

Bronze Age Settlement Patterns in the South Jordan Valley: Archaeology, Environment and Ethnology

Introduction

The ideas discussed in this paper stem from a three year project during which it is planned to link the evidence of surveys and excavation in assessing a regional archaeology. The project area is located north-east of the Dead Sea, between Wadi Shu'eib and Wadi Hesban. The excavations at Tell Iktanu and Tell al-Hammam are sponsored by the British Institute at Amman, with the permission of the Department of Antiquities of Jordan. Among the questions addressed in this paper are: 1) is the marginal nature of much of the terrain reflected in the sporadic pattern of occupation at Tell Iktanu and other sites in the vicinity; 2) can modern ethnographic patterns help in understanding ancient occupation patterns; 3) specifically, can modern patterns of transhumance be applied in interpreting archaeological evidence from the Early Bronze Age and the Intermediate Early Bronze-Middle Bronze Age; 4) can some aspects and implications of large scale population movements in the 20th century be applied to elucidate the archaeological record.

Archaeology

Ancient and modern settlement in the region appears to conform to patterns. Most sites lie on or near the perennial streams. Most of the modern towns are located in the western part of the project area, in open flat land in the same locations as the principal Roman/Byzantine settlements, at Shunat Nimrin (Bethnamaris or Bet Nimra), Khirbet al-Kafrain (Abila), ar-Rama (Livias) and Tell al-Mazar, regularly spaced in areas suitable for irrigation farming on the alluvial soils. The Early Bronze settlements and fortifications of the Iron Age and other periods are mainly further east, against the hills, still on the banks of the streams, but strategically located on the edge of the marginal land, overlooking alluvial farming land from the east.

In summary, there are at least nine sites of the Early Bronze 1 period in the area, of varied size and some appear to be unfortified and relatively ephemeral settlements.

Some of the numerous dolmen fields may date to this period (cf. Yassine 1988: 51). Cist grave cemeteries may pre-date them (Mallon *et al.* 1934: 154; Prag 1989: 34-45). There appear to be fewer sites of the Early Bronze 2 and 3 periods, but the large and almost certainly fortified sites at Tell al-Hammam and Tell Mustafā suggest a change in social patterns, with occupation of a more permanent nature. There are numerous sites of the Intermediate Early Bronze-Middle Bronze Age in the region, some of which are newly-founded, extensive settlements. They appear to be unfortified villages. At Tell Iktanu excavation indicates that there are two main phases of occupation between which the village was abandoned, and then completely abandoned at the end of the second phase. A large village also existed just north of Shunat Nimrin (Mellaart 1962: 130, 138; Prag 1974: 97; Yassine *et al.* 1988: 192), and probably at Tell al-Hammam, but there are also many small sites mainly along the perennial streams, with often in the vicinity of the main sites. Ephemeral and dispersed settlements appear to be the norm.

Less is known of Middle and Late Bronze Age settlements. Recent discoveries at Rawḍa/Hammam and Nimrin suggest that traces of these periods are buried under later occupational deposits, and thus finds in survey have been rare. It seems likely that a return to consolidated settlement patterns similar to those of Early Bronze 2, but with smaller sites, will emerge as the norm, with few other sites of these periods yet identified in the region. Certainly there was occupation in the Middle and Late Bronze Ages on the plateau to the east, at sites like Umm al-Qanafidh, Madaba and Amman; as well as at major sites like Deir 'Alla and Pella further north in the Jordan Valley.

Generally, the pattern of settlement in the project area during the Bronze Age seems to fluctuate through time, from dispersed/ephemeral to fortified permanent settlements, with long periods of abandonment on some sites. The question is whether on the basis of archaeological and ethnographic material, such changes can be linked to environmental, social and political causes.

