Early Mesopotamia

SOCIETY AND ECONOMY AT THE DAWN OF HISTORY

J.N. POSTGATE

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This book is dedicated
to the people of Iraq.

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Preface and acknowledgements

The need for this book was brought home to me on my return to Cambridge in 1981 to succeed Margaret Munn-Rankin in the teaching of ancient Near Eastern history and archaeology. The archaeology of Mesopotamia had always formed part of the first-year course for all archaeology students, but there was no single book which exploited Mesopotamia's special advantage – the opportunity to combine documentary and archaeological evidence. The book therefore sets out to describe an early state in terms sufficiently broad for the general reader, but with enough detail to help the specialist and to convey the wealth of information still to be recovered. The result is more history than archaeology, but my intention has been to bring the two disciplines closer together, and this is reflected in the number of illustrations: there are far more of these than originally intended, but they imposed themselves on the text as it proceeded. Quotations from the cuneiform sources are treated in the same way as illustrations so as to unclutter the narrative. The translations have all been compared with the original text, although I have often borrowed them with few or no changes from the previous translator.

A glance at the bibliography will convince the reader that detailed study of ancient Mesopotamia requires a knowledge of German and French, but after each chapter I have recommended a few titles, mostly in English, which would serve to take the reader more deeply into the issues.

In writing this book my principal debt has been to Professor Marvin Powell, who read the majority of the text in draft, suggested improvements to style, substance and accessibility, and saved me from a number of serious howlers. I am very grateful to him for giving unstintingly of his time and his expertise.

Professor Peter Steinkeller advised and corrected me on points of detail in the translation of some of the texts, for which I am very grateful, as I am to Jean Bottéro, Tina Breckwoldt, Jean-Marie Durand, Peter Laslett and Roger Matthews for answering questions and supplying information.

I am greatly indebted to many colleagues who have freely offered help with illustrations, whether by supplying them or by giving permission to use them, or often both: to Professor R. McC. Adams, P. Amiet, Professor John Baines, Professor Dr R.-M. Boehmer, Dr A. Caubet, Dr Dominique Collon, David Connolly, Dr G. van Driel, Professor Jean-Marie Durand, Dr Uwe Finkbeiner, Dr Lamia al-Gailani, Dr L. Jakob-Rost, Professor Wolfgang Heimpel, Dr Bahijah Khalil Ismail, Dr Stefan Kroll, Professor Jørgen Laessøe, Professor Jean-Claude Margueron, Dr Roger Matthews, Helen McDonald, Dr Roger Moorey, Professor Raouf Munchaev, Professor Paolo Matthiae, Professor Hans Nissen, John Ray,

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This book would not have been possible if I had not lived in Iraq. I would like to record my lasting gratitude to the modern inhabitants of Mesopotamia for their constant courtesy and hospitality, in homes and offices, in city and countryside, and in times good and bad.

Note to paperback edition: a few factual errors and misprints have been corrected, and some additional references added to the Notes and Further reading. My thanks to Bendt Alster, Rainer Boehmer, Tina Breckwoldt, Jerrold Cooper, Stephanie Dalley, Igor Mikhailovich Diakonoff and Dietz Edzard for pointing out mistakes and suggesting additions.

J.N. Postgate
1991, 1994

Note

In the transliteration of cuneiform texts certain conventions are used. The letter š is the equivalent of English sh; ṣ is the emphatic s encountered in Akkadian and other Semitic languages. In cases where the distinction is needed, **bold face** is used for Sumerian, *italics* for Akkadian words. Square brackets – [ ] – enclose portions of a text which are missing on the original but have been supplied in translation. When citing Sumerian I have dispensed with the diacritics used by specialists, except in a few cases where it seemed desirable to retain them.

The metrology of Mesopotamia is enormously complex, but in citing cuneiform documents some measures of weight, volume, etc. cannot be avoided. I have not adopted a rigid approach since (as explained in the Epilogue) there is no attempt to broach the quantitative aspects of the record. Nevertheless, the following list with approximate modern equivalences may be helpful to the reader. The tables are deliberately restricted to measurements used in the text; for the details of the complete systems see Powell 1989.

Length	1 stage	**danna**	*berum*	= 10.8 km	
	1 cubit	**kuš**	*ammatum*	= 0.5 m	
Area:	1	**bur**		= 6.48 ha	= 3 **eše**
	1	**eše**		= 2.16 ha	= 6 **iku**
	1	**iku**		= 0.36 ha	= 100 **sar**
	1	**sar**		= 36 sq.m	
Weight:	1 talent	**gun**	*biltum*	= 30 kg	= 60 minas
	1 mina	**mana**	*manum*	= 500 g	= 60 shekels
	1 shekel	**gin**	*šiqlum*	= 8 g	
Capacity:	1 bushel	**gur**		= 300/240 litres	= 5/4 **bariga**
	1	**bariga**		= 60 litres	= 6 **ban**
	1	**ban**		= 10 litres	= 10 **sila**
	1	**sila**	*qum*	= 1 litre	

Notes:

(1) The bushel in particular varied in the number of lesser units it contained, between different cities and dates; 300 **sila** is the norm from the Akkad Dynasty on.

(2) In some passages I have used the 'Sollberger convention' for this series, in which expressions such as 2.3.1 would refer to the 3 highest units in the series, thus: 2 **gur** 3 **bariga** 1 **ban**.

Prologue

The history of the western world begins in the Near East, in the Nile Valley and in Mesopotamia, the basin of the Tigris and Euphrates. Here two contemporary but strangely differing cultures served as the centres from which literate civilization radiated. Egypt, physically constrained within the narrow strip of the Nile Valley and isolated from western Asia, retained its highly idiosyncratic identity with little infusion from elsewhere, and did not export its language or script or other artistic forms, except upstream to Nubia. Mesopotamia was open along both flanks to intrusion from desert and mountain, and its cuneiform script was exported across thousands of miles and adapted to a great variety of languages. The record of the early stages of these two formative cultures also comes to us in different shapes: most of the early records surviving from Egypt are formal texts with a ceremonial or religious content, and much of our knowledge of their life comes from the superb detail of the tomb paintings. For Mesopotamia very little pictorial evidence has survived, but the durability of the clay tablet has given us enormous sheaves of written detail about the organization of early society.

