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INTRODUCTION

Persian, I have never yet run from any man in fear and I am not doing so from you now. There is, for me, nothing unusual in what I have been doing: it is precisely the kind of life I always lead, even in times of peace. If you want to know why I will not fight, I will tell you. In our country there are no towns and no cultivated land; fear of losing which, or seeing it ravaged, might indeed provoke us to hasty battle. If however you are determined upon bloodshed . . . one thing there is for which we will fight – the tombs of our forefathers. Find those tombs and try to wreck them, and you will soon know whether or not we are willing to stand up to you.

(Herodotus, *The Histories*, Book IV, 125)

The defiant reply of the Scythian chieftain Idanthyrsus to Darius, King of Persia, contains a number of points of interest to any student of nomadic pastoralism as an anthropological and historical problem. The ceaseless cycle of mobility, the lack of fixed assets and the military advantages which flow from both – all are common themes in the anthropology of Near Eastern nomadism. Historians receive the occasional glimpse of nomadic cultures and lifeways, such as the above. But, like Darius, archaeologists have had great difficulty in pinning down ancient nomads. Indeed for many years it seemed that the only archaeological traces of nomadic cultures were likely to remain those mysterious tombs or *kur-gans* to which Idanthyrsus referred.

If, like Darius, we intend bringing nomads to boot, then we would do well to concentrate not on the obvious manifestations of nomadic material culture – the tombs, the weapons, the works of art – but instead attempt to understand nomadism as a phenomenon, as a system with its own underlying dynamics and its correlates in space and time. Had Darius possessed such an understanding then he would perhaps not have been led such a merry chase; nor would his departure from the field have been quite as undignified. Likewise the uninformed archaeologist will be at the mercy of uncontrolled observations, chance encounters and tantalizing glimpses from afar, remaining blissfully unaware of the larger pattern. He will most probably depart the field in equal disarray.

Research objectives

High in the Taurus Mountains of southern Turkey, looking down on an encampment of black tents drawn up in a valley 150 metres below, I began to realize that the aim of my study was not the discovery of ancient

nomad cultures but something equally challenging. From my vantage point I could see that there was an underlying order in the location and orientation of tentsites. The layout of each tentsite and its associated features – forecourts, hearths, ash dumps, midden deposits – conformed to a single blueprint. I had seen and visited many such camps before and had studied published photographs and plans of campsites from Morocco to Afghanistan and Siberia to the Sudan, but perhaps not from quite the same angle.

I was of course familiar with Yellen's (1977) ring model of !Kung settlements and Binford's (1978a) Nunamiut hunting stand, but three things struck me here. First, most of the structures and features I could observe were recoverable archaeologically. Second, there were at least three distinct levels in the organization of the campsite: one set of rules governing the layout of workspace and features with respect to the tent itself, another set controlling the location of tents *vis-à-vis* each other as well as the terrain, and another set of factors which dictated that the campsite should be located here as opposed to a dozen other possible locations. Third, I was struck by how very different was the algebra underlying this pattern from any of the other settlement systems documented by archaeologists and by the impression – only a hypothesis at this stage – that the entire pattern was, in principle, deducible from what is known about the social and economic organization of pastoral peoples.

The settlement pattern I was observing contained three interesting qualities: redundancy, 'grain' and 'texture'. There was a high degree of redundancy in the organization of household space. Each tent, together with its work areas, features and facilities, was laid out apparently according to a single blueprint. The 'grain' was apparent in linear patterns in the location and orientation of tentsites forming parallel lines where possible but responding also to aspect and the lie of the land. The 'texture' of the settlement was a regular alternation of living floors and open spaces. There appeared to be a simple grammar underlying the spatial organization of the campsite, an understanding of which would enable a researcher to both recognize and predict the layout of other campsites. Perhaps more importantly I began to perceive that this grammar was a manifestation of the wider organization of nomadic and pastoral life. A method or series of methods, perhaps a whole framework, would be needed to explain why pastoral campsites should be distributed and organized in such a characteristic way.

