

Early Jordan: A Survey

Re-reading Runciman's 'History of the Crusades' the other day I came across a passage which, though applied to history, seems equally apt for the contemporary prehistoric scene. The gist is that what he calls 'the mountainous heap of the minutiae of knowledge' although sometimes of great value, should not be considered an end in itself; and here I quote, 'I believe that the supreme task of the historian is to write history, that is to say, to attempt to record in one sweeping sequence the great events and movements that have swayed the destinies of man'.

As a field archaeologist I naturally prefer the broad approach, and as this is the first of what we hope will be a long series of conferences, this paper is offered as an introductory, brief survey of the early days of settlement in Jordan based chiefly on two sites excavated under the auspices of its Directorate General of Antiquities, namely Jericho and Beidha. Thus clearing the way for specialists within the discipline in later conferences.

We are all aware that environment is the determining factor for settled life. Experiments in the cultivation of wild food plants began in those well-watered areas where potentially domesticable plants were available in quantity, and of course the same applies to the domestication of animals. This long process of experimentation, of mutation and human selection took from the Upper Paleolithic to the Late Neolithic before full domestication was accomplished. It also seems to have taken place at roughly the same time in different parts of the Near East. The only areas that concern us here are the uplands of southern Turkey, the Euphrates valley in north Syria and the hills of Palestine and Jordan. Those familiar with the right environments began settling during the Mesolithic, the Natufian, while others in less favourable ecological zones continued their roving way of life. This seems to have led to a most important symbiotic relationship between settler and wanderer from which the trade that was already reaching full spate by the 9th/8th millennia BC gradually evolved.

The Mesolithic peoples were the pioneering settlers, and to my mind this initial step was more or less forced on them because they first brought the wild food plants out of their natural habitats and planted them elsewhere. Once that step

was taken man had to stay put to protect the plants all the time. First a form of ground clearance was necessary then, after planting, protection from birds and animal trampling, later from intense competition from other plants, not to mention holding off possible raids from other tribes and animals, and finally for harvest and sowing; after which the cycle repeated itself endlessly. From that moment onwards the irrevocable mutual dependence between men and plants came into being whereby, although the plants were to become the slaves of men, men were equally to become the serfs of the plants, and the same applies to animal domestication. The slow accumulation of knowledge through trial and error which must have preceded the first settling probably began in the Upper Palaeolithic, with the Kebarans almost completing the process and the early Natufians putting the final touches, thereby enabling the later Natufians to commence solid architecture and to proliferate their settlements.

Unfortunately this is a process that cannot be detected by botanical investigation because the plants under cultivation were physiologically wild. Only by man's selection and environmental manipulation did the physiological properties of the plants alter by continuous mutations into full domestication, after which they were helpless without the support of man. At the same time man himself also changed genetically, becoming, as the population densified, totally dependent on his plants and animals. If this had not been the case modern man could not have developed. In short, Natufian man settled by springs where the alluvial soil necessary for plant growth was present. He was cultivating wild plants, not strictly speaking practising agriculture, but he was beginning to be tied to the soil in a primitive way. On the other hand his main subsistence continued to be based on hunting and gathering, the only difference being that part of the tribe was static, looking after the plants. This concept of mine is not in accordance with current archaeological thinking which prefers the Natufian to be a period of intensive food collection leading to primitive agriculture during the later PPNA. This, to me, seems to run contrary to both human and plant nature.

Be that as it may, for proof is not possible, we find Mesolithic settlements along the Euphrates valley and in the

Jordan valley as well as up in the hills where they might be expected. At first the people lived in simple pits with superstructures of branches or leaves, but as their confidence in their great experiment increased they built more permanently: semi-subterranean round houses with stones or clay lining the pit sides. Of course, to emphasize my point, they remained primarily hunters and gatherers, but their territory would now be based on the permanently manned settlement. The latter continued to spill over from the highlands to the lowlands and river valleys, leading to the manipulation of water in a crude way and eventually to the relatively closely packed settlements of the PPNB, now well-known from the Euphrates to Sinai.

These centres of emergence yielded different cultural traditions. Indeed, within each one every local community would be stamped by its immediate environment, but there would be discernible links originating in a common tradition. For instance, flint knapping, certain architectural features and burial customs, pottery forms and decoration, still linked by tradition and a virtual spider's web of trade. By means of the latter new ideas and techniques reached the furthestmost outposts, to be either accepted complete, or accepted and modified locally or, of course, to be rejected.

