The Egyptian WORLD

Edited by Toby Wilkinson

THE EGYPTIAN WORLD

The Nile valley produced one of the most sophisticated, and certainly the longest-lived, civilizations of the ancient world. Yet remarkably few books have looked at the broad topics of ancient Egyptian culture as expressed down the centuries. *The Egyptian World* presents an authoritative, up-to-date, single-volume work on Egyptian civilization, organized along thematic lines. Readers will gain a broader understanding of ancient Egyptian society in all its complexity without having to contest with the rigid chronological divisions often imposed on pharaonic history.

The volume comprises 32 original contributions written by leading specialists from the UK, USA, Canada, Australia, New Zealand, Austria, Germany and Egypt. Each chapter aims to give a broad overview of its particular topic, while also reflecting its author's specialist research interests. With previously unpublished drawings and photographs, the volume as a whole presents a digest of current research trends in Egyptology as well as a unique examination of the Egyptian world. Throughout, the contributors have drawn on the latest fieldwork and analysis to provide a fresh perspective on an ancient culture.

Toby Wilkinson is a Fellow of Clare College, Cambridge, and an Honorary Research Fellow in the Department of Archaeology, University of Durham. His publications include *Early Dynastic Egypt*, *The Thames and Hudson Dictionary of Ancient Egypt*, and *Lives of the Ancient Egyptians*.

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THE EGYPTIAN WORLD

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Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2007
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
270 Madison Ave, New York, NY 10016

Routledge is an imprint of the Taylor & Francis Group, an informa business

Typeset in Garamond by
Florence Production Ltd, Stoodleigh, Devon
Printed and bound in Great Britain by
The Cromwell Press, Trowbridge, Wiltshire

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data
A catalog record for this book has been requested

ISBN 13: 978–0–415–42726–5

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ANCIENT EGYPTIAN CHRONOLOGY AND KING LIST

PREDYNASTIC PERIOD *c.*5000–*c.*2950 BC

Badarian *c.*5000–*c.*4000
Nagada I *c.*4000–*c.*3600
Nagada II *c.*3600–*c.*3200
Nagada III *c.*3200–*c.*2950

'Dynasty 0' *c.*3100–*c.*2950

Kings whose existence is uncertain:

Iri-Hor (?)
Ka (?)
Scorpion (?)

EARLY DYNASTIC PERIOD *c.*2950–*c.*2575 BC

1st Dynasty *c.*2950–*c.*2775

Narmer
Aha
Djer
Djet
Den
Anedjib
Semerkhet
Qaa

2nd Dynasty *c.*2750–*c.*2650

Hetepsekhemwy
Nebra

Ninetjer
Weneg
Sened
Peribsen
Khasekhem/Khasekhemwy

3rd Dynasty *c.*2650–*c.*2575

(Some scholars place the 3rd Dynasty in the Old Kingdom)

Netjerikhet (Djoser)
Sekhemkhet
Khaba
Sanakht
Huni

OLD KINGDOM *c.*2575–*c.*2125 BC

4th Dynasty *c.*2575–*c.*2450

Sneferu
Khufu
Djedefra
Khafra
Menkaura
Shepseskaf

5th Dynasty *c.*2450–*c.*2325

Userkaf
Sahura
Neferirkara Kakai
Shepseskara Izi
Neferefra
Niuserre Ini
Menkauhor
Djedkara Isesi
Unas

6th Dynasty *c.*2325–*c.*2175

Teti
Userkara (?)
Pepi I
Merenra
Pepi II

7th/8th Dynasty *c.*2175–*c.*2125

Numerous ephemeral kings

FIRST INTERMEDIATE PERIOD
*c.*2125–*c.*2010 BC

9th/10th Dynasty *c.*2125–*c.*1975

Several kings, including:

Khety I
Khety II
Merikara
Ity

11th Dynasty *c.*2080–*c.*2010

Intef I
Intef II
Intef III

MIDDLE KINGDOM *c.*2010–*c.*1630 BC

11th Dynasty (post-reunification) *c.*2010–*c.*1938

Mentuhotep II *c.*2010–*c.*1960
Mentuhotep III *c.*1960–*c.*1948
Mentuhotep IV *c.*1948–*c.*1938

12th Dynasty *c.*1938–*c.*1755

Amenemhat I *c.*1938–*c.*1908
Senusret I *c.*1918–*c.*1875
Amenemhat II *c.*1876–*c.*1842
Senusret II *c.*1842–*c.*1837
Senusret III *c.*1836–*c.*1818
Amenemhat III *c.*1818–*c.*1770
Amenemhat IV *c.*1770–*c.*1760
Sobekneferu *c.*1760–*c.*1755

13th Dynasty *c.*1755–*c.*1630

Seventy kings, including (order uncertain):

Sobekhotep I
Amenemhat V
Qemau
Sihornedjheritef

Sobekhotep II
Awibra Hor
Amenemhat VII
Ugaf
Khendjer
Sobekhotep III
Neferhotep I
Sihathor
Sobekhotep IV
Sobekhotep V
Merneferra Ay (I)
Montuemsaf
Dedumose
Neferhotep II

SECOND INTERMEDIATE PERIOD
*c.*1630–*c.*1539 BC

14th Dynasty

Numerous ephemeral kings

15th Dynasty *c.*1630–*c.*1520

Six kings, including:

Salitis
Sheshi
Khyan
Apepi *c.*1570–*c.*1530
Khamudi *c.*1530–*c.*1520

16th Dynasty

Numerous ephemeral kings

17th Dynasty *c.*1630–*c.*1539

Numerous kings, probably ending:

Intef V
Intef VI
Intef VII
Sobekemsaf II
Senakhtenra (Taa I?)
Seqenenra Taa II
Kamose *c.*1541–*c.*1539

NEW KINGDOM *c.*1539–*c.*1069 BC

18th Dynasty *c.*1539–*c.*1292

Ahmose *c.*1539–*c.*1514
Amenhotep I *c.*1514–*c.*1493
Thutmose I *c.*1493–*c.*1481
Thutmose II *c.*1481–*c.*1479
Thutmose III *c.*1479–*c.*1425 and Hatshepsut *c.*1473–*c.*1458
Amenhotep II *c.*1426–*c.*1400
Thutmose IV *c.*1400–*c.*1390
Amenhotep III *c.*1390–*c.*1353
Amenhotep IV (Akhenaten) *c.*1353–*c.*1336
Smenkhkara *c.*1336–*c.*1332
Tutankhamun *c.*1332–*c.*1322
Ay (II) *c.*1322–*c.*1319
Horemheb *c.*1319–*c.*1292

19th Dynasty *c.*1292–*c.*1190

Ramesses I *c.*1292–*c.*1290
Seti I *c.*1290–*c.*1279
Ramesses II *c.*1279–*c.*1213
Merenptah *c.*1213–*c.*1204
Seti II *c.*1204–*c.*1198
Amenmesse *c.*1202–*c.*1200
Siptah *c.*1198–*c.*1193
Tawosret *c.*1198–*c.*1190

20th Dynasty *c.*1190–*c.*1069

Sethnakht *c.*1190–*c.*1187
Ramesses III *c.*1187–*c.*1156
Ramesses IV *c.*1156–*c.*1150
Ramesses V *c.*1150–*c.*1145
Ramesses VI *c.*1145–*c.*1137
Ramesses VII *c.*1137–*c.*1129
Ramesses VIII *c.*1129–*c.*1126
Ramesses IX *c.*1126–*c.*1108
Ramesses X *c.*1108–*c.*1099
Ramesses XI *c.*1099–*c.*1069

THIRD INTERMEDIATE PERIOD *c.*1069–664 BC

21st Dynasty *c.*1069–*c.*945

Smendes *c.*1069–*c.*1045
Amenemnisu *c.*1045–*c.*1040

Psusennes I *c.*1040–*c.*985
Amenemope *c.*985–*c.*975
Osochor (Osorkon 'the elder') *c.*975–*c.*970
Siamun *c.*970–*c.*950
Psusennes II *c.*950–*c.*945

22nd Dynasty *c.*945–*c.*715

Shoshenq I *c.*945–*c.*925
Osorkon I *c.*925–*c.*890 and Shoshenq II *c.*890
Takelot I *c.*890–*c.*875
Osorkon II *c.*875–*c.*835
Shoshenq III *c.*835–*c.*795
Shoshenq IV *c.*795–*c.*785
Pimay *c.*785–*c.*775
Shoshenq V *c.*775–*c.*735
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23rd Dynasty *c.*830–*c.*715

Takelot II *c.*840–*c.*815
Pedubast I *c.*825–*c.*800 and Iuput I *c.*800
Shoshenq VI *c.*800–*c.*780
Osorkon III *c.*780–*c.*750
Takelot III *c.*750–*c.*735
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Peftjauawybast *c.*735–*c.*725
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24th Dynasty *c.*730–*c.*715

Tefnakht *c.*730–*c.*720
Bakenrenef *c.*720–*c.*715

25th (Kushite) Dynasty *c.*800–657

(Some scholars place the 25th Dynasty in the Late Period)

Alara *c.*800–*c.*770
Kashta *c.*770–*c.*747
Piye *c.*747–*c.*715
Shabaqo *c.*715–*c.*702
Shabitqo *c.*702–*c.*690
Taharqo 690–664
Tanutamani 664–657

LATE PERIOD 664–332 BC

26th Dynasty/Saite Period 664–525

Nekau I 672–664
Psamtik I 664–610
Nekau II 610–595
Psamtik II 595–589
Apries 589–570
Amasis 570–526
Psamtik III 526–525

27th Dynasty (First Persian Period) 525–404

Cambyses 525–522
Darius I 521–486
Xerxes 486–466
Artaxerxes I 465–424
Darius II 424–404

28th Dynasty 404–399

Amyrtaeos 404–399

29th Dynasty 399–380

Nepherites I 399–393
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Teos 365–360
Nectanebo II 360–343

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Artaxerxes III 343–338
Arses 338–336
Darius III 335–332

MACEDONIAN PERIOD 332–309 BC

Alexander III (the Great) 332–323
Philip Arrhidaeus 323–317
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PTOLEMAIC PERIOD 305–30

