military support.[25]

This was provided in varying degrees by the presidio, a fort that was to become a New World variant of the Iberian border castle. However, in the two hundred years it was in use there was little in the way of development; it remained a simple square or rectangular fortification with two round and loopholed towers at opposing corners to overlook the faces of the four walls and a solitary entrance.[26] A central parade ground was bounded by barracks, officers' quarters, store-rooms and a chapel, all built against the 3m tall enclosure wall. Initially the presidio was rarely garrisoned by more than fifty part-time soldiers and many had far smaller complements.[27] As the missionaries spread north and built their missions amongst the various tribes, presidios were ultimately established on the northern borderlands from the Gulf of California through Arizona, New Mexico and Texas to Louisiana. A chain of fifteen presidios had been built between the Gulf of California and the Texan littoral by 1730. The aim was to prevent incursions by hostile tribes from the north, particularly Apaches and Commanches, and the French from Louisiana in the east. Of these presidios four are to be found in Texas, two of

[25] The stationing of soldiers in the missions may explain the number of rooms to be found in many missions, especially those attached to the pueblos of New Mexico.

[26] There was no need. Raiding parties rarely attacked these outposts, preferring to bypass military posts when attacking ranches, farms and missions. There is no record of any presidio falling to a native attack, although a few were occupied by ruse.

[27] These settler-soldiers had been born in the colonies and were able to endure the hardships of frontier warfare. They were better armed than Spanish regulars and carried lance, sword, shield, pistols and a musket. Each was provided with six horses and a mule enabling them to stay in the field for lengthy periods in their pursuit of marauders.

which demonstrate how the mission, settlement and presidio became related and interdependent institutions promoting Catholicism, colonialism and Hispanicisation. Both are found in the south and are separated by approximately 150km.

The original presidio of **Nuestra Señora de Loreto** was founded in 1721 on the site of the ruined French fort of St Louis on the Gulf coast of Texas in direct response to French encroachment upon the Spanish province of Texas. Now colloquially known as La Bahia, literally 'the bay', it was relocated in 1726 due to the hostility of the Karankawa people, before finally becoming established in 1749 on the bank of the San Antonio River a kilometre south of the present town of Goliad. Built close to the missions of Espíritu Santo and Nuestra Señora del Rosario, it now constitutes a rare example of the Spanish colonial mission/presidio complex. Built to protect the missions, the coastal region, the old San Antonio road and East Texas, its fortunes fluctuated, and it became the most fought-over fort in Texan history. The accurate restoration carried out in the 1960s has resulted in the presidio being returned to its 1749 appearance, although today only the chapel remains from this date. Built initially for the sole use of the garrison and the Spanish settlers gathering around the fort, it has been in continuous use as a place of worship. It also provided the fort with a powerful bastion in the middle of its northern wall. Of all the presidios built, this rectangular fort became the best defended, with towers at each corner, three for artillery and one to serve as a lookout tower. The north-west and south-east bastions are polygonal and the south-east lozenge-shaped, but in all other respects it follows the generic plan of a presidio, with buildings arranged along the interior walls of the fortified enceinte. The solitary gate is located in the middle of the west wall near the officers' quarters. Strategically located in an elevated position overlooking the surrounding area, it was originally provided with a garrison of fifty soldiers and six small cannons. During the first sixty years of its existence its fortunes mirrored those of the neighbouring missions. It was refortified in the 1790s following the founding of the Nuestra Señora del Refugio mission in 1793. It is best remembered, however, for its role in the war for Texan independence when it was captured by Texan forces, who then updated the fortifications and renamed it Fort Defiance.[28]

The neighbouring mission of **Nuestra Señora del Espíritu Santo de Zúñiga** became one of the most successful of all the Texan missions and had been rebuilt in stone and mortar by 1758 across the river from the presidio. With a population of two hundred converts the mission became very successful at stock-rearing, especially cattle and mustangs.[29]A well-developed irrigation system enabled enough corn and fodder to be produced not only to support the mission and the presidio but also to export the excess to other regions. It remained constantly under threat from Apaches and Commanches, however, and received a fortified wall in the later eighteenth century. Like the neighbouring presidio it has been restored to its 1749 appearance.

Of the two other missions at La Bahia, that of the **Nuesta Señora del Rosario** has

[28] It was the site of the Goliad declaration of independence and later the place where Santa Anna had the Texan commander Col. Fannin and over 300 of his men executed.

[29] Weber (1992: 205–9) points out that the natives were not only after booty, cattle and mustangs when they raided but were endeavouring to prevent further Spanish expansion and missionary activity.

become completely ruinous and lies undisturbed, although the ruined ground plan suggests that it was also enclosed by a fortified enceinte. Similarly, **Nuestra Señora del Refugio**, the last mission to be built in Texas, in 1794, was fortified with a wooden stockade to afford some protection against the Commanches.

The presidio and its garrison served to protect these three missions, which had had some success in converting the natives, who had accepted and adopted mission life. The friars instructed their neophytes in European agricultural techniques and arts. The comparative safety of the environment attracted artisans, traders and settlers and the community was sufficiently strong to be able to check the incursions of the hostile nomadic tribes and was robust enough to block French ambitions in the region.

The relationship between the presidio and the missions of San Antonio de Valero was somewhat different. The mission, better known as the **Alamo**, had been founded in 1718 on the eastern bank of the river as a way station for the supply wagon trains that journeyed from Mexico to the missions of eastern Texas. Almost immediately buildings to house the Captain and soldiers of the presidio were built a short distance away from the mission and then relocated to the opposite bank in 1722. Although, as elsewhere in Texas, the area was subject to native raids, the presidio was never fortified and the defence of the settlement was focused on the Alamo from the outset.

The missions in east Texas proved unsuccessful. French incursions from Louisiana, native raiders, disease and a lack of support from the central colonial government in Mexico saw four of them relocate in 1731 to San Antonio close to the Alamo and the presidio barracks. Coincidentally, over a hundred colonists from the Canary Islands arrived and the settlement developed rapidly, becoming the capital of Texas with the presidio commander being appointed governor. The success of the missions ensured a thriving community, although native threat was sufficient for all five missions to be fortified to varying degrees with a detachment of resident soldiers.[30]

The Alamo is now a national shrine on account of its siege by the Mexican general Santa Anna in 1838. Although there are now few remains from the earlier period, documentation and descriptions left by the missionaries and government officials give a good insight into how the friars and their neophytes defended their mission. It seems unlikely that the church that was started in 1750, following the collapse of an earlier church, was ever completed. Even today the ruins are impressive. The ambitious cruciform plan with a vaulted and domed roof together with choir loft and twin towers on the façade was never completed, probably due to a decrease in the mission population in the later eighteenth century.[31] The convento buildings were stone-built and contained the priest's quarters, lodgings for guests and soldiers, offices and a refectory and kitchen. Built onto the northern wall of the church, this square enclosure was double-storey on its western and southern aspects. By 1756 the mission population was recorded as standing at 328 and comprised natives from many different tribes who had chosen

[30] Although proficient in the use of the bow and arrow the mission natives were instructed in the use of firearms and the small artillery pieces provided for mission defence.

[31] It is now believed that it was intended to resemble the church at the nearby Concepción mission. The façade was altered by the US army in 1850, who added the parapet and inserted windows.

to live under the supervision of the Franciscans. The garrison of the undefended presidio varied from decade to decade but was never big enough to provide the security the missions needed if they were to prosper. The destruction of the Texan mission of Santa Cruz de San Saba, built to try to pacify some of the Apache groups, and the massacre of many of its inhabitants by the Commanches and their allies in 1758 provided the stimulus for the friars to fortify the Alamo. The plaza of the mission, to the west of the church and convento was enclosed with an adobe and stone wall almost 3m high and 1m thick with primitive bastions for the small artillery pieces supplied by the military. Measuring approximately 145m (north to south) by 50m (east to west), this irregular rectangular enclosure contained the lodgings for the natives. The solitary gateway located in the southern stretch is recorded as being defended by a tower and three canons in 1762. Ordered to be secularised in 1793 the mission lost its religious, pastural and educative role and became an army post for a squadron of Spanish regular cavalry sent to protect San Antonio. It had become in fact the de facto presidio. Such was the instability of the region that between 1810 and 1865 the former mission had sixteen different occupiers. Alterations from this period and the subsequent encroachment of the town have resulted in the destruction of much of the mission buildings of the eighteenth century. What remain have been carefully restored.

Also on the banks of the San Antonio River, but several kilometres to the south of the Alamo, is the mission of **San José y San Miguel de Aguayo**. Relocated in 1739 after an epidemic had decimated the mission population the stone-built friary extends eastwards from the church and contained a granary and workshops for weavers, blacksmiths and carpenters. Towards the end of its life as a mission one of the friars, Fray José Pedrago, had built a flour mill powered by water. Possessing a large tract of land along the river the irrigation scheme, or acequia, of the mission ensured abundant crops of corn, potatoes, beans, sugar cane and cotton, whilst the ranch held thousands of cattle, sheep and goats. Its riches proved tempting to the Apaches and by 1768 the mission had become enclosed by a defensive wall to protect its three hundred or so inhabitants. Each wall had a gateway and towers overlooked the walls and gates. When visited by Morfi in 1777 the mission was described as being strongly fortified and the first mission in America.[32]

The remaining three missions in San Antonio, **San Juan**, **Concepción** and **Espada** were similarly fortified and defended by their occupants and small detachments of presidio troops. In response to Apache incursions these had increased to eighty by 1772, twenty of whom were stationed outside the town to protect rancher settlers and travellers to La Bahia to the south-east. All the missions were to become secularised by the turn of the nineteenth century and property and land given to the mission inhabitants. As in Mexico this had been the intention from the outset.

Kennedy has attempted to compare these fortified churches and missions of Spanish New Mexico and Texas with the ribats of North Africa.[33] He is undoubtedly correct in his belief that

[32] Juan Agustín Morfi was a Spanish Franciscan missionary and historian who accompanied Teodoro de Croix, the newly appointed commandant general of the provinces on his inspection tour. He compiled an early history of Texas.

[33] Kennedy (1993: 68–70).

Moorish architectural influences were transported across the Atlantic to the Americas. His claims, however, that the ruins of the fortified missions along the frontiers of New Spain are indistinguishable from the ribat ruins of North Africa do not hold up when typology and occupancy are compared. It is only in the context that both provided frontier defences along the frontier against hostile enemies that any comparison is achieved. A more plausible influence may have been the large Friday mosques of Islam, which like the fortress monasteries of Mexico with their atrio could accommodate thousands of worshippers. Both the mosque courtyard and mission atrio are surrounded by walls, fortified in many instances, and arcaded to provide protection from the sun. Certainly the friar architects would have been familiar with the great Moorish mosques of the Iberian peninsula.

The eighteenth-century missions and presidios of California

Although the missions of California were not themselves fortified four were protected by the neighbouring presidios of San Diego de Alcalá (1769), Monterey (1770), San Francisco (1776) and Santa Barbara (1782) continuing the tradition established earlier on the Spanish–American frontier of using mission and presidio to establish colonial settlements.

By 1823, twenty-one missions had been established along the Californian littoral, each a good day's walk from the next and joined by El Camino Real or the Royal Road. The need for protection by presidios was not from any threat from the Californian native tribes but rather the fear of English privateers and Russian advances down the eastern seaboard.[34] Although the Franciscan missionaries recruited from Spain wished to maintain segregated mission communities, the influx of Hispanic settlers resulted in the opening up of the missions to Spanish residents. By 1846 all had become secularised.

The missions amongst the Maya of the Yucatan peninsula

The Yucatan peninsula in the south-east of Mexico juts out from the mainland into the Gulf of Mexico to the north-west and the Caribbean to the east. Densely populated by the Maya when accidentally discovered by the Spanish in 1511, it proved to be one of the most difficult regions to subdue, control and colonise.[35] The Spanish entradas of the first half of the sixteenth century met fierce resistance from the Mayan tribes until a combination of famine and a smallpox epidemic eroded their resolve and enabled the Spaniards to occupy the whole of the peninsula by 1545. The attempted spiritual conquest began shortly afterwards when eight Franciscan friars were invited into Yucatan.

The first mission to be founded was at Campeche, a coastal Spanish settlement, soon to be followed by the main Franciscan mission in the newly established capital of Mérida in the

[34] Ibid. 19. Kennedy describes the indigenous population of California as comprising of docile urban societies similar to the Mexican and Guaraní natives. If any threat had existed the huge mortality from diseases introduced from Europe rendered the natives powerless.

[35] Ruled from Spain and not Mexico City until Mexican independence, the peninsula was originally believed to be an island. It is essentially an immense limestone plateau with few natural resources and poor agricultural land.

north. It was from here that the Franciscans took their missionary zeal to the new towns being established for Spanish settlers. Whilst the central core of these new towns was reserved for the exclusive settlement of the Spanish and forbidden to the native, suburbs, or barrios, for the Maya were soon developed by the friars, and it was here that the missions were built.

Whilst the layout followed in general principles the plan established in New Spain with the church and its attached convento of two stories, an open chapel and atrio, the sixteenth-century Yucatan mission had an additional building. To protect their congregation from the intense sunshine the friars built the ramadas, open structures of pole and thatch occupying a large part of the atrio and attached to the open chapel.

Although the urban Mayan neophytes were instructed in much the same way as their fellow natives in Mexico, the small rural communities were, in the later sixteenth century, served by the visita, a subsidiary and dependant mission run by a priest from the town mission. It consisted solely of a stone-built open chapel and its attached ramada.

For centuries the monastery of **San Francisco de Mérida** was the centre of the Franciscan missionary world in the Yucatan. Today nothing remains. Perry depicts it as being surrounded by a polygonal enceinte with five bastions at the angles.[36] However, a substantial portion of the sixteenth-century mission of **San Bernardino de Sisal** remains in the northern inland town of Valladolid, although the façade is now partially obscured by a later porteria or closed arcade linking probably two of the earlier posas. The church, built of field stone set in limestone mortar, is awesome. It was consecrated in 1560. The fortress aspect of the church is enhanced by the absence of windows and a battlemented parapet above the barrel-vaulted roof. Departing from the normal east–west alignment the mission follows the standard pattern adopted throughout Yucatan with the convento positioned to the north of the church to provide some protection from the sun. The façade is devoid of towers or bastions and the simple belfry sits on top of the northern wall. Situated above an underground river, the monastery contains a waterwheel driven by mule-power to provide water for the mission and its gardens.[37] The architect, Fray Juan de Mérida, was also responsible for the monastic complex of **Izamal**, built on top of a levelled Mayan temple pyramid, with its similar fortress church, and for the mission at **Mani** now much ruined.

Many of the mission churches had been passively fortified in a way similar to those of central Mexico with thick high walls heavily buttressed and crowned with a battlemented parapet to guard against Mayan rebellion. It was an external threat that was to lead to further fortification, both secular and religious, however. The riches of Spanish America had seen the development of piracy together with English, French and Dutch privateers. Although their main targets were the treasure galleons of the Spanish Main and their ports of departure the Yucatan peninsula was attractive as it could provide the logistical needs of the privateers.[38] In response, a number of towns received walls and forts to protect them.[39] Missions and churches

[36] Perry and Perry (1988: 99–100).

[37] Surface water is rare in the peninsula and natural sink-holes, known as cenotes, give access to abundant underground rivers and lakes from the mule-driven well-head or noria.

[38] Many pirate settlements were located on the small islands off the peninsula and the neighbouring territory of Belise, formerly British Honduras, was a safe haven for a century or more.

were fortified. In 1667, despite the objections of the friars, the Governor of Mérida fortified the mission of San Francisco de Mérida, possible with the enceinte mentioned by Perry. Many of the inland visitas were replaced with stone churches and became, to all intents and purposes, fortlets. Two churches, in particular, were fortified by their friars in an endeavour to protect their congregations. Sacalum and Santa Elena, both to be found in the sierra of the interior, remain from this period in their entirety.[40] They are classic fortress village churches and were built upon rocky bluffs that dominate the nearby Mayan villages and the surrounding countryside. The passive fortifications are reinforced with a crenellated parapet and towers flanking the western façade. In addition Sacalum has a circular loopholed staircase tower attached to the northern wall giving access to the roof.

The chemin de ronde, here known as a camino rondo, makes its appearance in Yucatan. The immensely thick and buttressed lateral walls of the churches at **Dzemul** and **Uayma**, necessary to support the barrel-vaulted roofs, contain mural passageways adding considerably to the defensive abilities of these churches.

The need for the population to have access to buildings that could offer some form of protection during the many violent periods in the history of the Yucatan peninsula not only resulted in church and mission fortifications but led to the ruination of many. Mayan rebellions, piratical raids, the caste wars of the nineteenth century and Mexican revolutions have all taken their toll. Over a three-hundred-year period many churches and missions were adapted to become barracks, arsenals and fortresses. The ruination and abandonment of many of the missions and their churches attests to the repeated cycles of violence that have assailed the Yucatan plateau. Much of it was a consequence of persistent tensions of between the Maya who wished to maintain their culture and Spanish determination to control and convert the indigenous population.

The reducciones of the Jesuit province of Paraguay

In the early part of the seventeenth century the province of Paracuania or Paraguay, in central South America, was granted by the king of Spain to the Jesuits for the nurturing, protection and evangelisation of the pagan and semi-nomadic Guaraní people. It was to result in a form of communal living unique in that epoch.[41]

Early missionary work by the Jesuits amongst the Guaraní tribes had begun at the start of the seventeenth century. From the outset this evangelism had been opposed by the Paulistas, the Portuguese settlers in São Paulo, who wanted the natives to work their coastal sugar plantations, and by the Mamelucos who continually harried and raided native settlements in an

[39] Campeche still retains much of its walls and bastions and the town of Bacalar was built to protect against pirate incursions from Belise, then nominally Spanish, but in effect lawless.

[40] Formerly the village was called by its Mayan name of Nohcacab but renamed by German settlers in the nineteenth century.

[41] In the seventeenth century the name Paraguay was given to the basins of the Parana, Paraguay and Uruguay Rivers. It included as well as present day Paraguay, parts of Brazil, Bolivia, Uruguay and Argentina.

endeavour to provide South American colonists with slaves.[42] It was in response to these threats that the Jesuits were to develop their reducciones (or reductions). communities of natives in mission towns.[43] Like the mendicant friars in the northern provinces of New Spain, the Jesuit priests were men of exceptional abilities from the nations of Western Europe. Self-sacrificing, they were totally devoted to the protection of the natives from the excesses and cruelty of the European colonists. Although they were to be visited by Catholic representatives of the Church of Rome and by European traders, they were autocratic and endeavoured to develope native communities isolated from any European influences other than their own. That they were able to do this was due to the fear the peaceful Guaraní tribes had of the Mamelucos and their compliance with Jesuit doctrines and discipline in return for the safe haven they were offered. This community lifestyle, Christian in manner and practice, lasted for over one hundred and fifty years until the Jesuits were rounded up and expelled by the Spanish secular authorities in 1768.

The need for and manner of mission defences

The first mission was established in 1609, the year after King Phillip III of Spain issued royal authority to the Jesuits for the conversion of the Guaraní, when a number of tribal units were invited to live in a community dedicated to the greater glory of God.

It was not long before these early reducciones came to the attention of the Mamelucos, and some sort of protection was needed as a result. Caraman describes how Father Romero hastily threw up earthworks as a defence against the slavers around the vulnerable mission of Jesus Maria near the Atlantic coast. Before the circuit could be completed the settlement was overrun and razed to the ground, the church burnt and the natives killed or enslaved.[44] In a short space many of the early missions fell to the Mamelucos and their Paulista allies, resulting in some six thousand natives being taken to the slave markets of São Paulo or Rio de Janeiro. Only one mission resisted an attack and siege. Led by Father Salazar, the natives at the mission of Concepción held out until relieved by other mission natives.

The frequency and devastation of such attacks between 1628 and 1630 led to the relocation of the embryo reducciones into the interior. Despite lookout posts, skilful ambushes and an attempt to co-ordinate defence, attacks continued in a desultory fashion. Left to their own devices, the Jesuits reacted by relocating their reducciones in defensible positions, often at the junction of rivers, and surrounding them with palisaded earthworks. Such was the continuing threat, however, that they sent a deputation in 1640 to the king in Madrid for help. His letters to the viceroy in Lima permitted the Jesuits to arm the natives for the defence of

[42] The Mamelucos have been variously called Mameluks, Mameluken, Maloqueadores and Bandierantes. They were primarily bands of slave-raiders of mixed native and European, usually Portuguese, descent who travelled widely into the South American interior, especially Brazil in search of natives to sell. The origin of the name lies in the East where the Mamelukes were the Turk slave soldiers of the Arabs.

[43] McNapsy (1982: 8) explains that the Spanish word ‘reducir’ meant in the seventeenth century the gathering of natives into mission settlements. ‘Reducción’ is best translated as ‘community’.

[44] Caraman (1975: 72).

the mission townships; they were drilled by a small squad of Spanish regulars from Buenos Aires. Muskets were obtained and an arms factory and arsenal established.[45] Aided by retired soldiers who had joined the Jesuit order the natives soon became an effective militia and missions on the banks of navigable rivers started to build armed canoes and other craft in an endeavour to counter any plan by the Mamelucos to outflank landward defences.[46] The Jesuits also provided the missions with trained architect priests, one of whom, Father Brasenelli, builder of a number of churches, was also skilled in military science and the art of fortification. The Jesuit-led victory over the slavers at the Battle of Mbororé and the development of the militia gave confidence to the Guaraní, who flocked to the thirty missions established by 1720. Over 140,000 Christianised Guaranís lived in the townships with the average mission housing a population of four thousand neophytes led by rarely more than two or three Jesuit priests, one of whom was responsible for the daily religious services, the other(s) overseeing the daily secular activities. The missions could now field an army of over seven thousand disciplined and trained troops, and comparative security had been achieved.

Archaeological examination of the remaining ruins of the thirty missions established by the eighteenth century together with contemporary town plans has shown that the architectural scheme varied little from mission to mission.[47]

The mission of **San Ignacio Mini** on the Argentinean bank of the Rio Parana has impressive remains and is now in the care of UNESCO. Moved to its present site in 1696, it had reached the height of its prosperity by 1730, declining after the expulsion of its Jesuits in 1767. Badly damaged during the wars of Independence in 1817 it was reclaimed by the jungle and lay undisturbed until rediscovered in 1897. The architects were the Italian Jesuits Father Giuseppe Brasanelli and Father Angelo Petragrassa. They built the mission around a central grassy plaza of Armas, to the south of which stood the huge Guaraní-Baroque church, completed in 1724. Measuring 70 x 28m, only part of the façade remains. The detailed and delicate bas relief floral patterns of the Guaraní carvers afford an insight into the skills they had developed. Aligned north to south, the cemetery abuts the west wall of the church, whist the conventual and colegio buildings are attached to the eastern wall. Well proportioned with walls 1m thick and standing some 3m tall, rooms were provided for the priests and their guests, together with cloisters, schools, an armoury, store-rooms and workshops for Guaraní artisans. The mission garden containing an orchard and vegetable plots lay to the south of the complex. Housing for the native families was arranged around the other three sides of the plaza. Consisting of regimented blocks of single-storey buildings fronted by a roofed veranda, each contained ten one-room dwellings. Like the church, they were built out of sandstone embedded in an adobe mortar. The mission contained other buildings for the four thousand inhabitants. Houses for widows and orphans, a hospice, a prison and an inn, somewhat set

[45] The Spanish were wary of Portuguese intentions and the consequences if the missions were to fall to potentially hostile forces.

[46] Caraman (1975: 79–80) describes these canoes as being well equipped, like galleys with small cannon each side. They continued to be developed until the end of Jesuit control of the missions.

[47] Of the thirty mission towns, fifteen are now in Argentina, eight in Paraguay and seven in Brazil. It is only recently that the ruins have received archaeological and national attention.

apart from the township, completed the ensemble. Each township was surrounded by extensive agricultural land used for the cultivation of maize, and mate bushes for Paraguayan tea. Extensive pastures were developed for stock-raising. The community held everything in common, surplus produce being sold and the revenues given to the Spanish exchequer. Each native had a small plot of land for his own cultivation but money was never used and the death penalty outlawed. The community provided for its misfortunates. The day revolved around church services, work and communal leisure activities.

Examination of the ruins of the reducción of **Trinidad** in Paraguay, begun in 1706 by Father Primoli, demonstrates an almost identical ground plan. Here the houses of the natives had galleries linking them together and supported upon massive Roman arches. The church is now much ruined and a solitary tower built some distance from the church served as a watchtower or early belfry whilst the church was under construction. All traces of earthwork and wooden palisade defences have been lost. It is known that Father Brasanelli lent his skills to other missions, including his knowledge of military engineering; it is recorded, for example, that he helped to organise the defence of the mission of São Francisco de Borga in Brazil.

The military strength of the missions was such that they felt able in 1750 to resist the acquisition by the Portuguese of the Paraguayan missions on land ceded by Spain. In what are known as the Guaraní Wars, they fought both the Portuguese and the Spanish. Defeat was inevitable and the natives finally surrendered in 1756. This was the beginning of the end for the missions. European suspicions that the Jesuits were forging a republican Jesuitical state in the middle of European colonies in South America led to the suppression of the order and the expulsion of the priests from the continent. The mission towns slowly became depopulated and neglected, many of them being finally destroyed during the terrible Wars of Independence, while others were abandoned and allowed to return to nature. Whatever success the Jesuits had in creating cultured, comparatively safe and economically prosperous religious communes, they had failed to instil the political leadership and organisational skills necessary for the Guaraní to continue without the imposed autocracy of Jesuit philosophy. Efforts are being made by the governments of Brazil, Paraguay and Argentina to conserve the ruinous remains of the missions, gather together Guaraní-Baroque artefacts and record and recognise the cultural legacy of the achievements of the Jesuit and Guaraní partnership forged over a century and a half. Their experiment in Utopia failed, paradoxically, because it was so successful.

Comparisons between the missions of North and South America

There are parallels between what the Franciscans and the other mendicant orders achieved in the northern provinces of New Spain and Jesuit endeavours in South America. The basic aim was to convert, pacify, control and protect as many of the indigenous population as they could with only one or two priests at each mission. The same basic design of church, conventual buildings, workshops, classrooms and housing for the natives was followed by all the orders, although there was a great variation in size. The jungle Paraguayan missions of South America were far bigger, richer and more populous than their poor relations in the arid landscape of Spanish New Mexico. Adobe and field stone was used in the north whilst fine ashlar and wood were the building materials of choice in the Paraguayan missions.

Although the Mexican natives and the Paraguayan Guaraní adapted well to mission life, the tribes of the American South-west were much less compliant and at times openly rebelled against the missions. Whereas there is no record of any Catholic priest being harmed by the Guaraní mission natives, life for the Franciscan friar in the north was always perilous. Many New Mexican and Texan missions provided accommodation for a small garrison of soldiers to protect the priest and maintain order in the mission.

Fortifications were ubiquitous. Those in the northern provinces were required to provide protection for the mission population against marauding hostile native tribes who did not wish to be ruled by Spain and its mendicant servants. In contrast, threat in Paraguay came first from European-led slave-raiders and then from the Iberian kingdoms. Yucatan needed defences both from the indigenous population and European freebooters.

It was always intended that the missions of Mexico and Spanish New Mexico would become secularised. Jesuit intentions were much less transparent and ultimately led to their expulsion.

The biggest difference, however, is that whereas the North American missions were an integral part of the development of colonial settlements, those in Paraguay developed separately and in isolation from Spanish and Portuguese colonialism. European influences and politics were kept to the minimum.

The ecclesiastical fortifications of the Philippine archipelago

Historical background

Declared for Spain in 1521 when discovered by Ferdinand Magellan, the Philippine Islands received the attention of the mendicant friars and the Jesuits towards the end of the sixteenth century. Their orders from Philip II were very simple; the indigenous population was to be converted to Catholicism by persuasion and not by force. The task was enormous. The archipelago consisted of over seven thousand islands, of which approximately a tenth were inhabited. Prior to the arrival of the Spaniards there was no central authority; each community had its own chief or headman. The only exception was the Muslim sultanate on the southern island of Mindano. Communications were difficult, tenuous and always under threat from the ‘pirates’ from the south.[48] The friars and priests responded to the challenge with vigour and enthusiasm and realised from the outset that they had to gain the confidence and co-operation of the indigenous population. One way they could do this was by protecting their neophytes, especially those in vulnerable coastal settlements.

The fortified churches, convents and towers of the islands

The Spanish missionaries used to working in isolation and with few material resources realised as they had done in the New World that the simplest way to provide protection was to fortify the church. There are many examples dotted around the islands of fortified churches, convents

[48] The Philippines were attacked for centuries by Muslim and pagan raiders from Mindano and Borneo to the south. Their raids were almost certainly opportunistic forays for booty and slaves. The Spanish called the Muslim raiders ‘Moros’.

and watchtowers, some of them with quite sophisticated fortifications. To finance their building projects the friars frequently persuaded the government to waive tribute payments. Anybody willing to help, especially people with building skills, was recruited. Two things set these ecclesiastical fortifications apart from those of other Hispanic domains: their rococo architecture and the fact that they were maintained, strengthened and built up to the first quarter of the nineteenth century.

One of the earliest of the conventual fortresses is to be found on the island of **Capul**, built to protect the 'embocadero'. Strategically positioned in a narrow strait between the Bicol peninsula and Samar island, it was here that the Spanish merchant galleons assembled whilst waiting for a naval escort;[49] the island has only two landing places. The church, dedicated to St Ignatius Loyola, together with its conventual buildings was surrounded by a powerful crenellated enceinte reinforced with corner artillery bastions. The curiously differing shapes of these bastions and the crudeness of the masonry suggest that they were built in the early years of colonisation at a time when the mendicant friars did not have access to military engineers or architects. Provided with cannon, the fort could control one entrance to the embocadero. The western façade of the church served as the fort entrance and the huge bell-tower as a lookout post for the island. As well as the church and conventual buildings the courtyard contained a well and presumably an arsenal and barrack block, although these are no longer present. A similar bastioned conventual church is found at **Cuyo** on Palawan but this was obviously built by a military engineer as the pentangular enceinte contains regular bastions and echaugettes all constructed out of fine ashlar.

Many of the rural missionaries fortified their churches by building massive flanking towers at the western façade. The church of St Tomas de Villaneuva, the town patron, occupying high ground in the village of **Miag-ao** on the island of Iloili has a magnificent rococo façade in a Hispanic-Philippino style. It was also fortified by the addition of two huge towers built either side of the façade. These are strange; the northern is of four storeys, the southern of three. Both are massive and are strongly buttressed. Each storey is smaller than the one below, providing a number of walkways for the defenders.

These towers are ubiquitous and are often detached from the church particularly where there is a history of earthquakes. That at **Baclayon** on the island of Bohol is very similar in its construction to the massive minaret towers of Tunisia. Built by the discalced or barefoot Augustinians, it served as a lookout tower. Strangely the Jesuits built a fort behind the church.

Along with civil fortifications the coastal fortified churches frequently had small two-storey advance lookout towers. These baluarte towers were built overlooking possible landing places from the sea, particularly where raiders had previously landed.

Most of the Spanish fortifications in the Philippines were built by the religious orders whose missionaries served as the architects. Although architectural influences reached the Philippines from Mexico, the use of indigenous stone masons and carvers has produced an architecture that is best classified as Hispanic-Philippino rococo.

[49] The Philippines had become an entrepot for the collection of trade goods, especially silk and porcelain brought to the islands by Chinese merchants from Canton and paid for by silver mined in New Spain. They were then conveyed by galleons to Acapulco on the south-west coast of Mexico.

12
THE CAUCASUS REGION

Introduction

Armenia and Georgia, two of the oldest Christian countries, have constantly striven to remain independent of their powerful Islamic neighbours. Isolated from the West since the fall of Constantinople, both countries were under constant threat from the Ottoman Empire to the west and Persia to the east and south. Both countries have had to struggle to maintain their culture and religion through occupation, division or annexation by Islamic regimes. Their success is a reflection of the determination of these mountain nations. Although geographical neighbours with a common cause, they are ethnic rivals and each country is fiercely independent of the other. They need therefore to be considered separately, particularly as Armenian culture had an influence far beyond its present-day borders; a section is also included on Turkey (which covers part of the historical region of Armenia).

Armenia

The background to Armenian ecclesiastical architecture

The classic period of Armenian architecture belongs to the sixth and seventh centuries; further development ceased when Armenia was overrun by the Arab armies, and was not resumed until independence was once again achieved in the ninth century, recognised by both the Byzantine Empire and the Arab caliphate. By the tenth century monastic complexes were being developed and built throughout the country. They were characterised by the addition, to the western end of the monastic church, of the gavit, an annex uniquely Armenian,[1] which along with the domed hall became an integral part of church architecture. Decoration, whether intricate carvings, mosaics, stalactites or frescoes, reached a high degree of excellence. These skills, together with an ecclesiastical architectural form refined over centuries using fine sandstone ashlar of varying hues has produced a distinctive Armenian Christian architecture. Artisans kept alive their traditions through invasions by Arabs, Seljuk Turks and the Mongol Horde, despite the considerable destruction of ecclesiastical buildings and lengthy periods where there was no reconstruction or architectural development.

The fortified monastic complex

It is not known when monasteries became fortified. Building work resumed in the twelfth century when Armenia achieved independence from Seljuk rule. It was financed by the

[1] Of two storeys, the Gavit was frequently larger than the church to which it was attached and served both secular and religious purposes. It provided accommodation for an overflowing congregation, and at times enabled the nobility to separate themselves from the peasants. It provided a secular meeting house and served as a chapter house.

revenues accruing from an increasingly successful international trading role. The monastic complex had become refined and harmonised to include (in addition to the gavit) book depositories and scriptoria, refectories, belfries, often free-standing, and ornamental wells, each with its distinctive architecture. Khalpakhchian is of the opinion that these monasteries were fortified by bastioned walls before the Mongolian conquest of the middle of the fourteenth century.[2] It is from this period that the monasteries of Tatev, Geghart, Haghadzin, Hagpat, and Noravank date, and all have fortifications remaining today of varying degrees. It seems likely, however, that these remaining fortifications date from the seventeenth century when Armenia was partitioned between the Ottoman and Persian Empires. Although a time of insecurity, there was a resurgence of building and the reconstruction of churches and monasteries, particularly in Persian-occupied Armenia (coinciding with the present-day Republic of Armenia, the Nagornyy Karabakh enclave and the autonomous region of Iranian Azerbaijan).

Khalpakhchian's belief that the early monasteries were fortified receives support from other sources.[3] Unfortunately no specific examples are given. The consensus of opinion is that the tenth-century monasteries were extended in the twelfth and thirteenth centuries when they received their protective walls. Recent examination of the boundary walls shows that these are poorly built in comparison to the fine ashlar used in the construction of the monastic buildings. Although repeated reconstruction, following wilful destruction and earthquake over the centuries, has removed most of the evidence for twelfth- and thirteenth-century fortifications the monasteries of **Harich** and **Hovannavank** both retain sections of walls built out of well-coursed ashlar. Fine ashlar has been used at Hovannavank in the lower courses of the two semi-circular towers flanking the entrance passage that matches that of thirteenth-century masonry. To what extent and to what number monasteries received fortifications in this period is, however, impossible to know.

The fortified monastery of Sts Peter and Paul at **Tatev** in south-eastern Armenia, which has recently undergone restoration following extensive destruction caused by the earthquake of 1931, shows how Armenian ecclesiastical architects incorporated natural features into their ensembles, especially fortifications. The flat top of a spur formed by a deep river gorge with almost precipitous sides provided an ideal defensive site, and the monastery occupies the whole plateau. Roughly oval in shape, measuring approximately 100m east to west and 75m north to south, a defensive wall runs all round the edge following the contours except at the northern isthmus where the approach is less steep. Here a powerful curtain wall, reinforced with a circular drum tower at each end, completes the fortified enceinte. Arranged along the inside of the defence wall, excepting its eastern part, are seventeenth-century cells for the monks, the refectory, lodgings of the father superior, and work and store-rooms. Their flat roofs acted as the wall walk from which a parapet, probably loopholed, rose to a height of 2m. The exterior of the fortified enclosure wall has few openings and room interiors are lit from windows facing the monastic courtyard. The western drum tower provides additional protection to the solitary entrance. This gateway contains the eleventh-century domed church of Astvatsatin built on top

[2] Khalpakhchian (1980: 17). In addition bridges, secular fortifications and caravanserais were built.
[3] Arzoumanian (1970: 35).

Image not available

of the vault of the entrance passage. This is a feature rarely seen outside of Russia and may indicate that the monastery was fortified from its founding.

The monastery is dominated by the tenth-century cross-domed church of Sts Peter and Paul with its attached church of St Grigory the Illuminator of 1295 and a three-tier bell-tower built in the seventeenth century. This is of typical Armenian form; each tier lightens as it rises to the belfry supported by eight columns. It fell during the earthquake but photographs show detailed decoration on all external surfaces. The courtyard contains a strange and unique piece of Armenian engineering. Rising 8m to the carved stone cross at its summit, the octagonal stone-built pillar is hinged so that it tilts in response to the lightest touch before returning to its upright position. Built in 904, its purpose and function is unknown.

As well as serving as a fortress the monastery was a seat of learning and of the arts; its workshops produced illuminated manuscripts, books and intricate woodcarvings. Into the living rock were excavated hidden depositories for these works and monastic treasures.[4] Even in its partially ruined state it is a powerful fortification, built to defend the south-eastern border of the country. Restoration work has been carried out with a high degree of accuracy and artistry, demonstrating the continuity of Armenian craftsmanship.

In the northern mountainous region of Armenia, a little way from the Tbilisi road near the border with Georgia, the fortified monastery of **Hagpat** suddenly appears on a knoll rising from a high plateau surrounded by the coniferous forest of the Bazum ridge. It is possibly the finest ensemble of Christian architecture to be found in Armenia and most of its buildings are in a remarkable state of preservation. Probably founded in the tenth century, the monastery served as a university for the study of medicine and the sciences and for the production of manuscripts and books.

The main monastic buildings are grouped around the church of Nshan (the Sign) and were assembled over a span of two centuries, each architect in turn harmonising his edifice with those of his predecessors. Particularly noteworthy is the gavit, containing tombs of the royal family, and the extensive book depository, both of which are larger than the church to which they are attached.[5] A feature common to many Armenian monasteries is a triple-arched structure, dating from 1250, housing a natural water spring. Still in use today, it provided water for villagers and their livestock as well as filling the cisterns of the monastery itself. Also unique to Armenia are the intricately carved stone slabs with their geometrically incised crosses or khachkars. Of varying sizes they commemorate personages, events and acts of philanthropy. Hagpat is particularly rich in these outstanding stone carvings, which are found throughout the monastery.

Today there are no signs of any domestic buildings other than the refectory, which is incorporated into the defensive wall, presenting a blank façade to the outside. They probably await discovery when the accumulated debris of centuries that lies within the protective enclosure walls is removed. Now much reduced in height, without evidence of battlements or parapets, these walls are built of field stone in rough courses and are reinforced with eight

[4] Ibid. 166–7.

[5] Dug into the floor of the book depository are huge pottery urns, believed to have been inserted in the floor after the Mongol invasion when the depository was turned into a wine store.

towers, one of which, the south-western D-tower contains two large cisterns. The manner in which brick is used in this tower suggests it is from a later period, probably, like many of the fortified perimeter walls, the seventeenth century.

The fortress monasteries of Greater Armenia

Armenia today covers a much smaller area than it did until partitioned between the Ottomans and the Persians, and a number of fortress monasteries are found today in its neighbouring states. Unfortunately the majority are either ruinous, under threat or inaccessible. The recent seizure by Armenians of a small autonomous mountain region in what is now Azerbaijan has opened up an area long associated with Armenia. This region, known as Nagornyy Karabakh, lies to the east of present-day Armenia, and contains a fortress monastery which is much more formalised than the two examples previously discussed. Although the monastery of Amaras, previously a religious and cultural centre of Armenia from the fifth century onwards, survived the many Islamic incursions into the area, the present building dates from the seventeenth century. Still in a good state of preservation it serves to illustrate the typology of a number of fortress monasteries built in Persian-occupied Armenia during that century.[6]

Despite the uncertainty and insecurity of the period the Persians allowed a number of fortress monasteries to be built on land acquired by them. They range from simple constructions wherein a small church is enclosed in a small fortified perimeter wall reinforced with one or two round towers, exemplified by the monastery of **St Gevorg** at Mughni, to the sophisticated fortress monastery of **St Stephanos** now in the Iranian province of Azerbaijan. **Amaras** represents a middle stage in their development.

Built in the middle of its farmlands and orchards on flat land, the plan is one of a rectangle measuring 85 x 60m. The high, battlemented walls have loopholed drum towers reinforcing each corner, built from rough-hewn stone set in a lime mortar. Arranged along each of the four walls internally are cells for the monks, lodgings for the father superior and his guests, and workshops and monastic service rooms such as the kitchen. The living quarters are ranged chiefly along the northern and eastern wings of the complex and are typical of Armenian monastic cells; two rooms open onto a shared corridor that leads to the courtyard of the church. Replicated along each wall, they contain hearths and niches. The eastern cells effectively separate the monastic enclosure into two: a smaller eastern one, containing the solitary monastic entrance, and the larger western ecclesiastical compound, entered through a narrow fortified doorway. The eastern enclosure served not only as a barbican for the monastery but as stables to house the animals and farm implements of the monastery. As at Tatev, the continuous roofs of these single-storey rooms served as a wall walk for the parapet, loopholed at 1m intervals, but now devoid of battlements. The corner drum towers are of two storeys and have been provided with a double row of loopholes to cover the faces of their intervening walls. Only door and window frames together with the gun-loops are constructed with dressed stone.

