

## **EARLY NEOTHERMAL SITES IN THE NEAR EAST AND ANATOLIA. A REVIEW OF MATERIAL, INCLUDING FIGURINES, AS A BACKGROUND TO THE NEOLITHIC OF TEMPERATE SOUTH EAST EUROPE**

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**TWO PERIODS IN THE EARLY NEOTHERMAL.** It becomes increasingly necessary to give a summary of the significant events which took place in the Near East after the 9th millennium, as the excavated and published material increases. The traits in the S.E. European neolithic which are commonly referred to Near Eastern sources make it necessary to do so, at least with reference to these traits and more especially to figurines. It is not intended to give a complete account of all the better known characteristics of these Near Eastern cultures, but only to **examine** some of the features which seem to acquire or retain importance in their presumed subsequent diffusion and to comment on their implications.

The publication of the figurine material is, here as elsewhere, only partial, not always illustrated, and sometimes, only general ideas of the quantity and associations can be obtained. If however we divide the period for convenience into two broad divisions of c9000—7000 BC and c7000—5000 BC we can assign the material to various cultural groups within this and sometimes comment more precisely. This procedure may help to establish the perspective necessary to a true appreciation of the background to Eastern Europe which, lacking it, would be liable to an interpretation altogether too parochial.

The period of 9000 B.C. onwards reflects present estimates for the beginning of the Karim Shahirian phase which follows the Zarzian in Eastern Iraq and western Iran, while on the Levantine coast it includes Natufian developments. The terminal Palaeolithic blade-based industries of the Zarzian in the Zagros and in the Levant the Atlitian, Khebaran and El Khiam D and E, together with Ksar Akil and possibly the Nebekian at Jabrud both show an increase in open air sites and in the use of microlithic blades and geometric microliths and probably fall in the range 15000—9000 BC. Turkey may also have allied blade tool industries. Other claims for figu-

rine material in this period are slender and in fact we are forced to go as far afield as Morocco to illustrate the sort of thing that might be expected, where in level VI of Tatoralt (with a  $C_{14}$  date of  $12070 \pm 400$  BP), Roche J. (*L'Epipaleolithique Marocain*, 1963) has found a small stone figurine, supposedly bi-sexual, with ochre on it.

The 7th and 6th millennia are taken as the next major period but each can often be considered separately since the developments of what Mortensen (*Sumer*, 1964) has aptly subsumed under a „Zagros Group“ can be assigned in all probability to the first, and then the Hassuna Halaf developments to the second of these. Other areas begin also to emerge in more detail. I shall refer to these millennia as Period II in the near east and to the preceding two millennia as Period I.

While the natural habitat of domesticates extends from as far south as Shiraz in Iran along the W and SW flanks of the Zagros and then South again to the Lebanon and the Judean hills we shall find that we are forced to consider these two arcs, and their cultural developments separately in these periods. Not only does the Karim Shahririan not show continuity from the Zarzian nor the Natufian from the Kebaran, but that also between the Natufian and the Karim Shahririan there is a basic lack of similarity, for instance in the possibly higher emphasis in the Natufian on hunting, with a general lack of geometric microliths and comparable projectile points in the Karim Shahririan. The Northern and Anatolian, even European, boundaries of domesticates are not well defined yet, but the development of incipient cultivation and domestication as defined by the work of Braidwood and other takes place in Period I in a zone bounded on the south by the 30th parallel, and the 38th or 39th parallel seems, in the present state of our knowledge, to be significant northern boundary.

Period I includes besides these developments of major significance the first scattered evidence for the development of a figurine tradition, and of ground stone work and other traits, and we are bound to ask ourselves why this is so. It may be in part due to the state of our knowledge, since figurines are known from the Gravettian in Europe. The change involved in domestication really means many things, among which the causes and occasions are to be distinguished from the effects only by careful formulation. An important factor is the increase in density of population and consistent permanence of settlement which appears during this period, with subsequent profound implications for society and the individual. The second of these effects (that of permanence) has ceased to have meaning for the human race, but the first (that of population increase) remains as it originally was, one of the most important accompanying phenomena. It is unfortunately one difficult to quantify in prehistoric times.

**PERIOD I IN EASTERN MESOPOTAMIA.** The map of Period I shows that a number of sites have produced figurine material both from the Karim Shahririan and the Natufian areas. Art of a sort pebble profiles of a fish from layer  $C_2$  which is „Mesolithic“, and of a face from the Upper Paleolithic of layer E, both of stone -is also claimed from Beldibi. (*Antropoloji* 1964, 25—31).<sup>1</sup> Of the Karim Shahririan sites

<sup>1</sup> The rock shelter at Beldibi is itself known as Kum Bucagi, and the lithic material from this and other shelters near Antalya is related to the Natufian.

in Period I such as Zawi Chemi Shanidar and the upper levels of Shanidar itself, Gird Chai, M'lefaat, Tepe Asiab, and Karim Shahir. the last three have produced figurine material. *Zawi Chemi* (Sumer 1958, 131) is of Karim Shahirian date and about 160 kms to the NW of that site; the preceramic layers in question have given the date of  $10070 \pm 130$  (W681) BP and have produced a circular enclosure of river cobbles c.3m. in diameter while the same culture is represented 4 kms away in the upper levels of Shanidar cave. There is no mention of figurines from either of these. But from the open site of *Karim Shahir* W. of Chemchemal and about a mile east of Jarmo come two lightly fired figurines (Braidwood 1960, *Prehistoric Investigations in Iraqi Kurdistan*, (-PIIK) 52 sq & Pl. 23/6) which are sometimes also described as unfired. They „bear definite resemblances to certain specific examples of one special group among those found at Jarmo“ and one was found near the centre of a circular layer of red ochre in a pit. Ground stone work is well represented here both in ornaments and utility forms, as at Zawi Chemi and M'lefaat. These are a notable part of the technology of the early food producers and these two elements do perhaps suggest some affinity with Jarmo. But these sites are all at a level of incipient cultivation and do not represent village farming communities. Karim Shahir further has bracelets, pendants, toggles, querns and pestles on a palette with a decorated edge but no obsidian and no pottery.

*M'lefaat* is a low mound of some 1.5 m depth N of the Erbil-Mosul road on the west bank of the Khazir river. It may represent a phase slightly later than Karim Shahir (Braidwood 1962, 120) and has better ground stone tools, pestles, querns, rubbers, mortars, polished axes, two balls, a finely ground and polished rod; a shallow bowl fragment from the surface; and fragments of „semi-fired“ shaped clay (PIIK, 51) which are „unmistakeably fragments of figurines, or of rods or balls“, and also a cylindrical clay bead, from the excavation. Jarmo in Period II also has balls and cones. There are also only six pieces of obsidian excavated and five from the surface.

*Tepe Asiab* is a low mound 6 kms east of Kermanshah by the Kara Su river which has yielded a comparable occupation of intensified food collecting remains such as the many clam shells from the river (although not the land snails found at Sarab and Jarmo), ground stone beads, pendants and bracelets fragments of marble, two ochre stained burials and part of a large round shallow basin c 10 metres in diameter which is possibly a semi-subterranean structure. There are also two red ochre stained burials and a few fragments of figurines, described as „enigmatic“, and numerous small clay objects. (Braidwood, *Iranica Antiqua* 1, 1961c and *Science* 1961/133 no. 3649, p. 2008). The flint industry is more or less comparable with that of Karim Shahir but held to be rather more developed.

The important observation to make about all these Period I sites in the Eastern part of our area is that we can clearly see how both the grinding of stone and the manipulation, and even firing, of clay considerably preceded the making of pottery, as did the making of stone vessels of great sophistication. We may recall the clay figurines of the Pavlovian in Bohemia for a similar precedent, far less intimately connected to subsequent developments in that area but giving a more senior antecedent. The firing seems in most cases to have been of a light nature in Period I, with unfired examples well attested.

THE TWO PERIODS IN THE LEVANT. Period I in the Levant largely comprises Natufian development which brings with it a rich nobiliary art, among which figurines of the sort recently published from Ain Mallaha are unusual rather than integral. Sites are now known, not all restricted to the coast as formerly thought, but nevertheless most of them still are on the coastal plain with others in the Judean hills. From north to south the Natufian ranges from the slender evidence for it from Jabrud (Rust, *Die Höhlenfunde von Jabrud*, Plate 107) to the apparently considerable unexcavated levels of it at Beidha. As in the Zagros ground stone-work is of particular interest, and with hunting pre-occupations there is equivocal evidence for cereals, although direct evidence does not immediately appear even in the succeeding period. This „Pre-Pottery Neolithic“ had made its appearance late in Period II in fact, and shows much in common with the preceding Natufian in many cases. However it is far from being a simple or unitary phenomenon and has both regional and temporal variants. The latter are usually described in relation to the two quite markedly different pre-pottery phases at Jericho, which is inaccurate in view of the regional differences mentioned but necessary for the time being. In view of the element of continuity we will treat both Period I and Period II in the Levant insofar as they are pertinent to our main theme, before returning to consider the developments of Period II in the East. In the Levant as in the East the developments of the earlier and the later parts of Period II can be separated and often refined upon but it remains in the broadest sense a useful division which can be used to clarify the relation in time of the emerging Neolithic of Southern Anatolia, and of Greece and the South Balkans, to the Near Eastern events we are at present considering.

General accounts of the Natufian are readily available (eg DAE Garrod, PBA, 1957, 211.) and its rich inventory is not excluded from the numerous flexed burials which also mark the period — probably more than 300 in Palestine. The importance of grinding processes is particularly evinced both by deep marks in the live rock and by large scale stone work, and reaping is attested by the decorated composite sickles and their lusted blades, but the domestication either of plants or animals is not demonstrated. Their open and cave settlements are however of a permanent nature.

*Eynan (Ain Mallaha)* on the West side of the North end of lake Houleh in Israel is the best open settlement and covers some 2000 sq metres with a population estimated at some 200—300. (Perrot, J., *L'Anthropologie* 1966, 437 sqq). The round stone house structures, as they now appear from the presence of hearths, are of great interest and may call to mind the form from Zawi Chemi Shanidar. The differences from the Natufian of the caves of Judea and cf Mount Carmel emphasised by Perrot only demonstrate what we would in any case maintain, that the Natufian, like the succeeding pre-pottery, is susceptible to more detailed regional and chronological definition.<sup>2</sup> This does not preclude our treating it in general here. Ain Mallaha has produced a limestone figurine with traces of red ochre. (Perrot —

<sup>2</sup> As is evident from Neuville, R., *Revue Biblique* 1934; Garrod *PEA* 1957; Waechter, *Institute of Archaeology Annual Report*, London, 1951, 10—8, none of which can be taken as final statements of this.

fig. 23/1). It has stump arms defined by grooves and the head and base are broken. There is an incised line at the waist and finer scratches on the surface. There are also two pebbles of calcite with incised lines which render in a particular convention what is probably a human face (Perrot, fig. 23/2, 3) and pebbles grooved to represent phallos (fig. 21). A bone spoon (fig. 22/22) may also be mentioned. Apart from this the ground stone of all sorts is important, but particularly its weight and size and the grooved decoration (fig. 15/9, 10). Basalt is often the material employed.

Ain Mallaha comprises many of the significant figurine traits present in the Natufian. The copulating couple carved in limestone from the *Wadi Khareitoun* in the Judcan desert south of Jerusalem is without associations, although probably Natufian. (Neuville, R., *L'Anthropologie* 1933, 558). From the talus of a cliff in a close proximity to the Wadi Khareitoun, at *El Khiam*<sup>3</sup> comes a sequence from Lower, Middle, and Upper Aurignacian through Atlitian, three levels of „Kebaran“, which it will be remembered parallels in time but not in content the Zarzian of Iraq. Above this are two levels, 5 then 4, respectively „Khiamian“ I and II, characterised especially in the upper (4) by lunate microliths and backed blades and notched-base points retouched round the edge. Both levels contain rough stone bowls or mortars together with pestles, a pebble in level 4 is red painted and another may be scratched to represent a figurine, and in level 4 there is a human figurine of unbaked clay (Echegaray 1966, vol. II, fig. XXVIII and Pls VI & VII), the mid section of a simple torso just over 4 cms high. Above these levels come two with tanged points, flaked only partially or on one side („Proto-Tahunian“) and the upper level is „Tahunian“ with tanged points often bi-facially pressure flaked. The „Khiamian“ may be taken, despite the disclaimers of the excavator, as an aspect of the late Natufian here. Most of the faunal remains come from the upper two „Tahunian“ levels which are however taken to represent a continued development of the „Khiamian“, and contain goat (*Capra hircus*) as a primary element in the economy (Echegaray, 149) with hunting of gazelle, ox, wild as and boar. Snail shells are prominent in the Khiamian levels. The „Kebaran“ levels II and III are claimed to take the place of the evolving Natufian, and the „Khiamian“ levels (with the figurine in the upper one) probably therefore immediately precede the preceramic in the eighth millennium to which the „Proto-Tahunian“ levels correspond. The bifacial flaking of the „Tahunian“ then takes its place alongside the PPB, „B“ industry.

The most important remaining find is the carved calcite head from the *Mugharet el Wad* (Garrod & Bate, *Stone Age of Mount Carmel*, vol. I, Pl. XIII/4) from a well stratified context at the base of Group Burial H 1—10. The Natufian of the *Mugharet el Wad* has also produced a number of phallic flint pebbles in the general style of those from Ain Mallaha. (Garrod & Bate 1937, 41).

The relation of the lithic industry of Ain Mallaha to, and in fact its distinctness from, those of levels B<sub>1</sub> and B<sub>2</sub> of the *Mugharet el Wad*, Beidha (Seyl Aqlat), Erq el Ahmar, Shukbah, Jabrud, Kebara level B, Tor Abou Sif, and El Khiam B<sub>2</sub> is outlined by Cauvin, *L'Anthropologie* 70, 5—6, 485—494. (See also Prausnitz 1966). A profound study of the relationships of the Natufian is beyond our scope, but

<sup>3</sup> Echegaray, J. C., 1966.

it should be pointed out that there are traces of its influence at Beldibi.<sup>4</sup> The parallels of the Natufian extend also to the Capsian of the Maghreb which yields many parallels in the ground stonework and the phallic pebbles, (Vaufrey, R., *La Préhistoire de l'Afrique*, I, Tunis 1955; Camps-Fabrer 1966, 241—250 eg.) but the lateness of the Capsian makes this a very indirect matter. Lateness is also the objection to stressing more confidently the general parallels which certainly exist in the ground stonework of the Pre-Pottery neolithic of Cyprus. The fact is that such parallels do not in the first place have a satisfactory chronological connotation — and the ultimate limitations of the methods of relative chronology attest this — and secondly, antecedents of the Natufian will be found in the course of further research and its duration established. The regional variants of the culture may be contemporary, but cannot in any case be satisfactorily related in terms of this relative chronology. The succeeding cultures to which we must turn appeared towards the end of Period I; until the origins of the Natufian are better known the assignation of this culture, which might on the face of it be contained in a period of a millennium, to fill the remainder of that period must be purely conventional.

A number of sites shown „PPN“ material overlying Natufian and as we have seen this Pre-Pottery, based in addition to hunting on cultivation of cereals, collecting and herding, is commonly divided into two stages of which the first probably stems from the Natufian. Representative of this are the PPN A of *Jericho*<sup>5</sup>, *Nahal Oren*<sup>6</sup> (Wadi Fellah), and *Beidha*<sup>7</sup> (Seyl Aqlat). Mount Carmel would seem to be at the Northern limit of distribution of this stage at present. The break at Jericho between this stage and the PPN B which succeeds is quite marked, and other sites representative of the PPN B are *Beidha*, *Munhatta*<sup>8</sup> and *Tell Eli* (Sheikh Ali),<sup>9</sup> both in the Jordan valley, *Nahal Oren* in all probability (although it lacks the plaster floors which together with rectilinear plans differentiate this stage architecturally from the preceding one whose houses tend to be round) and *Tell Ramad*<sup>10</sup> just south of Damascus. It will be seen that this extends to the North the range of the Pre-Pottery, and there is also evidence from the base of Ras Shamra for it. This A and B division of the material is the most coherent way of explaining the development at present although as we have emphasised there is no reason to suppose that regional variants mirror the situation which obtains at Jericho, while there is

<sup>4</sup> (Bostanci, *Anatolia* 1959, 129; *Antropoloji* 1965, 91; Anati 1968.) To summarise the relationships of the sites near Antalya — *Belbasi* finds its analogies in, the Kebaran which is distributed from Ksar Akil on the coast of Lebanon down to the Wadi Madamah near Petra. This is differentiated from the Zarzian in having rather larger tools in general and not being exclusively microlithic. *Beldibi* may be linked with the Natufian and like it dissociated from Shanidar and Karim Shahir.

<sup>5</sup> *Antiquity* 1959. Kenyon, K.

<sup>6</sup> *I.E.J.* 1957, 125. *I.E.J.* 1963; Stekelis & Yizraely.

<sup>7</sup> *P.E.Q.* January—June 1966. Kirkbride, D.

<sup>8</sup> *Revue Biblique* 71, 1964, Perrot J. *Syria* XLIII, 1966/1—2. Perrot, J.

<sup>9</sup> *I.E.J.* 9, 1959, Prausnitz, M. W.