Ptolemy I 305–282
Ptolemy II 285–246
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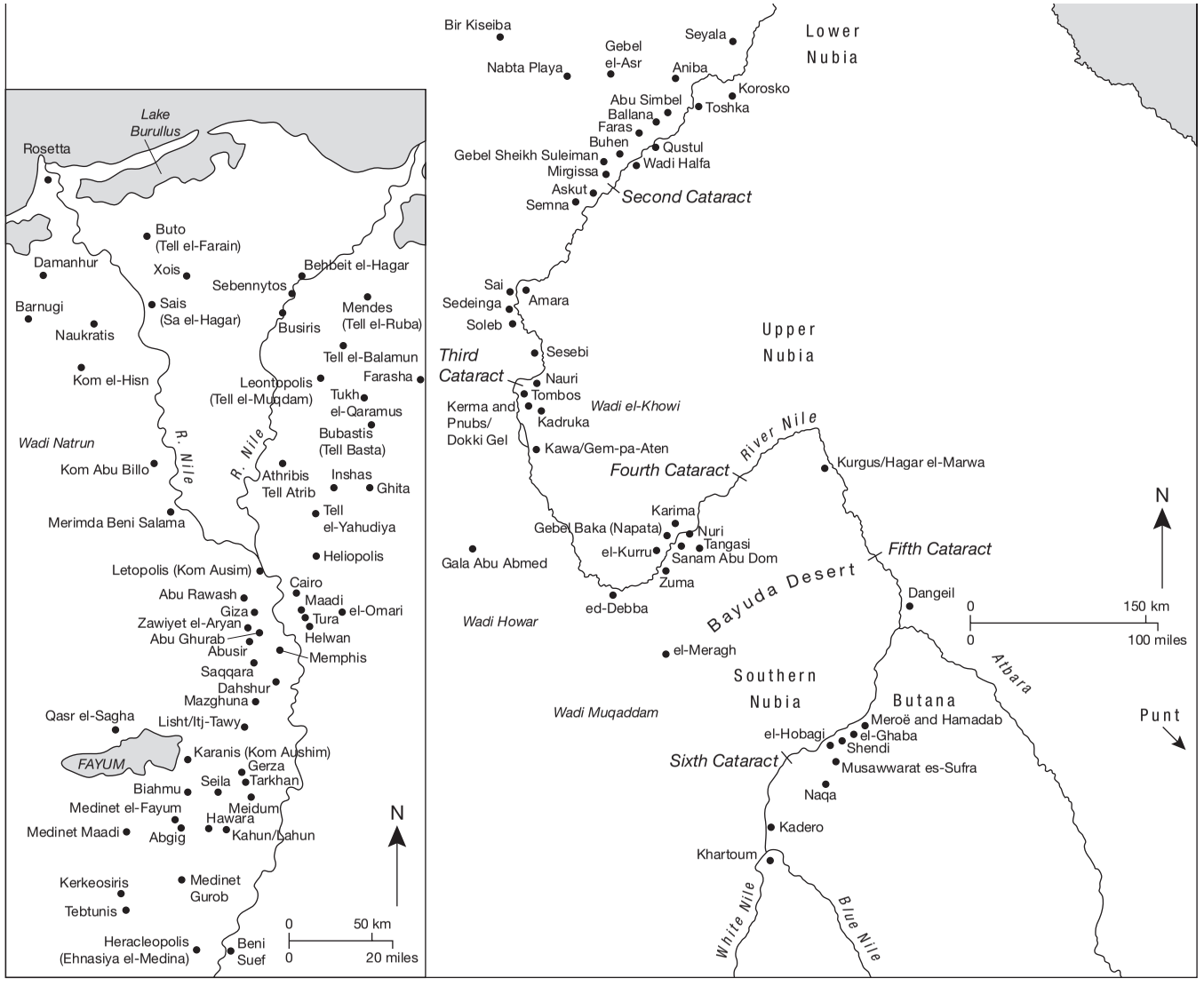
Mediterranean Sea
Zawiyet Umm el-Rakham
Mersa Matruh
Herakleion
Canopus
Alexandria
Buto
Sais
Lake Mareotis
Lake Manzala
Kom Tennis
Gaza
Tanis
Pelusium
Tell Ibrahim Awad
Tell Belim
Minshat Abu Omar
Tell el-Dab'a/Avaris and Ezbet Rushdi
Dafenneh
Qantir/Per-Ramesses
Sile
Tell el-Hebua
Kafr Hassan
Tell el-Maskhuta
Dawood
Tell el-Sahaba
Cairo
Tell Kua
Wadi Tumilat
Birket Qarun/
Lake Fayum
Libyan Desert
SIWA OASIS
Bahr Yusuf
Deshasha
el-Hiba
Oxyrhynchus
BAHARIYA OASIS
Minya
Zawiyet el-Amwat
Beni Suef
Hermopolis (el-Ashmunein)
Speos Artemidos
Tuna el-Gebel
Antinoöpolis
Dairut
el-Bersha
Meir
Cusae
Hatnub
Asyut
Amarna
Deir Rifeh
FARAFRA OASIS
el-Badari
Hemamia
Qau
Beit Khallaf
Akhmim
el-Mahasna
Naga el-Deir
Thinis
Nag Hammadi
Abydos
Dendera
Gebel el-Arak
Coptos (Qift)
Wadi Hammamat
Abu Ziyar and Tundaba
Qus
Balat/Ayn Asil
DAKHLA OASIS
Diospolis Parva
Medamud
Deir el-Ballas
Luxor and Karnak
Hibis
KHARGA OASIS
Naqada/Ombos
Tod
Western Thebes
el-Moalla
Wadi Miya
Armant
Elkab
Wadi Barramiya
Esna
Gebelein
Hierakonpolis
Adaima
Edfu
Gebel el-Silsila
Wadi Shatt er-Rigal
Kom Ombo
Qubbet el-Hawa
Abu Ballas
Elephantine
Awan
Wadi el-Hudi
First Cataract
Sehel
KURKUR OASIS
Philae
Beit el-Wali
DUNQUL OASIS
Kalabsha
Rod el-Air
Serabit el-Khadim
Wadi Maghara
Sinai
Gebel Zeit
Mons Porphyrites
Mons Claudianus
Red Sea
Berenike


Lake Burullus
Rosetta
Buto (Tell el-Farain)
Damanhur
Xois
Behbeit el-Hagar
Sebennytos
Barnugi
Sais (Sa el-Hagar)
Mendes (Tell el-Ruba)
Busiris
Naukratis
Tell el-Balamun
Kom el-Hisn
Leontopolis (Tell el-Muqdam)
Farasha
Tukh el-Qaramus
Bubastis (Tell Basta)
Wadi Natrun
R. Nile
Kom Abu Billo
Athribis
Tell Atrib
Inshas
Ghita
Merimda Beni Salama
Tell el-Yahudiya
Heliopolis
Letopolis (Kom Ausim)
Cairo
Abu Rawash
Maadi
el-Omari
Giza
Tura
Zawiyet el-Aryan
Helwan
Abu Ghurab
Abusir
Memphis
Saqqara
Dahshur
Mazghuna
Qasr el-Sagha
Lisht/Itj-Tawy
FAYUM
Karanis (Kom Aushim)
Gerza
Seila
Tarkhan
Biahmu
Medinet el-Fayum
Meidum
Hawara
Medinet Maadi
Abgig
Kahun/Lahun
Kerkeosiris
Medinet Gurob
Tebtunis
Heracleopolis (Ehnasiya el-Medina)
Beni Suef
0 50 km
0 20 miles
N
Bir Kiseiba
Nabta Playa
Gebel el-Asr
Seyala
Aniba
Korosko
Abu Simbel
Toshka
Ballana
Faras
Buhen
Qustul
Gebel Sheikh Suleiman
Wadi Halfa
Mirgissa
Askut
Semna
Second Cataract
Lower Nubia
Sai
Amara
Sedeinga
Soleb
Sesebi
Third Cataract
Nauri
Tombos
Kerma and Pnubs/ Dokki Gel
Kadruka
Wadi el-Khowi
Upper Nubia
Kawa/Gem-pa-Aten
River Nile
Fourth Cataract
Kurgus/Hagar el-Marwa
Karima
Gebel Baka (Napata)
Nuri
el-Kurru
Tangasi
Sanam Abu Dom
Gala Abu Abmed
Zuma
ed-Debba
Fifth Cataract
Dangeil
Bayuda Desert
Wadi Howar
el-Meragh
0 150 km
0 100 miles
Atbara
Southern Nubia
Butana
Wadi Muqaddam
Meroë and Hamadab
el-Hobagi
el-Ghaba
Shendi
Sixth Cataract
Musawwarat es-Sufra
Naqa
Kadero
Khartoum
Punt
White Nile
Blue Nile
N

INTRODUCTION

Toby Wilkinson

This volume is intended to fill a gap in the extensive literature on ancient Egypt, by presenting an authoritative, up-to-date, single-volume work on pharaonic civilization, organized along thematic lines. By eschewing the usual chronological approach, the book has been able to concentrate instead on exploring each individual topic from a variety of angles. In this way, it is hoped that readers will gain a broader understanding of ancient Egyptian society in all its complexity, liberated from the rather artificial chronological divisions that we impose on pharaonic history.

The book comprises 32 original contributions written by leading specialists from the UK, USA, Canada, Australia, New Zealand, Austria, Germany and Egypt. Each chapter aims to give a broad overview of the subject under discussion, while also reflecting its author's particular research interests. The volume as a whole, therefore, presents a digest of current research trends in Egyptology as well as a unique examination of the Egyptian world. Throughout, the contributors have drawn on the latest fieldwork and analysis to provide fresh perspectives on an ancient culture. The chapters are arranged in seven thematic sections.

Part I, Environments, looks at the physical parameters within which ancient Egyptian civilization developed and operated. Egypt is often taken to be synonymous with the Nile Valley, and this most important geographical feature is, indeed, the subject of the opening chapter. However, the ancient Egyptians had to come to terms with, and learn to exploit, a range of distinctive environments. Each of these is examined in turn, from the broad, green expanses of the delta – with all the constraints its environment imposed on settlement and communication – to the harsher, arid conditions of the eastern and western deserts. New archaeological work is transforming our understanding of both regions, and the chapters take full account of recent discoveries. The oases of the Western Desert have, likewise, emerged from relative obscurity to a much more central place in our picture of the ancient Egyptian world. Finally, in this part, a chapter explores the urban environment; towns and cities formed the backdrop for the lives of large numbers of Egyptians, but this facet of their experience is often neglected because of its relative invisibility in the artistic record of temples and tombs.

Part II, Institutions, concentrates on the human groupings that characterized the structure of ancient Egyptian society. At the very apex was the king, supported by his close relatives. The monarchy exercised a tremendous influence on all areas of Egyptian culture, dictating the styles of art, architecture and literature that dominate in the surviving record. The nature of royal power and the true extent of its political influence are important questions that go to the heart of Egyptian civilization. Besides the king and the royal family, other self-interest groups emerge as key players in internal politics. The literate bureaucracy of central and regional government, the powerful priesthoods attached to the major state temples, and the military hierarchy: all were at some times supporters, at other times rivals, of royal power. By exploring the ambitions and internal strains of these institutions, the fabric of authority in ancient Egypt can be laid bare.