Environment

The project area includes part of the foothills of the Transjordan plateau, and a section of the flat upper terrace of the Jordan Valley. Most of the land has an annual rainfall of less than 200mm, in the winter and spring, and very hot, dry summers. The region is dissected by several west-flowing perennial streams, the Shu'eib/Nimrin, the Meqta'a/Kafrain and the Hesban/Rama, with numerous subsidiaries. The water in these streams is now dammed or channelled for agriculture, but they still retain some moisture even in summer. In winter torrents from the higher rainfall areas on the plateau bring down substantial deposits of alluvium, followed by flooding and seepage in the alluvial soils of the Ghor. Winter dry-farming of cereals, and perennial irrigation farming take place on these soils. Under irrigation the Ghor is very fertile, with bananas and vegetables as modern crops. Much work remains to be done on the history of irrigation farming in the vicinity of Nimrin, Kafrain and Rama. There is a great dichotomy between the cultivable alluvial soils and the marginal pastoralist land in the foothills to the east and south, which is mainly used in the winter and spring. By May dry-farmed crops have been harvested, and the grazing and flocks have virtually disappeared from the vicinity.

Ethnology

Modern ethnographic patterns are one source of potential information which is being explored with particular reference to the settlement of the Early Bronze and Intermediate Early Bronze-Middle Bronze Ages at Tell Iktanu (Prag 1985). The premises underlying this work are 1) that much of the land in the vicinity of Iktanu is marginal land of use only to pastoralists in winter and spring; 2) that pastoralism and forms of pastoral nomadism or semi-nomadism suited to marginal lands in the Near East follow ancient patterns which may go back to the Neolithic period and the domestication of sheep/goats; 3) that the shifts between semi-nomadic pastoralist/cultivators and semi-sedentary or sedentary cultivators are relatively easily achieved, slowly if suitable conditions arise (e.g. Muhsam 1966: 113 = "spontaneous sedentarization"), but can be very rapid if political factors are involved (e.g. Muhsam *idem*, "initiated sedentarization"), or by reverse processes, nomadization. Local environmental factors are clearly of fundamental importance to all these processes, and thus it is of interest to explore modern ethnographic patterns within the environmental peculiarities of the region itself.

The 'Adwan

The 'Adwan are the main tribe in the Shu'eib/Hesban region.

1. *History*. Oppenheim (1943) and Peake (1958) summarize 'Adwan history into the early 20th century, as derived from oral traditions collected from amongst the tribes of Transjordan. Such accounts are not certain

evidence for earlier history, particularly for chronology. Some sources say the 'Adwan are linked to a tribe who lived in the northern Hijaz in medieval times, and are related to the Dhafir tribe who live on the borders of Najd and Iraq. Oppenheim rejects this genealogy in favour of the 'Adwan tradition that they descend from one of two brothers who came to power in the Hesban area of al-Balqa' of Transjordan in the 17th century.

Gaudefroy-Demombynes, with Arab writers of the Mamluk period as source material, notes that the tribal map of the Syrian desert changed radically after the 15th century (1923: 201, n.1). He records the 'Adwan as a sub-tribe of the Murra, one of the three divisions of the Bani Rabi'a (*idem*. 192, and n.11). The Bani Rabi'a (who counted ar-Ramlah among their fiefs in Fatimid times and expanded considerably in the 12th and 13th centuries under the Ayyubids) were the most important tribal federation in Mamluk times, when their territory extended from both banks of the Euphrates and the borders of modern Iraq south-west through Hawran to the Dead Sea. The Murra sub-section (under an amir in the Mamluk administration) occupied the area from Hawran to the Dead Sea, hence the 'Adwan may be located in the approximate area of their modern territories as early as the 13th-14th centuries.

By the beginning of the 18th century (according to the oral tradition) the 'Adwan had gained control (by inter-tribal battles) of the Ghor around Nimrin, Kafrain and Rama. From that time the genealogy of the tribe and ethnographic patterns are fairly positive. Setting aside the complex accounts of inter-tribal feuds, disputes with the towns people of Salt and complex intrigues for or against the Ottoman government, the normal pattern of 'Adwan exploitation of their territory seems clear and was described by Conder (1889: 290). In 1881 he estimated the 'Adwan to have 2200 tents, and a total population of 11,000 including their subsidiary tribes in al-Balqa'. They controlled approximately 1000 sq. miles, with many small tribes allied to them. Jaussen in 1907, describing just the 'Adwan, not their subsidiaries, lists between 340 and 400 tents in the areas of Hesban, the land east of Salt, the Biqa' and Ghor. The 'Adwan feuded with the Bani Shakhr whose territory was contiguous to the south and east, and with the 'Anaza to the east and north.