[6] Hasranyan (1990: 3). When Russia annexed Eastern Armenia in the nineteenth century, the monastery served both as a frontier fortress and between 1832 and 1844 as a Russian-Persian customs post. It is now in Armenian control.

Turkey

Like those of the Greek Orthodox Church, many Armenian monasteries in Turkey were occupied until the early part of the twentieth century. The museum in Sepanakert, the main town of Nagornyy Karabakh, has a number of photographs of the monasteries of St Karapet and Narik showing them to be both active and fortified at the end of the nineteenth century. The museum also lists sixty-six monasteries as belonging to the Armenian Church in south-eastern Turkey. Few remain today, and then only in a ruinous condition. There is evidence that a number were fortified and the plan of the small monastery of **St George of Goms** on the shore of Lake Van, although abandoned and ruined, shows it to be very similar to the Armenian monastery of Mughni with a solitary exception. The single church is not only surrounded by high walls, incorporating corner towers in the landward southern wall but forms part of the fortifications. The triple apse enclosed within the flat eastern part of the church becomes part of the eastern wall of the square fortified enceinte.

A similar fate befell the monasteries of the Greek Orthodox Church. Now abandoned and in the main inaccessible there are indications that a number were fortified. **Sumela** is one such monastery that survived since antiquity in the north-east of Turkey near Trabzon. Clinging to a sheer cliff face, almost a 100m above the valley below, access can be reached only by a steep path and a staircase leading to the single, southern entrance, easily defended. The monastery is built along a narrow ledge with the pilgrimage church and cave sanctuary protected by the range of buildings built on the cliff edge to house the monks and separated by a narrow courtyard. Of great importance in Byzantine times, it became home to Greek Orthodox monks until they abandoned it when the Pontiac Greeks were expelled from Turkey in 1923. Ravaged by fire, it has been vandalised. Even in its ruined state it is not difficult to imagine the power and religious imagery of this magnificent cliff-side monastery.

The monasteries of the Syrian Orthodox Church have been more fortunate, but only marginally so. Until the last few decades a number of monasteries and churches served the minority Syrian population; all are to be found on the Tur Abdin plateau of south-east Turkey. Today most of the Syrian Christians have emigrated and only two monasteries still function. The **Saffron Monastery**, or the monastery of Deyrulzafaran, lies 5km from Mardon and has served the religious and protective needs of the Christian villagers until recent times. Founded in 495, the monastery has been rebuilt and reconstructed many times. A rectangular building of three storeys, the differing styles of construction are clearly evident. Adornment is kept to a minimum. It has the outward appearance is of a fortress, although its internal appearance is completely different with its open central cloister.

Georgia

Georgia is a beautiful and mysterious country. This land of Kolkhis and the Golden Fleece, and of St George, has been a bastion of Christianity and a buffer between Christian Europe and the Islamic East. It has had a turbulent history where peace and stability have been rare. Its masons and sculptors have, however, left a magnificent legacy of ecclesiastical architecture, demonstrating not only their skill but also the determination of the Georgians to remain

Image not available

Christian despite repeated incursions and invasions by its Muslim neighbours. The cycle of destruction and renaissance is ingrained in Georgian culture, and the erection of churches, often on the top of mountains, is a visible expression of defiance and an unconquerable will.

Georgia fought a strenuous war against the Arab invaders of the seventh century, enabling monasticism not only to survive but also to flourish so that by the tenth century it been able to extended its influence beyond the country's borders to Greece and Palestine. It coincided with the finest period of ecclesiastical building, culminating in the construction of the magnificent cathedrals of Sveti-Cxoveli, Alaverdi and the church of Bagrat at Kutaisi.

Although the mountainous nature of the country together with the emergence of rulers determined to obtain and maintain independence from their Muslim neighbours has enabled Georgia to flourish, the thirteenth century heralded a progressive erosion of Georgian nationality, finally sealed by the capture of Constantinople. Georgia became subject to repeated invasions by both Turks and Persians. National unity was replaced with warring dukedoms or Muslim suzerainty. The only building works of any significance were fortifications. Architecture became impoverished and subject to Persian influences, seen in the use of brick. The isolated and elevated positions of many churches and monasteries were natural sites easily defended, and most of Georgia's rural ecclesiastical buildings were fortified to some extent. They were kept in good repair until Russia was invited to come to the country's aid in the nineteenth century.

The fortified monastic cave-city of Vardzia

The River Kura, arising in Turkey, winds its way through the mountains that straddle north-eastern Turkey and south-west Georgia. This high mountain valley became a natural invasion route. Cave-dwellings and rock-cut monasteries were already established in the area when King Giorgi III (1156–84) turned his attention to the tenth-century cave-village of **Vardzia** in an attempt to bar an invasion route and defend his country from the Turks. To the cave-village he added a fortified cave-monastery, excavated out of the tufaceous rock of the mountainside.

At first sight, the monastery added to the earlier secular habitations looks indefensible and yet it became a repository for national treasures and a refuge for the civil population for over three centuries. The appearance today, however, differs markedly from how it looked originally. Damage to the cliff face, both natural and man-made, has exposed many of the cave galleries, tunnels and staircases that connected them and were originally hidden from view.

Rising to a height of 3300m above sea level, the mountain face was cut away to steepen its river frontage. Into the soft tuffa were excavated hundreds of caves and galleries, hollowed out in a north–south direction, often reaching 50m in depth. It also became a multi-tiered complex of between seven and thirteen storeys extending along a frontage running east to west and measuring over 500m. Today, an external thirteenth-century bell-tower demarcates the division between the earlier cave-dwellings and the contemporary cave-monastery. However, the civil settlement was gradually absorbed into the monastery over the centuries and any distinction lost.

There are no external fortifications visible today, but the steep cliff face makes access to the cave entrances almost impossible other than at the lowest western end where the monastic

stables lay. A complex system of guard chambers, narrow tunnels between individual rooms and vertical shafts between each tier of caves controlled egress and ingress. Subterranean galleries with tunnels to the outside were camouflaged so that their role in providing rallying points for a rapid sortie outside the complex were completely hidden.

Archaeologists have so far discovered over five hundred rooms serving as churches and monastic buildings. Water was obtained from a natural spring in the heart of the mountain and by a subterranean aqueduct with a complex distribution system. Two churches are outstanding; both the central church of the Assumption, damaged in the earthquake of 1283, and the church of the Transfiguration are decorated with magnificent frescoes painted between the twelfth and sixteenth centuries.[7]

For centuries the monastery was a Christian frontier fortification of strength and served its purpose well against both Turks and Persians until Persian forces, led by Shah Tahmasp, captured the cave complex in 1551. Its appearance today, despite the damage that has changed it externally, is one of great strength. Although only a fraction of the rooms and tunnels are open to visitors, the complexity and defensibility of this cave monastery is apparent. It fell only when the Georgian army of King Luarsab I of Kartli was defeated by that of Shah Tahmasp and resistance would serve no purpose.

The fortified churches of Dzhvari, Ninocminda and Ananuri

Overlooking the monastic fortress town of Mcxeta, at the confluence of the Aragivi and Kura Rivers 18km north of Tbilisi, is the fortified church of **Dzhvari**. It is a fine example of the Georgian propensity for choosing hill-top sites that dominate the countryside; the church is visible from all around. As is common in Georgian ecclesiastical fortifications, the church and its defences are from two separate eras, in this instance a thousand years apart, the first being from 586 to 605. Entirely Georgian in design and concept, it was one of a number built throughout Georgia in the sixth and seventh centuries, at a time when the country had still to be united politically.[8] The exceptionally fine ashlar construction together with its complementary sculpture contrasts markedly with the poor quality of its surrounding stone and brick fortifications, obviously hastily built to protect one of the national symbols of Georgia. The site lends itself to defence falling away steeply down to the river hundreds of metres below. Here the western apse of the church is incorporated into the curtain wall. The more gently sloping south and eastern approaches are strongly fortified with high walls and multi-storey towers used for the accommodation of the defenders. The north-eastern tower is the strongest. The solitary entrance, in the south-east, is further protected by a barbican, now much ruined. Built of field stone with brick and tiles framing loopholes and openings in the towers, it was a substantial castle church. That it was meant as a serious defensive outpost, overlooking the monastic town below, is shown by the construction of a substantial cistern

[7] Cave complexes and huge underground cities were used by the Christians of Cappadocia in Asia Minor for centuries and achieved a high degree of sophistication.

[8] Beridze et al. (1984: 38). The church is described as being a tetraconch, whereby four apses point in the cardinal directions of the compass. Although regarded as being entirely Georgian, there was a separate and parallel development in Armenia.

Image not available

next to the church. The rectangular church rises above the curtain walls and served as a keep if required. Even today its iron-sheathed door and high narrow lancet windows give it a fortified appearance. There has been no detailed study of the site published in the West and little is known of its builders or history. It almost certainly dates from the troubled times of the later Middle Ages, probably from the sixteenth century.

Whilst the fortified church at Dzhvari was built to act as a sentinel castle, the fortified church at the village of **Ninocminda**, 50km east of Tbilisi, was built to shelter the civil population. Eastern Georgia has always been the most prosperous part of the country and avoided the economic decline that affected the rest of Georgia following the devastation brought about by Tamerlane's invasion of 1386. By the early sixteenth century it had become the rich trading kingdom of Kakheti. Independence was short-lived; the treaty of Amasa in 1555 between the Turks and the Persians saw Kakheti handed over to Persian suzerainty and the Kakhetin kings only ruled with the permission of their Islamic overlords. The instability and lawlessness of the period resulted in the building of fortifications round churches and monasteries to protect rural populations from bandits and incursions from the south. The ecclesiastical fortress at Ninocminda, retaining its original sixteenth- and seventeenth-century fortifications, is the finest example of a number of such fortifications, despite the ruination of its church.

The irregular pentangular enceinte measures approximately 75 x 60m and is reinforced by D-shaped towers at the corners, with the exception of the southern apex of the fortress where a barrel-vaulted gatehouse passage runs between two drum towers built of well-coursed rubble and rough-hewn stone; the use of brick for the semi-circular caps of the battlements and the beehive machicolations along the walls not only show Persian influence but also contribute to the aesthetic appearance of this powerful rural fortress. The enceinte surrounds the far earlier church of St Nino, built in 575, and hence predating that at Dzhvari. It represents the first stage in the development of the four-apsed church. It was altered over the centuries, but was destroyed in the earthquakes of 1824 and 1848, and is now ruinous, with the exception of the western brick portico added in the late seventeenth century. Surprisingly, the walls and towers together with the bell-tower and bishop's palace survived the earthquakes.

The bell-tower is particularly noteworthy. Built of earthen coloured brick in the middle of the sixteenth century, it shows strong Persian influences in its external design and appearance, where cross motifs are surrounded by recessed and pointed archways. The style is distinctly Islamic. The belfry is of typical Georgian style, where the conical roof is supported on colonnaded arches resting on a rectangular tower of three storeys, each designed from the outset to provide accommodation and provided with niches and a fireplace. Abutting the middle of the north-eastern wall, it connects with the residence of the bishop, extended in 1774. The courtyard is covered in the accumulated debris of centuries and only the foundations of buildings against the north-western wall have been identified. Built on high ground above its village there are clear views over the plain to the south and the neighbouring country of Azerbaijan, the source of so much fear. Together with the cave-monastery of David Garidzia to the south, Ninocminda was an important fortification in the defence of eastern Georgia and protected one of its earliest churches. It has now become a place of joy, home to

Image not available

weddings, feast days and the festival of St Nino of Cappadocia, who introduced Christianity to the region in 330.

Of all the great architectural complexes in Georgia, none is more expressive, spectacular or anachronistic than the ecclesiastical fortified complex of the dukes of **Aragivi**. It was built to protect the Georgian military highway that leads over the Caucasus to Russia 70km north of Tbilisi.[9] Built at the confluence of the Vezath-Hen and Aragivi Rivers against a backdrop of densely forested mountains, it typifies the resurgence of Georgian architectural and masonic skills and the continuing unity of the Georgian Orthodox Church. The whole complex dates from the seventeenth century with one exception: the earlier sixteenth-century tower of four storeys with a corbelled conical stone roof, so typical of the tower-houses of the high Caucasian villages of eastern Georgia.[10]

The fortress consists of two wards: a lower, built on the flat area between the confluence of the two rivers, and an upper that gradually rises to the west. The lower enceinte is now overgrown and its walls have crumbled. Only the small Mkurnali (doctor) church remains standing and the internal arrangements of the lower courtyard are no longer discernible. In stark contrast the upper fortress retains all its fortifications and most of its buildings intact. Measuring 82m east to west and 40m north to south, the upper ward forms a narrow rectangle with a perimeter wall very similar to that at Ninocminda with a loopholed and crenellated parapet and the insertion of beehive machicolations. Reinforced by five towers and two bastions, the seven-storey rectangular Seupovari Tower is of interest in that it is the only building at present in the fortress able to accommodate the duke and his retinue. Three floors contain fireplaces, but it must have been a gloomy place as the rooms are only lit by narrow arrow slits. Positioned in the middle of the western landward wall between the two round corner towers, it is in effect the keep. In the middle of the southern wall is inserted a three-storey gatehouse showing Persian influences in the form of its entrance arch and the use of brick. The courtyard is occupied by two churches from differing periods of the seventeenth century, leaving little room for any other buildings. The smaller, brick-built western church of the first half of the century is older than its larger neighbour, the Ghvtismshobeli church, dedicated to the Mother of God. This well-built stone church contains seventeenth-century frescoes and carvings of a quality that amply demonstrates the traditional skills of the Georgian artisan and artist.

That the fortified complex has survived in such a good state of repair is, in part, due to a restoration in the eighteenth century and its occupation well into the nineteenth. Despite its seventeenth-century date and its later restoration it remains a throw-back to the Middle Ages in its military architecture. Only a number of gun-loops in the north-eastern part of the perimeter wall and its primitive bastion indicate any adaptation for the use of firearms.

[9] Although the name is a recent acquisition, this road through the Caucasus has been an important trade route since antiquity.

[10] Its presence here is something of a mystery. It was built in isolation of the high mountain villages where these towers originated and perhaps served them as an advance lookout post on the route northwards. That it was incorporated into the fortress is a testimony to its strength and the accommodation that it could offer to a small garrison.

Image not available

The fortified churches of Upper Svanetia

In the upper reaches of the western Caucasus Mountains lives a tough, hardy and warlike group of Georgians known as the Svans. This region is today as isolated as it has ever been and is cut off from the rest of Georgia for most of the winter, when it is only accessible by helicopter. Of the many invaders of Georgia, only Tamerlane endeavoured to invade these high mountain valleys, but achieved little for his efforts. The Svans, now as then, are to all intents autonomous. Until recently they lived in their small villages of tall war towers, built as much to protect themselves from the blood feuds between families as against any invader. Although professing Christianity, a strong thread of the cult of St George together with animal sacrifice pervade their interpretation of the Georgian Orthodox Church. Many of the villages possess small churches, mostly dating from the Middle Ages, containing early frescoes now undergoing identification and restoration. A number were fortified within an enclosure wall incorporating a fortified tower-house or war tower.

The village of **Ushguli** claims to be the highest continuously inhabited village in Europe and contains many war towers and fortified houses. The whole village is dominated by the La Maria church complex where the small eleventh-century church has a stunning brass and copper-sheathed door so typical of early Georgian repoussé work. Surrounded by a wall 2m high and 1m thick, it contains gun-loops and is separated from a five-storey war tower of typical Svanetian type, containing its war platform and first-storey entrance, by a fortified farmhouse. Although the complex has been abandoned, the church is still in use and contains twelfth-century frescoes depicting the warrior saints St George and St Theodore.

Summary

Christianity, adopted as the official religion earlier in Armenia and Georgia than almost anywhere else, has remained ingrained in both cultures, and much time and effort have been devoted to its ecclesiastical architecture. Many churches and monasteries became identified with the struggle for and the maintenance of independence. The decision to fortify so many sacred sites had a threefold effect: it helped preserve the churches and their architectural and artistic treasures; it facilitated the churches in acting as rallying points for scattered rural populations; and it demonstrated that Christianity was to be preserved at all costs. The mountainous nature of both countries was an undoubted blessing. Few invaders attempted to penetrate these remote regions and the difficult life produced a hardy people able to survive the many catastrophes that befell them. The use of trading skills, political expediency and a perennial striving for independence ensured that their differing brands of Christianity would endure.

13
ETHIOPIA

Introduction

Ethiopia is an ancient and beautiful country, believed by the Portuguese to be the land of Prester John in the high Middle Ages. It is a land of many contrasting enthnicities, cultures, religions and geography.[1] Almost unknown in Europe until the nineteenth-century scramble for Africa when it successfully resisted an attempted Italian invasion, this warlike empire of the Abyssinians has remained Christian in its central heartland despite being surrounded on all sides by Islamic states from the time of the seventh-century Arab conquests. It has been constantly assailed by outside enemies and plagued by repeated civil wars, yet it has managed to maintain its independence and is the only country in Africa never to have been colonised.[2] It is in the northern mountainous and highland region that Christianity has flourished since it became the adopted religion of the Axumite Empire in the fourth century.[3] Ethiopia had reached its zenith in size, wealth and culture by the start of the sixteenth century. It had remained, however, isolated from the rest of the world since the seventh century, apart from two narrow lines of contact: to Alexandria, the seat of the Coptic patriarch of Egypt, and to the Ethiopian monastery in Jerusalem, founded in the thirteenth century.[4] By the fifteenth century contact with Europe was increasing, particularly with the Portuguese, who were establishing a lucrative trade with Africa and were attracted by the prospect of forming an alliance with a powerful Christian country in the region as a counter to the increasingly belligerent Ottomans. They also sought to control the valuable spice trade from the East. The embassy of Dom Rodrigo de Lima arrived in Ethiopia in 1520 shortly after the fall of Egypt, parts of Arabia and the Yemen to the Ottomans.

Alarmed as much by a possible alliance between Christian Ethiopia and Portugal as by religious fervour, jihad was declared in 1527, a year after the departure of de Lima. Under the leadership of Imam Ahmed ibn-Ibrahim, better known as Gran the Left-Handed, the Muslim armies of Adel, long-standing foes of the Christian Ethiopians, ravaged and pillaged the whole of Ethiopia for over a decade in an unprecedented manner.[5] As Rey states, ‘the vast

[1] Three of the great monotheist religions of the world, Judaism, Christianity and Islam, existed side by side with pagan animists for centuries. The Ethiopian Jews or Felashas were airlifted to Israel during the last civil war in 1991.

[2] There was a brief Italian occupation between 1935 and 1941, although Italian rule did not extend much beyond the major towns on account of a spirited resistance movement.

[3] Lasting over a thousand years until the tenth century the empire had the city of Axum as its capital and occupied present-day Eritrea and Tigré.

[4] Until recent times the abuna or bishop of Ethiopia was always a monk from an Egyptian monastery and was appointed by the patriarch of Alexandria.

[5] Rey (1929: 119–25). Although Gran proved himself to be an exceptional military commander his

accumulated treasures of generations was lost (to the nation) for ever'. The devastation wrought by Gran's jihad between 1527 and 1543 resulted in the burning, looting and despoiling of almost all of the country's churches and monasteries and the removal of their treasures and burning of their libraries. Only the rock-hewn churches of Tigré and Lalibela escaped relatively unscathed.[6]

Documentary evidence before the journals of Father Francisco Alvarez, chaplain to the embassy of Portugal to the court of Prester John in 1520, is absent. His journals are of value in that they record the journey of the embassy through Ethiopia and the nature of settlements before the time of great suffering imposed by Gran. As Ruth Plant points out, the lack of contemporary records and of research, and Ethiopian persistence in the use of traditional construction techniques and layout make architectural dating very difficult and at times impossible.

The Portuguese expedition to Ethiopia and the fortress monastery of Debra Damo

The journals of Alvares, chaplain to Dom Rodrigo, give some insight into the architecture and buildings of the places he visited. He describes Ethiopian monasteries as 'all situated on the greatest and highest cliffs'.[7] What he was witnessing were the monastic complexes found on top of ambas, flat-topped mountains enclosed on all sides by precipitous cliffs and surrounded by fertile wooded valleys. Although access was very difficult most of these monasteries fell to Gran either by assault or by treachery. Only the monastic fortress of Debra Damo successfully resisted a year-long siege. Attempts by Emperor Lebna Dengel to break out of his mountain retreat were severely limited by his lack of soldiers and firearms. At best he could only hold Debra Damo and the surrounding countryside. Despatching Bermundez, who had remained behind when de Lima's mission returned to Portugal in 1526, to seek help from the king of Portugal in 1535, he was to die before the arrival of four hundred Portuguese musketeers at Massawa under the command of Christopher da Gama in 1541.[8] The courage, professionalism, confidence and beliefs of this small group of soldiers were outstanding. Although they regarded themselves as partaking in a crusade to 'die for the faith of Christ and the salvation

army contained 800 matchlock-men, to which the Ethiopian armies, devoid of firearms, had no answer.

[6] They are not consdered here as they were not fortified. The twelve rock-hewn churches in the provincial town of Lalibela, believed to date from the twelfth to thirteenth centuries, rank amongst the greatest of architectural and engineering feats anywhere in the world. They still remain central to Abyssinian Christianity. It may be that a number of monasteries on islets in Lake Tana were spared pillage by Gran and his soldiers but if so they remain so far unknown and unrecorded.

[7] Alvarez (1961: 74).

[8] Rey (1929: 133–40). Assembled at Goa in India, this was a well-chosen, equipped and disciplined force led by the fourth son of the navigator Vasco da Gama. Provided with over a thousand muskets, pikes, small cannons and soldier artificers, it travelled inland, using Debra Damo as a supply base en route.

of that kingdom' they had to travel through an unknown, savage and hostile environment before they could help the beleagued Christians. After a number of keenly fought battles they helped the Ethiopians to finally defeat Gran in 1543 but the price was great. Da Gama and over three hundred of his soldiers had been killed in the restoration of the Christian Ethiopian monarchy and the new emperor Galawdewos had lost many of his outlying provinces.

The contribution of these disciplined soldiers, who saw themselves as Crusaders, together with a few small cannons, cannot be overstated. Without their help Ethiopia would not have survived as a Christian country. Despite entreaties there was to be no further military intervention from Portugal, although the survivors of the expedition stayed behind and fought for Galawdewos in his constant battles against his Islamic enemies. Debra Damo had provided a safe haven for the wife and family of Emperor Lebna Dengel whilst he waged a guerilla campaign against Gran. It played an important role when the Portuguese came to the aid of the Ethiopians and remained as the Portuguese arsenal until a peaceful conclusion was achieved. Its inaccessibility ensured that it could be put to other uses and in the ensuing centuries it was frequently used as a royal prison where relatives of the monarchy perceived as a threat to the established order were incarcerated.

The site and its buildings are of paramount importance to our understanding of these monasteries. The work of Derek Matthews in 1948 has shed much light on the plan of the monastery and the architecture of its ancient church.[9] The amba of the monastery of Debra Damo is as remote today as it always has been despite its proximity to Axum. The flat top of the amba is roughly an isosceles triangle with the shortest side to the west measuring just over 300m and the other two approximately 800m. It covers an area of approximately half a square kilometre. Surrounded on all sides by sheer cliffs that are in the main unscalable, access is still by a winding and single-track path that stops approximately 15m below the summit. Further ascent can only be made by means of a rope hoist controlled by the monks; it proved to be the only way in which Matthews could get his materials and artisans into the monastic enclosure. Almost the whole of the amba top is cultivated, with fields for wheat, barley and millet, cattle pens, cisterns and wells, and would have been able to support a population of around three hundred.

The church is located in the eastern apex near to the entrance hoist. Surrounded by a circular stone wall over 2m high it also contains the belfry. The attached treasury building is also walled. To the south is a second smaller and later church. The monastic church, almost certainly the oldest in Ethiopia, was built by Emperor Gabra Maskal before the ninth century. It is a rectangular building measuring 20 x 9m. It is well described by Matthews, who was able to establish the continuation of old Axumite building methods, as depicted upon the stele in Axum. The technique involves the use of transverse and longitudinal timbers to stabilise a wall built of small rough-hewn stones set in an earth mortar. The effect is to produce alternating bands of stonework up to 40cm in height separated by timbers up to 15cm thick. The church is of two storeys, and is entered by a porch, a later addition to the western entrance to the nave. Separated from the nave by a wooden partition is a sanctuary of three rooms, the outer two

[9] Matthews (1949: 194) points out that 'amba' means hill top but also came to mean a hill-fort, whilst 'debra' (with a similar meaning) came to mean a monastery.

containing the tombs of Lebna Dengel (1508–40) and his son Galawdewos, kings at the time of Gran. The roof is flat and made of compressed earth on top of a wooden ceiling. The traditionally held view is that the carved steps built to give access to labourers and materials were removed on completion of the monastery and church.

The communal monastic buildings comprise a refectory and chapel, and individual houses typical of Tigré to house the monks. Each has rooms for study, prayer and rest together with a small, attached garden for the cultivation of vegetables.[10]

Along with other amba monasteries established around Axum as seats of learning and retreat it served as a centre for book and manuscript production and as a theological college for the preservation of Orthodox Ethiopian church tradition and liturgy.

Debra Damo still functions as a monastery much as it has done for fourteen hundred years, and there are now about a hundred and fifty monks in residence. Its isolation and inaccessibility have made active fortifications superfluous: nature has ensured its inviolability to all, with the solitary exception discussed above.

The influence of the Jesuits between 1543 and their expulsion in 1633

Although the musketeers had saved Christian Ethiopia the Jesuits nearly destroyed it. Their missionary zeal and persistence resulted in a serious attempt to convert the emperors and their followers to Catholicism. Although they were misguided in their belief that this could be achieved amongst a people with long-established but differing Christian beliefs they did introduce building techniques and architectural styles which were to be developed during the Gondarine period of the seventeenth and eighteenth centuries. Of particular importance was the introduction of limestone mortar. Their religious contribution has long since vanished; their architectural contribution has its legacy in Gondar.

Although the emperors had no fixed capital until the foundation of Gondar in 1636 and buildings other than churches were very simple the Jesuits built a monastery at **Fremona** near to Adowa in north-east Ethiopia.[11] Its not only precarious but also often dangerous standing led to its fortification. Early in the seventeenth century substantial fortifications were in existence and that the Jesuits had erected a very strong monastery, 'almost a fortress surrounded by seven or eight bastions with lofty curtains between them'.[12] Although the Jesuits succeeded in converting Susneyos and many of his subjects, the religious discord this produced was to result in the expulsion of the Jesuits from Ethiopia in 1633. Emperor Fasiladas ordered the execution of any Jesuits refusing to leave and the seizure of their small cannons and firearms at Fremona, probably left over from the expedition of Christopher da

[10] Although this is a similar arrangement to the Carthusian Order in Europe, the architectural arrangement at Debra Damo is very informal.

[11] The peripatetic nature of the Ethiopian court arose from a number of factors. Military campaigns were a permanent feature of the emperor's activities and he also travelled throughout his kingdom to establish his authority, collect taxes and dispense his justice. The huge retinue that travelled with him soon exhausted local resources and forced it to move on.

[12] Rey (1929: 217).

Gama, is a further indication of the need for the Jesuits to fortify and defend their monastery. Their expulsion led to its ruination and today it is nothing more than a huge pile of rubble beside the Axum to Adowa road, with no recognisable features. It has never been examined or excavated.

The architect was almost certainly Father Pero Paes, a Jesuit priest of exceptional talents and the converter of Susneyos to Catholicism. He led his mission from India in 1603 and spent nineteen years in Ethiopia until his death in 1622.[13] Described as painter, mason, carpenter, sculptor and smith he built the only Portuguese architectural structures of significance that remain today, culminating in the palace church complex at Old Gorgora, built for Susneyos in the first quarter of the seventeenth century. His cathedral of **Maryam Gimbe** is the solitary monument of this period. Although now much ruined, enough remains to give an idea not only of the power of the complex but the excellence of its decoration. Using a defensible spit of land jutting out from the northern shore of Lake Tana, the rectangular cathedral with its cloister is a close neighbour of the emperor's palace of two storeys. The Jesuits had found a quarry of white stone and this was used to build the complex. One of the side walls still stands to its full height, probably because it is attached to a staircase tower built of fine ashlar. Although the church is more crudely built, it is decorated with tiles in the shape of roses and fleur-de-lys with columns, arches and round decorated windows.[14] Little else remains from the castle church built between 1619 and 1621 other than piles of rubble. The complex was originally walled and cisterns provided a water supply. The ruins of a round church, found in the compound, are believed to be of a later date. Although the architectural remains at Gorgora demonstrate undoubted European styles and decoration, they are not replicated elsewhere in Ethiopia.

The palace castle of Fasiladas and Debra Berhan Selassie church, the Trinity church of the Mountains of Light in Gondar

Surrounded on three sides by mountain ranges, the town of **Gondar** lies at an altitude of 2300m and rises above the fertile Dembia plain that extends southwards for 65km to Lake Tana. It was chosen by Emperor Fasiladas (1632–67) as his permanent capital in 1636 and transformed from a small village into a capital able to administer his sizeable empire. It rapidly became a rich trading centre with links to the Sudan in the west and the Yemen, Arabia and India in the east. The wealth generated enabled him to encourage the arts, especially music, poetry, painting and manuscript production. It was here that he built his palace castle, the first secular building of any size built by Ethiopians. With this as a precedent his successors added further castles and palaces to produce a fortified imperial city that has survived largely unscathed into the present. His palace is an important building and incorporates many

[13] With him travelled other Jesuits and a number of lay brothers and masons, one of whom, probably Indian, is credited with the first manufacture of mortar in Ethiopia around 1621. The prior use of mud and chaff as a binding agent for stone walls probably explains the ease with which Gran could pull down the existing churches, a process aided subsequently by the yearly heavy rains.

[14] Pankhurst (1955: 353–4) concludes that the tiles were cast in a mould rather than carved.

decorative features from the earlier rock-hewn churches that give rise to many familiar features of Ethiopian architecture.[15] Although built by the son of Susneyos, it was constructed after the Portuguese had been expelled from Ethiopia and there is speculation about the architectural influences and who the builders were.[16] Both Pankhurst and Jager seek prototypes in the rock-hewn churches excavated centuries earlier. The transition to the castle of Fasiladas without any interveaning buildings is difficult to accept. What appears more likely is that the first castle was built not by Ethiopians but by Indians who had arrived in Ethiopia, possibly in the service of the Jesuits. The discovery of limestone and the ability to make mortar was instrumental in enabling a number of civil buildings to be constructed by the Jesuits. Many bridges built by them still stand and function, for example. In contrast their other buildings were simply abandonned. The castle of Fasiladas and the small forts of northern India moreover share similarities. All are simple square fortifications with round corner towers; simple to build, they are also simple to replicate. In addition there are no indications that there was much in the way of further development and many of the later castles of Gondar follow a similar pattern. Without the use of mortar they could not have been built.

Measuring 25m square, the two-storey palace has round towers of three storeys at each corner tapering slightly to a cupola. String courses delineate each storey and the flat roof of the palace has a battlemented parapet. In the south-west corner a rectangular tower rises for a further two storeys. Also battlemented, it commands the surrounding countryside. The presence of ground-floor doorways and first-storey balconied windows reduces significantly its defensibility and its role as a castle. Its size and architectural style, in contrast to any contemporary building, however, marks it out as a seat of power built for an emperor determined to bring prosperity and unity to a country weakened after over a century of warfare.

Although built of rough-hewn basalt in a lime mortar that has proved very durable, this fine building is embellished with the use of polished red tuffa highlighting the archways of doorways and windows. The use of well-crafted wooden balconies reached from the large windows of the first-floor hall together with external staircases on the rectangular tower adds to the beauty of the castle. Probably whitewashed in the seventeenth century, it would have provided a magnificent backdrop to the colour of the Ethiopian court.[17]

Fasiladas also oversaw the building of churches and other castles. In Gondar alone there were seven churches built during his reign and by the nineteenth century forty-four had been built. All bar one were destroyed in 1881 when the town was sacked by the invading Mahdists, fanatical Islamic soldiers from Sudan. The sole survivor, **Debra Berhan Selassie**, the Trinity church of the Mountains of Light, sits on the crest of a hill 1km to the north-east of the imperial city. Founded during the reign of Iyasu I (1682–1706), the original church was

[15] Ibid. 369.

[16] Jager and Pearce (1974: 38–40) and Pankhurst (1955: 368). Jager and Pearce do, however, record that a Yemeni diplomat reported in 1648 that the architect was an Indian.

[17] Pankhurst (1955: 368) describes how it has survived the earthquake of 1704, the civil wars of the eighteenth and nineteenth centuries, the savage invasion of the Dervishes in 1881 and a bombardment by the British in 1941.

round; it was destroyed in the earthquake of 1704. The present rectangular church was probably constructed in the late eighteenth century. In some respects it resembles the church of Fasiladas in Axum, although it now incorporates a roofed cloister running around its exterior added somewhat later.

Like many built Ethiopian churches it is awash with brilliant colour internally. Paintings on cloth are glued to the side-walls, those on the right depicting the life of Christ, those on the left St George and a number of Ethiopian emperors, including Fasiladas and Iyanos. The ceiling is supported on wooden beams and is beautifully painted. Variously coloured geometric patterns decorate the surface of the beams whilst the soffits are covered with rows of faces of winged angels with the wide eyes and facial expressions so loved by Ethiopian religious artists and illuminators of manuscripts.

The fortifications of the church are of uncertain date. They were certainly there when the Dervishes attacked the church and were repulsed in 1881. The style of the twelve towers, which reinforce the inner enceinte, is very similar to those of the castle of Fasiladas.[18] The towers vary in size and height; some are of two storeys, others of three. All taper towards the top but they are squatter than the corner towers of the castle. In good repair, many of the towers are roofed with a cupola, although one at least is crenellated. The inner entrance doorways are small, now no higher than 1.5m, and give access to rooms with a diameter of some 2.5m, reputedly the lodgings for monks and the storage of ceremonial artefacts. The towers are unevenly distributed around the perimeter for no discernible reason. The connecting curtain wall is now devoid of crenellations but stands to a height of over 3m. Both towers and the wall are built of rough but well-coursed basalt embedded in a lime mortar.

A three-storey entrance gate with double doorways faces the western façade of the church. A photograph in Pankhurst shows the roof to have a crenellated parapet and wooden balconies projecting from the inner wall, now no longer present. The influence of the castle of Fasiladas is easily identified. Almost directly opposite is a small postern gate in the eastern curtain. A wall runs diagonally north to south, bisecting the churchyard and enabling the aristocracy to be separated from their subjects. The whole ensemble is completed by a vaulted building abutting the southern wall that serves as the treasury and the Bethlem for the baking of bread for Holy Communion. Originally surrounded by a high outer wall this is now reduced in height and devoid of towers and an entrance gate.

Once surrounded by the homes and gardens of the Christian congregation that were destroyed by the Dervishes, the fortified church now lies in the tranquil shade of mature trees that hide its violent past.

The fortified rectangular and round churches

Although Debra Berhan Selassie church is the finest example of a fortified church remaining in Ethiopia, many others were fortified, usually to a much lesser degree. Following the re-establishment of the Christian empire in Ethiopia the destruction meted out by Gran ensured that many churches needed to be rebuilt. Previously churches had been rock-hewn or built on

[18] It is claimed that they represent the twelve Apostles and the gateway Jesus.

Image not available

the basilican plan. Three other forms now appeared. Pankhurst reproduces the eyewitness account of Father Paes who had travelled extensively in Ethiopia; he observed that in addition to the basilican churches some were round, some square and some rectangular. He also mentioned that some seemed to him 'to resemble a fortress in their massive character'.[19]

In general terms the rectangular church is an earlier development than the round and is more common in the north of Ethiopia, whereas overall there are more round churches. Examples of both rectangular and round churches with attendant fortifications are found in the highlands but the numbers cannot even be guessed at. Of those round churches visited all are enclosed within at least one substantial oval or circular wall built of dry stone or field-stone in a mud mortar; the entrance is a gateway, often of two storeys. Its function is almost certainly defensive, probably, however, to protect the graves from the attentions of wild animals.

Impressions

Ethiopia contains thousands of churches that have yet to be studied. Despite long periods of warfare and civil unrest many churches contain wall paintings, illuminated manuscripts and records seen by few. Many date from centuries ago. There are, however, enough churches that remain fortified and are accessible to suggest that there may be many more churches and monasteries that received similar fortifications even if only against wild animals and Shifta brigands, especially in rural areas.

Such has been the suffering of this magnificent country and its peoples for hundreds of years that it faces many important tasks and lacks the resources required to survey the vast numbers of churches and monasteries. A flight over the Highlands reveals large numbers of isolated and walled round churches. Jager, Pearce and Plant have shown what can be achieved by persistent fieldwork. The latter has demonstrated that there are archives, so far inaccessible, kept by church authorities in the provincial townships. It is impossible, however, to know the damage done during the civil wars of recent times and the extent of the loss of such archives.

[19] Pankhurst (1955: 340).

14
ISLAM I

Introduction

Byzantium had long perceived that the greatest threat to its Middle Eastern and Egyptian provinces came from the Sassanian Empire, which coveted the riches of Syria, Asia Minor and Egypt. So concerned with each other were these two great empires that they totally neglected, and failed to recognise, what was happening in the Arabian peninsula.

By the time of his death in 632, Muhammad had succeeded in unifying nearly all the tribes of Arabia, spiritually and politically, into the embryonic Islamic nation, soon to unleash its enormous, but as yet dormant, military might on a world exhausted by almost continuous conflict.

The success of the Arab army in Palestine, at the Battle of Ajnadyn in 634, over a punitive Byzantine expeditionary force, led to a series of brilliant military campaigns; armies spread out from Arabia: westwards into North Africa: eastwards into central Asia. Expansion was rapid; Tripoli had been reached in 644, although it was to be a further one hundred years before the rest of North Africa and Spain became part of the Islamic Empire. Kabul, in Afghanistan, fell in 664, opening the way to India. To the north, a contracted Byzantine Empire continued to hold out. In just over a hundred years the Islamic Empire stretched from northern India in the east to southern France in the west.

The failure to take Constantinople in the eighth century saw a change of tack; Muslim rulers opted for consolidation rather than expansion.[1] Temporary camps for a rapidly advancing army needed to be replaced by more permanent fortifications for occupying garrisons, especially on the borders; lines of communication had to be secured and the Arab minority protected.

The influences of early Roman and Byzantine fortifications

As Cresswell points out, fortifications were all but unknown in Arabia before the Islamic conquests.[2] The early invading armies, who had travelled north into Syria, came into contact with the Roman Byzantine frontier forts which ran in a chain from the Gulf of Aqaba to Palmyra, north-east of Damascus. Known as the castra of the Roman Limes Arabicus, originally built at the time of Trajan and Diocletian, they had been maintained and garrisoned for centuries. The basic plan had been replicated throughout the Roman Empire; those inherited by the Byzantine Empire underwent major renovations and additions, especially during the

[1] Hillenbrand (1999: 93).

[2] Cresswell (1952: 89–91). This is still the best paper on the subject of Arab fortifications before 1250. It does, however, need updating in the light of new studies.

reign of Justinian in the sixth century. These forts were square or rectangular, with square or round corner towers and half-round or square interval towers, designed to accommodate the artillery of the period, surrounding a central courtyard. There was a solitary entrance, frequently defended by a portcullis and often integral with an interval tower. Internally they contained barracks, officers' quarters and rooms for the quartermaster's stores and equipment. Great attention was paid to cisterns for the storage of water and in the provision of wells, especially in arid regions.

It is from the early military architects of these enduring forts, particularly those of Justinian, that later generations of military engineers, both Islamic and Christian, took so many ideas in their development of the fort and the castle.

Cresswell argues that some of the frontier forts in Syria were first used by the Umayyad princes, and their soldiery, who gleaned the necessary knowledge to enable the Arabs to construct their own fortifications, using the huge pool of skilled builders available to the conquerors. He cites the **Qasr al-Hair West**, built by Caliph Hisham in 727, on the road from Damascus to Palmyra, as the first of the purely Islamic fortifications to be built. Hisham had chosen to build what is considered a fortified palace on a small knoll in the Syrian steppe, incorporating the tall watchtower of the Justinian monastery, previously occupying the site. This is of importance as it contained an earlier machicolation, a defensive projection, overlooking and protecting the only entrance to the monastery. It is considered to be the forerunner of a form of military architecture soon to become commonplace in Islamic fortifications but not to reach Europe until the twelfth century.[3] The contemporary fortified palace of **Qasr al-Hair East** comprises two adjacent buildings; it represents a stage in the development of Umayyad military architecture, incorporating, as it does, machicolations. Greatly influenced by the architecture of the earlier frontier forts, they follow a similar ground plan and became the basic template for the future development of Islamic architecture, encompassing, with necessary modifications relative to function, the ribat, mosque, caravanserai, khan, madrasa and khanaqah.[4]

The eastern borders of this new Arab Empire, before further expansion into Asia and India, coincided with those of the Persian Sassanian Empire, and little in the way of new fortification was needed; existing defences were adequate. This was not the position on its borders with the Byzantine Empire; the Syrian, Palestinian, Egyptian and North African provinces had been lost but the Greek Byzantine core was far from moribund. It still posed a considerable threat to Islamic territories, especially to Syria and, via its naval strength, to North Africa, which was also threatened by the Berbers, nomadic camel-herding pasturalists from its neighbouring inland, mountain and desert regions.

The caliphs countered the threat, in part, in a uniquely Islamic way; architectural, secular,

[3] The palace gateway had a façade, decorated in carved stucco, believed to be the earliest example in Islamic architecture; fortunately still preserved in the National Museum in Damascus.

[4] Hillenbrand (1994: 334) points out that Islamic architecture uses the same form for different functions. He is of the opinion that the palace forts of Cresswell may well have served as caravanserai (q.v.), and that the influence of the Roman castrum was unlikely to have spread beyond Roman territory in the Near East.