A new account of the world's earliest urban civilization will always be needed, not least because the mass of documentary evidence is far from even a preliminary exploitation, and growing every year. Some explanation of the approach I have adopted may however be a good thing. Existing books on Mesopotamian history and civilization have usually been written by philologists working from the texts: they see the third and early second millennia as the first half of a 3000-year tradition of cuneiform culture in the Tigris–Euphrates basin, and indeed this is the case. I have deliberately taken a different course. First, I have stayed within the early period. There are various reasons for this. The documentary base is much richer at this time than later (although literary and religious texts are much rarer), both in numbers and in variety. We can therefore say much more in detail about the social and economic scene. Then, there is a major hiatus about 1500 BC, which to my mind divides the world of the ancient Near East decisively into two. The Old Babylonian world has deep roots in the third millennium BC: its documentary sources are mostly of a rather different nature from those of the third millennium, giving us more qualitative detail over a wider range of topics and less solid quantitative data, but time and again we find an assumption about the third millennium, extrapolated from the extra detail of the Old Babylonian period, is eventually vindicated by a contemporary reference. An understanding of early Mesopotamia is no more dependent on knowledge of the world after 1500 BC than fifth-century Athens requires a knowledge of the Byzantine Empire. Whereas the Kassite and Middle Assyrian kingdoms are the inheritors of the cultural

traditions of Babylon, politically they belong to quite another order, well worthy of study in their own right but very different. Generalities can be made about the period 3000–1500 BC with some profit, but to attempt to generalize for the entire sweep of Mesopotamian civilization often reduces the statements to meaninglessness.

Chronologically, therefore, our subject is Mesopotamia from 3000 to 1500 BC. It is aggravating that no convenient term is available to refer to this period as a whole, but the phrase 'Early Mesopotamia' has been used by others before me, and will have to serve. Geographically, both South Mesopotamia, the alluvial Tigris and Euphrates plain, and North Mesopotamia, the lands between the Zagros, the Anatolian plateau and the Euphrates at Carchemish, are equal partners in the civilization of the third and second millennia. This book however concentrates on the south because it is only during the second millennium that the available documentary sources allow us to say much about the north. Further, the society and economy of the north are palpably different, and since my effort has been to give a coherent account of these aspects it is not helpful to jump about and include the occasional reference to the north where it happens to appear relevant. My apologies, therefore, to Subartu for seeming to ignore it, and let me stress here that this is not intended to diminish the importance of its contribution. That there is frequent reference to Mari and its amazing archives and discussion of Assur's merchant colonies in Turkey is only apparently an exception, since these two cities can be seen as outposts of the southern culture.

Most other general books about Mesopotamia are written by archaeologists for archaeologists. Some take us through prehistory, treating early historical Mesopotamia as the culmination of a process but not usually according it a detailed description in its own right; others are straightforward accounts of the archaeology, art and architecture. This book is designed to fill a void, by describing early Mesopotamia from the written sources, but in terms which will be useful to the archaeologist, whether a Mesopotamian specialist or from elsewhere. This means eschewing the traditional historical enumeration of kings and dynasties, and directing attention to those aspects of the culture which are most easily correlated with the archaeological evidence. There is a blatant proselytizing motive behind this. While the historian or anthropologist is usually willing to look back in time to an earlier world (and I hope they will find this account enlightening), the prehistorian all too often ignores what came later. Yet those who work with early administrative texts are continually aware that they contain detail on precisely those activities which can be reflected directly in the archaeological record. Mesopotamia should be able to offer archaeologists working in all comparable fields with a series of paradigms, in which the pure excavated record can be compared with documentary sources as a check on the deductions frequently made without such a cross-check. At present we are far from achieving this, because there are not enough specialists working with the cuneiform sources, and not enough archaeologists collecting evidence in the form required to enable such comparisons.

Concentration on the social and economic aspects of the society is therefore deliberate, and determined in good measure by the nature of the available documentation. It is in no way intended to belittle the importance of the less material aspects of the civilization,

those reflected in 'literary' and 'religious' texts: in current archaeological usage, the 'symbolic' as opposed to the 'functional'. Although political ideology finds a place in chapter 16, I am conscious that my own specialization has left on one side much that should be said about the religion and the scribal world of early Mesopotamia. That would need a different book, not least because it would require constant reference to the cuneiform tradition after 1500 BC; for the present, A.L. Oppenheim's book, *Ancient Mesopotamia* (Chicago, 1964), covers much of this ground, but it is beyond question that more general study of the literature and religion of the early period by real specialists is desperately needed. Space has conspired with my own ignorance to confine my remarks on technical subjects like mathematics, music or astronomy to the minimum, but this should not be taken to imply that they are not important ingredients in Mesopotamian civilization. Some important topics, perhaps most notably taxation, have not been sufficiently studied by the specialists for me to have attempted even a provisional account. Others, like the origins of writing or foreign trade, seem to me to have attracted plenty of attention in recent years and I have kept my treatment of them brief for this reason. The astonishing wealth of detail from the palace archives of Mari is not perhaps exploited as much as it should be: but here again two recent books (Malamat 1989; Dalley 1984) afford an opportunity for the English reader to learn about some of the recent work.