The evolution of trade and identification of supply sources are the most urgent tasks for specialist study needed today. Find the sources of the different minerals and other natural objects of restricted provenance, and search for ancient workings and small settlements. Enlist the services of geologists, petrologists and chemists and leave them to get down to it in the field. The results would surely be rewarding.

Here I would like to point out various factors in human nature which are relevant to our understanding. It is the one thing we can rely on not to have changed. We are strongly territorial creatures on the one hand; on the other, greed has always been one of the main driving forces, though in the main, always led by an intensely aggressive and grasping minority, avarice is mercifully tempered by laziness. Also, we must remember that the mental capacity of man then was the same as ours' today. As man progressed from tentative beginnings through to the efficient self-supporting communities and on to the founding of colonies the *status quo* was disturbed. Springs originally open to all comers were enclosed, this and the expansion of territory around the settlements must have led to many disputes. Finally, when the colonizing movement took place the embryo elements of the future city states were already in existence, expansion was far greater, leading to envy, competition and never-ending wars. At least that is what history and events today seem to show. The colonizing process seems to have been active during the last half of the 7th millennium in the north where, although we lack sufficient excavation for this period, one may deduce that the very rich site of Çatal Hüyük was a dynamic centre based on trade, but founding colonies to provide her with luxuries as well as necessities. At the other end of the scale, the small site Umm Dabaghiyah was founded in a totally inhospitable

environment, at least for a Stone Age economy, in order to procure luxury commodities available there and needed by some relatively nearby equivalent of Çatal.

Until this time, the Pottery Neolithic, man's impact on his physical environment had been relatively light. True, he had broken the soil for the first time and thereby opened the way for future erosional processes. Goats were herded during the PPNB, the conspicuous devastators that eat saplings and thereby prevent the rejuvenation of woodland. Also man was manipulating water in a crude way which, in the end, could and did lead to salinization of vast areas. The most important adverse effect on his environment was brought about by his need for fuel. Although initially making inroads on arboreal stands near his settlements and, by the removal of shrubby bushes in open country, adding areas for future erosion, this incessant need had not yet reached the proportions it assumed during the Pottery Neolithic.

During the Natufian, PPNA and PPNB only small hearths for domestic purposes are found. At least as far as Jericho and Beidha are concerned not a single oven was encountered. But in the Pottery Neolithic, ovens of all kinds proliferate alongside the domestic hearths, indicating among other things, that man had already become dependent on articles that could only be manufactured by heat, in this case pottery. Experiments in modelling figurines and small utensils had been carried out intermittently since the malleability of clay became evident, probably in the course of moulding it into embryo bricks during the PPNA. By the PPNB, pottery is found sporadically at various sites including Beidha and Mureybit. In short the tests, though not perhaps a continuously sustained effort, culminated after roughly a millennium in true pottery. By the Pottery Neolithic period man was already enslaved by his plants, animals and his need for fuel for his furnaces. Only the itinerant tribes revolving on the periphery of the settled areas remained as free as humanly possible.

Having seen the probable state of affairs by about 6200 BC; we can look at the preceding stages as revealed by Jericho and Beidha. However, in general our records are lamentably sparse with very few sites adequately tested, these widely dispersed over a vast region with even fewer showing a long sequence. Many other sites are known through surveys, but they are chiefly of the PPNB tradition.

One of the few with a long sequence is, of course, Jericho; situated in a highly favourable environment with, above all, a magnificent spring and alluvial soil concentrating lush vegetation and game. Moreover, with most necessities for a Stone Age economy available in plenty nearby, it is no wonder we have a long tradition of settled living there. Unfortunately we have what amounts to only five soundings into the early levels, widely spaced over a large *tell*, so we lack all detail, even a full house plan. The original Natufian stage of pit-dwelling was not encountered, though doubtless present somewhere. The subsequent stage of semi-subterranean houses with stones lining the pit sides is, I submit, present at

the base of one of the soundings. Here the virgin clay had been removed except for an irregular area with roughly parallel sides. In the dug down area are fragments of curving stone walls. The other stones had probably been removed for later re-use. Although we did not know at the time, these remains are typical of Late Natufian settlements now well-known from, among others, 'Ain Mallaha further north in the Jordan Valley, where the houses are the direct ancestors of the PPNA examples and those of early Beidha. At Jericho these remnants were found with Late Natufian implements.