Image not available

military, religious and conceptual considerations were brought together to produce the ribat.

It is difficult to define what, at first glance, appears to be a distinct morphological fortification, with its uniquely Islamic garrison, the Murabitun ('men of the ribat'), a confraternity of the 'Guardians of Islam'. Our knowledge of the role and function of the ribat is derived, to a large degree, from literary sources, although recent excavations in Tunisia and Spain, together with the work of Neji Djelloul is altering Western concepts of this specialised fortification. Built in their thousands throughout the Islamic Empire, over a period spanning four centuries, especially on the borders with Byzantium, in Central Asia, North Africa and in the Iberian peninsula, surviving examples are few. With one exception (the ribat of Guardamar del Segura, in Spain), all are to be found on the coast of the Maghreb[5], especially Tunisia; dating just before and during the Aghlabid dynasty (800–909); a time of great prosperity and territorial ambitions.

Carole Hillenbrand proffers a simple definition. Writing about Arab fortifications at the time of the Crusades she defines the ribat as a 'frontier fort in which jihad fighters lived according to strict religio-military rule'.[6] Djelloul widens the definition substantially, after studying the fortifications in Tunisia, especially of Sousse and Monastir, following recent archaeological discoveries. Whilst happily accepting that ribats existed in isolation from other fortifications and buildings, he postulates that ribats were also part of a conglomeration of buildings, serving at times to house vast numbers of Murabitun and to be integral parts of town fortifications. He does not believe that the term ribat should be confined to a specific building type, suggesting that these conglomerations were, in effect, 'une ville-ribat' specifically to accommodate the ascetic warrior monks.[7] This theory will be explored further when the fortifications of Sousse and Monastir come to be examined in detail.

Ribats have been likened in the West to fortress monasteries and their garrisons compared to the warrior monks of the later Christian military orders. Whilst there are undoubted similarities there are also fundamental differences. Before the typology and role of the ribat are considered, it is necessary to understand the nature of jihad and the part played by the Murabitun.

Jihad, the 'path of God' and the role of the Murabitun, the 'soldiers of the Faith'

Ribats can be considered to be successors to the Roman castra and the Byzantine frontier forts. They came into being around the eighth century when the frontiers of the Islamic world became stabilised and secure lines of communication were needed. Placed on the borders of lands threatening Islam and the less secure regions of newly conquered territories, they needed tough, disciplined and committed garrisons. The formal concept of jihad, or Holy War, waged by the followers of the Prophet Muhammad against the infidel had by this

[5] That part of North Africa now comprising the countries of Libya, Tunisia, Algeria and Morocco.

[6] Hillenbrand (1999: 100–1).

[7] Djelloul (1999: 42–53).

time become inculcated by the Qur'an and tradition into the Islamic consciousness; the Murabitun were ideally placed to promote this notion. The first in the class of warrior monks, they predate their Western counterparts by four centuries. Although military skills and pious asceticism were very similar, there was one fundamental difference; unlike in the Christian orders, a Murabit served the cause of Allah for an agreed and variable period of time; unlike the Christian monastic orders, Islam has no concept of permanent vows.[8] Elena Lourie points out that this notion of 'stints of service' is the most striking feature of the ribat. Service as a Murabit in the ribat was a voluntary act of piety for a variable and agreed period. Recruitment was never a problem as membership of this brotherhood conferred considerable benefits both secular and religious upon the volunteer; calling upon others to join the Murabitun was especially meritous and ensured a constant supply of volunteers. The opportunity for a pious and ascetic life, together with the very real chance of martyrdom, ensured the commitment of these Arab holy warriors to jihad.[9] As a member of the jund, the ruling Arab elite, albeit with a duty of care to the neighbouring indigenous population whether Muslim or not, service in a ribat was accepted as a worthy substitute for prayer and fasting. It also ensured that the warrior monk would also gain entry into paradise, whether martyred during jihad or not.

The initial role of the Murabitun was to take the leading part in the defence of the borders of Islam and, on occasions, be part of expeditionary forces seeking to enlarge the world of Islam. Jihad could therefore be both passively and actively engaged in. At the beginning, there was no missionary role, but this changed when the indigenous population started to convert to Islam. When Arabic was adopted as the universal language of the lands of Islam and non-Arabs became assimilated, proselytising became increasingly important and with the inroads made by the heretical Shiites, the Murabitun increasingly preached the Faith, seeking conversions to the orthodox Sunni sect of Islam.

Djelloul has widened the definition of the ribat, at the same time arguing that the Murabitun took on additional duties. Those serving in coastal ribats and ville-ribats acted as coastguards warning and protecting the civil population against raids by the Byzantine navy where possible. They also accepted responsibility for the care of refugees and victims of such raids, finally involving themselves in the negotiations for the ransom and release of Islamic prisoners. They became military instructors, training a citizen militia to defend the walled cities springing up in the wake of conquest, frequently in the vicinity of their ribat. They also played an important role in the training of volunteers for jihad.[10]

Despite the widening role of the Murabit, he remained primarily a warrior monk. Asceticism and Islam were central to his main purpose of defending the Dar al-Islam, the 'Abode of Peace', against the infidel, whether by passively defending its borders or by actively pursuing an offensive jihad into the Dar al-Harb, the 'Abode of War'.

[8] Lourie (1982: 167–8, 170). She also argues that, even if temporary service was borrowed from the Murabit, it could never be applied to warrior monks, only to lay brothers, citing the attachment, to the Order of the Temple, of knights who served for a short period only.

[9] Lapidus (1991: 368).

[10] Djelloul (1999: 44–6).

It is widely accepted that ribats existed in large numbers but it is not known how large the brotherhood of the Murabitun became, although other classes of warriors are recorded as occupying these frontier Islamic castra. According to Carole Hillenbrand, many of the frontier forts, especially in Asia and the Middle East, were garrisoned by Ghazis who waged jihad with great religious fervour under a strict code of conduct. Like the Murabit, he was a volunteer, but did not belong to a strict Islamic confraternity; indeed there is evidence that in the eleventh century 'lightly Islamicised Turkoman nomads' served as Ghazis on the borders of Seljuk territory.[11] The Ghazi was recruited for specific campaigns, returning home on their completion, unlike the Murabit who remained in his ribat for his agreed length of service, resuming his spartan life of prayer and devotion.

In the western part of the Maghreb, particularly in Morocco, there arose in the early part of the eleventh century, a fundamentalist and fanatical dynasty known as the Almoravids. Their name derives from the Arabic, 'al-Murabitun', which has been translated as 'the brotherhood of warrior-monks'. Under the rule of Yusuf ibn-Tashfin, they were invited into Andalusia, in an endeavour to provide opposition to the Christian Reconquest and unit the petty kingdoms of the Taifa period. Although the Almoravids were Islamicised Berbers from the Sahara, their name suggests that the confraternity had spread throughout the Maghreb, if not the whole of the Islamic world, by the middle of the eleventh century.[12]

The role of the ribat

Before considering the morphology of the ribat and its specialised construction, necessary to fulfil its numerous and allied functions, it is appropriate to consider what they were. First and foremost, ribats provided a secure, fortified and exclusive environment for Islamic devotees, especially the Murabitun, who undertook warfare on behalf of Islam interspersed with periods of religious retreat. Although regarded by many writers in the West as a fortress monastery, this is something of a misapprehension. The fundamental difference between the Islamic and Christian warrior monks can be paralleled in their buildings. The Christian conventual castle and the fortress monastery accommodated a stable and life-long community; the ribat did not: indeed, the idea of monasticism in Islam rejects the notion of a lifetime commitment and devotion.

The ribat catered for the religious needs of the warriors. Cells, a refectory, cloisters and a prayer hall or mosque were mandatory to enable an ascetic and pious lifestyle to be followed; rooms for equipment, supplies and stabling needed to be incorporated to facilitate their military purpose. This it could do in isolation from other ribats and Muslim fortifications, but it was nearly always found in association with other ribats, either as part of a chain along a border or coast, or as part of a ville-ribat. Defined by Djelloul as a cluster of these buildings, often in close association with other fortifications; recent excavations in Monastir, in Tunisia, show the relationship.

They acted as arsenals and mustering points for warriors gathering for jihad, a role that was reversed when their environment was under attack or threat. At these times, they provided

[11] Hillenbrand (1999: 441). [12] Stierlin (1996: 234).

shelter and a place of refuge for the civilian population, often serving as the kasbah, or citadel, of a fortified town.

Whether part of an offensive or defensive line of fortifications, their lookout role required secure lines of communication. The Nador tower, the tallest of the four corner towers, proved to be very successful in this role; developed from Umayyad and Abbasid structures in the Middle East, they served to send signals, usually by the means of light from beacon fires from ribat to ribat, often utilising interval towers. Positioned on coasts, trading crossroads, river fords and mountain passes they were ideally situated to act as intelligence and relay centres It is recorded, for example, that, using coded signals, a message could be sent from Alexandria in Egypt to Ceuta in Morocco during the course of a night. They provided accommodation for government personnel en route to new postings and served as reception centres for returning or ransomed prisoners of war. Those, in the hinterlands, also served to protect and shelter merchant caravans, whilst those in coastal towns protected the harbour.

Whilst Arab geographers and historians frequently mention the ubiquitous nature of the ribat, literary sources make no mention of their evolution or military chronology. Information on the financial provision to run and maintain them is more forthcoming. Frequently endowed with lands by central government and private personages, they became centres of agricultural estates, the hima, growing cash crops and developing animal husbandry; those on the coast were granted extensive fishing rights and licence in addition. Grants were given to levy taxes upon merchant fairs and in the bazaars. Like their Christian and Buddhist counterparts merit was conferred on benefactors and patrons and gifts were lavishly given; during the Aghlabid dynasty in Ifriqya, the Muslim nobility was encouraged to found ribats in the towns and develop the ville-ribat.

The architecture and typography of the ribat, exemplified by the ribat of Sousse

That so few ribats, out of the many thousands purportedly built, remain today, has been commented upon already. The ribat of **Sousse**, on the eastern coast of Tunisia, is believed to be the most complete example still in existence, despite extensive renovation in the later part of the last century. Recent excavations in the neighbouring town of Monastir have confirmed the basic plan, replicated throughout the Tunisian littoral and probably throughout Islam. All date from the Aghlabid dynasty which ruled in Ifriqya in the ninth century; the remarkable uniformity of plan and form adds credence to the belief that the ribat of Sousse has remained true to its original form. Not only is it the most complete of these religious fortifications to have survived, but it is said to be the oldest Islamic building in North Africa. Originally the work of the Abbasid ruler, Yazid ibn-Hatim al-Muhallabi, it dates from around 796, possibly surviving because it was used, along with the neighbouring fortified mosque, to protect the later arsenal until the late Middle Ages, then becoming, with additions and minimal alterations, a merchant warehouse. The town of Sousse, now heavily industrialised, retains its fortifications from mediaeval times; surrounded by its encircling wall, some 2.25km in girth, it gradually rises from the harbour to the kasbah, which contains the Khalaf tower. Having escaped much of the concrete redevelopment that has blighted so great a part of the Islamic world, it remains

a legacy to its mediaeval past. Although now surrounded by restaurants and souvenir shops, careful and sympathetic restoration gives us a rare insight into the morphology of a ribat; only the parapet with its crenellations are modern and these are based on similar structures from the Aghlabid period.

The accretions of centuries have been removed to expose the ribat; architectural features developed in Syria during the Aghlabid period are instantly recognisable. From the outside the light brown sandstone blocks, carefully coursed, impart a warmth today that belies its militant and ascetic past. Enclosed within the town walls of 859, the ribat, constructed on top of the ruins of a sixth-century Byzantine fort, is a two-storey crenellated building, approximately 38m square. Strengthened by round corner towers except at the south-eastern angle where the corner tower is square and solid to wall height. It supports a cylindrical tower surmounted by a cupola. Access is reached from the wall walk by a spiral staircase. Known as the Nador tower, dating from 821, it served as a lookout tower, signalling beacon and possibly as a minaret. In the middle of the north, east and west curtain walls solid semi-circular buttress towers rise a little above the battlemented enceinte. The solitary entrance is by way of a square interval tower in the middle of the southern wall.

Built of regular courses of rough-hewn ashlar sandstone blocks, no consideration was given to decoration with the exception of the archway of the southern gateway.[13] Here, classical marble columns from the Roman epoch, that on the left fluted, stand on square podiums. The finely carved capitals and partial lintel above (also delicately carved and from antiquity) are surmounted by voussoirs so arranged as to be instantly recognisable as a very early version of the colloquially known Moorish or 'horseshoe' shaped archway. This fine portal leads to the purely military entrance passage; barrel-vaulted, with guard-rooms arranged on either side, additional defence is provided by a portcullis and two arch machicolations to enable defenders to rain down missiles on an enemy attempting to breach the gateway and held up by the portcullis. Further obstruction is provided by a double-planked, iron-sheathed and studded door.

The enceinte surrounds a central courtyard containing a well. Against the four walls at ground-floor level are arranged rooms, reputedly for military supplies and stores. Examination of a number of rooms reveals (as is confirmed in a number of ribats where the ground-floor arrangements exist, especially in Monastir) some of these rooms provided with stone benches and water channels, suggesting that the kitchen, refectory and stables were also on the ground floor. An arched cloister runs around the outside of these rooms and provides the walkway for the first-storey cells for the Murabitun, which are placed against all but the southern wall. Access to these cells, the walkway and the Nador tower is by means of staircases from both the south-eastern and south-western corners of the courtyard. Against the southern wall, above the gateway and the guard-rooms, the prayer hall of the mosque runs the whole length. Interestingly, it is pierced for the movable missile-firing artillery of the early Middle Ages. The loopholed crenellations that run round the external wall of the fort also run round the internal edge of the walkway so that defence was sustainable even if the courtyard was penetrated.

The spartan, simple lifestyle of these 'Defenders of the Faith', is echoed everywhere in this

[13] The blind arcading running all round the parapet under the string course of the loopholed crenellations of the southern wall and towers is part of the modern restoration.

building; whilst it would be able to accommodate a significant population, if necessary, the twenty or so cells would indicate a comparatively small resident garrison.

The ribat at Sousse is a near neighbour to the contemporary fortified mosque and the town walls near to the harbour. Djelloul is of the opinion that it is the sole remaining ribat of the ville-ribat of Sousse, the most important naval base in Ifriqya during the Aghlabid period, and cites other ribats that existed in Sousse and nearby al-Kantawi.[14] There are no remains of any of these associated ribats today; this is not the case at Monastir, however.

The ville-ribat of Monastir, one of the 'Gates of Paradise'

Situated on the coast, less than 25km south of Sousse, the ribat of **Monastir**, now part of the kasbah, was built in 796 by the Abbasid governor Harthama ibn-Ayun. Much altered, the ribat underwent considerable change in the eleventh century, when it became enveloped in a much larger enceinte. Reinforced with square flanking towers, it became the citadel of the walled town and received many additions to its fortifications over the ensuing centuries, culminating in the eighteenth-century artillery bastion at its north-eastern corner, which overlooked the harbour.

Approximately one third of the eighth-century ribat still remains; fortunately the southern wall remains in its entirety, replicating, faithfully, the Nador tower, southern gateway and the prayer hall of the ribat of Sousse. Archaeological evidence supports the view that, although somewhat smaller (33m square), it exhibited, in almost every detail, the same architectural features. Like Sousse, it lies close to the Friday mosque. The decision in the early part of the 1960s to demolish much of the medina of Monastir, especially that part around the kasbah, revealed the ground plans of two nearby ribats dating from the same Aghlabid period. Archaeological excavations on the small islet of Sidi al-Ghadamisi overlooking the harbour has revealed the foundations of a further ribat. All conform in almost every detail to the ground plan of the ribat of Sousse. It is this grouping of mainland ribats, surrounded by a fortified enceinte, enclosing the Friday mosque, barracks and lodgings specifically for Murabitun that Djelloul has called the ville-ribat, a township designed to accommodate only the warrior monks.

The ribats and ville-ribats of the Ifriqyan coast

The Aghlabid period coincided not only with a period of great prosperity, but also with a period of increased military activity in the Eastern Mediterranean. Jihad had been proclaimed by the Aghlabids as a means to further their designs on Sardinia, Sicily, southern Italy and Malta. The Byzantines responded by sending their still powerful fleet to harry the North African coast and disrupt the preparations of the Murabitun and the levies of the Aghlabids. As a consequence, the embarkation ports and harbours received their villes-ribats, from Gabes in the south to Bizerte in the north, connected by a chain of individual ribats all round the coastline. From the evidence of the recently discovered ribat of **Lamta**, 12km south-east of

[14] Djelloul (1999: 42).

Image not available

Monastir, it seems probable that there were no departures from the basic template during the reign of theAghlabids. The removal of centuries of debris and later village housing has revealed a ground-floor layout identical to those already described.

Summary

All our knowledge of the ribat comes from Arab geographers and historians who have concentrated on the conceptual ideology at the expense of the typology and history of these fortifications, together with the scant archaeological remains to be found in Tunisia. These remains, however, belong not only to the comparatively short period of Aghlabid rule but to a small geographical region.

That so few exist today out of probably thousands that were built between the eighth and twelfth centuries needs explanation. Certainly the archaeological evidence does not support the frequent mentions made by early Arab geographers that the ribat was widespread throughout the conquered lands in the early years.

Certainly, in central Asia and the Middle East, they ceased to have a function when different forms of fortification, in particular the walled town, were developed to protect the assimilated urban population. It has already been mentioned that there are many similarities between the ground plans of various Islamic public and religious buildings serving differing functions, and it is entirely conceivable that many were converted to other uses, particularly into caravanserais, which are found from Afghanistan to Turkey. The ground plans are very similar, conversion would have been very easy, and in those remaining today they share many of the external features of the Tunisian ribat.

In many instances they may have simply disappeared. The stone construction in Tunisia has contributed to the preservation of the ribats of Sousse and Monastir; in many parts of central Asia the favoured building block is the sun-dried mud-brick. It may be that many buildings have just been allowed to disintegrate, and have succumbed to the forces of nature.[15]

Djelloul has stated that the ribat should not be considered as a specific building type; archaeological evidence to support this opinion has recently come to light in Spain. That ribats were built for the Murabitun in the Iberian peninsula from the ninth century has been well documented. It had been thought that the only remains were in Spanish place names containing the word 'rabit', the colloquial form of 'ribat', the Christian Reconquest obliterating them completely. They were redundant and difficult to convert to Christian usage, and allowing them to remain would have been a constant reminder of the power of Islam.[16]

[15] The isolated central Asian city of Khiva, now in Uzbekistan, maintained its sun-baked mud walls well into the twentieth century, sufficiently strong to resist a siege by 15,000 Turkomans in Feb. 1924 until relieved by the Russians. Allowed to deteriorate, many sections had by 1997 become shapeless heaps of dried mud. In the neighbouring desert are mounds indicating the sites of caravanserai. Hillenbrand claims that some such central Asian sites have been excavated by ex-Soviet archaeologists and identified as ribats. His sources are not identified.

[16] La Rabida, approximately 8km from Huelva, in Andalusia, is a fourteenth-century Franciscan monastery. There are no remains, today, of ruins which would suggest it replaced an earlier ribat.

The discovery and subsequent excavation in 1984 of an archaeological site at Guardamar del Segura, 25km south of Alicante, has revealed a ribat and confirms the documentary evidence that they existed in Andalusia from the ninth century.[17]

The typology, however, poses more problems than are answered, departing, as it does, so markedly from the master plan of the ribat of Sousse. Ruiz and his colleagues have uncovered the remains of three more-or-less parallel rows of buildings, constructed of rammed clay on a masonry base. The whole, almost elliptical complex, is surrounded by traces of a defensible wall and contains over twenty individual cells arranged in the three rows, each with its own mihrab, aligned south-westerly to face Mecca. The mosque, containing two prayer halls, is situated centrally in the middle terrace. Believed to date from 944, it is later than the other buildings in the ribat, which date from the second half of the ninth century.

It would appear that ribats were built during the early stages of the Arab conquest of the Iberian peninsula, protecting the major routes to the north, e.g. at Mérida, Tarifa and Gormez. By the tenth century the Arab conquerors had formalised their defence of the conquered territories on fortified cities and castles making the ribat redundant as a fortification. It seems likely that the Spanish ribat was a temporary structure whose role was over once the frontier moved northwards and which thus fell into disuse and disrepair. This is in contrast to the North African coast where Christian threat to the Maghreb persisted until colonisation by the Spanish, French and Italians in the nineteenth century and early years of the twentieth.

It is entirely conceivable, in view of the large numbers recorded as being constructed, that many still exist, in a ruined and unrecognisable state, so far escaping the attentions of archaeologists; the chance discoveries in Monastir are witness to this. In other instances, comparatively intact fortifications may well be ribats, unrecognised as such. Kennedy describes two forts on the coast of what was the kingdom of Jerusalem, now in Israel, which are very similar to the Arab forts first built in Syria.

The oldest, at **Cafarlet**, just north of Caesarea, is unlikely to have been a ribat; the fort just south of the modern port of Ashdod quite possibly was. This rectangular fortification, measuring some 60 x 45m, incorporates both round and square towers in its enceinte. The fort has been described by Kennedy as ‘probably a rare example of Fatimid fortification’, built, he postulates, to act as a base during the Arab Palastinian campaign against the Byzantines around the turn of the eleventh century. He quotes the Arab geographer al-Maqdisi, who recorded that the fort was used to ransom Arab prisoners of the Byzantines, a role ascribed to the Murabitun.[18]

Whilst this may be considered conjectural, what is certain is that large numbers of small forts, sometimes grouped together, were adapted for use by an ascetic and devoutly religious Islamic brotherhood of warrior monks committed to jihad. They could dictate their period of service; denied to the Christian military brotherhoods, this is the fundamental difference, other than religion, setting apart the two classes of warrior monks.

[17] Azuar Ruiz (1990: 109–45).
[18] Kennedy (1994: 18–19).

15
ISLAM II

Introduction

The initial rapid and widespread conquests of the Arab armies resulted in long lines of communications to the Arabian heartlands. Although the conquered indigenous populations remained more or less compliant with the wishes of their conquerors, who in return allowed the existing administration and religions to continue, threat existed to the occupying Islamic forces not least because they were in such a minority. Using the ribats as garrisoned staging posts on the routes back to Mecca, until the capital moved to Damascus, together with the adoption of the Byzantine signalling system, ensured secure lines of communication and supply routes to the frontier regions, scenes of constant military activity for centuries.

It is apposite to mention here that the number of Islamic religious buildings which can still be identified as having evidence of fortification are few in comparison to the fortified religious buildings of Christian countries. The reasons are unclear; it may simply be that the Muslims kept their sacred buildings solely for religious purposes, fortification only occurring in rare instances, a direct result of local need. The fact is, however, that there are examples of all forms of religious architecture containing elements of fortification, whether mosque, minaret, monastery or mausoleum. Most examples date from the early period of Islamicisation before the defence of the caliphates, sultanates and khanates became more formally based upon the walled town or city with its citadel occupied by the ruling aristocracy. They are also to be found in all parts of the Islamic lands and cover a time span of many centuries.

It is unlikely that we will ever know the extent to which fortifications were added to religious buildings in the countries of Islam. Robert Hillenbrand points out the difficulties the architect faces in obtaining a reliable history of Islamic architecture and points to a number of difficulties and problems, amongst which are the 'multi-functional nature of Islamic architecture' and the sheer numbers of lost buildings.[1] The classic example, already discussed, is the ribat, whose morphology allowed for a change of use when its military function ceased.

In Islam, until recent times, there was no division between the secular and the religious as there was in Christianity. The ruling caliph was also the religious head and the provincial governor was also the imam. There was no vying for power and status in Islam as occurred in Christian countries where popes challenged kings and bishops crossed with the local nobility. There is no great tradition of castle-building with the possible exceptions of Spain and the Holy Land in response to the Reconquest and the Crusades. The Islamic ruler lived in his citadel where he controlled the urban population who lived in the attached walled town. It was only natural that the mosques were placed both in the citadel (Aleppo in Syria and Cairo in Egypt are the best-known examples) and in the fortified town. Although many mosques were

[1] Hillenbrand (1994: 1–7).

separated from the noise and bustle of the densely populated town or city this was to promote religious devotion. There was no need for the fortified precinct wall that was frequently found surrounding the abbey or cathedral of many European cities in the Middle Ages, betraying the tensions between the religious hierarchy and the military or civil administration.

The origin, functions and early development of the mosque in the Arab conquest and expansion of the empire

Of all the buildings of Islam the mosque is not only the most recognisable to Western eyes but is a monumental structure so central to the lives of the followers of the Prophet.

From the outset Muhammad had combined his religious fervour with a worldly and pragmatic approach to his role as a reformer. As a consequence the mosque, initially a courtyard in the house of the Prophet in Medina where adherents could meet to share their newly found faith, prayers and devotions, soon developed into an increasingly specialised building. Its role was to widen as Islam grew in popularity and the numbers of converts increased. From the beginning, the secular needs as well as the religious needs of the faithful were catered for. Whilst the principal role was to provide a permanent and sacred place for prayer, devotion and the teachings of Islam, it provided for the religious rites of birth and death, and for the care of the sick, infirm and elderly. An obvious sanctuary and refuge, it had been used right from the outset as a meeting place where political discussions and proclamations took place, thus inextricably weaving the religious and secular roles. Councils sat here and judgements were delivered; it became a seat of government and although trade and commerce were forbidden inside the mosque it could be used as a community treasury.

Whilst enclosure walls were an early architectural feature of the mosque, for a rapidly advancing army expediency saw them replaced by a symbolic delineation of sanctity and direction of prayer; a simple ditch or fence serving until permanent settlements could be built.

One of the first buildings to be constructed in these new Arab towns, it is entirely conceivable that the mosque served in many instances to protect the minority ruling Islamic military elite. Many of these mosques had huge enclosure walls, and whilst they can be regarded as symbolic citadels of this new faith, suddenly appearing out of the Arabian desert, they were sufficiently powerful to serve as a fortress so necessary for any conqueror.

The congregational mosque

Although there are few surviving buildings from the early years of Islam, there is literary evidence that the congregational mosque was first built in the armed camps, or Amsar, probably in the centre and large enough to accommodate the whole army. As the conquest became consolidated, these early mosques were converted into substantial buildings.

Amongst the earliest is the mosque at Kufa, situated on the Euphrates in Iraq, some 250km south-east of Baghdad. Here, the great mosque dating from 670 is surrounded by an enceinte approximately 110 x 100m fortified by round corner towers and twenty-two semi-circular buttress towers, although the number of entrances, five alone in the northern wall, would if originally present considerably weaken it as a fortified structure. Interestingly,

attached to the northern wall of the mosque, and probably of an earlier date, is the Dar al-Imara palace. In a similar way the wall is buttressed by twenty-four interval and four corner towers; all are now ruinous.

The great mosque at Samarra, dating from 847, provides a better example of an early fortified congregational mosque. All that survives now is the outer wall and the spiral minaret, rising from its square plinth, just outside the northern wall of the mosque. This is one of the largest mosques in the Islamic world. The rectangular enclosure wall, measuring 240 x 155m, is buttressed by four corner towers and forty semi-circular interval towers, twelve each on the longer eastern and western walls and eight on each of the southern and northern, with portals after every second buttress. Whilst large enough to shelter thousands of people its defensive role is weakened by the minaret that dominates the mosque rising as does to a height of over 50m, making it one of the tallest in the Islamic world.

Far away, deep in the arid desert of Tunisia, 150km south of Tunis and 60km west of Sousse, is the city of Kairouan, the fourth most Holy City in Islam after Mecca, Medina and Jerusalem. At first sight it is hard to understand why Okba ibn-Nafi founded a city here in 670. Then as now the surrounding scrubland offered little for the agriculturist and the building of an aqueduct to bring in water from a wadi 35km away demonstrates that water locally was in short supply.[2] Yet the strategic nature of the site is evident.

Settlements were built specifically to become centres of operations for the marshalling of supplies and the mustering of soldiers. Fustat, near Cairo in Egypt, was used as the centre of operations for the conquest of the eastern Maghreb and there was a need to build another in Ifriqya to act as a springboard for further conquest. The Arab advance and occupation was opposed, however, by both Byzantines and Berbers; as a result Kairouan was built here not only to deter the sea-borne Byzantines from an inland expedition across a hostile terrain but also the Berbers, who would face a difficult march from their mountainous homelands. The city is surrounded by a treeless plain stretching in all directions as far as the eye can see; any invading army would easily be spotted long before it arrived in front of the city.

The Great Mosque in Kairouan now lies within the city walls and dates from the ninth century. It is hugely impressive and is dominated by its minaret, a landmark in all directions. The external appearance of the tan-coloured walls of the mosque is one of a desert fortress; they date from 836 when they were constructed by the Aghlabid Prince Ziyadat on the site of Okba's mosque destroyed by the Berbers decades earlier.[3] Heavily buttressed with substantial stretches crenellated and loopholed, the irregular rectangular walls, almost trapezoidal, are 1.9m thick. They measure externally 130 x 80m, are built out of rough-coursed stone and are reinforced by corner towers over 4m square. Rising to a height of 10m, six gates open today into a courtyard 65 x 50m surrounded by a double portico. The paving of the courtyard, worn smooth by generations of worshippers, has been carefully arranged to channel rainwater into a settling tank leading to cisterns dug deep under the mosque. The wellheads in the courtyard

[2] Built by Abu Ibrahim Ahmad in 860, it fed two huge circular tank reservoirs, one of which has a diameter of 128m and is fed by a smaller settling tank.

[3] Ziyadit Allah was not only a scholar and builder but also a warrior leading the Arabs in their conquest of Sicily in 827.

are deeply grooved after centuries of friction from the ropes used to haul up water in leather buckets from these internal reservoirs.

The three-storey minaret is incorporated into the northern wall in line with the mihrab. Although the lower courses of the first storey date from around 725, the rest of this minaret dates from the ninth century. This is undoubtedly a military tower.

Kairouan was the first city founded by the Arabs in North Africa, around 670, and had its origins in the military camp of the occupying army. The appearance of the ninth-century mosque, the most important Islamic building in Africa, together with its crenellated minaret supports Djelloul's assertion that it is a 'fort constituting a symbol for the community and its prayers'.[4]

The surrounding city walls, reinforced with round towers and fortified gateways, were first built in the twelfth century. Thus for almost three hundred years the Great Mosque served as a fortified citadel for the invading Arabs and as with Christian and Buddhist monumental fortified buildings was symbolic of the power and permanence of the religion.

The mosques at Tunis and Sfax, both in Tunisia, date from the ninth century and follow Kairouan very closely in ground plan and minaret, displaying the same military countenance, although there is a departure in form at the mosque at Sousse, already mentioned in connection with its neighbouring ribat. Buttresses are absent and the much smaller mosque has no minaret, defence being provided by substantial corner towers and a battlemented parapet.

The mosque as part of urban fortifications

Four surviving examples have been identified where the walls of the mosque have become an integral part of the defences of a city, analogous to the incorporation of Christian churches and cathedrals into the fortified enceintes of cities. Each needs to be examined separately, belonging as they do to different periods and different dynasties.

Mahdia, founded in 916 on the Tunisian coast, shortly after the arrival of the first of the Fatimid caliphs, became their capital in 921. Planned from the outset to serve a number of roles, the site was chosen because of its strategic position and ease of defence. A spit of land that jutted out from the eastern Sahel coast of Ifriqya separated by a narrow sandy isthmus from the mainland was chosen. A triple layer of walls defended the landward side and the rest of the spit was surrounded by seawalls. Designed from the start as a royal city for the caliph and his court (commoners and merchants were housed in a suburb on the landward side), it contained the port, probably previously excavated by the Phoenicians, and the arsenal for the emerging Fatimid navy. Cisterns, reservoirs and storage buildings, so necessary in times of siege, were installed, along with fortified palaces for the nobility. The mosque, the first built by the Fatimids, was an integral part of the seaward defences on the south and occupied reclaimed land where the western and southern walls formed part of the ramparts of the city. Curiously, the two corner towers of the façade of the mosque contain water tanks. Unfortunately the present mosque is recent; it was rebuilt between 1961 and 1965, faithfully reproducing the tenth-century plan that still exists.

[4] Djelloul (2000: 8).

Mahdia successfully resisted sieges in 945, 1390 and again in 1520 by the Spaniards, only to fall in 1555 during the Habsburg–Ottoman conflict, when most of the defences, including those provided by the mosque, were destroyed.

Two mosques in Cairo occupy part of the stone walls built by the Fatimid vizier Badr al-Jamali between 1087 and 1092, so enlarging the fortified city and replacing an earlier mud-brick wall. The mosque of al-Hakim, built between 990 and 1013, is a square enclosure mosque measuring 120 x 115m, constructed in brick with its outer walls faced with roughly dressed stone. Originally outside the defences of the city, the north-eastern wall of the mosque became incorporated in the city wall between the Bab al-Futuh (the gate of prosperity) and the Bab al-Nasr (the gate of glory). The two minarets, originally separated from the mosque became embedded in square bastions; that at the northern angle becoming one of the battlemented towers of the city wall. This mosque, the second to be built by the Fatimids, has many similarities with the mosque in Mahdia. It suffered in the earthquake of 1302 and has undergone a number of renovations and changes of use. When housing prisoners of war during the Crusades, the Franks built inside a chapel, destroyed when Saladin turned the mosque into stabling for his cavalry. During the French occupation of Egypt by Napoleon it became a fortress and storehouse for the invading army, finally becoming, in the nineteenth century, a repository for many of the precious artefacts of Islam. More recently it has returned to its original role and serves as a mosque for the Ismaili Shiite sect.

The mosque of Mu'ayyad Shaykh, a Circassian slave who rose to become an emir in the fifteenth century, abuts the Bab Zuwaylah, a gateway built in the southern wall around 1092. It is debatable whether this mosque was truly fortified; however, its southern wall is contiguous with the city wall and the solidarity of the flanking drum towers of the attached city gate was used to support the two elegant, slim and octagonal minarets built in 1419 and 1420.

The walls of **Jerusalem** have undergone much rebuilding and represent work of many periods, Byzantine, Umayyad, Crusader, Mamluk and Ottoman; the walls remaining today are the work of Suleyman II who rebuilt the walls of Jerusalem which incorporated the Haram esh-Sharif, the 'Noble Sanctuary of Islam'. Known also as the Temple Mount, it is no less holy to the Jews, whose Temple stood here, and to Christians as a consequence of the role it played in the life of Jesus. It is here that the Rock of Abraham, protected by the Dome of the Rock, is found, together with the Aqsa mosque, the end point of Muhammad's miraculous night journey from the holy mosque of Mecca. The Haram esh-Sharif is the third most holy site of Islam and the Aqsa mosque occupies much of the south side and abuts the southern outer wall of the Temple and the double gate of the city fortifications. Founded during the Umayyad period and contemporary with the great mosque of Damascus, its present form dates from the middle of the fourteenth century.

The minaret, its origins and function

Instantly recognisable, the origin and early function of the minaret is the subject of much discussion, most of it speculative. It is a widely held view that it is a tall slim tower, closely associated with a mosque, whence the Muezzin calls the faithful to the Adhan, the ritual prayers of Islam performed five times daily.

Minarets fall into two main categories: the tall, round and slim towers of the eastern lands of Islam, and the large square towers of North Africa, found occasionally also in Spain.[5] Whilst the former probably owe their origin to the lookout and beacon towers of the Middle Eastern and Asian caravan routes and possibly the Syrian church bell-tower it is claimed that the **Pharos** lighthouse in Alexandria provided the role model for the military-looking minarets of Ifriqya. Regarded as one of the wonders of the world, the Pharos was built in antiquity and was the centre of a line of lighthouses stretching along the coast both eastwards and westwards. Reputably over 100m tall this three-storey tapering building held in its top storey a lighting apparatus visible for 50km. It continued to function long after the Arab conquest of 641 but the lighting apparatus was replaced by a mosque after the earthquake damage of 1100 until finally being destroyed by another earthquake a couple of centuries later.

The minaret at **Kairouan** is much smaller, however, although also of three storeys. Measuring 10.5m square at its base, it rises to a height of 31.5m. The lower storey is thick-walled and loopholed on three of its four faces. The side overlooking the open courtyard of the mosque contains the solitary entrance doorway with its intricately carved lintel and small windows, one for each of the three floors. From its loopholed battlements rises the second storey, smaller to allow for a wall walk for the defenders, and provided with battlements and surmounted by a third storey, a ribbed cupola. It is now believed that this military-looking tower was based on the Roman lighthouse of Salakta, on the nearby coast, itself modelled on the Pharos.

Support for the belief that the main function of the Kairouan minaret was as a defence tower is provided by the appearance of the Khalaf tower in the kasbah of the coastal town of Sousse, east of Kairouan. This battlemented tower, 8m square at its base, rises to a height of 30m. The four floors are reached by a staircase built into the thickness of the walls, and the first served as a mosque for the watchmen. Built on the highest point in the city, it served as a lighthouse, a lookout tower and a fortified tower dominating both the walled town and its citadel. Contemporary with the mosque at Kairouan, it superseded the Nador tower of the earlier ribat. A further possible influence could be the square tower of the early Christian monasteries of Coptic Egypt and of Palestine. Although the dates of construction of the Qasrs of the Egyptian desert monasteries are unknown with certainty, they were likely to have been incorporated into the monastery by the time the fortified minarets of Ifriqya were built. In addition Arab architects would almost certainly be aware of the defensive towers of the Palestinian monasteries.[6]

Finally mention must be made of the tall and richly decorated minarets of the western

[5] Stierlin (1996: 170) says that this form of minaret spread through North Africa to Spain from the 'Kutubiyya Mosque in Marakesh to the Giralda Tower of the Great Mosque of Seville'.

[6] The minaret continued to be used as a defensive tower into the fourteenth century. The 30m high tower of the White Mosque in Ramla, built in 1318 in the Holy Land, is provided with loopholes for archers. It is another mosque provided with cisterns under the courtyard, again from the Umayyad period. Hillenbrand (2000: 129–71) discusses at length the origin and function of the minaret, mentioning the role that the Umayyad Palace of Qasr al-Hair al-Gharbi may have played as a precursor of the mosque as 'a refuge for the faithful with the minaret as its bulwark'.

Maghreb that often reach a height of 65m. Syrian influence is again argued but this seems to be tenuous in the extreme. Many have a defensive look about them; small solitary entrances, windows which resemble loopholes and their sheer bulk, often up to 15m square, suggest a military purpose, although any suggestion of austerity or functionalism is removed by the remarkable patterned decoration. Access to the top of the minaret is via a ramp circling a square central core. Rabat and Marrakech in Morocco contain fine examples and the minaret at Tlemcen in Algeria is unique in having in its base the only entrance to the courtyard of the now destroyed mosque. The absence of rooms of any size and the ascent via the ramp around a central core argues against a military role, despite the visual statement of awesome power.

Islamic monasticism and the khanaqah

Islamic monasticism took root, like its Christian originator, some time after the foundation of the religion by Muhammad; it was both eremetical and coenobitic. Almost all monasteries were built in urban areas and were as a consequence infrequently fortified. The rise of Sufism that first appeared in the late twelfth century saw the development of a new architectural form of Islamic monastery.

Sufism became a branch of Islam opposed to the more secular, structured and legal theology of orthodox Sunni Islam. Teaching a personal, mystical worship with Allah, it was influenced by Buddhism, Hinduism, and Persian Zoroastrianism. Surprisingly it incorporated some of the Christian beliefs of the monastic orders. There were, however, important differences between the monastic philosophies of the Christian monk and the Sufi mystic; he had, for example, no abbot, rather a teacher (shaikh) and the Sufi monastery could accommodate non-celibate pupils and devotees, although all led a simple, ascetic life of learning, prayer and charity. Like the later Western mendicant friars, many Sufis left their monasteries for significant periods and their khanaqahs offered shelter for specific groups of travellers. As a result many were built in rural areas and were thus more at risk of attack. It is not known, unlike with the ribat and the caravanserai, just how many were fortified. That some were fortified is demonstrated by two khanaqahs. One, the complex of **Jamal ad-Din** at Anau in Central Asia, has recently been severely damaged by an earthquake, the second, the khanaqah of **Pir Sadat** near Baku in Azerbaijan is identified by Hillenbrand as being fortified, enclosed as it is by a crenellated perimeter wall.[7] It is a trapezoidal fortified enclosure with round corner towers and semi-circular intermediary towers in the middle of three walls and a rectangular fortified gateway inserted into the fourth. In this respect it is not unlike the ribat of Sousse, although the Nador tower had been replaced by a minaret attached to one of the buildings lining the inner walls of the enceinte. To cater for the religious needs of the Sufis these buildings included a ceremonial hall, refectory, kitchen, library, cells and special quarters for guests and the shaikh. Its fame resulted in it developing into a pilgrimage site. The Sufis flourished under the Seljuks and many monasteries were built in Anatolia, Central Asia and Egypt. Unfortunately little attention has so far been paid to them.

[7] Hillenbrand (2000: 219–20).

The multi-functional religious complex

Many of the problems posed in the study of Islamic architecture have already been discussed. The basic architectural template allows for easy change of use and function. Frequently buildings for differing functions were built contiguously; long-term building developments resulted in complexes that can be difficult to understand.

The previously mentioned khanaqah at Anau dates from the fifteenth century and was built within fortress walls. It became part of a complex that contained a mosque, a madrasa or collegiate mosque, literally a 'place of study', as well as lodgings for pilgrims.

The mosque at **Tinmal**, built in the tenth century in the High Atlas Mountains of Morocco, was fortified and became part of the fortifications of the nearby civil settlement. A mausoleum was added and for a time was deemed strong enough to serve as the State treasury and as a ribat, despite its modest size.