Part I

Setting the scene

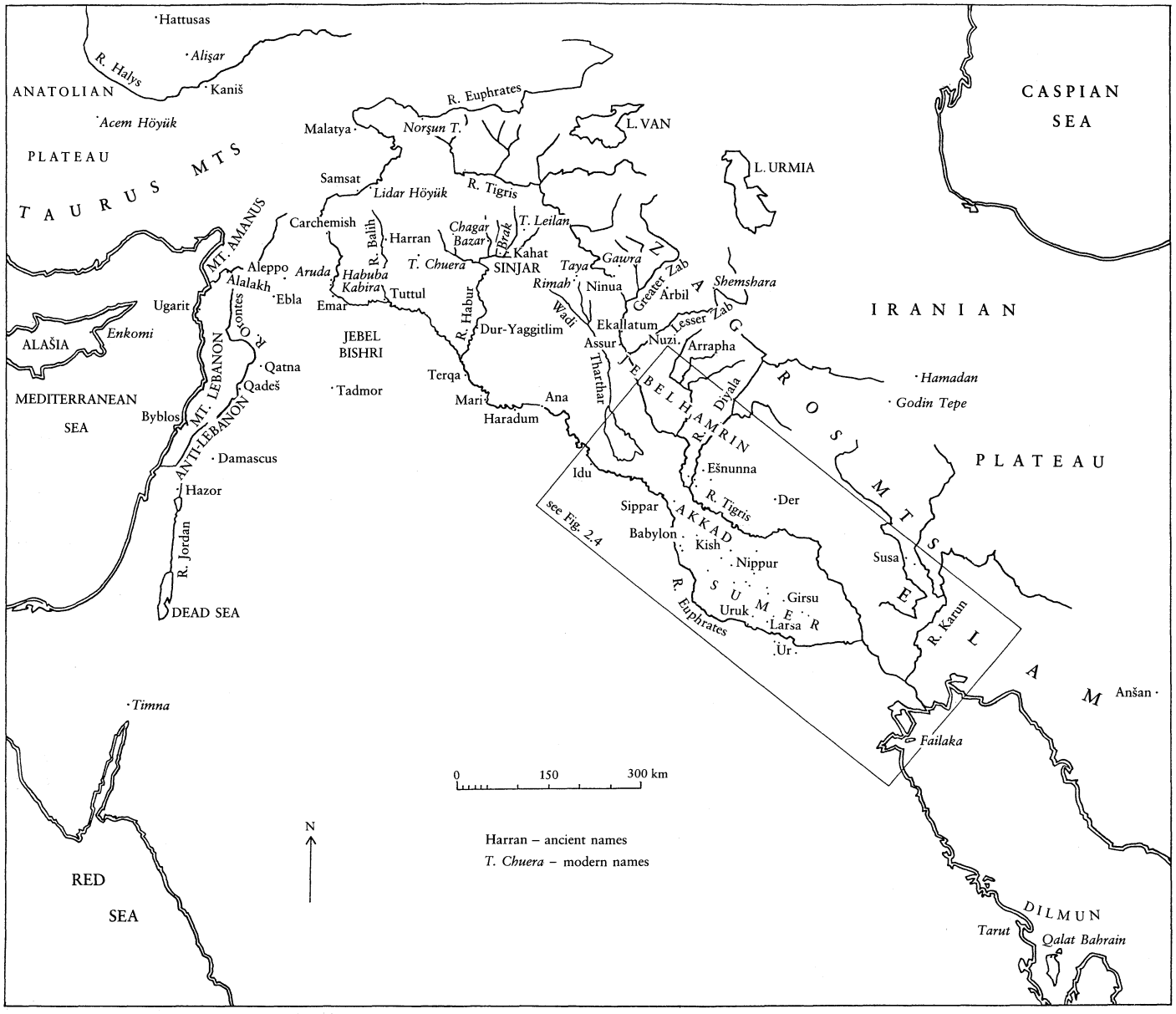

Figure 1:1 The Near East 3200–1600 BC

1

Mesopotamia: the land and the life

The name 'Mesopotamia', coined for a Roman province, is now used for the land between the rivers Tigris and Euphrates, and in many general books it features as the eastern horn of the 'fertile crescent'. The Mesopotamian heartland was a strip of land wrested by human vigilance from adverse climatic conditions. Its geography is essential to the understanding of its history: it defines the lifestyle of the agricultural community, and thereby of the city. It preordains the location of settlements and of the routes between them. Extremes of temperature and abrupt changes in landscape divide the area into very distinct environments, which can be blocked out on a map much more clearly than in most temperate parts of the world. The different zones favour or impose different lifestyles, which have often coincided with ethnic and political divisions and so have a direct impact on history. Sometimes it is the physical conformation of the country that has an obvious effect on its human geography: mountain ranges act as barriers to communication, plains enable it and rivers channel it. Major political units grow up in areas of easy communication, whether in the South or North Mesopotamian plain – Sumer, Babylon, Assyria – or on the Iranian or Anatolian plateaux – Elam, the Hittite Empire, Urartu; the intervening mountain ridges and valleys of the Taurus and Zagros, like so many mountainous areas in the world, foster local independence and discourage the rise of larger groupings, political, ethnic and linguistic. Here there were never major centres of cultural diffusion, and it was on the plains of North and South Mesopotamia that social and political developments were forged.

Our approach to Mesopotamia is that of many westerners before us, from Herodotus on, drawn by the reports of ancient cities in a fertile plain. Coming from the Mediterranean past Aleppo, the point of departure is a quay on the right bank of the Euphrates where it flows almost due south after leaving the Turkish mountains. Here at different times Zeugma (Birecik), Carchemish, Emar, and before history Habuba Kabira were the principal ports. As we float downstream, we leave behind us the agricultural lands which stretch almost unbroken from the Euphrates along the foot of the Turkish hills, and the river cuts its way through a dry plain on each side (Figure 1:2). Here and there along its course there is a village, or sometimes a small town, with orchards and crops flourishing on the alluvial soils left by the river and occasional side wadis in the bottom of the valley, but in the entire 700 km stretch the places of historical importance can be counted on the fingers of one hand: just below the junction with the Habur was the city of Terqa, already important

Figure 1:2 The Euphrates at Ana looking east. In the river, piers of a medieval bridge link the right bank to the island; on each side brown cliffs rise above the date palms, flanking the valley.

in the third millennium BC as recent excavations have shown, and another 80 km downstream, where the valley bottom opens out to a width of 15 km, lies Mari. Below this, the ancient island of Ana, now sadly under the waters of another dam, and Hit, where the bitumen bubbling up from underground was exploited long before Herodotus tells us that Nebuchadnezzar used it for the walls of Babylon.

The desert

Most of the landscape, if we disembark and scale the dusty cliffs each side, is empty, and, except in spring, brown. On the left is the Jazirah, which stretches to the Tigris and the fringes of cultivation south of Mosul, on the right the Syrian desert. Both are the ancestral home of the nomad. The desert, never uniform in character, encloses Mesopotamia on the west from the Euphrates bend down to the head of the Gulf, and is penetrated by only a few routes open to the traveller from outside, notably that taking off from Mari and making west to the oasis of Tadmor (classical Palmyra) on the road to Damascus. Until very recently it retained a fauna of its own with clear links to Africa: ostriches were hunted by the Assyrians, cheetahs were reported this century, and far down in the Arabian peninsula the hartebeest. The wild ass, or onager, is another casualty of modern times, but their herds were vividly described by travellers such as Xenophon and Layard.

Today's desert nomads are almost exclusively of Arab stock. Similar well-defined tribal groups were present round the fringes of settled lands as early as our records go, but one

cannot assume that the modern lifestyle is of ancient origin. The bedu of the western romantic consciousness and Arab heroic tradition is a relative newcomer: as one penetrates deeper into the desert, pasturage becomes scanter and distances from well to well increase, making long-distance travel impossible without the camel, with its greater speed and endurance in desert conditions. As far as we know, before about 1000 BC the camel was not domesticated, and hence the 'archetypal' pure beduin lifestyle impossible.[1]

A great deal has been written in recent decades about nomadism in the ancient Near East, stimulated largely by the fascinating light cast by the documents from the palace at Mari, seat of a recently settled nomadic dynasty. As more detail is recovered it becomes increasingly clear that, although the contrast between 'the desert and the sown' was always vividly felt, they were never entirely independent of one another. Beduin often camp well within the limits of agricultural settlement today, finding grazing for their sheep. They act as shepherds for the urban landlord, or villagers who have larger flocks than they can graze in their own fields. The Arab tribes of the Jazirah do not roam aimlessly across the land, seeking grazing wherever they can find it, but have well-established summer and winter pastures, to which they move at the change of season every year along known routes, and there are often small settlements in the winter grounds where part of the tribe may stay and engage in agriculture (Figure 1:3). Grazing rights to different areas are agreed both within the tribe and with other tribes and any settled inhabitants of the areas in

