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The Iron Age Culture in the United Arab Emirates, between 1100 BC and 250 BC

Benoist Anne

United Arab Emirates are part of Eastern Arabia, bordered to the north-west by the Persian Gulf, to the east by the Oman sea, part of the Indian Ocean, and to the west by the *Rub al Khali*, the desert of central Arabia. The western part of U.A.E. is covered by sand dunes. The eastern part is covered by a range of mountains oriented North-west / south-east, locally called Hajjar mountains. They form a half-circle 700 km long for 50 to 150 km wide, separating the western region from the eastern coast. The central part of these mountains is formed by ophiolitic and metamorphic rocks, such as chlorite or diorite, which have been exploited during antiquity for making vessels. The mountains also include sources of copper. Copper was exported to central regions of Middle East (Mesopotamia) from the third millennium BC onwards.

The western and the eastern foothills of the Hajjar range are traditional areas of settlement and agriculture. In these areas a plain formed by alluvions dated from the Holocen Period extends on a distance of 15 km in the northern part (Ras al Khaimah) to 50 km in the southern part (al Aïn). To the west, the western foothills are protected from extension of dunes by a range of calcareous outcrops (Jebel Hafit and jebel Aqlah in al Aïn area, Jebel Buhais in al Madam area, jebel Fayah in Mleiha area, etc). This region benefits from waterflows coming from the mountains, retained at a reasonable depth (circa 15-20 m) by a layer of silt present in the deposits. Along the coast, areas of mangroves have long provided local inhabitants with wood, whereas various species of fish and shellfish were obtained from the sea. Among the latter, *Pinctada Margharifera* are sources of pearls, exported to other regions (Mesopotamia, Iran), from Antiquity onwards.

Iron Age Period in Eastern Arabia was defined during the years 1980 on the basis of the Iranian chronology and extends between the end of the second millennium BC (circa 1200 BC) and the end of the first millennium BC (circa 250). The term "Iron Age" itself could appear as

inappropriate for naming this period, as no iron was used or produced in the region during that time, excepted on one site (Muwailah), where it probably was imported from other regions of the Middle East. Thus, this appellation must be considered as purely formal and referring to nearby cultures (Iranian Iron Age) more than to any local historical reality.

The Iron Age period includes three main phases¹:

- Iron Age I (1200 – 1000 BC), which appears as a transitional period between the Late Bronze Age and the proper Iron Age, and which was put in evidence on few sites (Shimal, Tell Abraq, Kalba).

- Iron Age II (1000 BC – Circa 600-550 BC), which appears as the main phase of development of local Iron Age culture.

- Iron Age III (600-550 – 250 BC), a late phase only few represented and badly understood, which seems contemporaneous with the emergence of Iranian Iron Age III and the formation of the Achemenian empire.

Iron Age I culture (1200 – 1000 BC).

The origin of Iron Age culture is still badly understood. The Iron Age I phase was defined by P. Magee on the basis of the results of excavations at Tell Abraq, a settlement site located along the western coast of the U.A.E. on the border between Umm al Quwayn and Sharjah Emirates². On this site, remains of occupation layers including postholes were found over an older Late Bronze Age tower. They produced a type of pottery unknown before, and distinct from the previous Late Bronze Age one (Fig. 1). This pottery, grey or brown to black, coarse, handmade, poorly fired and never slipped or decorated, can be compared to examples from the level III of the city of Qala'at al Bahrain, dated from the very beginning of the first Millennium BC (circa 1000

1 Magee, 1996b

2 Magee, 1996b

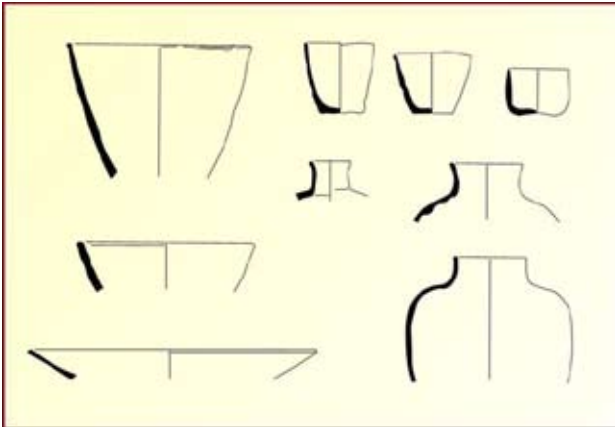


Fig. 1 : Iron Age I pottery from Tell Abraq (after Potts, 1990, Fig. 131, 133, 134, 135)

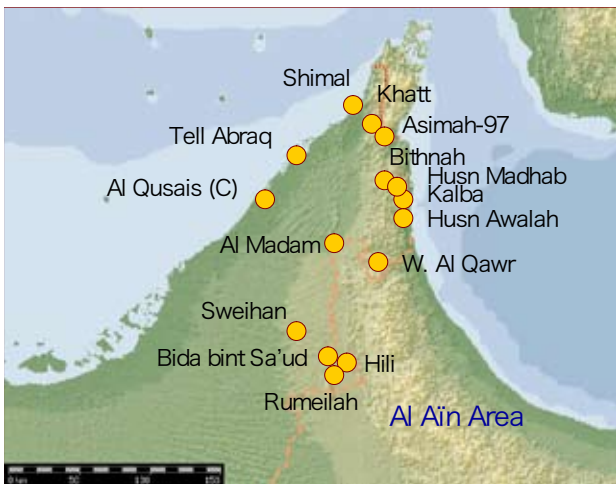


Fig. 2 : The Iron Age II sites in the United Arab Emirates

BC). In upper layers on the same site some elements of comparisons with Iron Age II cultures in Iran appear (bridged spouted vessels, painted ware). For this reason, P. Magee interpreted these layers with a coarse handmade ware as the witnesses of a culture preceding the classical Iron Age culture in the U.A.E., and called it Iron Age I.