Somewhat similar in overall size, approximately 33 x 55m, is the irregular trapezoidal fortified complex of the **Chella** necropolis at Rabat, also in Morocco, that dates from the first half of the fourteenth century. Within the crenellated walls are sepulchral chambers, two mosques, minarets and a small monastery. There is a central court that leads to cells for the monastic residents. It has also been described as a ribat and played an important role in the jihad opposing the Spanish Reconquest. An interesting architectural feature is the solitary entrance gateway. The pointed archway is surrounded by decorative carving and flanked on either side by two semi-octagonal towers 15m tall surmounted by a square crenellated parapet. Both towers are loopholed at the level of the crenellated enceinte.

In Turkish Anatolia at **Kayseri** is the Khwand Khatun complex where a mosque and a madrasa are joined together. Both are protected by crenellated walls, interval towers and round corner towers. The courtyards are much reduced in size and there is a narrow solitary entrance to each, although the two communicate with each other internally. This is a unified fortified building serving two distinct but related functions.

The citadel

It has been previously mentioned that, in the main, the Muslim populace preferred to defend itself by sheltering within walled towns and cities, with the ruling dynasties building within the walls their citadels whence they exercised their control and power.[8] Two such citadels, those of Cairo and Aleppo, warrant examination to understand the role of the mosque and minaret in such fortifications.

The Citadel of the Mountain overlooks the city of **Cairo** and the neighbouring city of Fustat; much of what remains dates from the twelfth century, when Saladin was instrumental in the building of many of the fortifications. It covers a huge area and comprises two irregularly shaped fortified enclosures. That to the north measures approximately 430m east to west and 250m north to south and served as the barracks and headquarters for the elite troops of the garrison. The southern enclosure, with its axis running north to south, is larger, measuring 480

[8] Hillenbrand (1999: 489–91).

x 280m, and contained the palaces and administrative buildings of the caliph or sultan. Both enclosures contain a number of mosques for the exclusive use of the different factions occupying the citadel; each regiment or corps of soldiers identified with a particular mosque. Chosen by Saladin for its strategic position, this was lost when the mosque of Sultan al-Hassan was built on high ground overlooking the citadel. Used by the Mamluks and more recently Napoleon, it served as an artillery bastion to bombard the citadel.

Much more dominating of its attached walled city is the citadel of **Aleppo**, built as it is on a prehistoric tell. This is a magnificent fortification, perching on the top of a steep glacis, surrounded by a ditch. The enceinte, oval in shape and measuring 500 x 350m, contains over forty square or rectangular towers and two barbicans. The main gate with its complex angled entrance is the finest example of Islamic fortification in Syria. Amongst the usual buildings of the citadel are two mosques. The Great Mosque, built by al-Zahir Ghazi and restored between 1213 and 1214 after a fire, has a tall and square minaret that served as a lookout tower for the citadel over the city and the surrounding countryside. The smaller mosque of the citadel was believed to be associated with the journeys made by Abraham and became a pilgrimage site as a result.

The caravanserai and its relationship to the Hajj

Of all the Islamic buildings that both have religious connotations and can be deemed defensible or fortified, the most enduring, ubiquitous and numerous are the caravanserais, simply defined as rural fortified inns found along trade and pilgrimage routes. Whilst the Arab traders and merchants spread out from the Arabian peninsula in all directions, their caravans helping to sustain the far-flung garrisons and outposts, the greatest stimulus for travel was provided by the Hajj. One of the five Pillars of Islam, it is the duty of every believer to make, at least once in a lifetime, a pilgrimage to Mecca and the mosque of the Haram.[9] It is the most holy and sacred site in Islam, containing in the centre of a vast courtyard the Ka'ba, supposedly built by Abraham. For those who could not travel to Mecca, for whatever reason, lesser sites served to satisfy the need for the Baraka, or blessing.

Trade routes have existed since antiquity, and there has always been a concomitant need for shelter and protection of the merchants and their baggage animals that continued into the Byzantine and Sassanian eras. In the early days of the Arab conquests the victors had access to large pools of artisans and came into contact with many differing cultures; they quickly adapted to their needs those architectural forms necessary to maintain their empire. With the advent of the Dar al-Islam, the Abode of Peace, the role of the ribat and especially its military function lessened. Whilst travellers were unlikely to meet with aggressors from outside the empire, the vastness of their lands and the remoteness of many of the trade and pilgrimage routes necessitated protection from brigands and bandits who roamed the more isolated regions. In these regions an established ribat would be ideally suited for a change in use without much in

[9] The five Pillars of Islam are the Shahada. The belief that there is no God but God and Muhammad is the prophet of God, prayers five times daily, fasting from sunrise to sunset during the month of Ramadan, the giving of alms to the sick and poor and finally the Hajj.

the way of structural alterations.[10] However, not surprisingly, with any building which has been widely used throughout central Asia and the Middle East for over a thousand years, there is a wide variety of form and size, together with the number of services provided, although the basic Islamic structural template was followed. Travellers, whether merchants or pilgrims, needed shelter and sustenance, ideally at intervals of a day's journey.

The caravanserai at **Chah-i-Siyay**, near Isfahan in Iran, which dates from between 770 and 785, has a very similar ground plan to the two desert palace fortresses in Syria, as do the fortified inns between the Tigris and the Euphrates. The caravanserai, as well as occupying redundant ribats, architecturally probably originate from the early Syrian palaces; indeed there is a belief that the palaces east and west of Palmyra functioned as caravanserais.

Although heavily restored, the caravanserai built by Kayqubad I in 1229 between **Aksaray** and **Konya** is typical of many built in the thirteenth century in Turkish Anatolia. One of around a hundred such caravanserais, it has the distinct form of two rectangular adjoining and interconnecting buildings. This Seljuk caravanserai is larger than most and the smaller covered hall, measuring 31 x 50m, is attached to its larger courtyard (47.5 x 62.5m) containing the entrance gateway. Built of fine ashlar, unadorned externally, it is reinforced with semi-circular and faceted interval buttresses between the square and octagonal corner towers. The entrance gateway contains a muqamas vault that contrasts with the plain ashlar walls. This pointed recessed vault above the entrance arch is made up of small concave elements giving a honeycomb appearance and is surrounded by roundels and pillars carved with abstract patterns. The inner courtyard has arcaded porticoes built against the longest walls. They lead to small rooms used as workshops, a bath-house and private chambers. In the centre of this paved courtyard is a prayer room built on four arches, again richly carved with intertwined geometric patterns and roundels. The blank exterior is pierced only by rain spouts and high, narrow splayed loopholes, probably more for lighting than for defence. Although 12m high, the restored walls are devoid of crenellations, but the presence of a staircase suggests that there was a wall walk. Although there were twenty caravanserais on the 250km road between Kayseri and Konya, most caravanserais were built approximately 40km apart, the distance a camel can travel without food or water in a day.

The pilgrimage caravanserai

At the other end of the spectrum is the **Khan al-Qutaifah** caravanserai in Syria, one of a group of sixteenth and seventeenth-century caravanserais built expressly for pilgrims. As Robert Hillenbrand states, it can be regarded as a 'miniature city', providing not only shelter and accommodation but also baths, restaurants, shops and a mosque.[11] The fortified enclosure wall measures 160 x 100m. The nineteenth-century caravanserai of **Aliabad**, on the Teheran to Qum highway in Persia represents perhaps the most sophisticated of any pilgrimage caravanserai and offers all that even the most privileged of pilgrims could want.

[10] Hillenbrand (2000: 341–2) discusses how the ribats of Central Asia changed roles when pacification made them redundant.

[11] Ibid. 352.

Many of these pilgrimage caravanserais were built by the rich and powerful of the day, not only as a service to Islam but in order to improve their standing both on earth and in paradise. The earliest such series, on the Baghdad to Mecca route where twenty caravanserais have been identified, was sponsored by the wife of Harun al-Rashid in the ninth century. Some three hundred years later the Seljuk sultan Malik-Shah, an implacable enemy of the Assassins, built a chain of caravanserais on the Hajj route from Mesopotamia to the holy cities. There is a similar chain between Antioch and Damascus that links up with those leading to Arabia.

As with most Islamic architecture there is a basic plan of a central courtyard surrounded by rooms for stabling and the storage of goods in transit, with lodging against a surrounding fortified enceinte entered by a single gate and fortified with round corner towers. This plan is followed from Afghanistan to the Middle East and Arabia; embellishments reflect only the richness of the patron or the importance of the pilgrim. Anatolian examples on the other hand would appear to be atypical in having an attached covered chamber.

Ukhaidir, a fortified palace in Mesopotamia

Although a secular building the palace of **Ukhaidir** is worthy of inclusion as it is thought to have had a profound influence on both Eastern and Western ecclesiastical fortifications.

Located in what is now semi-arid countryside 120km south of Baghdad in Iraq, it was originally surrounded by a well-developed and fertile agricultural region when it was built around 778. The paranoia of its builder, Isa ibn-Musa, is shown by his need to surround his fortified palace, not yet completed, by a wall heavily fortified in a complex and innovative way. Constructed of rough-hewn mortared stone, this outer enceinte measures 174 x 170m and surrounds the rectangular palace. Its walls are approximately 19m high and 2.6m thick. The four gateways are each protected by flanking towers, a portcullis and guard-rooms and are found in the centre of each of the four walls. The main gate, in the north wall, is flanked by two square towers and leads directly into the palace in contrast to the other three entrances that open into a courtyard surrounding the palace through huge semi-circular projecting towers. The four circular corner towers contain a stairway leading to a barrel-vaulted and loopholed gallery that runs all the way round the enceinte widened by forty semi-circular towers linked by round-headed arch machicolations externally. The inner aspect of the wall is supported by square colonnaded buttresses solidly arched to further widen the walkway of this early chemin de ronde. This gallery is 4.5m wide and is splayed externally at intervals to produce loopholes and to give access to chambers in the upper part of the semi-circular buttresses. The gallery can also reached by staircases built either side of the south, east and west gates.

Whilst the palace, measuring 120 x 80m, is similarly surrounded by a buttressed wall, it is overlooked by the enclosure wall, and was, as a consequence indefensible once this outer wall was breached. It cannot therefore be considered a forerunner of the concentric castle. The similarity of this outer enceinte to those of the congregational or Friday mosques of Kufa and Samarra is, however, striking. This fortress palace is a very impressive example of sophisticated military architecture but the importance of this building lies in its machicolations.

Bonde is of the opinion that the fortress churches of the Languedoc, particularly Saint-

Pons-de-Thomières, have their closest parallels in the castle of the Crac des Chevaliers and Ukhaidir.[12] The way in which the arch machicolation came to be used in both secular and ecclesiastical fortifications in mediaeval Western Europe has never been chronologically traced. It is believed, however, that machicolations were used in ribats, since they are found in the existing ribats in Sousse and Monastir. In addition, the eleventh-century caravanserai of Ribat-i-Malik in Central Asia contains galleries. Both the Crusader castles of Saône incorporate these two forms of military architecture in their defences. Perhaps the Frankish military architects were introduced to the concept in the Islamic East and incorporated it in their castles. The frequent contacts between the south of France and the Holy Land suggest that the introduction of this novel and successful form of military architecture into Western Europe was inevitable.

[12] Bonde (1994: 141) points out that machicolations were used by the Roman, Byzantine and Islamic military engineers before arriving in Western Europe in the twelfth century.

16
IRAN AND SYRIA

Hasan-i-Sabah and the valley of Alamut

The journey made by Hasan-i-Sabah to the valley of Alamut in the Elburz Mountains of Iran, just to the south of the Caspian Sea, brought about an opposition to the established authority based entirely on fear and terror. Deeply religious since childhood, he converted to the Ismaili sect of Shiite Islam in 1072. As a result he became fanatically opposed to the Seljuk Turks who held power in the Middle East, after they had overcome the Shiite Abbasid dynasty in that part of the Islamic Empire that is present day Iran and Iraq. When adopting Islam, they had chosen to follow the orthodox Sunni faith.

Such was Hasan's opposition to the Seljuks and anybody professing Sunni Islam that he carefully planned the formation of a secret and revolutionary sect based upon Ismaili Shiite extremism. His first need was to establish a secure base from where he could carry out his campaign of revolutionary preaching and militancy. He sought a mountainous region where he could acquire or build castles to keep him and his followers safe from retribution and reprisal from the Seljuk Empire, preferably one with a disaffected population, sympathetic to extreme Shiite views, which could be converted or at least accept or tolerate them, and which was remote and inaccessible.

The people and the valleys of the Elburz Mountains appeared ideal for his purpose, and he earmarked the castle in the Alamut valley as his potential headquarters. Held on behalf of the ruling Seljuks, he acquired the castle by subterfuge after his Da'is, or missionaries, had begun the conversion of the garrison of the castle and its neighbouring villages.[1] Smuggled into the castle in disguise he was able to expel the Seljuk governor and begin to establish himself, his disciples and his cause in the valley of Alamut and its tributary and neighbouring valleys.

The origins of the Ismaili sect of Islam

It is appropriate to digress at this point and consider the rise of the Ismaili Shiite sect following the great schism which occurred shortly after the death of Muhammad. Although he had unified the disparate and warring tribes of Arabia, he was not to see the start of their incredible conquests and the spread of Islam; rather his death plunged the Islamic world into turmoil. The 'Messenger of God', despite his religious fervour and organisational skills, had left no obvious successor.

Abu Bakr, father-in-law and one of the earliest and staunchest disciples of Muhammad, was chosen as the first caliph, or deputy of the Prophet. Right from the outset there were dissidents who wished Ali, the cousin and son-in-law of Muhammad, to succeed him and start

[1] A da'is, literally a summoner, preaching the message of the imam, the head of the Shiite community.

a bloodline, which was ultimately achieved in 656 when the third caliph was murdered. The mystical supporters of Ali belonged to the party of Ali, Shi'atu'Ali or simply Shia. Their strength was to remain in the Middle East, especially what is today Iran and part of Iraq.

The Orthodox or Sunni Muslims opposed the descendental doctrine of the Shiites and the murder in 680, of Hussein, the second son of Ali, who had been proclaimed caliph, saw the beginnings of 'Shiite martyrology with its strong streak of esotericism and thirst for revenge'.[2]

The Shiites were not to remain unified for long; in the eighth century there was a split between the moderates and the extremists after the death of the sixth imam, the religious leader of the Shiites. His eldest son Isma'il was disinherited, possibly due to his association with the militants who sought power by force, and his younger brother became the seventh imam. Those Shiites who remained loyal to Isma'il formed a breakaway sect, the Ismailis.

The complexities of the rivalries between the Sunnis and the Shiites need not concern us here, nor the ebb and flow of Ismaili power, except to record a further schism in 1094, this time amongst the Ismailis. Nizar, the appointed heir to the Shiite caliph of Egypt, al-Mustansir, was displaced in favour of his brother. Attempting to gain the caliphate by force of arms, Nizar was captured and put to death, with the result that many eastern Shiites preferred henceforth to follow the line of Nizar.

It was to this sect that Hasan-i-Sabah gave his lifetime powers of devotion, allegiance and leadership. Pockets of Nizari Ismailis were to be found throughout Persia but in order for Hasan to carry out his mission he required a more secure base than his devotees could supply in the cities. His first need was to consolidate his occupancy of the Elburz Mountains, acquire new converts, and capture, buy or build more castles to accommodate his followers. Only then could he form his secret and murderous band of soldier disciples, the Fida'iin, known to the Crusaders as Assassins.

The Assassins

Hasan's cause was made easier by the alienation, resulting from the Seljuk conquest, of many revolutionary zealots, who were happy to accept his preaching and live in his mountain fastness. Legends abound on the methods Hasan employed to convert numbers of his followers into a disciplined, trained, blindly obedient and self-sacrificing body of killers, who would murder, without question, at his bidding. Even their name adds to these legends. The word 'assassin' is believed to be a derivative of 'hashish', a drug reputedly used by Hasan and his instructors in the training of their killers, the Fida'iin. It was used as one of the ways of inculcating into the minds of the Fida'iin the notion that entry into Paradise would be the reward for dying for the cause of the Nizari Ismailis. Chosen to become a political killer for the avowed revolutionary aim of overthrowing the Seljuks and removing orthodox Sunni Islam from power, the Assassin expected to die when carrying out his orders.

Hasan had travelled widely through the countries of Islam for many years before he arrived at Alamut. Legend states that he built there a garden so beautiful that it recalled

[2] Pean (1995: introduction).

Image not available

Paradise, representing as closely as possible the Qur'anic description of Paradise as a 'garden flowing with streams'. Living in this wondrous garden were the most beautiful of women. It is easy to understand the impression this earthly notion of Paradise would have made on those schooled by the master into his beliefs, who were susceptible to his will and suggestion, especially if hallucinogenic drugs were used. Other legends encourage the belief that Hasan started to train his Fida'iin from an early age. Taught the language and culture of those whom he believed were his enemies, the Assassin would be able to get near his intended victim without arousing suspicion.

Whatever the method used, Hasan surrounded himself with a substantial number of fanatics, sworn to absolute secrecy, total loyalty and blind obedience. So persuasive was the master that he had no shortage of volunteers prepared to carry out ritualistic murder, always with a jambiya, the curved dagger favoured by Arabs.

The Assassin was almost always caught and killed, indeed he welcomed death as it gave him the opportunity to enter Paradise, the ultimate reward for the fanatic. Hasan even set up in his castle a 'role of honour' where the name of the Fida'i, that of his victim and his position in society were recorded. Once Hasan entered the castle of the Alamut valley he became reclusive and spent his last thirty five years living a celibate and ascetic life, all the while planning his reign of terror, based upon the assassination of those Seljuk and other leaders who opposed him and sought to harm his cause.

The victims were always selected with the utmost care; those actively hostile to the Ismailis were most at risk, as were those who had harmed this secret sect. No one was immune, whether caliph, minister or army commander; indeed the threat or deed of assassination of garrison commanders in castles coveted by the Ismailis was an effective way of gaining control.

The castles of the valleys of Alamut

As Lewis states, the Ismaili strategy was one of 'penetration, entrenchment and attack'.[3] The Ismailis acquired their castles and built others together with linking towers and small outworks to produce a consolidated defensive network, as the examination of the remains in **Alamut** will show.

There were small outposts of the sect in other mountainous regions of Persia, for example in the south-west between Kuzistan and Fars and in Quhistan, the mountainous region between Persia and Afghanistan; unfortunately there are scant remains of castles and no studies available. What little knowledge we have of the castles of Alamut is a result of an expedition led by Peter Willey into the mountains of Elburz in 1960. His expedition faced many difficulties in identifying and surveying the castles, not least because of the destruction meted out by the Mongols, subsequent earthquakes and later overbuilding.

From what little information we have on the Assassin castles of Persia and Syria it is possible to make a number of generalisations about the Ismaili castles. All are to be found in mountainous regions where there was a disaffected population with Shiite traditions. They are interdependent and linked visually with a number of lookout towers, providing an intricate

[3] Lewis (1985: 44).

system of signalling: sited, where possible, on rocky outcrops they overlook valleys fertile enough to maintain the garrisons and the dependant villages and towns of the Ismaili sympathisers. The garrison commander was a celibate ascetic and his warriors led an almost monastic existence. The castles were large enough to shelter all the members of the sect during times of threat, and contained stores and cisterns to enable them to resist a substantial siege. The military architecture almost certainly reflected localised development; rough-coursed stone is used in conjunction with brick, bound with a clay mortar. Access was always difficult, with only tracks for the pack animals used to supply the castles.

Huge cisterns were needed, not only to supply the castle but also to feed the irrigation system required to water the gardens and cultivated fields in the dry environment of summer. Channels from the extensive rocky catchment areas led to cisterns both inside and outside the castle so arranged as to enable any overflow to be channelled into another cistern. One of the cisterns in the castle of Lammassar still retains the post holes used to support a roof or awning to prevent evaporation. The garrison was able to draw water by two means from the river that ran below its walls. One of the towers of the enceinte was built to overhang the river and water could be obtained by lowering a bucket from a trap door, and a tunnel, hewn from rock and guarded by a tower, ran from the castle for some two hundred metres down to the river.[4]

Hasan planned his mountain citadel carefully and ensured that strategically placed castles controlled all access routes into his heartland. The valley is some 40km long and in places 25km wide; bounded by mountain ranges up to 3000m high on the north, south and east, the western entrance is through the narrow gorge of Shir Kuh. Hasan built a castle here with two outlying forts either side of the river and protected the eastern approach with the castles of Ilan and Nevisar Shah. The large castle of Maymum Diz protected any approach from mountain passes to the north, whilst the large castle of Lammassar protected any approach from the valley of the Shah River (Rud). This fortified mountain valley, the centre of Naziri Ismaili power, was further protected by an outer ring of castles and fortifications. The Seljuks were aware of what was happening and sent an army to capture the valley in 1092, which was not only repulsed but was to herald the first of the murderous attacks on those in power who opposed the Ismailis. Nizam al-Mulk, the grand vizier who had orchestrated the attack on Alamut, was murdered by one of Hasan's Fida'iin disguised as a Sufi to gain access.

The castle of Alamut and the 'garden of streams'

Alamut was home to Hasan all his life and it is probable that if his legendary garden did exist it was located here. Willey and his party spent some time at this castle and his findings are interesting, although the interpretation below is speculative. The castle dates from the middle of the ninth century and was probably built by religious refugees from the Abbasid caliphs. Altered and extended by Hasan after he acquired it around 1090, it was destroyed by the Mongols after it fell into their hands in 1258. Rebuilt during the Safavid Persian dynasty (1502–1736), it was used as a royal prison in the seventeenth and eighteenth centuries before falling into ruins again. Strongly sited, the castle is in two parts and although there are sizeable

[4] Willey (1963: 274).

remains of the fortifications these are probably Persian additions. What is interesting and almost certainly from the time of Hasan is a qanat or water channel of gigantic proportions. Measured by Willey's team at some 200m long, with a width of 4m and similar in depth, he found evidence of attempted destruction, possibly by the Mongols. Running east to west across the southern slope of the eastern part of the castle, it is reached by rock cut steps from the castle above. An obvious reservoir for the collection of rain water from the rocky slopes above, its position may be explained by the utilisation of a natural rocky fault during its excavation. There are no associated fortifications with this qanat, making it unlikely that it was primarily a cistern in case of siege, particularly as both parts of the castle contained cisterns within their walls. Alternative theories suggest that it may be a reservoir either to serve the neighbouring villagers or to provide water for the irrigation of their fields. Willey feels that it was both a moat and a water channel. Whilst it was not possible to tell where the qanat led to westwards, the eastern end led to the north-eastern extremity of the second or 'onion' castle, so named because of the bulbous rock which rises above the ridge. This part of the castle is oval in shape, measuring 300 x 200m, and defended by cliffs to the north and east. The south-western aspect is cut off by a wall from the qanat and the whole area was found to contain many clay water pipes, unfortunately so disturbed that any water distribution scheme could not be identified. That the qanat served as the reservoir needed to supply the 'Garden of Streams' is, perhaps, more fanciful than the prosaic view of it functioning as a moat or as part of an irrigation system for the fields necessary to supply the castle.[5]

Willey and his team found other castles where sophisticated water collecting and distributing systems still remain. At Shir Kuh, the collecting system almost rivals that of Alamut; situated at the entrance to the valley it is not only smaller but more vulnerable. Interestingly these reservoirs and overflow channels are again outside the defences of the castle. At the castle of Lammassar there is a catchment area which drains into cisterns, again connected by channels to drain away overflow. Earthenware conduit pipes were again discovered.[6] Neither castle has any reservoir or channel approaching the size of the qanat at Alamut, however; as all the castles are so ruinous it is unsafe to draw any conclusions.

Expansion of the Assassins into Syria

The success achieved by Hasan in organising his extremist revolutionary state in Alamut, together with other enclaves in Persia, allowed the Ismailis not only to challenge the might of the Seljuks and the orthodoxy of the Sunnis, but also to have the confidence to establish a colony in Syria. The arrival of the Crusaders and the capture of Jerusalem in 1099 together with the decline of the Shiite Fatimid Empire in Egypt had resulted in political and religious instability in the Near East. Coinciding with reverses for the Ismaili cause in Aleppo and Damascus, the Da'is now turned their attention to the mountainous region of the Jabal Bahra between the city of Hama and the Eastern Mediterranean coast, in present-day Syria.

The instructions from Alamut were very simple: to follow the tried and tested formula of

[5] Ibid. 214–24.

[6] Ibid. 257 and 274.

securing, by whatever means, a number of castles in a remote and inaccessible region, where the indigenous population were receptive to the Ismaili preachers and missionaries. Progress was slow at first, in acquiring either converts or castles, but by 1141 they had managed to obtain **Qadmus**, bought in 1132 from its Muslim ruler, Khariba. Previously garrisoned by Frankish Crusaders who had been driven out by the Ismailis between 1136 and 1137, it had returned to Muslim care. Similarly, **Masyaf** Castle, captured from the Seljuks around 1140, was destined to become the most important of the Assassin castles in Syria and the 'mother of Assassin frontier castles'.[7]

The acquisition of these castles together with the fearsome reputation that the Ismailis had achieved resulted in little attempt to counter their threat, let alone attempt to dislodge them, by either orthodox Muslims or Christian Crusaders who surrounded them on all sides. As Runciman comments 'the appearance of a new and disruptive sect would hinder a Muslim counter-Crusade' and could be of use to the Crusaders, especially as the Assassins did not change the direction of their policies; Seljuk and Sunni were the implacable enemies, not the Christian Crusader.[8]

The arrival of Sinan, the 'Old Man of the Mountains'

During the middle years of the twelfth century more converts were attracted to the valleys and more castles built. It was, however, the arrival of Sinan, a leader of exceptional abilities, that was to result in the firm establishment of this dependency of Alamut. This small revolutionary state, encompassing an area of less than a thousand square kilometres, was to have an influence out of all proportion to its size. It was something of a buffer state, being surrounded to the south, west and north by the Crusader county of Tripoli and the principality of Antioch and to the east by the Sunni Muslim state of Damascus. It was, however, fiercely independent.

Sinan, born Rashid al-Din into an important family of Basra, now in Iraq, entered the valley of Alamut as a youth following a family rift. His abilities were soon recognised and, along with the sons of the Ismaili leadership, he received Nizari indoctrination and a military and political education.[9] He was ordered to Syria after a short spell as a missionary in his own town, and soon consolidated the Ismaili position in its small mountain enclave, capturing the castle of Ullaikah and rebuilding Rusafah and Khawabi. As at Alamut the castles became part of a defensive military complex with a sophisticated communications system using carrier pigeons, protecting the settlements of the believers in the fertile valleys. Realising his precarious and vulnerable position, especially as he had no army of any size to oppose the Sunnis or defend against Crusader raids, he followed the ways of the Alamut leadership in using fear and politics to ensure the survival of his beleaguered emirate. His immediate task was to choose the most able, devoted and fanatical of his followers to train as his Fida'iin, men who would defend the Ismaili cause without question.[10]

[7] Hillenbrand (1999: 501).
[8] Runciman (1965a: 119).
[9] Lewis (1985: 110–11) quotes the biographer of Sinan.
[10] Mirza (1997: 27–8).

Sinan was to rule his Syrian enclave until his death around 1193, initially with Alamut as suzerain, although Alamut's control and influence waned as Sinan became more powerful and autocratic. He was widely known in the West and amongst the Crusaders as the 'Old Man of the Mountains', but this sobriquet was never used by the Nizari Ismailis, to whom he remained the revered representative of the imam.[11] Described by a contemporary Sunni writer as 'a man of knowledge, statecraft and skill in winning men's hearts' he followed the Alamut leadership in using his Fida'iin to achieve his aims, his ordered assassinations included high-ranking Christians.[12] The continuing existence of this small but independent state depended upon its isolation and inaccessibility, the political skills of its leaders, the connivance of the Crusaders and the fear engendered by the sinister Fida'iin.

The Old Man of the Mountains became synonymous with the successors of Sinan and is frequently mentioned in Crusader journals. Joinville, who wrote about the crusade of St Louis IX, king of France, describes graphically the power and megalomania of the Syrian Nizari leader as he travelled round his domains. Preceded by a carrier bearing an axe studded with knives, the population is repeatedly exhorted to 'turn out of the way of Him who bears in his hands the death of kings!'[13]

The castles

The castles of the Assassins in Syria, like their counterparts in Persia, are now so ruined that in almost every case even the ground plan is barely discernible. So ruinous are the structures above ground that only **Masyaf** today can be instantly recognised as a castle. A visitor to the coastal town of Tortosa in 1212, Wilbrand of Oldenburg, remarked of the Crusader castle of Margat that 'opposed to it are many strong castles of the Old Man of the Mountain'.[14] When T. E. Lawrence visited the region in 1908 he was singularly unimpressed, and almost scathing in describing the Assassin castles of Qadmus and Masyad (Masyaf) as 'absurdly weak'.[15] As Smail points out, however, the best defence of a castle is its inaccessibility and the use made of natural features.[16] Sinan sited his castles well, choosing precipitate rocky outcrops and mountain crests, close enough with their attendant towers and fortlets to form a composite, intervisible and interdependent whole, much in the way Hasan did in and around Alamut. There were no castles here to rival Margat or the Crac des Chevaliers, yet few attempts were made to capture the castles until the final days of the Assassins.

The castles dominated remote and fertile river valleys. Eight can be identified with certainty and another three or four as temporary citadels for the Ismailis. Unlike Alamut, no

[11] Kennedy (1994: 166). Mention of the Old Man of the Mountains is made by Wilbrand of Oldenburg, a German traveller, who visited the castle of Crac des Chevaliers in 1212. According to Boase (1967: 75), he also wrote 'who is wont through his messengers to kill our men with daggers'.

[12] Mirza (1997: 39).

[13] Joinville and Villehardouin (1963: 280).

[14] Boase (1967: 75).

[15] Lawrence (1988: 350).

[16] Smail (1995: 217).

one castle can be identified as the domicile of the Grand Master, the Syrian leadership preferring to move from one castle to another. The historian and archbishop William of Tyre estimated that Sinan had 60,000 followers in his mountain fastness by the second half of the twelfth century, living in villages and townships sheltering in the lee of the castles, each settlement having an agricultural, trading and economic infrastructure. Castles, as at Alamut, were only occupied in times of danger. It has been postulated that the Ismaili castles were populated by whole communities of the followers of the Old Man. But whilst some of the Alamut castles were large enough to do so those in Syria are simply not large enough to accommodate a small township of 700–800 persons together with their material possessions (William of Tyre's figures).[17]

Masyaf, standing atop a hillock, is the best preserved of the castles; surrounded by its present-day village, it retains its walls but is now a castle of many different building periods.[18] The multi-towered outer wall and gatehouse surrounds a dominating inner keep-like fortified enclosure. There is little space here to accommodate a civilian farming and merchant population on top of the ruling hierarchy, its teachers, missionaries and trainee Fida'iin, except in time of danger, although it almost certainly had a different ground plan when first built.

Destruction of the Assassins' castles is so great that only a few generalisations can be made. All are built of rough-hewn stone. Most contain mosques, baths and cisterns, and some still have the remains of a water-distribution system by means of clay pipes. Nearly all have a solitary eastern gateway reached by a flight of stairs. Apart from Masyaf, only one, Ullaikah, built on a spur of the Taraz Mountains in the direction of Damascus, is anything other than a simple enclosure castle. It has two walls, one within the other and thus appears to have been a concentric castle containing all the features of these castles. Many have now been built over, masking any remaining features, and they have, in the main, not been examined by archaeologists.[19]

The relationship between the Assassins and the Crusaders

Prior to their settlement in the Syrian Mountains, the Ismailis in Aleppo carried out a number of assassinations of Seljuks and Sunni Muslims, two of which were of particular value to the Crusaders. The murder of the emir of Apamea in 1106 was of benefit to Tancred, the prince of Antioch. The assassination of Mawdud, the emir of Mosul, in 1113, who was the leader of an expeditionary force assembled to help the Syrian Muslims against the Crusaders, removed a powerful enemy of the Franks. Crusader dialogue with Ridwan, the Muslim ruler of Aleppo, would have informed them of his patronage of this fundamentalist sect, so bitterly opposed to the enemies of the Christians. It is not too surprising therefore that when Ridwan died, thus removing protection of the Assassins in Aleppo, they sought refuge in Crusader-controlled

[17] This may have been the case at Subeibe Castle, near Banyas in Syria, the first stronghold acquired by the Persian Ismailis in 1126, but which was evacuated within two to three years.

[18] Müller-Wiener (1966: 68) describes the castle as an 'extremely compact citadel'.

[19] Hanna (1994: 101).

country.[20] The sect went underground and started to acquire castles, which could only have been achieved with the support and connivance of the Franks, who believed that they had little to fear and much to gain from the bitter enemies of the Seljuks and Sunnis. Little is known of the early relationship between Crusader and Assassin, although Raymond of Antioch was in an alliance with an Assassin chief in 1148 and in 1152 Count Raymond II was murdered by Fida'iin at the southern gateway into Tripoli, an act where the motive remains unknown.[21] Tribute had been paid to the Templars at Tortosa and in 1173 the sectarians under the leadership of Sinan felt strong enough to suggest an alliance with Amalric, the king of Jerusalem, against Nur al-Din, the chief enemy of the Christians, in return for the cessation of this tribute.

This was the time of Saladin, who was embarking on his campaign to rid the Holy Land of all Crusaders; the Assassins sided with the opponents of Saladin, whether Christian or Muslim. So antagonistic was the Old Man of the Mountains to Saladin that he twice sent his Fida'iin to assassinate him. Both attempts were unsuccessful and Saladin responded by entering the territory of the Assassins and laying siege to Masyaf, only to lift it after a short time. Although it is chronicled that the siege ended when Saladin woke one morning to find an Assassin's dagger at the side of his bed together with a poem that warned of the consequences of his campaign against the Ismailis, the truth is likely to be more prosaic. The army had had enough of campaigning, had acquired sufficient booty, and wished to return to Egypt. The upshot was an apology to the Old man of the Mountains and a treaty that endured.[22]

Whilst nobody was immune to the Assassins' blade, few Christians were targeted by the Ismailis, in stark contrast to the Sunnis. The murder of Conrad of Montferrat, king of the Latin Kingdom of Jerusalem in April 1192, demonstrated the planning and stealth of the Assassins. The piety and sincerity showed by two of Sinan's devotees in wishing to convert to Christianity was so convincing that Conrad was prepared to sponsor their baptism and as a consequence they had no difficulty in approaching Conrad when Sinan gave his order. The murder was apparently in revenge for an act of piracy ordered by Conrad on one of the merchant ships of the sect and his subsequent refusal to return its goods and the crew. Others postulate that Saladin paid Sinan to assassinate both Conrad and Richard Lionheart, Richard being spared as the murder of two senior Crusader leaders may have led the way open for Saladin to renege on his treaty with the sect and thus reopen hostilities.[23]

Despite paying tribute to them, the Christian military orders were not targeted. The Assassins were of the opinion that the exercise would be futile, since to assassinate a Grand Master would serve no purpose; he would immediately be replaced by a successor of equal merit and there would be no destabilisation of the orders. Such, however, were Crusader politics that the assassination of Raymond, the eldest son of Bohemond IV of Antioch in the cathedral at Tortosa in 1213, followed shortly afterwards by Patriarch Albert of Jerusalem, was believed to have been instigated by the Hospitallers.[24] Bohemond sought his revenge against the Assassins by besieging, with Templar support, the Ismaili castle of Khawabi. Further use of the Assassins by the Hospitallers for their own ends resulted in the murder of Adam Baghras, regent of Christian Armenian Cilicia. The payment of tribute obviously rankled with the

[20] Runciman (1965a: 127). [21] Ibid. 325–6 and 333.
[22] Ibid. 410. [23] Runciman (1965b: 65). [24] Ibid. 138.

Ismailis, although they were happy to receive it from both Christian and Muslim leaders fearful of the threat of assassination. Joinville, senechal to the French king and Crusader, St Louis, records that amongst others, tribute was paid by the emperor of Germany, the king of Hungary and the sultan in Cairo to ensure 'the friendship of the Old Man of the Mountains'.[25]

Despite the annihilation of the Persian Ismailis and the threat from Sultan Baybars, ultimately to bring about their downfall, the Syrian Ismailis showed their gratitude when victories over the Christians removed the need to pay tribute to the Hospitallers. The assassination of Philip of Montfort in Tyre in 1270, followed by the attempt on the life of Prince Edward of England in 1272, was a desperate attempt by the Ismailis to stave off their demise. They also offered help to Baybars during his siege and capture of the Hospitaller castle of Crac des Chevaliers, a further attempt to survive the inevitable.

The final years

The Mongol advance through Persia and the fall of Baghdad in the middle of the thirteenth century resulted in the whole of Persia falling under the control of the Great Khan, with the exception of the Ismaili castles in the north. Despite years of negotiation, the Ismailis were unable to reach an agreement with these invaders from the East and the leadership became divided amongst itself, some wanting to resist, others wishing to obtain the best terms they could. Hulegu Khan, commander in chief of the Mongol army and grandson of the great Genghis, had only the destruction of the Ismailis in mind. This heretical sect that had resisted all attempts to destroy it was now facing its greatest threat as the Mongol army entered the mountain stronghold. Castle after castle tendered its surrender, only the commanders of Alamut and Lammassar refusing. The Mongol response was to besiege both, Alamut surrendering within a few days, Lammassar holding out for two years until 1258. All the castles were reduced and made untenable, their occupants put to the sword. The power the sect had held in Persia was over for good.[26]

The Syrian branch, well aware of what had happened in Alamut, had sought to ally itself with Baybars, the Mamluk sultan of Egypt who was liberating the Holy Land from the Crusaders and intending to oppose the Mongol invasion. Recognising the threat that the Assassins posed, Baybars rejected any alliance and sent a force into the Jabal Bahra to besiege those castles that refused to surrender. Ullaikah, Rusafah, and Khawabi fell in 1271, although the others held out to differing degrees. By 1273 all the castles were under the control of Baybars; the power of the sect had been destroyed for ever.

This extremist sect, which gave the word assassin to the English language, had for almost two hundred years led a revolutionary campaign against the Seljuks, Sunni Muslims and anybody who opposed them, using murder and the threat of murder. Their campaign of terror pervaded the whole of the Middle East, and with their perverse belief that assassination was a legitimate way to achieve their aims, they were universally loathed as well as feared. In the end this was all they achieved.

[25] Joinville and Villehardouin (1963: 277).

[26] Lewis (1985: 94–6).

17
THE HIMALAYAN REGION

The Tibetan cultural region

Tibet, that remote, mysterious and little-known country, spiritual if no longer temporal home to the Dalai Lama, has kept alive a way of life and a rich and ancient culture, irrevocably intertwined with the magical and mystical form of Tantric Buddhism. Its basis is compassion and wisdom, manifesting itself in the gentleness of the Tibetan people, the devotions of the legions of crimson-robed monks and the splendour of those ubiquitous seats of learning and repositories of knowledge, thought and philosophy, the monasteries. Unfortunately, huge numbers were so cynically and wantonly damaged or destroyed by the Red Guards of the Chinese Cultural Revolution during the 1960s.

Sandwiched between India and China, the awesome Himalayas hold back the inhospitable and arid Jang Tang, the Tibetan plateau known to its inhabitants as the 'Roof of the World'. This physical environment, the adoption for the second time of Buddhism in the eleventh century and a self-imposed isolation has produced a culture of intrigue that has spread beyond its geographical boundaries. Indeed, it is better to consider a Tibetan cultural world as its people, religion, art, literature and architecture have spread to China in the east, and Bhutan, Sikkim, Nepal and the Indian Himalayas to the south and west.

Tantric Buddhism pervades all aspects of life in Tibet and the Himalayan regions, with the exception of the southern reaches of Nepal, and everywhere are to be found monasteries, tangible expressions of Buddhist power and the hold it has on a deeply religious people.

Whilst the primary concern is with the fortified monasteries that were built from the fifteenth century onwards in the Himalayas, central Tibet, the eastern province of Kham and neighbouring China, an understanding of the origin and development of the various sects is required. Intense rivalries, political machinations and religious intrigue ensured that the Tibetan region remained in solitary limbo, its population serfs to the secular nobility and the powerful monastic lamas until the middle of the twentieth century.

The origins of Tibetan Buddhism

The Buddhist Dharma, or teachings, were proclaimed by Sidhartha Gautama, an Indian prince from the north-east of the country who renounced his wealth and status, and turned to a life as an ascete in the sixth century BC. Announced as the first Buddha, his philosophies and the preaching of his missionaries were slow to reach the Himalayas and did not penetrate into Tibet until almost a thousand years after his death.

These early missionaries had to confront the local deities and their priesthood, which they successfully did by incorporating these powerful Tibetan deities into Buddhist theology, transforming them into protectors of the Dharma. This conversion occurred around the time Tibet was becoming united in the seventh century by King Songtsen Gampo, the son of the

warlord of Yarlung. Using his military skills he conquered vast tracts of land. His hold was further strengthened by his shrewd marriage to Chinese and Nepalese princesses who were both devout Buddhists, thus making the task of his missionaries easier. Government was centralised in the Lhasa region, where he built his palace on the site of the present Potala Palace. The power of Tibet increased over the next two centuries and the empire extended into present-day Kashmir, Nepal, Sikkim, Bhutan, upper Burma and western China. The Indian Tantric master Padmasambhava was invited into Tibet by King Trisong Detsan, who had ascended to the throne in 815, and there was consequently a change in approach to the mix of ancient Indian Buddhism and the worship of indigenous Tibetan deities. In trying to enforce a strictly orthodox Buddhism, he engendered such hostility that he was assassinated and his Yarlung empire descended into civil war, the resulting disintegration leading to the establishment of small warring kingdoms throughout the Tibetan ethnic region.

One such kingdom, that of Guge, roughly approximating to western Tibet and the Ladakh region of Kashmir in the Indian Himalayas, is believed to have initiated the re-establishment of Buddhism by inviting in 1042 the great Indian master Ringchen Zangpo, who then travelled on to Tibet. Tibetan scholars had sporadically travelled to India to obtain and translate texts; however, it was Zangpo's mastery of the Tibetan language which stimulated the assimilation of Indian Buddhist texts and the reaffirmation of Buddhism as the religion of Tibet.