In common with other volumes in this series (Gould 1980; Torrence 1986) this book is about the building of middle range theory. Middle range theory involves the identification of key variables or indicators, the construction of valid instruments for the analysis of archaeological data (Binford 1983, p.129), the definition of units of analysis and the perception of appropriate scales of resolution for the solution of different problems. Middle range theory seeks to establish sets of variables which are known to interact in a certain way for a wide range of problems, although the exact nature and extent of the interaction will vary with individual applications. These do not constitute 'covering laws' or 'laws of culture process'. A law implies a certain relationship between components – E always equals mc^2 – whereas the most we can hope for in a subject like

archaeology is some general statement that questions about energy will involve mass and some exponent of velocity.

Middle range theories are not just 'middle sized' theories or small theories upon which larger theories may be built, but theories which occupy a mid-point in the research process. If we wish to propose general theories about raw materials procurement and exchange in cultures at different levels of complexity, then we may first need to recognize that the key variables involved include control over supply and production, efficiency, sophistication of technology, simplification, standardization and specialization (Torrence 1986, pp.40–5). If an example of a 'law' is the formula for relating floor size or settlement size to population (Narroll 1962; Cook and Heizer 1968) then a corresponding instance of middle range theory is the recognition that settlement size and population size or density *interact* with each other though the nature of this interaction varies at different population sizes and also in relation to external factors such as the mode of production (Fletcher 1981, p.98). Likewise the identification of domains and modular units in David Clarke's (1972b) study of Iron Age Glastonbury is a case of middle range theory employed in the wider task of understanding the principles of Iron Age settlement systems. Essentially, middle range theory is not about laws, but about constructs and model building.

Since the inception of behavioural archaeology (Schiffer 1976) archaeologists have begun to look at sites in a new way. While Schiffer's approach was mainly confined to the reconstruction of behavioural events and distinguishing behavioural from post-depositional processes, the behaviourist perspective does not exhaust the range of possibilities opened up by the new approach. Other studies have shifted the emphasis from patterning in 'primary' refuse to regularities in the distribution of 'secondary' refuse (Schiffer 1972; Murray 1980), with a corresponding attention to the general 'maintenance of life-space' (Binford 1981) as opposed to the performance of specific tasks. If works as disparate as Yellen's (1977) account of !Kung campsites, Binford's (1978a) Eskimo hunting stand, Flannery's (1976) Mesoamerican village, Kramer's (1979) Iranian villages, Hodder's (1982) accounts of East African settlements and David Clarke's (1972b) study of Glastonbury have anything in common, it is the central notion of *site structure* defined most recently as 'the spatial distribution of artifacts, features and fauna on archaeological sites' (Binford 1983, p.144). This definition is inadequate in that it is not so much the distributions themselves that are important as the spatial *relationships* between items and/or features and relationships between the factors or variables that account for these visual patterns.

Any site may be envisaged as a set of items, artifacts or debris, organized with respect to a set of features (Binford's 'framework'). The underlying control variables may be divided into: those relating to 'body mechanics' (*ibid.*, p.145) or kinetics which may be presumed fairly constant across space and time; environmental variables involving terrain, aspect, shelter, etc., which will also be fairly constant depending on the priorities of the site's inhabitants; and social or economic factors such as kinship distance, wealth and status which may be expected to vary between populations. Also present will be sets of variables which might be

termed 'cultural', and it is here that the greatest scope for variation occurs, particularly as the size and complexity of settlements increases. I am therefore less sanguine than Binford (*ibid.*, p.146) about being able to decipher all the information 'coded into the organization of site structure'. Cultural variables in particular are liable to produce variations in form and scale which will prove resistant to the application of 'laws'. In any particular case it will therefore be necessary to understand the unique patterns introduced by cultural factors in addition to those accountable by kinetic, environmental and social factors.