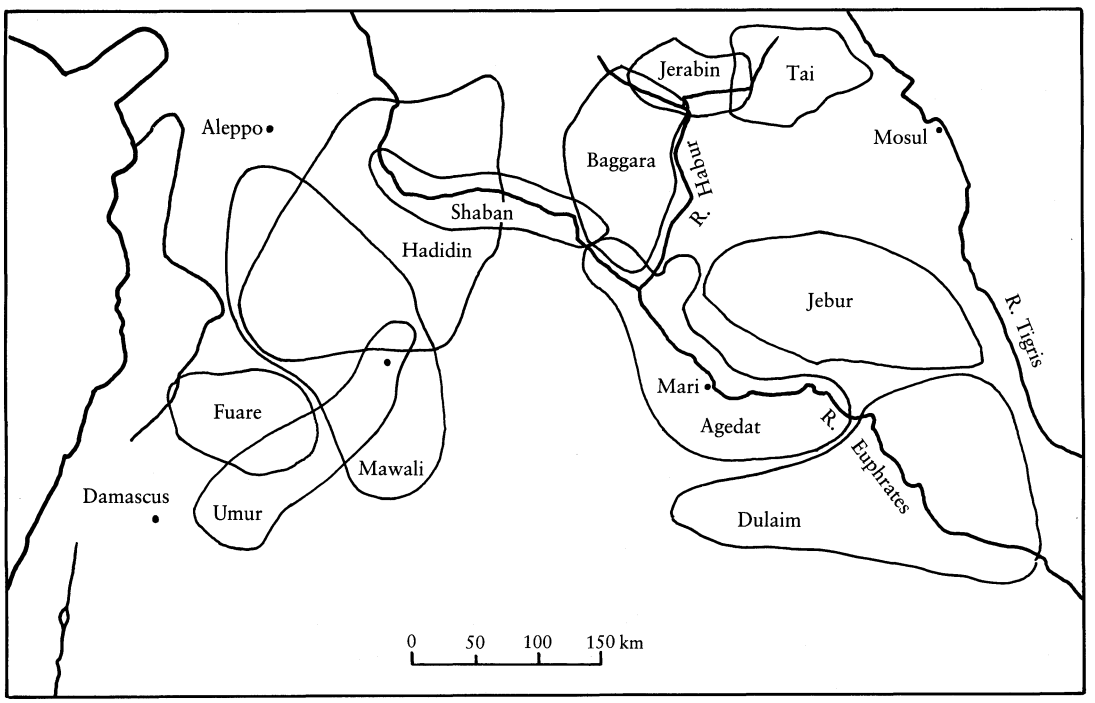

Figure 1:3 Traditional grounds of sheep-rearing tribes in Syria and North Mesopotamia. (After Wirth 1971, Karte 11)

question.[2] All the same, this is a fruitful ground for dissent, and the location of the summer grounds must have varied throughout history as climate or politics moved the southern fringes of settled agriculture closer to or further from the hills. Much of the political history of both South and North Mesopotamia revolves round the tensions between these different lifestyles, and we shall return to the role of the nomad below (chapter 4).

The southern plain and marshes

Eventually, after much meandering, the Euphrates enters the southern alluvial plain. The contrast with the lands to the north is intense, and is the direct consequence of the climate and the physical geography. Geologically, South Mesopotamia is of very recent origin – an alluvial deposit laid down by the two rivers (and their predecessors) in the deep trench formed between the Arabian shield to the west and the sharp folds of the Zagros mountains. The most obvious characteristic of this plain is its flatness. As much as 500 km north of the Gulf coastline, the general landscape is still less than 20 m above sea level, giving a gradient of 1:25000. This has various consequences. There is little to restrain a river which chooses to change its course, and in the space of a few years the natural landscape can change from barren sandy desert to marsh. It is very easy to direct water from the rivers on to the land, but much less easy to divert it and drain the land. The most conspicuous features of the landscape are the ancient sites, and the solid green blocks of palm-groves. Only the lowest of these are concealed by the long banks each side of ancient or modern canals. Although there can be much local variation, as we shall see later, the patterns repeat themselves time and again, and the landscape changes little overall.

Southwards the plain gives out where the rivers, united today at Qurnah into the Shatt al-Arab, lose much of their water into wide marshlands before reaching the open waters at the head of the Gulf. Here villages of reed houses perch on islands of vegetation (Figure 1:4). For mile upon mile one can slide through avenues of reeds which far overtop a man's

Figure 1:4 The marshes of the Tigris–Euphrates delta.

height, in a silence broken only by the calls of birds and the crashing of water buffalo in the thickets. Much romanticism has been lavished on the marsh dwellers of the south by European writers, attracted by their reed architecture and primeval lifestyle, as well as their extreme habitat with hidden ways through the reeds and the sense of penetrating a world apart. We have detailed accounts of their boats and houses, of their fishing and herding activities, and of their social customs. Life in the marshes is built round reeds and fish, with few concessions to the technical advances of civilization, so that it need have changed very little since neolithic times; but whether it is in fact an archaic survival or a much more recent adaptation to a marginal environment is another question. According to Salim, the usage of the marsh dwellers themselves confines the term Ma'dan to the buffalo breeders, and a good proportion of them are, or claim to be, descendants of beduin tribes.[3] Tradition also relates that many of the marsh dwellers are descended from escaped slaves from the time of the Zanj rebellion in the ninth century AD. In any case, since water buffalo were introduced to Iraq during the early Islamic period, it is deceptive to treat the 'marsh Arabs'' way of life as inherited unbroken from prehistoric times. As Salim's study makes clear, the establishment of stable political conditions tends to break down the isolation of the marsh dwellers, and in early Mesopotamia several of the principal cities were on the fringes of marsh or sea. True, we hear from Sennacherib about campaigns against Chaldaeans living 'in the middle of the marshes', but they must have taken up this life precisely during an absence of strong central authority. It would be wise, therefore, while accepting that the marsh dwellers of today may be living a life not unlike that of the earliest inhabitants of Ur or Eridu, not to assume that they represent an archaic survival.

The eastern flank

The marshes also stretch north for some 200 km along the east side of the Tigris as far as Amara, cutting Mesopotamia off from direct access to the neighbouring plain of Susiana, which was always an important centre of its own. To reach Susiana from Mesopotamia two routes were possible: a narrow and uncertain passage between the marshes and the Gulf to the south-east,[4] or the more normal route pushing north-east until the marshes give way to dry land and then turning to the south-east, skirting the flank of the Zagros, and during all our time span passing the city of Der. Precisely how far north this point was must have varied, and the nature of this route depended on the level of exploitation of the waters of the river Diyala: when this was actively pursued, irrigation from the left bank fingered out into the lands to the south-east, and enabled the growth of major cities such as Ešnunna (Tell Asmar) or Tell Agrab – sites which are now once again within the limits of cultivation but lay in high desert in the 1930s when the Oriental Insitute of Chicago began excavations there.