<sup>10</sup> *Annales Arch. de Syrie* 1963, 175—209; *Annales Arch. de Syrie* 1964, 109—128; *L'Anthropologie* 70, 1966, 390—391., de Contenson & van Liere 1966, and 1966b., Hooijer 1966 (faunal), van Zeist and Bollema 1966 (Palaeobotany).

hope that the exploration of Western Syria and Eastern Turkey will clarify the wider relationships. One obvious point must be that if the Natufian does indeed extend as far North as Jabrud, as it certainly does to Ain Mallaha, then what is claimed to develop from it might be expected to be found over a comparable area. It is at any rate possible for the time being and for the sake of clarity to envisage the PPN A as occupying later Period I with PPN B in existence in the seventh millennium, while the unpublished C-14 dates from Tell Ramad may show that the „Chalk Ware“ development there starts roughly with the sixth millennium. This scheme is perfectly susceptible of alteration in the light of any further new facts. For example, there are some indications, that the round house which for the present is taken to characterise the architecture of the PPN A was retained and reappears later in the PPN B.

*Beidha* is one of the most informative of the PPN sites, and has besides the PPN a substantial Natufian, which at present awaits excavation. The architecture shows a stratified development starting with polygonal stone house foundations in level VI. There are round houses in level V and subrectangular houses with curved walls in IV. These levels roughly correspond to the PPN A of Jericho and have carbon dates in the first three centuries of the seventh millennium (with 5570 half life). The plaster in VI—IV is a sandy clay mixture with lime, very thin, with traces of some colours — purple, red, ochre, brown, with black lines and possibly red dots. (The plaster in III—I is by contrast a white lime plaster, very fine and hard.) There are no specialised workshops in the lower levels although IV has a small house apparently devoted to grinding cereals, but levels III and II have the corridor houses, narrow corridors with three transepts and walls as thick as these, which are probably the basements of a light upper storey room, sometimes with a plaster floor and of some 30 sq metres. There are also large rectangular houses (9 by 7 m.) once thought to be courtyards, and other complex plans. Level II has produced rectangular houses with red painted plaster and high-sill hearths while levels II and III have the familiar tanged-point stone industry with pressure-flaked tangs, flaked-picks or axes, and awls. This is found in the PPN B, for example also at Munhata.

The „workshops“ have produced a varied content of bone tool and bead etc. manufacture (PEQ 1966, 24, 25) and in one of these in level II was the rotund unbaked clay figurine, seated, 2.8 cms high and with the head missing, illustrated in PEQ 1936, fig. 4. The carbon date for this level is  $6600 \pm 160$ ; K 1095, from charcoal. Small stonework is rare at Beidha but level II has produced a small „bell amulet“, while odd concretions not unlike the figurine were collected. The workshops produced other small baked clay objects including apparently a small perforated leg and foot, with a knee (fig. 4 and PL XVI/b).

From level VI, the burnt polygonal house E 130, comes a clay ibex figure, with realistically recurved and modelled horns. It is baked, probably as a result of the burning. This house is an exception to the absence of specialised workshops below level III, and it produced most of the data on plant remains. There were also small bowls and objects modelled in clay.

There are no ovens from any level at Beidha and the very worn teeth of the inhabitants possibly point the fact that the parching of emmer was not known. Other points of interest are the grooved axe of fig. 10/11, PEQ 1966, which corres-

ponds closely to a series noted by the author in association with early neolithic developments in South-East Europe, and also the burials found. There are only six adults altogether, but twenty children, and many of the fifteen intramural burials found in the three seasons before 1966 had single beads at the mouth or nose. This habit recalls the occurrence in Europe of the holes in the chin, or pellets at the lip, of various figurines which occur in some of the areas most closely related to the Mediterranean zone. The habit of decapitation recurs at Beidha, probably by twisting, after dessication in a chanel house, which reminds us not only of the other PPN instances but also of Çatal Hüyük. There is a further large aceramic village, without Natufian, some 10 kms N. of Beidha at Shaquaret M'siad, and another to the South at Adh Dhaman.

We need not summarise the unique developments at *Jericho* save to draw attention to the large lime marl figures on a reed frame-work Garstang's excavations (*Syria* 1935, Pl. LXIII; *Liverpool AAA*, vol. XXII, Pl. LIII and p. 166). These are attributable with very high probability to the PPN B although not characterised in Garstang's account as such. There are two groups, each of man, woman and child made in a very accomplished and realistic way without any sexual emphasis. The toes, breasts, etc. are modelled and the eyes inlaid with sea shells. They are about two thirds life size but flattened. The best preserved head (refs. above) is painted with drab or reddish lines for the fringe and beard and hardly any detail of the modelling of the face is ignored. Garstang's account — that they were not associated with pottery and were discovered „below the highest level of Neo-Tahunian flints“, together with the sections (*Liverpool AAA/XXII*, Plate XXVI) — must put them late in the PPN B period as we now see it. The best preserved head and its group were unbaked and the other group partly baked put resting on a hearth (ibid Plate LII/b) so that this is possibly secondary. This group was found in a small chamber just north of house 202.40 cms above floor level (on the hearth to which the room was devoted), and 202 had a red burnished plaster floor. His excavations also produced a „shrine“ with a portico of six posts, antechamber and inner room, which yielded many animal figurines (sheep, cattle, goat, pig) and phallos.

The terraces and cave on Mount Carmel's Western cliff known as *Nahal Oren* (*Wadi Fellah*) have produced, besides the bone and stone animal heads from the Natufian cemetery, incised pebbles from the PPN II level. This level succeeds PPN I which is claimed to resemble the PPN B of Jericho, and has round or oval houses of 9—15 sq metres on the terraces and cup marked stones. The pebbles come from house 16 (*IEJ*, 1963, Pl. 2/fig. h.) and their resemblance to pebbles from the „Yarmukian“ pottery neolithic of Shaar Hagolan is noteworthy since it implies some sort of continuity from this late PPN to that altogether early aspect of pottery Neolithic. The pebbles have incisions round the top which might recall the phallic pebbles, but are also divided at the bottom by vertical incisions which make them more like schematic figures. The relationship to the later examples is at any rate typologically much closer than to the general tradition which exists as far back as Taforalt. In the same Wadi, above and opposite Nahal Oren, Abu Usba (*IEJ*, 1952, 15 sq.) is claimed to have produced very early pottery.

The end of the PPN B would fall in our scheme in the middle of Period II and Munhata, Tell Ramad and Tell Eli are sites which have both PPN and Pottery



neolithic above it. *Munhata* has figurines of clay from both these levels, twelve at least from the PPN. (Perrot; *Syria* XLIII 1966, 49—63; *Revue Biblique* 71/1964; *Syria* 1964, 323—345; Perrot, 1967.). The site is south of lake Tiberias and the PPN (levels 6—3) has considerable square house remains with plastered niches, large stone querns and vessels and basalt vessels, while the flint industry has the long barbed points with pressure flaked tangs, commonly about 12 cms long. The succeeding pottery level, level 2 is essentially Yarmukian, having for instance herring-bone incised pottery, and five at least of its remarkable figurines. The arrowheads are here much smaller, about 3 cms long, pressure flaked all over one side and at the tang and point and with less marked barbs. The larger javelin-like point is absent<sup>11</sup>. There are denticulated blades and flaked axes. Above level 2 the restricted area of level 1 is final fourth millennium.

The two types of figurine from *Munhata* are illustrated in *Syria* 1966, Pl. VI. Those from the PPN are pillars with a flat expanded foot, pressed down, and heads on top of this which are flattened and incline slightly back. The eyes are round applied pellets, without incision, or else vertically incised, (Pl. VI/4), or dimples. Pl. VI/2 has rounded breasts and Pl. VI/1 male organs. There are also animal figurines and other „geometric“ modellings occur. The figures of level 2 have vertically elongated heads — applied pellet eyes also elongated and with incisions, longer modelled noses than the preceding types, applied „ear“ blobs and incisions round the throat. They are of fired clay whereas their predecessors were of „terre durcie“. There are leg fragments (Pl. VI/14, 15) with red painted stripes, and Perrot estimates that the biggest figure would have been some 30 cms high. The large complete figure illustrated in Perrot 1966, 14, a female figure with pellet eyes and a sort of „cape“ round the shoulders, and the left arm across the body under the breasts, has traces of red ochre. From level 2 also come pebble figurines (Perrot 1966, 15) with lightly scratched lines, as from Byblos and Shaar Hagolan, while animal figurines are also said to be numerous. Some pebbles painted with red ochre are also mentioned and stones incised with parallel lines.

There would seem to be a considerable gap between levels 6—3 and the Yarmukian which follows. At earliest the first levels of 2 are in the second half of the 5th millennium. Virtually the same sequence and gap seems to be repeated at Sheik Ali (See also *de Contenson* 1966, 6), which is after all only ten kilometres to the North.

All the remains of animals from the lower levels of *Munhata* and the proportion of juveniles indicate that they are entirely hunted (Perrot 1967). There are also the many projectile points, and no positive evidence for cereals, although there are the large basalt querns and rubbing stones. The architecture is well developed (Perrot 1967 et al.) but in essentials it cannot really be demonstrated that there is any advance over the Natufian of the 9th millennium.

<sup>11</sup> We may note that in the pottery neolithic of impressed and incised wares comparable to the Byblos neolithic, at for example Tell Abu Zureiq, the biconical sling shot familiar in S.E. Europe occurs. This is probably late 6th or early 5th MBC (cf. the date from Byblos of c. 4600±200, W. 627, for Byblos A.).

The PPN of Munhata however is, like the Jericho PPN B, Beidha II—IV and Tell Ramad I, with which it may be compared, an affair of the final 7th millennium.

Far from betokening an increase in settled life the introduction of pottery in Palestine before 6000 BC is followed by a period in the whole 6th millennium and first half of the 5th millennium marked by a gap in material — seen between Munhata 6—3 and 2, Sheikh Ali 4—3 and 2, Jericho PPN B (X) and PN A (IX). During this period architectural remains are notably in decline.

The herringbone incision of Yarmukian pottery is probably to be equated with Middle Byblos. *Shaar Hagolan* in the Yarmuk valley has this pottery and a number of the pebble figurines anticipated at Nahal Oren (*IEJ* 1, 1950—51 & *IEJ* 2, 1952, Pl. 16 and p. 216—7). They are here elaborated and accompanied by phallos but for example *IEJ* 1950—51 Pl. 111/2 is close to the Natufian ones; there is however imported Halafian ware in middle Byblos which helps to date it and the Yarmukian to the very end of Period II. The figure illustrated in *IEJ* 1, Pls. IV/1—2 and V/1—2 is of interest. Carved in limestone and 65 mm high what Stekelis regards as the breasts are presumably the buttocks and it nicely exemplifies a carved out form of female figure with prominent buttocks and legs joined together which might be found in clay in south east Europe. The pebble figures are parallel at sites near Yarmuk (eg Geshar) and at Byblos<sup>12</sup> and Ras Shamra. Buildings are not reported and this is of interest since it supports a contrast with the PPN which will be found elsewhere. One of the pebble figures found in the grey neolithic layer of the settlement both exemplifies very well the incised design and has the interesting feature of traces of vermilion paint mixed with oil, according to Stekelis, and absorbed by the stone. It is of soft limestone 9.1 cms high (*IEJ*, 2 Pl. 16, a & p. 216—7). From *Shaar Hagolan* come other examples of the clay figure heads with high top and pellet eyes and lips, modelled cheeks and nose and ears (Anati, *Palestine before the Hebrews*, 266).

*Tell Eli*, only partially published, also shows Pottery Neolithic following PPN. It is 5 kms west of *Shaar Hagolan*, beside the Jordan and has no mention of figurines. (*IEJ*, 9, 1959, 166 sqq.: more information is contained in Prausnitz's thesis which is not available to me). However we have in a sense been led on past earlier pottery developments in the Beq'aa (upland Lebanon NW of Damascus) simply in discussing sites like Munhata. The Beq'aa sites and Tell Ramad merit comment, although the former in particular are as yet unpublished<sup>13</sup>.

*Tell Ramad* (references are given above) is on a basalt plateau beside the Wadi Kattana in the region south of Damascus, and now known to have six metres of deposit. The architecture of the lower phase (I) is not described but level II, the richest period, has rectangular houses, with stone foundations and unbaked brick walls and level III has no buildings, only pits (Pisé huts according to *de Contenson* 1966). In level I there are however round plastered hearths; it has *Triticum dicoccum*, *Hordeum distichum*, and lentil, but the fauna is entirely wild (deer, gazelle)

<sup>12</sup> (*Bull. Mus. Beyrouth*, 1961, 71 & Pl. III 7 examples). Note also the clay figure, Pl. II/a.)

<sup>13</sup> Some details & illustrations may now be found in *Copeland and Wescombe* 1966.

although there are animal figurines of unbaked clay. This level seems to be comparable to Munhata 3—6 or to the Jericho PPN B of the mid seventh millennium and includes the ground basalt industry, limestone bowls and bone tools such as spatulae. There are burins and unretouched blades with a high gloss, arrowheads both notched and tanged and blades of obsidian. This Pre-Pottery culture evidently included a measure of cultivation with hunting and without herding. The continuity in level II is evident in a similar flintwork inventory which includes flaked axes and the smaller type of arrow described for Yarmuk, and discards the unretouched blades in favour of denticulated blade elements; in the similarity of the architecture of II with „PPN B“, architecture elsewhere; and in the presence also of deposits of skulls covered with plaster and ochre. The same plants, together with prune, almond, pistachio, etc. are present: but there is an important discontinuity which is not made clear, for gazelle is joined by pig and cattle and in this level the chalk ware appears, in association with very friable pottery. There are also in level II „abundant stylised animal and human figurines“ of unbaked clay, and a limestone torso c.8.5 cms high, of a female (*De Contenson & van Liere* 1966 b, Pl. 2c/13). There are several carbon dates now available. Level I from just above bedrock has dates, 6140 and 6250 and another date from the same level of 6260. Level II has three dates: 5970, 5950, and 5930 (see list of C-14 dates for data) and it will be seen that these are consistent clusters. (*de Contenson* 1966, c. The two dates given in *l'Anthropologie* 1966, 391 are both put in the level II, incorrectly).

It is evident that level II which is from 2.30 to 4.30 m. thick, comprises important developments which are only partly revealed by the present published descriptions. Herding and pottery neolithic elements appear in direct continuation of a PPN, and unbaked figurines are numerous. In level II the inclusion of many horned animal figurines reflects the herding preoccupations, while the human ones are held to resemble the pillars with pellet eyes from Munhata. The pottery skulls are attributed to level II, but the PPN here has now apparently also produced modelled plaster bodies from below these.

In the presence of these evident elements of continuity with the PPN B it would be imperative to know just what is their relation to the new traits at this site. The „Chalk Ware“ is very thick unfired whitish pottery with thick bases and sides. According to de Contenson, it is made of „calcareous clay mixed with pozzolanic clays in a mould“, with the surface well smoothed.

This would seem to be the point at which to remark on the terminology used in relation to the „plasters“ and „chalk wares“, and „lime marl“ figures. The „plaster“ of the PPN is not necessarily a true lime plaster although it has not always been made clear what it consists of. The description „chalk marl“ applied by Garstang to the figures from Jericho would seem to be far more accurate, both there and on the well known „Plaster Skulls“. In the case of the Chalk Wares it is not known what the basis is for the description of „pozzolanic clay“ content by de Contenson at Ramad, but certainly in the case of specimens from Lebwe examined at the Institute of Archaeology in London there is no clay fraction and the specimens consisted of almost pure calcium carbonate with perhaps 1—2% of Gypsum and a maximum of 5% clay content on visual estimates after solution. In fact the

Chalk Wares do consist in this case of almost pure (possibly weathered?) chalk with decayed organic matter, which has not been fired but nevertheless has a fine hard burnished surface. The question of its having been shaped in a mould may well be a probability but cannot be demonstrated directly in this case. (It may be noted that moulds were probably used from a quite early stage in the formation of the mud bricks). To characterise the Chalk Wares as „crude“ is misleading; they have regular thickness and forms and a high finish, and from the available descriptions seem also on occasion to be combined with plaster surfaces. The shapes at Lebwe comprise flat based forms with thick vertical sides which extend down below the base, raising this off the ground. A variety of flat, rounded or thickened rim shapes is present. The resemblance of the surface to the better stone vessels found in the PPN B is striking.

There might one feels be some question here of imitating stone vessels, and the technique is further elaborated at Byblos and Tell Ain Nfaikh where we find this hard white smooth paste applied to the outside of normal pottery to cover the whole vessel, which is incised to receive it. (*Bull. Mus. Beyrouth* XVII, 1964, 23 and Pl. V. Profiles at Ramad, *AAS* XIII above fig. VIII). It is clear that it continues beside the dark-faced burnished wares of Byblos type here (and at Lebwe and elsewhere) but the more important point of how these relate to the PPN elements at Ramad is not made clear. Continuity continues to be evident in level III whose inventory is an impoverished version of II. There are no buildings, only pits; pig, sheep and goat and cattle are more frequent, and the dark-faced burnished wares compare with the Middle Neolithic of Byblos (the parallels are illustrated in *L'Anthropologie* 66, 1962, 488—502, fig. 5 and *L'Anthropologie* 67, 1963, 489—512 fig. 11). This supports the idea that the site at Ramad was abandoned at the end of the fifth millennium, but at the same time makes it seem that the Ramad level II represents developments of the early ceramic and late PPN periods which have unfortunately not been clearly separated, even in order to demonstrate their continuity. In III the flimsy evidence for architecture contrasts with the PPN, and it might be justifiable as de Contenson does to describe it as semi-nomadic if we would define this term. It is compared to Munhata 2 or Jericho IX—VIII, but the denticulated blades, smaller arrows and flaked axes of the pottery level (2) at Munhata have already appeared in Ramad II! The Yarmukian pottery can, according to Perrot in any case, be related to Middle Byblos. Ramad is one of the sites which might yet produce clearly related Pre-pottery and pottery levels.