This approach to site structure implies a form of 'structuralism', which should however be distinguished from the 'structuralisme' (Gellner 1982) of the so-called cognitive school. We are concerned with pattern and redundancy in spatial form and relationships without necessarily reading into this any notions of essentialism, that such forms 'have deep natures or constitutions or inner essences' (*ibid.*, p.99). Of course the kind of middle range theory advocated here could just as well be pressed into the service of 'structuraliste' or cognitive theories about human spatial behaviour, as attempted in numerous works by Hodder (e.g. 1982). The concept of site structure can be used with equal effect to support arguments about on-site behaviour and the organization of activity space on the one hand, and theories of spatial patterning based on conceptual or ritual systems on the other. A concern with site structure need not commit the archaeologist to any stance at the 'grand theory' level. However it does presuppose the use of a range of techniques for the detection and analysis of spatial patterning, which in turn place certain demands on the conduct of excavation and the manner in which data are defined, recorded, stored and processed (see Winter 1976; Bogucki and Grygiel 1981; Ammerman *et al.* 1978).

If the New Archaeology of the late 60s and early 70s taught us anything it was that data do not exist as *a priori* facts but are the result of constructs which researchers use in approaching their raw material, and reflect not only the researcher's aims and presuppositions but also the general paradigm within which he or she operates. Currently a range of statistical techniques is being developed for the analysis of intra-site and regional spatial patterning (Hodder and Orton 1976; Orton 1980, 1982; Kintigh and Ammerman 1982; Whallon 1973, 1974, 1984). Attempts are even being made to address the difficult question of quantifying relationships between features and item distributions (Simek 1984). At the same time revolutions are occurring in the computer storage of spatial information. Unfortunately excavation technology and organization generally lag behind these trends, and much of the current effort in the development of site structure models has been directed into ethnoarchaeological work.

Ethnoarchaeology

Like many other students of site structure I have been forced to confront the issue of the role of ethnoarchaeology. Our discipline recently went through a decade of an almost indecent concern with the use of ethnographic analogy (Binford 1972a; 1972b; 1972c; Chang 1967). While

recourse to *ad hoc* ethnographic parallels will no doubt continue to inform and misinform archaeologists for years to come (Ucko 1969), arguments by ethnographic analogy have no place in middle range theory. The close association of middle range theory and ethnoarchaeology derives not so much from the use of ethnographic analogy to predict the past (Binford 1967; Durrenberger and Morrison 1977; Orme 1973; Allen and Richardson 1971; Gummerman and Phillips 1978) but from the fact that ethnographic settings provide an optimal environment in which to identify and study the behaviour of key variables, refine measuring instruments and isolate appropriate analytical units. The ethnographic setting may be likened to a laboratory in which phenomena are studied under controlled conditions. The application of constructs, instruments and models so derived to 'real' archaeological problems and data has nothing to do with ethnographic analogy. Nor is there any *necessity* that they be derived from ethnographic contexts. One of the most elegant middle range models, Clarke's (1972b) 'modular unit', was derived almost entirely from archaeological data, with a little help from Roman ethnohistory. Yellen's (1977) !Kung campsites were archaeological in the sense that most of them had no recorded systemic context, and this was true also of some of my abandoned nomad camps.

Binford's (numerous publications) view of ethnoarchaeology as a laboratory for generating middle range theory by studying the relationship between archaeological 'statics' and the 'dynamics' of a living system is a useful one. But it should not be forgotten that dynamic relationships can also be studied through archaeological data, and that these data, as opposed to the physical remains in the archaeological record, are never really 'static'. There is no reason why the study of dynamics should be confined to the ethnographic domain, although it is certainly true that understanding the operations of dynamic systems in the present can assist greatly in imparting form and meaning to archaeological residues.

