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## Jordan in the Fourth Millennium

*Jordan in the Fourth Millennium...*: this title raises immediately the question of chronology. What does "fourth millennium" mean and consequently what chronology to adopt? Should the calibrated dates according to Stuiver and Reimer 1993<sup>1</sup> be considered and then, should it be here referred to calendar years, keeping in mind that a millennium in calibrated dates varies,<sup>2</sup> being either shorter or longer than thousand years... Or should uncalibrated dates be adopted? Facing this problem and considering the wide audience of the conference where not only specialists of ancient periods were present, it was decided at Copenhagen and, in this paper as well, that we would refer to uncalibrated BC dates.

Then, the problem of "slicing" the history of Jordan in millennia came up and soon it became clear that it was unrealistic to stick to it. *Fourth millennium*: we are not yet in historical periods ... and, even in historical periods, there are often difficulties for epigraphists and archaeologists to correlate their chronologies. Moreover, what does a "millennium" actually mean? From a cultural point of view a "millennium" does not have any signification.

So, why not to keep the classical periodization system and to use "developed and late Chalcolithic" after Joffe and Dessel's 1993 terminology<sup>3</sup> and Early Bronze Age Periods. Then, a major problem of terminology arises: in Europe, these words, at first, had only a technological meaning:<sup>4</sup> for instance "Chalcolithic" was created to define essentially lithic industries to which could be added copper objects; then, its meaning had been enlarged to characterize a period but it is never defined with precision. So, in a text, to understand well what the word "Chalcolithic" means, it becomes often necessary to know the habits of the author. Due to the lack of precise definition of this word, in the region here concerned, the beginning of the period, the "Early Chalcolithic" is often

designated as Late Neolithic or *vice-versa*. The explanation for this being — and it should be stressed — that there is no major discontinuity between the end of the Neolithic and the beginning of the Chalcolithic; at the end of the period, even if some sites are totally abandoned, a continuity exists as well with the Early Bronze Age I period: some sites continue to be inhabited, and neither the economy nor the social organization show tremendous changes.

"Culture" names might also have been used and this paper might have been built on the "Ghassulian" that covers part of the fourth millennium; but, once again, what actually is the exact definition of the word "Ghassulian"? Recent excavations<sup>5</sup> have clearly shown that: a) the site of Tulaylât al-Ghassûl has been occupied for at least a millennium, and b) the period usually called "the Ghassulian" is short if we consider the history of the site; on a stratigraphic point of view it represents only four of sixteen layers that are placed in Joffe and Dessel's chronology in the "Developed Chalcolithic" that means on the same horizon as the "*floruit*" of most of the sites of the Negev.

Now that this question of terminology has been examined<sup>6</sup> and since, in the previous sessions of the conference, the fifth millennium has not been looked at, it has been decided to deal with Jordan in the fifth and fourth millennia. This period is an intermediate one, a period of transition between:

- the time when the groups become intensive producing farmers and when pastoralism, as well, starts to play a more important role due to the presence of domesticated sheep that moves easier than goats;<sup>7</sup>
- and, at the other end of the period, the moment when people begin to settle into towns.<sup>8</sup>

Until the seventies, little work has been achieved in Transjordan related to this period, except for the large ex-

<sup>1</sup> Stuiver and Reimer 1993.

<sup>2</sup> Evin 1995.

<sup>3</sup> Joffe and Dessel 1995.