Part III, Economies, examines the patterns of economic activity in ancient Egypt. The productive sector was dominated by farming, and by the complex system of land tenure, taxation and redistribution that maintained the royal court and financed its lavish building projects. The organization of labour required for pyramid-building ranks as one of the ancient Egyptians' greatest achievements, yet the composition and control of the workforce is rarely studied. Other chapters focus on the technologies employed in craft production, and on the balance between state and private enterprise, an evolving debate within Egyptology.

Part IV, Societies, forms the core of the book, both spatially and conceptually, and represents one of its most distinctive aspects. There have been very few detailed discussions of ancient Egyptian social factors, even though topics such as gender, sexuality, ethnicity, morality and law lie at the heart of any society, ancient or modern. They circumscribed the lives of the ancient Egyptians as much as any geographical, political or economic factors, yet social influences are rarely given due consideration in studies of pharaonic civilization. Moreover, there is a tendency to regard ancient Egyptian culture as monolithic, rarely departing from the dictates of the royal court except during periods of political turmoil. Yet, throughout pharaonic history, local identities existed, even if they left weak traces in the official record. The chapters of Part IV comprise an original and ground-breaking series of insights into the fundamental nature of ancient Egyptian culture.

Part V, Ideologies, looks at ancient Egyptian beliefs in their many forms. The ideology of kingship permeated, indeed defined, state religion. Inextricably bound up with the myths about Egypt's creation and the daily rites of the major cults, it was one of the most important determinants of ancient Egyptian court culture. While the great temples are enduring symbols of pharaonic civilization, they have little to say about the spiritual beliefs and practices of ordinary people. Our knowledge of private religion is, instead, based upon the study of smaller artefacts and is constantly evolving. The belief in an afterlife, reflected in the elaborate preparations made for burial, was a universal concern for all levels of society, and – from pyramids to mummies – has provided many of the quintessential symbols of ancient Egypt.

Part VI, Aesthetics, focuses on the cultural expressions that have survived from ancient Egypt, and which continue to entrance the modern mind. The Egyptians' highly distinctive artistic and architectural legacies are, perhaps, more familiar than their literary output; yet all three areas provide important insights into ancient

Egyptian sensibilities and modes of self-expression. All three represent means by which the ancient Egyptians projected their consciousness onto the world around them.

Part VII, Interactions, which forms the final section of the book, examines the contacts between ancient Egypt and its neighbours, and the influence that pharaonic civilization had on the development of other cultures. Egypt stands at the meeting-point of Africa, Asia and Europe, and has always been a melting-pot of peoples, beliefs and cultural influences. Egypt's significance in the ancient world extended far beyond its own borders. Only by looking at ancient Egypt from without, as well as from within, can its distinctive achievements be placed in proper context. Of course, ancient Egypt continues to have an impact on today's world, and the final chapter will look at our enduring fascination for 'The Egyptian World'.

PART I

ENVIRONMENTS

CHAPTER ONE

THE NILE VALLEY

David Jeffreys

The geography of the Nile Valley is, of course, familiar to anyone with an interest in pharaonic civilization, but that familiarity tends perhaps to cloud our appreciation of its unusual and even unique qualities. Essentially a major river system passing through a hyper-arid desert (it has sometimes been described as a 'linear oasis'), the valley consists of the river itself, with an average width of about 500 metres, and a strip of arable alluvial soil either side, giving a flood plain width varying from three to 12 kilometres. The edges of the valley are of only seasonal potential use, and in times of low floods and during the dry season were used for occasional grazing or abandoned altogether.

The northern Nile Valley (from Khartoum to Cairo) is fed by three main tributary sources (the White Nile rising in Uganda, the Blue Nile flowing from Ethiopia, and the Atbara which joins the main course in Sudan, north of the confluence of the other two at Khartoum); its regime within Egypt is not conditioned by local precipitation (except for the Mediterranean coastal region) but by weather events thousands of kilometres to the south, where the monsoon rains fall over the Ethiopian highlands, swelling the Blue Nile during the summer months. The White Nile, by contrast, provides a smaller and relatively even supply throughout the year, while the Atbara is largely seasonal and supplies comparatively little.

The history of formation of the northern Nile Valley is complex, and involves several geological stages (Eonile, palaeonile, prenile, proto-Nile, Neonile) whose formation is explained by responses to tectonic movement, climate change and sea levels (Said 1975, 1990). Only the last two of these phases coincide with human occupation: river terraces of Palaeolithic times can be traced at some points in the sides of the escarpment, and for the whole of the Neolithic, from about 12,000 BP, the valley has been gradually building. To a large extent this explains why very few Palaeolithic sites are located in or near the present flood plain, especially in the north: they are found either in the high desert and correspond to moister, savannah conditions in the eastern Sahara (McHugh *et al.* 1988; Wendorf *et al.* 1992/3), or occur in older riverbank deposits which have been cut by later channels and are now well above the valley floor (Sandford and Arkell 1929; Sandford 1934: 61; Vermeersch 2000). The desert limestones and sandstones underlying the earliest recent riverine deposits

have been found (near Cairo) sometimes at depths of over half a kilometre (Said and Yousri 1968).

The Nile Valley today presents as a long thin ribbon of alluvial silts and clays along the river sides, with the highest ground usually lying along the riverbanks where the heaviest suspended material in the floodwaters has been deposited. These banks or levees most often show an eastward progression across the valley floor (Butzer 1976), although trends in the opposite direction are also evident (Kubiak 1998; Graham and Bunbury 2005). This movement is important for the study of settlement patterns: some east-bank sites may have been wholly or partially removed by the changing course of the river, while those on the other side will either have followed the river or been left lying inland.

The Egyptian Valley north of the First Cataract ('Upper Egypt') is often conventionally divided into three sections (e.g. Baines and Malek 1980): southern and northern upper (Aswan to Abydos or Asyut); middle (Abydos or Asyut to Fayum) and lower (Fayum to Cairo). This schema corresponds to the general width of the flood plain at various points: it is conspicuously narrow between Aswan and Kom Ombo, relatively broad throughout the region between Luxor and the Fayum, especially north of Asyut, and narrow again between the Fayum and Cairo. Upstream of the First Cataract at Aswan (usually taken as the southern frontier of pharaonic Egypt), the valley was exceptionally narrow before the construction of the Aswan Dam, and was interrupted by a series of other cataracts that result from bands of harder rocks such as granite crossing the course of the river. These, and one ex-cataract within Egyptian territory at Gebel el-Sisila, were traditionally exploited by the Egyptian state as useful sources of specialist building or sculptural stone.

Following the most recent drying phase of the Sahara from the fourteenth to the twelfth millennia BC onwards, and especially from the fourth to the third millennia BC, the Nile Valley and delta became a magnet for population movement and settlement from the former savannah areas to the west (Hassan 1988), and from the Levant and the south. Human exploitation of the Nile's resources almost certainly began in prehistoric times: designs on painted pottery of the Naqada II Period have, for example, been interpreted as proto-images of an irrigated landscape, although there is debate on the question of how early a full, man-managed pattern of flood-recession agriculture was established. The assumption is that, by the time a fully functioning state apparatus for the Nile Valley evolved (probably by the 3rd Dynasty), the agricultural infrastructure was, if not centrally controlled, then at least organized as a series of networks at a regional level for maximum yield and storage capability. Throughout pharaonic history and, indeed, into modern times, agriculture was dependent on basin irrigation, which used the annual floodwaters to be stored in basins (Arabic *ahwad*, singular *hod*), bounded by earthwork dykes, until the suspended silts were deposited; the water was then drained off in a controlled sequence by breaching the boundaries between the basins. Only with the construction of the Aswan Dam at the end of the nineteenth century, and more crucially with the High Dam in the 1960s, did this system end and perennial irrigation become possible. With these modern constructions the traditional Nile regime and much of the Nilotic landscape has changed out of all recognition, as has the habitation pattern. The High Dam no longer allows the natural suspended silts to be carried over the flood plain; instead, these are mostly blocked and collect within the reservoir (Lake

Nasser). Construction within Egypt, especially in high-value urban and suburban environments (most notably around Cairo), has been allowed to continue almost unchecked and is now at a critical stage (see below). The long-term rise in the floodplain due to natural sedimentation has also been arrested, and there are other ecological consequences (salination, local changes in weather, a rising groundwater table) that affect the economic sustainability of the country, and, by extension, its cultural heritage.

The periodicity of the flood recession cycle is, in some ways, crucial to an understanding of other features of the Egyptian social and economic calendar. The Nile in Egypt began to rise in late summer, reached its maximum in September, and subsided in late autumn. This reversal of the normal timing, with planting and cropping taking place in the winter months, was commented on by early visitors to Egypt, as was the observation that the Nile flowed in the 'wrong' direction (i.e. from south to north). Since a close record was kept of the dates and levels of inundations, it became apparent that celestial calendars (especially lunar) required compensation for annual environmental events.

Both the ancient Egyptian and the Arabic terminology for different parts of the flood plain suggest that there was a sophisticated understanding not only of the timing but also of the processes at work, or at least of the effects that these processes would have on a successful harvest. There were, for example, different terms for land regularly inundated, land only occasionally inundated, and land newly created or reclaimed from the river, as well as specific terms for different soil types. There must have been some awareness of the long-term properties of the river regime, such as the gradual rise in level of the plain, as well as the lateral movement of the river across it; although to what extent any action could be taken to counter or accommodate this behaviour is less clear. There are certainly instances of very old standing structures, found at levels that were once dry throughout the year, becoming gradually waterlogged or seasonally flooded; there is also some evidence in recent times of competition between municipalities over islands and other new productive or potentially productive land, and it is reasonable to suppose that this existed at earlier periods too. Individual towns and villages certainly had their own river defences, which might also act as military features in time of need, and the maintenance of municipal dykes was a carefully managed business.