Iron Age I layers were identified on two other sites: Shimal³, in Ras al Khaimah area and Kalba⁴ on the eastern coast, to the south of Fujairah. At Shimal, layers of Iron Age Period include a shell midden (period IVA) and later, a small house in stones probably with a covering in perishable material (period IVB). In Kalba, the Iron Age I material was part of the filling of an older ditch installed around a Late Bronze Age tower. On other Iron Age sites, Iron Age I layers couldn't be surely isolated, although

a coarse pottery showing some parallels with the Iron Age I one was discovered in the deepest layers of some Iron Age II sites (first layer of building G at Rumeilah⁵, deepest layers from the site AM-54 in al Madam⁶, tiny layer under the cultic site of Bithnah-44⁷).

Multiplication of settlements and organization of territories during Iron Age II : some examples

Iron Age II period has been identified on many settlement sites and is considered today as the period of apogee of the development of Iron Age culture in Eastern Arabia (Fig. 2). Iron Age II settlements have been brought to light in many areas of the U.A.E., along the foothills of the Hajar range, from Ras al Khaimah to the north (upper layers of Nud Ziba in Khatt area⁸) until the region of al Ain to the south (sites of Hili-2⁹, Hili-14¹⁰, Hili-15¹¹, Hili-17¹², Rumeilah¹³, Bida bint Sa'ud¹⁴, graves in jebel Hafit¹⁵ ...), along the western and eastern coasts (Tell Abraq¹⁶, Hamriyah¹⁷, Husn Madhab¹⁸, Dibba¹⁹, Kalba²⁰ along the eastern coast) and in the valleys inside the mountains area (Bithnah area along the wâdî Ham²¹, Fashgha, Naslah and Rafaq areas in the wâdî al Qawr²², etc). Iron Age II settlements were even found in desert areas such as Muwailah²³, located in the dune field in the western part of the U.A.E. Thus this period appears as an important phase of increasing of local population.

Iron Age II Period is also a phase of development of houses construction. Along the western foothills of the

3 Velde, 1992

4 Carter and Magee, 1999.

5 Benoist, 2000 : 134 - 151.

6 Benoist, 2000 : 211 - 227.

7 Benoist, 2007 : 43

8 De Cardi, 1984 ; De Cardi, Kenneth and Stocks, 1994.

9 Rahman, 1980.

10 Boucharlat and Lombard, 1985 : 62-64 and PL.67.

11 al Tikriti, 2002.

12 al Tikriti and Haddou, 2001. Hili-17 DAA2.

13 Boucharlat and Lombard, 1985.

14 al Tikriti, al Haj and al Niyadi, 2001 Bida bint Sa'ud. DAA2.

15 Friflet, 1970 : 377-378 ; Cleuziou, Pottiers and Salles, 1978 : 12-18.

16 Potts, 1990a. Potts, 1991.

17 Mouton, 1986.

18 Corboud et al, 1994 : 22-24. Corboud, 2001 : Husn Madhab, Fujairah. DAA 2.

19 Bibby, 1970 : 351-354

20 Carter and Magee, 1999.

21 Corboud et al, 1990 : 25-28. Benoist, 2007.

22 Phillips, 1994.

23 Magee, 1996a, Magee, 2003.



Fig. 3 : Iron Age II mudbrick houses at Rumeilah, in Al Ain region (picture : R. Boucharlat).



Fig. 4 : The outcome of an Iron Age II falaj at Hili-15 in al Ain (excavation : W. Y. al Tikriti, dept pf Antiquities, al Ain.)

Hajjar range (regions of al Ain and al Madam) houses in mudbricks organized in villages appear (Fig. 3). At Rumeilah and Hili-2 houses were disposed in a loose pattern with large empty space in between²⁴. Each house included one to three architectural units of rectangular or square shape, surrounded by large courtyards in which domestic activities took place, evidenced by installations such as fireplaces, canopies marked by postholes or pillars, pits, concentrations of artefacts. Rooms were often narrow, this due to the limited possibilities offered by the material used for roofs. The latter were probably flat, in terraces, formed by a range of wooden beams covered with silt and accessible by a staircase built inside the house. Pipes in ceramic found along the walls in Rumeilah or Hili-2 probably were drains installed around the terraces.

It is during Iron Age II that the traditional water supply system made its first apparition in the region. This system, locally called *falaj* (plural : *aflaj*) consists into a subterranean channel bringing the water from the aquifers of the mountains to the plain, by simple gravity. Wells are regularly disposed along the channel in order to facilitate the access to the latter during the construction and during operations of maintenance and eventually repairing of the system. Aflaj dated from the Iron Age II Period were excavated in Hili-15 (Fig. 4) and in Bida bint Sa'ud areas by the Department of Antiquities of Al Ain²⁵, and some others were put in evidence during surveys in other

settlement areas (al Madam²⁶, Muwailah²⁷, Maysar-46²⁸ in central Oman).

The *falaj* system largely extended the size of the cultivated areas present along the foothills and is considered as one of the main factor of local development during Iron Age II period, although it is not the only one. It also played a large part in the change of location of settlements as is illustrated in al Ain oasis where Iron age II settlements extend 2 km to the west of the Bronze Age ones.

The outcome of water (a part of the *falaj* locally named *Shariyah*) represents a strategic point inside the settlement areas. Traditionnally in the Oman Peninsula, this point is often controlled by a *bayt al falaj*, a public place where the distribution of water is decided. Iron Age public buildings were also discovered next to the outcome of both Iron Age *aflaj* in al Ain, one in Hili-14, next to the *shariyah* of Hili-15 (Fig. 5), the second in Bida bint Sa'ud, at a distance of circa 100 m of the *shariyah* of bint Sa'ud *falaj*²⁹. A third public building was discovered in the eastern part of the village of Rumeilah (House G : Fig. 6), in an area where the *shariyah* of the *falaj* providing the water of this village would have been located (the latter was not found during excavations). These buildings probably also played a part in the control of the distribution of water inside the oasis³⁰.