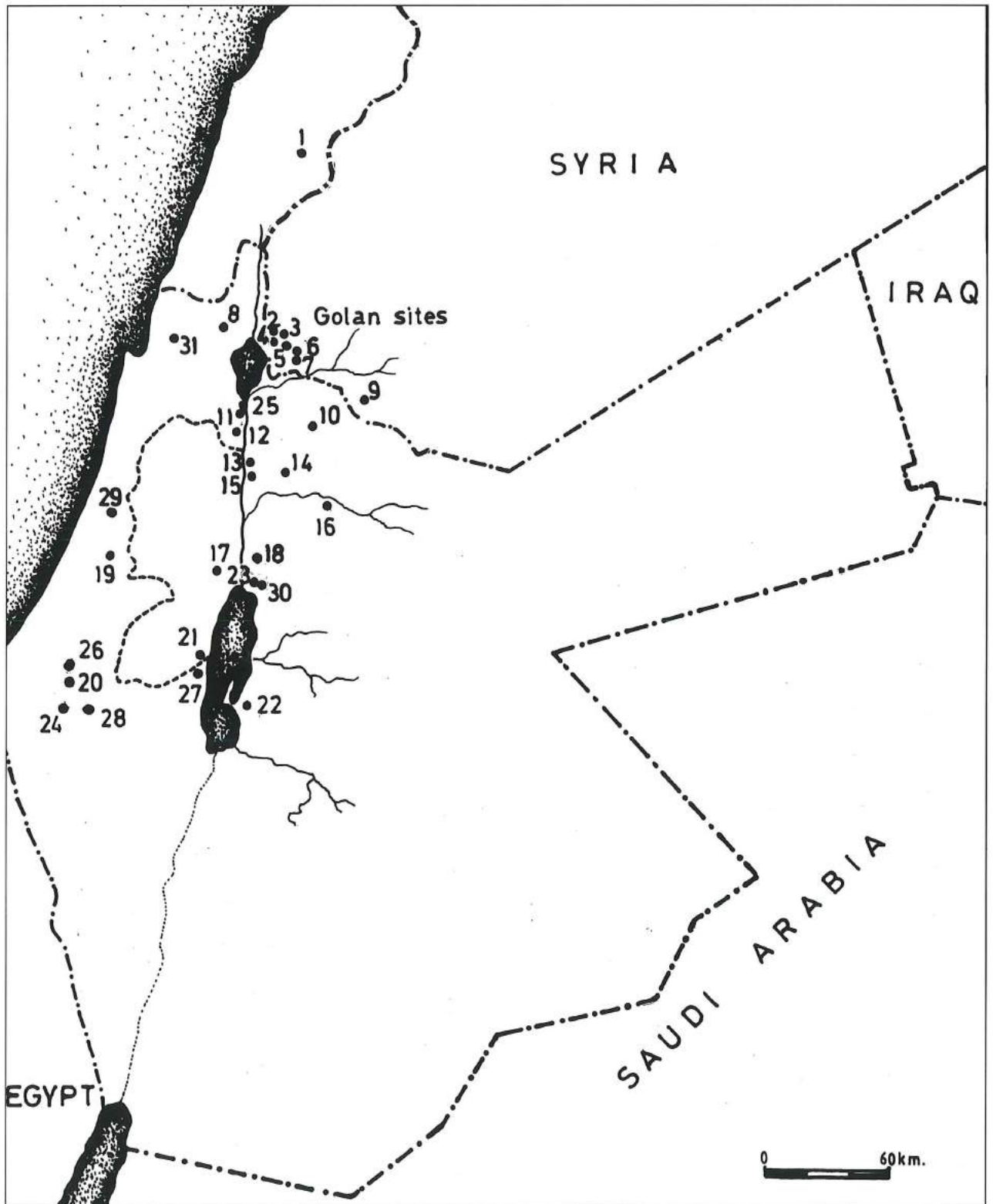
<sup>4</sup> Leroi Gourhan 1992.

<sup>5</sup> Hennessy 1969; Bourke *et al.* 1997.

<sup>6</sup> We are not insisting on this problem of terminology since Gilead 1988 and Joffe and Dessel 1993, among others, have recently published detailed articles on this topic.

<sup>7</sup> Ducos 1993; Perrot 1993.

<sup>8</sup> Miroshedji 1989.



1. Map of the sites mentioned in the text (drawn by Ali Omari):

1. al-Biqā'; 2. ad-Dura; 3. Tall Shiqiyya; 4. Siyar al-Khurfān; 5. Rasm Harbūsh; 6. 'Ayn al-Hariri; 7. Rasm al-Kabash; 8. Safad; 9. Dar'ā; 10. Sāl; 11. Munḥaṭa; 12. Baysān; 13. Abū Hābil; 14. Tall Maqlūb; 15. as-Sa'idiyya; 16. Abū Thawwāb; 17. Ariḥa/ Jericho; 18. Ghrubba; 19. Ludd; 20. Gilāt; 21. 'Ayn Jidi/ En Gedi; 22. Bāb adh-Dhrā'; 23. 'Udhayma; 24. Shiqmmim; 25. Neve Ur; 26. Nahal Gerar; 27. Nahal Mishmar; 28. Bi'r as-Saba'/ Beersheba; 29. Wādī Rabah; 30. Tulaylāt al-Ghassūl.

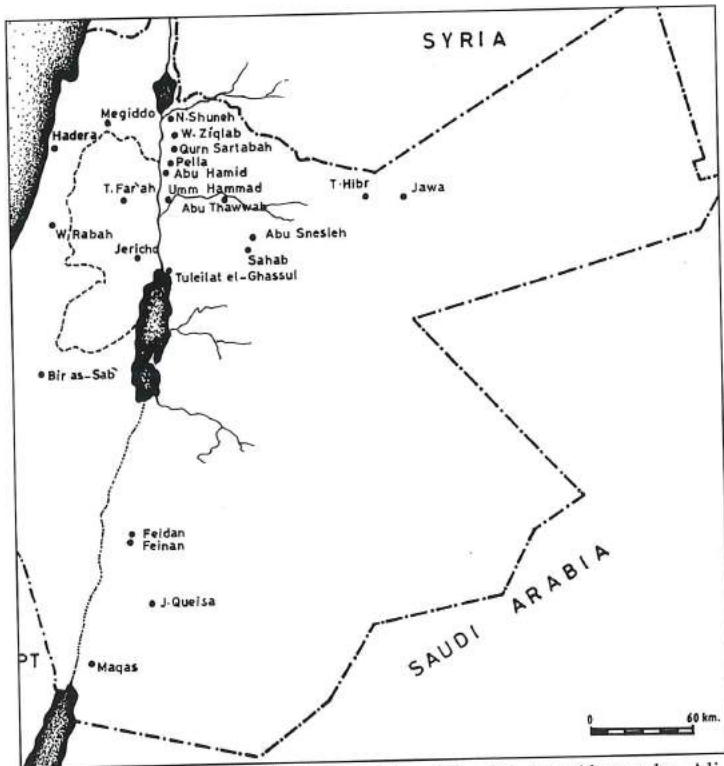
cavations led at Tulaylāt al-Ghassūl by the Pontifical Institute in the thirties, resumed after the war by R. North and in the late sixties by B. Hennessy.<sup>9</sup> Nearby, some work had been done by Stekelis at 'Udhayma, a cemetery site close to Tulaylāt al-Ghassūl.<sup>10</sup> South of the Dead Sea, the excavations at Bāb adh-Dhrā', still active these days, started<sup>11</sup> (FIG. 1).