The length and narrowness of the valley are among its most conspicuous features and these almost certainly contributed to the emergence of Egypt as one of the earliest, if not the earliest, of the world's territorial states. Although stretches of alluvial deposition are found throughout the Nile Valley north of the First Cataract, the width of the valley floor varies from four to 12 kilometres across. Areas of particular constriction occur north of Aswan, prompting the suggestion at one time that this might account for competition and the early rise of state society in this area (Bard and Carneiro 1989); and just south (upriver) of the head of the delta branches, which is again very probably the reason for the location of the first capital of the unified state (White Walls, later Memphis; modern Mit Rahina) at this point (Jeffreys and Tavares 1994). It is not altogether clear how the hydropolitics of the valley operated in pharaonic times: there was almost certainly no real competition for water resources, since the technology needed for damming or for massive water storage did not exist, although some temporary arrangements for diverting river channels may have been

introduced in the cataract regions (Vercoutter 1994; but see de Putter 1992, 1993). However, the need to cooperate in the maintenance of river defences and containing earthworks must have involved organization at the local, if not the national level. The interrelationships between the different nomes is of considerable interest, since the formal, normative documents from periods of settled rule rarely shed light on them. There are occasional eulogies of individual cities, and some administrative texts that record travel up and down the river, and temple landholdings; but only recently has evidence been produced for tension and even hostility between neighbouring nomes, significantly during the intermediate periods (Darnell and Darnell 1997a). In some cases new political foundations seem to be deliberately sited between existing power centres (e.g. Itj-tawy and Amarna; and possibly Thebes in the 12th Dynasty).

Similarly, interpretations of the relations between Egypt and Nubia have, until recently, rested on a fairly small corpus of official/ceremonial pharaonic texts. There is no very good reason for treating Egypt as a separate entity, isolated from societies further south: recent work has tended to reflect an awareness that Nilotic cultures in both Egypt and Sudan are, perhaps, more helpfully considered together (Welsby 1996), even to the extent of tracing the roots of pharaonic civilization to south of the First Cataract (Williams 1980, 1987; but see Adams 1985). Certainly the traditional view of Nubia as a culture or culture group under the shadow of a politically dominant Egyptian state has come to be questioned if not deconstructed in recent years.

In section, the Nile Valley appears as a slightly inverted saucer (Butzer 1976), with low-lying areas, often marsh and backswamp environments, near the desert margin and the highest ground near the river where the heavier soil particles were precipitated soonest after the arrival of the flood. Habitation sites in the valley typically cluster at its edges or along these levees and riverbanks, where the highest alluvial ground is found, above the floodwaters all year round. Northwards from Dairut in Middle Egypt, where the valley is at its widest, a subsidiary stream, the Bahr Yusuf (probably a relic of an older course of the main river, maintained and periodically cleared by successive governments) runs parallel to the Nile, with its own flood plain and associated settlement sites. Just north of Beni Suef, a branch of the Bahr Yusuf flows into the large wind-scoured depression of the Fayum with its (much reduced) lake, the Birket Qarun. The Fayum is a curious and interesting geographical feature and seems at times to have acted almost as an overflow facility to the Nile Valley: recent geoarchaeological work there is beginning to suggest that Egyptian water management might have been more ambitious than has been supposed (Hassan 2005).

Typically, settlements were located closest to the water resources, along riverbanks and the sides of subsidiary channels, where these allowed advantageous conditions. The question of transient populations, moving between towns and villages and the surrounding countryside, and even at times out into the desert regions, is not much discussed but they must have been a constant feature, though they appear only occasionally in the pictorial record.

Cemeteries were normally sited close to the settlements, or in the nearest available part of the desert margins. Only rarely, and for specific cult requirements, were burials made within settlements, and of necessity these were shallow enough to remain above the contemporary groundwater table during the inundation. The occasional

reference to burials (and temples) being flooded makes it clear that these events were rare and were considered disastrous.

This historical settlement pattern has changed beyond all recognition during the twentieth century, once the successive Aswan dams had essentially created dry conditions throughout the year, allowing building to spread far beyond the original practical limits. The ecology of the Nile Valley is now, in fact, at a critical stage – one of the most acute in the world – in which the finite agricultural resources of the flood plain are in danger of being seriously depleted and eventually overrun by accelerating building programmes (Nasa Earth Observatory website). Overflow housing and irrigation schemes in the desert regions adjacent to the valley are only a partial solution to the problem, and create and perpetuate their own problems.

The river was vitally important to both practical agrarian behaviour and cognitive patterns, although it is perhaps curious that textual references are not more common. There was a distinct terminology for the 'ordinary' Nile (*iteru*), as opposed to the flood (*hapi*) which was deified and had an important shrine just south of Cairo (Zivie 1980), at the traditional meeting place of the valley and delta, the 'Two Lands'. In Roman times the river in flood was personified in sculpture as a bearded male deity, similar to the Tiber figures, attended by 16 cherub-like beings representing the cubits of an 'ideal' flood. Monitoring of the Nile flood was carefully, indeed almost obsessively, maintained, and we have a near-continuous sequence of flood records from the Roman Period onwards (Popper 1951; Hassan 1981), although the records from pharaonic times are, perhaps surprisingly, much less abundant. Observations were made at a number of sites – usually at a kind of building, often attached to a temple, known in Roman times as Nilometer or Niloscope (later *miqyas* or *manyal* in Arabic), of which the best known are at Aswan (Elephantine Island) and Cairo (Roda Island). Curiously, we know little about this practice before the Late and Ptolemaic Periods: although a few flood marks do occur, also notably recorded on outlying parts of temple complexes, it cannot be assumed that they were part of a system organized on a national or even a regional scale (Borchardt 1906; Bonneau 1971). The late antique tradition of a Nilometer at Alexandria (or Memphis?) shows how closely the responsibility for recording the flood was in the hands of the priesthood or clergy (Engreen 1943).

It is assumed that there must also have been an equally rigorous method of recording property boundaries in between floods: considering the extremely precise cadastral records for individual properties it would be surprising if the same detail were not kept for agricultural holdings. How this was managed on the ground is, however, again uncertain: a series of cult objects known as *cippi* (an Italian term meaning 'boundary stone') is certainly known from Egypt, almost always associated with the image of Horus as a child, but this is entirely a contrived modern Egyptological term and it is far from certain that this was the original purpose.

As far as we can tell, the remote sources of the Nile and the cause of the flood were unknown in ancient times, although there was a pious fiction of a source both at Thebes (Gabolde 1995) and Aswan, and a separate, notional 'source' of the delta branches was located in the Memphis region. Herodotus in the fifth century BC was only able to surmise (although quite accurately) on the reasons for the inundation.

The extraordinary, linear geography of the valley must have exercised a huge influence on the settlement and demography of different regions. The desert margins

were policed at certain times, perhaps by local tribal groups, though it is uncertain how effective this form of control can have been – immigration, or at least ingress, at all points along the valley must have been regular, although perhaps less marked than in the delta with its hazier boundaries and more heavily used access routes. One record from Middle Egypt, apparently showing an incoming social group approaching and dealing with the regular inhabitants of the valley, places that group in a kind of limbo between open desert with its own fauna, and the conventional imagery of a settled agrarian population. Depending on season, the desert margins will have provided free passage and adequate grazing and life support, though there may have been competition for them.

The Nile's geography also dictated the administrative divisions of the country, known in later times as nomes, which in the valley (unlike the delta) are able to straddle the main course of the river (Helck 1974). The numbering of the 22 Upper Egyptian units begins with Aswan at the First Cataract, while the 'northern' capital, Memphis, occupying a position at the transition from valley to delta, was considered the first nome of Lower Egypt.

At the local and regional levels, settlement will have been dictated by the habitability of different zones throughout the flood cycle: the popular view of the Nile flood as a stable, regular event, providing guaranteed subsistence benefits at relatively little cost in effort and technology, certainly needs some revision. There was, for example, no certainty year on year of the flood reaching its optimum level (called euthemia or plenitude), irrigating the maximum area of the flood plain without causing structural damage, and the complete reliance on the flood as a means of livelihood (wells and cisterns seem to be almost unknown except in marginal low-desert environments) made Egypt extraordinarily vulnerable to variations in the flood level reached. Some, indeed, have seen the failure of the flood over periods of time as being instrumental in the weakening or loss of centralized control at certain points – Egypt's 'intermediate periods' (Bell 1971, 1975; Hassan 1981). Progressive cultivation of the flood plain may also sometimes have gone into reverse or been reduced in the short term: recent work on later (Mamluk) flood levels (Borsch 2000) has suggested that high levels early on in the season are not necessarily a sign of adequate floodwater cover, but might have resulted from inefficient or non-existent storage of floodwater in Upper Egypt.

Other accepted views of the Nile Valley also need to be questioned. The landscape is often assumed to be similarly constant and unchanging over time, but it is clear that at least from Early Dynastic times the valley floor, as well as the river bed and flood level, have been inexorably rising – an average of one centimetre per century has been estimated (Butzer 1976) – which means inevitably that the valley in antiquity must have been not only lower but also considerably narrower than at present. Palaeofan drainages such as those of the Wadi Hof and the Wadi Digla in the Memphis area will have intruded much more obviously into the flood plain and may even have affected the course of the river. Because of the constant remixing of newly laid sediments due to intensive arable farming, the buried stratigraphy of the valley floor is extremely amorphous and laminated layers are usually only found on undisturbed island shores. This helps to explain why we know surprisingly little about ground levels in the valley during dynastic times or, for that matter, any other period – pavement levels of temples and other structures at major sites will almost

certainly have been higher than the general level of the valley floor. An interesting case is that of the 'valley temples', found with most, if not all, Old Kingdom pyramids and solar temples, which were once thought to provide functioning harbours for ceremonial and supply vessels reaching them across the inundation waters or by canals: it now seems unlikely that even abnormally high inundations would have come anywhere near these structures (Jeffreys 2001).

Archaeological exploration of the Egyptian Nile Valley in the last 200 years has, in general, been a remarkably uneven affair: the overwhelming concentration of excavation and survey has always been on the obvious, easily accessible temple and funerary sites on the low and high desert margins, with little work done on settlement sites in the flood plain. This is gradually changing, but the priority of many fieldworkers is still undoubtedly the monumental structures in the dry desert zone.

Much has been made of the urgent need for archaeological recording in the Nile delta, to the extent of the Supreme Council for Antiquities declaring a virtual moratorium on further fieldwork unless undertaken in the delta. It is, however, often overlooked that the problem, as it concerns settlements, is equally acute in the valley, and indeed in the extended valley created by ambitious irrigation projects such as Toshka: sites such as Amarna and the Khafra diorite quarries, once thought safe from modern development, are now directly threatened and there seems to be little sense of urgency about their protection on the part of the authorities.