Contacts with India continued until the Islamic invasion and conquest of north India saw the total destruction of the great Indian Buddhist centres. The last was Vikramshila, in the early thirteenth century, a centre much visited by Tibetan scholars. The influence of Indian Buddhism and culture now ceased. Indian art had long been assimilated and adapted to local needs and traditions. Architecture was entirely Tibetan in origin; development and building styles derive from the trans-Himalayan house, although Indian monastic layout initially influenced Tibetan religious architecture. Monastic content developed a settled format, typically Tibetan in style with adaptation according to local needs or position. A relationship developed with military architecture either by fusion or spatial arrangement.[1]

The early Tibetan Empire had used the advent of Buddhism to establish and maintain control of its frontiers. Whilst the power base was in central Tibet, links with India had provided the kings of central Tibet, and later those of Guge, with a sophisticated military machine: better armaments and the use of proven tactics ensured that the opposing tribal warrior coalitions were at a distinct disadvantage. As Hosla points out, the acquisition of new territory was planned around a military and civil administration centred on a fort and the nearby monastery.[2] The monastery was to become 'an extension of the political arm of the king' playing a vital role in the conversion of tribal rituals and festivals into Buddhist ones, at the same time introducing literacy, education, local government and commerce. There are scant archaeological remains identified from this period. It is claimed that despite the ravages of civil war, earthquake, fires and more recently, the depredations of the Red Guards, the central Tibetan monastery of Samye dates from the later part of the eighth century. The nearby

[1] Tucci (1967: 111–15).

[2] Hosla (1979: 76).

fortress of Yumbu Lagang, reputedly the oldest dwelling in Tibet, is earlier, dating from the seventh century.

Founded by King Trisong Detsen, **Samye** was the first monastery to be established in Tibet and has its buildings arranged in the shape of a mandala to represent Buddhist cosmology. There are today no identifiable remains of the neighbouring castle or fort, the seat of power of the local nobility and the garrison commander.

Yumbu Lagang reaches into the skies from its rocky mountain pinnacle overlooking a fertile and well-populated river plain. Totally destroyed recently by the Chinese, it has now been completely rebuilt. Now the seat of a small monastery, its multi-storey tower was, perhaps, the forerunner of many of the lookout towers that dot the mountain tops of central and western Tibet. Ascent by foot is difficult and its high walls would make scaling difficult.

The influence of the Mongols

The Himalayas had protected the Tibetan region from the influence of Islam. A new threat, however, appeared in the north-east, where Genghis Khan, who had by 1206 united all the nomadic tribes of Mongolia, was about to embark on his last, and most terrible, conquest. The Tibetans were aware of the nature of Mongol invasion; all opposition was crushed without mercy. Submission without any opposition to the Mongol raiding parties of 1239 saved Tibet from the severe depredations that the Mongols inflicted upon regions that resisted conquest. As a consequence Tibet became part of the empire of the Great Khan, an event of significance in the development of Buddhism since Kublai Khan, the grandson of Genghis, embraced Buddhism in 1270 and became a powerful and generous patron.

His conquest of the Sung Empire of China in 1279 resulted in Mongol support that was both protective and financial. It was the start of that peculiar relationship between China and Tibet known as Yon-Mchod, or Patron and Priest; the Chinese emperor and the chief lama each exerted an influence over the other. Tibet became once again a political entity with the core revolving around the Yarlung–Lhasa–Shigatse region of central Tibet in the fourteenth century.

The rise of the sects and the ascendancy of the Gelukpas

The original school of Tibetan Buddhism, based on the early Indian teachings, became known as the Nyingmapa, or Red Hat sect founded by Guru Rimpoche (Padmasambhava), whose first monastery was at Samye. By the end of the eleventh century, Tibetan isolation, introspection and the obsession with Buddhist theology led to the formation of two further lineages: the Kagyupa and the Sakyapa. The former introduced the incarnate-lama system of succession and played a great part in the formation of the present kingdom of Bhutan, whilst the later, continuing with a hereditary approach, became increasingly powerful as a result of its influence upon, and favours received from, the ruling Mongolian aristocracy. The head lama of the Sakyapa had by the thirteenth century become the most powerful man in Tibet with a role as spiritual mentor and teacher to the Buddhist emperor of China.

By the late fourteenth century, however, his power had been substantially eroded by the rise to prominence of a reformist movement led by Je Rinpoche, better known as Tsongkhapa. His Gelukpa, or Yellow Hat, order rapidly eclipsed the Red Hats and became the most

powerful and largest of all the schools of Tibetan Buddhism. The incarnate Dalai and Panchen Lamas belong to the Gelukpa school, and it is from these Yellow Hats that Tibet developed the theocracy resulting in this priestly order, through the office of the Dalai Lama, taking political control of Tibet.[3]

The rise to prominence of the Yellow Hats was not a peaceful one, and whilst the two rival sects differed little in basic theology, the Red Hats were not prepared to lose power to the Gelukpas. Both groups sought to ally themselves to the Tibetan nobility and the Mongolian overlords to the north. It was a time of 'bitter, bloody deeds and unscrupulous intrigue'.[4]

The next two centuries were to see a constant power struggle between the increasingly powerful lamas and the nobility and land-owning families. It was also a period which saw the founding of the Great Monasteries in central Tibet, especially in the environs of Lhasa, now the capital. This was made possible by the patronage and gifts of the Mongols. Huge monastic complexes, almost cities, were created, each containing many thousands of monks: Ganden, founded by Tsongkhapa himself in 1409, was followed by Drepung in 1416 and Sera in 1419. All Gelukpa establishments, they became monastic university townships and were known as the 'three pillars of the State'. Others soon followed: Tashilhunpo monastery, to be the home of the Panchen Lama, was founded by the first Dalai Lama in 1447 to the west of the dzong at Shigatse; the great monastic complex of Gyantse, Pelkhor Chode, is contemporary, again built near the dzong.

The increasing struggles between the sects and the land-owning nobility resulted in the ordinary peasants siding with the Gelukpas, preferring to be ruled and guided by monks rather than by a secular autocracy. Gelukpa supremacy was now unshakable and their missionary work in Mongolia reaffirmed Buddhism as the State religion when Altan Khan, the sixteenth-century ruler, embraced the Gelukpa cause. It was Altan who conferred on Sonam Gyatso, the head lama of the Gelukpas and the third incarnation of the sect, the title of Dalai Lama, literally 'Ocean of Wisdom'.

The expediency by which one of the sons of Altan Khan was recognised as the incarnate Dalai Lama Sonam Gyatso in 1589 gave more impetus to the developing theocracy of the Tibetan State. The successor to Sonam, Nagawang Lobsang Gyatso, to become known as the Great Fifth, proved such an astute religious, political and military ruler that he achieved autonomy from both the Mongols and the Chinese, which endured until the Chinese occupation in 1951. Religious unity was achieved by ensuring that the lesser lineages acknowledged the Dalai Lama as their titular head.

The monasteries

The two great periods of monastic construction were in the twelfth century after Bhuddism had been reintroduced following the depredations of earlier centuries, and again between the fifthteenth and seventeenth centuries. The wealth generated by the Yellow and Red Hats led

[3] This theocracy was to remain until the Chinese invasion and annexation of the 1950s.

[4] Snellgrove and Richardson (1968: 149). Political machinations and intrigue have continued to the present day. Only a few years ago a plot was hatched to spirit out of Tibet the karmapa, leader of the Kagyupa school, from Tsurphu Monastery, where he lived under the supervision of the Chinese.

to the development of the vast monastic cities in Tibet, the hill-top monasteries in Little Tibet and the dzongs of Bhutan.

Whilst documentary evidence for the dates of the foundations of the monasteries exist, in many instances there is little in the way of documentation about the actual buildings. Study is difficult as very little has been published so far and although the Chinese in the 1950s surveyed the monasteries and made an inventory of their artefacts, the results are still locked in State archives. Tibetan choices for the location of their monasteries, most frequently perched on mountain tops or the sides of hidden valleys make access very difficult at best, and many monasteries remain inaccessible. The greatest problem, however, in the study of these magnificent buildings has been their almost total destruction during the cultural revolution in China and after the uprising in Lhasa when the Chinese destroyed any building of more than two storeys that might possibly have a military role. The country's architectural legacy was almost totally destroyed. Only a scattering of monasteries around Lhasa and the great Potala Palace of the Dalai Lama escaped demolition, reputably on the instruction of Chou En-Lai, together with a number in the countryside which were saved by their use as grain stores.[5]

Fortunately, Tibetan influence in Ladakh, Zanskar and the valleys of Lahaul and Spiti, now in India, although located in the west of the Tibetan plateau, has ensured that a number of the Buddhist monasteries from the late mediaeval period have remained more or less as they were built. Similarly the energies of Shabdrung Ngawang Namgyal and his lineage in Bhutan have left a number of fortress monasteries, the Bhutanese dzongs, the ultimate fusion of religious and military architecture in the Himalayas.

Architectural techniques and form in the Tibetan cultural region

Tibetans build with considerable skill and ingenuity, using only the simplest of materials to produce monastic complexes that not only cover vast areas but soar skywards, storey upon storey. The basic building materials of sun-dried mudbrick, mud and chaff mortar, rough-hewn stone and timber, mostly fir and oak, are fashioned into buildings immediately recognisable as Tibetan, whether house, manor, palace, fort or monastery. Remarkable skill is needed to fuse these simple materials into buildings that can withstand extremes of weather, particularly wind, cold and snow.

Upon rocky or dug-out foundations coarsely dressed stone is set in a mud mortar. Between 0.5 and 1.5m in thickness, these stone walls rise to varying heights and adequately defend against rising damp. The use of sun-dried bricks, or in some cases of stamped mud, is reserved for the upper storeys. All walls have an inward batter. Wooden door and window frames are usually prefabricated in the forested regions of Tibet. Narrow in the lower floors, the windows increase in size with each storey. Floors are also constructed from timber and rest upon wooden columns or pillars. Decoration is often added in the form of wooden balconies and galleries reaching out from the upper stories.

The best clay available is used to plaster both the inside and outside of the walls; applied

[5] Dowman (1988: 8–14) states that of the 3000 or so monasteries that were in existence when the Dalai Lama went into voluntary exile in 1959 very few escaped destruction that in many instances was total.

by hand it is a very effective protection against erosion caused by wind and snow. Decoration varies from region to region and according to the function of the structure. Temples receive the greatest embellishments, whereas forts, commonly called dzongs, are utilitarian with the exception of those built in Bhutan. Labour was provided by the village and farming peasantry, with the more skilled roles being taken by the monks. Building techniques have remained unchanged for centuries, fortunately facilitating the expansive rebuilding of monasteries which is presently being undertaken throughout Tibet.

Monastic types

Hosla has classified Buddhist monasteries into four main types, although all monasteries are built around the main temple or utse lying at the very heart of the monastery.

The earliest form, built on flat ground on valley floors, consists of a four-way oriented temple with lodgings, storehouses and kitchens all enclosed within a perimeter wall, which may be round, elliptical or arranged in a zigzag fashion. Of these only **Samye** has survived. The wall here originally served both to isolate and to defend its occupants. Recently reconstructed, it appears at first sight to be crenellated; however, closer inspection reveals hundreds of chortens which adorn the encircling wall.

Hosla describes a second monastic form where the walled temple complex is separated from the other buildings necessary for monastic communal living. Cloisters, refectories, lodgings and storehouses are physically apart from the temples. Those that remain are found in Indian Tibet and include the monasteries of **Thiske** and **Alchi** in Ladakh. These two forms are from the early years of monasticism, before the growing role of the monastery necessitated architectural changes. Monasteries were becoming far more than religious retreats; functional needs brought about further evolution. As well as centres for the devoted, shaping and challenging Buddhist theology and philosophy, they became depositories for Buddhist texts, providing workshops for the monk artisan in wood-block printing. Buddhist fine art developed in the monastery along with astronomy and traditional Tibetan medicine; education of selected monks became a necessary prerequisite. Secular roles were increasingly performed by the monastery and its inhabitants: civil administration, involvement with trade, and the storage of foodstuffs, especially grain, given to the State by the feudal peasantry, became an integral part of the function of many monasteries. Involvement in these roles led to many monastic recruits joining for the security and comparative safety such positions offered.

As a result, by the fifteenth century, monasteries were composed of numerous buildings, physically separated, and without any formal arrangement. These complexes, straddling the side or top of a mountain, attained vast sizes, containing thousands of monks. Architectural form related more to function and the physical contours of the site than any other consideration. The theological role of the monastery is well demonstrated at the great **Pelkhor Chode** temple complex at Gyantse. It contained not only Gelukpa and Sakyapa schools but also those of many other sects. Here the straggling arrangement is enclosed within a huge perimeter wall, whereas in Ladakh and the valley of Spiti in Indian Tibet they are far more compact in order to provide a more effective defensive role.

Hosla regards the fortress monasteries of Bhutan as his final classification, with their

orderly rooms arranged around a courtyard that contains the central temple or utse. Symmetrical of form with clear divisions as to purpose, these dzongs warrant separate consideration.

The ultimate development of Buddhist religious architecture was achieved when the Potala Palace of the Dalai Lama was built in Lhasa. It is one of the great buildings of the world and deserves to be considered in detail, combining as it does symbols of intense spirituality with the traditional trappings of Tibetan government. This centre of Tibet's theocracy shelters behind powerful fortifications.

Monastic siting and defensive considerations

Despite the mystical, supernatural and legendary nature of Buddhism, the monastery builders seem to have adopted a pragmatic approach to the siting and building of monasteries. Their secular role in the early development of Tibetan expansion and unity saw them positioned strategically. Often built at the confluence of rivers, near to trade routes and at important crossroads, consideration was given to the needs and comparative comforts of the monks. Frequently built in the lee of a hill surrounding a fertile valley, the monastery, where possible, faced towards the east to catch the thin sunlight of these high places. Increasingly, over the centuries, monasteries gave up their valley locations in favour of mountain tops.

The secular role of many monasteries led to large numbers becoming very wealthy. For centuries the neighbouring farmers had given a significant proportion of their harvest to the monastery. Monks could also become engaged in trade, which together with the gifts and donations from pilgrims and patrons resulted in the accumulation of great wealth; this wealth was translated into monastic religious art, artefacts and treasures. The enormity of these riches is demonstrated by the incorporation of 300kg of gold onto the surface of the 26m high statue of Maitreya, the future Buddha, found in the Jamkhang Chenmo temple at Tashilhunpo monastery. The gold colour symbolised the loving kindness of the Buddha. So rich did Tibetan monasteries become that the Chinese labelled them 'the western store-houses'.

Protection was needed against bandits and brigands, from attacks by rival monasteries and lineages, and from the depredations of external aggressors. The documentary evidence relating to attacks on and damage to the monasteries extends over centuries. Samye, despite its protective wall, was attacked and damaged in the civil wars of the eleventh century, and there are records of the looting of monasteries by Mongolian raiding parties in the thirteenth century. The rivalry between the Sakyapa and Gelukpa led to serious fighting between the two sects; the king of Shigatse sided with the Red Hats to attack the Yellow Hat monasteries. A Tibetan army that attacked and besieged the Ladakhian monastery of Bagso was kept at bay for three years due to the huge grain stores kept there.[6]

Whilst the early monasteries were provided with a defensive perimeter wall, and at the time of Tibetan expansion and consolidation became associated with the nearby fortress of the ruling aristocracy, the ascent of the Buddhist lamas to the highest reaches of power resulted in

[6] The fortified, sixteenth-century monastery of Litang, in eastern Tibet, was besieged by the Chinese People's Liberation Army in February 1956. Defended by many of its monks and neighbouring farmers, it succumbed after being bombed and strafed by the Chinese airforce.

the fortification of many monasteries. Different regions had different needs and were subject to different architectural influences. They need to be looked at separately.

The warring monks and the Dob Dobs

Whilst no comparison can be made with either the Murabitun or the Christian military orders of warrior monks, there is evidence to suggest that the supposedly peaceful Buddhist monasteries developed their own corps of fighting monks. By the fifteenth century, such was the complexity of the monastic city that monks became specialised, performing specific roles whether as farmers, traders, builders or carpenters. One group took on the role of monastic guards and policemen necessitated by the development of such large monastic populations together with their acquired wealth. The civil war of the early seventeenth century was fomented by lamas and the monks played their part in the numerous battles and sieges. The monks of Sera were regarded as being both clever and dangerous. They had raised a small army of warrior monks, known as Dob Dobs, who although feared were admired for their athleticism and martial skills. They undertook regular training and became a close-knit community. Inside the monastery they shaved their heads, but those acting as bodyguards to high-ranking lamas on their travels were recognised by long, curly coiled hair either side of a central shaven scalp. There is little information on how these warrior monks functioned, though they exerted political pressure that could be backed up by force.[7] There is much evidence of monasteries being attacked, besieged and defended by monks. Saskya monastery was attacked and pillaged in 1290, and both Drepung and Sera have been repeatedly attacked since the seventeenth century.

Enough monasteries remain to give an indication how monasteries became fortified and how Tibetan military architecture influenced the building of the Potala Palace and the Bhutanese dzongs; there appears to have been a parallel architectural development, a symbiosis in many instances. Dzong and monastery are frequently found in close proximity, best exemplified in the towns of Gyantse and Shigatse. Occasionally the dzong contains a monastery or theological college; Dechen dzong, guarding the northern approaches to Lhasa, contains the Sangnak Kar, a Gelukpa theological college visited by the great Tsongkhapa, and the fortress of Gyama Trikang contains a monastery. In other instances the monastery received a fortified perimeter wall with corner bastions and a protected gateway, the complex functioning both as a provincial dzong as well as a traditional monastery. The finest example so far recorded is at Sakya, east of Shigatse; here the Lhakhang Chenmo, or southern monastery, is surrounded by a square perimeter wall, 160m long on each side, reinforced by square corner and central interval towers on each side. That situated in the middle of the eastern wall contains the only entrance gateway. Believed to date from the thirteenth century it was the chief monastery of the Sakyapa sect and, surprisingly, escaped the attention of the Red Guards. The appearance today is probably much as when first built. In typical Tibetan fashion, repairs and maintenance remain faithful to the original.[8] There is also a northern monastery, now little more than a ruin with similar fortifications.

[7] Stein (1972: 141).

[8] Inside the monastery are wall paintings showing how the monastery was built together with any subsequent repairs and alterations.

Samye and Chokhorgyal

Marking as it does the introduction of monasticism into Tibet in the eighth century, **Samye** has always been an important pilgrimage site, representing a continuum of Tibetan Buddhism for twelve hundred years. It has survived civil war (the eleventh century), fire (in the seventeenth and nineteenth centuries), earthquakes (in 1816) and the recent Chinese occupation, when it was turned into a farming commune and many of its religious buildings demolished. Much rebuilding has resulted and continues. The surrounding elliptical wall over 1km in length, with a height of 4m and a thickness of 1m, is crowned with over a thousand chortens or stupas. Four gateways are situated at the cardinal points, where there is provision for guard-rooms, or gonkhangs, for the protective deities. The central four-storey utse, containing rooms for the Dalai Lama and for the storage of relics, represents Mount Sumeru, the centre of the universe, and is surrounded by four 50m tall stupas and the temples of the sun and moon. The enclosure contains the lodgings of the monks, other temples, a meditation hall and a printing press, all of which have undergone or are undergoing restoration. The buildings are in fact arranged in the form of a cosmic mandala, the Buddhist version of the universe.

Whilst the fortified aspect is now much reduced, the mystical Yellow Hat gompa, or monastery, of **Chokhorgyal**, like Samye, built on flat ground, has the remains of its massive ramparts still reinforced with bastions and fortified gateways. It gives a good impression of how these flatland monasteries may have been fortified. The curious triangular enceinte, rather than the more common round, oval or quadrilateral wall, reflects the 'triadic geomantric symbolism of this power place'. Here three rivers join, three mountain peaks surround, providing abodes for the protective deities, and three valleys run into each other.[9] Founded by the second Dalai Lama Gendum Gyatso at the beginning of the sixteenth century, there is a fusion between functional military architecture and the magical symbolism of the location. The monastery is now much ruined but contains two temples and two theological colleges.

Gyantse, the monastery of Pelkhor Chode

Once the third-largest town in Tibet after Lhasa and Shigatse, Gyantse is situated upon a crossroad; once a trading centre between Tibet, India and Nepal, its status is now much reduced. It is notable for being the scene of conflict between Britain and Tibet at the turn of the twentieth century when, in 1904, Colonel Francis Younghusband attacked and captured the dzong. Gyantse has retained much of its traditional Tibetan aura, ambience and architecture.[10] Whether secular or religious, its architecture is being maintained and restored in true Tibetan style, sympathetic to its past.

Surrounded on all sides by mountains and bisected by the Myangu River, the town is dominated by its dzong of the fourteenth and fifteenth centuries commanding the trade routes; Lhasa to the south-east, Shigatse to the north-west and Sikkim to the south-west.

Lying approximately 500m to the north-east, at the foot of the fortress is the great

[9] Dowman (1988: 257–8).

[10] The story of Younghusband's expedition during 'the Great Game' is well told in *Bayonets to Lhasa* by Peter Fleming.

Image not available

Pelkhor Chode, the monastic complex of Gyantse, dating from the fifteenth century. Ecumenical by nature, the monastic complex belongs to no one lineage and at its zenith contained seventeen colleges, representing all the Buddhist schools. The site is spectacular, and like the neighbouring dzong rises northwards from the town lying in the valley below. Both are built upon rocky outcrops that rise from the valley, where the steepest sides are to the north, east and west; both are strongly fortified.

The monastery is surrounded by a huge bastioned wall of stone and mud brick that runs across the base of the rock separating the town from the religious community. The wall turns northwards at the eastern and western edges of the rock formation and is joined by the undulating northern wall running along the crest of this rocky hill. Immensely powerful, this encircling wall is further strengthened with fifteen interval towers along all but the southern wall. Now devoid of any of any reinforcing towers, this wall now contains only the recently inserted entrance gateway.

Whilst today the walls are in a ruinous state, and the buildings in the protected monastic compound almost totally destroyed, a painting in the restored Tsuklakhang temple vividly portrays the fortified monastic complex before its destruction. It further shows the southern wall to have been reinforced with corner towers and square interval towers. The monastery contains the nine-storey chorten of a hundred thousand Bhudda images, the Kumbum. Slowly the foundation is coming back to life.

Although the monastery is dominated by the dzong built for the kings of Gyantse, it is a powerful fortification in its own right and the protective walls enclose an area large enough to shelter the population of the town in times of need.[11]

The 'Great Fifth'

The Tibetan Bhuddist tradition of incarnation is a process wherein following the death of a senior lama a male child, after a period of exhaustive examination including the investigation of oracles, supernatural phenomena and the testing of the proffered candidate, is recognised as the incarnate or reborn lama. It has resulted in a system whereby a child from a lowly background can achieve high office. It has also produced some very great men, none more so than the fifth Dalai Lama, Nagawang Lobsang Gyatso, the 'Great Fifth', a man of political awareness and shrewdness.[12] Born in 1617 at Qonggyai in the Shannan region, the Gelukpa leader ruled between 1642 and 1682.

A civil war had been waged between the rulers of Shigatse, aided by the Red Hats and the rulers of Lhasa, supported by the Yellow Hat Gelukpas. The success of the Lhasa factions was

[11] Fleming (1961: 160) A photograph taken after the dzong was captured shows the monastery in the background with many of the buildings in the monastic painting present. The monastery was considered by British officers to be of 'equally stout construction' to the dzong but no mention is made of any attack or defence. A small building containing historical details and artefacts from Younghusband's assault is labelled 'The Anti-British Museum', which it certainly is.

[12] The title of Dalai Lama was first given, by Mongol overlords, in 1578 to Sonam Gyatso, the head of Drepung and Sera monasteries, the third incarnation. The Dalai Lama is regarded by all sects as the titular head of Tibetan Buddhism and is seen as the embodiment of the Avalokiteśvara, the 'Lord who looks down in compassion'.

assured when the Mongols, under Gushi Khan, interceded on their behalf. His continuing support for the Gelukpa leader enabled Tibet to enter a period of stability that saw Tibetan arts, crafts and architecture flourish.

The establishments of able regents who oversaw the civil administration – there were four during the reign of the Great Fifth – allowed the Dalai Lama and the khan to embark upon an inspection of existing monasteries and initiate the building of new ones for the Gelukpa lineage. Older monasteries were encouraged to accept Gelukpa teachings, but such was the charisma and power of the Dalai Lama that those monasteries that remained loyal to their older schools readily accepted the Dalai Lama as undisputed head of all the sects.

Until now Tibetan monasteries had been built on valley floors or in the folds or lee of protecting mountains; the shift to mountain tops resulted in monasteries dominating physically as well as spiritually the surrounding countryside and population. The Potala Palace in Lhasa is the culmination of this evolution.[13]

The triumvirate of the Dalai Lama, his Mongolian patron and overlord and the regent, or desi, established a religious union and identity throughout Tibet, not seen for eight centuries. As undisputed spiritual and temporal ruler, he needed, in his capital city of Lhasa, a palace from where he could maintain his authority and dispense his compassion through the theocracy he had established in 1642.

The Potala Palace

The site chosen demonstrates the genius of the Great Fifth; even today, surrounded by nondescript concretions erected recently by the Chinese, it is one of the great buildings of the world. Lhasa is situated in the middle of the river valley of the Kyi-Chu at a height of 3660 metres. Within this fertile valley are a number of hills, the largest of which, Mount Marpori, is situated on the northern bank of the river. Revered by the Tibetans as the site of the palace built a millennium earlier, the Dalai Lama V realised the spiritual significance of the 'place where Avalokiteśvara lives'. It is not recorded what remained of the eighth-century palace, although it is likely that what did remain was demolished.

Building commenced in 1645 with the White Palace; built on top of the eastern part of Mount Marpori it was not completed until 1653, although the Dalai Lama had moved here from Drepung Monastery in 1648. Fortified from the outset with protecting walls and a huge drum tower, it served as the residence of the Dalai Lama and his government, with the necessary offices and reception rooms. Construction continued until the early years of the eighteenth century. The death of the Dalai Lama in 1682 had been concealed from all by his regent Sanje Gyatso in order that building could continue without the interruption and upheaval this revelation would have caused.[14] His main work was the adjacent Red Palace, which contains the mausoleums of seven Dalai Lamas (V and VII–XIII). Their remains are entombed in individual chortens sheathed in gold and studded with precious stones; that of the Great Fifth rises 20m through three storeys and is covered with almost 4000kg of gold.

[13] Snellgrove and Richardson (1968: 199–200).

[14] The choosing of the next incarnate was a lengthy and time-consuming business and was often accompanied by intrigue and political instability.

Image not available

Other rooms contain shrines, chapels, meditation rooms and assembly halls, all sumptuously decorated and embellished with the finest work of Tibetan, Nepali and Chinese artists and sculptors and separated by numerous courtyards.

Ultimately the whole of Marpori, the Red Hill, became covered in additional buildings; rising to a height of over 115m, through thirteen storeys, it was until recent times one of the tallest buildings in the world. It still remains one of the most impressive. It measures 360m east to west and 335m north to south. With an interior area covering approximately 130,000 square metres the thousand rooms reputedly house two hundred thousand images.

The flat ground to the south was enclosed within walls approximately 20m high, containing corner bastions and fortified gateways. This bailey was populated by the laity, necessary to maintain the functions of government and the fabric of the palace. It contained printing presses, workshops, barracks, lodgings for visitors and housing for the civil service.

The substantial body of monks who surrounded the Dalai Lama were accommodated in the western wing of the White Palace, which together with the Red Palace was further protected by four huge drum towers, one of which protects a spur work to the north of the Red Palace.

Only wood, stone and earth was used in the construction of this most magnificent example of Tibetan architecture; the slopping walls are painted red and white and pierced by black-framed windows with decorated pelmets, increasing in size with each storey. The golden domes and cupolas of the chortens of the incarcerated Dalai Lamas provide a magical skyline. Its labyrinthine passageways, dark and musty, give access to rooms decorated and furnished in such a way as to show the continuum of Tibetan Buddhism and its art from the seventeenth century to the present. The nearest equivalent in Western Christendom is the Vatican in Rome and the Palace of the Popes in Avignon. The Potala Palace in Lhasa is the ultimate fusion of fortress and monastery and dominated every aspect of Tibetan life until the voluntary exile of the Dalai Lama in 1959.

Shelling by the People's Liberation Army during the 1959 uprising damaged the southern façade, the porch of the Red Palace and the Potala school; only the intervention of Chou En-Lai, who used his own troops to protect the palace, saved wholesale destruction during the Cultural Revolution.

The weather in Lhasa can be notoriously fickle, indeed Tibetans claim the weather of all four seasons can occur in a single day; the mood of the palace changes accordingly. Dark and brooding under the black clouds heralding thunderstorms, it has a fairytale appearance when covered in snow. It is seen at its best, however, when the brilliant Tibetan sunshine turns the palace into a dazzling mixture of white, red ochre and gold. The master of its environment, despite being surrounded by nondescript concrete and glass high-rise buildings of Chinese construction, it is a tangible expression of the devotion, beliefs and culture of the Tibetan people. In this respect, its future is as important as the past.

The present situation

Much reference has been made to the damage and destruction inflicted upon Tibetan culture and its architecture during the latter half of the twentieth century by the Chinese. Despite a change of policy in the 1980s, allowing Tibetans to undertake rebuilding and restoration of

their monasteries, the accumulated art and architecture of centuries has been irretrievably lost. Very few buildings escaped destruction. Fortified farms, manor houses, watchtowers and the fortified centres of civil administration, the Tibetan dzong, were reduced to rubble; anything of value was confiscated.

It is a reflection of the resilience and character of the Tibetan monk, together with a centuries-long tradition of Tibetan building techniques and styles, that monasteries are being rebuilt in the manner and arrangement that existed before 1950. It is, however, inconceivable that any of the secular buildings will be reconstructed, with the exception of those that may have a role in the developing tourist industry.

The western Indian Himalayas

Both the secular and religious architecture of this devoutly Buddhist region of the Western Himalayas, now part of India, draws its inspiration and building techniques from Central Tibet. Part of the Guge kingdom of western Tibet in the Middle Ages, Ladakh in Kashmir, north-west India, was already Buddhist by the eleventh century. The spread of Islam up the Indus valley resulted in ties with India becoming very tenuous and the Ladakhi region increasingly turned to Tibet, whose influence became paramount. Both the upper and lower realms of Ladakh had become unified under the Buddhist king Tashi Namgyal in an attempt to resist further Islamic expansion.[15] The dynasty he founded enabled the region to prosper and many of the monasteries that were built still exist and function in the way that they have done since the fifteenth century.

As in central Tibet, the combination of a hill-top fort with a nearby valley monastery was used to pacify, control and administer newly acquired territory by the kings of Guge and their successors, the kings of Ladakh, an arrangement that, geographically, still exists at Alchi. Whilst this arrangement continued in the provincial centres of Tibet, especially at Gyantse and Shigatse, a significant development occurred in the Ladakhi region.

By the fifteenth century Buddhist supremacy had become firmly established but the threat posed by the Islamic rulers of neighbouring Baltistan saw an increasing fusion of fort and monastery. Always close, this politico-religious symbiosis realised the benefits to be gained by increasing physical union. Indeed today only the monastery of **Alchi** occupies its original site on the valley floor.

The fort, always located on easily defensible mountain tops had to remain there for military reasons. It was the monastic complex that moved up the mountain to merge with the fortress to form a compact and defensible whole.[16] As space was limited on the mountain tops the monk-architects imitated their military colleagues and started to build upwards, adding more storeys to provide the rooms necessary for the monastery to function. Both **Tikse** and the relocated **Lamayuru** rise to five storeys and the vertical arrangement of monastic buildings

[15] There is no documentation about the history of Ladakh until the later Middle Ages and few have written about the region. According to Hosla, the history by Francke published in 1907 remains the standard work.

[16] Hosla (1979: 77).

with the fort resulted in a close-knit and compact group of buildings. This arrangement made them easy to defend and difficult to assault with the military equipment and technology available to Himalayan invaders. Although the monasteries tried to follow the lead set by Sera and Drepung near Lhasa, physical constraints and defensive needs played a greater role than the symbolic.[17] Balti-Kashmiri armies were becoming increasingly belligerent; raids were becoming more frequent. The hill-top monastery forts were best able to resist attack and shelter the local peasantry; this was especially important as under the primogeniture system where every family gave at least one of their male children to the monastic body. The result was an increase in the number and size of the monastic communities in the region between the fifteenth and seventeenth century.

The **Ki Gompa** in the Spiti valley is a typical example of these fort monasteries and sits on top of a barren mountain 12km to the north-west of the valley capital of Kaza. It is a conglomeration of separate buildings built on either side of the mountain crest and clustered around the main and always central temple. There is no symmetry, as for example is found in the Bhutanese dzong and although the central temple is approached from across a courtyard, open spaces are kept to a minimum. Although there is usually an ambulatory for pilgrims, this is reduced to a narrow passage that separates the chapel of the deities, the lodgings of the head lama, kitchens, store-rooms and the cells of the monks. It conforms to the general principle of temples occupying the highest levels with the cells randomly built at a lower level. Each monk has in his house a stove, fuel store and sleeping platform. Windows always face inwardly and the external appearance of the helter-skelter monastery is one of blank façades with minimal openings.[18] It was ransacked in the petty wars between Ladakh and Kulu and also suffered greatly during the Dogra War. Like so many monasteries in the Tibetan region it has undergone a process of continuous replacement, reconstruction and addition, invariably in a haphazard fashion apart from the central temple. It is, however, instantly recognisable as a typical Himalayan fort monastery.

Despite the success of the Baltistani army under Ali Mir who conquered the area in the sixteenth century and plundered many monasteries, fortunes were restored under the greatest of all the Ladahki kings Singe Namgyal (1570–1642) who increased the size of his kingdom and established his capital at Leh. Together with the Drukpa lineage he founded the monasteries of Stakna and Hemis, the largest and most famous of all Ladakhi monasteries. However the greatest of all his architectural achievements is the fortified palace that he had constructed in his capital. Built along the crest of a hill that overlooks the town of Leh it envelopes both sides and rises to seven storeys. In typical Tibetan style the thick high walls slope inwards with windows that are little more than loopholes in its three lowest storeys. This stark, unadorned and dominating palace is a true fortress and shows how the architecture of Ladakhi hill-top buildings became utilised for purely residential and military purposes. It is, despite the claims of Shigatse and other Tibetan dzongs, the prototype upon which the Dalai Lama based the design of his White Palace in Lhasa.[19]

[17] Ibid. 80. [18] Ibid. 81–7.

[19] Following the Dogra war and the decreasing fortunes and powers of the Ladakhi royal family, culminating in exile, the fortress palace fell into ruin and it is only recently that any attempts have been made to reverse this process.

Despite the close cultural ties with Tibet, Ladakh was subjected to invasion by a joint Tibetan and Mongolian army in the late seventeenth century. Again its fortunes picked up, only to suffer the depredations of the Dogra army from Jammu in the 1830s. The determination and the resilience of the Buddhist monks and their commitment to their monasteries have ensured that many monasteries have recovered. Strict adherence to traditional Buddhist architectural form, composition and construction has resulted in a present-day appearance that would be instantly recognisable by their original builders.

Nepal, Sikkim, Arunachal Pradesh and China

Whilst Tibetan Buddhism and its monasteries are found in other countries occupying part of the Himalayan range few are fortified, certainly not to the extent of those found in Tibet, Ladakh and Bhutan.

In Nepal Buddhist influence is confined mainly to its northern march with Tibet and the Kathmandu valley. Although the Buddhist monastic centres here are majestic examples of the art and craftsmanship of the Nepali artisans with their brick and wood constructions, none are fortified. The nearest that Nepal can offer is in the remote mountain kingdom of Mustang in the north-west. The tiny capital of Lo Mantang, built in a river plain, contains three small walled monasteries surrounded by the houses of the townspeople and all are enclosed within the town wall reinforced by towers and one entrance gateway.

Sikkim, sandwiched between Nepal and Bhutan, received an influx of Tibetan Buddhists fleeing from religious strife and the civil wars of the fifteenth and sixteenth centuries. Although the Gelukpa sect dominates Tibetan Buddhism, the Nyingmapas hold sway in Sikkim and a number of mountain gompas were built. Located deep in valleys and on mountain peaks it is not known if any were ever fortified.

In the Indian province of Arunachal Pradesh in the north-east corner of India, in an enclave lying between Bhutan, Tibet and Myanmar, lie a number of Buddhist monasteries in the eastern Himalayas. Now located in the heart of the modern town, at a height of 3400m, the monastery of **Tawang** was founded by one of the Great Fifth's missionaries for the Gelukpas in the middle of the seventeenth century and maintains strong ties with Drepung Monastery near Lhasa. Modern buildings now obscure its commanding site and it was obviously modelled on the Potala Palace with the main temples on the mountain crest and a walled forecourt housing monastic and civil buildings. Like the Potala, the monastic wall is reinforced with corner bastions.

Almost certainly the last Buddhist monasteries to be fortified are those of **Putuozongsheng** and **Xumifushou**, two of the 'Eight Outer Temples' in Chengde, Hebei province of China. Although both are very similar and are again modelled on the Potala place, they are of a later date. Putuozongsheng, the Chinese version of Potala, is the largest of the eight and was built between 1767 and 1771 to commemorate the sixtieth birthday of Emperor

[19] Following the Dogra war and the decreasing fortunes and powers of the Ladakhi royal family, culminating in exile, the fortress palace fell into ruin and it is only recently that any attempts have been made to reverse this process.

Qianlong; it served to accommodate the Dalai Lama and other dignitaries during their visits to China. Walled, it rises slowly south to north to the strongly fortified temple citadel. Like all Buddhist monasteries the plan of the forty halls, temples and other buildings forming the monastic complex is somewhat random, although the monastery can be subdivided into three sections. The first or southern forecourt is entered by the main gate to the monastery and contains the 'Five-Pagoda Gateway', so named after the five pagodas erected on top of the four-storey entrance gate, each representing one of the lamaist lineages.[20] It is symbolic of the Chinese emperor's tolerance of the different Buddhist sects. The middle or White Terrace contains the monks' lodgings and a number of temples, and leads to the temple complex known as the Great Red Terrace, which is powerfully fortified with walls and bastions. Rising to a height of 60m it has a façade modelled on the Red and White Palaces of the Potala but is less striking externally. The central 'Temple of the Unity of the Myriad of Truths' is roofed in a decorative way with gilded tiles. Whilst the enclosure wall is crenellated and reinforced with a number of fortified gateways and corner towers, the monastery is much more spacious than the Potala place and its ambience is softened with gardens, pine and birch trees.

Bhutan

Background and geography

Bhutan is a small Himalayan kingdom that has always managed to keep its independence.[21] It has also managed to develop and maintain a distinct culture despite the attentions of its powerful neighbours, Tibet to the north and India to the south. Helped by a geography that makes access and travel difficult, even today, an enduring Buddhist religion has been inextricably woven into a society in a way that has no parallel in the Christian West. Together with a self-imposed isolationism until three decades ago, the country owes its separate culture and unity to the vision, determination and ability of one man, Ngawang Namgyal.

Bhutan is a land of widely different physical characteristics. It is broadly separated into eastern and western parts by a mountain chain running north to south that separates the Trongsa and Bumthang valley systems and even today is only crossed by one narrow road, at Yotong La pass 3425m above sea level, which is liable to landslides during the monsoons. The high and permanently snow-capped Himalayan range acts as a natural border with Tibet, the source of all the rivers of Bhutan which run south through the inner Himalayan regions whose valleys wind through thickly wooded and at times precipitous mountain ranges.

Most of the population, then as now, lived in the inner Himalayan region and had little contact with people from outside. Trade and cultural influences were infrequent and remained so until the last two centuries when the British East India Company mounted missions to extend trading options and get into Tibet.

Ngawang Namgyal: the Shabdrung

Ngawang Namgyal was born in 1594 at the Tibetan Drukpa monastery of Gardron. At the

[20] The pagoda is synonymous with the Tibetan chorten or stupa.

[21] The Bhutanese, however, call their country Druk Yul, the land of the 'Thunder Dragon'.

time of his birth his grandfather was reigning as the seventeenth prince-abbot of the Drukpa monastery of Ralung, east of Gyantse. Under threat from the Yellow Hats, the Drukpas were weakened by internal dissension over the leadership succession. Although Ngawang was ultimately appointed after years of dispute his tenure was permanently under threat. Fearful of a plot to remove him from Ralung Monastery, he carefully planned voluntary exile in Bhutan where he had cultivated friendships. Knowing that he would be warmly received by Drukpa followers there, he left Tibet in 1616, taking with him powerful relics.[22] This was the first of many journeys he was to undertake in his lifetime, travelling the rhododendron-clad valleys and forging political and spiritual alliances with the independent ruling families which enabled him to remain the hereditary leader of the Drukpa school. Here he faced the first of many challenges; the dichotomy between defending his position, with force when needed, and the Buddhist exhortations that demand compassion and respect for all forms of life and forbid taking anything that is not freely given.

Reaction was rapid. Wary of having a potentially powerful and unified southern neighbour, Tibet launched the first of a wave of incursions and invasions into Bhutan in an endeavour to destroy the powerbase the future Shabdrung was establishing. Where and when the Tibetans were repulsed is not known. It did, however, produce a breathing space to allow Ngawang to go into retreat and plan his future strategy, epitomised in his authorship of the Nga Chudrugma or the 'Sixteen I's'.[23] This seventeenth-century mission statement was to earn him the sobriquet of Shabdrung, literally 'he at whose feet one submits'.