Surveys and soundings by Glueck, Contenson and Mellaart on some sites such as ash-Shūna N., Abū Hābil, as-Sa'idiyya, and Ghribba in the Jordan Valley in the late fifties and early sixties,<sup>12</sup> were followed by an intensive survey in 1975 by the Department of Antiquities, the University Jordan and ACOR.<sup>13</sup>

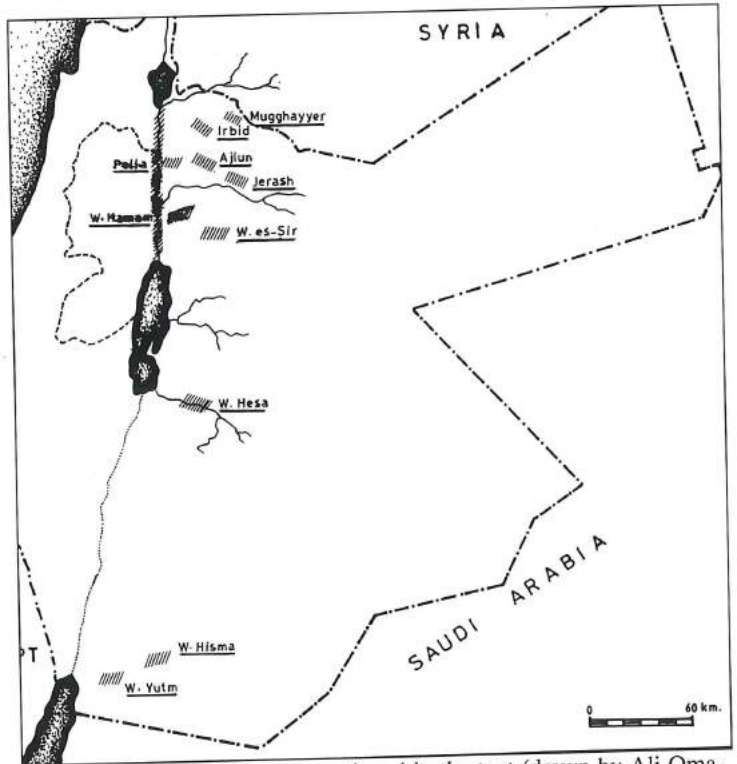
With the exception of the excavations of Saḥāb, south-east of 'Ammān in 1971 under the responsibility of M. Ibrahim,<sup>14</sup> almost nothing had been achieved on the highlands, and the plateau, nor in the South.

Since the last two or three decades, considering the pe-

riod concerned in a large area of Jordan, surveys, soundings and excavations (FIGS. 2, 3) have been blooming, especially in the northern part of the country (ash-Shūna North, Wādī Ziqlāb excavations, Pella/ Jabal Sarṭaba, Abū Ḥāmid, Tulaylāt al-Ghassūl, Katārat as-Samrā', Umm Ḥammād),<sup>15</sup> more recently, in the 'Arabah (Wādī Faynān, Tall al-Maqāṣṣ ),<sup>16</sup> on the highlands and the plateau as well (Abū Thawwāb, Jabal al-Muṭṭawaq, Abū Snaysla) and, in the arid zone (Jāwa, and the rock shelter of Tall al-Hibr to mention only the most important projects).<sup>17</sup> Surveys have also been conducted in the North such as the ones made in the hinterland of Pella, in Wādī as-Sir, in the 'Ajlūn and Jarash region and, east of Irbid, in the al-Mughayyar area with the important site of Sāl,<sup>18</sup> on the east coast of the Dead Sea.<sup>19</sup> In the South, surveys made were in Wādī al-Ḥasā and Wādī al-Ḥisma.<sup>20</sup> Meanwhile, it remains often difficult to use these surveys as often in the publications the sites are referred either to Neo/ Chal-



2. Map of the excavated sites mentioned in the text (drawn by Ali Omari).



2. Map of the survey areas mentioned in the text (drawn by Ali Omari).

<sup>9</sup> \*Mallon, Koeppel and Neuville 1934; \*North 1961; \*Hennessy 1969.