The next stage was retrograde as regards architecture: simply hut floors surrounded by mounds of clay on which superstructures of plant material were erected. The whole accumulation formed a small 'core' *tell* 3 metres high. The attendant flint industry stemmed from the Natufian. An important detail about this Proto-Neolithic period is that obsidian made its first appearance at this time; proof that trade was coming through from Anatolia by the 9th millennium. Trade from the shores of the Mediterranean and Red seas had already been supplying exotic shells and pebbles to the Natufians, but obsidian does not seem to have been available then.

We all know the next stage, the PPNA, with semi-subterranean round houses with wide walls made of primitive clay bricks in the pits. Clay was used for the domestic architecture according to the dictates of the immediate environment. These houses were the direct descendants of their Natufian predecessors. So in the PPNA we have both domestic architecture and flint industry stemming from the Natufian tradition. The entire built-up area, comprising some four hectares, was surrounded by a free-standing stone wall with a stone staircase tower forming an integral part of it, still standing some 10 metres high. Here I have a suggestion to make. Could not the Proto-Neolithic mound have been formed by the builders of the PPNA permanent settlement? Could they and the PPNA not have been two facets of the same stage?

Those people would have had to camp at Jericho for a long time to consolidate their claim to spring and oasis; a venture probably disputed by others. Presumably they would have enclosed their lightly built settlement and the spring-head by a palisade. They would have had to clear the surrounds of the spring and perhaps experiment in controlling seepage. Finally, no doubt after repulsing various raids and when their confidence both in their own strength and in their ability to control, at least to a certain extent, the living force of the spring had increased, they made a permanent dwelling place by it. Then, contrary to the excavator's idea, the wall would have been erected first, surrounding a much larger area than was immediately necessary, and finally the houses. In my own experience the camping floors, fire-pits and temporary dwellings of the builders of the first permanent houses are always present somewhere. After all, it takes time to decide whether or not a place is entirely suitable for permanent habitation. After that one still has to live somewhere while building.

Be that as it may, when it came to fortification or enclosure the inhabitants put their trust in stone; a material by no means as easily obtainable as clay at Jericho. They would have had to collect the boulders from wadi beds and the screes of the hills. The effort and organization glimpsed is truly awe-inspiring. But there is no sign of hasty building in the parts of the wall uncovered, or in the tower for that matter. At Jericho I think the whole process of clearing and building must have taken many years, long enough for the small Proto-Neolithic *tell* to accumulate three metres high. By counting the floors in the south section of Square M one might come to some conclusion as to how long that time was, if this theory is feasible.

Much speculation has been concerned with the function of the tower, and most see it as a part of the defences, for manning the ramparts. But could not its primary function have been as a watch tower? A huge periscope? Once the wall, still standing 3 metres high, had been built the inhabitants could no longer see who was coming, or what was happening outside. They badly needed advance warning on such matters as possible ganging up of tribes against them, or of others poaching their food from the oasis, the movements of game, and perhaps to keep the spring under surveillance in case of seepage. In short they needed a permanently manned watch tower and not a rickety wooden platform on four stilts. Everything at this stage argues for a leisurely progression and not towards hasty building under pressure from some immediate danger.

In contrast, the later addition of an encircling ditch 9 metres wide and 3 deep, cut into bedrock without benefit of metal tools, accompanied by a heightening of the wall does argue for a danger perceived in time to take adequate steps against it.

One wonders what movements were abroad that changed a relatively peaceful scene. For this was a time when the general population was not very high, and when a large portion of that population was busily engaged in settling down at other springs in the Jordan valley which had good alluvial soil, as well as up in the hills. Whatever caused the additional precautions, the PPNA continued for a long time after, long enough for one more heightening of the wall. Finally, for some unknown reason the site was abandoned, later to be occupied by the PPNB people of different cultural traditions. To remind you of a few of these: fully evolved rectangular architecture built at ground level, secondary burial below floors, detachment of skulls and so on. At present it looks as if this tradition came from the north, and from this time onwards a steady infusion from that area was to last for millennia, until the rise of Dynastic Egypt. But our indigenous Natufian line became submerged.