While the Diyala waters created a corridor between the north-eastern corner of the Mesopotamian plain and Susa and beyond, the river also served as a principal route for those travelling due east and even north as well. The eastern route is variously called the Silk Road or the Great Khorasan Road. After crossing the Iranian frontier it soon has to

climb nearly 1,000 m in a spectacular pass called Tak-i Girreh to the plateau, leading through Kermanshah to northern Iran and on eastwards to the cities of Central Asia and finally China. The northern route unites travellers from Susiana with the even busier route from the Mesopotamian plain. From Baghdad, and before that from any of the great cities at the northern end of the plain, the road to Assyria did not head due north along the banks of the Tigris like the modern asphalt, but sought more hospitable terrain where villages were more frequent, supplies of food and water easier to come by, and there was less risk of marauders. This route, formalized by the Achaemenid kings as the Royal Road which ran from Susa to Sardis in western Turkey, meant following the Diyala upstream for some 180 km, until the abrupt rock wall of the Jebel Hamrin is reached. This outlying fold of the Zagros mountains runs in an amazingly straight and regular line for hundreds of kilometres. South of the Diyala breach it gradually loses height and dies out within about 25 km; but to the north it rises to over 300 m above the plain, and, although it is not high enough to feature on many maps, it is steep enough and rough enough to form a major barrier, with only a few crossing places (Figure 1:5).

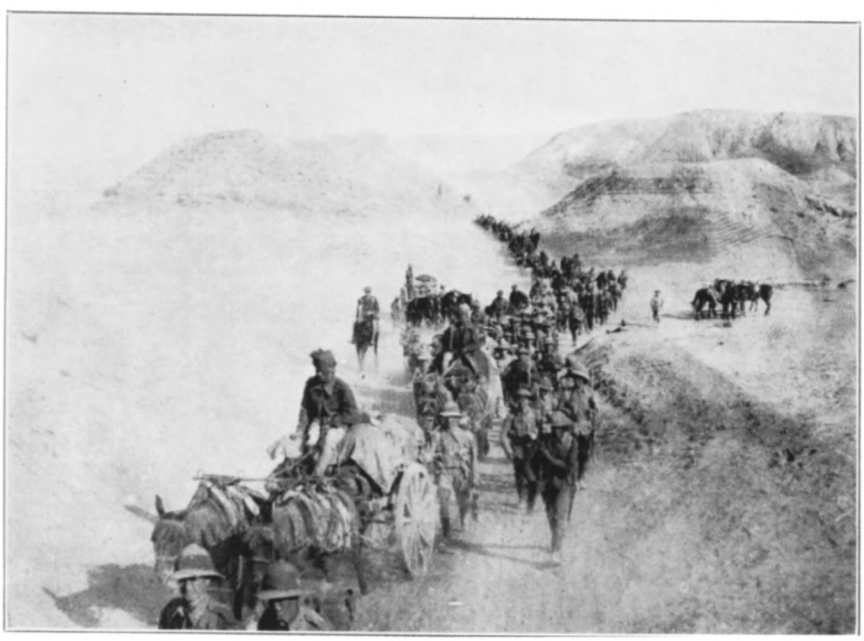

Figure 1:5 The Jebel Hamrin: 'British transport crossing the Sakaltutan pass'. (From F.J. Moberly (ed.), *History of the Great War, based on official documents, vol. IV: The Campaign in Mesopotamia 1914–1918*, 1927, 94)

The range is not merely an obstacle to the traveller – it serves as an important natural and often political dividing line. Beyond it the alluvial plain and its familiar conditions are finished. Most of the terrain is far from flat, and, with increasing rainfall as one approaches the mountains, the countryside becomes greener. As a natural barrier, therefore, it separates the alluvium from the northern plains; as a political line it protects Sumer and

Akkad from the barbarous north and east. From early times the whole range, including the section called Jebel Makhul, south-west of Assur on the west bank of the Tigris, was known by the name of Mount Ebih: it features in Amorite personal names, and its symbolic value as the first outcrop of the mountains which fenced the eastern borders is expressed by the Sumerian myth of Inanna and Ebih, where it stands for unruly enemies in the hills.[5]

Before moving to the north, let us first follow the Diyala river further to the east, across sporadically cultivated rolling countryside, until we meet the first major Zagros ranges, and passing through them debouch on to the fertile plain of the Shahrizur in Iraqi Kurdistan. This is the largest of three intermontane plains nestled among the Zagros along the north-eastern borders of Iraq. The capital of the area today is the city of Sulaimaniyah, founded in 1781 as a summer station for the Pasha of Baghdad, but the centre of gravity has probably always been towards the south end in the region of Halabja.[6] Towards the north the plain is gradually hemmed in by the mountains, and finally reaches the left bank of the Lesser Zab which cuts through the range in deep chasms and was only traced to its source late in the nineteenth century. Upstream and on its right bank is the small Rania plain, now very largely under the waters of the Dokan dam but inevitably a natural and often political entity in antiquity, at least in the Old Babylonian period centred on the site of Tell Shemshara which has yielded archives of that date (Figure 1:6). And further north still is the plain of Rowanduz, only accessible by difficult mountain passes but large enough again to form a significant homogeneous area.

Today the mountain regions of modern Iraq are almost exclusively the preserve of a bewildering complex of Kurdish tribes, although towards Turkey there are still pockets of Aramaic-speaking villagers who retain Christianity and a fierce conviction of their Assyrian origins. There are a few towns, acting as centres for the different sectors, but most of the population are farmers, working fields in the valley bottoms or stepped in hard-won terraces up the hillsides on which their villages hug the slope. Often part of the village decamps in the summer months to take the sheep and goats up into the high country, living in tents or flimsy shacks. It seems probable that their traditional lifestyle is little changed from prehistory. Other Kurdish tribes, e.g. some of the Jaf, had an entirely different regime, being transhumant shepherds living exclusively in tents. Their summer pastures are high in the hills, previously across the Iranian frontier east of the Shahrizur, but in autumn they migrate westwards to the open plains and foothills beyond the mountain ranges.[7] The Kurdish language is Indo-Iranian, perhaps a descendant of Median, and as such probably entered the area during the late second or early first millennium BC. Before that the population of the Taurus and Zagros borders is mainly Hurrian speaking where we can identify them; but to the east in particular we have to reckon with other language groups including Gutians, Kassites and Elamites. What is clear from the accounts we possess is that, as in all mountain regions, the political scene was minutely fragmented; and the influence of the mountain tribes on the lowland political scene has never matched that of the nomad. Raids from the hills tended to be of short duration, and with the exception of the Kassites no mountain tribes succeeded in establishing themselves as the ruling dynasty of the plain before the Achaemenid empire.

