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BEADS, PENDANTS AND OTHER ORNAMENTS FROM LATE 3RD–2ND MILLENNIUM BC OCCUPATION ON FAILAKA, KUWAIT

Ann Andersson
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Abstract: The preliminary results presented here are the product of research conducted on behalf of the Kuwaiti National Council for Culture, Arts and Letters (NCCAL), the Moesgaard Museum and the Kuwaiti–Danish Archaeological Mission to Failaka. The notable collection of beads, pendants and other ornaments, which provides the basis for this research, originates from the Danish archaeological excavations at Failaka. The first part of the Danish excavations was conducted in 1958–1963 and the renewed investigations by the Kuwaiti–Danish Archaeological Mission in 2008–2012 uncovered more material, adding to the Failaka bead assemblage. This paper presents a preliminary assessment of the beads from Failaka and should be considered an introduction, as the material is subject to ongoing study.

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The assemblage of beads, pendants and other ornaments excavated at Failaka is a significant collection of items, which can contribute to the understanding of Dilmun cultural occupation on the island, as a mediator of trade and contacts between distant regions, in the 2nd millennium BC. Diverse goods were obviously being transported throughout the Persian Gulf, demonstrating widespread contacts with remote regions.

A recent study of an assemblage of stone vessels excavated from tells F3 and F6 at Failaka provides evidence of connections with the territories of present-day Syria, Iraq, Iran, Afghanistan, Pakistan, Bahrain, Saudi Arabia (Tarut Island), United Arab Emirates and Oman (Hilton 2014: 10, Fig 3). A preliminary analysis of the bead assemblage presented in this article similarly points to the Dilmun settlement at Failaka as participating in an extensive network of trade at that time. The bead assemblages recovered from tells F3 and F6 show a difference in the spatial distribution of beads between the two tells, suggesting that the activities involving beads were linked primarily to the administrative buildings on the island.