2. *Pastoral transhumance*. The 'Adwan practised pastoral transhumance, using the winter and spring grazing in the warm Jordan Valley. When the grazing ran out and the weather became hot in May, they moved with their flocks to the cooler plateau for summer grazing. There were two main branches of the tribe, the elder (or Shalih) tribe who spent the summer months on the plateau to the north of al-'Ali and descended by 'Iraq al-Amir to Shunat Nimrin for the winter. The shaikh in 1881, 'Ali Diyab, had a winter encampment of 80 tents and some mud huts at Nimrin (Conder 1889: 238). The shaikh in 1907, Sulṭan ibn 'Ali Diyab had a summer encampment of 140 tents near Hesban (Jaussen 1908: 401). Oppenheim (1943: 215) records

Shaikh Majid al-'Adwan with 80 tents in summer at Hesban and in the winter at Shunat Nimrin. The younger (or Nimr) branch of the 'Adwan spent the early summer near Jubeiha, and later 'Ain Fudaili, and lived the rest of the year at Kafrain where there were tents, and also a few huts of small masonry and reeds, on the north bank of the stream in 1881. In 1907, the Nimr chief was Fahd ibn Qublan who had a camp of c. 60 tents (Jaussen 1908: 401). Oppenheim (1943: 216) records that the Nimr shaikh was Barakat al-Falah, with 70 tents in summer at Hesban and in winter at Ghor al-Kafrain. Also according to Oppenheim, another branch of the 'Adwan had two chiefs, 'Ajed al-Ma'arik and Abdallah al-Darda, who spent the summer at Yajuz and the winter at Ghor ar-Rama. The winter headquarters of the various branches of the 'Adwan were thus regularly located at Nimrin, al-Kafrain and ar-Rama; in summer they were located at Hesban and to the north in the region of Sweileh on the plateau. They possessed many flocks of sheep, and some camels.

3. *Integrated nomadism.* 'Adwan relations with the nearest important town at Salt, where there was a fort sometimes controlled by the 'Adwan, are also relevant to the nomadic pattern. The townspeople of Salt formerly paid tribute to the 'Adwan; who also imposed market taxes, and levied toll on every camel load of potash exported from the Dead Sea (Oppenheim 1943: 212). Salt was important for political and economic reasons, being both a market town and a centre of Ottoman administration. In 1867 the Turks put the citadel at Salt in order, and built block houses at Nimrin and Hesban. 'Adwan relations with the Ottoman government varied. Different branches of the 'Adwan supported or opposed the central government on various occasions. Peake (1958: 170) records the tale of Shalih (al-'Adwan) who took refuge in the fort at Salt in c. 1780; the inhabitants of the town killed him and sent his head to the government. Salt is still an important market and administrative centre today, though only the merest remnants of its Ayyubid castle and Ottoman citadel remain. The 'Adwan thus demonstrate a form of integrated nomadism with the settled people at Salt.

4. *Agriculture and spontaneous sedentarization.* In the 19th century the 'Adwan did not themselves cultivate in the Ghor but controlled the Ghawarni tribes, who farmed the Saisiban plain as their serfs, growing maize (corn was grown further north, near az-Zarqa). Field boundaries were marked. According to Jaussen (1908: 401, 403) the Ghawarni tribe who served the 'Adwan were the Gohran al-'Abid who lived mainly at Masouh, whose chief Sulaiman Hamdan was a vassal of Sultan ibn 'Ali Diyab. According to Oppenheim (1943: 212) the 'Adwan had cultivated in the Biqa' for a long time and by the mid-20th century were in full transition from semi-nomads to farmers.