In documenting the spatial organization of contemporary nomads I am not attempting to map this organizational structure onto ancient nomads. I am suggesting that in prospecting for nomad sites we need to design surveys with regard to certain factors: that, for example, temporal and spatial variations in both the permanency of dwellings and the physical layout of settlements have a bearing on the detection of regional tendencies towards nomadization or sedentarization; that the investigation of suspected pastoral or nomadic sites will be more informative if certain kinds of study units and sampling schemes are employed and particular forms of spatial analysis applied. Investigations along these lines may well point to a system organized in a similar fashion to those observed today – analogy, or to something quite different, anomaly (Gould 1980) – but whatever the outcome it is the *tools forged in the ethnographic setting* which are imported into the past, not that setting itself.

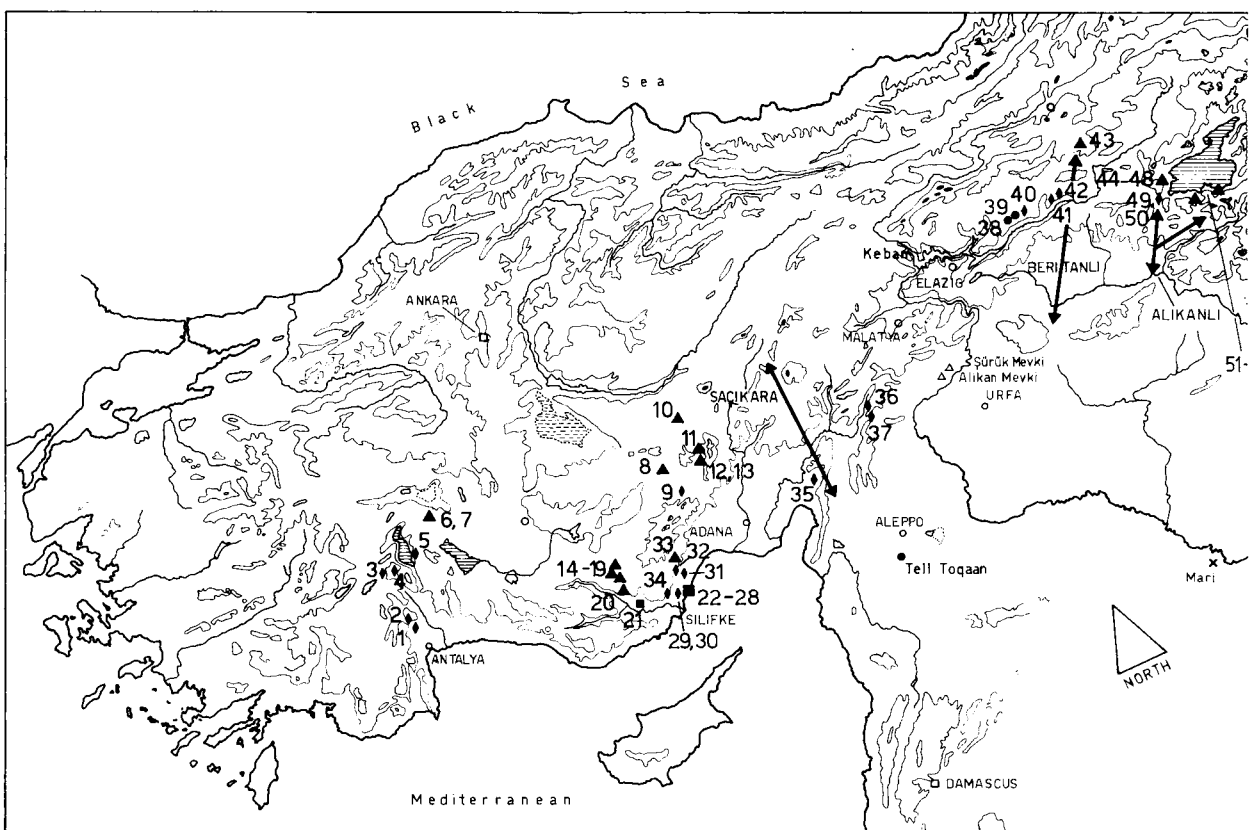
As a laboratory for the development of middle range theory pastoral campsites present certain obvious advantages. Campsites that are abandoned, but still active may be studied without the impediments imposed by continuous occupation. Campsites may be studied while occupied as well as in various stages of abandonment – i.e. they may be observed in both systemic and archaeological context, enabling us to move from the

realm of statics to dynamics and back again with relative ease. Although my own observations were confined to a few years, the long-term study of single campsite locations offers the prospect of detecting diachronic variations in discard patterns, architecture, settlement plans and intensity of use. As Binford (1983, p.397) has recently observed, while site structure has been approached in terms of seasonal and functional variations, 'There has however been essentially no discussion of long term patterns of change in the disposition of a complete system in space'.