24 Boucharlat and Lombard, 1985. Rahman, 1980.

25 Al Tikriti, 2002.

26 Benoist, Cordoba and Mouton, 1997. Al Tikriti, 2002.

27 Mouton, 2001 Muwailah. DAA2.

28 Weisgerber and Yule, 1999 : 101.

29 Al Tikriti 2002.

30 Benoist, 2000 : 357-361.



Fig. 5 : map of a large Iron Age II public building at Hili-14 in al Aïn (drawing : P. Garczynski, French Archaeological Mission in Abu Dhabi).



Fig. 6 : map of the building G at Rumeilah (drawing : P. Garczynski, French Archaeological Mission in Abu Dhabi)

The building Hili-14 appears as the largest one. This building was mapped during a survey by the French Archaeological Mission. It measures circa 55 x 62 m and is surrounded by a fortification wall 1,50 m thick. More than 50 rooms are visible along the fortification wall inside the building. To the south-east a larger room with walls reinforced by pillars appears as a prestigious space, where official meetings could have taken place. The *falaj* Hili-15 might have been providing the water of several villages (Hili-15, but also Hili-2 and Rumeilah), and the building Hili-4 next to it might have occupied by a central

authority in the administration of al Aïn oasis during Iron Age.

The public buildings at Bida bint Saud and Rumeilah are of smaller size and show many similarities. Both include a large central room including pillar bases (9 at Rumeilah, 12 at Bida bint Sa'ud). At Rumeilah, the walls and the floors of this room were covered with a white plaster, and prints of wooden posts were visible in the walls. A similar material was collected in both buildings. It includes elements usually absent or very scarce in private houses : incense burners, bowls with graffiti engraved, bridged spouted vessels. At Rumeilah were also collected two jars with a snake representation in relief appliqué. The public buildings of Rumeilah and Bida bint Sa'ud can be interpreted as two local administrative buildings, in relation with the nearby settlements.

Other types of architecture and settlement organization have been evidenced in other regions. At Muwailah, in the sand dunes area, houses were built in blocks of beachrock and bricks made in indurate sand³¹. The settlement area was organized in a dense pattern and surrounded by a large circular fortification wall. A public building similar in shape to the public buildings of Bida bint Sa'ud and Rumeilah, and including a similar material (snake representations, incense burners, bridged spouted vessels) was present inside the enclosed area. A *falaj* was located to the south-west of the site, probably taking water from sources located inside the sand dune area. The public building evidenced at Muwailah might also have played a role in the local water distribution, but owing to P. Magee, it also was a central place for the administration of trade in the area³² : some exotic products such as Iron were found inside in large quantity. Tents seem to have been set outside the fortification wall, as is suggested by alignments of small stones and postholes found outside the enclosed area³³.

In regions of mountains such as the wâdî al Qawr, Iron Age II settlements were organized in small groups of houses marked by low walls in stones, and probably covered with precarious materials (palm branches,

31 Magee, 1996a. Magee, 2002. Magee, 2003.

32 Magee, 2002.

33 Mouton, 1986.

tissues)³⁴. Regions of mountains are not adapted to the installation of aflaj of the same type than the ones existing along the foothills, but are more usually alimented in water by a system locally called *ghayl falaj*, which takes water from the aquifers of the wadis. This system allows an organization less centralized than along the foothills: each farm can easily be alimented independently. No evidence of any *ghayl falaj* related to any Iron Age II settlement were ever discovered by excavations, but the organization of the territories associated to settlements installed in the mountains seems to differ from the one prevailing along the foothills. Fortresses in stones were built on strategic places on the border of some territories of valleys (Husn Madhab controlling the outcome of the wâdî Madhab³⁵, Bithnah-24, facing the southern entrance of the territory of Bithnah, along the wâdî Ham³⁶). They show the importance of control of passes for local communities.

Handcraft activities and specialization of economy

Iron Age II is also marked by a complete reorganization of local handcraft activities. A new production of ceramics, showing a relative homogeneity, extended over eastern Arabia, from the region of Ras al Khaimah until central Oman (Lizq area). This production was made by specialized potters, installed in several areas. In the oasis of al Ain, a pottery workshop probably existed in the area of Hili-17, where a large amount of pottery wasters was collected³⁷. The shapes produced by this workshop were of various types, including bowls, large opened vessels, small jugs, bridged spouted vessels, large storage jars, used in settlements, public places and graves of the region. Among the most characteristic productions of Iron Age II periods are bridged spouted vessels, recalling some Iranian examples, hole mouth storage jars, necked jars with vertically pierced lugs, small sinuous or carinated bowls (Fig. 7). All the production of this area was characterized by a light sandy matrix, several types of temper being added to the paste of the largest



Fig. 7 : Pottery collected in the building G at Rumeilah (picture : R. Boucharlat).

vessels. Other workshops producing similar shapes in a different fabric also probably existed in other regions, as is suggested by the composition of the material collected on the sites³⁸.

The copper industry also developed in the region during Iron Age II. Copper melting sites of large size were excavated by the Bergbau Museum in central Oman (Bilad al Maidin³⁹, Raki-2⁴⁰). At Bithnah, a small Iron Age II copper melting site was located in the north-eastern part of the valley⁴¹. Copper slag were also present at Rumeilah, in al Ain⁴².