Determined to combine religious and secular law and produce a dynastic theocracy he found that it was to be a difficult and lengthy task. Internal opposition from different Buddhist schools and the ever-present threat from Tibet led to a pragmatic approach. The Shabdrung deemed it prudent to start building the first of his fortifications, which became and remain such a feature of Bhutanese life, both secular and religious, and of its history, architecture and landscape.

The development of the Bhutanese dzong

Despite the Himalayan mountain range posing great difficulty to travellers, the various Tibetan Buddhist cultural regions were in frequent contact with each other. The Tibetan dzong,[24] a purely civil fortification, much like the baronial castle of the West, had already become closely associated with monasteries in newly acquired areas and for reasons of defence monastery and dzong had become more physically related in Ladakh.

Fortifications already existed in Bhutan before the arrival of the Shabdrung. They belonged to a local nobility who ruled their own territory and engaged in local and petty feuds with their neighbours, more or less at the same time as the various Buddhist lineages were

[22] One of which, the 'self-created image of Karaspani', is today regarded as Bhutan's most treasured sacred object.

[23] It is an outstanding statement of self-esteem, belief and desire for power. It contributed greatly to his standing with the deeply religious and superstitious peoples of his newly adopted domain.

[24] Aris (1982: 13) states that dzongs in local Bhutanese literature are described as 'the heavenly abodes of the tantric divinities'.

Image not available

competing for dominance.[25] The Shabdrung, however, started to build dzongs that differed in design and purpose from any previous fortifications in the region and which were to prove to be huge, tangible and enduring legacies to his success in achieving Drukpa hegemony. These massive fortress monasteries have, over the centuries, become synonymous with Bhutanese culture and government, and despite sieges, fire and earthquake still exist today and continue their role as seats of regional government and Buddhist retreat.

There is no tradition of townships, let alone cities, in Bhutan, a state of affairs that existed until the middle of the twentieth century. The indigenous population consisted of nomadic pasturalists or peasant farmers living in dispersed farms and hamlets. There was no central administration or government; each locality managed its affairs as best it could.

The first dzong to be built by the Shabdrung was to serve as a prototype, a template for the many others he was to build and by those who ruled after him. A variety of functions were required if he was to fill the void in this disparate and anarchical mountainous Himalayan region. Above all he needed a building that was a visible expression of his power, a symbol of his permanence and a statement of his strength. It had to be able to resist the military technology of the region that may be brought against it and it had to be large enough to house the monastic temples of the Drukpas and their burgeoning brotherhoods. The officers of his administration, initially carried out by monks but later taken over by laity, required accommodation, as did the loyal local population in times of danger. Finally a granary had to be established for the storage of cereals acquired by the grain tax levied annually upon all the monastic tenants. The dzong he created was a monastery that was a fortress and a fortress that was a monastery; the duality had equal importance.

The architecture of the dzong

The architectural study of the dzongs is handicapped by a lack of documentation. Bhutan has no tradition of recording its architectural achievements; construction methods relied upon the oral tradition rather than drawn plans. The master craftsman passed on working techniques to his apprentices by the spoken word and practical example. Dzongs, then as now, were built, repaired and restored without plans. What little there were of indigenous archives have largely been lost in the fires that have damaged dzongs for centuries. The fondness for the flickering butter lamps in the cramped and cluttered temples of the dzongs was the cause of most of the fires.[26] Further loss occurred during the earthquake of 1897, which spared few dzongs. Additionally, architecture has been caught up in the Buddhist belief in the 'Wheel of Existence' wherein birth, life, death and rebirth is applied equally to temporal as well as spiritual matters. The process of construction, demolition and re-erection that has gone on in Tibet for millennia applies equally to Bhutan.

It is almost impossible to determine the original features of the dzongs. **Simtokha**, strategically placed on the trans-Bhutan highway is, it is claimed, little changed from the dzong

[25] It is debatable whether there were any Buddhist ecclesiastical fortifications before the arrival of the Shabdrung. Certainly there are no known remains today or documentary evidence.

[26] The last to burn down was Drukgyel in the Paro valley in 1951 and the 'tiger's nest' monastery 900m above the floor of the Paro valley lost its main buildings in a fire on the 19 August 1998.

built in 1629 by the Shabdrung, and yet we know it was besieged on at least three occasions before it was restored in 1671.[27] Fortunately Lieutenant Samuel Davis of the Bengal Army, who accompanied Samuel Turner's mission in 1782, has left a portfolio of watercolours of views of Bhutan and its dzongs.[28] Similarly, photographs taken between 1905 and 1907 during John Claude White's journeys through the Himalayas and Bhutan in particular give an idea how the cycles of reconstruction have changed appearances over the last century. Dzongs are living and vibrant edifices accommodating monastic bodies and administrators much as they have done for centuries.[29]

Dzongs, without exception, are strategically sited, frequently on commanding positions on high ground. That at **Trongsa** is visible in all directions from great distances. All were designed from the outset to house the dual system and were fortified to protect the surrounding dependent population as well as the resident incumbents. Whereas the monasteries of Tibet and Ladakh have somewhat haphazard and loose arrangements between their constituent buildings, this is not the case with the dzong. Enclosed between high walls are two separate wings, one occupied by monks and the other by the civil administration. Separating the two, frequently free-standing, is a central, often multi-storey tower, the utse, containing at least one temple on each floor. The arrangement is always formal and they are instantly recognisable. Comparatively few in number, twenty remaining in varying degrees of completion, there is one to each administrative district and they are still far and away the largest buildings in Bhutan.

The 'Palace of Great Happiness': Punakha dzong

Punakha dzong was the second to be built by the Shabdrung in 1637 at the confluence of the Pho Chu and Mo Chu, the father and mother rivers. It was designed to house a monastic community of six hundred monks, guard the two river valleys and extend influence eastwards. It served as the seat of government and was the former winter residence of the rulers of Bhutan; it is now the winter home to the monks of Thimphu and Trongsa.

Today the dzong is somewhat different to that photographed by White in 1906, although it still has the appearance of a powerful fortress. Gone are the two eighteenth-century fortified cantilever bridges that crossed each river and gave access to the dzong from the east and the west, although one of the four towers remain with the stumps of its pine log cantilever piers still evident. The main entrance is to the north away from the confluence and was originally protected by the ta dzong, a powerful fortified tower. Damaged by a flood in 1994, only the lower storey remains of this barbican; the upper storeys have been replaced by a temple. The entrance to the dzong is reached by steep wooden steps that were designed to be pulled up to

[27] The dzong was unsuccessfully besieged by dissident Lamas in 1629 when only partially built. It succumbed, however, in 1634, when Tibetan help was obtained.

[28] These are illustrated in the book *Views of Medieval Bhutan* by Michael Aris.

[29] Tashichoedzong has been almost completely renovated and enlarged by King Jigme Dorji Wanchuck between 1962 and 1969 and serves to house the central monk body in the summer, the National Assembly and the Palace of the King with his throne room. The last dzong to be built was in Tashi Yangtse, both along traditional lines and using traditional methods. Not surprisingly defence was not a consideration.

Image not available

further protect the heavy wooden and iron-studded doors. The rectangular main building measures 180m long by 70m wide and is unique in containing three courtyards with an utse of six storeys, each containing temples, known as ihakhangs, richly decorated by mystical wall paintings. Again the solitary entrance doorway is three metres above the ground, although the wooden stairway cannot be retracted.

Like all dzongs it is built of well-coursed, worked stone in an earthen mortar, and the walls are very thick. White's photograph shows that there were few external openings, closed on the inside by shutters, and none externally to the two lower storeys of the rooms arranged around the courtyards. The monks have taken advantage of the intervening century to widen these into spacious windows and balconies, especially to the upper rooms. The external walls have a slight inward batter and are covered in a white limestone plaster. Now galvanised tin sheeting is used to cover the wooden roof struts and replaces the original wooden shingles weighed down with stone river boulders. The eaves are so built that an airy space exists between the flat roof of the top storey and the pitched roof of the courtyard range; from a distance the roof seems to float above the dzong. This is a common feature of many small civil buildings and is used to dry grain and animal fodder for the harsh winters. The roofs of the various temples are surmounted by gilded pagoda like canopies.

The whitewashed, lime-coated stonework softens the look of this mighty fortress monastery, whose appearance is enhanced by the rusty-red woodwork of the window frames, balconies and roof supports, now embellished to varying degrees by symbolic wooden lattice work painted in vivid colours. Wherever a building in Bhutan is used for religious purposes a broad rusty-red painted band runs round just under the eaves and this is no exception.

Although the external appearance is impressive, nothing prepares for the colour and intricacy of the woodwork of the stairs, galleries and arcades of the buildings ranged around the stone-paved courtyards. Here is design, carpentry and artwork of the finest workmanship, fitting surrounds for the mausoleum of the Shabdrung built in the southernmost courtyard. Despite its richness and opulence defence is not neglected and galleries run all round. These are chemin de rondes and are loopholed at 1m intervals. Despite extensive damage over the centuries by fires and flood, each reconstruction seems to have eclipsed its antecedent in the care and skill given to decoration.

Local variations and adaptations

Although there is a ready water supply at Panakha, in many dzongs water supplies would have posed a problem, especially at times of siege. It is reputed that the Shabdrung and later dzong builders got round this, not by building cisterns, but by building and excavating tunnels from the dzong to the nearest water source whether stream, river or spring. The best example accessible today is to be found at **Jakar** 'the castle of the white bird'. It now overlooks a small town near the foot of the Choskhor valley and is reached by a narrow path overlooked by the ta dzong. Acting as a barbican it is attached to the western end of the dzong by means of a round tower that, via a wooden ladder, gives access to a paved and stepped path. This path runs between high loopholed and stepped walls running down the north-west side of the ridge upon which the dzong is built for a 100m or so. Here it meets the top storey of another round tower where once again another wooden ladder leads to a tunnel running down to a well fed

by the River Bumphang. The descent is perilous. A similar arrangement is said to exist at **Drukgyel** in the upper Paro valley.[30]

Although the ta dzongs at Jakar and Drukgyel have become integral parts of the dzong most are independent structures as at **Paro** where the imposing round tower protects the high ground above the dzong. Now containing the National Museum, it rises to six storeys and galleries run in the thickness of the walls for the defending archers. Most dzongs built on high ground follow the contours of the ridges upon which they are built. The huge, straggling, complex and powerful dzong at Trongsa has received further protection from three independent towers built on the high ground above it.

Few outworks, other than these towers, remain today. However at Paro there are extensive outworks on the eastern and southern aspects, consisting of loopholed walls and towers, one of which appears to contain a gateway. At Drukgyel there appears to be a barbican defending the solitary eastern entrance.[31] Elsewhere only the remains of the fortified bridges indicate the presence of additional defences.

Each dzong and ta dzong contained rooms that acted as the armoury for the rural militias. We have a good idea of what the armouries contained and how the militias were armed as Captain H. H. Hyslop, invited to the coronation of Ugyen Wangchuck as the first king of Bhutan in 1907 took numerous photographs, including one of the Drukgyel armoury.[32] The walls were hung with rows of embossed hide and cane shields, helmets, probably wickerwork but possibly iron, matchlock guns and the voluminous quilts the Bhutanese wore to protect against poisoned arrows. Curiously, White records the discovery of catapults in the rafters of Paro dzong, and the National Museum holds in one of its vaults a number of huge matchlock wall pieces typical of the Tibetan region.[33]

The fortified cantilevered bridges of Bhutan

The rivers of Bhutan are rarely peaceful. For large parts of the year they are fast-flowing torrents, hostile to any form of ford, and whist they increased the defensibility of the country they also contributed to its isolation.[34] Although the subtropical region of Bhutan had bridges made out of braided creeper and bamboo and iron-chain suspension bridges had been introduced from Tibet the cantilever bridge was the most ubiquitous. The principle is to reduce the central span of the bridge by means of cantilevering beams on both sides of the river. Two bridge houses, which became fortified towers, were needed to anchor the three layers of beams that project over the river from each bank, thus reducing the final span to between nine and eleven metres. Old photographs show that many of the dzongs near rivers, for example Paro, Punakha, Wangdue Phodrang and the monastery at Cheri, were further

[30] When the ruins were visited in 1993 this could not be located.

[31] A photograph of the dzong was featured on the cover of the April 1914 issue of the National Geographical Magazine. It was used to illustrate an article by White.

[32] They are published in Collister (1987).

[33] Similar matchlocks were used by the Tibetans at the fort in Gyantse when attacked by Younghusband.

[34] Even today, despite huge road building efforts, Trongsa dzong can only be reached by a 40km detour via the Mangde chu valley, such is the steepness of the river valley sides.

protected by at least one of these fortified bridges. The river at **Wangdue** was too wide for a single span and use was made of a second gatehouse built on a rocky outcrop in the river. Originally built in 1684, it remained in use until replaced by a bailey bridge in the early 1970s and is now in a ruined state, as are most of the others.

The dzongs today

Lovingly maintained and as much alive today as they were when first built, the dzongs retain the religious and administrative roles they were conceived to perform, although their defensive function has receded from the eighteenth century onwards. As a consequence, the restoring and remodelling that has gone on, usually as a result of natural disasters, either fire or earthquake, has resulted in a softening of their austere outside façades and in significant alterations to structure, best seen at **Traschicho** and **Punakha**. The absence of a military role has seen a blurring of military features and decoration is becoming increasingly evident. However, against a backdrop of the wooded or snow-capped mountains of Bhutan, these imposing white, red and ochre dzongs present to the Bhutanese people even today what the Shabdrung had always intended: powerful expressions of the presence and permanence of Drukpa Kayupa Buddhism and a culture divorced from Tibet.

CONCLUSION

Religious fortifications: their reasons and purposes

In examining the role fortifications played in the three religions under discussion a number of hypotheses may be reached that transcend the religious divide. The addition of fortifications to religious buildings and complexes was ubiquitous and continued for over a thousand years. The sheer numbers fortified and their widespread distribution indicates that they played an important role in ecclesiastical and religious affairs for centuries and although there is no discernible logical chronological or architectural development a number of differing functions can be identified.

Fortifications were first added to monastic complexes in Palestine and Egypt in response to threat from desert tribes. For many religious communities existence was precarious and the acquisition of fortifications was necessary to ensure at least some chance of survival. This was equally true of desert monasteries, Christian communities in Muslim-ruled Armenia and Caucasia and in the borderlands with hostile neighbours. In a similar way many Tibetan monasteries were threatened by rival Buddhist schools and lineages and by the state of lawlessness that existed in many of the more remote regions. The pilgrim caravanserai was vulnerable when it was built in regions devoid of population. The monumental fortifications built by Anba Kirillus IV in 1854 at St Anthony's monastery in Egypt and the upkeep of fortifications surrounding religious complexes in the Ottoman Empire and Persia show that the need was there until the middle of the nineteenth century.

The Islamic ribat, the Christian conventual castle, the mendicant missions in the New World and the Bhutanese Buddhist dzongs were all built to safeguard conquered lands, to protect the local population and act as bases for expansion. Although it is not known whether the dzong housed warrior monks in a similar way to the Dob Dobs of the Gelukpa Buddhists of Tibet both ribat and conventual castle were garrisoned by warrior monks.

Many religious fortifications were grouped together to become part of a national system of defence. Although the fortress monasteries of Russia of the sixteenth and seventeenth centuries were to become the most powerful anywhere, the precedent had been set four centuries earlier. Many monasteries and churches on the Mediterranean coast of France were fortified and formed a defensive line in depth against invaders from Spain and North Africa. In Romania the king of Hungary installed Germanic settlers in Transylvania who built fortress and fortified churches to safeguard not only themselves but also the eastern marches of the Hungarian kingdom. During the Reconquest of the Iberian peninsula fortress monasteries were part of an integrated marcher defensive system and the kingdom of Spain used the missions of the mendicant friars, together with the presidio, to defend its territories in New Mexico, now the south-west of the USA. In the Himalayan kingdom of Bhutan the Shabdrung and his successors built the dzongs to guard and protect the routes across and through this

part of the Himalayas. So much effort was put into ensuring that these monasteries would act as the static defences of the kingdom that almost no other defences or fortifications were built.

Many religious buildings were fortified in a monumental way resulting in fortresses to rival any built by kings and secular rulers. Both the Potala Palace of the Dalai Lama in Tibet and the Marienburg, seat of the Grand Master of the Teutonic Knights, now in Poland, are two of the world's most powerful castles of the late mediaeval period. The Vatican continuously updated its defences and is now surrounded by a powerful bastioned enceinte.

All three are incredible expressions of the power of their occupants who were also quick to provide their abbots and bishops with similar power bases exemplified in many of the cathedrals of southern France; fortifications that eclipsed many of those of the local nobility. In England there is a parallel with the building of many impressive gateways to the monastic enclosure, built as much for show as for military purposes.[1]

Conversely the fortress monasteries of Russia were used by the State to keep a check on the activities of the Orthodox Church hierarchy whilst the mendicant friars and their fortified monasteries were used in an attempt, mainly successful, to pacify and convert the indigenous population.

That the more humble parish churches were fortified in thousands throughout Europe is a testimony to the efforts of the local community, who were prepared to invest time, money and effort in producing, to varying degrees, a defensible building to protect them in their rural and agricultural way of life. That many, for example in La Thiérache and Transylvania, are built close together in a comparatively small area of countryside suggests a cohesiveness and a mutual defensive organisation. Many are within sight or sound of each other and the communities often employed watchmen to give warnings of any hostile approach and a captain to marshal the defence of the community. The ribats of North Africa used this cohesiveness to produce an early warning system of impressive abilities.

Architectural considerations

Examination of the forms of military architecture employed in the fortification of religious buildings does not demonstrate a chronological advancement, with the possible exception of the conventual castle and the fortress monasteries of the Tibetan sphere of influence. The degree and complexity of fortification varied enormously and depended upon the riches of the establishment or community, the generosity of the patron or benefactor, and the social and political will. The fusion of religious and military architecture has, however, resulted in a number of hybrid structures that have a definable typology and should be regarded as an architectural genus. This is certainly the case with the ribat and the conventual castles of the Crusaders, especially those of the Teutonic Knights. Both the buildings and their occupants almost mirror each other in design and function. There are, for example, many architectural

[1] There is debate at present about the role of the keep in the Norman castle. Many military architectural historians are of the opinion that the long-held belief that it was the last line of defence in a castle should be challenged and that it should be regarded rather more as a tangible expression of the power of the Norman lord.

similarities in plan, arrangement and function between the ribat at Sousse in Tunisia and the Teutonic conventual castle of Lidzbark in Poland. In a similar way the mighty Russian fortress monasteries are also a distinct architectural genus in having vast fortifications surrounding large religious and monastic ranges.

Many fortress cathedrals and churches combined fortification in such a way that externally the appearance was one of a fortress. Albi and Rudelle are examples from the thirteenth and fourteenth centuries in south-west France with the donjon church of Safita in the Holy Land very similar to the latter. These fortress churches continued to be built until the seventeenth century especially in the north of France where the church of St Juvin was built to serve as both church and fort. It was strong enough to resist a considerable force and protect its parishioners for a considerable time during the wars and political instability of the region in the seventeenth and eighteenth centuries.

Bonde credits the Languedoc with the invention of the fortress church and monastery in the twelfth century and points out that the adoption of the machicolated arch 'introduced an economical and effective system of fortification into Western Europe'.[2] This form of defensive military architecture was widely used in the Islamic east before its introduction into France. It seems likely that the close relationships and communications between the clerics of the south of France and those of the Crusaders in the East suggest that arch machicolations were introduced into Europe as a result of these.

Although a debate on whether the experiences of the Crusaders in the Holy Land and the development of the conventual castle had any influence on the development of Western European military architecture is not relevant here, the castles of Sancho Ramírez certainly influenced the military orders, however.[3] His early castle of Loarre, with its complement of monks, served as a prototype for the Holy Land, ultimately leading to the conventual castle of the Teutonic Knights in northern Europe. The refinements were restricted to military architecture with minimal alteration to the monastic layout unless the local geography of the site dictated otherwise.

The effectiveness of ecclesiastical fortifications

Little has been written about the effectiveness or otherwise of ecclesiastical fortifications. What evidence there is suggests that they were at least as successful as contemporary, purely military fortifications of a similar size. The fact that they were built over a long period of time supports this view. Indeed in Russia and north-east Europe they replaced conventional castles and guarded much of the frontier in the Holy Land, Spain and Portugal during the Reconquest and the northern frontiers of the Spanish New World.

Views regarding how successful the rural fortress and fortified churches were in

[2] Bonde (1994: 174).

[3] Kennedy (1994: 188–9) points out, however, that box machicolations were incorporated in the Holy Land in both Islamic and Crusader fortifications from the early years of the thirteenth century but were rare in Europe. He concludes that it was not new styles of military architecture that the Crusaders introduced into Europe but rather new methods of siege warfare.

protecting their congregations vary and there is more contention. The majority of these defences were peasant defences built out of necessity by local communities. As with many static fortifications they were built in an effort to deter attack. There are, however, many recorded instances of fortified churches being attacked, desecrated, looted and burnt.[4] It is undoubtedly true that during this period many churches would have been targeted by the roving bands and nearby garrisons. The success of a fortified church in defending its parishioners, their goods and chattels would depend upon a number of differing factors. The number and desperation of the attackers would be deciding factors as would the scale of the church fortifications and the resilience and determination of its defenders. There is clear evidence that communities fortified their church to the best of their abilities and resources. That they must have been successful to a significant degree is demonstrated by the number that were built over the centuries. Where churches now have either no remain of fortification or only vestigial ones this is not so much because they were destroyed by enemies but rather that they were removed in the nineteenth century by restorers.

Where substantial fortifications remain, few show evidence of damage caused by a determined attack. Unlike castles there have been few attempts to slight. The churches in La Thiérache, for example, still retain their sixteenth and seventeenth-century defences much as when first built. In their case it would appear that many attackers were deterred or repelled. The evidence is that they were successful communal defences much in the same manner as the Saxon churches of Transylvania.

Whither now?

Until a careful inventory is made of the churches and ecclesiastical establishments of Europe, much in the way that Brooke approached the churches of the Anglo-Scottish Borders, the scale, extent, distribution and types of fortification will not be known. This is an enormous undertaking, further held back by a lack of appreciation that this form of fortification exists so widely throughout Europe. Fieldwork in France has shown just what a wealth of fortified and fortress churches that country has, many not recognised as such. Why some communities fortified their churches and others did not is far from understood and church and parish archives need to be examined to determine the reason. Pagnotta, examining the fortified churches of Meuse in northern France, concludes that the reasons behind fortification, the number fortified and the patchy distribution can only be guessed at. The paper by Wright on the fortified church at Chitry in northern Burgundy is an illuminating insight into how this church became a village fortress by the addition of towers, a fortified cemetery wall and moats in the fourteenth century. He discusses the political ramifications and the determination of the community to defend themselves.

It is hoped in due course to publish a gazetteer, based on the research of others and on fieldwork; whilst such a venture is bound to be far from comprehensive at this stage, it will present representative types of religious fortifications built by the three religions under

[4] Curry and Hughes (1994: 113–14) record that damage to ecclesiastical buildings as a result of the Hundred Years War was great and widespread.

discussion and the areas of the world examined. There are, however, vast areas that still need to be researched. Little is known about religious fortifications in Eastern Europe though logic dictates that they will have been built as in the West. There is a suggestion that a number of mediaeval churches in Finland were fortified; again this appears logical, considering the numbers of ecclesiastical fortifications constructed in the Baltic region.

The inventory by the Ministry of Education and Science in Spain, listing the military architecture of that country, indicates that there are many religious fortifications about which almost nothing has been recorded.[5] In addition, the colonial churches and monasteries of Spain, Portugal and Holland in Africa and Asia have not been researched in any depth. Similarly the question of whether the Portuguese in Africa and Asia fortified any of their churches has not been addressed. The three volumes by Sinclair give a tantalising glimpse of what research into the religious buildings of eastern Turkey may reveal. It is impossible to speculate what the position was in North Africa that had hundreds of churches and ribats, almost all of which are now either lost or greatly ruined.

Other religions need to be considered, particularly in India, China and south-east Asia, all of which may well have unrecorded fortified religious buildings.[6] Certainly there is a tradition of warrior monks in Asia.

Finally I have attempted to show that religion and fortification is a subject separate from its two component parts and that religious fortifications in themselves are worthy of further study from the architectural, historical and socio-religious view point. They belong, I believe, to a definable and distinct form of architecture.

[5] The inventory lists the names of fortified ecclesiastical buildings in each province with the briefest of descriptions. Over fifty are listed by name only with no indication as to whether they are monasteries, churches or cathedrals etc.

[6] The discovery of a mission fortified by a wooden palisade in Canada, two fortified Jain temple complexes in India and a fortified synagogue in Poland suggest this may be the case.

GLOSSARY OF TERMS

Abbasids. The second Islamic dynasty, ruling between 750 and 1258. They succeeded the Umayyads.

Acequia. A system of channels and water courses supplying the missions and farms of the mendicant friars in New Mexico.

Aghlabids. The ruling dynasty of North Africa between 800 and 909. Their capital was at Kairouan.

Almohads. An Islamic North African dynasty of Berbers ruling the Maghreb and Spain between 1130 and 1269.

Almoravids. A strict Islamic dynasty of Berbers ruling in North Africa before the Almohads.

Amba. Flat-topped mountains found in Ethiopia.

Anchorite. A recluse or hermit who has withdrawn from the world for religious reasons.

Arsanas. A small port and boathouse belonging to the monasteries of Mount Athos in Greece, frequently fortified.

Ashlar. Hewn stone with square edges used for building purposes.

Assassin. A member of the fanatical mediaeval Naziri Ismaili sect of Shiite Muslims, using murder as a political weapon.

Assommoir. French term for a murder hole in a ceiling behind the entrance door of a fortified building thus exposing an assailant to fire from above.

Atrio. The enclosed courtyard, used for outdoor services, facing the west façade of Mexican mission churches.

Augustinians. A monastic order following the rule of St Augustine.

Barrel vault. A semi-circular arch of stone covering a passageway or building.

Barbican. A defensive work built in front of a gateway or gate-tower.

Bartizan. A crenellated turret projecting from a wall, usually at a corner.

Bastion. A defensive work projecting from the wall of a fortified enceinte designed to give flanking fire.

Bastion trace. The ground plan of a fortified enceinte that includes bastions.

Bawn. A defensive wall usually attached to two sides of a tower-house enclosing a small courtyard, frequently found in Ireland.

Benedictines. A monastic order following the rule of St Benedict, commonly known as the Black Canons, from the colour of their habit.

Berbers. Tribesmen of Barbary and the Saharan region who converted to Islam after the Arab conquest of North Africa.

Bretache. A box-like structure projecting from an opening in a wall and machicolated to cover a window or door. Also known as a box machicolation.

Caliph. The Muslim ruler in line of succession to the Prophet Muhammad.

Caravanserai. Lodgings or inns provided in rural areas for travellers and merchants. Built in the form of a chain, each one a day's journey from the next, they are found in Muslim countries along trade and pilgrimage routes. Most were fortified.

Caponier. A covered gallery running across a ditch to connect the enceinte with foreworks. It is frequently loopholed to give flanking fire along the ditch.

Casemates. Openings built in the thickness of a wall or bastion to provide bomb-proof shelter for artillery, armaments or the garrison.

Cashel. A stone wall, usually round or oval, enclosing an early church or monastery in Ireland.

Chemin de ronde. A French term used to describe a passageway running in the thickness of a wall all round a fortified building to give easy access to any part of the defences. It can also be applied to a walkway that runs continuously behind a parapet.

Chevet. The flat façade of the chancel of a church.

Chorten. A sacred stone Buddhist monument of differing sizes often containing a relic or relics and usually round. Also known as a stupa.

Clochan. An Irish dry-stone beehive-shaped dwelling from antiquity.

Coenobite. A member of a religious order who lives as a member of a community of that order.
Conquistador. A member of the Spanish armed forces taking part in the conquest of the Americas, especially New Spain.
Copt. The name given to a member of the Egyptian Christian Church.
Corbel. A stone projection from a wall that supports another structure such as a wooden beam or a box machicolation.
Crenellation. A parapet provided with regular openings between the merlons.
Da'is. A missionary belonging to the Naziri Ismaili sect.
Dalai Lama. The supreme leader of Tibetan Buddhists. A reincarnate of his predecessor.
Dansker tower. The latrine tower of the Teutonic Knights.
Debra. The Ethiopian word for a church.
Dharma. The teachings of Buddhism.
Dominicans. An intellectual order of mendicant friars given to preaching in towns.
Dorter. The communal sleeping quarters of Christian monks.
Dzong. A term that has two different meanings: in Tibet it is the name of a secular fortress belonging to the nobility; in Bhutan it is the name given to a fortress monastery occupied solely by Buddhist monks.
Echauguette. A stone sentry box at the corner of a bastion, usually built on corbels.
Embrassure. An opening in a parapet for use by artillery, usually splayed outwardly to give a variety of firing positions and shelter the artillerymen.
Enceinte. Both a defensive wall and the area enclosed within it.
Entrada. The name given to Spanish military and exploratory expeditions in the New World.
Essenes. A devoutly religious Jewish sect sharing a communal existence around the time of Christ. Most lived in the settlement of Qumran in Palestine.
Eremite. A religious recluse or hermit.
Fatimid. Independent rulers of Ifriqya and Egypt between the tenth and twelfth centuries belonging to the Shiite sect.
Fida'i. A trained assassin of the Nizari Ismailis.
Franciscans. A monastic order following the rule of St Francis. Living a life of poverty, they devoted themselves to preaching and missionary work.
Gavit. The name given to the square building added to the western façade of Armenian churches and used for both religious and secular purposes.
Ghazis. Islamic warriors who led a strict religious life when engaged in holy war.
Gompa. A Buddhist monastery.
Gorodnya. Rectangular structures built from logs, filled with earth and linked together to form a fortified enceinte. Built almost exclusively by Russians.
Goulot. A short and narrow circular rock-cut passage between underground chambers in a fortified cave complex.
Guaraní. The name given to the indigenous population of central South America. They were a very artistic and industrious people greatly influenced by the Jesuits.
Gulag. A Russian labour camp used for criminals and political prisoners.
Hajj. The Islamic pilgrimage to Mecca, one of the five Pillars of Islam.
Hoarding. A covered wooden gallery, often loopholed, built out from a parapet with openings in the floor to cover the base of the wall or tower.
Ifriqya. That part of North Africa now approximating to Tunisia.
Imam. Islamic religious leader, especially one who leads prayers.
Janizary. Elite soldiers of the Turkish sultan recruited from tributary children of Christian subjects.
Jesuit. A member of the Society of Jesus a Roman Catholic organisation formed to oppose the doctrines of the Reformation and to proselytise amongst heathen peoples.
Jihad. A holy war proclaimed by Muslims. This can be defensive as well as offensive. It is perceived as a collective obligation.
Katholikon. The main church of a Greek Orthodox monastery.
Kern. A lightly armed Irish soldier.
Khachkars. Intricately carved Armenian commemorative religious flagstones.
Khan. An urban caravanserai.
Khanaqah. An Islamic religious complex containing a mosque, madrasa and a monastery.
Machicolation. A slot or open space in the floor of an

overhanging fortification through which missiles can be dropped or fired.

Madrasa. An Islamic religious school.

Maghreb. That part of North African now comprising the countries of Morocco, Algeria and Tunisia.

Mamelucos. Slave-traders in South America of mixed native and European descent. They preyed upon the Jesuit reducciones.

Mamluks. A militant Islamic thirteenth-century dynasty that followed the Ayyubids as rulers of Egypt.

Mandala. The Buddhist cosmic or symbolic diagram.

Mantlet. A wooden shutter placed on hinges in the crenellations of a parapet to protect the defending archers.

Martyrium. A shrine. A Christian building dedicated to a martyr to the faith.

Mendicant. A beggar. When applied to a religious organisation it indicates that its members live on alms.

Mesa. A high tableland; usually applied to North American rock formations.

Merlon. The solid part of a parapet between two crenels or embrassures. The merlon may contain loopholes or gun-loops.

Metokhion. The dependency of a Greek Orthodox monastery, whether land-holding, daughter house or secular buildings.

Meuretière. A French term for a murder hole. A space in a vault or roof, particularly of a gateway, through which missiles can be dropped on assailants.

Mihrab. A niche in the Qibla wall of a mosque. It indicated the direction of Mecca and the direction towards which Muslims prayed.

Mongols. A hardy semi-nomadic race from Mongolia in central Asia.

Monophysite. An adherent of the belief that there was only one nature in the person of Christ.

Moors. The collective name given to the descendants of Arabs and Berbers who had settled in Spain after the Muslim conquest.

Murabitun. The warrior monks of Islam.

Lama. A Buddhist religious leader who can be celibate or married.

Laura (lavra). A monastery that comprises an aggregation of individual cells for the monks, frequently found in Egyptian monasteries.

Nador tower. The name given to the lookout tower of a ribat, usually located at the south-east corner.

Narthex. A portico or vestibule built on to the western façade of a church and separate from the nave.

Newel. The central column of a spiral staircase in a church or castle tower.

Old Believers. Russian Orthodox Christians preferring to keep to the original litany and services before the seventeenth-century reforms dictated by the central church in Moscow.

Ottomans. An Islamic Turkish dynasty particularly powerful between the sixteenth and eighteenth centuries when they threatened Europe, leading to the building of many ecclesiastical fortifications.

Palisade. A solid fence made of upright pointed logs or staves.

Parapet. A breastwork built on top of a rampart to shelter its defenders. It was frequently crenellated and loopholed.

Paulista. Name given to European settlers around the city of São Paulo in Brazil. The name also became associated with slave-traders.

Paulites. A Christian religious order formed in the Hungarian capital of Buda in 1215.

Pele tower. A name that attracts controversy. It has been used to describe the isolated fortified towers of the north of England and is used to describe the fortified towers provided for the clergy of the English march.

Plateresque. The name given to a form of Spanish American colonial architecture that incorporated Gothic, Moorish and Renaissance elements.

Portcullis. A wooden grill frequently reinforced with iron that could be lowered within grooves to reinforce an entrance gateway.

Portico. An ambulatory where the roof is supported by columns spaced at regular intervals.

Posa. Small chapels built in the corners of atrios.

Postern. A small vaulted passage in a fortified wall enabling the garrison to make a sally.

Premonstratensians. A Christian religious order founded in 1120 in France. They were colloquially known as the White Canons after the colour of their habit.

Presidio. A simple frontier fort built by the Spanish to defend missions and borderlands occupied by soldier-settlers.

Priory. A Christian monastic community that usually

began as the daughter house of a much larger monastic establishment.

Qasr. A fort, in particular the fortified tower of a Christian monastery in Egypt and Palestine.

Qibla. The wall of a mosque facing in the direction of Mecca.

Ramada. A roof made out of poles and thatch occupying a large part of an atrio and attached to a mission chapel. It provided shelter from the sun during church services.

Reducción. The name given to the townships built by Guaraní converts under the control of Jesuit priests in South America.

Refectory. A common dining room in a monastery.

Reaver. Also known as a moss trooper. An armed cattle rustler and brigand operating in family and clan groupings groupings for centuries during the later Middle Ages in the Anglo-Scottish Borders.

Relics. Important for the pilgrimage trade and thus a lucrative source of revenue, relics were jealously guarded. They comprised parts of the body or clothing of saints, martyrs and other holy personages.

Reredorter. The monastic latrine block always associated with the dorter.

Revet. A stone or brick facing given to the sloping bank of an earthwork.

Ribat. An Islamic fortification built to a specific plan and garrisoned by warrior monks. Originally found throughout the Arab empire, few remain today.

Rocca. The generic name for an Italian castle.

Routier. A soldier who made forays into the French countryside in search of booty.

Salle de défense. A French term for a room built above the nave or chancel and equipped with active fortifications such as machicolations, loopholes, gun-loops, crenellations and echauguettes.

Salle de refuge. A refuge room built above the nave or chancel of a church or in a church tower to shelter parishioners. Some were partitioned and rented out to families.

Sassanians. A Persian dynasty that ruled between 224 and 637. The empire stretched between Syria and central Asia and they were enemies of Rome and Byzantium. They were conquered by the Arabs and replaced by the Abbasids.

Seljuk Turks. The first important Turkish Muslim dynasty they ruled in central Asia from the elevneth century onwards and combined Turk armed forces with Arab and Persian administrators. They seized Anatolia from the Byzantines.

Shabrung. A spiritual, civil and military ruler who welded disparate parts of Bhutan into a country.

Slype. A passage between the cloister and monastic cemetery.

Stupa. See Chorten.

Sufi. Member of a mystical Islamic sect strong in Turkey.

Talus. Part of a wall or earthwork that slopes outwards.

Tatar. A native of part of central Asia extending eastwards from the Caspian Sea.

Tell. Arabic name for an artificial mound often covering the ruins of an ancient town.

Tête-du-pont. A barbican placed in front of a bridge on the opposite side of a river or moat from the main fortification.

Umayyad. Islamic dynasty founded in Damascus that followed the caliphs of Mecca when the Arab capital was transferred to Mesopotamia.

Utse. The main tower of a Bhutanese dzong or Tibetan monastery. It containing the most sacred temples, relics and artefacts.

Vault. The stone roof of a passageway or chamber.

Vizier. The chief minister of a caliph or sultan.

'Z' plan. The name given to Scottish fortifications where a square or rectangular fortified building has two towers attached at opposite corners.

Zansker system. A massive system of fortification in Russia combining natural features together with military architecture.

BIBLIOGRAPHY

The Bibliography includes works referred to in the footnotes, as well as some further works recommended for further reading.

Aluve, K. 1993. *Eesti keskaegsed linnused* [The Medieval Strongholds of Estonia]. Valgus, Tallinn.

Alvarez, F. 1961. *The Prester John of the Indies.* Vol 1. (ed. C. F. Beckingham and G. W. B. Huntingford). Cambridge University Press.

Anderson, W. 1980. *Castles of Europe from Charlemagne to the Renaissance.* Ferndale Editions, London.

Aris, M. 1979. *The Early History of a Himalayan Kingdom.* Aris and Phillips Ltd, Warminster.

——. 1982. *Views of Medieval Bhutan.* Serindia Publications, London.

Arzoumanian, P. 1970. *Armenian Churches, Holy See of Echmiadzin.* The Calouste Gulbenkian Foundation, Lisbon.

Attala, N. S. (Undated). *Coptic Art.* Vols. I and II. Lehnert and Landrock, Cairo.

Azuar Ruiz, R. 1990. 'Una rabita hispanomusulmana del siglo X', *Archaeologie Islamique*, 1, 109–45.

Badawy, A. 1978. *Coptic Art and Architecture.* Cambridge, Massachusetts.

Ball, W. 1994. *Syria. A Historical and Architectural Guide.* Scorpion Publishing Ltd.

Barber, M. 2000. *The Cathars.* Longman, London.

Barbier. P. 1968. *La France feodale* [Feudal France]. Vol. I. Les Press Bretonnes, Paris.

Barrucand, M., and A. Bednorz. 1992. *Moorish Architecture in Andalusia.* Taschen.

Barry, T. E. 1987. *The Archaeology of Medieval Ireland.* Methuen.

Bartlett, R., and A. Mackay. 1989. *Medieval Frontier Societies.* Clarendon Press, Oxford.

Bartusis, M. C. 1992. *The Late Byzantine Army.* University of Pennsylvania Press, Philadelphia.

Beresford, M. 1988. *New Towns of the Middle Ages.* Alan Sutton.

Beridze, V., G. Alibegasvili, A. Volskaja and L. Xuskivadze. 1984. *The Treasures of Georgia.* Century Publishing.

Berton, K. 1977. *Moscow. An Architectural History.* Studio Vista.

Boas, A. J. 1999. *Crusader Archaeology.* Routledge.

Boase, T. S. R. 1967 *Castles and Churches of the Crusading Kingdom.* Oxford University Press.

Bonde, S. 1994. *Fortress-Churches of Languedoc.* Cambridge University Press.

Boström, R. 1968. *Böda kyrkor* [The Churches of Böda]. Almqvist and Wiksell, Stockholm.

——. 1969. *Källa kyrkor* [The Churches of Källa]. Almqvist and Wiksell, Stockholm.

——. 1972. *Föra kyrkor* [The Churches of Föra]. Almqvist and Wiksell, Stockholm.

Bozineki-Didonis, P. 1985. *Crete.* Melissa Publishing House.

Braunfels, W. 1972. *Monasteries of Western Europe.* Thames and Hudson.

Brooke, C. J. 2000. *Safe Sanctuaries. Security and Defence in Anglo-Scottish Border Churches 1290–1690.* John Donald, Edinburgh.

Burn, A. R. and M. Burn. 1980. *The Living Past of Greece.* The Herbert Press.

Caraman, P. 1975. *The Lost Paradise.* Sidgwick and Jackson.

Chavrukov, G. 1978. *Bulgarian Monasteries.* Septemvri Publishing House, Sofia.

Cheesman, R. E. 1936. *Lake Tana and the Blue Nile.*

Christiansen, E. 1997. *The Northern Crusades*. Penguin.

Coldstream, N. 1999. 'The Grotesque Sculptures at St Davids', *Heritage in Wales*, 13.

Collins, R. 1988. *Spain*. Oxford University Press.

Collister, P. 1987. *Bhutan and the British*. UBS Publishers' Distributors Ltd, New Delhi.

Conant, K. J. 1990. *Carolingian and Romanesque Architecture 800–1200*. Penguin.

Cook, G. H. 1954. *The English Mediaeval Parish Church*. Phoenix House Ltd, London.

Craig, M. 1982. *The Architecture of Ireland*. Batsford.

Cresswell, K. A. C. 1952. 'Fortification in Islam before A.D. 1250', *Proceedings of the British Academy*, 38: 89–125.

Curry, A., and M. Hughes. 1994. *Arms, Armies and Fortifications in the Hundred Years War*. The Boydell Press.