Geographical scope and environment

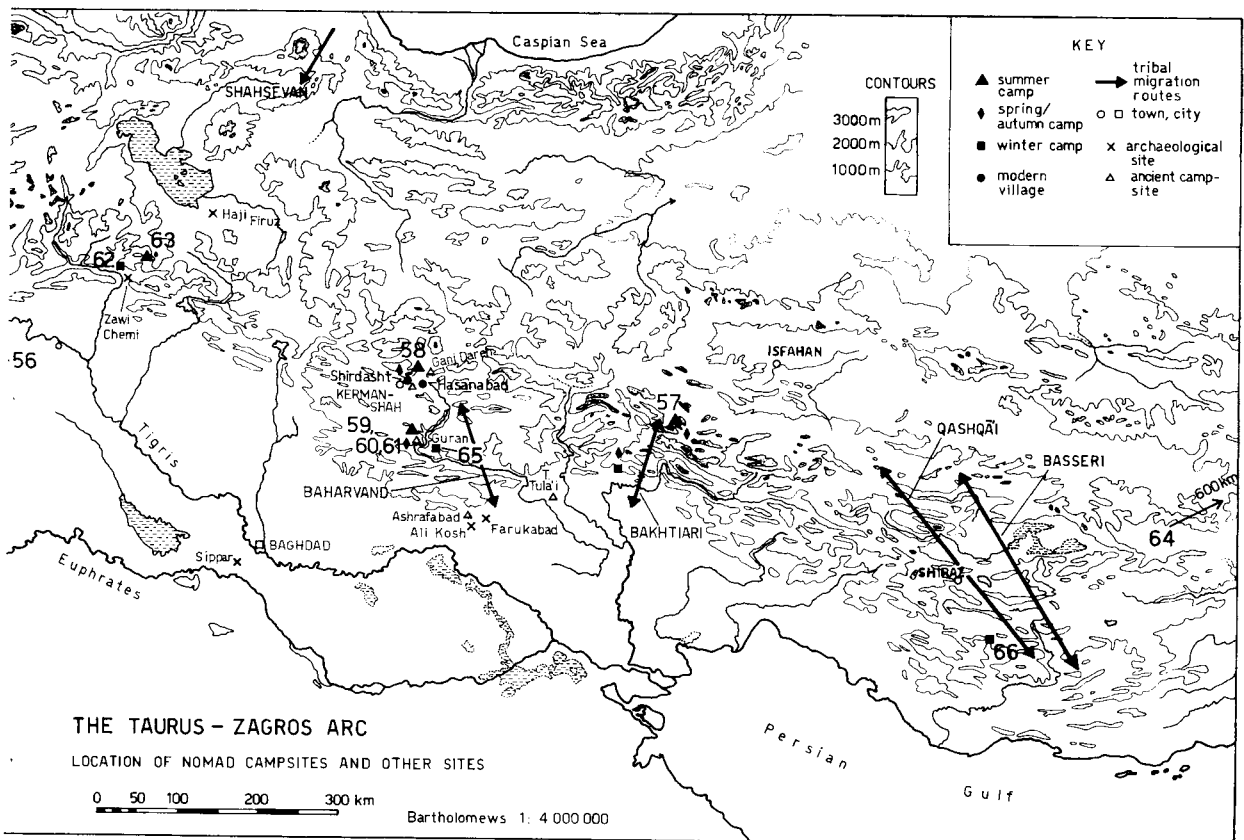
Fig. 1.1 General Map of Middle East with historical and archaeological sites and modern nomad groups. Modern campsites mentioned in connection with this study are also shown, distinguished according to winter or summer camps.