<sup>10</sup> \*Stekelis 1935.

<sup>11</sup> \*Lapp 1966.

<sup>12</sup> \*Glueck 1934, 1935, 1939, 1945, 1951; \*Contenson 1960, 1964; \*Mellaart 1962.

<sup>13</sup> \*Ibrahim, Sauer and Yassine 1976.

<sup>14</sup> \*Ibrahim et al. 1984; Zu'bi 1992

<sup>15</sup> Ash-Shūna N., Baird and Phillip 1994; Wādī Ziqlāb, Banning et al. 1996 and Tall Findi, Blackham et al. 1998; Pella/ Jabal Sarṭaba: \*Hanbury Tenison 1986; Bourke et al. 1996, 1997; Abū Ḥāmid: Dollfus and Kafafi 1998, 1993; Dollfus et al. 1988; Ghassūl: Bourke et al. 1995, 1997; \*Umm Ḥammād: Helms 1984, 1986,

1987.

<sup>16</sup> Wādī Faynān/ Faydān, Hauptmann and Weisgerber 1987, Hauptmann et al. 1989, Adams and Genz 1995; Maqāṣṣ: Khalil 1987, 1995.

<sup>17</sup> Abū Thawwāb, \*Kafafi 1988; Jabal al-Muṭṭawaq, \*Hanbury Tenison 1986, Fernandez-Tresguerres and Junceda Quintana 1991; Abū Snaysla, Kerner et al. 1992; Jāwa, \*Helms 1987; Betts (ed.) 1991; Tall al-Hibr, Betts 1992.

<sup>18</sup> Wādī as-Sir: Chang-Ho, J. 1997; 'Ajlūn and Jarash Region, Sapin 1985; Mughayyar Area, Ibrahim and Mittmann pers. comm.

<sup>19</sup> \*Amr et al. 1997.

<sup>20</sup> Wādī al-Ḥasā, McDonald 1988; Wādī Ḥisma, Henry 1988.

co or to Chalco/EB1.

In Jordan, in the Highlands and in the eastern Arid Zones, relatively few fifth-fourth millennia key sites have been excavated, Jāwa — at the end of the period — being an exception;<sup>21</sup> on the other hand, a large number of sites have been surveyed and largely exposed in the Jordan Valley; so, in order to have a glimpse at the evolution of villages during the “Chalcolithic” period, Abū Ḥāmid, a site of the Ghawr that has been occupied during the fifth and the first half of the fourth millennia, will be used as the backbone of this paper and, as an example, we will try to figure out the relations that it had with other regions. This site and the area around have recently (1986-1992) been systematically surveyed and excavated over a large surface (ca 2500 m<sup>2</sup>).<sup>22</sup>

At the end of the sixth millennium and at the early fifth millennium the environment of Abū Ḥāmid was quite different from what we can observe nowadays. The Jordan river was not so entrenched and its banks — as the anthracological and vegetal macroremains analyses made by R. Neef<sup>23</sup> have evidenced — were covered by reeds, poplars and tamarisks. On the east bank a slightly undulating gentle slope was leading to the piedmont: the marl deposits left when Lake Lisan dried up were covered by deposits of rich red loams. The researches of Fuad Hourani and Marie Agnès Courty on the early to mid-holocene climate<sup>24</sup> have distinguished — for the Jordan Valley — three main phases: the first one (8,000-6,500 uncal BC) corresponds to the development of a mosaic landscape with marshlands in wide flood plains, and to the extensive formation of travertine that took place under the warm and humid conditions well known for the first Holocene optimum. The second phase (6,000-4,500 uncal. BC) begins with a period of erosion and torrential flows, indicator of pronounced instability of the climate. Then, a period of stability seems to have been re-established in the Ghawr with slow deposition by sheet flows of the red silt, their pedological development indicating cold and humid conditions. A third phase (ca. 4,500-3,500 uncal. BC) is marked by the renewal of torrential flows, generalised erosion, enlargement of lateral wadis and the incision of the Jordan River corresponding to the establishment of a Mediterranean semi-arid climate.

Abū Ḥāmid, with the proximity of water — essential not only for human beings but also for domesticated animals — of wood for fuel and of rich loamy soils, offered the conditions requested by a group of herders and farmers who wanted to settle. At that time, late sixth/early fifth

millennium BC, the climate seems to have been relatively stable and colder than nowadays.