The unpublished sites excavated by Dorothy Kirkbride (Helbaek) in the Beq'aa seem to fit on to the sequence here. *Lebwe* (*Labwa*) has the same sequence as Ramad followed by dark burnished wares of the type of early neolithic Byblos. Ard Tlaili starts with these and goes on to middle Byblos times. Lebwe has produced a malachite bracelet. What is perhaps important in all these sites from the first appearance of the chalk wares is the marked absence of the accomplished architecture of the PPN. The „architecture“ associated with pottery consists mainly of pits. If we go for a moment further afield to Tell Mureyba'at near Raqqa on the Euphrates in Northern Syria, excavated by van Loon and not yet published we have a site without agriculture but with 17 building levels and possibly several hundred houses

based largely on hunting. (See Bouqras, below). Not only the architecture but the „public works“ and their maintenance are remarkable at Khirokitia on Cyprus. The architecture of the first Pottery levels at Jericho is rudimentary indeed compared with the PPN there. There are many indications that the PPN people and their predecessors were more, and not less, settled in many respects than their successors. The PPN at Ras Shamra has square house with stone foundations and brick walls in a stratum 1.20 m thick below 12 m. It also has produced a soft limestone figure, affined to the pebble figures but somewhat more carved out, from a level at 13—14 m. Above this and still in level Vc (or V phase 1) at 12—13 m is a figure of dark brown sundried clay. Both are illustrated in Schaeffer, *Ugaritica* IV, 154, while a summary of the pottery stratigraphy may be found in *Syria* 1961, 221. C—14 dates for the PPN of Ras Shamra are  $6192 \pm 100$ . P549 from 13 m. and  $6410 \pm 101$ . P640 from just above 14 m. The clay figure seems to have numerous jabs with a tubular end over its upper half. Tubular jabs occurred at Sarab (See below). It is worth noting in the PPN also a considerable Glacis of alternate layers of marine gravel and earth (*Syria* 38.10).

The PPN sites in the north are both few and not well defined in their affinities. This is inevitable with as few sites as Ras Shamra, Bouqras and Mureyba'at in northern Syria and then further south only Said Naya and Ramad. The Chalk Wares occur following this period at Ramad Lebwe, Tell ain Nfaikh, Nebaa el Faour, Byblos, Hama on the Orontes, Soukas in the coastal Latakia, and then at Ras Shamra. An attempt to relate these events to environment may be found in *A.A. Syr.*, XIV, 1964, 124. Braidwood R. J. & L. S. 1960 gives within some stated limitations an idea of subsequent pottery developments in the Amouq area, as sequences of materials.

It is evident that an account like this, mainly designed to summarise material, cannot pretend to be complete, but it is necessary to turn to the Eastern part of the area which we left at the end of Period I. In the broadest way the Levant and this eastern area (the Zagros) have already in common such elements as figurines, obsidian (late in Period I in the Levant and not for instance in the Natufian nor at Karim Shahir) ground stonework, round structures and some comparable economic developments; yet these differ in degree and in kind and it is necessary to discuss the two areas separately. In between them there is an area which can be called Northern Mesopotamia for convenience, that is to say, inland Syria and the adjacent areas of modern Turkey and northern Iraq, and which mediates geographically between the two main areas. From it have come recently some sites of importance, which we will first consider, and following these Period II in Eastern Mesopotamia.

**NORTHERN MESOPOTAMIA.** This geographical area, as defined in the preceding paragraph, is naturally independent of modern state boundaries, and Çayönü and the sites near Bozova should strictly be included in it. These are described in section 2.6, insofar as any data are at present available from them, and these and sites further west in Anatolia (such as Aşikli) seem to be linked by the further feature of a stone industry of pressure-flaked tanged points with the two sites to be described in the present section, Bouqras and Mureyba'at. Todd 1966 lists 10 sites on the Anatolian plateau with such a pressure-flaked industry,

Mureyba'at begins about the middle of Period I, and Bouqras lies at about the middle of Period II, and although important sites it must be emphasised that they are only two sites to hint at a whole course of development during the period in this area. Chronologically Çayönü lies between them, but it is described as having a pre-ceramic (Sc. neolithic) economy, while the most striking thing about both Mureyba'at and Bouqras is that this is not the basis of their existence, and that they may belong to a series of other similar sites extending from Suberde and Aşikli to Çayönü and Northern Mesopotamia. Certainty about this must await further work.

*Tell Mureyba'at* (van Loon, 1966 ; van Loon 1966a ; *Sci. Amer.* May 1966, 53—54 ; van Zeist and Casparie 1968 ; *J.N.E.S.* forthcoming).

Tell Mureyba'at lies on a gravel ridge at the junction of the Belikh with the Euphrates west of Raqqa and about 85 kms east of Aleppo.

Here van Loon excavated in 1965 a five acre mound with 17 building levels, amounting to a thickness of 6—7 metres. The radiocarbon dates (See Section 0.31) for the lowest level but one lie in the first half of the 8th millennium, and from this come wild einkorn and wild barley. There are no domesticated animals and no cultivated plants throughout the early levels. The main basis for subsistence is claimed to have been the hunting of wild cattle, onager and gazelle, with fallow deer, boar, wolf and hare less frequent. The preliminary consideration of the fauna shows the same proportions of 30% *Bos primigenius*, 30% *Equus hemionus hemippus* (onager), and 30% *Gazella* throughout. Fishing is not attested although mussels were collected. Wild lentils and vetch were also collected and sixteen round roasting pits, 80 cms across and 70 cms deep, occur. Wild grains are said to have been parched and roasted in these. There are frequent grinding stones and much flint work. Van Zeist and Casparie 1968 remark that this two seeded variety of wild einkorn and wild barley were probably harvested not in the immediate vicinity of the site but at least 100 kms away in adjacent Turkey (Compare the account of Harlan, 1967). Wild einkorn does not normally occur below 500 m, and the barley not in large stands in the area of Mureyba'at.

On this basis a settlement with a long duration was sustained, and a population of up to 200 families (as estimated by van Loon from an excavated area of 240 sq.m.). The flint industry of the lower levels includes sickle blades and pressure flaked tanged points of „Syro-Cilician“ type, together with a few notched base types as found in Palestine (Ehrich 1965, 63).

Architecture includes houses with curved outlines and pavements of limestone blocks in the lower levels (I—VIII). At the base these have hearths sunk in limestone pavements and bordered by stones set on edge in hard red clay. Higher up, the paving reaches 4 metres in length and the walls include old querns set upside down. Level IX is without architecture but includes the 16 roasting pits, for which analogies may be found at a later period in the Brick Wall Zone level of Ali Kosh, attributed to the early sixth millennium.

Levels X—XVII have straight walled houses made of single thicknesses of loaf shaped bricks cut out of limestone to c. 26×12×9 cms. These were laid like bricks with red clay in between. Burials are secondary, with skulls and groups of bones placed near the walls of houses. There is a large carnivore jaw in the wall

of one of the small rooms mentioned below, and cattle horns also occur embedded in walls. One of the houses built of limestone bricks is only 3.5 metres square with four small rooms of 1.5 metres square (Level XIV up from base). These have small peep holes.

Sickle blades with silica gloss, grinding stone and tanged points occur from level IV upwards, and there are also stone bowls with wavy relief decoration in brown stone and comparable to one from Çayönü. There are engraved wavy („snake“) designs on paving stones; and limestone plates 23—35 cms in diameter. The two main components on the flaked stone industry are heavy tools of chert and light burins, awls, end scrapers, blades and tanged points of flint.

*Bouqras*<sup>14</sup> is on the west bank of the Euphrates opposite the junction with the Khabur and like Mureyba'at further upstream is an example of the degree of village settlement which can be achieved largely on a basis of hunting and collecting. Their situation in a region to the south of the 200 mm. isohyet where irrigation would be necessary might account in part for this as de Contenson suggests, but it may be that such sites will be found to characterise the area, which mediates geographically between the Levant and the Zagros in Period I and earlier. The radio-carbon dates for Bouqras are forthcoming, but in the meanwhile we need not be driven, as de Contenson is, to compare level I there with Ain Mallaha (in the ninth millennium), with the PPN A of Jericho (in the eighth millennium) and with Jarmo (in the seventh millennium). The deposit is some 5 metres thick and if the absence of painted ware is any indication the site was abandoned before 5000 B.C. The first level (I) contains two village levels of pisé houses with beaten earth floors, sometimes covered with matting. De Contenson compares the architecture and equipment with Jarmo, but grains are quite absent and *Capra aegagrus*, *Ovis orientalis* and a large *Bos* were present and said to be hunted. There is however a grinding industry of heavy basalt (also sandstone and diorite) pestles and querns and rare sickle blades (only two with gloss) which suggest plant usage as in the Natufian, but the comparison with Ain Mallaha is nevertheless unnecessary since this level is likely to be seventh millennium. The flint industry includes end of blade scrapers and asymmetrical partially pressure-flaked arrowheads of a small size, and some with tang produced by a burin blow. There is also an obsidian blade industry and a human figurine of unbaked whitish clay, 3.7 cms high (No. B. 65. 91 de Contenson & van Liere 1961, P. 13b).

Level II has four villages of houses built of unbaked brick with plaster floors. There are pillars and benches marking a system of rectangular structures. The flint industry is a continuation of I, with scrapers and arrowheads. Burins become more and more numerous and the obsidian and bone tools continue, but the heavy grinding industry and sickle blades are apparently absent. There are well-polished local alabaster and gypsum stone bowls and a „jadeite“ stamp seal (Green translucent stone, 2.85×2.1×1.2 cms. No. B. 65. 64). There are abundant hunting remains of the species recorded from I.

<sup>14</sup> *Annales Arch. de Syrie* 13, 1963, 182; *L'Anthropologie* vol. 70/3—4, 1966, 389—90; de Contenson & Van Liere 1966; Hooijer 1966.

Level III consist of one village comparable to those of II except in the presence of fourteen sherds of undecorated dark burnished ware and possible domesticated goat and cattle remains. Alabaster vessels continue to be important.

(*Addendum*). The radiocarbon dates for Bouqras are now available (de Contenson 1966, 6 (June 1967). Level I has 6190 and 6290, although the later date comes from the lowest layer, while level II is 6010 and level III 5910. (See list of carbon dates for data). These dates are consistent with our general picture and will be seen to correspond closely with the range covered by those of Tell Ramad. (In fact, we now learn that level II contains a vessel of white ware similar to those from Ramad, but coarser).

*El Kowm*. (Not on maps). This site is newly discovered and promises to be of importance, both because of its size and its position. (Dornemann, R. H. 1969).

It lies c.60 kms as the crow flies NE of Palmyra, and therefore outside the dry-farming limit today, but with a good water supply. Of this 25 metres high tell 15.2 metres are neolithic and of this the lowest 10.35 m are „PPN“. Fauna are especially abundant in the lowest levels and include gazelle, equids (probably onager), large cattle, sheep and goat — seemingly all wild. Wheat and barley are present. Obsidian, common throughout, is again commonest in the lowest 3m. The PPN has cream and white mud plaster floors bone tools and spatulae, stone bowls, polished axes and red burnished plaster. The neolithic has eleven excavated rooms so far, with stone foundations and 40 cm thick mud walls with thin lime plaster. A stair with four right-angle turns may indicate two storeys. White plaster vessels again remind one of the Levantine sites like Ramad, especially since the pottery includes dark faced burnished wares compared to Amouq A and B, as well as coarse yellow ware. The flint industry (18000 piece so far) is not described but might be expected to conform to the tanged pressure-flaked tradition. Stamp seals are also present. It is to be hoped that we shall hear more of this site which lies between the Djebel Abu Rujmein and Djebel el Bishri. If these „plaster vessels“ are indeed analogous to the Chalk Wares there is the possibility that we have here a site with 10 metres which lie before the sixth millennium in a significant geographical position, but clearly comment must await further work.

**PERIOD II IN EASTERN MESOPOTAMIA.** The information for the first part of Period II in Eastern Mesopotamia — broadly speaking the seventh millennium — comes from Ali Kosh (with a short discussion of the subsequent developments in Khuzistan), then from consideration of the Zagros Group, mainly Jarmo, Tepe Sarab and Tepe Guran, with Gird Ali Aga at the end of this phase. The second half of Period II comprises the developments of the Mohammed Jaffar phase of Ali Kosh, the early phases of Tepe Sabz, Sialk insofar as it is relevant to our summary, then Shemshara and Hassuna and Matarrah, together with the recent information from Tell es Sewwan, Tamerkhan and Choga Mami.

Many of these sites are now producing figurine material among their other traits, although the main group to which one is usually referred to for comparison, that of Jarmo, is only partially published. What should be pointed out is that this „Eastern Area“ of Mesopotamia comprises a number of regions which show hopeful signs of producing local sequences against which, however provi-



sional, discussion can be set. Such are the sequences for the Northern Zagros area of Kermanshah and Kurdistan derived from the work of the Iran Research Project (eg. Braidwood in *Iranica Antiqua* I, 1961) — the Danish work centered on Tepe Guran to the south of this — the frame-work proposed for Luristan and Khuzistan by Hole and Flannery (eg. *PPS* 1967) — and in the lowlands the material emerging from Tell es Sewwan and the survey work of J. Oates near Mandali and Badra in central eastern Iraq (Oates, J. 1968). Although the comparison between these in detail is still invested with many problems they undoubtedly form the soundest basis, if only because they reflect the main environmental divisions of these areas, the alluvial plains, the piedmont steppe, the intermontane valleys, and the high plateaus. It should be borne in mind therefore into which of these environmental frame-works particular sites can for the time being be fitted, since this clarifies the discussion a great deal. One of the most notable recent contributions in however the confirmation by Joan Oates (1968) of Jarmo — like (and Ali Kosh — like) material from the edges of the alluvium at the foot of the Pusht-i-Kuh foothills and in a lowland area with water supplies probably adequate for agriculture. The environmental divisions are by no means paramount nor the distinctions between upland Jarmo and lowland Hassuna necessarily so rigid as has sometimes been supposed.

We may start by mentioning Ganj-i-Dareh Tepe.

*Ganj-i-Dareh Tepe* is in the Bisitun valley about 60 kms west of Kermanshah<sup>15</sup> and is a tell with a maximum deposit of seven metres in which small soundings have revealed a great deal of flintwork and animal bones, with no pottery, no obsidian nor reaping knife elements. There is an industry based on regular blades, with backed bladelets, scrapers, a flaked axe and denticulated pieces. There were fragments of stone dishes or querns. No house plans were recovered nor could Young and Smith believe that such a stable settlement in this area was dependent entirely on hunting. But there are enough parallels to make their surprise unnecessary, even if the carbon date from the lowest ash zone which they give  $(8450 \pm 150)$  is earlier than estimates for Bouqras or Mureyba'at. Another date for the early levels is  $6960 \pm 170$  B.C., so that it is not at present possible to be certain of the dating or the details of economy and material culture. It is just possible that the site represents, from the Eastern area, a phenomenon comparable to Mureyba'at and comparable sites. Until further dating evidence is available it seems preferable rather to regard the site as early in Period II than in Period I.

*Ali Kosh* is in Khuzistan just south of Deh Luran, lying near Tepe Sabz and Tepe Mussian and Garan between the Mehme and Daiwarreh rivers. The contents of the three phases excavated in the small area of  $3 \times 5$  metres and (as published by Hole and Flannery in *Iranica Antiqua* 1962, 97 and Hole et. al. in *Current Anthropology* 1965, vol. 6 ; No. 1, 105) produced more questions than answers — as the authors themselves say in the more coherent account of Hole and Flannery, *PPS* 1967.

The first phase of Ali Kosh has three figurines, the second six (and these two levels precede pottery), and the third phase nine. They are grey and lightly baked. There is no trace of painting on them, but some have an incised pattern. In the

<sup>15</sup> *Science* 1966, vol. 153, No. 3734, 388.

first phase goat herding was a major part of subsistence, and the figurines are of small animals which could be goat. There is a copper bead from second phase, and pottery here follows both agriculture and the use of copper in the third phase. The dates given in the table below for the phases are only partially supported by the radiocarbon series available, some of which are however clearly aberrant and with standard deviations of up to 600 years. None of the dates for the first phase fall within the range estimated on the table, even by a standard deviation.

The sequence proposed for Luristan by Hole and Flannery (1967) is in bare outline as follows :

3700 \_\_\_\_\_

Bayat Early irrigation farming and cattle domestication. Full range  
4100 of cereals.

Mehmeh

4500 \_\_\_\_\_ SABZ series.

Khazineh

\_\_\_\_\_ 5000

Sabz (= basal Jaffarbad, Susiana „a“).

5500 \_\_\_\_\_

5600 \_\_\_\_\_

#### *Period II*

Muhammed Jaffar \_\_\_\_\_ Early dry farming and caprine domestication. Emmer  
6000 and two-row hulled barley ; initial seed gathering.