The composition of the slag collected on copper melting sites suggests that different types of copper sulfide were mixed together during the process. The adding of an element rich in iron is sensible in several places. This adding helps the separation of copper from sulfides by creating iron sulfides, helping the liquefaction of the slag. The temperature of melting was between 1200 and 1500 degrees, which suppose the use of elaborated oven including a ventilation system and an internal covering with fireclay⁴³. Bronze objects included arms (arrowheads, daggers, axes), vessels (bowls, spouted vessels), tools (knives, chisels, hoes), and heavy bracelet-shaped objects, which might have served as weighting units of bronze⁴⁴.

Softstone vessels (chlorite, steatite) were another

34 De Cardi, 1984. Phillips, 1997.

35 Corboud *et al*, 1994 : 22-24.

36 Benoist *et al*, 2004 : 17-23.

37 Benoist, 2000 : 187-196, Benoist, Magee and al Tikriti, 1998 "Hili-17" in DAA-1.

38 Benoist, 2000 : 366-389.

39 Hauptman, 1985.

40 Weisgerber and Yule, 1999 : 108-116.

41 Corboud *et al*, 1990 : 27. Site number 54 : « Bithnah H »

42 Boucharlat and Lombard, 1985 : 66.

43 Analyses made by A. Hauptman in Oman : Hauptmann, 1985. Analyses made by S. Pillaut in Bithnah : Benoist, Skorupka, Pillaut *to be published*.

44 Lombard, 1985 : 205-217.

typical production of the region. In the absence of any workshop discovered yet among the Iron Age II sites excavated, we know little about the operating mode of this kind of production, but it is clear that most of the production in softstone was totally renewed during Iron Age II : The stones used for making vessels changed and new shapes appeared (tronconical vases with lugs, lids with central buttons, spouted bowls)⁴⁵.

A relative specialization of local economies is also sensible during this period, and subsistence patterns varied from a place to another. In al Aïn region, agriculture appears as the predominant local activity, although handcraft activities (pottery, bronze) were also practiced there. In that region, traces of livestock farming appear to be tiny, whereas they seem more important in al Madam Area⁴⁶. In Muwailah, P. Magee mentioned the frequency of camel bones among the remains, suggesting that camel livestock farming could be among the local activities practiced in this area⁴⁷. In Bithnah, traces of agriculture are relatively scarce (although agriculture was probably practiced to a modest scale in the valley), whereas witnesses of livestock farming (goat sheep) and copper production are well attested. Exchanges from a place to another permitted to extend the set of goods accessible to each community. Circulation of products (pottery) was evidenced in the U.A.E. by PIXE-PIGME analyses⁴⁸.

Cultic rituals

Elements suggesting cultic rituals devoted to a God represented as a snake have been put in evidence on two Iron Age sites in the U.A.E. This snake cult was first discovered at al Qusais (Emirate of Dubaï), during a rescue excavation supervised by M. Taha, who published in 1982 the plan of a small stone building, open on one side, built on the top of a hill where small snake figurines in bronze were found⁴⁹. Together with other snake representations on the pottery of the site (Fig. 10), this evidence led the author to interpret this building as a

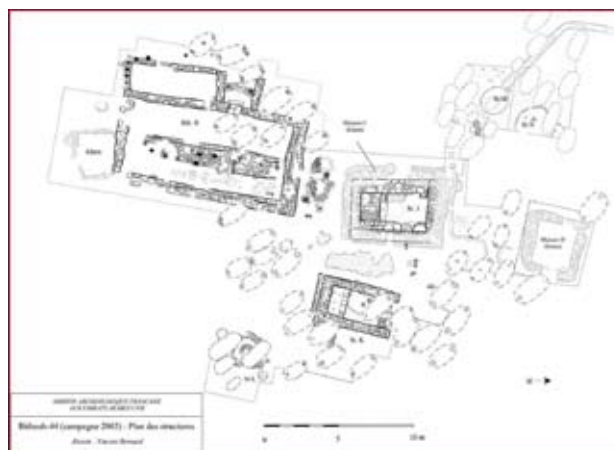


Fig. 8 : Map of the central part of Bithnah-44 (drawing : V. Bernard, French Archaeological Mission in the U.A.E.).

temple and to point out the existence of a snake cult in the region. Snake representations were compared with similar features from Elam, and the hypothesis of an Iranian influence on local culture was suggested.

The recent excavation of the cultic site of Bithnah-44 in Fujairah Emirate brought to light more elements allowing to precise the rituals practiced in relation with this snake cult⁵⁰ (Fig. 8). A central building including a large room with pillar bases was brought to light on the site. Small open air altars were discovered to the south and to the east of the site. In front of the eastern altar, offerings of goods including bronze drops and bronze slag were placed in some storage jars buried into pits. To the north were found two small buildings opened to the north, including a podium in mudbricks, which probably served as places of individual devotions. Incense burners were collected in large quantity inside these two structures. Next to them were dug two large pits, joined by two canal coming from the north. These two pits were interpreted as two pools filled with water, where ritual ablutions could have taken place. In the central part of the site, next to the largest building where found remains of animal sacrifices (young goats and sheep). These remains had been buried into pits carefully closed with a layer of clay. 29 pits filled with animal bones were excavated in this area. They were associated to small wells 30 to 65 cm deep, built in stones and sometimes plastered with clay, which might have served for libations. The site produced a high number of