5. *Shrines.* Conder (1889: 238) noted a shrine of the Muslim saint al-Khaḍr to the south of ar-Rama. This tradition is today identified by local 'Adwan with Tell

al-Mazar ("the place which is visited"), where there are Byzantine ruins, and a modern cemetery, but no shrine. Also in the tribal territory is the shrine of Nabi Shu'eib in Wadi Shu'eib. The present mosque (adjacent to the cenotaph of Jethro, priest of Midian and father-in-law of Moses) is forty years old, but replaces an earlier one. North of Salt is the shrine of Nabi Yusha' (Joshua).

6. *Burial.* On top of Tell Nimrin in 1881 were three masonry tombs, the graves of chiefs of the Shalih branch of the tribe, with smaller graves around them (Conder 1889: 238). There was also a white painted tomb of a member of the Nimr branch of the 'Adwan on the top of Tell al-Kafrain (Conder 1889, 140). Ar-Rama in 1881 also had tribal tombs on the top of the tell, here the white painted tomb of Daḥis (Conder 1889: 238) with other graves around. The cemetery on top of the tell is prominent today. Excavation has shown that the top of both tells at Iktanu, and various places in the vicinity were in use for burial in the 20th century. Not far away, at the junction of Wadi al-Kafrain and Wadi ar-Rama was the now destroyed but previously substantial decorated masonry tomb of Findi al-Fa'iz, a shaikh of the Bani Shahr who died c. 1841 (H. 1257, according to the marker on the modern concrete tomb) or c. 1877 (according to Conder) on his way home to the Madaba region after a visit to Nablus (Conder 1889: 113-115; cf. Yassine *et al.* 1988: 193, no. 207, Qabr 'Afandi).

7. *Initiated sedentarization.* The visible traces of perhaps some centuries of occupation of the project region by the 'Adwan may therefore amount to little more than burial grounds, field boundaries, and the randomly located foundations of a few very poor houses. These nonetheless represent a long-lived, numerically large and structured society whose political and battle strength continued into the 20th century. An 'Adwan revolt was suppressed in the summer of 1923. In the 1930's land registration began and confirmed 'Adwan territorial rights. As landowners there was increased incentive to settle on the land.

In 1965 the site of Iktanu was owned (inherited in shares) by six members of one 'Adwan family living in a small house in the Ghor to the north-west. The strategic (Iron Age) nature of Iktanu was re-emphasized when the army occupied it for some years during the 1970s. Since the arrival of the East Ghor canal, implementation of the Hesban-Kafrain Irrigation Project in 1980, and the promulgation of land redistribution laws (Khoury 1987: 88ff.) sedentarization of the 'Adwan has been virtually completed. In 1987 many of the 'Adwan lived by irrigation farming on small farms on the alluvial soils of the Ghor. The site of Iktanu itself had been subdivided: the north and south tells are now separately owned, the latter perhaps best described in modern idiom as an investment property.

In following the 'Adwan history from a process of spontaneous to initiated to completed sedentarisation we can learn something of the factors involved. The understanding of environmental and political factors can be

further reinforced and expanded in the history of local events. The workmen employed on the excavations at Iktanu in 1966 were 'Azazma Bedouin refugees from the Beersheba region, newcomers to the area after 1948. Their history also adds to the data to be assessed in this region.

The 'Azazma

1. *History.* The 'Azazma tribal federation occupied land south and south-east of Beersheba in the Negeb, c. 16,000 strong in the census of 1946 (Muhsam 1966: 7). The other tribes of the Negeb (total Bedouin population of the Negeb in 1946 was possibly 65,000 people — Muhsam *idem.*) had varied origins, some were perhaps indigenous, some came from Arabia, some from Sinai and Egypt; the origins of the 'Azazma (like those of the 'Adwan) are not certain but they are said to belong to the Quda'a who lived before Muhammad in the Northern Hijaz and the Syrian Desert. They arrived in the Negeb at some date prior to the mid-19th century, probably during the period of weak Ottoman government when the Bedouins flourished. As pastoralists, practising transhumance on a limited territorial scale, they underwent a process of sedentarization started under the Ottomans and continued under the British Mandate. By 1946 they were still mainly tent-dwellers moving according to the need for pasture, but doing some cultivation in the northern part of their territory. Their territory stretched from the Wadi 'Arabah to the fringes of Sinai, and up to Beersheba (Oppenheim 1943: 122; Bailey 1985: 49). Of the 16,000 'Azazma in the Negeb in 1946 only about 1000 remained in the new State of Israel. The remainder moved to Jordan, first to the West Bank, then across to Transjordan, at the time of the fighting between the Egyptian and Israeli forces in the Negeb. In Jordan the problems of re-establishing such large numbers of people and flocks in other tribal territories was obviously difficult. A government plan to settle the 'Azazma near al-Jafr 15km from Ma'an met local tribal opposition; another project was designed with UNRWA help for the Karak area, which included feeding centres, new schools, tents and animals (Plascov 1981: 86). The particular group living near Iktanu (only a part of the much larger 'Azazma population in Jordan) say they went first to Na'ur, then moved to Karak for seven years, before coming to their present land (c. 1956?).