Ali Kosh ALI KOSH series.

\_\_\_\_\_ 6750

Bus Mordeh

7500 \_\_\_\_\_

#### *Period I*

10000 (9000)

Zarzian

20000

Hunting and gathering.

Upper Baradostian

30000

Lower Baradostian.

38000

Mousterian

50000

These authors discuss the settlement patterns which they attribute to these phases and the findings from the relevant sites, so that it is here necessary only to select material relevant to this study and to comment on it. The Upper Palaeolithic sites of the Khorramabad valley give the respective up to the end of the Zarzian

It is possible that the Mousterian — Baradostian — Zarzian may be a continuous development, but nowhere in the Zagros can one see a transition from the Zarzian to the early farming sites<sup>16</sup>. In terms of our study the beginning of Period I would contain this transition and the Bus Mordeh phase at Ali Kosh belongs to the end of it. This and the second phase at Ali, Kosh, the Ali Kosh phase, are aceramic, and here again it is quite clear that while the precedent for ceramic shapes lies in the stone vessels, the precedent for the firing of clay is already present in the figurines of animals (probably the caprids important to the economy of the whole phase) from the Bus Mordeh phase. The Mohammed Jaffar phase has „stalk figurines“ with an expanded foot, decorated with incised zig zags, and a stalk- or snail- like top so that they recall those found in the upper levels of Jarmo, or at Tepe Sarab. Expanded feet will also be remembered from the previous millennium among the Munhata figurines. Besides these there are human figures, including one recognisable as squatting and clasping its knees, although headless. The fabric is soft and friable, as is the early pottery, and the firing not more than that long practised on figurines and to roast grain.

Another trait appearing in the third, and possible in the second, phase at Ali Kosh is the labret. This is an elongated stone or clay object waisted at the centre (Hole and Flannery 1967, fig. 9). It is striking that this form should be exactly paralleled at *Obrez I* in Syria, Yugoslavia, in two unpublished examples from a Starcevo site. These are of stone (Novi Sad Museum). More nail-like shapes from the Sabz are also explained as labrets, and such are well known from the early neolithic of Greece, where I believe that some figurines may be used to support the idea of lip plugs in the lower lip. Further examples like the Greek labrets have been found at the Starcevo site of *Divostin* in Serbia (Verbal information Dr. Srejovic).

Ground stonework is present in many varieties of grinding basins, grooved rubbing stones, saddle querns, combined grinding slab and mortar, and in stone vessels themselves, from the Ali Kosh phase onwards. The first suggestion of the use of grinders or rubbers in the Zagros comes with the ochre grinders mentioned in the Baradostian and the grooved rubbing stones found in the Zarzian. It is just possible that some correlation between intensive ground stone usage and the usage of plants (whether wild or in early stages of domestication) which are „hulled“, may be demonstrable. It is noticeable that with the emergence of a full range of cereals in the Sabz series, particularly by the Khazineh phase, the ground stone industry notably declines in variety. This correlation may apply to the Natufian situation, and ought to lead to an examination of the types of cereal grains from, for example, the Khirokitian economy. There are in fact no carbonized grains available from the Khirokitian, but on the above assumption the refinement and variety of the ground stone work from Khirokitia, together with the late date of the settlement, might be an actual indication of retardation and a primitive degree of evolution in the cereal crops utilised. The cereals cultivated early in Europe,

<sup>16</sup> The upper levels of Palegawra, dating to c.12000 B.C., contain, as Garrod 1938 implies, elements which differentiate them from the Zarzian (as Braidwood does not do.). See *PIIK*, Pl. 24.

on the other hand, are both varied (three species of wheat and two forms of six row barley. Clark H.H., 1967, 15) and commonly naked so that considerable antecedent evolution is indicated. The ground stone industry of querns and rubbers in the European early neolithic lacks variety or elaboration, although it is consistently present.

The ground stone industry of Lepenski Vir I, includes elaborated grinding hollows and mortar-like forms with rims and subdivisions within, quite apart from the pecked out boulder art and figures. (Nandris 1968. See Appendix C). The material from the site is not yet in a state to draw conclusions about the plant usage of this pre-neolithic level, but this industry would seem to be homotaxial with the elaborated ground stone industries on a large scale which precede cereal species modified by domestication in the Near East. It would, of course, be preferable to argue this from the plant remains rather than from the stone industry. The general impression, however, is of an inverse relationship between the generalised and the diversified forms of these two elements. If „hulled“ grains demand more intensive grinding preparation to render them useful, this element of equipment would naturally tend to be emphasised and varied and even decorated. If naked forms of grain lessen the need for such equipment it is natural that it should decline to a more basic quern — and rubber repertory.

Some further comments occur on the Ali Kosh and Sabz phases, which are summarised in *PPS* 1967 by Hole and Flannery, so that it is not necessary to do so here. For example, both Hole and Flannery for Luristan and Higgs (*PPS* 1966, 28) for Greece, suggest that water retentive soils were an important factor sought by early dry-farmers. Seeds of emmer and two row barley from the Bus Mordeh phase are mixed with rush seeds suggesting that the crops were planted at the fringes of marshy ground. Considered in the context of an adaptation of the neolithic economy to Temperate Europe it must seem that in the First Neolithic area this factor would cease to have so much importance. It is possible to demonstrate a close association between individual sites of the Körös culture and areas of deep water table in the Tisza area (Nandris 1968a). This shows a constancy there of this particular parameter of the ecosystem since the fifth millennium. It implies a search for dry areas for actual settlement, while as regards the agriculture of the Körös people water in this area must have been in ample supply. We know too little to say whether irrigation was either practised or even necessary. In general, the transitional area between those in which moisture retentive soils were a definite advantage (for Europe-Greece) and those temperate enough to have a generally sufficient soil moisture content, must be the most interesting for the process of adaptation of the farming economy to European conditions. Macedonia is one such area (The Macedo-Bulgarian area of Nandris 1968a).

Stone bowls appear at least from the Ali Kosh phase onwards and decrease with the Sabz phase, the first of the Sabz sequence. Among the pottery from this phase may be noted oval shapes (which are found both in the Greek *PPN* and in one instance — author's collection — from the site of Starcevo itself) as well as short pedestals, some with cut out windows, in the black-on-buff painted ware of Sabz. If they show anything long range comparisons may show only that early

farming cultures have some surprising details in common within a certain period of time. The fact is that it is not possible to understand the developments which take place in south east Europe while remaining blind to those which take place in distant Khuzistan, let alone adjacent Greece and Anatolia, and it is in this sense that long range comparisons must be understood.

The dates postulated for Sabz I — 5500 to 5000 BC — again fall outside any radiocarbon dates for the level, just as those for Sabz II fall some 500 years earlier than the date postulated. The sequence may not run straight through in the manner suggested, even in the restricted area of Luristan, and this of course affects the population density curve put forward by Hole & Flannery. If the early part of the Sabz sequence overlaps with the Ali Kosh sequence rather than following it then irrigation farming and cattle domestication do so too. The radiocarbon dates support either overlap or succession theories in early Sabz. It is precisely because the sequence within a small area highlights the difficulties of relating chronology to economic experiments that it is so valuable. It emphasises the difficulty of long range comparisons, even with adjacent areas of the Zagros, and Hole and Flannery specifically have not attempted this. If, on the other hand, we had available for South East Europe the sort of data extracted by them from survey and excavation we could proceed to quite different interpretations of the Neolithic there. As it is trait correlation reveals that even complex traits, that is to say very specific associated traits, cannot always be held to be contemporary, although other meanings can be given to them. Different types of economic experiment, or solution, may well be contemporary on the other hand. Hole and Flannery's treatment of the developments within a regional ecosystem, treating it as if isolated, contrasts with Mortensen's linking of regional groups under the name of the „Zagros group“, and may be preferable for the time being. Later attempts to link such regional studies may prove more effective than a present attempt to compose a „group“ from sites possessing traits in common, but also many dissimilarities and wide geographical and chronological distribution. We can see for instance that lowland sites like Choga Mami (see below) have identical painted ware to Ali Kosh, in addition to material comparable to Jarmo, and the links between these may be best made when regional studies are further advanced.

Hole and Flannery 1967 suggest that the rough chronological equivalents for the Sabz phases in Susiana — (which, as suggested by Le Breton in *Iraq*, 1957, 124, with the Sabz phases added, are : — Susa A — Later Ubaid and Uruk ; Susiana d — Late Ubaid — Bayat ; Susiana c — Early Ubaid — Mehmech ; Susiana b — Halaf — Khazineh ; Susiana a — Hassuna — Sabz) — can later be replaced by the Sabz phases which take account of economic factors in addition to pottery sequences. The excavation of the Susiana sites (Le Breton, *Iraq* 19, 1957 ; *Iranica Antiqua* 1962, 134) was by arbitrary levels and they are of less value than might be hoped. Jowi and Bendebal both have figurines, Jaffarbad is poorly excavated but may have earlier Jarmo-like material (*L'Anthropologie* 45, 102), Mussian (near Ali Kosh, not in Susiana) has painted wares and figurines probably not earlier than Ubaid 2 (formerly „Had'i Muhammed“ — *Iranica Antiqua* 1962, 134 note 1 ; Gautier and Lamore. *Mem. Mission Arch. en Iran* 8, 69). The pottery of Susiana and Deh Luran, according to

Hole and Flannery, is near identical and a valuable study is that of J. Oates in *Iraq* XXII, 43.

The Jarmo series of figurines is illustrated in part in publications to date (*PIIK*, Pl. 16; *ILN* Dec. 15, 1951, 994—995; *ILN* April 28, 1956, 410—411), but there are over 5000 pieces of human and animal figurines and clay cones and balls, etc. (*PIIK*, 44). These occur throughout the levels and are small, and only lightly fired or unbaked. Some are covered all over with red ochre. In the upper levels there seem to be no horned animals and the human figures are more elaborately made, while the splayed out bases supporting a head alone (*PIIK*, Pl. 16/14 & 15) are found only in these levels. Some of the figurines are illustrated in Zervos, *Naissance de la Civilisation en Grece*, figs. 27, 28, 34, 35, 36. There are also one clay and several carved stone phalloi (eg. *PIIK*, Pl. 21/11, c. 6.25 cms preserved and p. 46) marble vessels and marble bracelets decorated with ribs, and bone spoons. Bone spoons are already present in the Levant in Period I (at Ain Mallaha) and then in the seventh millennium at Tell Ramad, Level I. Just as in that area the PPN A is held to stem from the Natufian so the Jarmo figurines and clay balls and cones recall features already outlined from Period I in the East, as does the ground stonework. Nevertheless, the agricultural basis of the Jarmoan remains one essential difference from Period I, and the situation is rather that these are certain traits which the two periods certainly have in common, and which originated in Period I among the other more fundamental experiments in subsistence which were then going on. The discovery of Jarmo material in the alluvial plain, at Tamerkhan as a final occupation, and at Choga Mami (see below) is an important extension of the range of this culture.

*Tepe Sarab* is a low mound 7 kms east of Kermanshah (Braidwood, *Iranica Antiqua* 1, 1961, 3 and *Science* 1961/133, No. 3469, 2008) with pottery, clay figurines, fine ground stonework and flint and obsidian in the Jarmoan tradition but if anything technologically more advanced and possibly slightly later. The carbon dates are in first half of the sixth millennium and the pottery includes much red slipped and burnished ware which is rare at Jarmo. There is no wheat or barley as yet but land snails (*Helix salomonica*) as at Jarmo appear. The houses seem only to be flimsy structures associated with pits however and contrast with the more substantial architecture of Jarmo and upper *Tepe Guran* of the same time. This has led Braidwood, (*Atti, VI Congresso Internazionale delle Scienze Preistoriche e Protoistoriche* I, Rome, 1962, 122) to propose that the site may be an „up-country seasonal temporary settlement“. There is some painted ware with more complicated motifs than occur at Jarmo. The figurine material (*ILN* 22 Oct. 1960, 696; Zervos, *op. cit.*, figs. 17—26 & 32) is not systematically published but includes well modelled animal figures and seated rather snail-like female figurines (Zervos fig. 17, 19) one of which is decorated with tubular end impressions and nail-incisions. Further to these the black figurine which seems to be an improvement on a natural pebble but is in any case smoothed and carved (Zervos fig. 32) and is only some two cms. high, might be compared in a general way with the improvements on natural concretions found at Çatal Hüyük.

*Tepe Guran* (*Acta Archaeologica*, 1963, 97—133 & *Sumer* 1964, 28—36) is in Northern Luristan near the edge of the fertile plain of Hulailan and 140 metres from the right bank of the Jazman Rud river. It shows a clear stratigraphy of 18 levels

of early village farming occupation (below early Bronze Age) of which the bottom three levels (T down to V) are Pre-Ceramic. The ceramic levels start with an architecture of huts showing as curved or straight stains, presumed to be decayed wooden walls; these exist for a while (until level M) side by side with the quite elaborate (AA, 1963, 110—111) mud brick houses of the upper levels, in which querns and sickle blades with silica gloss and other indications of agriculture are more marked than in the lower part of the mound. Mortensen believes that the early settlers were primarily herders, with agriculture developing later. The aceramic levels contain clay figurines, which are soon followed by undecorated greyish-brown ware very lightly fired and very like the figurine fabric (AA, 1963, fig. 14). The pottery levels next contain wares comparable to Jarmo, and then Sarab. The more advanced architecture — including „Terazzo“ floors of Felspar or of red or white gypsum — of the younger levels (eg. J, K, L) is shown by the pottery to be contemporary with the pit-like depressions of Sarab. White and pink marble vessels occur and a ground stone phallus (AA, 1963, fig. 21). The composition of the successive levels as regards pottery is shown in *Sumer* 1964, fig 7 by Mortensen. Level H has 25% of the whole occurrence of sherds, the highest in the sequence, consisting predominantly of Buff wares, with the very end of the Jarmo style of painted ware and the very beginning of the red-burnished wares, and during the period of Guran and Sarab styles of painted wares, and this level has produced a carbon date of  $5810 \pm 150$  (AA, 1963, 120, n. 29) which is consistent with Mortensen's chronology. These buff wares are present at around 6000 B.C. in upper ceramic Jarmo and at Guran and Sarab and later in the sixth millennium at Ali Kosh 3 and Hajji Firuz (*Atti*, Rome, *Congress* 1962, 123) and in the basal layer (VII) of Godin Tepe (*Science* 1966, vol. 153, No. 3734, 339). Other parallels for upper ceramic Jarmo are claimed even at Mushki and Djari B near Persepolis (on ceramic evidence alone — Braidwood, *British Association for the Advancement of Science*, 17, 1960, 217, and Vanden Berghe, *Archeologie de l'Iran Ancien*, Leiden 1959, Pl. 42, which compares more closely with the more elaborate painted wares of Sarab. These are not necessarily later than those from Jarmo).

*Gird Ali Agha* (PIIK, 37) is a mound on a gravel hill of the first major terrace of the Greater Zab. The material compares with the upper levels of Jarmo or with basal Tell Hassuna and may be contemporary with either of these. There are a few pieces of apparently human figurines, fragments of rods, a ball and cone and clay beads. Broman believes the figurines to resemble those from Jarmo, without any animal figures. The pottery is thick walled and vegetable tempered and there are five sherds with modelled eyes and eyebrows similar to those found at Matarrah. (The sherds from Hassuna have painted decoration added to the modelling). There is pit-house architecture only, and very little painted ware, although some sherds are probably decorated with red ochre, as they certainly are at Jarmo.

It remains to describe recent excavation and survey work in the lowland area of Eastern Iraq which will greatly increase our knowledge of this region. There are the surveys mainly in the Mandali region, but also round Badra, by Joan Oates, and her excavations together with the Department of Antiquities at Tell es Sewwan.

The two most important sites from the survey work are Tamerkhan and Choga Mami. Both lie immediately north of Mandali and are published in Oates, J., 1968. There are some 40 other prehistoric sites N. of Mandali.

*Tamerkhan* is a mound about  $100 \times 125$  metres with a six metre stratigraphy whose last occupation shows flint, obsidian and pottery identical with that of Jarmo. It lies on the edge of the alluvium of the plain at the foot of the Pusht-i-Kuh, in the lowlands. This area has sufficient spring and stream water and a rainfall probably adequate for agriculture, although approaching the 200 mm. minimum.

*Choga Mami* (Oates, J., 1968, 53) is an irregular mound about  $200 \times 100$  metres and from 2—5 m high. The surface produces painted wares of all the known prehistoric varieties of Iraq, together with some unknown varieties. There is incised Hassuna ware and a monochrome Cf Jarmo, and painted ware identical with that from Ali Kosh. The Halafian, which has a predominantly northern distribution, is rare, but as Oates points out this site could probably give a good indication of the relations between Jarmo and Hassuna. The main excavation so far is of the Sammaran village of c. 5500 BC, with an associated series of superimposed ditches which may indicate irrigation. Six-row barley is present, which may point in the same direction.

A fired clay head from Choga Mami must be mentioned in this study (Oates, J., 1968, 56 and Plate 1), although the date cannot be established with certainty<sup>17</sup>. It is a gritty pale well fired head 4.8 cms high with coffee bean eyes and applied nose and lips, the eyelids painted with three dots each, and the hair and lips also painted with a black paint decayed to greenish. A hair style with applied disc ornaments is modelled. The date might be as late as Ubaid and is probably not earlier than the Samarra period, although the parallels with the Hassuna V (Samarra period) painted face vessel or the face vessel from Samarra (*Iraq Museum*, Oates 1968, fig. 11) are of the most general nature. Pellet eyes at Sewwan are however also associated with Samarra pottery.