The net result is that the archaeological picture from Egypt is hopelessly one-sided: in many cases we simply do not know where the settlement sites are, and are forced to infer them from an assumed proximity to concentrations of tombs and mortuary temples. A good example of this disparity is the Old Kingdom capital of Memphis, whose cemeteries and pyramid fields, stretching 36 kilometres from Giza and Abu Rawash in the north to Dahshur and Mazghuna in the south, are deservedly world-famous, while the location of the city itself remains almost entirely a matter of conjecture. The supposedly 'typical' town sites, of which only a handful are recorded (Amarna, Deir el-Medina, Kahun) are, in fact, anything but typical: Amarna is a new foundation town built to serve a highly individualized royal cult; Deir el-Medina is a purpose-built craft village; and Kahun is essentially a pyramid town which survived as a local administrative hub. Significantly, none of them was built in the flood plain, although there may have been some kind of a mental map of settlement patterning in operation: the famous case of the royal capital, Amarna, exhibits several nodes of settlement activity, clustering in the north, centre and south of the large desert embayment containing the total conurbation, rather than a highly centralized, nucleated organization. Could this be a reflection of the way that a true valley settlement would have been laid out, i.e. discontinuously, with palace and other specialist areas located, perhaps on islands, away from the 'core' site?

Because of its shape, settlement patterning within the flood plain tends to defy the usual attempts to formulate for spatial analysis (e.g. central place theory); instead, the series of provinces (nomes) has at the core of each a nome capital, which persists over long time periods (although some are still unlocated or conjectural). Some of the best-known urban sites (Thebes, Amarna), being new royal locations, never emerged, or were slow to become established, as regional centres. Satellite sites are, of course, known, although it is important to recognize that many of these may be only ephemeral, or only seasonally occupied. Some towns (e.g. el-Hiba) seem to

be deliberately sited on the traditional boundaries between nomes, although these boundaries might shift over time and were probably never formally marked.

The naming of Egyptian sites can be initially confusing: it has become the practice in Egyptology to use pharaonic Egyptian, Greek or Roman, Coptic or Arabic versions, or any combination of these. Some modern placenames (e.g. el-Ashmunein) derive from the ancient Egyptian, some (e.g. Burumbul) from Greek; often toponyms are given in binary form (Avaris/Tell el-Dabʿa, Memphis/Mit Rahina) in the literature. It may be noted that modern toponyms can be quite inappropriate for referring to ancient sites: when these were large conurbations with extensive cemeteries (Memphis, Thebes, Per-Ramesses) they often lie beneath and beyond several modern towns or villages.

The Nile Valley naturally provides some unique landscapes: one of its characteristics is that the desert is ever-present on both the eastern and western horizons and in some places is extremely conspicuous; in such locations the landscape was clearly important to local cult activity (Amarna, Gebel Barkal) and itself became associated or identified with specific deities (the 'mistress of the mountain' at Thebes and Memphis). Elsewhere, as at Amarna/Akhetaten ('Horizon of the Aten'), whole towns are laid out with respect to features on the horizon: in the case of Amarna, the 'royal valley' housing the tombs of the royal family. Another interesting case study is the Memphis pyramid field, where the pyramids, as man-made simulacra of mountains, are specifically located in the landscape as a kind of visual relay between different parts of the capital, and even between Memphis and other towns (especially Heliopolis, centre of the sun cult). The pyramids, indeed, are located in an iconic stretch of land along the Nile, embracing as they do the abrupt transition from valley to delta, with its very different geography, landscape and culture.

CHAPTER TWO

THE NILE DELTA

Penelope Wilson

The triangular fan of the Nile delta has provided a rich natural environment with abundant resources for human habitation over the past six thousand years. The historical and archaeological details of some settlements in specific delta locations are better known for some periods than for others. It is likely that the contribution of the delta to Egyptian culture and civilization in antiquity varied and is only preserved in discrete parts. Calls for more work to be carried out on the archaeology of the northern part of Egypt in the last 40 years have begun to yield interesting results, not only for establishing a northern identity and dynamic, but also inviting comparison with the alluvial areas of the Nile Valley. By addressing the expectations of what can be extracted from the archaeological material of the north, a meaningful comparison of Egyptian culture in the north and south could be eventually attempted and, perhaps, the reality behind the Egyptian ideology of the 'Two Lands' explored more fully. In the delta, there are not the standing, inscribed temples and tombs or well-preserved cemeteries that have provided so much information about Upper Egypt. There are, however, significant *tell*-sites and the remains of large urban centres, as well as groups of cemeteries upon sand hills which have led to the development of a distinctive form of settlement archaeology. Investigative techniques, such as the study of the geological and riverine impacts on human life, the archaeological investigation of urban sites with complex and difficult stratigraphy, and combined ground and satellite regional surveys are contributing to a larger picture of human life dynamics throughout the delta and valley. The complexity and multidisciplinary nature of some of the work and the lack of emphasis on sensational burial finds has, however, limited the public perception of the progress made in delta archaeology. The threats of agricultural and modern urban pressures and the efforts of the Egyptian authorities to encourage coordinated work in Egypt are moving forward delta studies towards the complex synthesis of excavated material of all kinds. The results could lead towards the definition of a significant Lower Egyptian culture, an exploration of the political tensions within the unified complex state, and an understanding of the reasons why the controlling administrative centre of a united Egypt could only ever have been in the north, even if based in different locations.

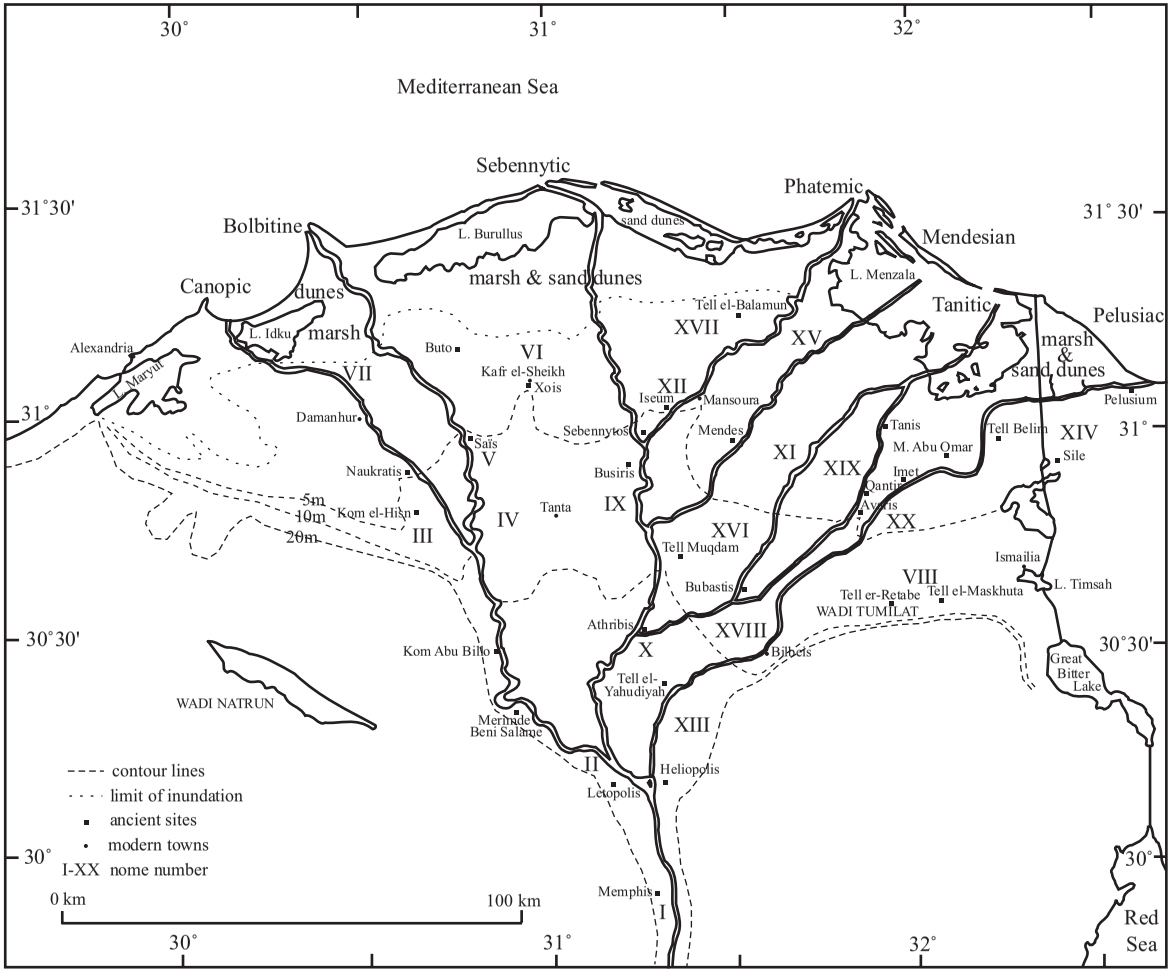


Figure 2.1 Map of the Nile Delta showing a reconstruction of river branches in ancient times, ancient sites, modern towns and contour lines. It is based on a compilation of data by Said (1993: 71).

GEOLOGY

The delta is a fan of mid-Pleistocene sands and gravels, covered in a layer of alluvial sediments and cut by a network of river channels and distributaries (Butzer 1975). The best alluvial land was situated in the upper delta plain, with a broad fan-like shape delineated at the side by 20-metre-high scarps of Late Pleistocene sediments. There is little topography, with the height of the land mass above sea level rising from zero metres at the coastline southward towards Cairo which lies around 18 metres above sea level. The modern total land area of the delta is estimated at 12,500 square kilometres (Sestini 1989).

The formation of the delta has been affected by various processes, including changes in sea level, subsidence of the delta fringe and plain, off-shore sedimentation patterns and the variable volume of the Nile flood. In some places, the underlying, undulating sand was higher than the alluvial mud of the flood plain. Such sand hills or *geziras* were exposed and weathered, cut and reworked by river channels and formed higher ground, until they were partially or completely subsumed beneath the accumulated sediments.

There were two main and significant river branches from around 8000 BC: one through the central delta plain, later the Sebennytic Branch, and the other to the west along the desert fringe, later the Canopic Branch (Butzer 2002: 89). There were a number of other minor distributaries, particularly on the east, reaching the Mediterranean Sea through a system of freshwater lakes, brackish lagoons, sand ridges and marshland. Until 2000 BC there was deep entrenchment of the distributary channels, creating five major branches known in the Ramesside Period, if not before, as the 'River of the West' (Canopic), the 'Water of Ptah' (Bolbinitic), the 'Great River' (Sebennytic), the 'Water of Amun' (Phatemic), and the 'Water of Pre' (Pelusiac) (Bietak 1975). The river branches ran in incised channels with banks or levees beside them, formed by the deposition of sediments at the point nearest to the channel during major floods. The levees, especially on the outer edges of river bends, formed high ground, which would have stood above the flood plain and above lesser floodwaters. The variability of the floods, in terms of energy of the flood, the volumes of water and the amounts of sediment, meant that distributaries incised new courses and old channels could be abandoned, filled with sediment and subsequently recut.