In antiquity the slopes must often have been forested, but today there are only scattered

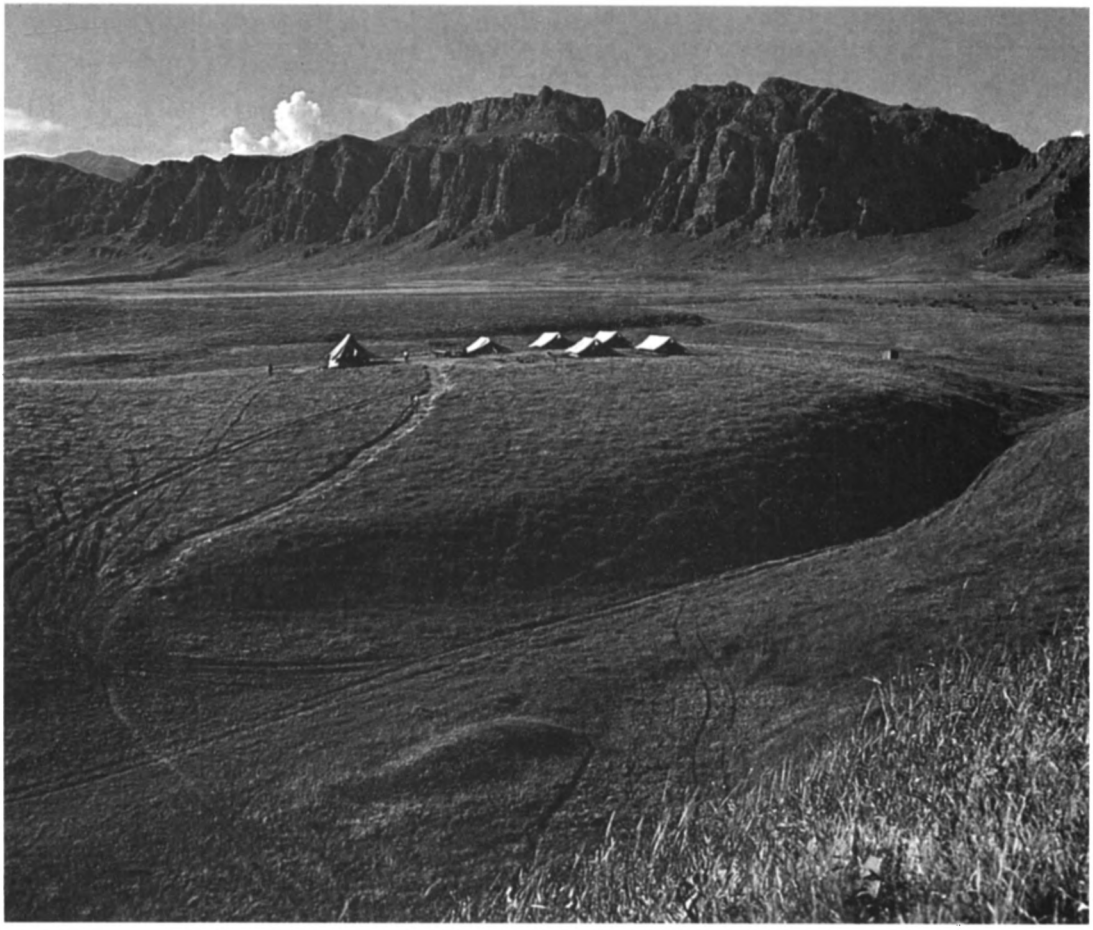

Figure 1:6 The plain of Dokan (or Rania): the Danish excavation camp, 1957. (Laessøe 1963, Plate 12a)

remnants left by the depredations of goats, charcoal burners, and other human activities. 'In favourable habitats the *Quercus* formations provide an almost closed forest of trees of medium height (5–10 m), especially in relatively inaccessible mountain districts remote from villages and trade routes' (Guest 1966, 73). In the eighth century BC, Sargon of Assyria passed through the Zagros on to the Iranian plateau, and in his letter to Assur, the national god, reported that 'I passed between Mt Nikippa and Mt Upa, high mountains clothed with all kinds of trees, ... over which shade is spread like a cedar-forest, and on whose paths the traveller does not see the rays of the sun'.[8]

The northern plains and the jazirah

The Assyrian kings were much impressed by the mountains which fringed their land, and Sargon's son tells us how, when campaigning in the modern Cudi Dağ, which tradition identifies as the Ark's final resting place, he 'leapt from rock to rock like an ibex, and then sat on a rock and had a cold drink'. The awe with which these absolute despots describe their mountaineering exploits reflects their lowland background, the wide open spaces of northern Iraq, which stretch westward across North Syria to the Euphrates. On the map, these northern plains look just as flat as the southern, but this is deceptive. For one thing, there are minor ridges of hills which, however low, form significant natural divisions of the landscape, 'rugged ranges, scored deeply by ravines, and except for goat-tracks crossed by no regular paths ...' (Mason 1944, 79). Two examples may serve: the jebel behind Kerkuk to its east (Kani Dolman Dagh) divides the Zab–Diyala block longitudinally, much like the Hamrin itself further to the south-west, and so decrees that most routes run parallel to the range on one side or the other, or confines them to certain crossing places where the terrain is easier. Similarly on the other side of the Tigris routes are aligned with the Jebel Sheikh Ibrahim, which merges eventually into the imposing hump of the Jebel Sinjar. It too is a low range, but it is a fault with a steep broken escarpment on its south-western face, and to scale it involves scrambling and discomfort, and the regular routes will always have passed parallel to it to the south or north. Where there is a convenient crossing place there will usually be a settlement of some importance, of which Tell Afar, ancient name unknown, and Kerkuk, ancient Arrapha, are good examples.

Even apart from these minor ranges, the general terrain is far from flat (Figure 1:7). Much of it is broken limestone country, with 'shallow valleys between low, smooth hills, often with rock outcrops near their summits' (Dorrell 1972, 69), only occasionally cut through by deep seasonal wadis. In places there are patches of good soils forming miniature alluvial plains; one example of this is south of the Jebel Sinjar: Soviet archaeologists working in the region have used the term 'valley' to refer to this environment, but the English word is deceptive, since the strip of well-cultivated land south of the hills is transected by the wadis making their way southwards to join the Wadi Tharthar, and is bounded on the south only by the transition to broken limestone country.