The radiocarbon dates from *Tell es Sewwan* (*Radiocarbon* vol. 7, 190) based on the 5568 half life, are not internally consistent but suggest that the site began probably before 5500 B.C., possibly in the early sixth millennium. (Braidwood has suggested that the „Hassuna“ period was in existence by 5750 B.C. *PIIK*, 161). *Tell es Sewwan*<sup>18</sup> is a rich site which promises to be of the first importance. The levels are of the „Hassuna“ Ib onwards and a particular feature of the site are the clay figurines which are found in these and the stone ones which are found in the graves, mostly of children, which are under the floors of houses of the earliest level. The site is a tell overlooking the banks of the Tigris from a 12 metre high cliff, 10 kms south of Samarra. It is ovoid in shape (230 by 110 metres and 3.5 metres high) and a defensive ditch belongs to the earliest phase. From this come the plant remains which include Bread Wheat (*T. aestivum*) and Emmer, Einkorn (probably), six-row naked and hulled barleys, and also caper and the linseed which suggests to Helbaek some sort of irrigation, more likely spill-pools and damning than regular canalisation. Curved sickles with blades of flint and obsidian set in bitumen occur

<sup>17</sup> It must now be considered certainly of Samarra date in view of recent work at Choga Mami. (Verbal information, J. Oates).

<sup>18</sup> Joan Oates, *Iraq* 1966, 146—153. Helbaek, *Sumer* 1964, 45—48.



(Sumer 1965, fig. 78). Levels I to III are said to contain „Archaic Hassuna“ material, but mention of Hassuna material must remain doubtful. Copper occurs both in one of the graves under level I as a piece near the neck of a skeleton and in level I as pieces and some beads. The architecture is mud brick and quite elaborate. Building 1 in level I was possibly a „shrine“ with 131 of the 134 burials found in the first season under its floor, upon which were two clay one stone figurines — the stone one in front of a niche in the end wall. The beads round the arms, legs, waist and legs in the graves parallel the ornamentation of the figurines. Level II contains „incised and painted Hassuna“ wares, and in level III the „archaic Hassuna“ painted ware disappears and the first Samarra painted ware appears while there is much incised pottery. Level IV sees the end of „Hassuna“ incised ware, and painted and incised Samarra predominates; and in level V we have Samarra pottery only.

It is therefore possible to fit the figurine material into this sequence, and in particular the examples published by Joan Oates, *Iraq* 1966. Although there are many more figurines than here published, the twenty examples shown (there are at least 50, probably 100 alabaster figurines in the burials<sup>19</sup> together with bowls of the same material) give valuable information on the context of the traits present. Full descriptions are available (Oates, *Iraq* 1966) so that I propose only to comment on the development of the traits and some implications — referring to the illustrated figurines (*Iraq* 1966) for convenience in the following way: *Level I* — F 1 — Pl XXXVIII; F 2 — Pl XL/a, b; F 3 — Pl XLI/a; F 4 — Pl XL/c, d; F 5 — Pl XLII/a; F 6 — Pl XLIII/c; *Level II* — F 7 — Pl XLIII/b; F 8 — Pl XLIII/a; F 9 — Pl XLII/b; F 10 — Pl XLII/c; F 11 — Pl XLII/d; *Level III* — F 12 — Pl XLI/e; F 13 — Pl XLI/d; F 14 — Pl XLI/c; F 15 — Pl XXXIX; F 16 — Pl XLIII/e; *Level IV* — F 17 — Pl XLIII/g; F 18 — Pl XLIII/f; F 19 — Pl XLIII/d; (*No level*) — F 20 — Pl XLI/b.

The accompanying table shows how selected traits relate to time. F 20 is not given a level, and copper is added.

It will be realised that this picture does not come from the totality of the material, but taken as it is probably broadly true. Joan Oates considers that the Nea Nikomedeia figurines are „entirely unlike“ those from Tell es Sewwan (*Iraq* 1966, 150, n. 19), but this is not so. What is remarkable is not the dissimilarity of the stone examples, which are without precedent in their own area at this period in any case, but that the comparatively small sample of clay figures should have so many traits in common with Nea Nikomedeia. There are chronological grounds for comparison, which is of the greatest importance. Both sites have very varied figurine assemblages so that it is not just a matter of comparing single traits. Moreover, Greece is not without parallels among the stone figures, even if NN lacks them. Compare Chaeronea F 15 with *Sumer* XXI, 1965, Plate XXVII, top row, second from left, or, for example, the Avaritsa figurine type.

The stone figures at Sewwan share a number of the features on the table, and have in addition others such as bitumen on the head. The conical head dress often has a median incision, the eyes are commonly inlaid and the posture of the

<sup>19</sup> *Sumer* 1963, fig. 4, *Arabic section*. *Sumer* 1964, fig. 2, *Opp.* p. 9. *Sumer* 1965, 17—32. (El Wailly & es — Soof.).



left leg folded across horizontally to the vertical right leg occurs, together with the more usual one of both legs folded, seated and standing postures. The diagram shows in a self explanatory way how the traits are related to time. (In particular, the introduction of Samarra culture traits in the stratigraphy modifies the traits considered in the diagram.) The head dress of F 1 is not of the same type as the stone examples. Traits i-p are temporarily absent from Level II, but reappear in the Samarra period, with which the earlier levels would seem to have some continuity.

The parallels with Nea Nikomedeia occur among traits l-s, excluding traits r and o, but adding the very important resemblances — which are not made into traits — in the modelling and postures of F 12 and 13 and in the modelling of the lower part of F 15 and its association there with traits s and l. Trait „s“ refers to the shape of head also found at Nea Nikomedeia — a rather pear-shaped smoothly modelled head — and this, with the whole modelling of the expanded feet, broad thighs and upper half narrower in relation to these in side view, even the general placing of the arms of F 15, justify the comparison — even if it has a plastic necklace and ears. It is also described as hollow which those at Nea Nikomedeia are not, although hollow figures are present at Nea Nikomedeia. The similar head of F 17 has a pink slip, as does F 1, which recalls from the description a slip which does occur at Nea Nikomedeia.

The „coffee-bean“ eyes which attract so much attention at Nea Nikomedeia occur on F 15, 16 and 17. (F 6 — which also has its parallels at Nea Nikomedeia — seems to have them too although they are described as „pellet“.) Study of the information points to the periods when the first Samarra painted ware appears and when Hassuna incised ware disappears, in levels III and IV, as showing the strongest body of associated resemblances between Tell es Sewwan and Nea Nikomedeia; as might certainly be expected antecedents for individual traits occur earlier in the „Archaic Hassuna“ levels. This is of great interest when we remember that the face vessel<sup>20</sup> with pellet eyes and plastic nose and painted features from Hassuna (*Iraq Museum*, Baghdad No. 50235) comes from the Samarra culture in Hassuna level V<sup>21</sup>, and that in S. E. Europe its closest parallels come from Nea Nikomedeia and Vrsnik while the contents of Gird Ali Agha link the tradition of face vessels with earlier times. The several traits described are moreover not necessarily earlier in the area of the Hassuna-Samarra cultures than at Nea Nikomedeia.

These data seem to justify a careful comparison between the two sites and their congeners even if they are separated by 1300 miles. Indeed the whole purpose of this study must be to place south-east European cultures in perspective with their Near-Eastern coevals. The real implication must be that one would wish to compare both sites via intermediaries which lie closer at hand, for example to find in Anatolia or elsewhere levels which relate to both, since it is not to be supposed that they are to be directly related. Nea Nikomedeia, with C-14 dates which now cluster around 5800 or 5900 B.C. corresponds in time more with the levels I and II

<sup>20</sup> JNES 4, 1945, 286, figs. 1, 2; Pl. XVII/1, 2.

<sup>21</sup> C-14 date W660 gives  $5090 \pm 200$  BC for this (5301 with new half life of 5730.) The Samarra culture flourished in the second half of the sixth millennium.

of Tell es Sewwan than with III and IV, whereas to argue only on typological resemblances (as has so often been the practice within more closely related areas) would be to make III and IV contemporary with Nea Nikomedeia. We are so used to assenting with Childe to the „Primacy of the Orient“ that it is difficult to adjust to more complex primacies. That of the stamp seals would seem to be a case in point, where the orient does not necessarily own the older forms of particular types, and this may also be the case with the figurine forms of Tell es Sewwan. This analysis at any rate is based on particularisation of the traits involved.

The emergence of pottery in the Eastern area seems to fall in the second half of the seventh millennium rather than towards 6000 B.C. as in the Levantine areas already discussed. Nevertheless it was certainly not adopted at the same time in different areas and at different sites. The ceramic tradition is comparable at Jarmo, Sarab and Guran as Mortensen has pointed out (*Sumer* 1964, 28—36) when linking them, together with Shemshara, under the name of the Zagros Group. But there are now lowland sites like Tamerkhan with comparable material. Shemshara lacks the ceramic tradition of Jarmo, but its Jarmo-like pre-ceramic levels seem to be contemporary with Hassuna (*Sumer*, 1962, 73 sq). We have seen that Ali Kosh shows features similar to Jarmo and Sarab, although the upper level would seem to be later and the middle level even has hammered copper, while the ceramic parallels are not well stratified. They can also be found even farther afield, at Djari B and Mushki. So that while the group is legitimately defined as related<sup>22</sup> it has a wide distribution in time and space and extends into the lowland zone not only ultimately at Ali Kosh but also as defined by the recent work of Joan Oates, especially at Tell es Sewwan, and in surveys near Mandali and Badra in Central Iraq on the East of the plain. Although Mortensen feels that the Hassuna-Samarra groups of the lowlands in the sixth millennium cannot be traced back to the Zagros group it would seem that Tell es Sewwan carries on and develops the figurine tradition of the Zagros group, and the two are in any case partly contemporary. (eg. Tell Shemshara and Ali Kosh which both seem to go on well into the second half of Period II, while at Sarab and Guran the blade tool tradition and marble vessels also go on into the sixth millennium). Braidwood also has pointed (*PIIK*, 161-2) to various similarities and dissimilarities of the Jarmo and Hassuna-Samarra assemblages, but the remark that „the bulk and variety of figurines seen at Jarmo were not available from Hassuna and Matarrah“ would not now apply to Tell es Sewwan, while in any case the idea of face-sherds would seem to link Gird Ali Agha with Matarrah and Hassuna. The chipped and ground stone industries remain as the major dissimilarities between the two- if one takes the figurine material together

<sup>22</sup> It has in common the farming and herding developments, and the lithic industry of blades and microliths, the ground stone industry of bowls bracelets and beads, and the clay figurine tradition. Sarab, Jarmo and Guran have clay „nails“ (or stone bone or shell) while Shemshara which lacks the ceramic tradition of the group has marble, obsidian and serpentine nails, in the later half of the sixth millennium. As noted above (Ali Kosh) it may be premature to try and define this „group“ as related and the developments within a regional ecosystem (as studied by Hole & Flannery) should perhaps first be defined. Nevertheless in this east Mesopotamian area both these approaches by all these authors have proved valuable

with pottery and the architecture as links, albeit differentiated, between the two areas and cultural traditions.

But the question is rather whether there is any functional necessity for the chipped stone toolkit in its Jarmo form in the lowland area. At Choga Mami at the edges of the alluvium we have the opportunity to relate Jarmo and Hassuna material directly. It is also apparent however that there is earlier material in the lowland zone which may be of even greater relevance to the relationship of the plain to the uplands than is the differentiated culture of Hassuna. The toolkit is found at the edges of the lowland at Tell Urwell and Tell Rasein (PIIK, 49) and flint and obsidian, in addition to pottery, identical with Jarmo is found at Tamerkhan at the top of six metres of further material. It is here in all three cases at the edges of the plain near the foothills so that direct relation between the two areas is possible. But the possibility also remains that differences between upland and lowland industries are functional ones, just as is postulated in the Epirus by Higgs (1968) and that there was seasonal movement between the two areas, which is quite compatible with the idea of the „up-country seasonal temporary settlement“ postulated by Braidwood for Sarab. Functional differences are not to be expected in the figurine material for example. Hence the traditions found at Sewwan, or in the face-sherds, quite plausibly continue those of the upland area, between which and the lowlands it is possible to envisage cultural links and seasonal movement at an even earlier period. This means that the „Zagros Group“ as a purely upland group would probably be too narrowly defined. As regards seasonal movement, the scale of the whole Zagros is not so large as to preclude this, for it is in fact smaller than the area occupied by the „First Neolithic“ in Temperate South East Europe.

By the period of Hassuna lowland culture was already considerably differentiated. The obsidian projectile point of „Syro-Cilician“ tradition from Hassuna (Lloyd and Safar, *J.N.E.S.* 1945, fig. 22/9 and p. 269) may not in itself be convincing but it does serve to remind us that Hassuna is just as likely to have been receptive to the influence of its coevals in Syria as in the Zagros, and these are less well known. It is apparent however that the multi-level settlements of the Pre-pottery stage can be found over a wide area from Ali Kosh, to Jarmo VI—XVI and Ganj-i-Dareh Tepe, tentatively the lower levels of Tamerkhan, then Bouqras and Tell Mureyba'at and Levantine sites like Tell Ramad and the sites to be described from Anatolia. These thick deposits belong (pace the early radiocarbon date at Ganj-i-Dareh Tepe) to the end of Period I and the first half of Period II, while the way of life which they represent continued in the sixth millennium, as at the base of Sarab and Shemshara.

**PERIOD II IN ANATOLIA.** Late in Period I or early in Period II a number of sites were established in Anatolia which are described as Aceramic neolithic, but this may have to be qualified. Their beginnings are uncertain, but radiocarbon dates for Çayönü at least go back to the mid-8th millennium. In the absence of good evidence for most of the sites there seems no reason to extend their range far back into Period I. Five carbon samples have been taken from Aşikli Hüyük, but excavation has not been pursued on any scale at that site. That a site has no pottery does not mean that it is any earlier than, for example, Ilıcınar. What is of more

importance is the continuing emergence of parallels for the economic phenomena of the period before pottery already described from the Near East — not only the Aceramic Neolithic but also the type of economy described from Northern Mesopotamia. Geographically speaking three sites in Eastern Turkey belong to that province. Two are North West of Urfa, near Bozova (i.e. *Söğüt Tarlası* and *Biriz Köy : Anatolica* I, 1967, 6) and have early blade tool industries of a „pre-neolithic“ character, while *Çayönü* is near the copper mines of Ergani half way between Elazığ and Diyarbakir. All three are therefore between the upper waters of the Tigris and Euphrates. (*AJA*, LXIX, 1965, 138).

*Çayönü* is a village with complex architecture including houses with stone foundations and orthostats and buttresses. It uses native copper shaped into drills or pins, and malachite beads, flint, obsidian, and ground stone objects. In Braidwood's opinion (Ehrich 1965, 63) the ground stone industry and the few figurines are in the „Jarmo tradition“. Stone bowl fragments include decorated examples possibly comparable to Mureyba'at. (van Loon, 1965, 215). The radiocarbon dates lie in the last half of the 8th and first half of the 7th millennia. The economy is described as pre-ceramic neolithic, but insufficient data are yet available.

In the present state of research and publication these sites serve only to amplify the geographical picture to some extent. Together with the scanty economic data we possess they prove to be at their most revealing when viewed in the rather wide way here attempted. The remaining sites which represent Anatolian developments lie in Turkey north of the Mediterranean, in the central plateau and the mountains south of this.

*Aşikli Hüyük*<sup>23</sup> lies at about the same latitude as *Çayönü*, near the 38th parallel. More information is published from it, although it awaits excavation, which may modify the conclusions. These are, however, the two most northerly sites so far described. *Aşikli* is about 25 kms south east of Aksaray and is a mound showing six metre high sections, burnished red hard lime-plaster floors low down in these, mud brick walls without stone foundations and an obsidian industry which seems unchanged throughout. This is a blade industry with many scrapers fitting the picture of a hunter, possibly herding economy, although there are not a great number of projectile points. Complete retouch over even one face is rare on those which are found. There are some possible sickle blades but no querns or grain<sup>24</sup>. Stone rubbers, pestles and other ground stone work appear however and a bone hook resembling later examples. Significantly enough the nearest parallel on which Todd rests is Bouqras, although he does so only on the basis of a search for typological parallels for the obsidian industry. His estimate for the date is c. 7500/7600 to about 6900/6800. The upper limit is arbitrary at present but final eighth millennium to early seventh would seem to cover the span of the site<sup>25</sup>. On the basis of our summary to date,

<sup>23</sup> *Anatolian Studies* 1966, 139—163.

<sup>24</sup> Incidental practical light (relevant also to Mureyba'at) on the harvesting of wild modern grains from the area of *Çayönü* is thrown by Harlan, 1967.