Meanwhile a parallel development had been going on in north Syria along the Euphrates valley. The early settlers had come down from the uplands and were siting their villages along the river banks and no doubt at suitable springs. At Mureybit, near Raqqa, there is a fine sequence, somewhat

earlier than Jericho in date. Starting with Mesolithic huts and a flint technique bearing certain resemblances to the Natufian. Then through periods of round houses with a flint industry evolving from Mesolithic towards the PPNB as found at Beidha, and finally to rectangular architecture, secondary burial below floors, detachment of skulls and so on.

The causes of such radical changes as the evolution of new tools, architecture and burial customs over a very wide area is a matter for conjecture. Was it diffusion? New ideas and techniques spreading along with trade? Or, was it a matter of very slow migration? People camping here and there for a while looking for somewhere to settle, no doubt also having to fight the locals? Personally I prefer a mixture of the two. Innovations by way of trade coupled with slow infiltration, but not a sudden invasion. I think it was this gradual increase in population and the attendant territorial fights that caused Jericho to look to her defences. It is possible the security of Jericho could have led her inhabitants to stagnate during the latter part of the PPNA. It is difficult to recognize any broad innovations in the sparse evidence we possess. This is a charge that might also be laid against the PPNB there, who seem to have continued the same from beginning to end, although in fact, they first herded goats and their plants were practically domesticated.

The prosperity of PPNB Jericho has been ascribed not only to her lush oasis environment, but also to her having cornered the trade in salt, bitumen and various minerals from the Dead Sea. It is possible she could have controlled the N.W. corner, west of the Jordan river, but the Dead Sea is large and we know many sites with equal opportunity and closer access which Jericho could hardly have influenced. After all it is some 20 kilometres away from the Dead Sea and local tribes could easily have supplied her needs and any export surplus while the town continued to live on its own bounty.

Now to Beidha, tucked away in mountainous desert near Petra. Set against the background of Jericho it presents a slight anachronism. With a beginning date of about 7200 BC we have, in effect, PPNA round houses going with PPNB implements in the early levels; a constellation also known from Mureybit some 500 years earlier according to Carbon 14 (Libby). After camping for a while in temporary huts the people of Beidha also built a wall around their inner territory and created their permanent community. Governed by the environment, as always, they built in stone, for real clay is not available in that rocky and sandy locality. The village lies in a very favourable environment and, in contrast to Jericho, in a healthy upland climate at 1,000 metres. Unfortunately only the outer perimeter of what was once a large site remains after erosion, but even so we can deduce a great deal. The inner citadel, as it were, was enclosed, but beyond the wall the wadi bed is full of stone scattered from buildings mostly destroyed by later terracing and the building of soil-retaining dams.

Inside the wall lies the heart of the village. At Beidha there is no sign of the stagnation we suspect at Jericho. On the

contrary we can see a steady development. The architectural remains are the most obvious and frequently cited as showing an unrivalled evolution. We all know this sequence. First the semi-subterranean round houses built in clusters, then single round houses with a few old-fashioned clusters. The next stage is sub-rectangular houses with gently curving walls and rounded corners, and finally true rectangular architecture. The only conservative element clung to by the builders was the habit of digging down before building up. All buildings in every level are semi-subterranean, whereas all rectangular buildings found elsewhere at this time were built at ground level.

Alongside this advancement we can detect changes in the inhabitants' way of life. Even during the cluster house period, VI, and within the general muddle, we can see a slight tendency towards differentiation of occupation in the separate elements of a cluster. One room suggests use as a kitchen or livingroom, with baskets of plant remains, a wooden bowl, a quern and grinders, plus a relatively clear space. Next door contained a preponderance of animal bones and ground-stone tools. A third room in this cluster was concerned with less messy occupations, it held a trough, many polishing stones, shells, baskets and a bundle of roughed out flints, arrowheads and fine blades ready for retouching. We have no such details for the later round house period, V, but perhaps this is negative evidence for a general clean-up; and we had found the living houses and not the workshops. The subrectangular houses, IV, were not burnt like the earlier ones. Judging from the care with which they built, these people exhibit a high aesthetic standard visible in their preference for a judicious mixture of flat mud-stone slabs and boulders to form a truly Byzantine aspect; as also the scrupulous way in which they kept their floors absolutely clean. We have very few finds from IV.