2. *Pastoral transhumance.* The 'Azazma within the project area have adopted a very similar environmentally imposed pattern of pastoral transhumance to that formerly practised by the 'Adwan. In 1966 the 'Azazma workmen at Iktanu had black tents just to the south of the Dead Sea Highway at ar-Rama, and also on the marginal lands right to the edge of the foothills. They lived here for most of the year, but in May moved with their flocks to the areas around al-Mushatta, al-Hallabat and Lail, just west of al-Hallabat. There they remained for three to four months, for the grazing and the cooler weather. They regarded the heat of the Jordan Valley in the summer as unhealthy for

man and beast. They have sheep, goats and a few donkeys, few camels, and no cows.

3. *Sedentarization.* Since their arrival the process of sedentarization has been even more rapid than for the 'Adwan, speeded by various political, social and economic factors including land rights, schooling and wages. By 1987 the extensive village known as Maşna' ar-Rama, south of ar-Rama, had been built by the 'Azazma, but many still live in tents in the vicinity, up to two days walk away. However most of the people still migrate with the herds in the summer, taking tents and bedding but leaving most of their possessions in the care of old people in the houses. They use the market towns of Deir 'Alla and Madaba, and Salt remains important for administrative and medical reasons. However in winter 1989 many of the houses were untenanted, or lacking roofs, emphasising the still uncertain roles of sedentarization.

It seems that they have fitted into a niche left vacant by the now sedentarized 'Adwan; adhering very much to the same environmentally imposed patterns of pastoralism, but not in quite the same places; generally this group occupies the pastoral land of former 'Adwan territory, in winter land south of alluvial soils, and in summer territory at a greater distance to the south and east, which are also in more marginal environments than the old summer territory of the 'Adwan at Hesban. The environmental constraints on sheep/goat pastoralism have imposed themselves on the newcomers to the area.

Present conditions are governed by very complex factors, but the presence of other pastoralists who now (1989) use the marginal land in winter should be mentioned: the Jairat from the Karak area, the 'Ajarma and the Shawabka from the Madaba area. There is also the largely but not entirely sedentary population of 'Amarin refugees (like the 'Azazma, from the Beersheba region) who are said to comprise 50-60% of the population in the village of Rawḍa. They are more sedentarized than the 'Azazma, but there was an 'Amarin camp on Iktanu during the summer of 1988 whose flocks were supplied with water and fodder by pipe and truck. There is an even more recent influx of Egyptian and Syrian workmen due to economic rather than political factors. A Syrian from the Aleppo area was employed as a shepherd for sheep and goats on the tell in January 1989. Our small workforce in 1989 was drawn from four different tribes, plus one Egyptian.

Hypotheses

Environmental as well as political and economic constraints are operative on the life-style of the population in the area. It is possible to build several hypotheses to test against the excavation and survey evidence for ancient settlement in the same area: not to suggest exact patterns and parallels, but to assess similar constraints on ancient populations.

1. *Transhumance.* The regional environment imposes definable patterns on pastoralists. If the population has large flocks of sheep, goats or camels then it may have to

move or send them away to pasture on the plateau in the care of shepherds in the summer due to the heat and the lack of grazing; for towns dependant on a mixed economy of agriculture and pastoralism flocks sent away in summer in the care of shepherds would be vulnerable. It may be one reason that large urban centres in the Middle and Late Bronze Age were a less viable proposition. More ephemeral patterns of occupation in the Intermediate Early Bronze-Middle Bronze Age and perhaps in the Early Bronze 1 period may indicate that the settlements were regularly abandoned in the summer (like that of the 'Azazma).