At its origins, the village is formed by a cluster of round or oval semi-subterranean huts with almost vertical edges; their diameter varies between 2 and 3 meters, their depth between 1.50 and 1.80m. Most of them were dug — from a thick layer of terra rossa — into the marls. Inside these pits, as the micromorphological analyses made by F. Hourani have shown, a succession of trampled floors is present; some of them are covered with mats; according to the phytoliths, most probably, these pits were roofed with vegetals.<sup>25</sup> The stratigraphy and the sediment analyses as well, show that periodically these pits were abandoned. Inside the dwelling-pits not one domestic structure such as basins or hearths was discovered. These features were located outside the shelters. At least in the excavated area, these shelters were very close to each other, but seemingly not dug at the same time.<sup>26</sup>

Gradually these pits were filled up and, in a second phase, replaced by an other type of dwelling. One has been partially excavated; its shape is oval and the floor is ca 0.50m lower than the outside surface. Inside, its edge offers a kind of wall higher than the surrounding floor, made with lumps of clay. Inside this structure two small basins filled with ashes are present.

In the middle of the fifth millennium, for one or two centuries as it seems, the village as a cluster of pit-dwellings seems to have been abandoned but more mobile groups were still coming to the site. Those people had left behind them remains of their passages such as ashy floors, post-holes or stick-holes — these last ones could have been used as stands for goatskin churns or as holes to maintain weaving looms — a lot of hearths and basins often with white plastered walls and pits.

The pottery is in use at Abū Ḥāmid since the origins of the settlement. As Jaimie Lovell has shown,<sup>27</sup> the fabrics are dominated by an orange-buff fabric that has very few inclusions and appears in a very well levigated form and a more granular, less well levigated with slightly different proportions of inclusions. These make up about 93% of the assemblage. A very hard biscuity red/brown fabric appears in very small amount as does a silty buff fabric. For the most part, shapes are simple and bowls dominate the assemblages; small bowls, quite crudely made are often painted in red-orange linear designs, reminiscent in the valley of Katārat as-Samrā'<sup>28</sup> and, on the other side of the river, of Tall Tsaf,<sup>29</sup> of Jericho level IX and also, close to the Mediterranean coast, of Ludd<sup>30</sup> as well as in the high-

<sup>21</sup> \*Helms 1981.

<sup>22</sup> Dollfus and Kafafi 1988, 1993; Dollfus, Kafafi *et al.* 1988.

<sup>23</sup> Neef 1988, 1990, n.d.

<sup>24</sup> Hourani and Courty 1997.

<sup>25</sup> Hourani 1997, 1999 and pers. comm.

<sup>26</sup> Hourani 1999 and pers. comm.

<sup>27</sup> Lovell *et al.* 1997.

<sup>28</sup> Leonard 1992.

<sup>29</sup> Gophna and Sadeh 1989.

<sup>30</sup> Gopher and Gophna 1993.

lands in Jordan at Abū Thawwāb.<sup>31</sup> That shows well the contacts that the clans or the tribes or, maybe only some individuals, had with other groups. In fact, there is a wide variety of decoration styles which include spots and simple geometric patterns paralleling the material published by Mellaart from Ghрубba.<sup>32</sup> Hole-mouth jars are present as well as tall high-necked jars, sometimes decorated around the base of the necks.

What is also important is to stress the contacts with the North (Northern Syria, Anatolia?) as it can be inferred from some bichrome sherds that are very Halafian in style. An Halafian influence had been already noted in the Lebanese Bīqā'<sup>33</sup> and at Tall Tsaf,<sup>34</sup> northwest of Abū Ḥāmid. Abū Ḥāmid and perhaps Katārat as-Samrā'<sup>35</sup> according to the publications would be the southern sites where Halafian style sherds have been found.

Until now, just a presence of Halafian sherds has been noted, in the future it will be very important to understand the system of exchanges and the reasons of those. It should be added that, differing from the Neolithic periods, almost no obsidian<sup>36</sup> has been found in these levels. Also, no copper objects coming from the North that could be testimonies of exchanges with Anatolia have been recovered yet.

All the semi-subterranean pit dwellings contain relatively homogeneous ceramic materials whereas the levels devoid of architecture contain a much larger variety of fabric types and a mixture of earlier and a few of later forms. According to studies by J. Lovell<sup>37</sup> it seems that it is not until the first levels of the middle phase that the fabric groups begin to stabilise into easily definable groups.

This leads to the end of the fifth millennium. At that time, the agglomeration of Abū Ḥāmid offers a quite different aspect. The habitations are not any more semi-subterranean dwellings. They are now houses built above the floor with plano-convex bricks. The rooms are rectangular and their walls are often covered by layers of plaster that might have been the support for frescoes; one of them has been found, fallen in a pit. It is in buildings of the same period that at Ghassūl as well, frescoes appear for the first time. At least at Abū Ḥāmid, nothing can indicate that the building with the wall painting had any special (ritual?) function.

In the Abū Ḥāmid village, some of these dwelling complexes consist of two buildings: one is a rectangular room to live, and the other consisting of two oblong cells too narrow to have been used to live or even to sleep, and

was most probably used for storage. Cooking took place outside, in areas where a lot of plastered basins, large oval pits filled with stones cracked by fire or/and ashes were found. Like at Ghassūl, in open-air areas, large oval or round surfaces of pebbles carefully laid and always associated with a fire pit are present.