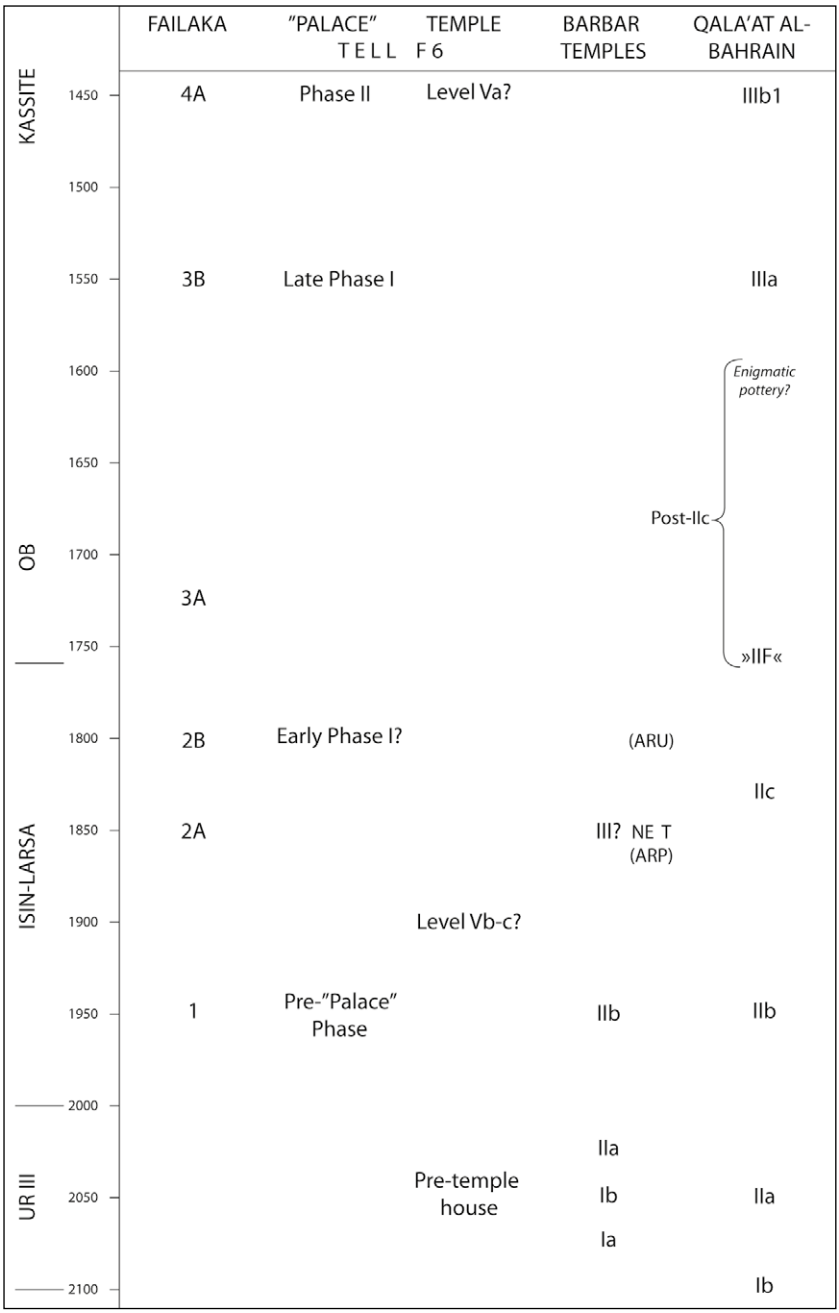

Fig. 1. Chronological chart for the late 3rd–2nd millennium BC in the upper Gulf (After Højlund 2012: 167, Fig. 2)

HISTORICAL CONTEXTUALIZATION

The bead material discussed here originates from the Failaka Island, located in the Persian Gulf. Failaka lies approximately 20 km off the coast of Kuwait and is advantageously situated in the Gulf, close to modern Iraq and Iran [*Fig. 2*]. Archaeological remains belonging to the Dilmun culture from the late 3rd–2nd millennium BC were identified on the island (Kjærum, Højlund 2013). The main territory of the Dilmun culture was in modern Bahrain,[1] where the archaeological sites of Qala'at al-Bahrain, the Barbar temples, the settlement of Saar and the Aali burial mounds, among others, have been associated with it (Andersen, Højlund 2003; Højlund 2007; Højlund, Andersen 1994; 1997; Killick, Moon [eds] 2005; Laursen 2008).