Before moving on to an account of contemporary nomadic pastoral systems it is necessary to define the geographical scope of the study. While evidence is drawn from the entire area of the Near East and Central Asia, from the Atlas Mountains to the Altai, the core area, for which the conclusions reached in the course of this study are held to be valid, is the mountain arc of the Taurus and Zagros, covering much of modern Turkey and Iran, together with associated low and high altitude steppelands (see Fig. 1.1).



During one of my sojourns in a summer campsite some 1,500 metres up in the Taurus Mountains, a small shepherd boy brought me a piece of rock, explaining that it contained *eski Müsülman sanat* (ancient Islamic artworks). The delicate patterns inscribed in the stone were indeed reminiscent of the kind of intricate inscriptions and miniatures found in mosques, but the whole composition could be identified as a starfish, a fossil from an ancient Miocene sea. Other marine fossils of seashells and molluscs were common in rocks all over the campsite. Some millions of years ago, during the Miocene era, the tectonic plates supporting Africa and Eurasia began to come into collision, with the Arabian plate caught in between. The tremendous forces involved have raised the great mountain chains of the European Alps, the Taurus and the Zagros, across to the Hindu Kush and Himalayas, where similar processes are under way involving the Indian Subcontinent.

Along much of the length of the Taurus Mountains a cross-section through the ranges follows the following sequence. Fairly precipitous limestone hills or karst formations, trending in an east-west direction, rise directly out of the sea or the coastal plain, cut by the deep gorges of streams whose catchments lie in sheltered valleys to their north. Behind this initial barrier rises an even higher escarpment with the limestone



giving way to granite and more gently rounded summits, falling on their northern slopes to low foothills and the vast sweep of the Anatolian Plateau. Rising directly out of these steppelands are the great volcanic cones from Emir and Hasan Dağ in the west, to Erciyas, Nemrut, Süphan and Ağrı Dağ in the east, thrown up by disturbances deep in the subduction zone where the African plate plunges beneath the Eurasian one. To the east, where the mountain chains begin to sweep around to a north-west-southeast direction, rises the limestone massif of the Jilo Mountains, a tangled maze of saw-toothed ridges and deep abysses. While a certain amount of shearing and slippage occurs along the Taurus section of the arc, in western Iran the tectonic plates meet head on, producing down-warping in Mesopotamia and the Persian Gulf and setting up a series of parallel ripples running from northwest to southeast, each a little higher than the previous one, culminating in the snow-capped peaks of the Zagros. Again the relatively open terrain of the higher altitudes, or thrust zone (Gilbert 1983), contrasts with the convoluted limestone ridges and deep, sunless gorges at the lower altitudes (Sunderland 1968).

The implications for human settlement of such a landscape have been considerable. From very early times until the present, population has been concentrated on the plateau or the coastal plain and Mesopotamia. Moreover the mountain chains have served as significant cultural barriers, though by no means impenetrable ones. In sharp contrast to the situation in Arabia and Central Asia, the major access routes through the ranges, by which trade and communications are carried on, also serve as the migration routes of nomads, bringing them into continual contact with sedentary society. It is the character of this interaction, as much as the great environmental and seasonal contrasts, which has influenced nomad social structures and settlement systems.

2

ORIGINS AND DEFINITIONS

The weapon is his companion . . .
 Who knows no submission,
 Who eats uncooked flesh,
 Who has no house in his lifetime.