45 Lombard, 1985 : 189-197.

46 Cordoba, 2003.

47 Magee, 2004.

48 Magee *et al*, 1998. Magee, 2005.

49 Taha, 1983.

50 Benoist *et al* 2004. Benoist, 2005. Benoist, 2007. Benoist, Pillault and Skorupka, *to be published*.

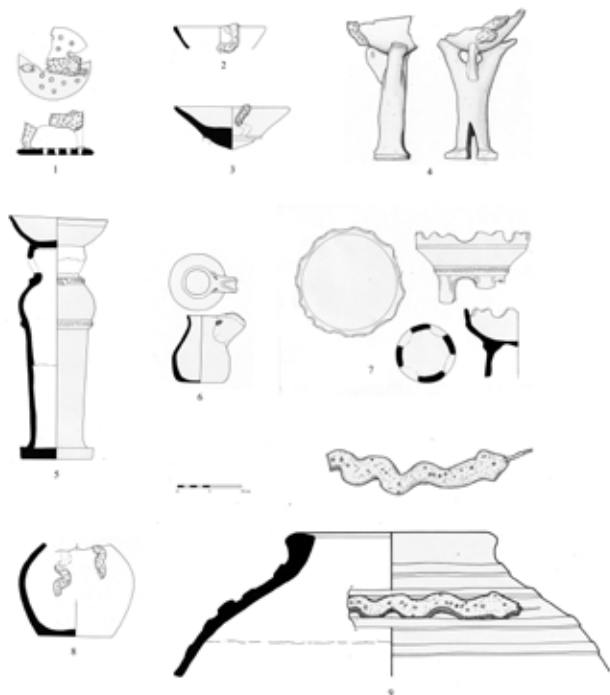


Fig. 9 : Cultic pottery from Bithnah-44 (Drawing : V. Bernard, French Archaeological Mission in the U.A.E.).

pottery fragments with snake representations (Fig. 9), similar in style to the ones of al Qusais (Fig. 10).

Funeral practices

Various types of graves were in use during Iron Age II Period. Individual graves in pits or in small cairns are attested in al Qusais⁵¹ (Fig. 11), and in al Madam (jebel Buhais⁵²) regions. In other regions, such as the wâdî al Qawr, collective burials were built (Fig. 12)⁵³. In many places, older graves were re-used during Iron Age II period, fourth millennium graves on the jebel Hafit in al Aïn⁵⁴, second millennium graves in Bithnah region⁵⁵ and along the eastern coast (Dadna⁵⁶, wadi Sharm⁵⁷). Data concerning the treatment of bodies are only few documented in the collective burials, where bones were often disturbed by the re-opening of the grave for further

51 Taha, 1983.

52 Boucharlat, Pécontal-Lambert, 1992.

53 Phillips, 1997.

54 Cleuziou, Pottiers and Salles, 1978.

55 Corboud et al 1996.

56 Benoist *et al.*, 2001 : 8-29.

57 The excavations of the graves I and II at Sharm remains unpublished, but a study of the softstone material collected in the graves has been published by M. Ziolkowski (Ziolkowski, 2001).



Fig. 10 : Cultic pottery with snake representations from al Qusais (after : D.Potts , H al Naboodah and P. Hellyer editors, 2003 : *Archaeology of the United Arab Emirates*, Proceedings of the First international Conference on the Archaeology of the U.A.E., p 316).

inhumations⁵⁸. In the individual graves of al Qusais, the bodies were lying on a side, with legs folded, and offerings were placed near the head or the feet (bowls in pottery, softstone vessels, bronze objects, jewels)⁵⁹. No strong difference was noticed in the quantity or the quality of goods deposited with the bodies from an individual grave to another: this suggests that social hierarchy was not expressed in graves.

Evolution of the U.A.E. during Iron Age III

The Iron Age III Period was first identified at Rumeilah⁶⁰, where it is represented by settlements layers including new pottery types, made in a fine wheelmade fabric, which can be compared to Iranian pottery shapes dated from the 6th-3rd centuries BC. They include carinated bowls with a whitish outer surface, and cups with an incurved rim burnished in dark red (Fig. 13). Similar shapes occur in Iran (Hasanlu III, Ziwiye, Godin tepe II, Baba Jan I, Zendan, Jameh-Shuran, Tureng Tepe,

58 see Corboud et al 1996 about the treatment of bodies in the collective burial of Bithnah.

59 Taha, 1983.

60 Boucharlat and Lombard, 1985 : 53-62.

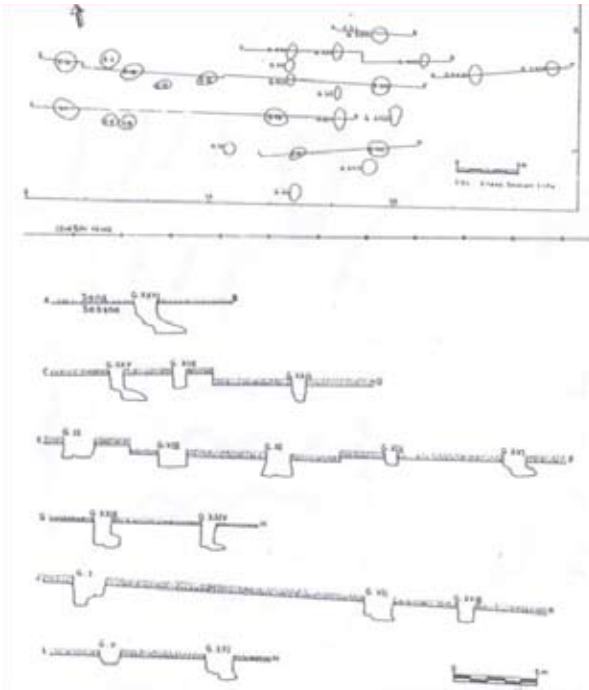


Fig. 11 : Map and section of al Qusais C (after : M.Y.Taha, 1982, Fig. 5-6)