There were recurrent flood perturbations, however, with high floods for a century during the period 4250–4000 BC, in general between 4100 and 2400 BC and during the Middle Kingdom (Butzer 2002: 90). Low floods are measured and recorded on the Palermo Stone during the 2nd Dynasty (Bell 1970). After 1400 BC there was greater channel stability leading to the more 'modern' fluvial regime and continued accretion of overbank silts. The lower flood energy of the river led to the progressive atrophy of five Nile branches, with water being diverted to the modern Damietta (Phatemic) and Rosetta (Bolbitine) channels by the seventeenth century AD (Embabi 2004: 73) (Figure 2.2). The flood plain was watered and covered by alluvial sediments during the inundation, with the water courses dividing it and creating natural basins. The management of the basins meant that water was provided for the duration of a crop or crops and the land under cultivation could be increased by effective control of the irrigation systems. Changes in the pattern of flooding and of the river branches affected human settlement very greatly and, in consequence, are a significant factor in the economic and political development of the delta (Hassan 1997).

Figure 2.2 The Rosetta mouth of the Nile.

The area to the north of the 1 m above sea level contour line was dependent on low sea levels for human settlement, particularly in the Ptolemaic–Roman and Late Antique Periods. Parts of the city of Alexandria, all of Canopus and Herakleion in the north-west, small *koms* in and around Lake Burullus, as well as the formerly large settlement at Kom Tennis in Lake Menzala and the great city of Pelusium in the north-east have suffered due to sea level rise for one reason or another (Stanley 2005). The lagoonal and marsh fringe of the lower delta plain now comprises the reclaimed areas of lakes Mareotis, Burullus and Menzala. The steady reclamation of the marshes in the north-east may be one of the factors in the economic prosperity of this area, particularly from the New Kingdom onward.

South of the 1 m hinge, the delta can be divided geographically into three main portions, each with distinct geological and, perhaps, ethnic profiles, yet each a part of the same flood plain environment. The central delta is a thick mass of flood plain silt, intercalated with peat marshes and lying on sand with some sand hills and ridges running in a north–south line alongside sediment levees created by deep river channels. The north-western delta consists of beach sands overlying lagoon mud, peat marsh and marine sand, brought inland over the flood plain silt and the original sands. This area abuts the desert sands of the Western Desert along with its oasis areas. The north-eastern delta is a similar stratum of beach sands overlying peat and lagoon deposits, but with thicker layers of marine sand intercalated with silt and mud, overlying deepwater marine mud upon sand, flood plain mud and, finally, the original

sand base (Stanley 2005). The hinge line provides some geological understanding for the environment and also allows a basis for a reconstruction of the human responses to the exploitation of the delta.

GEOGRAPHY AND CULTURE

The development of the delta as a contributory factor in the maintenance of the Egyptian state depended upon the availability of agricultural and pasture land and its management by the settling of people and animals there. The river routes to the west and east gave access to important resource areas and created flexible Egyptian 'frontiers' allowing people to pass in and out of Egypt, as well as being fixed and guarded so that transient peoples could be stopped and monitored (Quirke 1989).

The literary text, *The Teaching for King Merikara*, dating to the Middle Kingdom, acknowledges that in ancient times the divisions of the delta were recognized and had a specific character. Merikara ruled the north from his capital city at Heracleopolis, east of the Fayum, in opposition to the Theban rule of the south. His father, King Khety, counselled him to depend upon the delta, both for its revenues and as a buffer against incursions, particularly on the eastern side: 'It happened that I became lord of (my) city, one whose heart was heavy because of the delta (from) Hutshenu to Sembaq, whose southern boundary was at Two Fishes Canal' (lines 81–2). Though the exact location of these places is unknown, the subtext is that they are a domain, that is, a royal or temple estate, a town acting as a regional administrative and surplus storage centre, and a major canal system, perhaps artificially enhanced, in the delta. The western side provided Merikara with *meru*-wood and juniper wood, implying perhaps limited forestation, possibly in scrubland in the sandy areas of the western margins. It is likely that not only were the desert fringes an abundant resource for plants, bushes and wild animals, such as hares, gazelles, wild boar and wild cattle, but that the cultivated areas around Imau (Kom el-Hisn) were notable for their vineyards. The sandy soil would have created a reasonable growing environment for vines and they could have remained in place all year on the desert terraces above the flood level. Wine for the jubilee festivals of Amenhotep III came from the vintners of the 'Western River' (Leahy 1978: 31 no. XVII).

From the edge of the desert, near Kom Abu Billo, there was access to the south towards the Fayum and north-west towards the area of Wadi Natrun, a depression 25 metres below sea level at the northern end, 35 kilometres long and a maximum of 8 kilometres wide (Figure 2.3). There are now eight lakes lying in a line along the *wadi* and some of them dry up in the summer leaving a white salt crust residue, while others remain as marshes (Meinardus 1989: 48–51). The 'Hill of Nitria', located south-west of modern Damanhur and close to Barnugi, supplied natron (Evelyn White 1932: 19–20), a mixture of sodium bicarbonate and sodium carbonate, with some sodium sulphate and sodium chloride impurities. It was used in mummification, for the artificial drying and preservation of soft tissues, and in faience and glass manufacture. The most famous inhabitant of this area was the 'Eloquent Peasant', who brought from here to Egypt the herbs and plants of the area, the stones of the desert, natron and salt, and perhaps traded with the Farafra cattle herders for 'sticks' and with the local Tjemhu or Tjehenu inhabitants for jackal and leopard skins (Parkinson 1997: 58). These latter peoples seem to have ranged across the western

Figure 2.3 The Wadi Natrun looking towards the delta, with modern reclaimed land in the foreground.

desert and coastal margins from Early Dynastic times, with the Libu and Meshwesh attested further to the west by the New Kingdom (O'Connor 1990).

The 'Middle Islands' of the delta in Merikara's 'Teaching' were the patches of flood plain, *geziras* and levees between the river channels, which constituted the central settled areas with state temples and agricultural lands. The cultivated land was the rich agricultural zone subject to increased exploitation from the beginning of the Egyptian state. The ten oldest of the 20 Lower Egyptian nomes (districts) are situated in the area between the two main distributaries and date to before the 3rd Dynasty (Butzer 1976: 93–4), with recent work showing that Mendes and Buto have clear Predynastic settlement layers and Saïs has Neolithic material (Wilson and Gilbert 2003). The story of the delta is inextricably linked with the gathering pace of agricultural development and the extension of this central area, bringing large areas of fields under cultivation by improved drainage and irrigation. More importantly, manpower was provided through military campaigns to operate and develop the field systems (Redford 1993). The modern patchwork of small strip-like fields can be clearly seen on maps and from aerial and satellite images, but ancient field and domain patterns are well hidden beneath the mud. The flat landscape gives the impression that it can be traversed easily, but it is deceptive. Due to the nature of the cultivation, the land is also criss-crossed by irrigation ditches and the larger canals. They can be an impediment to direct movement from east to west, although local ferries would

have made crossing larger waterways possible. The sand *geziras* stood up out of the mud and the early river distributaries wove around them in a sinuous pattern. Every thousand years, an average of 1.5 metres of sediment would have been added to the land surface.[1] Over time, many of the smaller *geziras* were buried by the accumulations of sediment or eroded and washed away by the undercutting of the water channels. The great cities of Saïs, Xois and Imet (Buto) took advantage of the agricultural hinterland and managed it for their temple towns situated on dispersed *geziras*. They were far enough away from one another that they did not encroach on each other's territory, but close enough to trade, participate in festivals and coordinate the management of the river channels and dykes. The flood plains supported a subsistence and surplus crop of grain, vegetable and fruit crops, along with flax and vines. Towns, villages and hamlets may have completed the dispersed settlement patterns spreading out from the main storage and cult centres.[2]

Merikara was finally warned that, although the eastern zone of the delta was full of foreigners, the area from Hebenu in the south to the 'Way of Horus' in the north-east was a buffer zone, settled with towns and people. Danger came from the nomadic Asiatic peoples, who were a constant source of unease and disorder. While the 'foreigners' of the east were tolerated because they paid taxes to the Egyptian king, the Asiatics were regarded as a source of chaos and incursions. In the eastern delta, there were a series of low depressions which formed a chain of marshy and lake areas between the Mediterranean Sea and Red Sea coast. The area was characterized by salt flats and impassable marshes, though pathways on higher and more compact ancient levees created state highways which were guarded by fortifications and garrisons of soldiers, at least from the Middle Kingdom, if not before. The fortress of Tell el-Hebua, just beyond Qantara in the middle of a now very desolate area, protected and monitored the 'Ways of Horus' into Sinai and beyond (Maksoud 1998). In the Early Dynastic Period, there were already a number of Egyptian settlements on the eastern side of the delta,[3] which demonstrate the presence of an elite, perhaps controlling early, overland trade routes to the east (Tassie and van Wetering 2003). They may either be seen as 'colonies' established by the newly founded state and populated from the great urban centres at Memphis, or pre-existing local elites who demonstrated their 'new' status by adopting the elite Memphite culture in their graves and by being buried in a manner similar to their contemporaries. They seem to have created a managerial network exploiting the agricultural hinterland of the area, supervising the Pelusiac Branch of the river and its distributaries and the land routes eastward through the Wadi Tumilat. They adopted or brought in the customs of the Memphite elite and their burial practices too, so that the cultures they represent are relatively homogeneous. A local east delta culture is more difficult to trace because it is not represented within this system.

The status of people indigenous to the Eastern Desert and salt-marsh areas is of some importance in understanding the tensions of control and culture in the eastern delta in particular, and the ramifications of the 'Hyksos' rule of 1700–1400 BC. The Egyptians characterized such people in the state ideology as *shatyu* and/or *pedjetyu-shu*, but archaeological evidence for them is, not surprisingly, meagre. Some of the nomadic tribes of the area may have acted as caravan leaders and ultimately as middlemen in the trade routes. Middle Kingdom settlements or foundations at Tell Ibrahim Awad and Ezbet Rushdi were established by the kings who brought the

Figure 2.4 Delta fields and tree-lined canal. The modern landscape, here at Sa el-Hagar, is deceptive. The tall Eucalyptus trees on the right and bamboo in the centre are modern imports.

middlemen into the eastern delta. The subsequent weakening of central rule allowed people with an Early Bronze Age II Palestinian cultural background to take over the strategically important nexus at Tell el-Dabʿa (Avaris) and to create a centre of northern rule from here (Bietak 1997a). Their influence can be seen in the burials at Tell el-Maskhuta, and in the Tell el-Yahudiya juglets which are found from Middle Egypt to Palestine. The later positioning of Per-Ramesses (Qantir), the capital of the Ramesside kingdom, nearby to the north-east, emphasized that, in an eastward looking world order, the eastern delta provided an environment for coordination and contact between the Aegean and Mycenaean world, Anatolian and Eastern Mediterranean cultures, and the southern lands of Upper Egypt and Nubia. The eastern frontier continued to be a focus of strategic development into the 26th Dynasty and the Late Period, with royal refoundations at Mendes (Redford 2004a), Tell Belim and Dafenneh, while, under Nekau II, the first attempts were made to link the Red Sea to the Mediterranean by means of a canal.