2. *Sedentarization, spontaneous and initiated.* Rapid shifts from nomadic to sedentary life are well within the range of pastoralist groups and are illustrated by the formerly transhumant tribes living in the project area who now occupy large and small unfortified villages, hamlets and farm houses. The reverse process is also observable, for the failure of the winter rains even today is disastrous for those inhabitants of the area who still depend on dry-farming for cereals. The occupation and abandonment of the site at Iktanu in the Early Bronze 1 and the Intermediate Early Bronze-Middle Bronze periods could be explained in these terms. Lack of grazing and empty silos would make continued occupation impossible in a society not structured to provide relief.

3. *Population mobility in pastoralist zones.* Contacts outside the region should be considered. Normal transhumance in the region ranges from valley to plateau. But in this century political factors have brought a large immigrant population from the Negeb, whose contacts with Egypt have been close in the past. The Negeb population as a whole had closer contacts both in their origins and in their pastoral and political activities with Egypt, the south Jordan Valley, south Transjordan, Syria and even Iraq, than with central and north Palestine (indeed Muhsam notes specifically that the contact between the Negeb tribes and those of north Palestine in the 20th century hardly existed, though this is not so for earlier periods — see Hutteroth 1975; such contact may depend on political and urban factors within Palestine). The homogeneity of the Syrian, Palestinian and Negeb marginal zones are reinforced in their use for pastoralism. There are possible implications to be considered here in the homogeneous patterns of ceramic distribution in south Palestine and south Transjordan in the late third millennium.

4. *Large scale population movements and the archaeological record.* In particular the mobility of very large groups of people within the project area is attested, as is their absorption with very little archaeological trace apart from the increased size and number of settlements. Investigation of the 'Azazma and 'Amarin houses and artifacts is likely to offer little variation from that of their 'Adwan neighbours. Sedentarization of the 'Adwan has been fully achieved in approximately sixty years, and of the 'Azazma partly achieved in less than twenty years. How should these

factors be considered in the light of recent debates on changes at the beginning of the Early Bronze 1 or the beginning of the Intermediate Early Bronze-Middle Bronze Age as due either to population increments from outside, or as due to purely internal social change? Contemporary literature, as exemplified by the Mari texts, indicates large scale pastoralist mobility is not a purely modern Bedouin phenomenon. Political factors in Palestine, Egypt and Syria may well have influenced expansion of settlement in marginal zones in the late third millennium.

5. *The significance of isolated burial grounds.* The archaeological evidence for several hundred years of 'Adwan occupation of the area is mostly restricted to burial grounds, often on prominent mounds or away from the area of the alluvial soils. Should the extensive dolmen fields and isolated cemeteries in this region of the Jordan Valley and Transjordan plateau be assessed in the light of the practices of these transhumant pastoralists? In both examples the lack of direct association with settlement sites, and sometimes random scattering on the landscape, could be used to identify dolmens and isolated cemeteries more closely with pastoralists than with the cemeteries of sedentary communities. The evidence (Yassine 1988: 52) suggests at least some dolmens date to the Early Bronze 1 period; is this another implication to be assessed in describing the Early Bronze 1 population (or large parts of it) as semi-sedentary?

6. *Integrated nomadism.* 'Adwan and 'Azazma connections not just with Nimrin and al-Kafrain, but with market towns to the east (Salt, Madaba) and further up the Jordan Valley (Deir 'Alla) may reflect a pattern of occupation in the Middle and Late Bronze Age, when material for settlement appears to be scarce in the project area.

Finally, it should be stressed that it is not intended to interpret the archaeological evidence directly in terms of recent Bedouin ethnographic patterns, but rather to explore hypotheses or patterns that they may reveal or illustrate, in conjunction with the analysis of the results of our investigations on the sites themselves.

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