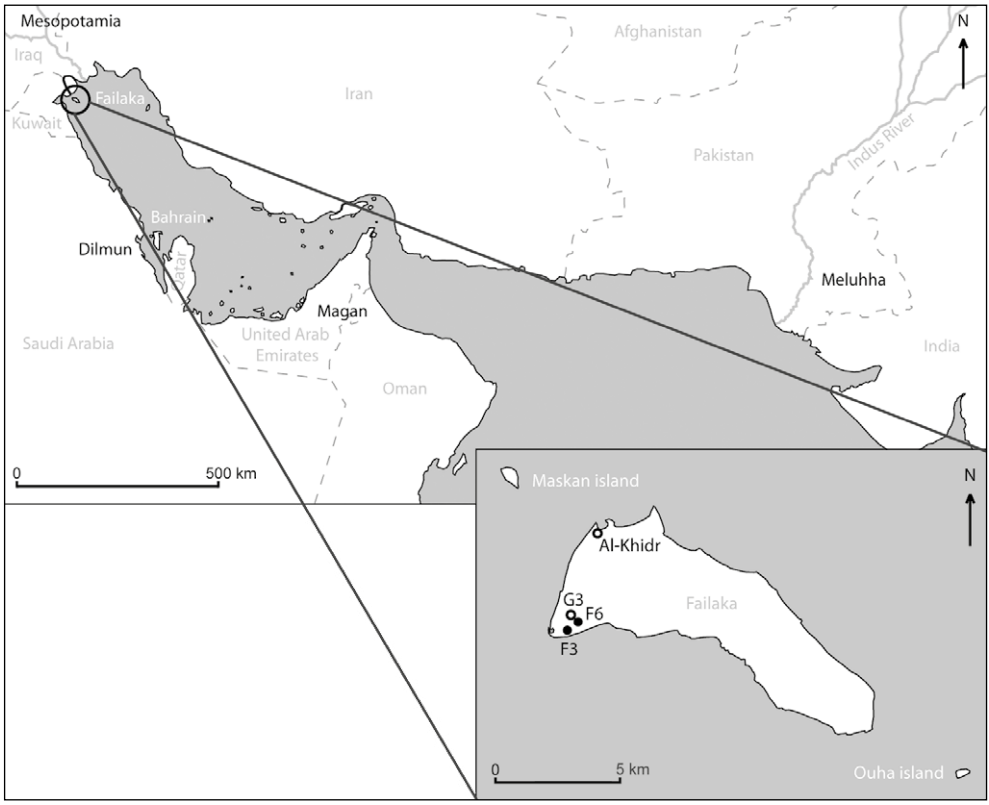

Fig. 2. Location of Failaka Island in the Gulf region; inset, island with marked sites of Dilmun occupation (Map A. Andersson)

[1] Dilmun territory evidently shifted from mainland Saudi Arabia to Bahrain during the late 3rd millennium BC. Sites, such as Tarut Island, Abqayq and Umm al-Nussi in Saudi Arabia, provide the essential archaeological evidence for that (Potts 2009: 31).

Failaka was settled at a later point in time than Bahrain and is considered a 'satellite' of the Dilmun culture (Potts 2009: 34). Settlement on the island appears to have been founded as a node in the maritime network operating in the Gulf during the late 3rd and 2nd millennium BC, facilitating trade and contacts between southern Mesopotamia and the regions towards the south. The Dilmun toponym is known from Mesopotamian literary sources, which also mention Magan[2] and Meluhha, identified as, modern-day Oman and the territory of Pakistan and northwest India, respectively (Boivin, Blench, Fuller 2009: 262–263; Potts 2009: 31–32) [see ***Fig. 2***]. These regions participated in the Gulf trade network and while fluctuations in this network occurred over time, altering the scale of interaction and the nature of the connections between the different parties involved, the facilitation of trade was generally an important component of the Dilmun culture (Ray 2003: 85; Boivin, Blench, Fuller 2009: 263–264; Potts 2009: 33).

ARCHITECTURAL REMAINS ON FAILAKA ISLAND

The Dilmun culture of Failaka is represented by archaeological remains at two Bronze Age tells designated as F3 and F6 [see ***Fig. 2***, inset]. These tells were excavated mainly by the Danish archaeological missions to Failaka between 1958–1963. Subsequently, a French and an American mission excavating F6 revealed further architectural remains. The American mission also conducted excavations at F3, but uncovered no substantial architecture (Howard-Carter 1984: 5). Danish researchers uncovered evidence of a multiphase occupation of the site from the late 3rd and 2nd millennium BC [see ***Fig. 1***]. Recent Danish work (2008–2012) has continued excavations at both tells.[3]

SETTLEMENT AND TEMPLE COURTYARD AT F3

The remains uncovered at Tell F3 consist of domestic architecture from multiple phases of occupation, assigned to periods 2, 3A, 4A and 4B at the site (for a ground plan of tell F3, see Kjærum, Højlund 2013: 14, 15, Figs 7, 8). Domestic architecture of the Period 2 phase consisted of a row of houses located towards the center of the tell (Kjærum, Højlund 2013: 11). Period 3A domestic architecture likewise consisted of a row of small houses with courtyards located south of the Period 2 settlement. Among the installations associated with these houses were cisterns, ovens and low stone tables (Kjærum, Højlund 2013: 17). Period 4A row houses were built above part of the Period 3A houses and were similar in nature, with cisterns and other stone installations. In Period 4B, the occupation of F3 again moved towards the north and central parts of the tell. The houses of this period became substantially larger in size and had thicker walls (Kjærum, Højlund 2013: 21, 60–69, 80, 88–89).

[2] Also known as Makkan (Boivin, Blench, Fuller 2009: 262).

[3] Moreover, the French mission uncovered a structure assigned to the Dilmun culture at G3 (Calvet 1984) and a Slovak team excavated a small settlement at al-Khidr, on the northern coastline, also belonging to the Dilmun culture (Benediková *et alii* 2008; Barta *et alii* 2010).