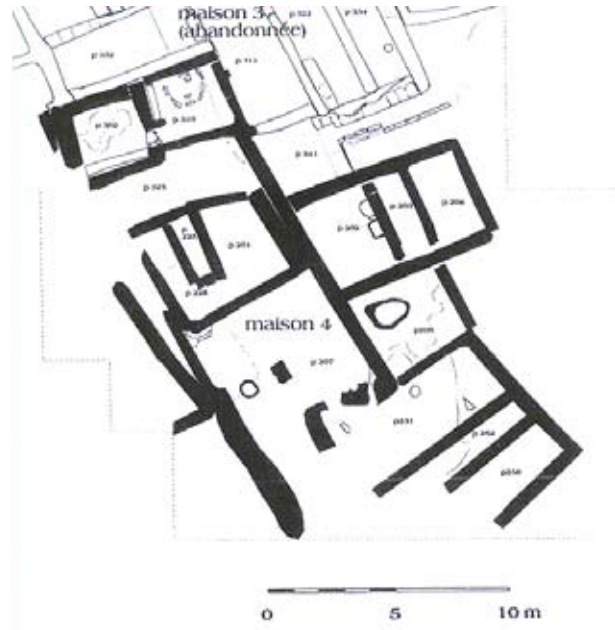


Fig. 13 : Iron Age III pottery from Rumeilah (after : Boucharlat and Lombard, 1985, Pl. 58).

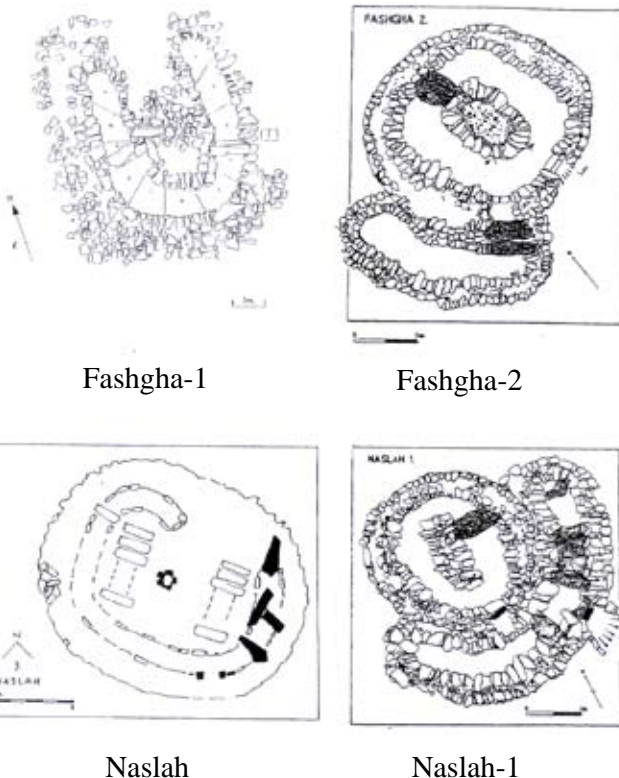


Fig. 12 : Map of Iron Age collective burials in the wâdî al Qawr. (Fashgha-1 : after Phillips, 1987, Fig. 3 ; Fashgha-2 : after Phillips, 1997, Fig. 5 ; Naslah : after De Card, and Doe, 1983, Fig. 2 ; Naslah-1 : after Phillips, 1997, Fig. 6).

Pasargadae, Persepolis, Tepe Yahyah II, etc)⁶¹. Iron Age III layers were later excavated on some other sites, such as Tuqeibah (al Madam area)⁶², Rafaq-2 (wâdî al Qawr area)⁶³ or Tell Abraç (level III)⁶⁴.

At Rumeilah, the Iron Age II settlement was included houses organised in a loose pattern, with large empty spaces in between, each one including courtyards installed on the periphery of the habitation space, where a large part of domestic activities were taking place (including cooking). During Iron Age III, this organisation was replaced by a dense pattern of houses with internal courtyards and kitchens, and most of the domestic activities were confined inside the habitation area (Fig. 14)⁶⁵. Storage jars are more numerous inside each house, as well as weapons (arrowheads, daggers, axes). Inside the wall of an Iron Age III house was found a small hiding place including a small jar with beads and jewels. These elements suggest the increasing of a feeling of insecurity among the local inhabitants.

A similar evolution can be stressed in the wâdî al

61 For comparisons between eastern Arabian and Iranian productions, see : Magee, 1996.

62 Benoist, Cordoba and Mouton 1997.

63 Phillips, 1997.

64 Magee, 1996.

65 Boucharlat and Lombard 1985. See also Benoist, 2000 : 120-127.



Fig. 14 : map of Rafaq-2 (Drawing : British Archaeological Mission in Ras al Khaimah, supervised by C. Phillips).

Qawr area, where villages of *barastis* settled on low terraces along the wādî during Iron Age II were replaced during Iron Age III by a fortified building installed on the top of a rocky outcrop overlooking the wādî (Fig. 15). The site of Rafaq-2 consists into a stone building measuring 22 x 30 m, surrounded by a wall 90 cm thick. It includes a courtyard in the western part and 15 rooms in the eastern part. The entrance was to the south-east and was accessible by a staircase built on the slope of the mount⁶⁶.

Iron Age III appears as a period of decreasing of the density of occupation as well as a period of disorganisation of some aspects of the previous Iron Age II society, The Iron Age II public buildings of Rumeilah, Bida bint Sa'ud and Muwailah were all abandoned, and it is also probably the case of Hili-14, as no Iron Age III pottery appears on the surface.

On another hand, many of the previous Iron Age II cultural patterns continued during this period, particularly in the range of handcraft activities and productions (pottery, softstone vessels, bronze). At Rumeilah and Rafaq 2, some pottery fragments imported from regions of Mesopotamia, Bahrain and Iran attest from the maintaining of exchanges along the Persian Gulf during that period⁶⁷.