<sup>25</sup> Recent radiocarbon dates confirm this estimate, without reaching Todd's upper limit. They range from 7008—6661 BC, clustering at 6800 BC.

however, we can go further than this and include this multi-layer stratified site, based presumably overwhelmingly on a hunting economy, with Bouqras not simply on the basis of typological affinities in the stone industry but because it fits in to the temporal and economic frame-work of Mureyba'at and the other sites already emphasised as being one of the most significant phenomena of early Period II or late Period I — within which span they will certainly soon be more precisely located. Ganj-i-Dareh Tepe may indicate that such settlements go much further back than this. Such „hunting settlements“ should ultimately be distinguished from settlements whose base is partly domesticated — the „Aceramic“ settlements.

As to the geographical position of the site this is consistent with a point already made, regarding a significant northern boundary in the region of the 39th parallel, as are the following quotations referring to surveys: „Ilicapinar south of Çihanbeyli marks the (northern) limit of the early neolithic province on the southern plateau, although neolithic man moved beyond these limits“. (Mellaart, A.S. 1961, 163); „...it is rather surprising that no recognisable traces of neolithic occupation have been found north of a line İnçesu-Ortaköy (north of Aksaray) — Çihanbeyli, despite a considerable examination of the area as far north as Yozgat“. (Todd, *Annual Report, Ankara Institute*, 1966, 11).

This northern limit on the plateau at about 39 degrees north is of interest when considering the relations between eastern Europe and the Near East, and in fact persists at least into the Chalcolithic period. It may be based on ecological factors. An alternative explanation for the absence of neolithic could be the presence of other human groups. The pressure-flaked obsidian industry is also found south of this limit. (See eg., Todd 1966.)

Aşikli may be in part contemporary with aceramic *Haçılar*, which has 1,5 metres of deposit without pottery or figurines or cereals<sup>26</sup>, although there is a great deal of straw in the mud bricks and none of the levels was fired to preserve grains. The shallow aceramic mound underlies the larger late neolithic mound and its top is weathered and decayed. The fifth down of the seven levels has a carbon date of  $6750 \pm 180$  (BM 127) — (7050 with 5730 1/3 life). There are small rectangular rooms up to  $4\frac{2}{3}$  metres, and courtyards with hearths or ovens in them. Some of the plaster has red stripes on cream or solid red floors built over pebbles. Only larger walls have stone foundations; the straw and the ovens may indicate some agriculture and there are sheep, goat and cattle, besides marble balls and bowls, obsidian, polished axes, and skulls propped up on stones, upon virgin soil. There are few flaked stone tools for purposes of comparison with Aşikli. (A.S. 1961, Pl. XV/a.)

*Görüklük Tepe*, *Suberde*<sup>27</sup> on the western shore of lake Sugla has nearly three metres of aceramic deposits with 25000 faunal remains of deer and gazelle and of sheep, goat, pig and cattle which it is claimed were not domestic. Sheep, pig and red stag predominated (90%) then the aurochs and goat, wolf, fox and tortoise. No carbonised seeds were found nor pottery, but baked clay objects include pit linings of clay, human and animal figurines, and clay cones 2—3 cms high. The animal

<sup>26</sup> Mellaart 1967, 4 does however mention grains from the site as being domesticated and chronological comparable to those Beidha and Ali Kosh.

<sup>27</sup> A.S. 1966, 32—33; A.S. 1965, 137; *AJA* April 1966, 142; *Anatolica* I, 1967, 4.

figures include ridge-backed pigs, and the human ones a female figure with incised decoration which comes from the upper of the two prehistoric levels. There are carbon dates ranging from 6300—5900 with one at 5600 B.C. The obsidian industry includes points pressure-flaked on one side (that is to say, with more extensive flaking than at Aşikli), circular scrapers (a common type at Aşikli) and some backed blades and micro-blades less than 2.5 cms long. The small stonework includes 63 small polished axes, many stone beads and pendants, plano-convex rubbers, and other polished stone seemingly associated with the upper level. There is a good polished bone industry. The lower level, about 2 metres thick has no plaster floors or pottery, but unplastered walls in the upper part, and a basin 80 cms in diameter and 40 cms deep, with linings fired in situ, while the floors and benches are of smoothed mud. (The basin immediately recalls the unfired linings of Biserna Obala.) A copper awl (or piece of wire) 4 cms long belongs to this level. The second level has plaster floors and mud brick walls in bad condition. The site ought to be slightly later than the Haçılar aceramic, but until the obsidian industries are described in more detail it is not possible to set Suberde in relation to the antecedent industry of Aşikli and the subsequent industry of Ilıcapanar nor to show how Haçılar is set aside from this tradition. The distinction between Aceramic and hunting settlements should be borne in mind. The copper at Suberde is not substantially earlier than that from Çatal where it occurs in level X ( $6385 \pm 101$ . P. 782. 5730  $\frac{1}{2}$  life) but does somewhat antedate that from the „Hassuna“ of basal Tell es Sewwan in the early 6th MBC and from Ali Kosh 2 ( $5810 \pm 330$ . *Humble Oil Co.*) — using the dates literally for the purpose.

*Ilıcapanar*<sup>28</sup> is a small mound about 12 kms south of Çihanbeyli which has an obsidian industry with lances and arrowheads and no pottery, but in contradistinction to the aceramic sites above this neolithic site is probably to be dated to the time of Çatal Hüyük and probably nearer to 6000 BC than to the sites described above. The industry (quite absent from Haçılar) is identical to that of Çatal and closely parallels that of the Mersin neolithic and the Çukurkent group. There are green-stone („nephrite“) axes, which are also a feature<sup>29</sup> of Mersin, and of the Çukurkent neolithic which is however differentiated by the pottery and figurines which appear there. The area of Ilıcapanar is almost a desert as regards primitive agriculture, and this is still one of the most northerly neolithic sites in Anatolia; the lance heads point to a hunting economy and Mellaart may be right in suggesting also an exploitation of salt for exchange from the salt lake of Acituz Gölü at whose northern end the site lies. It points the fact that there is no good reason why an aceramic and a ceramic site should not be contemporary, and at Çatal Hüyük pottery was not in any case an important element of the material culture.

The pottery resemblances between the respective levels of Mersin (from about XXVI downwards) and the Çukurkent group (*Istanbul Mitt.* 1958 supra) help to substantiate the contemporaneity of the closely similar obsidian industries. That of

<sup>28</sup> *Istanbul Mitteilungen* 8, 1958, 82—93.

<sup>29</sup> e.g., Rekdemir Hüyük — *Istanbul Mitt.* 1958, 89; No. 45. Mersin — Garstang fig. 6. (level XXVI) and p. 16. (Both these are 4.5 cms. long).



Çukurkent resembles the neolithic (and early chalcolithic) unpainted burnished wares of Cilicia, without the incised decoration. There is a complete absence of painted ware among the pottery. Painting is present in the figurines, and for this the red stripes on the plaster Haçılar provide a sufficient precedent.

*Çukurkent*<sup>30</sup> is not excavated but has yielded much material. It is not a tell but a settlement on a natural hillock on the east side of lake Beyşehir 1 km NE of Çukurkent. There are stone cists with burials in or near the settlement and these have produced stone and clay figurines both human and animal, stone bowls, pins with animal and human heads, beads and ornaments and two clay stamp seals. Mellaart notes that pottery of the same type is found at Çatal. Kanal Hüyük in the same group has produced a figurine of grey clay with incised pointillé decoration (A.S. 1954, 184, No.82) and Çukurkent a total of twelve published. They show a strong tradition of small stonework carving, here directed to the making of figures, which in south-east Europe too was a feature of this (and in Europe the following) millennium, and which is seen there too to be associated with such features as the small greenstone axes and possibly the grooving technique on small axes.

The *Çukurkent group* is defined in the Beyşehir-Seydişehir area and includes Hoyran Hüyük, on the west shore of lake Beyşehir, Kanal Hüyük at the NW end of lake Şugla, Kizilviran Hüyük, other sites like Rekdemir Hüyük lying in the area between these, and Çukurkent itself on the east shore of lake Beyşehir. The wider affinities of the group however extend further east to Çatal and Ilıcınar and Mersin, and just possibly to Erzerum, and it probably includes both neolithic and early chalcolithic material, so that the extent and duration cannot be thought of as too closely defined. Mellaart (A.S. 1961, 159—60) assigns Çukurkent to the late neolithic, roughly contemporary with Haçılar IX—VI, at or just preceding the middle of the sixth millennium, on the basis of the figurines and in the pottery the absence of hole-mouth shapes and predominance of light coloured wares. As to the figurines there is nothing to compare with those from the end of the LN at Haçılar from level VI, by which time also there we have the beginnings of painting on the pottery — not, as we have seen, discernible at Çukurkent. (There is one sherd, comparable to the beginnings of painting in the Haçılar neolithic level VI. (A.S. 1958, 151.). There are stamp seals at Çukurkent (A.S. 1954, 184, No.91) of a type much closer to the chalcolithic than to those of Çatal in the EN. We could suggest therefore that the position of Çukurkent is somewhat that of the Kizilkaya neolithic in time (A.S. 1961, 166), immediately preceding Haçılar IX, and in view of the parallels in pottery (A.S. 1958, 151) probably continuing at least during Haçılar IX and VIII<sup>31</sup>. At Kizilkaya hole-mouth dark faced burnished wares appear, in lesser quantity, and there are small greenstone axes just as at Ilıcınar, Mersin and Çukurkent. Finally the pottery of Alan Hüyük at the south end of lake Beyşehir (A.S. 1961, 168, fig. 5) is indistinguishable from that of Çatal (A.S. 1961, 162, fig. 2). These sites (not Kizilkaya) share an obsidian industry with antecedents at Suberde and Aşikli but absent, whether before or after, from Haçılar.

<sup>30</sup> A.S. 1954, 180; Bittel, *PZ* 1949/50, 135; Ormerod, *B.S.A.* Athens 1912—12, 48.

<sup>31</sup> And if F15 is any indication continuing until Haçılar VI, or alternatively, until in a position to influence the products of Haçılar VI.

Some of the traits relating to the site of *Çatal Hüyük* are given in the accompanying diagram. Only certain points from this rich site can be dealt with here. It begins at some time in the middle of the 7th millennium with level VI (which shows two levels of building, VI A and VI B, only in the houses) starting the 6th millennium, and ending about 5700 with levels I and 0. Painting is confined to the walls and figurines and hardly developed on the pottery, which is not an important element in the rich inventory. The stamp seals which occur in levels VI, IV, III and II, can be paralleled at Nea Nikomedeia (particularly, eg., A.S. 1964, 98/6 from level IV)<sup>32</sup> and on radiocarbon grounds must begin at the same time, the 58th or 59th century. The clay figurines come also from levels VI—II, with stone ones in VII but particularly in VI. The bone belt hooks from level VI are closely paralleled in Nea Nikomedeia. The upper levels of *Çatal* are presumed to overlap with *Haçilar* IX, and the base of the site to show similarities in the pottery to the top levels of *Beldibi* B. It should be noted that the evidence for cattle domestication at *Çatal* is among the earliest anywhere (c. 5800 or even 6500 B.C.) and that there is no evidence for domestic sheep or goat. (Perkins D., 1969).

There are both schematised figurines (levels IV—VIII — see A.S. 1962, Pl. VII/a) and naturalistic ones, partly coeval as we have cause to expect. The first are pillar-like, with pointed heads and expanded bases, but in this category sheep, goats and cattle predominate and these figures are found in substantial numbers deposited between the walls of buildings (A.S. 1963, 78 and Pl. XVIII/a).

Less common in level VI are the naturalistic figurines, but a fine example is provided by the seated clay headless female figure, with the hands on the knees and the head missing. (A.S. 1963, 92). The fingers are shown and the navel and nipples are impressed. The clay is creamy with designs in red paint.

From level II come nine figurines from a shrine, one of them stone and one the seated female figure flanked by two leopards (A.S. 1963, 94, fig. 30) with their hands on breasts, stomach or thighs, and legs folded under them. A turban-like head dress is shown. One is standing (A.S. 1963, 93) with a fringed dress.

The stone figures from *Çatal* are described in A.S. 1963, 82 sq. They are mainly from level VI. A group of thirteen was found in one shrine, four in an adjacent building, two others in other buildings in this level, and frequently accompanied by natural concretions. They make considerable use of the natural shape themselves indeed, elaborating this with incision. They are all different because of this and not one suspects because they are heirlooms as Mellaart suggests (A.S. 1963, 82). The materials are white marble and black, brown, blue or grey limestone. The natural concretions are found at Nea Nikomedeia also on occasion. Another stone carving is the white marble vulture (?) (A.S. 1963, 90, fig. 26) also from level VI.

Further stone figures come from levels VI and VII, and these are of chalk or calcite (A.S. 1964, 73 sq.) as well as alabaster and limestone. One (A.S. 1964, Pl. XVII/a) is as schematised as a Yarmukian pebble figurine, although it must precede these by over a millennium.

<sup>32</sup> Parallel motifs are found in the wall paintings, eg. *Anatolian Studies*, 1963, Pl. III, level III; and in the painted design on the legs of the figurine A.S. 1963, 92, level VI; or in the wall paintings A.S. 1962, Pls. X—XI, level VI.

## CATAL HUYÜK

	SHRINES	WALL PAINTINGS	WALL PAINTINGS WITH HUMANS.	STAMP SEALS	COPPER, LEAD.	STONE FIGS.	CLAY FIGS.	SCHEMATIC CLAY FIGS.	RED PLASTER.	BELT HOOKS.	RED OCHRE BURIALS	BONE SPATULAE.	FLAX	OBSIDIAN MICROLITHS	PAINTED FIGS.
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0															
I															
II	*			(7°)	*	(°)	*					*		*	
III	*	*	*	(3°)	*	(°)	*				1			(°)	
IV	*	*	*	(8°)	*	(°)	*	*			3	*			*
V		*	*		*		*	*			1				
VIA	*	*		(2°)	*	*	*	*		*	1	*			*
VIB	*	*			*	*	*	*		*	3				
c. 6000 BC.															
VII	*	*			*	*		*			7	*			
VIII	*	*			*			*			4	*			
IX	*	*						*			1				
X	*	*			*										
XI									*						
XII									*						
XIII															

The stone figures from the upper levels are fewer. Level IV has produced a complete standing female figurine (A.S. 1962, Pl. IX/a—c) in alabaster and level III a seated figure (*ibid.* Pl. VIII/c) and a head (*ibid.* Pl. IX/d). From level IV a painted clay figurine (*ibid.* Pl. VIII/b) is almost identical in style and size to the seated stone one from level III, just as the two clay standing ones from III and IV (A.S. 1962, Pl. VIII/a and d) are very similar.

*Haçılar*<sup>33</sup> has produced nine levels of late neolithic and early chalcolithic together with a series of radiocarbon dates dating these to the second half of the sixth millennium, or with a half life of 5730 to about 5700 onwards. (At 5568 half life this is from about 5540 onwards.) The basal levels, IX—VII are of relatively short duration and most of the information for the late neolithic comes from its upper level, VI. IX is a thin stratum of earth and pottery directly overlying bedrock and VIII and IX comprise the two floors of one building level. (A.S. 1961, 40). VII again is no more than an earlier floor of level VI, the burnt level which produced a large series of very accomplished naturalistic female figurines, described in A.S. 1961, 47 sqq. The plan of the houses from which these come is given in A.S. 1961, 42—43, fig. 2. Contemporary with them is a deposit of stylised torsos (A.S. 1961, Pl. VI, d and e) of which about ten were saved, together with five clay bars and a small greenstone pendant (*ibid.*, Pl. VI/c, d); all come from house Q2 from a niche or „serving hatch“ on the other side of which lay a „very steatopygous“ larger figure, also with a wooden head. The principle of these recalls the „acroliths“ of Thessaly. The existence of all these figurines contemporaneously with the remarkable naturalistic ones and with the stone slabs with roughly incised eyes and features (an almost complete one with one leg missing comes from house P1) is a salutary reminder of the impossibility of applying naive ideas of typological development to assigning relative priorities in time to figurine material where other data are absent. Apart from these three types level VI has hollow theriomorphic vessels<sup>34</sup>, and the recumbent deer and the boar from house Q (A.S., 1961, Pl. XIV); the treatment of the muzzle of the former recalls that of the Nea Nikomedeia and the Lakavica pigs. There is also a use of plastic relief on vessels (A.S. 1961, 68) and a face lid with incised eyes from this level, a small mother of pearl (freshwater mussel) figure 3,5 cms high (A.S. 1961, 68 and A.S. 1958, Pl. XXXII/c), carved bone spatulae with animal heads or plain, small greenstone axes and chisels, stone marbles and copper ore, six curved polished antler sickles with slots and blade inserts, and in the pottery (although monochrome wares predominate) the appearance of rudimentary painting in red on cream. (A.S. 1961, 67, No. 4). All these traits are therefore contemporary with the naturalistic figures from the adjacent houses Q3 and 5, and some from area P. Some are baked and some unbaked, nearly 20 are almost complete, 35 is the number restorable on paper and parts of perhaps another 25 may be represented; it is not proposed to repeat the descriptive data found in A.S. 1961 for this large collection, which is at present unique. Relevant features however are the use of black paint for hair or pupils, and white paint for the dress as well as black. A sort of apron is represented (eg., fig. 9, fig. 11). The figures lie, stand or sit, sometimes on animals and may carry animals. The largest are usually red burnished and standing. Fingers are very schematically shown and mouths never. They may have tiered conical head dresses, buns or pigtails and all the adults are female. The eyes are incised with two lines after the manner of the stone slabs (A.S. 1961, Pl. V/d) or the face vessel (*ibid.*, fig. 27, No. 34) which also has the border of the hair at the

<sup>33</sup> A.S. 1958, 1959, 1960 and 1961.