Davies, J. G. 1982. *Temples, Churches and Mosques*. Blackwell.

Dent, J., and R. McDonald. 2000. *Warfare and Fortifications in the Borders*. Scottish Borders Council, Melrose.

Djelloul, N. 1999. *Les Fortifications en Tunisie* [The Fortifications in Tunisia]. Ministère de la Culture. Tunis.

——. 2000. *Kairouan the Great Mosque* (trans. A.-M. Driss). Éditions Contrastes, Sousse.

D'Onofrio, C. 1994. *Castel S. Angelo*. Romana Societa Editrice, Rome.

Dowman, K. 1988. *The Power-Places of Central Tibet*. Routledge and Kegan.

Dragut, V. 1982. *Moldavian Murals*. Meridiane Publishing House, Bucharest.

Empey, G. A. 1984. 'The Sacred and the Secular: The Augustinian Priory of Kells in Ossary, 1193–1541', *Irish Historical Studies*, 24, 131–51.

Fabini, H., and A. Fabini. 1985. *Kirchenburgen in Siebenburgen* [The Fortified Churches of Siebenland]. Koehler and Amelang, Leipzig.

Faensen, H., and V. Ivanov. 1975. *Early Russian Architecture*. Paul Elke.

Fawcett, R. 1994a. *Scottish Abbeys and Priories*. Batsford, London.

——. 1994b. *The Architectural History of Scotland*. Edinburgh University Press.

Fino, J.-F. 1977. *Fortresses de la France mediévale* [Fortresses of Medieval France]. Éditions A. & J. Picard, Paris.

Fisher, L. F. 1998. *The Spanish Missions of San Antonio*. Maverick Publishing Company, Texas.

Fleming, P. 1961. *Bayonets to Lhasa*. London.

Francke, A. H. *A History of Western Tibet*. Motilal Banarsidass Publishers Private Ltd, New Dehli.

Gagniere, S. 1965. *The Palace of the Popes at Avignon*. Caisse Nationale des Monuments Historiques. Paris.

Giday, B. 1988. *Ethiopian Civilisation*. Addis Ababa, Ethiopia.

Gil, J. 1989. *The Finest Castles in Portugal* (trans. G. F. W. Dykes). Editorial Verbo, Lisbon.

Glick, T. F. 1995. *From Muslim Fortress to Christian Castle*. Manchester University Press.

Gwynn, A., and R. N. Haddock. 1970. *The Medieval Religious Houses of Ireland*. Longman.

Haldon, J. 2000. *The Byzantine Wars*. Tempus.

——. 2001. *The Byzantine Wars*. Tempus.

Hamilton, G. H. 1983. *The Art and Architecture of Russia*. Yale University Press.

Hanna, Z. 1994. *Syria, the Castles and Archaeological Sites in Tartus* (trans. B. Khoury and R. Botros). Sidawy Printing House, Damascus.

Harrison, P. A. 1994. 'Church Fortifications in La Thiérache', *Fort*, 22: 3–24.

——. 1995. 'The Tower Churches of Gower', *Gower, the Journal of the Gower Society*, 46: 15–23.

Hasranyan, M. 1990. *Amaras*. The Council of Ministers, Armenian SSR.

Hellier, C. 1995. *The Monasteries of Greece*. Tauris, Parke, Brooks. London.

Hetherington, P. 1991. *Byzantine and Medieval Greece*. John Murray.

——. 2001. *The Greek Islands*. Quiller Press.

Hillenbrand, C. 1999. *The Crusades: Islamic Perspectives*. Edinburgh University Press.

——. 2000. *The Crusades Then and Now*. Council for the Advancement of Arab–British Understanding.

Hillenbrand, R. 1994. *Islamic Architecture: Form, Function and Meaning*. Edinburgh University Press.

Hiorns, F. R. 1956. *Town Building in History*. Harrap.

Hirschfeld, Y. 1992. *The Judean Desert Monasteries in the Byzantine Period*. Yale University Press, New Haven.

Hofrichter, H. 1980. *The St Stephen Monastery*. Edizioni Ares, Milan.

Hogg, I. 1981. *The History of Fortification*. Orbis.

Hosla, R. 1979. *Buddhist Monasteries in Western Himalaya*. Patna Pustak Bhandar, Kathmandu, Nepal.

Hughes, Q. 1974. *Military Architecture*. Hugh Evelyn.

Jager, O. A., and I. Pearce. 1974. *Antiquities of North Ethiopia*. F. A. Brockhaus, Stuttgart.

Joinville and Villehardouin. 1963. *Chronicles of the Crusades* (trans. M. R. B. Shaw). Penguin.

Jones, M. 1994. 'War and Fourteenth-Century France', in A. Curry and M. Hughes (eds.), *Arms, Armies and Fortifications in the Hundred Years War*, 104–20. The Boydell Press.

Kafka, K. 1969. *Wehrkirchen Niederösterreichs I*. [Fortified Churches of Lower Austria I]. Birken-Verlag Vienna.

——. 1970. *Wehrkirchen Niederösterreichs II* [Fortified Churches of Lower Austria II]. Birken-Verlag, Vienna.

——. 1971. *Wehrkirchen Karntens I* [Fortified Churches of Karnten I]. Birken-Verlag, Vienna.

——. 1979. *Wehrkirchen in Oberösterreich, Salzburg, Tirol und Vorarlberg* [Fortified Churches in Upper Austria, Salzburg, Tirol and Vorarlberg]. Birken-Verlag, Vienna.

Kamil, J. 1996. *Coptic Egypt*. The American University in Cairo Press.

Kelland, C. H. 1982. 'Ecclesiae Incastellatae: A Documentary and Architectural Study of the Concept of 'Fortified Churches' in England and Wales'. M.Phil. thesis, University College, University of London.

Kennedy, R. G. 1993. *Mission. The History and Architecture of the Missions of North America*. Houghton Mifflin Company, Boston.

Kennedy. H. 1994. *Crusader Castles*. Cambridge University Press.

Khalpakhchian, O. Kh. 1980. *Architectural Ensembles of Armenia*. Iskustvo Publishers, Moscow.

Kleiss, W. 1974. *The Monastery of St Thaddeus*. Edizioni Ares, Milan.

Krautheimer, R. 1986. *Early Christian and Byzantine Architecture*. Penguin Group.

Kubler, G. 1940. *The Religious Architecture of New Mexico*. The Taylor Museum, Colorado Springs.

—— and M. Soria. 1959. *Art and Architecture in Spain and Portugal and their American Dominions, 1500–1800*. Pelican History of Art, Penguin.

Kudriavtsev, F. 1988. *The Golden Ring*. Aurora Art Publishers, Leningrad.

Lalor, B. 1999. *The Irish Round Tower*. The Collins Press, Ireland.

Lapidus, I. M. 1991. *A History of Islamic Societies*. Cambridge University Press.

Laske, F. 1902. *Die 4 Rundkirchen auf Bornholm.*

Lawrence, T. E. 1988. *Crusader Castles.* Clarendon Press, Oxford.

Leask, H. G. 1928. 'Taghmon Church, Co. Westermeath', *Journal of the Royal Society of Antiquaries of Ireland*, 58, 102–10.

——. 1955–60. *Irish Churches and Monastic Buildings*, vols. I–III. Dundalk.

Lewis, B. 1985. *The Assassins.* Al Saqi Books. London.

Lourie, E. 1982. 'The Confraternity of Belachite, the Ribat, and the Temple', *Viator*, 13.

Lythgoe, A. M. 1975. *The Monasteries of the Wadi 'n Natrun.* Vol. III. Arno Press USA.

Matthews, D. H. 1949. 'The Restoration of the Monastery of Dabra Damo', *Antiquity*, 23: 182–200.

McMahon, M. 1991. *Medieval Church Sites of North Dublin.* The Stationary Office, Ireland.

McNapsy. C. J. 1982. *Lost Cities of Paraguay. Art and Architecture of Jesuit Reductions 1607–1767.* Loyola University Press, Chicargo.

McNeill, T. 1997. *Castles in Ireland.* Routledge.

Meinardus, O. F. A. (Undated). *Monks and Monasteries of the Egyptian Deserts.* American University in Cairo Press.

Mesqui, J. 1997. *Châteaux, forts et fortifications en France* [Castles and Fortifications in France]. Flammarion, Paris.

Meuret, J. P. 1977. *Les Églises fortifiées de la Thiérache* [The Fortified Churches of La Thiérache]. Société Archaeologique de Vervins et de la Thiérache, Vervins.

Michell, G. (ed.). 1996. *Architecture of the Islamic World.* Thames and Hudson.

Milovsky, A. 1986. *Ancient Russian Cities.* Raduga Publishers, Moscow.

Mirza, N. A. 1997. *Syrian Ismailism.* Curzon.

Molin, K. 2001. *Unknown Crusader Castles.* Hambledon and London.

Moorhead, M. L. 1975. *Presidio: Bastion of the Spanish Borderlands.* University of Oklahoma Press.

Morant, R. W. 1995. *The Monastic Gatehouse.* The Book Guild.

Müller-Wiener, W. 1966. *Castles of the Crusaders.* London.

Murphey, R. 1999. *Ottoman Warfare, 1500–1700.* University College London.

Murphy-O'Connor, J. 1998. *The Holy Land.* Oxford University Press.

Neill, S. 1986. *A History of Christian Missions.* Penguin.

Nicolescu, C. 1978. *Moldovita.* Editura Sport-Turism, Bucharest.

O'Brien, J., and P. Harbison. 2000. *Ancient Ireland from Prehistory to the Middle Ages.* Oxford University Press.

O'Keefe, T. 2000. *Medieval Ireland, An Archaeology.* Tempus.

Ogden, A. 2000. *Fortresses of Faith.* The Centre for Romanian Studies. Oxford.

——. 2002. *Revelations of Byzantium.* The Centre for Romanian Studies, Oxford.

Opolovnikov, A. V., and Y. A. Opolovnikov. 1989. *The Wooden Architecture of Russia.* Thames and Hudson.

Osada, Y., G. Allwright and A. Kanamaru. 2000. *Mapping the Tibetan World.* Kotan Publishing, Reno.

Pagnotta, P. 1993. *Les Églises fortifiées de la Meuse* [The Fortified Churches of the Meuse]. Citédis Éditions, France.

Pankhurst, S. 1955. *Ethiopia: A Cultural History.* Lalibela House, Essex.

Parry, J. H. 1977. *The Spanish Seaborne Empire.* Hutchinson.

Paulsson, T. 1958. *Scandinavian Architecture.* Leonard Hill.

Pean, R. 1995. *Islamic Tunisia* (trans. A. Murray, M. I. Martin, B. Abdessamad and A. M. di Curzio). Régie 3, National Heritage Agency, Tunis.

Pepper, S. 1977. 'Planning versus Fortification: Sangallo's Project for the Defence of Rome', *Fort*, 2: 33–49.

Perry, R. 1992. *Mexico's Fortress Monasteries*. Espadana Press, Santa Barbara.

—— and R. Perry. 1988. *Maya Missions*. Espadana Press, Santa Barbara, California.

Petrie, G. 1970. *The Ecclesiastical Architecture of Ireland*. Irish University Press.

Pierson, J.-F. 1986. *2000 ans de fortifications en Meuse* [2000 Years of Fortifications in Meuse]. Dossiers Documentaires Meusiens, Bar-le-Duc.

Plant, R. 1985. *Architecture of the Tigré, Ethiopia*. Ravens Educational, Worcester.

Plog, S. 1997. *Ancient Peoples of the American Southwest*. Thames and Hudson.

Presford, P. E. 1999. 'Il Borgo' (Vatican City), *Postern*, 9: 9–13.

Rey, C. F. 1929. *The Romance of the Portuguese in Ethiopia*. Witherby.

Rey, R. 1925. *Les Vieilles Églises fortifiées du Midi de la France* [The Old Fortified Churches of the South of France]. Paris.

Riley-Smith, J. (ed.) 1990. *The Atlas of the Crusades*. Guild Publishing.

Rodley, L. 1985. *Cave Monasteries of Byzantine Cappadocia*. Cambridge University Press.

Rudofsky, B. 1977. *The Prodigious Builders*. Secker and Warburg.

Runciman, S. 1965a. *A History of the Crusades*. Vol. 2. Penguin.

——. 1965b. *A History of the Crusades*. Vol. 3. Penguin.

Salch, C.-L. 1978. *L'Atlas des villes et villages fortiés en France* [An Atlas of French Fortified Towns and Villages]. Éditions Publitotal, Strasburg.

——. 1979. *Dictionnaire des châteaux et des fortifications du moyen âge en France* [Dictionary of Castles and Fortifications of the Middle Ages in France]. Éditions Publitotal, Strasburg.

—— and J.-F. Fino. 1977. *Atlas des châteaux forts en France* [An Atlas of French Castles]. Editions Publitotal, Strasburg.

Salter, M. 1991. *The Old Parish Churches of Gwent, Glamorgan and Gower*. Folly Publications, Malvern.

Sanford, T. E. 1947. *The Story of Architecture in Mexico*. Vision Press, London.

Santelli, S. (Undated). *Medina's Traditional Architecture of Tunisia* (trans. K. Hylton). Dar Ashraf Editions, Tunis.

Schicklgruber, C., and F. Pommaret. 1997. *Bhutan: Mountain Fortress of the Gods*. Bookwise (India) Pvt Ltd.

Smail, R. C. 1995. *Crusading Warfare 1097–1193*. Cambridge University Press.

Smith, D. 1993. 'The Muscovite Zaseka System', *Fortress*, 17: 21–7.

Snellgrove, D., and H. Richardson. 1968. *A Cultural History of Tibet*. Weidenfeld and Nicholson.

Söderberg, B. (Undated). *Kyrkorna på Gotland* [Churches on Gotland]. Gotlandskonst A/B, Visby.

Sofianos, D. Z. 1991. *Meteora*. Holy Monastery of Transfiguration, Great Meteora, Greece.

Spiteri, S. C. 1994. *Fortresses of the Cross*. Heritage Interpretation Services, Malta.

Stalley, R. 1987. *The Cistercian Monasteries of Ireland*. Yale University Press, London and New Haven.

Stein, R. A. 1972. *Tibetan Civilization*. Faber.

Stierlin, H. 1996. *Islam: Early Architecture from Baghdad to Cordoba*. Taschen.

Stoye, J. 1964. *The Siege of Vienna*. Collins, London.

Tejada, L. M. 1999. *Castles from the Heart of Spain*. Konemann, Cologne.

Theocharides, P., P. Foundas and S. Stephanou. 1992. *Mount Athos*. Melissa Publishing House, Athens.

Thomas, H. 1993. *The Conquest of Mexico*. Hutchinson.

Thomas, J. 2002. *Albi Cathedral and British Church Architecture*. The Ecclesiological Society.

Tietzsch-Tyler, D. 1993. *The Augustinian Priory of Kells, Co. Kilkenny*. Kells Region Economic and Tourism Enterprise Ltd, Ireland.

Tribe, T. C. 1996. *Ancient Coptic Churches and Monasteries in Delta, Sinai and Cairo*. Institute of Coptic Studies, Cairo.

Triolet, J. and L. Triolet. 1995. *Les Souterrains* [Underground Tunnels]. Éditions Errance, Paris.

Tucci, G. 1967. *Tibet: Land of Snows*. Elek Books.

Tuulse, A. 1958. *Castles of the Western World*. Thames and Hudson.

Ulmer, C. 1997. *The Castles of Friuli*. Konemann.

Weber, D. J. 1992. *The Spanish Frontier in North America*. Yale University Press.

Weissmuller, A. A. 1967. *Castles from the Heart of Spain*. Barrie and Rockliff.

White, J. C. 1909. *Sikhim and Bhutan*. Edward Arnold.

Whitehill, W. M. 1968. *Spanish Romanesque Architecture of the Eleventh Century*. Oxford University Press.

Willey, P. 1963. *The Castles of the Assassins*. Harrap.

Wright, N. A. R. 1991. 'The Fortified Church at Chitry', *Fort*, 19: 5–10.

——. 1998. *Knights and Peasants*. The Boydell Press.

Zhewen, L., and S. Peng. 1986. *Through the Moon Gate: A Guide to China's Historic Monuments*. Oxford University Press.

INDEX

Note: Page references in italics indicate line illustrations; those in bold indicate colour plates. Placenames beginning 'St' and 'Saint' are filed as though spelled 'Saint'.

Abu Bakr 239–40
Abu Ghosh (Palestine), defensible church 43–4
Acoma (New Mexico), San Esteban del Rey church 177–8
Acre, fall (1191) 60, 61
Aegean Sea: island fortress monasteries 124–6
  St John the Evangelist, Patmos 125
  St Panteleimon, Tilos 125–6
Agde cathedral (France) 56, 100
Aghlabid dynasty 218, 221–5, 229
Aisne (France), fortified churches 111–12
Ajnadyn, Battle (634) 215
Akko (Acre), conventual castle 41
Alamo mission *171*, 181–2
Alamut valley (Iran): and Assassins 239, 240–2
  castles *241*, 242–4, 249
  and 'garden of streams' 242, 243–4
Alaverdi cathedral (Georgia) 198
Albert of Jerusalem 248
Albi (Languedoc): cathedral of St Cecilia 55–6, 65
Palace de la Berbie 56–7
St Salvie church 57, 278
Albigensian Crusades 55–8, 98, 101, 114
Albornoz, Cardinal Gil de 153, 155–6
Alcántara order 50
Alchi monastery (India) 255, 264
Aleppo (Syria), citadel 235
Alexander II, Pope 48
Alexander VI, Pope 154, 172 n.4
Alfonso the Chaste of Asturias 51
Ali (son-in-law of Muhammad) 239–40
Aliabad caravanserai (Iran) 236
Almohads, in Iberian peninsula 49
Almoravids: in Iberian peninsula 48, 49
  in North Africa 220
Alnwick Abbey (Northumberland), gatehouse *75*, *77*
Alphonse VII of Castile 49
Alphonse of Poitiers 101
Alphonso IV 52
Alphonso VI of León 39, 47–8
Alphonso Henriques of Portugal 52
Altan Khan 253
Aluve, K. 58 n.44, 64 nn.53,54
Alvarez, Fr Francisco 207
Amalric of Jerusalem 248
Amaras monastery (Nagornyy Karabagh) 195
amba (hill top) monasteries 207, 208–9
America *see* Mexico; Paraguay; USA
Amieira castle 41 n.6, 52–3, 65
Ananuri (Georgia), fortress 203–5, *204*
Anau (Central Asia), Jamal ad-Din khanaqah 233, 234
anchorites 7, 10
Ancroft church (Northumberland) 68 n.4
Anderson, Iwar 94 n.12
Anderson, W. 52 n.29, 151
Anglo-Normans: in Ireland 28–36
  in Wales 80, 81
Annan (Dumfries.) 78
Anthony, St 10
aqueducts 155, 199
Arab conquests 12, 20, 21–2, 198, 206, 215–16, 226, 227–9
Aragon, and Reconquest of Spain 48–9
Arbore (Romania), painted monastery 129
arcades: arcaded parapets 84–5
  blind 29, 79, 111, 131, 222 n.13
archers' galleries, Sweden 91–3
architecture 4, 5, 277–8
  Arab 150–1, 215–16
  Armenian 191
  Baroque 46, 138, 139–41
  Bhutanese 270–1
  Cistercian 42, 50, 119
  Frankish 43
  Gothic 29, 44, 55–6, 61–2, 111, 113, 118, 145
  Moorish 55, 182–3, 222
  Muslim 57 n.39, 227, 234
  Plateresque 174
  rococo 190
  Romanesque 5, 29, 48, 65, 73, 93, 96, 99–100, 108, 111–14, 118, 150
  Tibetan 251, 254–6, 257, 263–4
Archon (France), fortified church 98
archway, horseshoe 222
Ardennes (France) 113
Ardmore (Co. Waterford), round tower 27
Aris, M. 2, 268 n.24
Arkadi monastery (Crete) 126
Armenia 6, 191–5, 276
arsanas (fortified port) 124
artillery, and military architecture 153–5, 156, 157, 162–3, 169, 170
Arunachal Pradesh (India), Buddhist monasteries 266
Ascoli (Italy), fortress 156
Assassins 44, 240–2, 244–5
  castles 3, *241*, 242, 246–7, 249
  and Crusaders 240, 244–6, 247–9
  in Syria 237, 244–8
Assisi (Italy): churches 150
  Rocca Maggiore 150, 155
assommoirs 107, 113, 114
Asturias, kingdom 47, 51
Aswan, monastery of St Simeon *9*, 10–12, *11*, 21–2
Athassel priory (Co. Kilkenny) 32, 36
atrio, in Mexico 173, 175, 178, 183, 184
Augustinian order 31–2, 48–9, 85–6, 150
Austria: fortified churches 6, 146–7
  fortified monasteries 139–412

Avignon, Palace of the Popes 56, 119–20, 153, 156
Azerbaijan, St Stephanos monastery 195
Azuar Ruiz, R. 226

Baclayon (Philippines), fortified church 180
Bad Pirawath (Austria), fortified church 147
Bad Steben (Germany), fortress church 143
Badr al-Jamali 231
Baghras, Adam 248
Baku (Azerbaijan), Pir Sadat khanaqah 233
Baldwin, Archbishop of Trier 138–9
Ball, W. 20
Balrothery (Ireland), fortified belfry 34
Baltinglass priory (Ireland) 32
Banská Stiavnica (Slovak Republic), fortified church 145–6
barbican: in churches 107, 131, 199
  in conventual castles 44, 53
  in monasteries and priories 77, 86, 124, 138, 144, 273, 274
Barbier, P. 98, 99–100, 114
bartizans 70
Bartlett, R. and Mackay, A. 47 n.20, 49 n.24
Bartusis, M. C. 136 n.19
bastides (France) 100–3, *102*, 115
bastions: America 180
  Austria 147
  Caucasus 192, 203
  Italy 153–5, 156
  Mexico 184
  Philippines 190
  Poland 144
  Tibet 257, 263
bastle houses 66–8
battlements: Iberian 55
  Irish 29, 30, 32, 33, 34–5
  loopholed 85
  stepped 32, 35
  see also merlons
Baybars, al-Zahir, sultan 22, 42, 249
Beaumont-de-Lomagne (France), bastide church 103
Beaumont-du-Périgord (France), bastide church 101–3, *102*, 115
Beaurain (France), fortified church 112
Bedale (Yorks.), fortified church 68
bell towers, fortified: Armenia 194
  France 99–100, 103, 105, 108, 110–11, 113
  Georgia 201
  Germany 143
  Ireland 25, 31, 34
  Italy 149
  Sweden 89
  Syria 232
  see also towers, Irish round towers
Belmont Castle (Palestine) 40
Belozersk (Russia), monastery of St Cyril 165, 166–7
Belvoir Castle (Palestine) 40–1
Benedict XII, Pope 119
Berbers: in North Africa 12, 21, 216
  in Spain 47, 220
Berenguer IV, count of Barcelona 51
Beresford, M. 101 nn.13,14
Bernard of Castenet 55, 57, 58
Bernard de Combret 56–7
Berwick-upon-Tweed, fortification 66
Bethgibelin castle (Palestine) 40
Béziers (Languedoc) 55
  Saint-Nazaire cathedral 57–8, 175 n.12
Bhutan 267–75
  architecture 270–1
  dzongs 5, 6, 254, 255–6, 257, 268–74, *270*, 276–7
  fortified bridges 271, 274–5
  geography 267
  and Kagyupa Buddhism 252
  and Ngawang Namgyal 254, 267–70, 271
  as theocracy 268
Bizzos church (Syria) 20
Boase, T. S. R. 41, 246 n.11
Böda (Öland), fortified church 92
Bohemond IV of Antioch 248
Bolea, Moorish castle 49
Bonde, Sheila 2 n.2, 57–8, 100 n.10, 237–8, 278
Bonnet (France), fortified church 98 n.4
Bonnier, Ann 88 n.2
Bornholm (Denmark), round-tower churches 93–4, *95*, 96
Boström, R. 93
Bouteille-Saint-Sébastien (France), fortified church 114–15
Braga (Portugal), fortified cathedral 53
Brasanelli, Giuseppe 187–8
Braunfels, W. 51 n.28, 138 n.4, 139, 141 n.9, 148 n.1
bretache (box machicolation) 107–9, 111–13, 114
Brethren of the Sword 58, 60, 61
bridges, fortified 271, 274–5
Brigeueil (France), fortified church 108
Brooke, C, J. 68, 79, 97 n.1
Bucy-le-Long (France), fortified church 113
Buddhism *see* Tibetan Buddhism
Bukovnia, painted monasteries 129–30
Bulgaria, fortified monasteries 133
Bunge (Gotland), fortified church 91
Burelles (France), fortified church 111
Burgh-by-Sands (Cumbria), St Michael's church 68 n.4, *72*, 73
Bury St Edmunds Abbey (Suffolk), gatehouse 85 n.24, 87
buttresses: corner 109, 111, 113, 114
  flying 57
  rectangular 56, 109
  semi-circular 50, 56–7, 150, 222, 228, 237
  triangular 16
Byzantine Empire, and Arab conquests 39, 121, 215, 223, 229

Cafarlet (Syria), Arab fort 226
Cairo (Egypt): al-Hakim mosque 231
  Citadel of the Mountain 234–5
  Mu'ayyad Shaykh mosque 231
Calansue castle (Palestine) 40
Calatrava la Nueva castle 50–1
Calatrava order 50
California, missions and presidios 183
camino rondo *see* chemin de ronde
caponier 62
Capul island (Philippines), St Ignatius Loyola church 190
Caraman, P. 186, 187 n.46
caravanserais 151 n.5, 216, 221, 225, 235–6, 238, 276
Carpenteo (Italy), fortified church 151–2
casemates 154, 160, 161, 163
Cashel (Co. Tipperary) 28, 30, 37
cashels 23–4, 27
Castell Sant'Angelo (Rome) 152, 153, 154–5, 157
Castile, kingdom 49
castles: bastioned 156
  capitular 38, 58, 63–5, 137–9

concentric 5, 41–2, 61, 237
conventual 4–5, 65, 220, 276, 277–8, in central Europe 146, in Holy Land 38, 40–3, 65, in Iberian peninsula 48–51, 52–3, in northern Europe 43, 58–63
quadrangular 60, 61, 99
rectangular 41, 51, 52, 61
wooden 58, 61, 159–60
castra, Roman 215–16, 218
Catalonia, and reconquest 49, 51
Cathars 55–8, 65, 99, 101
cathedrals, fortified 278
France 55–8, 65, 98, 100, 114, 277
Iberian peninsula 53–5
Ireland 29–30
Palestine 38, 44
Russia 165
Scotland 79
Catherine II ('the Great') 144, 165
Caucasus region 3, 191–205, 276
Armenia 191–5
Georgia 6, 191, 196–205
Turkey 196
cave of Machpelah (Hebron) 22
cave-monastery 198–9
Cēsis castle (Latvia) 58–60, *59*
Cefalù (Sicily), fortified cathedral 150–1
cemeteries, fortified walls 91, 93, 97, 98 n.5, 107–8, 113, 147
Central America: missions 183–5
Spanish conquest 170
Central Europe 137–47
episcopal palaces 137–9
fortified monasteries 139–42
chapels, open 172, 173, 184
Charles V, Emperor 153, 155
Charles VI of Spain 172
Chastel Blanc (Syria), Templar church 44–6, *45*, 108, 278
chemin de ronde
Bhutan 273
France 29 n.16, 57, 101, 103, 109, 111, 113, 115, 119
Germany 138
Iraq 237
Italy 154
Mexico 174, 175, 185
Poland 63
Portugal 55
Russia 165
Syria 20
Cheriton (Gower), St Cadoc's church 81, *83*
chevauchée 104
chevet 109
crenellated 177 n.23
flat 92, 101, 111, 115
loop-holed 42, 111
machicolated 57
in town walls 101–3
China, and Tibet 250, 252, 253, 254, 258, 263–4, 266–7
Chitry (France), fortified church 98 n.5, 279
Chokhorgyal monastery (Tibet) 258
chortens 255, 258, 260, 261–3
Choziba monastery, Wadi Qilt (Palestine) 15
Christianity: in the Baltic 88–9
in Caucasus 3, 205
in Ethiopia 206–9
in New World 170–2
and religious fortification 1, 3, 4, 7–8
in Russia 158–9
see also churches; Holy Land; Reconquest
Christiansen, E. 62
churches: bastide 101–3, 115
cruciform 18, 29, 73, 80, 111
gate-churches 161–2, 164, 192–4
pack-saddle 93, 96, 110, 139, 142
rural 6, 68, 103–15, 278–9
tetraconch/four-apsed 199 n.8, 201
wooden 91
churches, fortified 5, 6, 278
America 177–9
Austria 146–7
basilica plan 15
domed 15
effectiveness 278–9
England 68, *69*
Ethiopia 211–14
France 5, 6, 97–8, 99–100, 103–15, 237–8
Georgia 199–203
Germany 142–3
Holy Land 43–4
Italy 151–2, 157
Mexico 173–5, 179, 184–5
Philippines 189–90
Romanesque 5, 65, 93, 96, 108, 111–14
Romania 1, 6, 130–3, 136, 143, 276
round 210, 211–14
round-tower 6, 25, 29, 88, *92*, 93–6, *95*
Scandinavia 88–96
Scotland 78, 79–80
USA 176–7
Wales 80–1
west towers 68, 81–4, *82*, *83*, 85
circumvallation (Ireland) 23, 26, 34 n.25
Cistercian order 32–3, 148
architecture 42, 50, 119, 149
in Spain 48, 52
and Templars 39
cisterns: Assassin castles 243–4, 247
Caucasus194–5, 199–201
Egypt 12
Ethiopia 210
France 99, 118
Palestine 40, 44
Qumran 8
Spain 51, 53
Syria 20
Tunisia 229–30
Citadels, Islamic 234–5
Clement V, Pope 43, 153
Clement VI, Pope 119
Clement VII, Pope 155
clochans (huts) 23, 27
clocheur donjons, France 57, 58, 99–100
cloicteach (bell-tower) 26
cloisters, fortified 55, 57, 115, 119
Clun (Shropshire), fortified church 85, 87
Coburg (Germany), episcopal palace 138, *140*
coign and livery system 31
Coimbra cathedral (Portugal) 5, 53–5, *54*, 175 n.12
Coldstream, N. 85 n.23
Compreignac (France), souterrains 109 n.22
Conant, K. J. 27
Conrad, duke of Mazovia 60
Conrad of Montferrat 248
Cook, G. H. 279
Coolhill Castle (Co. Wexford), tower-house 35–6
Coptic Church: and Arab conquests 21
monasteries 10–14, *11*, *13*, 232

Corbridge (Northumberland), Vicar's Pele tower 5, 70, *71*, *72*
Cordoba, caliphate 47–8
corner towers: America 173
Armenia 195
Austria 147
Azerbaijan 233
Egypt 16, 231
France 57, 101–3, 108, 111, 113, 114
Germany 142
Iberia 50, 51, 52–3
Iraq 228–9, 237
Ireland 33, 34
Italy 149, 151, 154
in mosques 228–30
Palestine 40
Poland 61, 63–4
Roman 216
Romania 130
Russia 160, 161, 166, 168
Slovakia 146
Syria 20
Tibet 257, 260
Tunisia 222, 230
Cortes, Hernando 170, 172, 179
cortinas (peasant defences) 151–2
Crac des Chevaliers (Syria) 4–5, 41–2, 65, 238, 249
Craig, M. 26, 35 n.28, 36 n.33
Créances (France), fortified church *106*, 110
crenellation: America 177
England 77, 86
Ethiopia 212
France 56, 57, 100–1, 105, 107–8, 110, 111, 113, 114, 115–16, 118–19
Germany 143
Iberian peninsula 53, 55
Livonia 64
Mexico 173–5, 185
Morocco 234
Mount Athos 124
Scandinavia 91–2, 94
Syria 20
Tunisia 222
Wales 84, 85
Cresswell, K. A. C. 215 n.2, 216
Crete, monasteries 126
Cross, monastery of (Jerusalem) 46
crossing towers 29, 30, 32–3, 53
Cruas (France), fortified church 46 n.15, 107–8
Crusades 38–65
against Cathars 55–8, 101
and defence of Holy Land 39, 40, 43–7
northern 58–65
and Reconquest 47–58
cupolas 161, 211, 212, 232
Curry, A. and Hughes, M. 279 n.4
curtain walls: Austria 147
Georgia 199–201
Germany 142–3
Ireland 31, 32
Italy 149, 152–3, 154–5
Mount Athos 124
Romania 130, 131
Russia 160, 162
Scotland 79
Syria 20
Cuyo (Philippines) 190
Cyprus, and Hospitallers 125
Cyril of Jerusalem 46
Czech and Slovak Republics 145–6

Da Gama, Christopher 207–8, 209–10
Dalai Lamas 252, 253, 254, 258, 260–3, 267
Dalmatian coast 135
Dansker towers 62, 63, 119
Daphni (Greece), fortified monastery 15 n.11
David the Builder 6
Davies, Rees 28 n.14
Davis, Samuel 271, *272*
De Lima, Dom Rodrigo 206, 207
De Vaux, Roland 8
Dead Cities (Syria) 20
Debra Damo monastery (Ethiopia) 207–9
Dechen dzong (Tibet) 257
defence rooms: Scandinavia 92
see also salle de defence
Del' Aqua, Andrzej 144
Denmark, round-tower churches 88, *92*, 93–6, *95*
Dent, J. and McDonald, R. 79 n.16
Diaconiconum (princely house) 130
Diocletian, Emperor, persecutions 7, 18
Djelloul, Neji 218, 220, 223, 225, 230
Dob Dobs 257, 276
Dogra War 265, 266
Dohis (France), fortified church 97
Dol-de-Bretagne (Brittany), fortified cathedral 98
donjon churches: France 46, 100, 108, 111–12, 115
Georgia 201
Holy Land 44–6, *45*
donjon towers 42, 53
Donskoi, Dimitri 159
doors, fortified: Austria 147
England 68, 70, *72*, 73
France 107
Georgia *200*, 201, 205
Mexico 173
Romania 131
Russia 160,161
Scotland 80
Tunisia 222
Douglas, Archibold the Grim, 3rd earl 78
Dowman, K. 254 n.5
Dragomirna (Romania), painted monastery 129, 130
Dragut, Vasile 129 n.13
drawbridges 12, 56, 64, 107, 118, 120
Drepung monastery (Tibet) 253, 265, 266, 257
Drukgyel dzong (Bhutan) 274
drum towers 57, 108, 112, 149, 192, 195, 201, 263
Dryburgh Abbey (Borders) 80
Du Louvres, Jean 119
Durand de Beaucaire 56
Durham cathedral 66 n.3
Dzhvari fortified church, Mcxeta (Georgia) 199–201, *200*
dzongs 5, 6, 254, 255–6, 257, 268–74, *270*, 276–7

earthworks: Austria 147
Ireland 23, 26, 33
Italy 151–2, 155
Paraguay 186
Poland 144
Eastern Europe 280
Bulgaria, Serbia and Dalmatian coast 133–5
painted monasteries of Bukovnia 129–30
Transylvanian churches 130–3, 136, 143, 276, 277
Eastern Orthodox Church: in Caucasus 196
and Ottoman advance 121, 126
in Russia 158, 169, 277

echauguettes (round towers): in France 107, 109, 111, 113
in Germany 139, 143
in New World 174–5, 190
Edlingham church (Northumberland) 68 n.4
Edward I 80, 101, 103
Edward III 103
Egypt, Coptic monasteries 1, 10–14, *11*, *13*, 21, 232
early desert monasteries 7, 10, 276
Elne (Languedoc), fortress cathedral 55
Eltville (Germany), episcopal castle 139, 143
enceinte 4, 6
concentric 41, 142
conventual castles 40–3, 50
double 136
elliptical 144
hexagonal 139
inner 50
monasteries 10, 15, 21, 77
pentangular 165, 190, 201
polygonal 108, 161, 163, 164, 184
rectangular 20, 40, 101, 107–8, 115, 142, 144, 147
triangular 258
wooden 159
Enda Medhane Alem church (Ethiopia) *213*
Englancourt (France), fortified church 111
England: fortified churches 68–70, *69*
fortified monasteries *73–7*, *74*, *75*, *76*
Marches 66–77
pele towers 5, 70–3, *71*, *72*, *77*, 86
entrance gates: angled 51
monastery 12, 14, 16, 25
pilgrimage towns 20
Erize-la-Brulée (France), fortified church 98
Erize-Saint-Dizier (France), fortified church 98 n.4
Esnandes (France), fortified church 114
Espira-de-l'Agly (France), fortified church 100 n.11
Esqueheries (France), fortified church 112
Essenes, Qumran settlement 8–10, *9*
Estoutville, Louis d' 119
Ethiopia 6, 206–14
Debra Damo monastery (Ethiopia) 207–9
and Jesuits 209–10, 211
and Portugal 206–9
rock-hewn churches 207, 211
Etropole (Bulgaria), monastery 134
Évora (Portugal), fortified cathedral 53
Eyzies-de-Talac (France), fortified church 115

Fabini, H. and Fabini, A. 130 n.15
façades, twin-tower: France 58, 115
Mexico 173
Philippines 190
Portugal 53
Sicily 150
Syria 20–1
Fasiladas, Emperor of Ethiopia 209, 210–12
Fatimid dynasty 38, 230–1, 244
Festalemps (France), fortified church 115
Fida'iin *see* Assassins
Fino, J.-F. 56
First Crusade (1095-9) 39
Fleurance (France), bastide church 103
Floigny (France), fortified church 98 n.4
Föra (Öland), fortified church 92–3
Fore priory (Ireland) 32
fortification: Middle Eastern origins 7–22
types 4, 5
France 97–120
bastides 100–3, *102*, 115
donjon churches 46, 100, 108, 111–12, 115
fortified cathedrals 55–8, 65, 98, 100, 114, 277
fortified churches 5, 6, 97–8, 99–100, 103–15, 278, 279
monastic fortification 98, 99, 115–20, *116*, *117*, 276
regional differences 5, 110–15
Romanesque churches 5, 99–100, 108, 111–14
souterrains 109–10
Viking raids 98–9
Frederick I, Duke 141
Frederick II, Emperor 151
Fremona (Ethiopia), monastery 209–10
frescoes: Georgia 199, 205
Mount Athos 123–4
Romania 6, 129–30
Serbia 135
friars *see* orders, mendicant
Friuli (Italy), cortinas 151–2, 157
Froissart, Jean 119
Fronde, and fortification of churches 112
Fustat (Egypt), mosque 229

Gabra Maskel, Emperor of Ethiopia 208
Galawdewos, Emperor of Ethiopia 208, 209
galleries: casemated 154, 160, 161, 163
crenellated 56, 103, 105, 107, 114, 115–16, 143
Islamic 238
loopholed 20, 86, 139, 160
machicolated 107, 124, 139
two-storey 175
Gamboudakis, Kostis 126
Gammelgarn (Gotland), free-standing tower 89
Ganden monastery (Tibet) 253
gate-churches: Armenia 192–4
Russia 161–2, 163
gate-towers: Romania 130
Russia 165–6
gatehouses: Coptic 12, 14
England *75*, *76*, *77*, 85–6, 277
France 108
Georgia 201, 203
Germany 138, 141, 142–3
Ireland 25, 32
Italy 149
Romania 131
Scotland 79, 85
Tibet 257–8, 263
Gattopone, Matteo 155–6
gavit 191, 194
Genghis Khan 158, 252
Georgia 6, 191, 196–205, *197*
Ananuri fortress 203–5, *204*
Dzhvari church 199–201
Ninocminda church 201–3, *202*
Upper Svanetia 205
Vardzia cave-city 198–9
Germany: episcopal palaces 137–9, *140*
fortified churches 142–3
fortified monasteries 141–2
Ghazis 220
Giorgi III of Georgia 198

Glendalough (Co. Wicklow), round tower 24–5
Glick, T. F. 49 n.23, 53 n.31
Golden Horde 158–9, 167
Gondar (Ethiopia): **Debra Berham Selassie church** 211–12
palace 210–11
Gotland, fortified church towers 89–91, *92*
Gower (Wales): arcaded parapets 84–5
and French churches 110 n.23
western towers 81–4, *82*, *83*
Gran the Left-Handed (Imam Ahmed ibn-Ibrahim) 206–8, 210 n.13, 212
Grande, Claude de Joyeuse, comte 108
Great Britain 66–87
arcaded parapets 84–5
English Marches 66–77
fortified churches 80–1
military towers 85
monastic fortifications 73–7, *74*, *75*, *76*, 77–80
monastic gatehouses 85–6
pele towers 5, 68, 70–3, *71*, 77, 86
Scottish Marches 77–80
Welsh Marches 80–4
western church towers 68, 77, 81–4, *82*, *83*, 85
Great Salkeld (Cumbria), St Cuthbert's church 68 n.4, *72*, 73, *106*
Greece: Meteora sky monasteries 126–9, *127*
Mount Athos monasteries 121–4, *122*
and Ottoman Turks 121, 123, 126
Gregory XI, Pope 119, 154, 156
Guardamar del Segura ribat (Spain) 218, 226
Gushi Khan 261
Gwynn, A. and Haddock, R. N. 28 n.13
Gyama Trikang (Tibet), fortress 257
Gyantse (Tibet): dzong 258–60, 274 n.33
Pelkhor Chode monastery 253, 255, 257, 258–60, *259*