66 Phillips 1997.

67 Benoist, 2000 : 392-395.

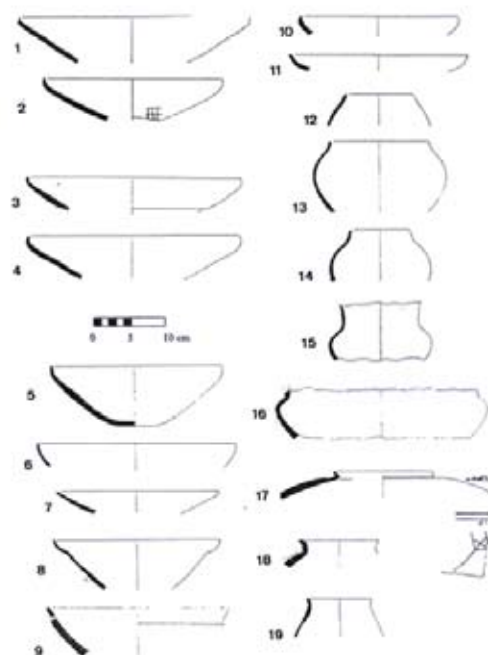


Fig. 15 : Map of Iron Age III houses in Rumeilah (Drawing : P. Garczynski, French Archaeological Mission in Abu Dhabi).

The causes and the historical background of this evolution are still poorly understood. The Oman Peninsula was known during Antiquity as the land of *Magan* – *Makan* in neo-babylonian sources - *Maka* in Persian sources. This country also might have included the region known today as Makran in south Pakistan. The land of *Maka* is mentioned in historical sources as a part of the achaemenid empire, where it was integrated as a *Dahyuh*, a province which sent men for military campaigns and was paying a tribute to the achaemenian kings, but which kept a local administration⁶⁸.

The possible integration was not the consequence of any conquest of the region by the Persians : no campaign in the region of *Maka* is mentioned in historical sources. The integration of the Oman peninsula in the Achaemenian empire might have been the result of a “heritage” gained by the Persians after their victory on the neo-babylonian kings. On another hand it is also possible that some of the local rulers in eastern Arabia voluntary acted for this integration, as it probably offered some advantages (protection of trading in the Persian Gulf, security of boundaries along the desert area).

The sites of Rumeilah and Rafaq-2 seem to have

68 Potts, 1985 ; Salles, 1990. Potts, 1990b : 394-400. Lombard, 1985 : 31-41.

been occupied until the middle of the third century BC. Researches carried out on the site of Mleiha by R. Boucharlat and M. Mouton showed that a new population, probably originating from central Arabia, settled in the region during that period⁶⁹. This population probably quickly integrated the local Iron Age III one. New cultural patterns developed in the region after this date.

Bibliography

- Al Tikriti W.Y., 2002
The south-east Arabian origin of the *falaj* system. Proceedings of the Seminar for Arabian Studies, vol. 32 : 117-138.
- Benoist A. 2000
La céramique de l'Age du Fer en péninsule d'Oman. PhD Thesis. Paris.
- Benoist A. 2002.
Quelques réflexions à propos de l'utilisation des céramiques dans la péninsule d'Oman au cours de l'Age du Fer. *Paléorient* vol 27/1 : 45-67.
- Benoist A. 2005.
Excavations at Bithna – Fujairah. First and second seasons. Emirates Heritage vol.I. *Proceedings of the First Annual Symposium on recent Paleontological and Archaeological discoveries in the Emirates. Al Ain*. Peter Hellyer and Michelle Ziolkowski eds. Al Ain pp 70-87.
- Benoist A. 2007.
An Iron Age II snake cult in the Oman Peninsula : evidence from Bithnah (Emirate of Fujairah). *Arabian Archaeology and Epigraphy*. Vol 18 : 34-54.
- Benoist A., Cordoba J., Mouton M. 1997
The Iron Age in almadam (Sharjah, U.A.E.). Some notes on three seasons of work. Proceedings of the Seminar for Arabian Studies Vol. 27 : 59-74.
- Benoist A., Colson M, Dalongeville R., Eliès S. 2001
Archaeological investigations in Fujairah 2000 : a preliminary report. Report submitted by the French Archaeological Mission to the Department of Antiquities of Fujairah, Lyon, January 2002.
- Benoist A, Bernard V., Hamel A., Saint-Genez F., Schiettecatte J., Skorupka M. 2004 :
L'Age du Fer à Bithnah (Emirat de Fujairah) : campagnes 2001-2002. *Proceedings of the Seminar for Arabian Studies*, vol. 34 : 17-34. University College, London
- Benoist A., Pillault S., Skorupka M. *To be published*.
- Le symbole du serpent dans les pratiques cultuelles d'Arabie Orientale au cours de l'Age du Fer (1200 – 300 av J.C.) : l'exemple de Bithnah (Emirat de Fujairah). In C. Robin and I. Schachet eds : Proceedings of the meeting « Dieux et Déesses d'Arabie : images et représentations » ; DATI Project, ANR, Collège de France, Paris.
- Boucharlat R., Lombard P. 1985
The oasis of al Ain in the Iron Age. Excavations at Rumeilah 1981-1983. Survey at Hili-14. *Archaeology in the U.A.E.* vol. IV : 44-73.
- Boucharlat R., Lombard P. 2001
Le bâtiment G de Rumeilah : remarques sur les salles à poteaux de l'Age du Fer en péninsule d'Oman. *Iranica Antiqua* 36 : 213-238.
- Boucharlat R., Pécontal-Lambert A., 1992
The 1990 excavations at jebel Buhais : an Iron Age cemetery. In : Boucharlat R. ed. *Archaeological Survey and Excavations in the Sharjah Emirate, 1990 and 1992. A sixth interim Report*. GREMO, Maison de l'Orient, Lyon, December 1992.
- Carter R., Magee P. 1999.
Agglomeration and Regionalism : Southeastern Arabia between 1400 and 1100 BC. *Arabian Archaeology and Epigraphy* vol 10 :161-179.
- Corboud P., Castella A.C., Hapka R., Im-Obersteg P. 1990
Archaeological survey of Fujairah 2 (1988-1989). Swiss-Liechtenstein Foundation for archaeological research abroad, Bern, Vaduz, Genève and Neuchatel.
- Corboud P., Castella A.C., Hapka R., Im-Obersteg P. 1990
Archaeological survey of Fujairah 3 (1993). Swiss-Liechtenstein Foundation for archaeological research abroad, Bern, Vaduz, Genève and Neuchatel.
- Corboud P., Castella A.C., Hapka R., Im-Obersteg P. 1996
Les Tombes protohistoriques de Bithnah. Terra Archaeologica I. Verlag Phillip Von Zabern, Mainz.
- Cordoba J. 2003 :
Villages of Shepherds in the Iron Age : The evidence of Al Madam (AM-1, Tuqaibah, Sharjah, U.A.E.). In Potts D, al Naboodah H and Hellyer P. Eds : *Archaeology of the United Arab Emirates. Proceedings of the First International Conference on the Archaeology of the U.A.E.* Trident Press, British Library, London in collaboration with Zayed Centre for Heritage and History, Abu Dhabi.
- De Cardi B. 1977
Surface collections from the Oman Survey. *Journal of Oman Studies* 3 part 1 : 59-70.
- De Cardi B. 1984.
Survey in Ras al Khaimah, U.A.E. In Boucharlat and