<sup>34</sup> As at Göruklik Tepe, Jarmo, or many other sites animal figurines are abundant at *Haçılar* but not emphasised in reports.

## HAÇILAR

Level		RUDIMENTARY PW — (monochrome predominates)	SOLID & LINEAR PW — (monochrome predominates)	SOLID PW LINEAR PW W/R PW	STANDING figurines LYING AND SEATED figurines.	STAMP SEALS	ANIMAL figurines	PLASTIC RELIEF	BONE SPATULAE	PW Anthropomorphic vessels.	FACE LID. INCISED FACE SLABS.	PELLET EYES (coffee bean)	LOW PEDESTALS with cut-out window: PAINTING on figures.	Theriomorphic vessels.	Mother of pearl fig.	Torso figs. & clay bars.	Wooden insert heads.	Greenstone chisels, pendant, etc.	Stone marbles.	Copper ore, or copper.	ANTLER SICKLES.
I				*	*	*		*	*	*			*								*
II				*	*	*	*	*	*	*		*	*								*
III				*	*			*					*						*		*
IV				*	*			*					*						*		*
V		*			*			*				*	*						*		*
VI		*			*	*		*	*		*	*	*	*	*	*	*	*	*	*	*
VII	L. N.																				
VIII																					
IX																					

temples incised in the step-like way seen on virtually every head of a figure from this level. This may give some comfort to the idea that very specific traits in association document a close affinity, nevertheless these two same traits appear on heads from Agio Gala and from Beycesultan and in the latter case, although unstratified, scarcely earlier than Early Bronze I! The combination and recombination of traits makes „affinities“, however defined, a matter therefore of probability, and

for this reason we can for the time being only give precedence to establishing priorities, to the study of spatial and, with the help of radiocarbon, of temporal distribution. The step-like incision of the hair reminds us that the face lid of level VI may be turned upside down and used as a cup and that the enigmatic „abstract“ designs of the solid style of painted ware can in some cases be regarded as conventionalised versions of the painting of faces on vessels. The step-like edge of the hair lends itself to this, and the bun of the figure may be rendered by a lug. Thus the tradition of face vessels can be given continuity through the levels — IV, III and II — of solid style painting. One such vessel even has obsidian inlay<sup>35</sup>, in the position of the eyes, which is a feature of the level I face vessels.

It is a constantly recurring feature of research in these periods that the discovery of antecedents for highly stylised features renders these comprehensible. This tendency to render with conventional signs seems to be consistently present, and partly explains what we mean by an artistic tradition, a transmitted mode of execution. It does not of course preclude the adoption on occasion of the convention by those unfamiliar with the tradition and its consequent rendering without understanding. (A stock example of this would seem to be the degeneration of Classical coin designs at the hands of the Celts). But this is not a commonplace in the Neolithic at this time and place, and in general it is easier to produce evidence for substantial continuity. Some of the Haçilar vessels explicitly repeat the same design in positive and negative versions and it is not difficult to see the Amzabegovo vase as a provincial version of this tradition repeated without full comprehension. The exigencies of woven design may also, as Mellaart claims, play some part.

A final figure which must be mentioned from Haçilar VI is the lying woman (A.S. 1961, 59, fig. 20) whose posture on her front with the legs bent up beside the body reminds us that naturalism is not photographic and that there remains the possibility that were stylistic antecedents to be discovered we might still come to the conclusion that the greenstone „frogs“ from Nea Nikomedeia were human beings.

From level V comes the only example of „coffee-bean“ pellet eyes from Haçilar, or indeed from Anatolia. (Mellaart, *Earliest Civilisations of the Near East*, 109). In this level while monochrome pottery still predominates both solid and linear patterns appear in the painted ware. There is an ibex figure in plastic relief. This level begins the early Chalcolithic but it essentially continues the early neolithic.

Levels IV—II see the full development of the solid, red on cream painted style. The early chalcolithic figures are all standing and plastic relief, painting on figurines and the presence of copper continue throughout the period. From IV comes a torso with arms stuck out but no indication of their detail nor head. (A.S. 1958, 147, fig. 10). It is red painted.

A very similar torso is found in level III (A.S. 1958, 147, fig. 9/4.) together with three other figures (A.S. *ibid.*, fig. 9/2, 3 & 5) — the right side of a standing female figure (whose manufacture in halves, arm position and expanded feet are found in Greece), a rod like head with a plastic pigtail at the back and pellet eyes without incision, and a left leg of a figure like the half one, but with slight indication

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<sup>35</sup> Verbal information, Mr. James Mellaart.

of a knee, and with a red „shoe“ in solid paint and a red fringe or apron before and behind, on cream base. This feature is one of the closest parallels for the red-on-cream apron occurring on a hollow figurine from Nea Nikomedeia, although the shapes of the two figures are not closely related. Aprons occur in the First Neolithic of the Sofia basin. In level II the fabric and shape of A.S. 1958, 146, fig. 9/1 are the same as the standing half-figure from level III, the hands only being to the sides instead of to the breasts. There are also a painted hip fragment (A.S. 1958, 147, fig. 10) and a standing figure (A.S. 1960, 104) painted all over the right side in solid red and with circles all over the left side. Level II has an animal head (A.S. 1958, 147, fig. 10) and this level has also produced stamp seals (Milojčić, *JRCZM*, 1964, fig. 1/2, 3, 4) and bone spatulae.

Level I has linear painted ware of the later style and face vessels of red on cream in this style, with eyes, nose, ears, eyebrows, chin or even navel inlaid in obsidian. (A.S. 1960, Pl. XV, (which is restored with sherds which do not belong.) The two headed vessels in the British Museum, No. 134686, is incontrovertibly similar and has obsidian eyes and a five cornered body. It is built on a hard fired core, visible in the left arm where this has broken away.) There are some painted hollow feet in this level which suggest a standing type too. Nea Nikomedeia would on the evidence of carbon dates be almost a millennium earlier than these features which again recall its face vessels, particularly the painted one, but also painted hollow feet. Mellaart cites the carbon date of  $5100 \pm 200$  (i.e. W 660) for the Samarran parallel from Hassuna level V (A.S. 1960, 104). There is a very small proportion of white on red painted ware from level I, which is one of the parallels cited for Starcevo features at Haçilar. (A.S. 1960, 92). Mellaart also cites oval vessels<sup>36</sup> which occur at Galepsos (which is despite the black on red painting not convincingly as early as Starcevo), and low pedestals sometimes with round or triangular windows. This last is quite uncommon if not entirely absent from Starcevo, and apart from Greece might be found by the time of Maliq I in Albania (Prendi, *Studia Albanica* 1966. Tab. I/12). A bowl on four low feet from Haçilar is also cited, which is a very generalised and isolated parallel for a feature common in Kremikovci, Criş, Starcevo and Körös.

All these weak parallels for Starcevo come from the latest levels at Haçilar. at the end of the sixth millennium. But against this attempt to find Anatolian influences in that culture one must set the very specific evidence of figurines, especially the Rod Heads<sup>37</sup> with their incised hair which consistently point to a relationship between Starcevo and Greek sites. This remains true moreover of Trestiana in the Moldavian Criş so that this element is strongly represented even there. One may perhaps infer from the distribution of the white on red painted ware that the east of Roumania had connections also with eastern Bulgaria, the Marica basin; beyond this it is not possible to take the step into Anatolia. The „fortress architec-

<sup>36</sup> The present author has found an oval base at Starcevo itself, but this is not a usual feature of the culture; they do however occur in the Greek EN I (Early Monochrome) repertory at Ghendiki and Achilleon, and therefore we must suppose earlier in this millennium.

<sup>37</sup> See Nandris, *Belgrade Colloquium on the Early Neolithic*, Oct, 1969, forthcoming.

ture" and close plan of Haçılar I are not repeated in south-east Europe, nor does western Anatolia, as Mellaart often points out, generally adhere to the custom of intramural burial represented in Starcevo, Nea Nikomedeia and Greece.

Three unstratified heads from Haçılar are shown in A.S. 1958, 148, Nos. 1, 2, 4, and assigned to level II. These again may be set against those from Agio Gala and Beycesultan. These are later and show the mouth, which was never indicated at Haçılar.

It is worth commenting on the unstratified single find from *Kayirliköy*, because of its geographical position.

This figurine is in Afyonkarahisar museum (Inv. No. 2759) and is published (Bittel 1950). It comes from Nahiye Banaz (=Banas) in Western Phrygia at the head of upper tributaries of the Menderes which leads down to the coast of Ionia. It is of grey lightly burnished clay, hard fired, 7.7 cms, high and 5.95 cms wide, a seated female figurine with left hand to breast and right hand to thigh. The legs are folded with incised toes on the left one which points inwards. The surface layer is of a finer clay. The lower back and buttocks are well modelled but the upper back is flatter. The head on an elongated neck has incised eyes and mouth and a bun-like head dress. The navel is deeply incised.

The traits which would place this in the fifth or second half of the sixth millennium and not earlier are mainly those of position, elongated neck (the Çatal figurines do not elongate the neck but of course those from Nea Nikomedeia do) and eye treatment, and the fact that it in general modelling resembles figurines of the Sesklo period in Greece. The stylistic arguments are quite inconclusive but it would seem to fit into the Early Chalcolithic better than out of it. Its main interest is its location. Folded leg postures occur both at Tell es Sewwan (in level I largely) and in the figurines discussed by Weinberg 1951.

An analysis is given for the *Knossos* Neolithic figurines; these are published (J. D. Evans, 1964). But it is not intended to discuss them in detail, since this cannot be done in relation to the traditions of mainland Greece at present.

Level	Figurines		C 14
I	—	0	(5568 $\frac{1}{2}$ life)
II	* * * *	7 MN/LN	
(a)	—	MN/LN	
IIIb	* * *	3 MN	3730 $\pm$ 150
IV	* * * * *	30 EN II	
	* * * * *		
	* * * * *		
	* * * * *		
	* * * * *		



V	* * * *	11	EN I	5050 $\pm$ 180
	* * *			4190 $\pm$ 150
	* * *			
VI	*	1	EN I	4260 $\pm$ 150
VII	*	1	EN I	
VIII	* * * *	4	EN I	
IX	*	1	EN I	5260 $\pm$ 150
X	—	0		6100 $\pm$ 180; 5980 $\pm$ 130; 5790 $\pm$ 130 (Grain).

The increase in figurines in the EN II is seen to be foreshadowed at the end of EN I.

Cyprus, like Crete, has material which cannot be traced to sources outside the island. The resemblances of the stone vessels to those of a much earlier period in the Levant has already been noted and further parallels may be found in North Africa (See Camps — Fabrer 1966) — again without prejudice to the chronology involved. The radiocarbon date for *Khirokitia*, the earliest Neolithic I of Dikaïos (Dikaïos 1962, 180) is 5685 $\pm$ 100 (5568 1/2 — life) and the use of pottery seems to have been abandoned in favour of andesite vessels. Such features as the scratched pebbles (Dikaïos 1953, Pl. X/c) can be equated to those of the Yarmukian at the end of that millennium? (eg, Sha'ar Hagolan — *IEJ* 1950—51). Two of these come from the same floor level of tholos XLVII (Dikaïos 1953, fig. 98 and p. 310) as the unbaked clay head (Inv. No. 1063) which is one of the best known pieces from the site. This has incised herringbone hair behind and on the forehead, in addition to wavy plastic braids. (Dikaïos 1953, Pl. XCVIII; p. 183) *Khirokitia* again combines considerable, even municipal, building works with sickle blades and grinders but no direct grain evidence and no pottery. The material to fill the period between this and the Neolithic II (3500 $\pm$ 150 at Sotira) and the chalcolithic material before the Early Bronze Age which began c. 2300 B.C. is as yet not great. From Erimi in the chalcolithic, probably about 3000—2500 B.C. comes a head with pellet eyes and eyebrows, nose, nostrils and hair outline shown. (*Syria* XVII 1936, Pl. 67/5).

## LIST OF RADIOCARBON DATES FOR THE NEAR EAST AND ANATOLIA

All dates are quoted B.C. and with 5568 half life. Where conversion has had to be made from dates quoted at the 5730 half life this has been done to the degree of accuracy obtained on a slide rule and with a factor of 1.03. Some authors do not specify the half life quoted, so that there remains a doubt in some cases. The laboratory numbers have been quoted but dates have not been omitted simply because this is not obtainable.

For lists of dates relating to Central & South East Europe reference may be made to Neustupny, E., 1968.

## THE NEAR EAST

## TELL MUREYBA'AT

8050±99 P 1215  
 7542±126 P 1224  
 8142±118 P 1216  
 8265±117 P 1217  
 8018±115 P 1220  
 7954±114 P 1222

Both for lowest level but one (of 17 levels,  
 6—7 m thick). Wild grains and animals.  
 Basal I.  
 II.  
 X/XI.  
 XVI.

## JERICHO

9216±107 P 376  
 7950±70 GrO 942  
 8300±200 BM 105  
 7825±110 P 378  
 7705± 84 P 379  
 7632± 89 P 377  
 7220±200 BM 115  
 7006±113 P 382  
 6708±101 P 381  
 6885±210 F 40  
 6720±200 F 41  
 6660± 75 P 380

Mesolithic  
 Mesolithic  
 PPN  
 PPN A  
 PPN A  
 PPN  
 Mid PPN B  
 PPN B (Later stratum than P 381)  
 PPN B  
 PPN  
 PPN  
 PPN B

## JARMO

The average of W 607—8 and 651—2 is held to give c. 6750 for the PPN of Jarmo.

## GANJ-I-DAREH TEPE

8450±150 GaK 807  
 6960±170 GaK 994

PPN (Lowest ash zone)  
 PPN

## ALI KOSH

7950±200 UCLA 750 D  
 5720±170 I — 1489  
 5430±180 I — 1496  
 8000±190 I — 1490  
 6900±210 Shell 1174  
 6475±180 Humble Oil 1816  
 and 1833 (Identical)

I  
 I  
 I  
 II  
 II  
 II

6460±200 Shell 1246	II
6300±175 Humble 1845	II
6150±170 I — 1491	II
5820±330 Humble 1848	II
5810±600 SI 207	II
6970±100 SI 160	III
6940±200 SI 160 Repeat	III
5870±190 I — 1494	III
5270±160 I — 1495	III

## TEPE SABZ

7100±160 UCLA 750C	I
4790±190 I — 1497	I
1AD 490±140 SI 255	I
5510±160 I — 1501	II
5250±1000 ! SI 206	II
4975±200 UCLA 750B	II
4520±160 I — 1493	III
3460±160 I — 1500	III
5010±140 I — 1502	IV
4220±200 SI 203	IV
4120±100 UCLA 750A	IV
4110±200 SI 204	IV
4100±140 I — 1499	IV
3910±230 I — 1503	IV
3820±120 SI 156	IV
3750±250 SI 205	IV

## BEIDHA

6990±(160) K 1086	VI PPN
6765±100 P 1378	VI PPN
6760±160 K 1082	VI PPN
6596±100 P 1379	VI PPN
6830±200 BM 111	IV PPN
7178±103 P 1380	IV PPN
6780±(160) K 1084	IV PPN
6815±102 P 1381	IV PPN
6690±(160) K 1083	V PPN
6600±(160) K 1085	II PPN
6942±115 P 1382	Late II PPN

## BOUQRAS

6290 $\pm$ 100 GrN 4852  
 6190 $\pm$  60 GrN 4818  
 6010 $\pm$ 55 GrN 4819  
 5910 $\pm$  60 GrN 4820

PPN. Upper level I.  
 PPN. Basal level I.  
 PPN. Level II.  
 PPN. Level III (de Contenson 1966; but according to *Radiocarbon* 9, 1967, 128 level III is pottery neolithic.)

## TELL RAMAD

6250 $\pm$  80 GrN 4428  
 6140 $\pm$  50 GrN 4821  
 6260 $\pm$  50 GrN 4426  
 5970 $\pm$  50 GrN 4427  
 5950 $\pm$  50 GrN 4822  
 5930 $\pm$  50 GrN 4823

Basal level I. PPN.  
 Basal level I. PPN.  
 Level I. PPN with plaster skulls.  
 Level II. Chalk wares.  
 Level II. Chalk wares and figurines.  
 Level III. Cf. Byblos EN, Amouq A, Ras Shamra V B.

## RAS SHAMRA

6410 $\pm$ 101 P 460  
 6192 $\pm$ 100 P 459  
 5740 $\pm$ 112 P 458  
 5234 $\pm$  80 P 457

1 st building level of V C, 13.75—14 m., Aceramic.  
 13 m. PPN. Level V C.  
 11.15 m. Early pottery.  
 9 m. Neolithic.

## KHIROKITIA

5685 $\pm$ 100 St 414—415

PPN

## BYBLOS

5043 $\pm$  80 (B.M.B. 1961, 81)  
 4592 $\pm$ 200 W 627

Byblos A. Middle of first of three neolithic levels.  
 End of same level

## TEPE GURAN

5810 $\pm$ 150 (Copenhagen: Mortensen, in Meldgaard et al 1963, 120, n.)  
 Level H.

## TEPE SARAB

6010 $\pm$ 100 P 466  
 5694  $\pm$ 89 P 467  
 5655 $\pm$  96 P 465

## MATARRAH

5620 $\pm$ 250 W 623

II/4. (Later than Hassuna II).