(from a Sumerian text, *in* Chiera 1924, p.20)

While the quest for the origins of nomadic pastoralism is not the central theme of this work, the issue must be raised if only because it has formed the focus of so much archaeological work. Yet the origins of nomadism may not be of quite the same significance as other origins – such as the origins of food production and of urban life. In the latter instances we are dealing with major systems transformations which require extremely complex explanations and models and which are part of a general trend towards organizational complexity and increased energy capture. The advent of nomadic pastoralism has its place in all this but if, as suggested earlier, it is peripheral to the main line of cultural evolution, then it may not require the same level of explanation. Perhaps nomadic pastoralism cannot be said to have had a precise origin, or perhaps it has had many origins in many places and at different times. If, as argued by some (Khazanov 1984; Gilbert 1983; and also in this work), nomadism is an unstable and fluctuating phenomenon involving a heavy commitment to pastoralism, then we would be far better off studying those sets of conditions under which it emerges or declines than in searching for origins or building causal models.

A good starting point would be to define the *necessary* conditions for the existence of nomadic pastoralism. These include the presence of suitable animal species, a suitable physical environment for the maintenance of these species and the appropriate technology and social relations for domestication and continuous herding. The period in cultural evolution at which all these conditions were fulfilled may be taken as the predicted baseline for the subsequent appearance and reappearance of nomadic pastoralism. Yet existing theories of nomadic origins have tended to concentrate around two periods. It has been argued, most frequently by social anthropologists and historians, that nomadism is a consequence of the specialization and integration of pastoralism and cultivation which was

only possible with the development of complex (i.e. urban) societies (Lees and Bates 1974; Khazanov 1984, etc.). Others, predominantly archaeologists (Hole 1978; Gilbert 1983), have pushed the search for nomadic origins far back into the neolithic.

Historical evidence

Although accounts of ancient Near Eastern history often seem to assume the presence of a fluid, peripheral and mobile pastoral population, they are rarely explicit on this point. To the extent that recognizably nomadic groups appear at all it is generally within the context of the wider political designs of neighbouring states whose sources tend to stress administrative categories rather than economic or social ones. Apart from terms loosely translatable as Sandbewohner, Wilden, Zeltwöhnern, Wandern and Räubern (Vardiman 1977, p.22), there seems to be no ancient term which conveys the exact sense of 'nomad'. Even today, terms which initially conveyed the meaning 'nomad' have taken on an increasingly ethnic flavour. For instance, the term *Baluchi* was originally employed by settled populations to refer to all nomads, but as many nomads settled the term remained as an ethnic designation (Spooner 1969, p.150). The Turkish word *yörük* (wanderer) has also assumed a quasi-ethnic character. It is possible that a purely economic distinction between nomad and sedentary, pastoralist and cultivator, was not considered relevant in the past – at least to those who kept the records.

The earliest documentation of something resembling nomadism in the Near East concerns groups coming under the blanket term Amorites. These appear to have been a highly mobile, semitic-speaking population occupying the margins of the Fertile Crescent in the first half of the second millennium BC (Oppenheim 1977; Girshman 1964; Albright 1940, p.109) (see Fig. 2.1). They are described as keeping large herds of cattle, sheep, goats and asses (ibid., p.122) which confirms a pastoral emphasis, but not necessarily nomadism. Mural paintings from the 1,900 BC site of Beni Hasan portrayed a tribal chieftain named Absha with his retinue of kinsmen armed with throwing sticks and javelins and a baggage train of asses (Patai 1951, p.404). This could well be a nomadic group in migration, but there is no corresponding evidence for large flocks in attendance.

It has been suggested (Roux 1966, p.138) that the Amorites – or at least large sections of them – practised a form of sheep nomadism analogous to that pursued by modern Bedouin. Valuable insights into this period (*circa* 1,750 BC) have been obtained from archives discovered at Mari on the Upper Euphrates. Interpretations of these sources (Luke 1965; Rowton 1973, 1974) point to a small, vigorous kingdom deriving its income from river trade, intensive riverine agriculture and extensive pastoralism. Surrounding peoples, of an evidently tribal character – the Haneans, Suteans and Jamenites – appear to have been under varying degrees of political control. The Haneans, who seem to have formed the tribal power base for the ruling dynasty, displayed a 'semi-nomadic' pattern of residence in riverside villages, cultivating during the summer months and migrating into the steppe and northwards into the Khabur Valley during winter. The