In this period too comes an eastward expansion of the village. Still well within the boundary wall, but separated from the larger houses by an open space lie some beautifully built smaller replicas of the bigger ones. Possibly some social stratification was taking place by then. The last periods for which we have evidence for this steadily expanding life see a reduction in the size of the village and the advent of multi-roomed rectangular buildings possibly with lightly built upper storeys. Here we have evidence for specialization of crafts within separate buildings, as well as general workshops. We may here have a mixture of those who specialized in a certain craft for local sale and export, and those who supplied all their own needs themselves. We have specialists in horn-working and in bone-tool and bead-making. The beads were of bone, shell or exotic stone, the last two dependent upon imported raw material. There would also have been such specialists as leather-workers, basket-makers and workers with wood. But unless found in a burnt building there is no hope of proving their presence. One specific trade might be suggested, that of butcher, indicated by large amounts of animal bones, some jointed and still in articulation found

in a small room with various heavy stone implements next door.

We have glimpses of other aspects of these peoples' lives too. Some of their dead were buried in ruined houses. One example is from between Levels VI and V where a ruined house was used for this purpose over a period. Those skeletons were all of young people and they were complete. The only disturbance was caused by repeated digging of graves into the restricted space, thereby disturbing the earlier burials. No evidence exists for the middle levels, but with the rectangular buildings we get secondary burials, usually in unoccupied houses, and in most cases the skulls of adults had been removed. On the other hand the comparatively many infant and child burials were usually intact. These inhumation practices are well-known for this period; for instance, from Mureybit in north Syria, Ramad in south Syria, Beisamun in the northern Jordan valley and Jericho. Everywhere they seem associated with rectangular architecture and flint industries related to the PPNB tradition.

One other aspect of these peoples' beliefs is suggested by three unique structures uncovered outside the boundary wall. A description of the largest gives the best idea. It is a semi-subterranean enclosure or room, carefully paved and roughly oval. It shows signs of enlargement, but essentially it contains a large, flat slab of stone set on edge centrally with the two faces orientated east/west and thin edges north/south. Against the south wall another big stone is laid flat on the floor. Behind the latter on the south side of the wall is an immense shallow stone basin, an installation measuring 3.80 metres long, by 2.65 metres wide and only 25 cm. thick. It has a hole bored through the rim at the apex of its roughly triangular shape, and one or two 'donkey ties' to facilitate handling: an amazing tribute to the masons' art as well as expertise in handling these huge blocks. Below the paving we found an earlier edition of this enclosure; an oval or round area outlined by small, flat stone blocks set on edge, and also with a slab set in the floor near the south wall. This oval lies below the standing stone in the building immediately above.

From these remains found outside the settlement wall one can suggest the area was religious in function. Those just described suggest a solar cult, but taken together this conglomeration of paved buildings, huge stones, basins and other features could also suggest a ceremonial function. Rituals undertaken in the course of secondary burial, for example. Or perhaps, although no burials were found, or looked for, they mark the beginning of the real cemetery as opposed to the privilege, if such it was, of being shovelled into ruined houses. But here one is on thin ice. Possibly I had been on the point of finding out when events stopped me in my tracks.

The inhabitants enjoyed the good things of this world. They were cultivating cereals which, though still showing wild features were well on the way to domestication, and they were probably herding goats. Apart from these activities, fruits, nuts, acorns and pistachio, timber and resin were available on the doorstep, and abundant game also. Their environment

contained plentiful supplies of good flint, red and yellow ochre and haematite, all valuable export articles in demand elsewhere. But here again, adjacent villages would all have the same resources. Malachite also outcrops nearby, but basalt for their ground-stone tools probably lay beyond their territory; the closest volcanic field lies near Shobek. Salt could be obtained from their own rocks or from the salt mountain in Wadi Araba. There was no need to go to the Dead Sea. Imports include bitumen, obsidian, pumice, sea shells and possibly steatite.