RESOURCES

The whole of the delta was full of natural resources, from the migratory birds of the marshes to the tamarisk bushes full of bees and the fish of the waterways and ponds. The marsh areas would have seemed to be an impenetrable mass of reeds, but they contained channels, fishermen's huts, nets and baskets for catching fish. They also provided sport for fishers and fowlers (Caminos 1956). The careful husbandry of the

swamps meant that the channels through the thick reed thickets would have been kept open, known to people in strategic 'ports' such as Buto, but possibly inaccessible to those from outside. By controlling these access points the Butoites would have been able to allow traders in or set sail themselves in order to connect with people in other areas such as the region of Canaan (Faltings 2002).

Both pasture lands in the alluvial plain and the islands in the marshes also provided for the pasturing of cattle, sheep, goats, pigs, donkeys and mules. Many of the ancient nome names of the delta are associated with cattle; for example, the name of the 2nd Lower Egyptian nome of Letopolis on the south-west fringe is written with the foreleg of a bull, while the 6th nome of Xois, extending from the mid-delta to the coast, is written 'Mountain Bull' and the 10th nome of Athribis in the south-east delta is 'Black Bull'.[4] It is likely that cattle were brought up from the Nile Valley, possibly from even further south along the great cattle routes from Nubia. They could have been fattened on the delta pastures, scrubland and marshes, before being brought to the central administrative zone near Memphis for slaughter. It made economic sense for them not to be too far from where they were needed, that is, at the urban centre of Memphis and also the concentration of specialist craftsmen working on the royal mortuary complexes at Giza and Saqqara. The islands in the marshes and the non-agricultural pastures of the north provided secure places in which to herd cattle; the unauthorized removal of cattle from these areas would have been difficult. The preponderance of cattle suggests that they became the status meat of choice sometime during the late Predynastic Period, but finds from Predynastic Saïs (Wilson and Gilbert 2003), Old Kingdom Kom el-Hisn (Wenke *et al.* 1988) and Middle Kingdom Tell Ibrahim Awad (Boessneck and von den Driesch 1992a) suggest that pigs were reared over and above cattle and caprids, since pig bones are more prominent in the faunal record. An ostracon from the reign of Ramesses II details the holdings of the estates of the Temple of Amun in the delta, and although it mentions swineherds, does not refer to pigs (Wente 1990: 118–19, No. 141). Although this could be an oversight, it may also imply that pigs were the staple meat and produced fat for the non-elite inhabitants of the north. There are also documentary references to wool being transported downriver, perhaps from the delta pastures, and it was presumably an important commodity of the north (Wente 1990: 120–2).

Fish were an important staple food, being caught either in nets in shallow pools after the flood or in deeper water from boats by harpoon. Fish provided a rich harvest that could be dried, salted or processed to make pastes, and therefore kept for some time. The marshes themselves provided reeds which were harvested for use in making basketry, matting and papyrus. In addition, flax-growing areas and linen workshops must have been a major part of northern life, although the technologies of these fragile organic materials are difficult to study because they do not survive in the wet delta conditions. While all of the above resources were available in the south and in the Fayum, the delta provided an abundance.

There were also disadvantages to the north. 'The arrowmaker goes north to the Delta to fetch himself arrows. He must work excessively in his activity. When the gnats sting him and the fleas bite him as well, then he is judged' (*Satire of the Trades*: 8; Simpson 2003: 433). The extra humidity under the hot Egyptian summer sun made conditions difficult, while the cold winter winds and rainfall were unpleasant. It is not known if malaria was endemic to the delta area in ancient times, but

bilharzia and associated diseases could have been a damaging part of delta life (cf. Ayrout 2005: 72–4). The inundation was probably the most significant danger in the north. Aside from potential famine caused by lesser floods and destruction caused by high floods, the floodwaters themselves may not always have been potable as they were full of fine sediment. For a short time during the year effective sieving of water must have taken place, perhaps using linen gauzes; or wells were sunk in towns in order to provide clean, fresh water without having to rely on the river channels. Limestone-lined wells at Tell Abqaʿin (Thomas 2002) and Qantir, as well as pottery-ring-lined wells at Saïs (Wilson 2005), reflect the fact that the groundwater and, perhaps, springs in the delta played an important part in everyday life (Vernus 1989b).

HISTORY AND ARCHAEOLOGY

Earlier historical surveys of the delta have focused on evidence from written sources. The organization of the united Egyptian state by the 3rd Dynasty led to the development of the massive resource potential of the delta in order to supply the building projects of the Egyptian kings. The Memphite area was the perfect administrative centre for the ideological 'Two Lands' as well as being in a position to exploit the combined economic resource base of north and south. The domains of the 4th Dynasty and later attest to the internal colonization of the delta (Kemp 1983: 89–92); the foreign expeditions of kings helped in the acquisition of people and animals for the lands and work centres. There may have been local northern rulers in the First Intermediate Period as well as attendant economic and social problems; these would have been caused by factors connected with the inundation and changes in river channels, and would have been devastating for the rural foundations of the north. In the Middle Kingdom, kings tried to reassert control of trade routes by building fortresses and reorganizing the agricultural land boundaries (according to the Chapel of Senusret I at Karnak). By the late Middle Kingdom, however, the large Asiatic presence in the eastern delta and an influx of western Semitic speakers combined with the wane of Memphite control, leading to the establishment of a Late Bronze Age II Canaanite/Palestinian culture in the eastern delta whose rulers claimed authority over a substantial part of northern and central Egypt. The Theban kings of the New Kingdom removed this intrusive political element, but some of the cultural traces remained and the pattern of development of the delta continued as before, except that many delta estates were under the direct control of the Temple of Amun at Karnak and the Theban court. New areas were reclaimed and brought into the economic holdings, for example, around Tell el-Balamun. The political focus shifted back to the eastern delta in the face of Egyptian interaction with the power centres of the Late Bronze Age. Per-Ramesses formed a highly suitable court centre, and the lands around it supplied workforces as well as the army, with military men acting as landlords. Increased pressure on land came from the west with the immigration of 'Libyan' groups who eventually offered their services as mercenaries in the army and operated fiefdoms, exchanging military service for land. The dissipation of delta lands to groups of immigrants and the fracturing of political power led to chiefdoms of the Ma, Meshwesh and Libu who were not inclined to unite with one another (Redford 1993: 315–17).

The extension of the agricultural land available in the delta since the Old Kingdom meant that certain cities were no longer 'marsh' towns, but had a rich agricultural hinterland and formed city-states in their own right. In the 26th Dynasty, Saïs developed a new strategic outlook with a port and warehousing centre at Naukratis in the west of the delta. Military control of the east was backed by the use of Aegean military units, while the northern control of Theban property was achieved by sending the daughter or sister of the Saïte king south as the God's Wife of Amun. The establishment of the united Egyptian state with a power base in the western delta acted as a precursor to the foundation of Alexandria, again combining port, strategic location and administrative centre of control for the agricultural lands.

The nature of archaeology in the delta gives a different emphasis to economic, political and religious information compared to archaeology in the south. Epigraphy and the recording of standing monuments are less important in the north, where such monuments have not survived to the same extent as in the south. On the other hand, settlements and towns are rather better preserved in the northern environment at several different levels. The geophysical mapping of Qantir has led to more targeted excavations (Pusch 1999b) and the phases of the town of Avaris can be followed from the Middle Kingdom through to the early New Kingdom (Bietak 1997a). The systematic excavation of clear *tell* areas is uncovering the history of Tanis from the 21st Dynasty to the Ptolemaic Period (Brissaud and Zivie-Coche 1998) and Mendes from the Early Dynastic to the Roman Period (Friedman 1992; Redford 2004a). Fieldwalking and survey have produced interesting results about the Saïte Greek foundation and subsequent development of the town at Naukratis (Coulson 1996). Consequently, the questions raised by the excavated remains pertain to the development of the infrastructure of cities and their individual houses, to the relationship between living areas, cemeteries and temple complexes, and to the pottery traditions of different regions. Whereas the valley evidence emphasizes elite culture, with a written background, the delta may furnish more information about lower levels of society in both rural and cosmopolitan milieux.

In some ways, it is the difficulty of dealing with the archaeological material from the northern environment that has caused the perceived lack of knowledge about the delta, rather than a lack of actual material. Furthermore, the challenge lies in unravelling the evidence for 'low' urban and rural culture, and in defining a method for exploring its interaction with elite culture and the political dimension. Careful exploration of the existing nome capitals of the delta, especially in the last 50 years, is slowly building up a picture of cities as bustling as those of medieval Europe, as polyglot and cosmopolitan as any of the Eastern ports, and as full of religious ritual and festivals. The extension of this work to outlying towns, hamlets and settlement work may lead to understanding the dynamics behind political and religious life.

THE DELTA DIFFERENCE

The possible contrast between the local 'Egyptian-state' and 'fringe-state' lifestyles is hardly addressed by the elite archaeological evidence. The delta, however, contains large town *tell* sites and offers the prospect of stratified cultural information mixed with regional cultural differentiation in pottery and other objects, building practices and burial customs. It would be at the lower end of society that a regional delta

culture may emerge. An obvious area of immediate difference may have existed in the dialect of Egyptian spoken in the north. The only hints of this come, perhaps, from the names of the Late Period kings, such as Shoshenq and Psamtek, and in the variety of Coptic dialects, of which Bohairic is the northern version.