Henceforth, the pottery is more varied in its fabrics, shapes and decor. New shapes such as fusiform vessels appear. They are still rare and small, no more than 15-20cm while they will be more frequent on some sites in the mid-fourth millennium; then their size can reach 80cm. Some of the pots are most often just covered by a wash or a burnished slip (DFBW or RFBW) while others are decorated by motives incised with combs, shells and reeds. Some vessels are decorated with several bands in relief with finger impressions. Such surface treatments are well known on some sites of the Jezreel Valley, in Western Galilee, along the coastal plain as far south as Wādī Rabah,<sup>38</sup> north of Tel Aviv but until now, it does not seem that they are present on the highlands and plateau. In the Abū Ḥāmid assemblage bow rims and carinated shapes so frequent at Munhata 2a,<sup>39</sup> Hazorea etc. are almost absent whereas in the levels related to the Wādī Rabah phase of Ṭabaqat al-Būma, in Wādī Zīqlāb, they are frequent.<sup>40</sup>

Gradually and without neither stratigraphic gap nor obvious cultural, social or economic change, the Abū Ḥāmid settlement is sprawling and, in the middle of the fourth millennium, may have covered ca. 6 hectares (EW: 1.4km; NS: 0.4km). The network of the village seems loose: houses are not agglutinated but separated by large spaces; close to the houses there were most probably fields of cereals: wheat and barley, peas and lentils; olive trees were also planted around as might be suggested by the anthracological analyses which have shown the presence of olive wood in small hearths.<sup>41</sup> Indeed, the chances are little that people of the group would have walked up the slope more than 10 km to pick up olive wood in the natural forest — the olive trees was one of its component — and to carry back the wood in order to use it as fuel in small domestic hearths? Bushes, other species of wood present in the riverine forest or dung could have been used more easily. Olives were also found in great quantities at Jabal Sarṭaba in a farm of the same period. Recent work in Wādī Zīqlāb suggests that clusters of small sites at elevations around 400 to 600m have something to do with the development of an olive-oil industry.<sup>42</sup> At Ghassūl, date stones have also been collected. Besides cereals and

<sup>31</sup> Kafafi 1989.

<sup>32</sup> \*Mellaart 1956; Leonard 1992.

<sup>33</sup> Copeland 1969.

<sup>34</sup> Gophna and Sadeh 1989; see also Kaplan 1960.

<sup>35</sup> Leonard 1992.

<sup>36</sup> At Abū Ḥāmid only one bladelet has been found!

<sup>37</sup> Lovell *et al.* 1997 and pers. comm.

<sup>38</sup> Among others, Kaplan 1958, 1969, 1972; Nahal Beset, Nahal Ze-

hora, Gopher 1988.

<sup>39</sup> Garfinkel 1992.

<sup>40</sup> Banning *et al.* 1996; Banning and Siggers 1997.

<sup>41</sup> Neef, n.d. This is a strong argument in favor of the cultivation of olive trees, as it is very difficult to distinguish wild olive stones from domesticated ones.

<sup>42</sup> Banning *et al.* 1998.

leguminous, we have at this period the beginning of horticulture that in those regions will play over the time a very important role.

Now let us have a look at some of the activities that these villagers had. Indeed, on the floors of some rooms or outside along the walls a great number of objects allow us to reconstruct the activities of some of the inhabitants.

As an example, at Abū Ḥāmid, in one large room more than thirteen spindle whorls and some loom weights, bone spindles and needles, and a ceramic bowl with a curious handle inside, most probably to do with the work of textiles;<sup>43</sup> these bowls are very similar to some depicted in Egypt on later paintings. Imprints of textiles have been found on pottery sherds and one was uncovered as well when, at Yarmouk University (IAA anthropological laboratory) Anne Marie Tillier, the physical anthropologist, cleaned an infant burial. On the skull of this new born skeleton, the imprint of the linen in which it was wrapped<sup>44</sup> was found. Flax and wool were the materials most probably used.

In other areas, flint knapping activities to produce tools were evident, and it is interesting to note that, despite a great abundance of flint nodules in the terraces nearby, most of the nuclei are almost exhausted: piercers, borers, tabular scrapers — some of them showing, as do the sickles, some sheen. These glossed tools were used to reap cereals as well as to cut reeds. On the floors of two rooms were also found primary evidence of an activity of resharpener adzes and axes. It seems that very often the hafted part of those, used to cut wood outside of the settlement, were brought back to the village after having been broken; for what reason? the explanation is simple: the hafted part of a tool is the most precious one and its worth keeping it and then to proceed to a resharpener of the cutting edge that is not a difficult task.<sup>45</sup>

We would like to insist on the fact that, in general, the industry is an *ad hoc* one as it is the case on quite a lot of other sites of the same period<sup>46</sup> and that most of the inhabitants were capable to produce a tool according to their immediate needs. However, few tools seem not to have been made at Abū Ḥāmid as are some microscrapers on a very peculiar honey coloured translucent flint similar to some tools from the Negev and even from several sites in Lower, Middle and Upper Egypt.<sup>47</sup> Some of the scrapers are with invading retouch, some with perforated disks — their function still unknown — could have been made only by specialists. These disks are known essentially in

the Middle Jordan Valley especially at Neve Ur,<sup>48</sup> in Northern Jordan, in the Irbid area, at Dar'a<sup>49</sup> and on al-Jawlān. Recently some of them have been discovered in one ossuaries tomb cave that has been found at Peqi'in in western Galilea.<sup>50</sup> South from Abū Ḥāmid they are rare, while some fragments have been noticed at Ghassūl. Where these perforated disks have been made remains a question; was it in each village? in specific places?