Hagby (Kalmar), round-tower church 93, 94
Hagenau (Germany), fortified monastery 141–2
Hagpat (Armenia), fortified monastery 194
Hajj, and caravanserai 235–7
Al-Hakim, Caliph 38–9
Haldon, J. 39 n.1
Halltorp (Kalmar), fortified church 93
Hamilton, G. H. 167 n.19
Harich (Armenia), fortified monastery 192
Harlityunian, Varazdat 2 n.3
Harman (Romania), fortress church 1,131
Harrison, P. A. 81 n.20
Harthama ibn-Ayin 223
Hasan-i-Sabah 239, 240–2, 243–4, 246
Hattin, Battle (1187) 41, 47
Hellier, C. 123 n.3
Hemis monastery (Ladakh) 265
Henry of Gower, Bishop of St Davids 84–5
Herod the Great 22
Hetherington, P. 125 n.7
Heustreu St Michael (Germany), fortified church 143
Hillenbrand, Carol 2, 151 n.6, 218, 220, 232 n.6, 233, 236 n.10
Hillenbrand, Robert 2, 216 n.4, 227, 236
Himalayan region: Bhutan 267–76
Tibet 250–64
Western Himalyas 264–6
Hirschfeld, Y. 10, 15
Hisham, Caliph 216
hoarding 29, 34, 81 n.21, 85, 94, 100, 105–7
Holy Land: defence 39, 40, 65
and military orders 40–3, 248
and pilgrimage 38–9, 43–7
Holy Sepulchre church (Jerusalem) 38–9
Holy Warriors *see* Murabitun
Hore (Ireland), abbey and friary 30 n.18
Hosla, R. 2, 251, 255–6, 264
Hospitallers: and Assassins 248–9
in Central Europe 146
in Eastern Mediterranean 43, 121, 125, 136
fortified churches 43, 85
in Holy Land 40–3
in Iberian peninsula 49–50, 52–3
Kilteel preceptory 36
origins 39
house: bastle house 66–8
tower-house 6, 29–30, 31–2, 33–6, 68, 78, 80
Hovannavank (Armenia), fortified monastery 192
Howth (Ireland), St Mary's church 34
Hugh de Payens 39
Hughes, Q. 153 n.12
Hulegu Khan 249
Hulne Priory, Alnwick (Northumberland) *76*, *77*
Humor (Romania), painted monastery 129
Hunawihr (France), fortified church 108
Hundred Years War: and fortification of churches 97–8, 101, 103–4, 107–9, 110, 112–14, 279 n.4
and monastic fortifications 86, 115, 118–19
and rural populations 103–5
Hus, Jan 137
Hussein (son of Ali) 240
Hyslop, H. H. 274

Iberian peninsula: in cathedrals, fortified 53–5
Reconquest 39, 41 n.4, 47–58, 170, 220, 276
Ifriqya, ville-ribats 223–5
ihakhang (temple) 273
Inchcolm abbey (Soctland) 62 n.51
India, Tibetan Buddhist monasteries 251, 254, 255
Inishmurray (Co. Sligo), St Molaise monastery 23
Innocent III, Pope 55, 152
interval towers: Germany 142
Iraq 229
Italy 149, 151
Palestine 40
Roman 216
Russia 161, 168
Tibet 257, 260
Tunisia 222
Iran, Alamut valley 239, 240–4, *241*, 249
Ireland: Anglo-Norman monasteries 28–36
early Gaelic monasteries 23–8
fortified monasteries 6, 23–37
round towers 3, 5, 24–8, 29, 30, 34, 36
Viking raids 24, 26
Isafahan (Iran), Chah-i-Siyay caravanserai 236

Ishmael Pasha 126
Islam: and Arab conquests 20, 21–2
and Eastern Orthodox Church 121
in Ethiopia 206, 208
expansion 215
and First Crusade 39
and Holy Land 38–47
in Iberian peninsula 39
influence of Roman and Byzantine fortifications 215–18
Ismaili sect 3, 231, 239–46
and jihad 206–7, 218–20, 223, 226, 234
and monasticism 233
and mosques 183, 223, 227–38
and religious fortification 1, 3
ribats 215–26
studies of architecture 2
Western Himalyas 264
Ismailis, Nazari 3, 231, 240–6, *241*
castles 242–3, 246–7, 249
see also Assassins
Italy 148–57
fortified cathedral 150–1
fortified churches 151–2, 157
fortified monasteries 149, 157
Papal States 152, 155–6
town defences 148, 150
Ivan III ('the Great') 159
Ivan IV ('the Terrible') 163, 164

Jabal Bahra (Syria), castles 244–5, 249
Jager, O. A. and Pearce, I. 211 n.16, 214
Jakar dzong (Bhutan) 273–4
James IV of Scotland 79
Jasna Góra (Poland), fortified monastery 143–4
Je Rinpoche (Tsongkhapa) 252–3, 257
Jedburgh Abbey (Scotland) 79
Jerpoint Abbey (Co. Kilkenny) 32–3
Jerusalem: Aqsa mosque 39, 231
Crusader capture (1099) 39, 244
Dome of the Rock 39, 231
monastery of the Cross 46
Jerusalem, Frankish kingdom 43
Jesuits: in Ethiopia 209–10, 211
in Paraguay 185–8, 189
jihad 206–7, 218–20, 223, 226, 234
John Damascene, *Source of Knowledge* 16
Joinville, 246, 249
Julius II, Pope 156
Justinian I, Emperor 7, 15–16, 18, 20, 22, 216

Kafka, Karl 147
Kairouan (Tunisia): Great Mosque 229–30
minaret 232
Källa (Öland), fortified church 92
Kalmar (Sweden), churches 88, 93
kastiele (castelets) 145 n.15
katholikon 123, 128
Kayseri (Turkey), Khwand Khatun complex 234
Kelland, C. H. 80–1
Kells priory (Co. Kilkenny) 6, 31–2, 36–7
Kennedy, H. 40, 42–3, 65 n.55, 226, 278 n.3
Kennedy, R. G. 172 n.5, 182–3
Kerry (Powys), fortified church 85
Khalpakhchian, O. Kh. 192
Khan al-Qutaifah (Syria), caravanserai 236
khanaqahs 233, 234
Khawabi (Syria), Assassin castle 248, 249
Khor Virap (Armenia) 194
Khristodoulos of Bithynia 125
Ki Gompa monastery (Ladakh) 265
Kiev: Golden Gate 162
Pechersk Lavra 162
Trinity gate-church 162
Kilteel (Co. Kildare), Hospitaller preceptory 36
Kinneigh (Ireland), round tower 28
Kirillus IV, Abbot 21, 276
Kirk of Steill (Scotland) 79–80
Kläckeberga (Kalmar), fortified church 93
Knights of St John of Jerusalem *see* Hospitallers
Knights of the Temple *see* Templars
Kordecki, Augustin 144
Kraftshof (Germany), fortified church 142–3
Krautheimer, R. 15–16
Kubler, G. 172 n.7, 176 n.20, 177 n.22, 178 n.24
Kufa (Iraq): Dar al-Imara palace 229
mosque 228–9, 237
Kuressaare (Estonia), capitular castle 64
Kutaisi (Georgia), Bagrat church 198
Kwidzyn (Poland), Marienwerder castle 63
La Bahia missions (Texas) 6, 180–1
La Boupère (France), fortified church 114
La Chapelle-Pommier (France), fortified church 115
La Fève castle (Palestine) 43
La Thiérache (France), fortified churches 5, 97, 111–12, 277, 279
Ladakh, and Tibetan Buddhism 251, 254, 255, 256, 264–6
Ladykirk (Scotland), fortified church 79–80
Lalibela, rock-hewn churches 207
Lalor, B. 24 n.2, 26, 27, 29
Lamayuru monastery (Ladakh) 264–5
Lammassar (Iran), castle 243, 244, 249
Lamphey, bishop's palace 84
Languedoc: and bastides 100–3
and Cathars 55–8, 65, 99, 101
and fortified churches 99–100, 114, 237–8, 278
Lannoy, Sire de 62
Lärbro (Gotland), free-standing tower 89
Las Navas de Tolosa, Battle (1212) 50
Latrun castle (Palestine) 43
laura monasteries 7, 14–18
Laversine (France), fortified church 112–13
Lawrence, T. E. 246
Leask, H. G. 35
Lebna Dengel, Emperor of Ethiopia 207–9
Leo IV, Pope 152
León, reconquest 47, 48, 49
Lepanto, Battle (1571) 135
Levski, Vassil 134
Lewis, B. 242
Lhasa (Tibet), **Potala Palace** 6, 251, 254, 256, 261–3, *262*, 277
Lidzbark Warminski castle (Poland) 63, 278
Lincluden (Scotland), collegiate church 78
Lincoln, Newport Gate 25 n.3
Lindisfarne priory (Northumberland) *67*, 73–7, *74*
Lisbon, fortified cathedral 53, 55
Litang (Tibet), monastery 256 n.6
Livonia: and Brethren of the Sword 58, 60
and capitular castles 63–5
and Teutonic Knights 60–1

Llanddewi (Wales), fortified church *106*
Llanrhidian (Wales), fortified church 81, 84, *106*
Lo Mantang (Nepal), monasteries 266
Loarre castle (Spain) 48–9, 65, 278
Lodève (Languedoc), fortress cathedral 55
Lombez (Languedoc), fortress cathedral 55
loopholes: in cemetery walls 91, 113, 147
cruciform 73–7, *74*, 108, 114, 115
in fortified churches 44, 85, 91, 105, 107, 111–13, 142–3, 151
in fortified monasteries 62, 73–7, *74*, 160, 161
gun-loops *76*, 78, 79, 86, 107–9, 113, 143, 147
in minarets 232
splayed 20, 113, 143
Loreto (Italy), Santuario della Santa Casa 156
Louis VII of France 100
Louis VIII of France 55, 120
Louis IX of France (St Louis) 249
Lourie, Elena 219
Lusk (Co. Dublin), round towers 27 n.8, 33–4
Lythgoe, A. M. 14 n.8

machicolation: arch 56, 57–8, 100, 107–8, 114, 119, 134, 151, 222, 237–8, 278
arch and box 46 n.15
Austria 147
beehive 201, 203
box 10, 42, 62, 105, 107, 124, 131, 278
Crusader castles 42
false 110
France 53 n.32, 56–8, 103, 105–7, 110, 118
Iberia 52
Ireland 32, 33, 35
Italianate 154, 157, 160, 161
pele towers 70
Russia 161, 163
Scotland 79
Syrian 216
Machpelah cave (Hebron) 22
Madrid, Escorial palace 52
Maguelonnee cathedral (France) 56, 100
Mahdia (Tunisia), mosque 230–1
Makarois of Egypt 12
Malbork castle *see* Marienburg castle
Malling (Jutland), moated church 94–6
Mamelucos 185, 186–7
Manasija (Serbia), monastery 134–5
Manzikert, Battle (1071) 39
Al-Maqdisi 226
Margat castle (Syria) 41–3, 246
Marienburg castle (Poland) 40, 58, 61–3, 65, 277
Marienburg Palace (Germany) 138
Marienwerder castle (Poland) 63
Marly Gomont (France), fortified church 111
Marrakech (Morocco), minaret 233
Marseilles (France), Saint-Victor abbey 100
Maryam Gimbe cathedral (Ethiopia) 210
mashubeh 14
masonry: adobe 176–7, 188
ashlar 20, 22, 27, 29, 49, 51, 53, 80, 112, 191–2, 199, 222
boulder 60, 78, 94, 165
brick 56, 60–3, 86, 112, 144–5, 149, 160–1, 163, 198, 203
dry-stone 23–4
field stone 184, 188, 194, 199
rough-hewn 50, 53, 64, 195, 201, 211, 237, 247, 254
rubble 14, 60, 81, 89, 130, 134, 201
sun-baked brick 12, 14, 225, 254
wood and earth 23
Masyaf castle (Syria) 245, 246, 247, 248
Matthews, Derek 208
Maulbronn (Germany), fortified monastery *140*, 141
Maymum Diz (Iran), castle 243
McMahon, M. 34
McNapsy, C. J. 186 n.43
McNeill, T. 35 n.31
Mcxeta (Georgia), Dzhvari fortified church 199–201, *200*
Melk (Austria), monastery 139–41
merlons 70
grooved 79
loopholed 42, 44, 114, 160, 161, 163
pointed 55, 150, 173, 174
stepped 30
swallow-tailed 145, 149, 157, 160, 161
Meteora sky monasteries (Greece) 26, 126–9, *127*
Great Meteoron 128–9
Holy Trinity 128 n.12
St Stephen 128 nn.11,12
Varlaam *127*, 128 n.12
Meuret, J. P. 111–12, 114
meuretières (murder holes) 44, 80, 107, 111
Mexico: Actopan monastery 173, 174
Huejotzingo church 173
Maya missions 183–5, 189
San Agustín Acolman church 173, 174
Spanish conquest 170, 172
Tecamachalco monastery 173
Tepeaca fortified church 174, 175
Tepoztlán church 173
Miag-ao (Philippines), St Tomas de Villaneuva church 190
Michaelangelo 153 n.13, 155, 156
Michell, George 2
Milovsky, A. 164 n.14
minarets: Aleppo 235
influence on Christian towers 27, 150
Kairouan 230
Kufa 229
origins and function 231–3
Miradoux (France), bastide church 103
Miravet castle (Spain) 50, 51
missions: California 183
manner of defence 186–8
New Mexico 175–9, 189, 276
North and South America compared 186–8
Texas 6, 179–83
Yucatan peninsula 183–5, 189
Mljet (Croatia), fortified monastery 135
moats 64, 119, 155
for churches 94–6, 147
dry 40, 62, 144
for monasteries 115, 149
Mohács, Battle (1526) 146
Moldavia, monasteries 6
Moldovita (Romania), painted monastery 129, 130
Molières (France), bastide church 103
monasteries, fortified 1, 2, 3, 5–6
Aegean 124–6
in the Americas 170–89

Armenia 191–5, 276
Austria 139–42
Bhutan 5, 6, 254, 255–6, 257, 268–74, *270*
Buddhist 3
Central Europe 139–42
Coptic 10–14, *11*, *13*, 232, 276
Czech and Slovak Republics 145–6
England 73–7, *74*, *75*, *76*
Ethiopia 207–10
France 98, 99, 115–20, *116*, *117*
Germany 141–3
Iberian peninsula 48–52
Ireland 3, 6, 23–37
Italy 149, 157
Ladakh 264–6
and lauras 7, 14–18
Mexico 173–5
Middle-Eastern origins 7–8
Mount Athos 121–4, *122*
Nepal 266
painted 129–30
Palestine 1, 14–18, *17*, 21, 22, 46, 276
Philippines 190
Poland 143–5
as royal palaces 51–2
Russia 158–68
Scotland 78–9
Tibet 250, 253–4, 255–7, 276
wooden 159, 166, 167–8, 169
see also castles, conventual
monasticism: anchorite 7, 10, 233
coenobitic 7, 10, 15, 18, 233
Islamic 233
Monastir (Tunisia), **ribat** 5, 27–8, *217*, 223, *224*, 226, 238
Moncornet (France), fortified church 111
Monflanquin (France), bastide church 103
Mongols: invasions 137, 192, 242, 243–4, 249
and Tibetan region 252, 253, 256
monophysite controversy 18
Monreale (Sicily), fortified cathedral 151
Mont St Michael (France) 6, 99, 118–19
Monte Cassino monastery (Italy) 148, 149
Montearagon castle (Spain) 49
Montpellier (France), fortified cathedral 100
Montréal (France), bastide church 103
Moors, in Iberian peninsula 47–51, 52
Morant, R. W. 85 n.24
Morfi, Juan Agustín 182
Morgny-en-Thiérache (France), fortified church 111
mortar: adobe 177, 180, 187
clay 13, 243, 254
limestone 25, 184, 195, 209, 210 n.13, 211
Mortefontaine (France), fortified church 113
Moscow: Golden Ring monasteries 162–5, 169
Kremlin 159–60
mosques: fortified 150, 223, 228–30
Friday/congregational 183, 223, 228–30, 237
origin, functions and development 228
and urban fortifications 230–1
Mount Athos 121–4, *122*
Great Lavra *122*, 123–4
Gregoriou monastery *122*, 124
Iviron monastery 124
Karakalou monastery 124
Simonopetra monastery *122*, 124
Tzimiskis tower 124
Mount Tabor, fortified pilgrimage site 46–7
Mughni (Armenia), St Gevorg monastery 195, 196
Muhammad (Prophet) 215, 228, 239
Müller, Gen. 143, 144 n.12
Müller-Wiener, W. 42, 247 n.18
Murabitun 3, 218–20, 222, 225
murder holes 44, 80, 107, 111

Nagawang Lobsang Gyatso (‘Great Fifth’) 253, 260–1, 266
Nagornyy Karabakh 196
Amaras monastery 195
St Geborg monastery 195
Narbonne (Languedoc), St Just cathedral 55, 57
Narni (Italy), castle 156
Näs (Gotland), church 89–91
Navan priory (Ireland) 32
Neill, S. 172 n.8, 175 n.15
Nepal, and Buddhism 250, 266
Neumarkt am Wallersee (Austria), fortified church 147
New Mexico missions 175–9, 189, 276
Nuestra Señora de los Andeles de Pariuncula 178
San Esteban del Rey church 177–8
Newton Arlosh church (Cumbria) 68–70, *69*
Ngawang Namgyal (Shabdrung) 6, 254, 267–70, 271, 273, 276–7
Nicholas III, Pope 152, 154
Nicholas V, Pope 153, 154
Ninocminda church (Georgia) 201–3, *202*
Nizam al-Mulk 243
Nizari Ismailis *see* Ismailis
Noravank monastery (Armenia) 192
Norham castle (Northumberland) 79–80
Normandy, fortified churches 110–11
North Africa: and raids on southern France 99
see also ribats; Tunisia
Nouaillé (France), fortified monastery 115–18, *117*
Novodevichy (Russia), New Convent of the Virgin (Russia) 160–1
Nur al-Din 248

Ogden, A. 133 n.17
Okba ibn-Nafi 229
O’Keefe, T. 33 n.24
Öland (Sweden), parish forts 91–3, *92*, 96
Old Gorgora (Ethiopia) 210
Old Radnor (Wales), fortified church 85
Opolovnikov, A. V. and Opolovnikov, Y. A. 158 n.1, 159, 166
Oporto (Portugal), fortified cathedral 53
orders, mendicant: and American missions 172–5, 176–82, 183–5, 188–9, 190, 276
in Europe 141, 148, 150
orders, military 4, 5, 38, 39–40, 43, 278
and Assassins 248
and defence of pilgrims 43, 44, 46, 50
in Holy Land 38, 39–40, 43
resources 65
in Spain 49–53
Spanish 50

see also Brethren of the Sword; Hospitallers; Templars; Teutonic Knights
Østerlars (Bornholm), round-tower church 94, *95*
Ostheim (Germany), fortified church 142
Ottoman Turks: in Causacus 191, 198
in Central Europe 137, 141, 142, 144–7
in Eastern Europe 6, 131–5, 169
in Mediterranean 121, 123, 124–5, 126, 149, 153
Outremer: conventual castles 40–3
fortified churches 43–7
Oviedo (Spain), cathedral and palace 51
Oxwich (Wales), tower church 84
Oystermouth (Wales), tower church 84

Pachomius 7
Paczków (Poland), fortified church 144–5
Padmasambhava (Rimpoche) 251, 252
Paes, Fr Pero 210, 214
Pagnotta, P. 279
pagodas 267, 273
palaces: fortified 6, 237–8, 261–3, 265
and fortress monasteries 51–2
Pale (Ireland), tower-houses 33–6
Palermo (Sicily), fortified cathedral 151
Palestine: Crusader castles 39–41
monasteries 1, 7, 14–18, *17*, 21, 232, 276
St Sabas monastery 16, 22
palisades, wooden 58, 151, 159–60, 166
Pankhurst, S. 210 n.14, 211, 212–14
Papal States 152, 155–6
Paraguay: reducciones 185–8, 189
San Ignacio Mini mission 187–8
Trinidad mission 188
parapets: arcaded 84–5
battlemented 29, 35, 68, 86, 100, 160, 161, 184, 211, 230
loopholed 77, 84
machicolated 114, 115, 118–19, 161, 163
wooden 166
see also crenellation
Paro dzong (Bhutan) *269*, 274
Parry, J. H. 170 n.3
Patmos, monastery of St John 125
Paul III, Pope 154, 156
Pean, R 240
Pechory (Russia), Monastery of the Caves 162
Pecos (New Mexico), Nuestra Señora de los Angeles church 178
Pelkhor Chode monastery (Tibet) 253, 255, 257, 258–60, *259*
Pembroke, Richard de Clare, earl 28
Pembrokeshire, fortified palaces 6
Pepper, S. 154
Pereira, Don Álvaro 52
Perry, R. 184, 185
Perugia (Italy), fortress 156
Peter the Ceremonious of Catalonia 52
Peter the Great 160, 162, 164
Petosse (France), souterrain 110
Petrie, G. 25 n.3, 26
Petru Rares, Prince 130
Pfalzgrafenstein (Germany) 139, *140*
Pharos lighhouse 232
Philip I of Spain 189
Philip II of Spain 52
Philip of Montfort 249
Philippines 189–90
pilgrimage sites 25, 152
and caravanserais 236–7, 276
fortified 18–21, 22, 38, 43–4, 46–7, 114, 118, 144, 233
and military orders 43, 44, 46, 50
and Reconquest of Spain 48
Russia 163
Tibetan 258
piracy: on American coast 184
in Baltic 88–9, 91, 92
in Mediterranean 99, 121, 123, 124–5, 135, 149, 156
Pius II, Pope 156
Pius III, Pope 153
Pius IV, Pope 155
Plant, Ruth 207, 214
plaster: clay 254–5
lime 14
platform, fighting: Bulgaria 134
England 70
France 56, 99, 100, 108, 111, 113, 114
Greece 124
Ireland 35
Italy 156
Palestine 44
Portugal 55
Scandinavia 94
Scotland 79
Plettenburg, Wolter von 60
Plomion (France), fortified church 112
Poblet palace and monastery (Catalonia) 51–2
Poland: conventual castles 40, 43, 60–3
fortified monasteries 143–5
Portbail (Normandy), Saint-Nicholas-de-Pierrepont chapel 110–11
portcullises 64, 68, 77, 107–8, 131, 160, 216
Portugal 49
conventual castles 41 n.6, 52
and Ethiopia 206–9
independence 52
reconquest 47
posas, in Mexico 173, 184
Potala Palace (Tibet) 6, 251, 254, 256, 261–3, *262*, 277
Prejmer (Transylvania), fortified church 1, 131–3, *132*
presidios, Texas 179–83, 276
Pringle, 43
Prisces (France), fortified church 111–12
Procopius, *De Aedificiis* 15
Prudhoe Castle (Northumberland) 77
Prussia, conventual castles 43, 60–3
pueblos 175–8
Punakha dzong (Bhutan) 271–3, *272*, 275
Putna (Romania), painted monastery 129
Putuozongsheng monastery (China) 266–7

Qadmus castle (Syria) 245
Qalb Lozeh church (Syria) 20
qanat (water channel) 244
Qasr al-Banat church (Syria) 20
Qasr al-Hair East (Syria) 216, *217*
Qasr al-Hair West (Syria) 216
qasr (tower): in Coptic monasteries 10, *11*, 12–14, 21, 232
in Palestine 8, *9*, 15, 232
Qumran, Essene settlement 8–10, *9*

Rabat (Morocco): Chella necropolis 234
minaret 233
Ralph of Shrewsbury 87
ramadas 184
Ramla (Palestine), White Mosque 232 n.6

Ramon Berenguer IV of Catalonia 51
raths 23, 27
Raymond II of Tripoli 42, 248
Raymond of Antioch 248
Raymond of Toulouse 55
Reconquest of Iberian peninsula 39, 41 n.4, 47–58, 170
Red monastery of St Bishoi, Egypt *11*, 12, *13*
reducciones, Paraguay 185–8
refuge rooms: England 70
France 99
Ireland 33
Scandinavia 92
see also salle de refuge
Resafeh (Syra), Sergiopolis 18–20, *19*
Revel, Hugh 65 n.55
Rey, C. F. 99, 206–7
Rhodes, and Hospitallers 43, 125, 136
Rhossili, fortified church *106*
Ribat-i-Malik (Central Asia) 238
ribats 5, 99, *217*, 223–5, *224*
architecture and typography 221–3
as caravanserais 235–6
influence 151, 182–3, 238
and Murabitun 3, 219–20, 222, 225
origins 216–18
role 218, 220–1, 227, 276, *277*
towers 27–8, 221, 222
see also Monastir; Sousse
Richard I ('Lionheart') 248
Rila (Bulgaria), fortified monastery 133–4
Riley-Smith, J. 47 n.19
Rimpoche (Padmasambhava) 251, 252
Rocca Pia (Italy) 156
Roger II of Sicily 150
Rohrbach (Austria), fortified church 147
Roma, Guiseppe 149
Romania: fortified churches of Transylvania 1, 6, 130–3, 136, 143, 276, 279
painted monasteries of Bukovnia 6, 129–30
Romans, monastery of, Wadi al-Natrun 12, *13*
Rome: Borgo 152–4, 155, 157
Castell Sant'Angelo 152, 153, 154–5, 157
Civita Castellana 156
Civitavecchia 156
Nettuno fortress 156
St Peter's basilica 153
and Vatican defences 152–4, 157, 277
Ronciglione (Italy), fortress 156
roofs: flat 177–8, 192, 209, 211
pepper-pot 114, 142
pyramidal 142, 143
saddle-pack 93, 96, 110, 139, 142
tent 163, 168
Rudelle (France), fortified church 46 n.15, 108, 278
Rudofsky, Bernard 1
Runciman, S. 245
Russia 158–69
borderland monasteries 165–7
defenses of Moscow 159–60, 162–5, 169
fortress monasteries 158–68, 276, 277, 278
gate-churches 161–2, 163, 164
Golden Ring monasteries 162–5, 169
and Novodevichy convent 160–1
Ryssby (Kalmar), fortified church 93

saddle-pack roof 93, 96, 110, 139, 142
Saffron Monastery (Turkey) 196
Safita (Syria) *see* Chastel Blanc
Sagrajas, Battle (1086) 48
Sahagun abbey 47 n.19
Saint-Algis (France), fortified church 112
St Andrews (Fife), cathedral 79
Saint-Avit-Sénieur (France), fortified church 115, *116*
St Antony's monastery (Egypt) *11*, 21, 276
St Bishoi monastery, Wadi al-Natrun *11*, 12, *13*
Saint Brieuc (Brittany), fortified cathedral 98
St Catherine's monastery, Sinai *11*, 16–18, *17*
St Davids, bishop's palace 84
St George of Goms monastery (Turkey) 196
St Georges (France), fortified church *106*
Saint-Honorat-de-Lérins (France), fortified monastery 99, 100
St Jeremiah monastery (Saqqara) 22
Saint-Juvin (France), fortified church 108–9, 278
St Kevin monastery (Ireland) 24–5
St Makarius monastery, Wadi al-Natrun 12, *13*, 14
Saint-Martin-de-Jeantes (France), fortified church 111
St Mary's Abbey (York) 79
St Michael at Garaway (Hereford) 85
St Molaise monastery, Inishmurray 23
Saint-Pastour (France), bastide church 103
St Patrick's Rock (Co. Tipperary) 29–30
St Paul monastery, Egypt *11*, 21
Saint-Pierrevillers church (France) 5, *72*, 107, 112
Saint-Pons-de-Thonières (France), fortified abbey 100, 174, 238
St Radegoude (France), fortified church 105
St Sabas monastery (Palestine) 16, 22
St Simeon monastery (Aswan) *9*, 10–12, *11*, 21–2
St Simeon Stylites monastery (Syria) 18, *19*, 20
Saint-Victor abbey (Marseilles) 100
Sainte-Léocardie (France), fortified church 100 n.11
Saintes-Maries-de-la-Mer (France), fortified church 114
Sakya (Tibet), Lhakhang Chenmo monastery 257
Saladin 12 n.5, 44, 46–7, 231, 234–5, 248
Salch, Charles-Laurent 97, 98 n.7, 109 n.22
salle de defence 105, 107–8, 111, 113, 115; *see also* defence rooms
salle de refuge105, 111–12, 113, 114–15; *see also* refuge rooms; souterrains
Salter, M. 84
Samarra (Iraq), mosque 229, 237
Samye (Tibet), monastery 251, 252, 255, 256, 258
San Nazzaro Sesia (Italy), fortified monastery 149
San Nicola island (Italy), fortified monastery 149
Sancho Ramírez, king of Aragon 41 n.4, 48–9, 177, 278
Sanford, T. E. 172 n.6, 174 n.11, 175 n.14

Sangallo, Antonio the Elder 154, 156
Sangallo, Antonio the Younger 153–4, 156
Sangallo, Giuliano 153–4, 156
Santiago de Compostela 48, 50
  fortress cathedral 53
Santiago order 50
Saracens 99, 135, 150
Saskya monastery (Tibet) 257
Sauveterre-d'Aveyron (France), bastide church 103
Saxons, Rhenish, and fortress churches 130–3, 276, 279
Scandinavia 88–96
  fortified church towers 89–91
  fortified round-tower churches 6, 88, *92*, 93–6, *95*
  parish forts 91–3, *92*
Scotland, Marches 77–80
'scourge of God' 104
Seintein (France), fortified church 108
Seljuk Turks in Caucasus 191
  and Crusaders 39, 47
  and Ismailis 237, 239, 240–2, 243–5, 247–8, 249
  and Sufism 233
Senonville (France), fortified church 98 n.4
Sera monastery (Tibet) 253, 257, 265
Serbia, fortified monasteries 134–5
Sergiopolis (Syria) 18–20, *19*
Sfax (Tunisia), msoque 230
Shabdrung (Ngawang Namgyal) 6, 254, 267–70, 271, 273, 276–7
Shenudeh I, Patriarch 14, 21
Shigatse (Tibet) 257
Shiites, Ismaili 3, 231, 239–43
Shir Kuh (Iran), castle 244
Siberia: Malyy Anyuy fortress 166
  St Michael the Archangel monastery 166
  St Nicholas Korelsky monastery 165
 wooden architecture 159, 162, 167–8
Sicily, **Cefalù cathedral** 150–1
Siena (Italy), town defences 150
Sienkiewicz, Henry 144 n.12
Sikkim, and Tibetan Buddhism 266
Simon de Montfort 55
Simtokha dzong (Bhutan) 6, *269*, 270–1
Sinan (Rashid al-Din) 245–7, 248–9
Sinclair, 280
Singe Namgal, king of Ladakh 265
Sixtus IV, Pope 156
Sketis monasteries 10, 12–14, *13*
sky monasteries *see* Meteora
Smail, R. C. 246
Smith, D. 159 n.3, 167 n.25
Söderakra (Kalmar), fortified church 93
Sofia, tsarina 160–1
Soissonais (France), fortified churches 112–13
Solovetsky (Russia): fortified cathedral 165
  island monastery 165–6
Songtsen Gampo of Tibet 250–1
Sousse (Tunisia): minaret 232
  mosque 230
  Nador tower 28, 221, 222, 232
  ribat 27–8, *217*, 221–3, 238, 278
souterrains (France) 109–10
South America, missions 185–8
Spain: Christian Reconquest 39, 41 n.4, 47–58, 170, 220, 276
  Guardamar del Segura ribat 218, 226
  and New World 170–9, 183–5, 276
  and Philippines 189–90
  and ribats 225–6
  and settler-soldiers 47
Spiteri, S. C. 41, 43 n.12, 136
Spoleto (Italy), fortress 155
Stakna monastery (Ladakh) 265
Stalley, R. 37
stave churches 91, 92
Steinbach (Germany), fortified church 143
Stierlin, H. 232 n.5
stockades, wooden 159–60, 163, 166, 167–8, 181
Stoye, J. 146 n.17
Strakonice (Czech Republic), conventual castle 146
strongrooms: France 99
  Ireland 33
  Scotland 78
Sucevita (Romania), painted monastery 129, 130
Sufism 233
Sumela monastery (Turkey) 196
Sunni Islam 239–40, 244–5, 247–8, 249
Surville (France), fortified church *106*, 110
Susneyos, Emperor of Ethiopia 209–10
Suzdal (Russia): convent of the Intercession 165
  monastery of St Basil 164
  monastery of the Saviour and St Euthimius 164–5
Sveti-Cxoveli cathedral (Georgia) 198
Swansea castle 84
Sweetheart Abbey (Scotland) 78–9
Synaxarium 10
Syria: Arab forts 226
  and Assassins 244–9
  Crusader castles 41–3
  pilgrimage sites 18–21, 22
  Roman frontier forts 216
Syrians, monastery of, Wadi al-Natrun 12, *13*

ta dzongs 271, 274
Taghmon church (co. Westermeath), tower-house 34–6
Taifa states 47–8, 220
talus 35, 56, 81, 125, 149
Tancred, Prince of Antioch 46, 247
Tashichoe dzong (Bhutan) 271 n.29, *272*
Tashilhunpo monastery (Tibet) 253
  Jamkhand Chenmo temple 256
Tatars: Crimean 6, 129, 131, 164, 165, 169
  Kazan 158, 159, 165, 169
Tatev (Armenia), St Peter and St Paul monastery 192–4, *193*
Tawang (India), monastery 266
Templars: and Assassins 248
  castles 40, 43
  fortified churches 44–6, *45*, 85
  in Iberian peninsula 49–51, 52
  origins 39–40
  preceptories 36
temple, in Tibetan monastery 255, 256, 258, 273
Teutonic Knights 40, 43, 58, 89, 91
  and conventual castles 60–3, 277–8
  and papacy 63–4
  and Russia 158
Texas: Concepción 182
  Espada 182
  missions 6, 179–83
  Nuestra Señora de Loreto presidio 180
  Nuestra Señora del Espíritu Santo del Zúñiga 180

Nuestra Señora del Refugio 181
Nuestra Señora del Rosario 180–1
San Antonio de Valero missions *171*, 181–2
San José y San Miguel de Aguayo 182
San Juan 182
Santa Cruz de San Saba 182
Theocharides, P. 124
Thirty Years War, and fortification of churches 112, 145
Thiske monastery (India) 255
Thornton Abbey (Lincs.), gatehouse 85–6
Tibet: **Potala Palace** 6, 251, 254, 256, 261–3, *262*, 277
architecture 251, 254–6, 257, 263–4
and Bhutan 268, 275
culture 250
as theocracy 253, 256
Tibetan Buddhism 1, 5, 6, 250–64
Drukpa lineage 265, 267–8, 270, 275
fighting monks 257
Gelukpa (Yellow Hat) 176, 252–4, 255, 256, 258, 260–1, 266
'Great Fifth' 253, 260–1, 266
Kagyupa 252
monasteries 250, 253–4, 255–7, 276
Nyingmapa (Red Hat) sect 252–4, 260, 266
Sakyapa 252, 255, 256, 257
sects 250, 252–3, 268, 276
Tigré: Enda Medhane Alem church *213*
rock-hewn churches 207
Tikse monastery (Ladakh) 264–5
Tilos (Aegean), monastery of St Panteleimon 125–6
Tinmal (Morocco), mosque 234
Tivoli (Italy), Rocca Pia 156
Tlemcen (Algeria), minaret 233
Toledo, Christian reconquest 39, 47–8, 49
Toplou monastery (Crete) 126 n.9
Tortosa (Syria), cathedral church 44
Toulouse, fortified cathedral 56 n.37
towers: artillery 60, 153–5, 156, 157, 162, 180
baluarte 190
battered 25, 27, 29, 33–5, 81
buttress 50, 56, 57, 222, 228
Coptic monasteries 10, 12–14, 232
corner *see* corner towers
crossing towers 29, 30, 32–3, 53
Danish round-tower churches 6, 88, *92*, 93–6, *95*
drum 57, 108, 112, 149, 192, 195, 201, 263
freestanding, Gotland 89–91, *92*
in French fortified churches 101–3, 107–8, 114
Irish round towers 3, 5, 24–8, 29, 30, 34, 36
latrine 62, 63, 119–20
monasteries 16
octagonal 163, 165
Palestinian monasteries 15
pele towers 5, 68, 70–3, *71*, *77*, 86
pepper-pot roof 114, 142
polygonal 114
pyramidal roof 142, 143
at Qumran 8
rectangular 34–5, 108, 134, 160, 163, 164, 211
square 20, 29, 52–3, 101, 111, 115, 156, 232
staircase 30, 34–5, 78, 84, 85, 113, 114, 139, 185
Swedish round-tower churches 93, 94
Syrian churches 20–1
tower-house 6, 29–30, 31–2, 33–6, 68, 78, 80
western 33–5, 60, 68, 77, 81–4, *82*, *83*, 85, 142
see also corner towers; interval towers
towns, walled, Islamic 227, 234–5
Trabzon (Turkey), Sumela monastery 196
Transylvania, fortified churches 1, 6, 130–3, 136, 143, 276, 277, 279
Traschicho dzong (Bhutan) 275
Trinity church (Ireland), round tower 25
Triolet, J, and Triolet, L. 109 n.22
Trisong Detsan of Tibet 251, 252
Trondes (France), fortified church 98 n.4
Trongsa dzong (Bhutan) 5, *269*, 271, 274
Tunis, mosque 230
Tunisia: fortified mosques 150
ribats 218, *224*
see also Monastir; Sousse
Turkey: Armenian monasteries 196
caravanserais 236
Tuulse, A. 58 n.44, 61
Tynemouth priory (Northumberland), gatehouse 86

Ukhaidir (Iraq), fortified palace 237–8
Ullaikah (Syria), Assassin castle 247, 249
Urban II, Pope 39, 48
Urban VIII, Pope 154
Ursino (Sicily), castle 151
Urvan (France), fortified church 115
USA: fortress monasteries of New Spain 170–5, *171*
missions and presidios of California 183, 276
missions of Spanish New Mexico 175–9, 276
missions of Texas 6, *171*, 179–83
Ushguli (Georgia) 205
Ussher, James 35
utse (Tibetan temple) 255, 256, 258, 271, 273

Vardzia (Georgia), cave-city 198–9
Vasily III, Grand Prince 164
Vatican, fortification 152–4, 157, 277
vault: barrel, Crusader castles 44, Egypt 12, 14, England 68, 70, 77, Georgia 201, Germany 143, in Iberian peninsula 51, 55, Iraq 237, Ireland 35, 36, Mexico 173, 184, 185, Russia 160, Scandinavia 91–2, 94, Tunisia 222
groin 44
muqamas 236
ribbed 29, 33, 42, 50, 73, 107, 109, 111, 151, 173
spring 64
star 62
tunnel 70, 80
Vickleby (Öland), fortified church 91
Vigneux-Hoquet (France), church 97
Vikings: in France 98–9
in Ireland 24, 26
ville-ribats 218, 219, 223–5
Viollet-le-Duc, Eugène Emmanuel 119
Visby (Gotland) 89
Viterbo (Italy), castle 156
Vladimir of Kiev 158
Vok, Peter 145

Voronet (Romania), painted monastery 129
Voxtorp (Kalmar), round-tower church 93
Vyssí Brod (Czech Republic), fortified monastery 145

Wächtersbach (Germany), fortified church 143
Wadi al-Natrun monasteries *11*, 12–14, *13*, 21
  Romans 12, *13*
  St Bishoi 12, *13*
  St Makarius 12, *13*, 14
  Syrians 12, *13*
Wales: arcaded parapets 84–5
  fortified churches 80–1
  western towers 81–4, *82*, *83*, 85
wall walks: Armenia 192, 195
  Egypt 10, 14
  Germany 142–3
  Ireland 23–4, 29–30
  Poland 62
  Portugal 53
  Romania 130
  Russia 160, 161, 163
  Scandinavia 94
  Syria 20
  Tunisia 222, 232
walls: Armenia 192, 194–5
  battered 25, 254, 273
  Bhutan 273
  concentric 100
  Coptic monasteries 10, 12, 14, 16, 21
  Danish churches 94–6
  double 50, 62, 77, 141
  Ethiopia 212, 213
  France 99
  Georgia 199
  Greece 123, 124
  Ireland 6, 23–5
  Italy 149, 152–4
  Mexico 184
  mosques 228–9
  Palestine 16, 20, 22
  Romania 129–30
  Russia 160, 161, 165–7, 168
  Tibet 254–5, 256, 257, 258, 260
  Tunisia 230
  see also cemeteries; curtain walls
Wangdue Phodrang dzong (Bhutan) *272*, 275
warehouses, in fortified churches 88, 93, 94, 96
Wars of Religion: and episcopal palaces 137
  and fortified churches 98, 113, 142
  and fortified monasteries 118
watchtowers: Ireland 27
  Palestine 16
  Poland 64
  Scandinavia 94
water supply *see* aqueducts; cisterns; wells
Weber, D. J. 180 n.29
Weismüller, A. A. 50 n.26
Weissenkirchen (Austria), fortified church 147
wells: churches 103, 109, 142
  monasteries 12, 30, 192
  ribats 222
  towns 154, 160
White, John Claude 2, 271, 273, 274
Whitehill, W. M. 48 n.22
Wienberg, J. 88 n.2
Wiener Neustadt (Austria), fortified monastery 141–2
Wilbrand of Oldenburg 246
Willey, Peter 242, 243–4
William of Tyre 247
windows
  in fortified churches 29, 107
  in fortified monasteries 12
Wright, N. A. R. 97, 98 n.5, 104 n.19, 279

Xumifushou monastery (China) 266

Yasid ibn-Hatim al-Muhallabi 221
yatts (doorways) 73
Younghusband, Col. Francis 258, 274 n.33
Yucatan peninsula 183–5, 189
  Dzemul church 185
  Izamal mission 184
  Mani mission 184
  Sacalum mission 185
  San Bernardino de Sisal mission 184
  San Francisco de Mérida mission 184–5
  Santa Elena mission 185
  Uayma church 185
Yumbu Lagang (Tibet), fortress 252
Yusuf ibn Tashfin, Caliph 48, 220

Zagorsk (Russia), **Holy Trinity and St Sergius monastery** 6, 166 n.24, 173–4
Zangpo, Ringchen 251
Zeno, Emperor 18
Ziyadat Allah 229