Other tantalizing hints of significant cultural and technical differences between Lower and Upper Egypt come from the study of pottery types and assemblages from the delta. An indigenous Lower Egyptian tradition has been suggested from the pottery of the Late Predynastic Period at Buto and at Mendes, which was subsumed by the incoming Upper Egyptian Naqada II material, providing the evidence for the cultural unification of Egypt. A particular type of 'fibrous-ware' has been identified at Buto, Maadi and Mendes (Köhler 1992: 16–17; Friedman 1992: 200), as well as small globular pots with pre-fired holes perhaps peculiar to Buto which seem to be distinctively Lower Egyptian and correspond to the Naqada IId2–III phase (Köhler 1992; Friedman 1992: 204). Seidlmayer has identified a pottery sequence by comparing Late Old Kingdom and First Intermediate Period pottery from the north and south and detected that northern vessels remained more slender, with a high shoulder than the scraped and wheel-made, bag-shaped vessels of the valley. Perhaps this was the result of a delay in the use of new wheel technology in the north (Seidlmayer 2000: 122–4). French has cautiously suggested that a Late Dynastic marl pottery production centre existed in the north, perhaps using white desert clays from the west, and that there was a black-silt ware production centre in the north in the Ptolemaic Period (French 1992) for which a kiln has been found at Buto (Ballet in Hartung *et al.* 2003). Some of the differences noted may be due to the use of northern marl-clay resources, and some to different pottery functions, for example, in fish-product processing or pig and beef fat rendering, or perfume and wine manufacture.

Burial in the delta was a problem (Figure 2.5). The nearest high desert ground was to the east or west, but for most settlements it was impractical to use such locations. The *geziras* and levees provided some high ground, and the tops of the high sand hills seem to have been preferred places for burials, while the settlements were placed on the hillside, remaining above the flood plain. The proximity of settlements and cemeteries was close, and they could expand into each other. Solid mud-brick walls formed a good basis for ready-built tombs, perhaps with vaulted ceilings, and so abandoned town-areas could be reused in this way. Pottery-coffin burials in separate areas of sites, and poorer burials without obvious surviving funerary goods, could eventually become part of a new settlement at a later time, as the settlement was refounded. Such arrangements mean that, archaeologically, multi-strata sites tend to be both cemeteries and settlements. The survival of separate burial mausolea in the delta made from mud-brick suggests an elite burial practice which allowed mass burial, perhaps around important or influential individuals, for example, the Middle Kingdom vault at Bubastis (Grajetzki 2003: 46). There were also separate necropolis areas on sandy *geziras* as at Quesna (el-Hegazy 2002) where a 26th–30th Dynasty mausoleum evidently served the elite of Athribis, or the Wahibra elite-cemetery at Saïs (Bakry 1968). Other burial sites were within town areas in carefully defined zones; these may have been built over later, giving the impression of burials under houses. There is no doubt that the pottery-encased burials at Tanis and Tell Belim (Spencer 2002) belonged to individual cemetery zones separated from, but within visible contact of, the temples of both sites. Pottery slipper coffins provided

Figure 2.5 Kom el-Ahmar on a levee in Beheira Province has been affected by *sebakh* digging, but the local cemetery is still built on top of one of the ancient mounds.

some protection for the body and seem to have been the basic type of funerary equipment available for the middle-ranking elite in the north. In addition, the hawk-faced burials of the Third Intermediate Period may have originated in the north; they range from bronze beak and eye fittings from Tell el-Balamun (Spencer 2001) to the splendid silver sarcophagus of Shoshenq II from Tanis.

Hard stone sources were absent from the delta proper, with the nearest being at the delta apex at Gebel el-Ahmar and the Memphite desert. There was thus no need for the kind of economic management of the desert quarries as occurred in the valley, negating the importance of local rulers in the supply of these commodities. The lack of building stone seems to have led to the specific practice of recycling stone as a building material. For example, Middle Kingdom installations at Tell el-Dabʿa were reused throughout the eastern delta; Per-Ramesses was dismantled to be reused at Tanis (Habachi 1972b); buildings from Saïs were reused in villages along the Rosetta branch of the Nile (Habachi 1943) and, along with blocks from Heliopolis, contributed to the Ptolemaic cities at Alexandria, Canopus and Herakleion.

The mud-brick enclosures of the temples may have served as much as flood defences in the north as markers of divine space. The continual renewal of enclosures suggests that their low, brooding presence on the horizon would have become truly impressive during the flood. Although the delta landscape is flat, the tree-lined canals make long-distance views across the landscape difficult. This may have been the reason

behind a type of construction attested from the 26th Dynasty. There are a number of examples of casemate foundations which seem to have belonged to ramped, high platform structures. They may have been fortress-garrisons positioned in strategic places such as Tell Defenneh, Tell el-Balamun and Naukratis (Spencer 1999); but, they may also have served as watch towers, beacons and signal posts which could be used to send communications by light or fire more quickly than it would have been possible to traverse the land.

The plethora of ichneumon cults of Atum, the myths of the creatrix goddess Neith at Saïs, and the two aspects of Horus – as the hippopotamus harpooner at Mesen and as the child, protected in the delta marshes – all suggest that there were strong regional cult mythologies in the north, allusions to which were collected together in the 'The Delta Papyrus', P. Brooklyn 47.218.84 (Meeks 2006).

The north seems to have been a multi-ethnic environment, perhaps from the time of the first 'Egyptian' or 'Memphite' settlers who came to the delta, and it continuously adapted and changed, amalgamating 'Asiatics', 'Libyans' and 'Greeks'. All of these terms may mask a flexible, developing region whose people had a subtle, but profound, impact on Egypt. The economic strength of the north, based on its rivers, distributaries and flood plain, ensured the political power of the northern centres from Memphis to Alexandria, and subtly affected the direction of, and changes in, Egyptian culture as a whole.

NOTES

1 The figure given here is an average, as rates of sedimentation varied at different chronological periods according to the intensity of the inundation and depending upon where they were measured. Stanley estimates that an average of 1.4 mm of sediment was deposited each year in ancient times, based on the Smithsonian drill augers on the northern delta edge (Stanley *et al.* 1996). Butzer notes that there are too many local variables to make a general figure viable.

2 The modern Egyptian constitution describes the basic units of local administration as governorates (26), districts (163), major urban centres (4), provincial cities (8), towns (199) and village units (928). The latter consist of a mother village with the local people's council and executive council, then satellite villages (3,568) and hamlets (*ezbet*) (25,000) (Mayfield 1996: 74–7). The gradual increase in numbers reflects the outward spread of the population and, in effect, a dispersed settlement/population pattern, perhaps similar to that in antiquity.

3 The data should be seen in the light of excellent surveys of the east (Bietak 1975; van den Brink 1987) which have located 'settlement sites' and of the work done in cemetery sites, such as those at Kafr Hassan Dawood and Minshat Abu Omar. Some caution is expressed by van den Brink in the identification of sites from the mere presence of pottery sherds, as much soil material has been moved from place to place in the delta as *sebakh* for fertiliser (van den Brink 1987). In addition, monumental remains made from stone have had equally wandering lives. The actual definition of what constitutes a 'site' is yet to be achieved. There are undoubted *tells* and ancient sites, many of which have been levelled, but some have survived especially in Kafr el-Sheikh, Sharqiyah and Beheira provinces (Spencer 2006).

4 Others include the 11th nome of Pharbaethis in the central-eastern delta, which is 'Cattle Count', and the 12th nome stretching from Sebennytos to the coast in the north-eastern delta which is 'Calf and Cow'. In addition, the cow goddess Hathor was worshipped at Kom el-Hisn in the western delta, among other places.

CHAPTER THREE

THE DESERTS

John C. Darnell

The Nile Valley is a narrow ribbon of agricultural land cutting through the North African desert, and the oases of the Western Desert are but small islands of water and cultivable land afloat in a sea of rock and sand.[1] The majority of the territory that fell easily within the control of the pharaonic state was desert. This Red Land greatly exceeded the small areas of Black Land, as the Egyptians well understood, and they neither ignored nor feared either the rocky and mountainous wilderness to their east, or the even more awesome wastes to their west. The deserts contained many major routes, linking the Nile Valley with the oases and even more remote areas; they were the repository for most of the mineral wealth of Egypt and Nubia;[2] and the stones and minerals from these desert areas were the physical foundations for the architecture and economy of the pharaonic state.

The quarries and mining regions in the Eastern and Western Deserts were connected to the Nile Valley by often well-constructed roads (Murray 1939; Harrell and Brown 1995; Bloxam 2002; Shaw 2006), while additional road networks linked the Nile Valley with the Red Sea to the east and the oases and more distant points to the west (Figure 3.1). Pharaonic desert roads range from raised causeways to swept tracks to caravan routes formed by the tracks of numerous animals, and literally paved with sherds (D. Darnell 2002); the tracks often follow a relatively straight course, and are not averse to steep ascents, which people and donkeys negotiated with relative ease. Far from being limited to thoroughfares for stone and minerals, ancient Egyptian desert roads, particularly routes through the Western Desert, were important conduits for trade and travel. Tracks frequently ran parallel to the course of the Nile and cut off great bends of the river to bypass the cataracts and other areas of difficult navigation (Degas 1994; Darnell *et al.* 2002: 1–3; *contra* Graham 2005: 44), and would have continued to function when the Nile itself was low and closed to all but the smallest vessels. Even the gods themselves had to find their ways between the Nile Valley and the oases, and the roads might carry their divinity as well (cf. Kaper 1987; Klotz 2006: 9–10).

The deserts were important areas of cultural development before the rise of the Early Dynastic Egyptian state, and were fully integrated into the cultural topography of the pharaonic mind. The earliest pre-pharaonic cultures of north-east Africa emerged

Figure 3.1 Ancient caravan tracks along a major route between the Nile Valley (southern Thebaid) and Kharga Oasis.

from those deserts, and throughout pharaonic history the desert regions surrounding Egypt and Nubia formed part of the inscribed landscape of Nilotic civilization. While rock inscriptions could serve such mundane functions as sign posts and meeting places (for a rock inscription as a landmark for a desert patrol, see Smither 1945: pl. 3a, line 12), many reveal religious motives, and relate to a peculiarly Egyptian approach to annexing and 'Niloticizing' the desert. A number of desert sites are second only to larger temple complexes in terms of the importance and complexity of the inscribed material they preserve, and the information they provide regarding otherwise little known and poorly attested aspects of ancient Egyptian religion.

PREDYNASTIC AND PROTODYNASTIC EGYPT

The deserts that surround the Nile Valley and the western oases were once major centres of cultural change and interacton in north-east Africa. The desert hinterlands of Egypt – especially the vast expanses of the Western Desert – were the areas in which Neolithic traditions from the Sahara, the Sudan and south-western Asia met and combined to create the nascent pharaonic civilization.

During the last Ice Age the Sahara was much drier and larger than it is today. In one of many climatic fluctuations (Hassan 2002; Hoelzmann 2002), this period of hyper-aridity drew to a close around 12000 BC, when the southern monsoonal rains