In contrast with the south, the rolling configuration of the land does not permit cross-country canals except as enormous engineering projects – such as the Assyrian and Sassanian kings, and modern governments, have created – and agriculture is therefore dependent for its water on rain. While the settled plains are delimited to north and east by the foothills of the Zagros and Taurus, their southern and eastern borders are therefore defined by the limit of adequate rainfall. This runs in an arc parallel to the mountains, from the Euphrates at the latitude of Aleppo, close to the Jebel Sinjar, and then curving to the south-east across the Tigris above Assur to cross the Diyala near the Jebel Hamrin. The exact location of the limit varies considerably both from year to year and with the modern authorities writing about it. Geographers link places receiving equal amounts of rainfall with contour lines known as isohyets, and different writers may choose slightly differing definitions. According to Wirth, a successful barley crop can be achieved with

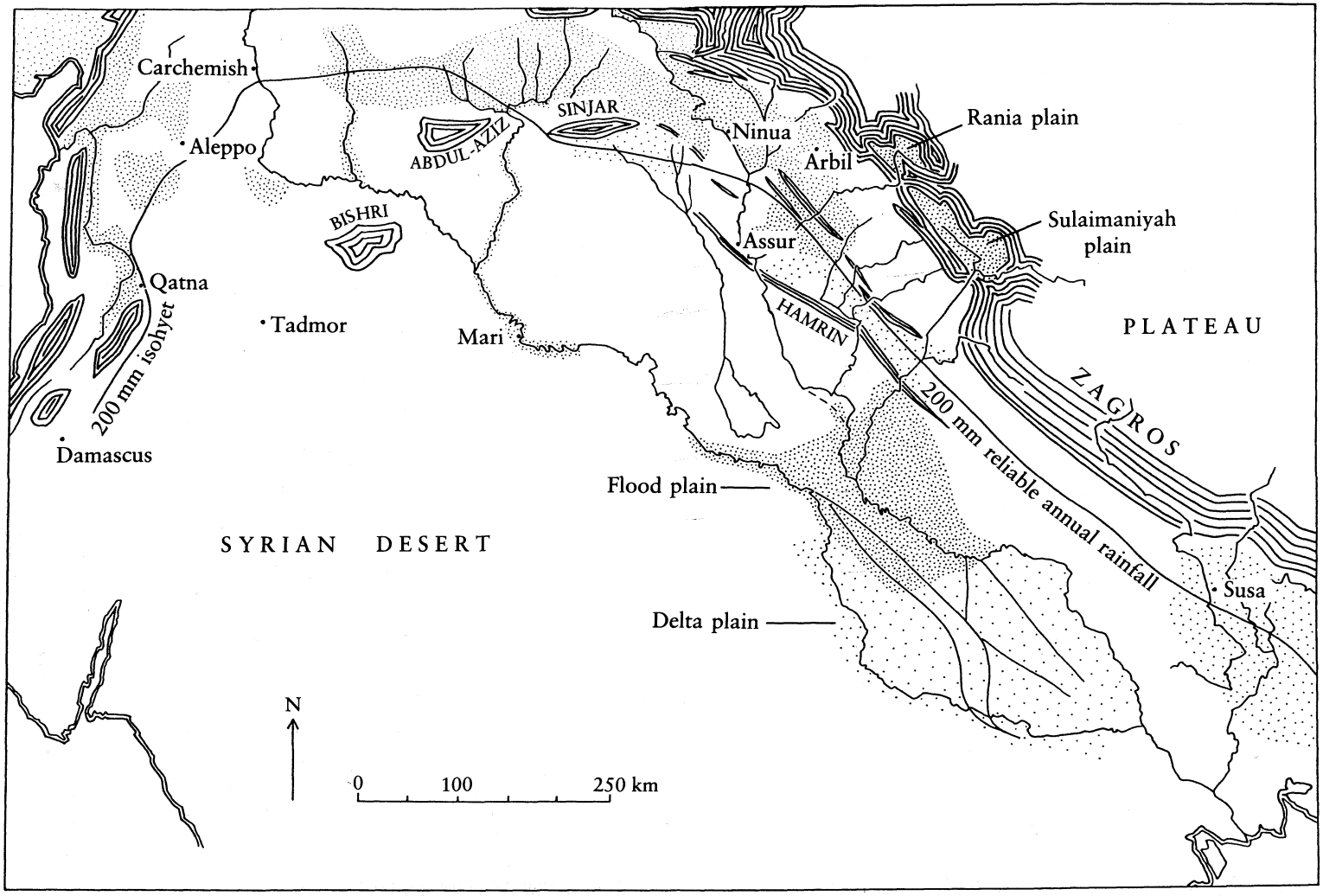

Figure 1:7 Mesopotamia and Syria: relief and soils, showing best areas for irrigation and rainfall agriculture. (Based partly on Buringh 1960 and Wirth 1971)

200 mm of fairly consistent winter rainfall, and wheat with 250 mm; orchards and summer crops need to be north of the 400 mm isohyet.[9] It is not sufficient, though, to draw the annual rainfall averaged over a number of years onto the map and assume that agriculture is possible above the resulting 200 or 250 mm isohyet: for a continuous settled existence the farmer requires a locality which can *depend* on adequate rainfall in at least three years out of five, and this generally corresponds to an annual average of about 300 mm. Because the change in rainfall on these flat plains is much more gradual than in the hills and mountains, this means that the effective limit of settlement is well to the north and east of the 200 or 250 mm isohyets. Hence the southern limit of agriculture, and thus of settlement, must always have been a tattered fringe giving onto the semi-desert between Tigris and Euphrates and, east of the Tigris, between the Zabs and the Diyala.[10]

Today there are no substantial settlements in the Jazirah south of the Sinjar range, and yet any visitor can, like Layard in the 1840s, count 'above one hundred mounds, throwing their dark and lengthening shadows across the plain' (Figure 1:8).[11] These include a chain

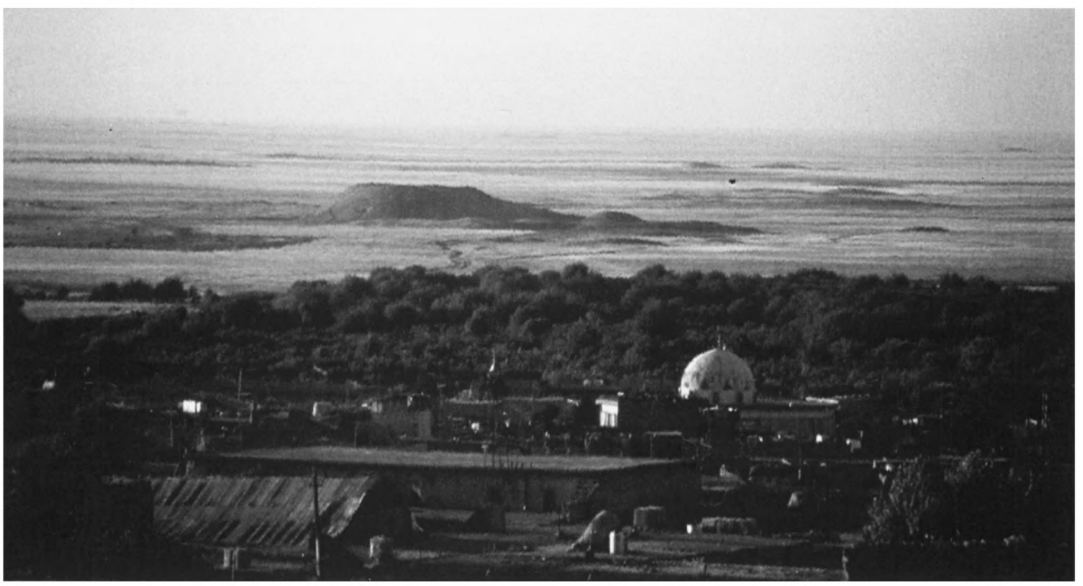

Figure 1:8 Ancient mounds in the jazirah between the Tigris and Sinjar: view south from the modern citadel at Tell Afar. (Photo: courtesy David Connolly)