Apart from domestic structures of Periods 2, 3A, 4A and 4B, a temple courtyard dated to period 3B was identified at F3. No domestic architecture of Period 3B has been located so far and it is suspected that such architectural remains may lie in unexcavated areas of the tell (Kjærum, Højlund 2013: 21). The temple courtyard has three building phases with fairly similar layouts, of which Phase II is best preserved. This phase included remains of a paved, roughly square temple courtyard with evidence of three altar-like structures. The maximum dimensions of the irregularly shaped courtyard were 12.80 m by 13.90 m (Kjærum, Højlund 2013: 21, 71–73). Three freestanding kilns associated with different occupation phases of F3 were found in the southeastern part of the excavated settlement. These were dated across Periods 2, 3A and 3B. Throughout the different occupation phases, this area probably had some kind of industrial function and the kilns were possibly related to the production of pottery (Kjærum, Højlund 2013: 21, 96–97).

THE "PALACE" BUILDING AND TEMPLE AT F6

Danish excavations at F6 have uncovered part of a building, which was originally designated the "Palace" [***Fig. 3***]. This monumental structure (23.00 m by 21.70 m) featured a long corridor with a large room

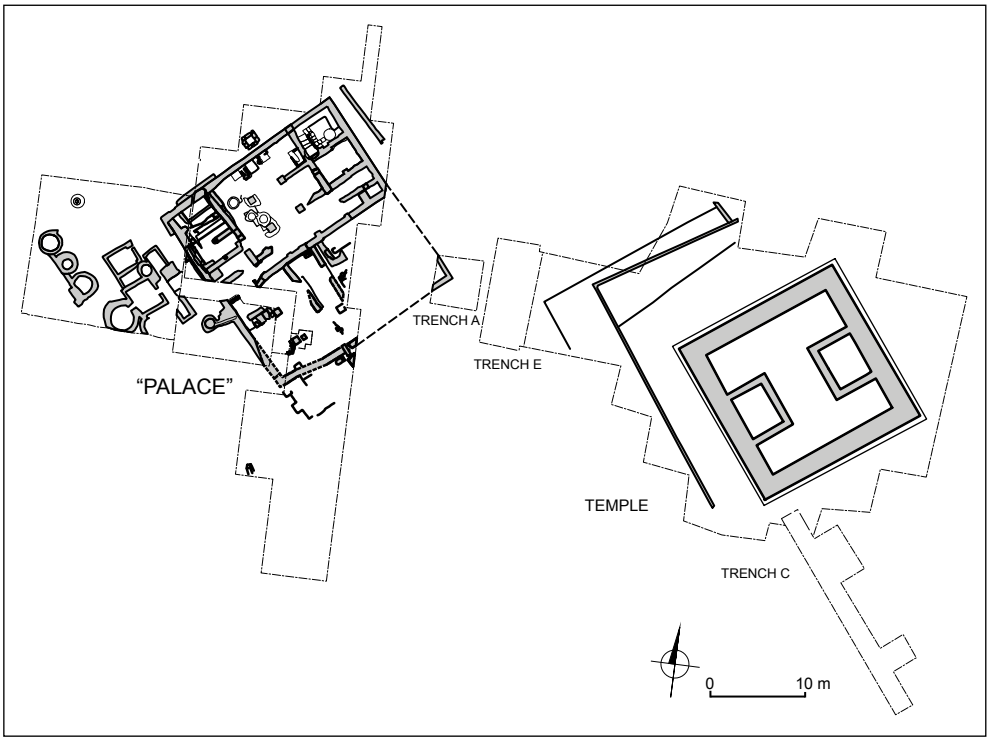

Fig. 3. Ground plan of the "Palace" building (left), the F6 temple (right) and the location of the Kuwaiti–Danish 2008–2009 excavation trenches (After Højlund 2012: 166, Fig. 1)

on either side. The corridor led to a pillared hall, which in turn was flanked by three rooms on either side. These were laid out following an identical plan (Kjærum, Højlund 2013: 99). The building had two phases of use (II and I), apparently without any significant change of function from one phase to the next. The installations in the building, consisting of large cisterns, channels and a large concentration of storage vessels, suggest that activities involving the manufacture of liquid products took place there. These seem to have been related to the temple excavated by the French mission (see below), serving it in a production and storage capacity (Kjærum, Højlund 2013: 105).