Piriform or round maces in very hard limestone or in hematite seem also to have been the work of craftsmen. These objects are always made in a very dense material and are very heavy. Despite the fact that they have been depicted in paintings in Egypt and on stelae in Mesopotamia as mace heads their use is still a question. At Abū Ḥāmid eight of them were found together — as if they have been put initially in a basket or a bag — showing various shapes, different materials and have not been perforated in the same way.<sup>51</sup>

Considering the pottery, there is a greater variety of shapes: in the northern part of the country, at Abū Ḥāmid as well as at Ghassūl, Pella (south central field, trench XXXIID), Baysān and in the sites of the al-Jawlān<sup>52</sup> very large jars have been found. At Abū Ḥāmid, one — 1.65m high x 1m diam. — was intact<sup>53</sup> and the base and lower parts of three others were found in various areas of the settlement. It looks like one of them was in each dwelling compound. The question of specialization, of "*savoir faire*" can be raised? Were these large jars made by any of the potters? Considering their weight, they were certainly not moved from far away,<sup>54</sup> but were most probably built up very close to where they were in use, maybe by itinerant specialists.

Besides this aspect, another important point is the appearance of small coiled-made V-shaped bowls that were finished with a slow wheel. We have here the appearance of a new technique that — as for some of the perforated objects — utilizes the rotative energetic force. These small vessels are very abundant, are found on most of the sites of this period and are usually thought to be locally made. At Abū Ḥāmid, the technological and petrographical analyses recently made by V. Roux and M. A. Courty have shown that 90 % of them came from the Negev, which is more than 200 km south. They are made of very specific loessic material.<sup>55</sup>

Abū Ḥāmid, in the middle of the fourth millennium, was not an isolated village in the Jordan Valley. In several locations, there are clusters of at least four or five villages,

<sup>43</sup> Martin 1993, Univ. Paris I, M.A. Thesis. Ali 1996.

<sup>44</sup> Tillier A. M. pers. com.

<sup>45</sup> Coqueugnot n.d.

<sup>46</sup> Rosen 1997.

<sup>47</sup> Coqueugnot in: \*Dollfus, Kafafi et al. 1988 a, b.

<sup>48</sup> Perrot et al. 1967.

<sup>49</sup> Nasrallah 1948.

<sup>50</sup> Gal et al. 1997.

<sup>51</sup> Al Sa'ad, Coqueugnot, Kafafi and Dollfus, in prep.

<sup>52</sup> Epstein 1998.

<sup>53</sup> On exhibition at the Museum of Jordanian Heritage, Yarmouk University, Irbid.

<sup>54</sup> Ali 1998.

<sup>55</sup> Roux and Courty 1997.

each one being separated from the other by a rather small distance of about 1.5-2km. These groupings might have had economic reasons such as proximity of good lands for agriculture or horticulture, or social ones such as the segmentation of a lineage.<sup>56</sup>

If the villages are covering — as a mean — area of 1-2 hectares, then larger ones (5-10 ha) are not exceptional, not only in the Jordan Valley but also in the highlands (sites such as Sāl in the Irbid area and one in the neighbourhood of Tall Maqlūb<sup>57</sup> in the upper Wādī al-Yābis, just to mention three of them). In the Lower Jordan Valley, Ghassūl is a very large settlement with unprecise limits; it seems to have covered between 20 and 30 hectares. This large size could be the result of a progressive displacement of the agglomeration along its successive occupations — like Abū Ḥāmid, Ghassūl as a settlement seem has been founded at the end of the sixth millennium or early in the fifth — in certain abandoned areas post-holes seem to suggest the presence of tents or huts. Elsewhere, the net of houses is tight and it seemed that as soon as a space was vacant, a house was built. Recent work at Ghassūl has clearly shown that in one area (area H) two phases of architecture are intermixed, showing long houses well built on multicellular mudbrick architecture.<sup>58</sup> At Ghassūl, it seems that in one area (area E) public, maybe ceremonial, buildings are present. Their plan seem to be very similar to 'Ayn Jidi/ En Gedi and Gilāt "sanctuary" ones.<sup>59</sup>