of major second and third millennium sites, of which Tell al-Rimah is the only one excavated, and some of which were the capitals of small independent polities, proving that in antiquity the area supported a considerable population. At least two major factors may help to explain the difference between modern and ancient conditions, one social, the other climatic. Clearly a slight reduction or increase in the average annual rainfall would shift the limit of viable agriculture. Unfortunately, evidence for climatic fluctuation of this kind is lacking for Mesopotamia proper, and although it does exist for surrounding areas, it is not precise enough to help in this context, because even a slight shift in precipitation has

a major effect in terms of horizontal extent (Figure 1:7). It has often been suggested that tree-cover was better in prehistoric times, that the oak and terebinth scrub still visible on the Jebel Sinjar would have been widely spread across the currently treeless plains to north and south of the hills as well, but this is not supported by any hard evidence as yet. Traces of water courses near Tell al-Rimah suggest that there may have been better water resources within historical times. Wadis, running from the slopes of the Jebel Sinjar, today cut into the plain and make their way to join the Wadi Tharthar; perhaps in earlier years these were more reliable, and could even have been diverted into local canal systems, or perhaps there were springs of sub-surface waters which are now depleted.

Life on the alluvial plains

In order to understand the nature of Sumerian civilization, we must now look more closely at the southern plains. The land of Sumer and Akkad forms a well-defined unit not merely because it occupies the southern alluvium, but because an urban lifestyle there requires a very specific subsistence strategy. Despite the natural vegetation which provides grazing in the steppe and thickets along the rivers, rainfall here is quite unreliable and inadequate to support agriculture. On the other hand, the soils of the alluvium are deep, and the flatness of the landscape enables an ordered system of fields and canals bringing water to them. Throughout history whenever South Mesopotamia has fostered a flourishing society this has been centred round an efficient agricultural regime, dependent on the controlled exploitation of the rivers. The limits of the potentially homogeneous area can be easily defined, since they are the limits of the alluvial soils accessible to canal or lift irrigation. Along the south-western flank are the rocky scarps which herald the edge of the desert west of modern Kerbela and Nejef. On the south the plain is hemmed in by the marshes at the head of the Gulf, in which the two rivers almost lose themselves before they reach the sea. Eastwards the southern reaches of the Tigris are also separated by marshes from Susiana (modern Khuzistan), while further north there are drier lands which can be irrigated from the left bank of the Diyala, and so form a north-eastern lobe of the settled plains. Northwards the limits are imposed by the geology: above Ramadi to the west and Baquba on the east the alluvial soils come to an end except in a narrow strip along the river beds, and hence there are no major settlements north of this point away from the rivers until we reach the North Mesopotamian plains. This enumeration shows how the lands of Sumer and Akkad are boxed in by natural frontiers on all sides, and explains how their inhabitants were linked by a common lifestyle even when politically they may have been quite disunified.

Thousands of years of human interference prevent us from knowing what that plain may have been like in its pristine condition, but it was certainly never a homogeneous environment. Although apparently flat to the eye, it is nowhere entirely so. Any water course, natural or controlled, will gradually build up a shallow bank or levée, to the extent that in time the rivers and canals flow above the level of the surrounding land, which is divided by their banks into basins imperceptible to the eye, but critical to the flow of

water. To quote H.T. Wright, 'When ... man-made factors compound the varied natural situation on the surface of the Euphrates geosyncline, then the physical environment becomes so complex that it defies detailed interpretation.'[12]

Under natural conditions, as the two rivers make their way through the alluvial plain they would tend to meander and to burst their banks in flood. Neither of these habits is convenient to the farmer, and from prehistoric times efforts would have been made to contain the flood water and discourage meandering and minor shifts in the course by building up earth banks. When the river does get out of control there is a serious risk that it may change its course drastically. This has certainly happened several times in the last few thousand years: below Kut there are at least three Tigris channels – the modern channel which may be of relatively recent origin, the modern Shatt al-Gharraf (now a man-controlled canal, but very likely on the line of an earlier natural bed), and the Dujail, on which the medieval city of Wasit stood, now abandoned. Above Kut the Tigris has probably not shifted substantially in historical times, although the Diyala has certainly shifted eastward at least once, but at least four major Euphrates channels are known at different dates, diverging from each other up at the top end of the alluvium above ancient Sippar.

How the landscape appears is directly affected by the level of human intervention. Under 'natural' conditions the mud-flats and levées of the major rivers could support a dense tangle of vegetation, including willows, poplars and liquorice, the domain of wild boar, big cats, and other wild animals like the Mesopotamian deer, now almost extinct. As the fresh ground water of the river tails off and saline conditions increase in the less well-drained areas, this poplar and willow maquis thins out, and very little survives along the rivers in South Iraq today; but dense tamarisk thickets, which are more salt tolerant, can spring up wherever water is sufficient and the land is not wanted by man or his herds.

Out beyond the tails of the canals, cultivation ceases abruptly and, except where there are shifting belts of sand dunes, the raw surface of the land is exposed (Figure 1:9). Between the Tigris and Euphrates and any canals taken off their banks, there is to this day a broad strip of desert not reached by any water, as barren as any landscape outside the alluvial plain, home to hyenas, jackals, eagles, lions, gazelle, and in antiquity no doubt the onager. Today, as for thousands of years, this does not mean a pristine surface: as the watercourses have moved, so has human activity. Alongside the canals, river beds and meanders and levées, are the scars of ancient cities and villages, and massive boundary walls, all eroded by wind and water or shrouded in silt and sand (Figure 1:10). This is a palimpsest of human history on the plains, and with skill and patience it may be read, with the help of aerial photographs, maps and surface survey (Text 1:1).[13]

Where no escape for the waters is available they will of course collect and marshes rapidly form. The most extensive marshes are in the south of the country, but they are not only there. An extensive marsh was formed this century at the tail-end of the Musayeb canal, while the site of Nippur, now sandwiched between the irrigated regime of the Shatt al-Daghghara and the sand dunes, was in the 1880s accessible only by boat. Although the marshes obviously preclude agriculture, and today's water buffaloes were not there in antiquity, they were still a rich resource, teeming with fish, marsh birds and turtles, and