East of the "Palace", excavations headed by a French mission between 1984 and 1986, with an additional season in 1988, uncovered a large temple building, measuring 19.50 m by 19.50 m (Calvet, Pic 1986; Højlund 2012: 170; Kjærum, Højlund 2013: 156). The building has been ascribed to a Dilmunite tradition based on parallels between it and the Barbar temples of Bahrain (Højlund 2012). Excavations by an American team, conducted in 1973 and 1974, exposed some small auxiliary structures located southwest of the "Palace" (Howard-Carter 1984). There appear to have been two phases of these structures, which might be linked to Phase II and Phase I (or earlier) of the "Palace" structure (Kjærum, Højlund 2013: 152–153). The function of these structures has been identified as production and storage (Calvet 2005: 46; Kjærum, Højlund 2013: 105).

Renewed Danish excavations at Failaka investigated the area immediately east of the "Palace" and the southeastern part of the tell in front of the temple (Trenches A, E and C, respectively), where the earliest archaeological remains on Failaka were found. These were dated to around 2050 BC and the finds associated with the remains are recognized as being of Mesopotamian origin (Højlund 2012: 166–167).

THE FAILAKA BEAD ASSEMBLAGE

The initial Danish archaeological excavations at Failaka (1958–1963) recovered a quantity of beads from F3 and F6, which will appear in a full publication (Andersson forthcoming a). With the renewal of excavations on Failaka by the Kuwaiti–Danish Archaeological Mission (in 2008–2012), the number of beads has grown continuously and this material is also intended for publication (Andersson forthcoming b).

At present, the assemblage from the Danish excavations at Failaka consists of approximately 700 beads. Of these, approximately 150 originated from the settlement at F3 and about 550 from the "Palace" building at F6 and the surrounding area.[4]

[4] The American and French excavations at F3 and F6 also recovered a number of beads, but these have not been included in the present study. The American excavations recovered approximately four beads from F3. At F6, approximately 11 beads were recovered from the excavations southwest of the "Palace" (Howard-Carter 1984). The French excavation recovered 51 beads from the temple area at F6 (Calvet, Pic 1986: 66–71, Figs 27, 28).

Beads were for the most part solitary finds in the different occupation layers, hence they cannot disclose much about the archaeological contexts from which they originated. However, the sheer number of beads is in itself significant and the fact that the material is found in context, for instance, in the F3 settlement and temple courtyard or in the area of the "Palace" building and its surroundings at F6, suggests that many of the beads were associated with activities taking place in these buildings.

The number of beads from the F3 settlement and temple courtyard area is markedly lower (n=150) than from the area of the "Palace" building and its vicinity at F6 (n=550). This contrasting spatial distribution of the bead material indicates a marked difference between the two tells and in particular that the activities taking place at F3 seem to have been less related to beads than the activities taking place at F6. The two main buildings found at F6, i.e., the temple and the "Palace", furthermore exhibited somewhat different patterns of spatial distribution of the beads. When compared, the amount of beads recovered by the Danish archaeological excavations of the "Palace" is significantly higher than the amount recovered in the French excavations of the temple, even though the areas excavated are similar in size. Renewed excavations by the Kuwaiti–Danish archaeological mission (2008–2012) recovered 205 beads from F6. Of these, Trench C, immediately southeast of the temple, yielded 140 beads. The excavation of the area between the "Palace" and the temple (trenches A and E) produced a number of beads similar to that of the French excavations, even though the size of the excavated area was significantly smaller. In this perspective, the number of beads from the French excavations, i.e., the temple, appears to be quite low. This discrepancy in numbers of beads recovered by the French and Danish missions might be explained by the different excavation methods: the Danish mission sieved all the soil from the trenches, thus recovering a larger number of smaller items, such as beads, whereas the French mission did not utilize sieving in the excavation of the temple (F. Højlund, Shehab A.H. Shehab, personal communication, 2012).

The spatial distribution at F6 seems to indicate that activities involving beads were to some extent, but not exclusively, related to the activities of the "Palace". This building has been interpreted as a structure related to the nearby temple and associated with functions of production and storage of liquid products, but it might have held other goods as well. While the quantity of beads from the temple itself is meager, the finds from the surrounding area would suggest that activities involving beads were related to both the temple structure and the "Palace" production and storage building at F6.