At Abū Ḥāmid, some of the inhabitants were moving outside the Valley for various purposes. It is almost certain that a part of the group was leaving the village with their ovicaprids flocks every year. No remains of animals younger than three months have been found — and it is not a question of preservation as bird or rodent bones were found. This observation could indicate that she-goats and ewes were giving birth most probably in the highlands where we can imagine part of the group was going in a transhumance movement. There are, indeed, strong material culture ties with sites of western Ḥawrān such as Sāl, Dar'a and with some of the al-Jawlān as well (cf. *supra*). It is also to the north — the region around Wādī al-Yarmūk and Wādī al-'Arab — that most probably if not the groups, at least some individuals, were going to get basalt raw material, or the basalt vessels themselves. At Abū Ḥāmid, the very little number of basalt flakes collected might suggest that the vessels were not produced in the settlement but were most probably made near the raw sources.<sup>60</sup> Till today, no workshop has been found and in-

tensive surveys should be done in that area with the goal of eventually finding them.

Towards the South, there were also movements: Wādī Faynān was certainly an attractive place to go and get some green stone to make figurines or beads, and most probably to get malachite or cuprite in order to produce some utilitarian copper objects such as needles, pins and axes — as is the case, on a larger scale, in the Negev. On the other hand, the "prestigious" items, made in arsenical copper such as the ones found at Nahal Mishmar were imported from far North, Anatolia or even Caucasus.<sup>61</sup>

The Jordan Valley and the Negev, despite some differences in their material culture due on the one hand to their traditional heritage, and on the other to their environment, were sharing in the beginning of the fourth millennium BC some common beliefs. The very schematic and flat-relief violin-figurines in hard stone, found at Abū Ḥāmid and Ghassūl in domestic contexts as well as in the Negev, for example at Gilāt in the "sanctuary" would be some expression of them. The large theriomorphic terra-cotta vessel uncovered at Abū Ḥāmid would be another one. Indeed, this large vase representing a bull loaded originally with one or two vessels, can be compared to the woman and to the sheep found also at Gilāt in the "sanctuary". Both carry containers. Their technology is very similar, as is their symbolism: all three insist on liquids (cf. the vessels that they carry on their back or on their head), that could be poured into their body. Water, as we know, is essential not only for human beings but also for domesticated animals, to which it should be provided when water cannot be found at proximity.

Furthermore, we should add that the small V-shaped bowls, made with the rotative kinetic energy found at Abū Ḥāmid but produced in the Negev, could have been used for some ceremonies a hypothesis that finds some support in their frequent presence in tombs all over the southern Levant.

If we turn now to burials: in non of the excavated sites of the fifth and early fourth millennia in Jordan are burials frequent. Some infants buried in jars or under sherds are present at Ghassūl<sup>62</sup> and at Abū Ḥāmid.<sup>63</sup> In comparison with the population, the adult skeletons that have been found are quite rare. It seems that, like for example at Shiqmim in the Negev,<sup>64</sup> bodies were buried in large cemeteries outside the village that could have been regionally used. 'Udhayma, 3km from Ghassūl could have been one of them.<sup>65</sup> Cists, cairns, stone circles and dolmens are present as they are at Shiqmim. Their date at

<sup>56</sup> Dollfus 1989, paper presented at the fourth conference of the History and Archaeology of Jordan, Lyon; in Wādī Ziqlāb and Wādī al-Yābis also similar clusters have been evidenced.

<sup>57</sup> Palumbo, Mabry and Kuijt 1990; Mabry and Palumbo 1992.

<sup>58</sup> Bourke 1997.

<sup>59</sup> En Gedi, Ussishkin 1980. Gilāt, Alon and Levy 1989.

<sup>60</sup> Wright *et al.* n.d.

<sup>61</sup> Hauptmann *et al.* 1992.

<sup>62</sup> Mallon, Koeppl and Neuville 1934.

<sup>63</sup> Dollfus and Kafafi 1999.

<sup>64</sup> Levy and Alon 1985.

<sup>65</sup> Neuville 1930; Stekelis 1935.

'Udhayma is not certain but recent work in the 'Irāq al-'Amir region<sup>66</sup> could help put some of them in the late Chalcolithic period or very early in the Early Bronze Age, as Stekelis had already noted. These large cemeteries — a little later it will be the same at Bāb adh-Dhrā' — seem to be the consequence of a new way of life and of a new mode of structuring of the regional space: they could have been a gathering place for nomadic groups. The remains of their temporary dwellings can often be observed among the megaliths. And, as Jean Guilaine wrote in his volume *La Mer Partagée*: «chez certains groupes, conserver les défunts ne saurait être mené à bien sans le recours à une architecture plus ou moins monumentale, gage d'impression, de respect, de durée...Construire des tombeaux immuables éfait aussi l'occasion d'affirmer la pérennité de la communauté».<sup>67</sup>

To come to an end, we should insist that if we begin to have some ideas about the way of life of the people of Jordan in the fifth and fourth millennia, of the environments to which they had to adapt themselves, even of their societies and economies, what we know concerning their dead is still quite little. So we would like to insist that in a near future more efforts to be made on this problem.

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