69 Mouton, 1992 : 274-285.

- Salles ed : *Arabie Orientale , Mésopotamie et Iran Méridional de l'Age du Fer au début de la période Islamique*. Paris, recherche sur les civilisations, mémoire n ° 37 : 201-216.
- De Cardi B., Kenneth D. , Stocks, 1994
Five thousand years of settlement at Khatt. *Proceedings of the Seminar for Arabian Studies* vol. 24 : 35-96.
- Hauptmann A. 1985.
5 000 Jahre Kupfer in Oman, Band 1, Die Entwicklung der Kupfermetallurgie vom 3. Jahrtausend bis zur Neuzeit, in : *der Anschnitt, Zeitschrift für Kunst und Kultur im Bergbau*, Bochum : Deutsches Bergbau-Museum Bochum, 1985.
- Lombard P. 1985.
L'Arabie Orientale à l'Age du Fer. PhD Thesis University of Paris I, Paris.
- Magee P. 1996a
"Excavations at Muwailah : preliminary Report on the first two seasons". *Arabian Archaeology and Epigraphy*, vol. 7-2 : 195-213.
- Magee P. 1996b
"The chronology of the South-East Arabian Iron Age". *Arabian Archaeology and Epigraphy* vol. 7-2 : 240-252.
- Magee P. 2002
"Further evidence of desert settlement complexity: report on the 2001 excavations at the Iron Age site of Muwailah, Emirate of Sharjah UAE", *Arabian Archaeology and Epigraphy* vol. 13 : 133-156.
- Magee P. 2003
"Columned Halls, Power and Legitimation in the South-east Arabian Iron Age". *Archaeology in the U.A.E.* : 181 – 191.
- Magee P. 2004
"The impact of southeast Arabian intra regional trade on settlement location and organization during the Iron Age II period". *Arabian Archaeology and Epigraphy* vol. 15 : 24-42
- Magee P. 2005.
"Production, distribution and function of Iron Age bridged spouted vessels in Iran and Arabia: results from recent excavations and geochemical analysis". *Iran* vol. XVI p 93 -115.
- Magee P., Grave P., Al Tikriti W.Y., Barbetti M., Yu Z., Bailey G., 1998
New evidences for specialized ceramic production and exchange in the south-east Arabian Iron Age. *Arabian Archaeology and Epigraphy* Vol 9-2 : 236-245.
- Mouton M. 1986
The historical periods : the soundings. In Al Abboudi N.H. ed. *2nd archaeological Survey in the Sharjah Emirate, 1985*. Economilac printing press, Dubaï : 20-22.
- Phillips C. S. 1997.
"The pattern of settlement in the Wadi al Qawr." *Proceedings of the Seminar for Arabian Studies*, vol. 27 : 205-218.
- Potts D.T., 1985
"From Qadê to Mazun : four notes on Oman c.700 BC – 700 AD". *Journal of Oman Studies*, vol 8 : 81-95.
- Potts D.T., 1990a
A prehistoric mound in the Emirate of Umm al Quwayn, U.A.E. Excavations at Tell Abraç in 1989. Munksgaard.
- Potts D.T.1990b.
The Arabian Gulf in Antiquity. Vol. I : From Prehistory to the fall of Achaemenian Empire Clarendon Press, Oxford.
- Potts D.T. 1991
Further excavations at Tell Abraç. Munksgaard
- Salles J.F. 1990
"Les Achéménides dans le Golfe Arabo-persique. » In Sancisi-Weerdenburg H. and Kuhrt A. eds: *Achaemenid history IV: centre and periphery*. Nederland, Instituut voor het nabije Oosten, Leiden, : 109-130.
- Taha M. 1983
"The Archaeology of the Arabian Gulf during the first Millenium B.C." *Al Rafidan* III-IV, p 75-87.
- Velde C. 1992
Die Spätbronzezeitliche und früheisenzeitliche Siedlung und ihre Keramik in Shimal, Ras al Khaimah. University of Göttingen.
- Vogt B., Franke – Vogt U., 1987
Shimal 1985/86: Excavations of the German Archaeological Mission in Ras al Khaimah, U.A.E. BBVO. 8. Berlin.
- Weisgerber G., Yule P., 1999
Preliminary report on the 1996 season of Excavation in the Sultanate of Oman; In. Yule P. ed. *Studies in the Archaeology of the Sultanate of Oman*. Orient Archäologie Band 2. Deutsches Archäologisches Institut. Verlag Marie Leidorf GmbH. Rahden/Westfl. : 97-118.