## TELL HALAF

5620 $\pm$  GrN 2660

## HASSUNA

5090 $\pm$ 200 W 660

Level V (As painted face vessel).

## HAJJI FIRUZ

5319 $\pm$  GrN 2660

## BELT CAVE

5330 $\pm$  P 19 A, B

Early pottery

## TELL ES SEWWAN

5506 $\pm$ 73 P 855

Pre level I

5349 $\pm$ 86 P 856

Level III

4858 $\pm$ 82 P 857

Level I

0.32

## ANATOLIA

## ÇATAL HÜYÜK (Further dates below.)

6200 $\pm$ 101 P 782

X

6295 $\pm$ 102 P 779

IX

6010 $\pm$  97 P 770

VIII—VII

5805 $\pm$  94 P 777

VI B

5730 $\pm$  94 P 797

VI B

5680 $\pm$  94 P 772

VI A 2 Stamp Seals in level

VI (Nos. 19—20).

5650 $\pm$  92 P 778

VI A

5835 $\pm$  93 P 781

VI A

5605 $\pm$  96 P 769

VI A

5740 $\pm$  94 P 776

VI A—V

6140 $\pm$  99 P 775

V—IV 8 Stamp Seals in level IV (Nos. 11—18).

5045 $\pm$ 94 P 774

IV—III 3 Stamp Seals in level III (Nos. 8—10).

5635 $\pm$  79 P 796

II 7 Stamp Seals (Nos. 1—7).

## ÇATAL HÜYÜK WEST (Pennsylvania dates).

5445 $\pm$  92

IX

5650 $\pm$  79

VI

5275 $\pm$ 131

II a

5195 $\pm$ 119

I a

## ÇAYÖNÜ

7570 $\pm$ 100 GrN 4458  
 7250 $\pm$  60 GrN 4459  
 6840 $\pm$ 250 M 1609  
 6220 $\pm$ 250 M 1610

Aceramic

"  
 " Level 4—5.  
 " Level 4—5.

## HAÇILAR

6750 $\pm$ 180 BM 127

Aceramic mound (Also attributed to level  
 V, early chalcolithic.)

5390 $\pm$  94 P 314

IX, LN.

5820 $\pm$ 180 BM 125

VII, LN.

5400 $\pm$  85 P 313 A

VI, LN.

5600 $\pm$ 180 BM 48

Burning of VI.

5220 $\pm$ 134 P 316

IIa. Early chalcolithic.

5040 $\pm$ 121 P 315

Ia. Early chalcolithic.

## MERSIN

6000 $\pm$ 250 W 617

Basal level

## CAN HASAN

Four Pennsylvania dates for level 2b -

4935 $\pm$ 804937 $\pm$ 804855 $\pm$ 824770 $\pm$ 78

## BEYCESULTAN

4960 $\pm$ 58 P — 298

XXVI. Late chalcolithic.

4690 $\pm$ 62 P — 297

XXVIII. Mid late chalcolithic.

## ÇATAL HÜYÜK

5549 $\pm$  93 P — 1361

V.

5711 $\pm$  99 P — 1375

VI (Post).

5961 $\pm$ 103 P — 1363

VI. (Beam).

5779 $\pm$  80 P — 1365

VI A.

5954 $\pm$ 111 P — 1362

VI B. (Post).

5986 $\pm$  98P — 1364

VI B. (Post).

5903 $\pm$  97 P — 1367

VIII.

5734 $\pm$  90 P — 1366

VIII.

5987 $\pm$ 109 P — 1369

X.

5894 $\pm$ 102 P — 1371

X.

6965 $\pm$  85 P — 1372

X.

6086 $\pm$ 104 P — 1370

X.

5807 $\pm$  92 P — 1374

XII.

## SUBERDE

5957± 88 P — 1385	Upper II (lower of 2 levels).
6045± 76 P — 1386	Upper II (lower of 2 levels).
6326±300 P — 1387	Lower II.
6226± 79 P — 1388	Lower II.
5634± 85 P — 1389	Lower II.
6299± 91 P — 1391	Lower II.
6570±140 — 1867	Aceramic

## AŞIKLI

7008±130 P — 1240
6843±127 P — 1241
6828±128 P — 1242
6857±128 P — 1238
6661±108 P — 1239

**TABULATION OF DATES FOR NEA NIKOMEDEIA, HAÇILAR & ÇATAL HÜYÜK**  
(All 5568 half life)

HAÇILAR	Id	NEA NIKOMEDEIA	
5000	Ic		
	Ib	Spoons ; White on	
	Ia 5040 Early Chalco.	red painting	
	Iib	(Level I).	
Solid style painting	Iia 5220 Early Chalco.	Later stamp seals.	
	III		
	IV		
	V	Pellet eyes once.	5331
	VI 5400 LN	6 sickles	
	VII		
ÇATAL	0	VIII	
5000	I	IX (5390) LN	
	II	5635	7 stamp seals
	III	5645	3 stamp seals
	IV	(6140)	8 stamp seals
	V	(5740), (5549)	
	VI A	5605 (destruction, 2 stamp seals)	5607
		5711, (5961) ... (level VI)	..
		5650	Belt hooks (level VI)
		5680 (beginning)	
		(5835), 5779.	
	VI B	5730	
		5805	
		5954, 5986	5830

6000

VII	6010
VIII	5903 (5734)
IX	6295
X	6200 (6086, 5987, 5894, 5965)

(6210)

HAÇILAR (aceramic mound ?) 6750

## KEY TO MAP OF PERIOD I (9000—7000 BC)

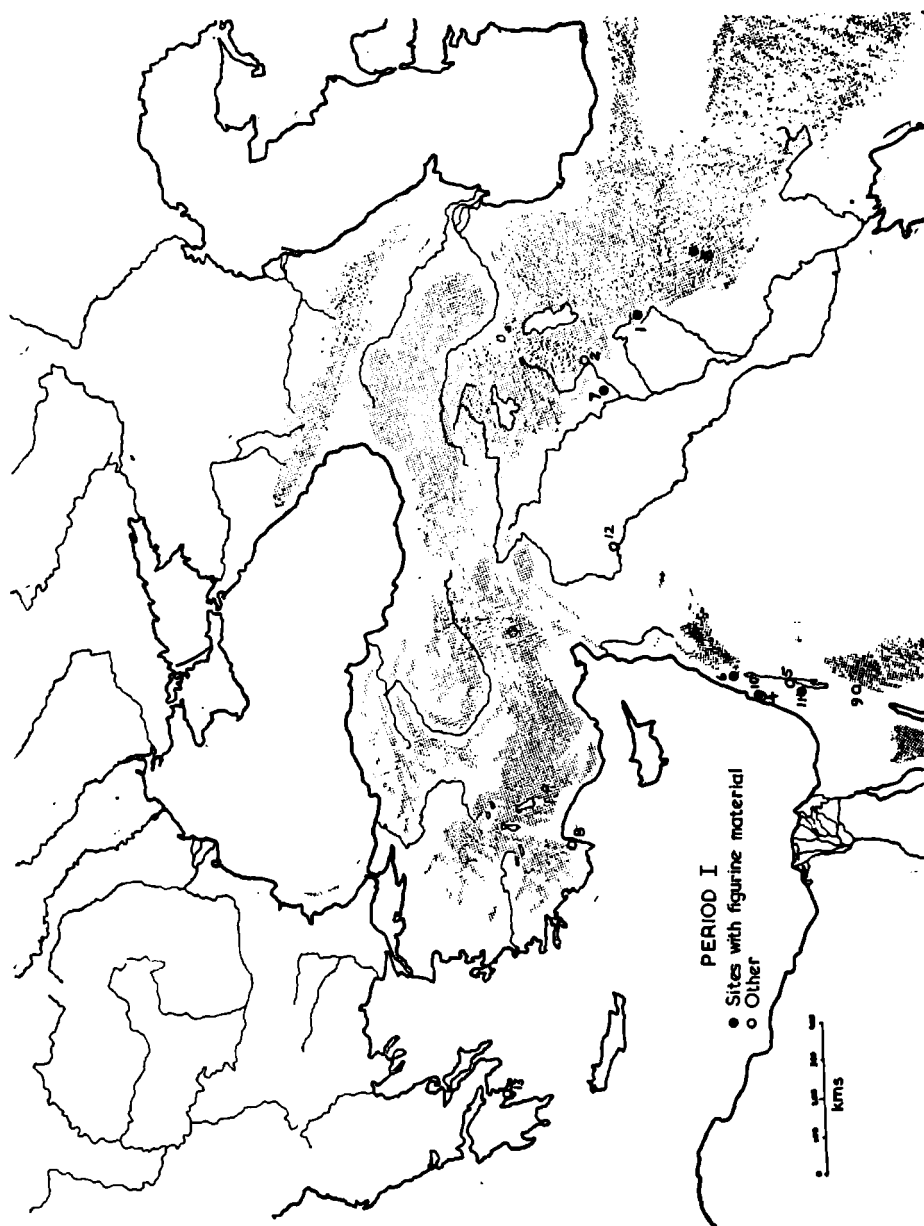
1. Karim Shahir
2. Zawi Chemi Shanidar
3. Tepe Asiab
4. Nahal Oren PPN A
5. Jericho PPN A
6. Ain Mallaha
7. M'lefaat
8. Beldibi — Kumbuçagi C
9. Beidha
10. Mugharet el Wad
11. El Khiam
12. Tell Mureyba'at
13. Frangthi cave.

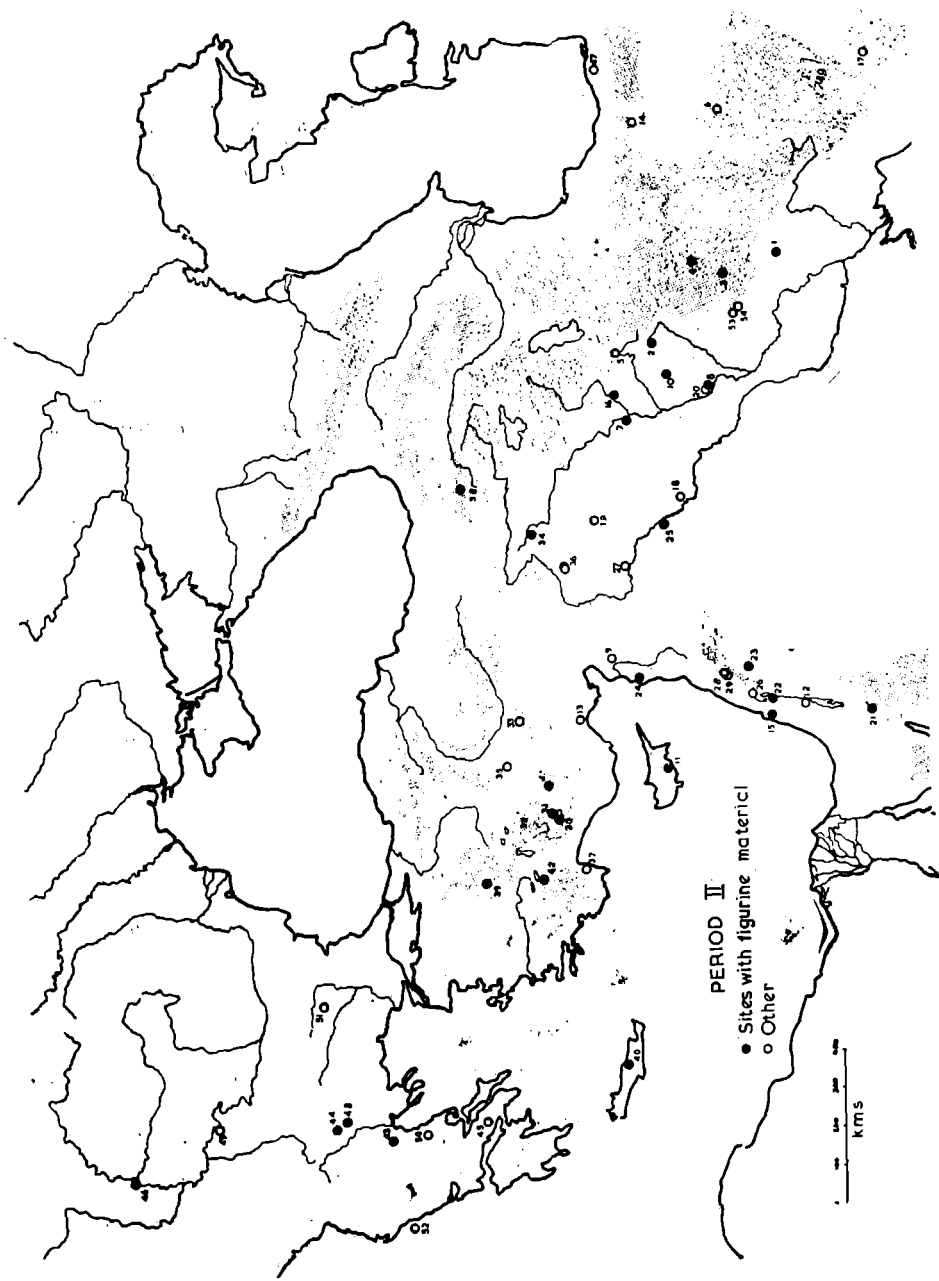
## KEY TO MAP OF PERIOD II (7000—5000 BC)

Site	Indication of date
1. Ali Kosh	Early 7th MBC onwards
2. Jarmo	Early 7th MBC
3. Tepe Guran	Late 7th and all 6th MBC
4. Tepe Sarab	Early 6th MBC
5. Shemshara	Late 6th MBC
6. Sialk I	6th MBC
7. Hassuna	Late 6th MBC
8. Tell el Sewwan	Early 6th MBC
9. Amouq A	Early 6th MBC
10. Matarrah	Mid 6th MBC
11. Khirokitia	Mid 6th MBC (5685±100)
12. Jericho	(Later PPN in Early 7th MBC ?)
13. Mersin	Basal neo. c. 6000 BC
14. Chashmah Ali	As Sialk I or later.
15. Nahal Oren	As Jericho. Figurines above PPN I, which compares with Jericho PPN B
16. Gird Ali Agha	Cf upper Jarmo or lower Hassuna.
17. Mushki and Djari B	Cf upper Jarmo ?
18. Baghouz	Hassuna / Samarra material
19. Chagar Bazar	Hassuna / Samarra material



20. Samarra	Hassuna / Samarra material
21. Beidha PPN B	Early 7th MBC
22. Munhata PPN B	
23. Tell Ramad PPN B	Mid 7th — Early 6th MBC
24. Ras Shamra PPN B	
25. Bouqras „PPN“	6300—5900 BC
26. Tell Eli PPN and pottery Neo.	
27. Tell Mureyba'at	Continuing from Period I ?
28. Labwe	Early pottery Neo 6th MBC
29. Ard Tlaili	Early pottery Neo 6th MBC
30. Suberde „PPN“ and pottery	From late 7th MBC
31. Kanal Hüyük	Çukurkent group
32. Çukurkent	Çukurkent group or Seydeşehir / Beydeşehir group)
33. Aşikli Hüyük	Around 6800 BC (7000—6600 BC)
34. Çayönü	Mid 7th MBC
35. Ilıcapiınar	
36. Bozova sites	
37. Beldibi B	
38. („Erzerum“ figurine ; doubtful provenance.)	
39. Kayirliköy	
40. Knossos	
41. Çatal Hüyük	
42. Haçılar	
43. Nea Nikomedeia	
44. Vrsnik	
45. Elateia	
46. Gylarét	
47. Belt cave Neo.	
48. Lakavica	Early 6th MBC
49. Lepenski Vir	
50. Argissa	5400—4800 BC 5550±90 Grn 4145 for level with Early Painted ware. (Sic.).
51. Asmaska	Early 5th MBC
52. Sidari	Mid 6th MBC
53. Choga Mami	
54. Tamerkhan	





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**AȘEZĂRILE NEOTERMALE TIMPURIÎ DIN ORIENTUL APROPIAT ȘI ANATOLIA.  
PRIVIRE GENERALĂ ASUPRA MATERIALULUI (c. 9000—5000 î.e.n.),  
INCLUZÎND FIGURINELE, CA O BAZĂ A NEOLITICULUI  
DIN EUROPA TEMPERATĂ DE SUD-EST**

**REZUMAT**

Poate fi de o anumită semnificație să aduni într-o largă sinteză câteva din cele mai importante așezări, care documentează apariția la ceea ce ne referim noi, ca fiind neoliticul din Orientul Apropiat și Anatolia. În mod firesc, această trecere în revistă este restrinsă în anumite aspecte ; în primul rînd, o descriere sumară, în special cu referiri la figurine, de asemenea, nu toate așezările importante au fost menționate. O asemenea lucrare este imposibil să fie perfect la zi.

Studiul poate avea o oarecare valoare prin înlăturarea imperfecțiunilor, ca o bază pentru apariția neoliticului timpuriu din Europa temperată și ca o explicație a unor chestiuni ridicate de fiecare așezare. Nu se încearcă să se explice procesele după fenomene atât de îndepărtate, totuși materialul poate servi să sublinieze complexitatea lor. Cele 2 hărți arată grafic, în chip satisfăcător, expansiunea în timp și, în sfîrșit, pătrunderea în Europa temperată, făcînd ca acest material să fie de bază pentru populația europeană preistorică.