One is left with the impression of a thriving, more or less self-sufficient community. They imported the few extras they needed and must have had plenty of surpluses of minerals, fruits, nuts and so on as well as finished products to pay with. They were by no means isolated. Many other such sites are known in Jordan, both close to Beidha, in the Wadi Araba and elsewhere. We need some more excavation to see if self-sufficiency was the order of the day, or whether some settlements already show signs of specialization.

At the end, in about 6500 BC, Beidha was abandoned. We do not know why such apparently flourishing settlements as, for example, Jericho were left like this. But there seems to have been a general abandonment at roughly this time in Palestine and Jordan. A climatic change, a slow drying up, is usually cited as the reason, or some temporary reaction to tectonic movement. Pollen analysis and other natural scientific evidence does point to some slight desiccation, but one wonders whether this would be enough to have caused Jericho to be abandoned. Beidha would be more sensitive to drought, but the spring at Jericho would still be active. Could it not be that these places were full of endemic cholera and dysentery which occasionally gave rise to gigantic epidemics like the Black Death transmitted through the villages by traders and other travellers? Regrettably man is not naturally the cleanest of creatures, so the conditions under which these early villagers must have lived defy the imagination. Despite her spring Jericho was abandoned twice, each time for a long period. It is possible that not only did they foul themselves up to a devastating degree, but that they also succeeded in poisoning the spring and ground-water for a time. In which case even those who came to gaze on the deserted town would fall ill if they drank the water. In some such manner these deserted settlements would be shunned and damned by the tribes for generations. The signs would be difficult to trace. All unburied dead would be taken care of by natural means, but perhaps plague pits would exist outside the walls. Some such epidemic would have caused young and old to die. In such a state of affairs the survivors would realize it was necessary to get away from the stricken village and wander in the open with their flocks. Be that as it may, something must have happened within this general period when it seems that in both Palestine and Jordan the PPNB sites were everywhere abandoned. Jericho was re-inhabited later, as she had been after the PPNA desertion, but not Beidha.

There follows something of a hiatus in our knowledge. No

matter the cause, this reversion to nomadic life cannot be detected by archaeology. But after a period, perhaps quite a long one, people did begin settling again, but they did so in a more temporary manner to begin with. They lived in pit dwellings with lightly built super-structures of plant material, and only after a time did they begin building solid structures again. It was a re-enactment of the evolution from Natufian pit dwellings through to ground-level architecture that we have been following, but the later manifestation was accompanied by pottery.

The nomadic period, then, is not traceable, but the pit-dwellings and later periods are. The only trouble is that the former do not leave mounds and so are extremely difficult to find. Apart from the pit-dwellers of the Pottery Neolithic A and B at Jericho I know of only three other such sites in Jordan, although many more will be found and are being found. Two of the three were noticed in road cuttings, and the third was found in the side of an eroded wadi bank. So they do not come easily.

I now finish with a sketch of the later Neolithic, post PPNB, in Jordan. In Wadi Rumm at Abu Nakhailah we have a stone-built settlement with both round and rectangular architecture. The round houses are semi-subterranean and very reminiscent of early Beidha. It has a more advanced flint industry than Beidha, but no pottery. The flints more closely

connect with those of the Pottery Neolithic and I placed this village in the mooted hiatus.

In Wadi Shu'aib there is a fine PPNB site with pits cutting into it and with both pits and surface spread with pottery and flints like those of Byblos ancien. This should be about 6000 to 5800 BC. At Umm Salihi on the old Jerash road, lies a site with stone architecture, pottery and flints related to the Yarmukian. This site has now been planted with trees and built over. Our last site, Ghrubba is in the Jordan valley and here the pottery seems to bear a distant connection to Samarra in Iraq, which is the last half of the 6th millenium in date. These faint resemblances also indicate trade was still going strong with the flourishing northern regions. The trade routes into Jordan were either along the Euphrates and down the Levant, or down the Euphrates, up Wadi Hauran, across the watershed and down into Wadi Sirhan.

Thus during the mooted period of desertion we have four known settlements of differing age and cultural tradition; six different phases, if we count the two known from Jericho. This suggests the desertion is more imagined than real. For although the south did suffer some setback at the end of the PPNB, the few sites we find after that do seem to reflect faintly the trends from cultures flourishing elsewhere. For, taking Donne out of context and misquoting: as in the case of man 'No country, town, village or habitation is an island unto itself'.