FAILAKA BEAD TYPOLOGY

The Failaka bead typology follows, with some modifications, Horace C. Beck's 1928 seminal study "The Classification and Nomenclature of Beads and Pendants". A selection of the types represented in the Failaka assemblage is outlined here in brief pending a complete typology to be published elsewhere (Andersson forthcoming a).

The Failaka bead assemblage includes beads, pendants and other items, such as shell rings (Killick, Moon [eds] 2005: 186–187, Fig. 5.11s). The latter were probably used as ornaments but not beads

in the traditional sense, as the objects do not appear to have been particularly suited for stringing, but they are included as items of adornment [*Fig. 4:a*].

The assemblage from Failaka is on one hand quite diverse with many different types produced from a variety of materials. On the other hand, most of the bead forms can be classified under such shapes as spheres, bicones and barrels. These shapes are made predominantly from semiprecious carnelian, which gives the impression that the bulk of the bead assemblage is quite homogenous [*Fig. 5*]. The collection further contains a variety of forms, albeit in smaller numbers, such as drop pendants [*Fig. 4:b*], long and short cylinders [*Fig. 4:c, h*], long barrels with lenticular cross sections [*Fig. 4:d*], long barrels with plano-convex cross sections [*Fig. 4:e, g*] and long barrels with ovoid cross sections [*Fig. 4:f*], among others.

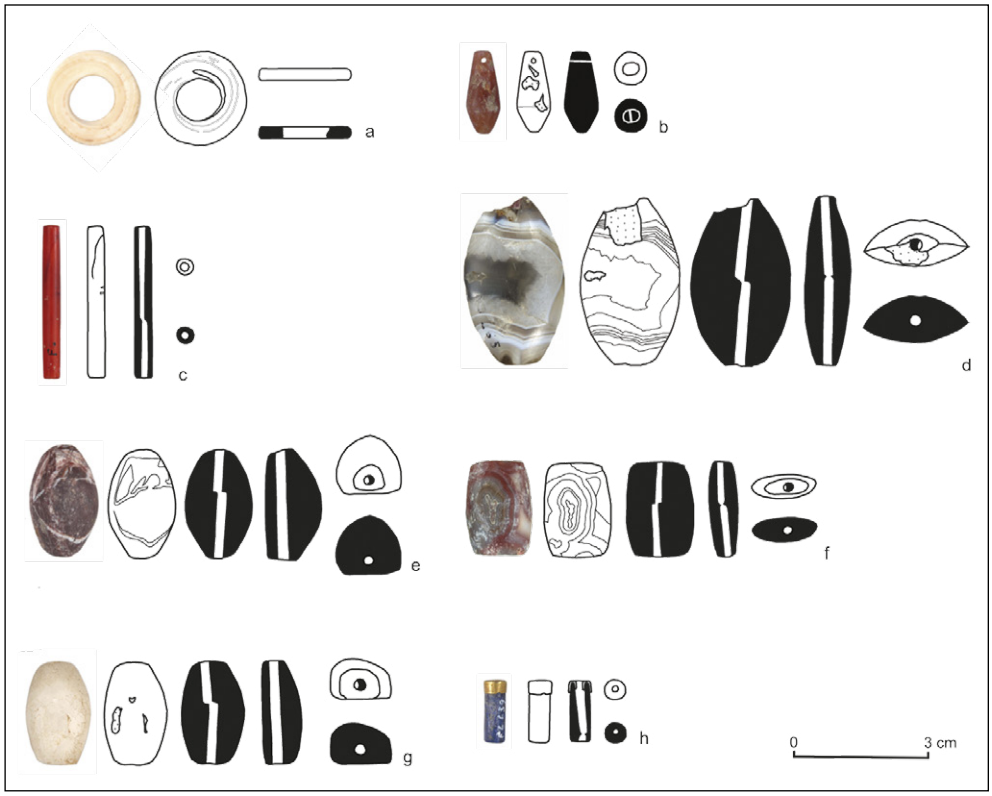

Fig. 4. Selected beads from the Danish excavations on Failaka (1958–1963): a – shell ring F3.BBG (Kuwait Museum [=KM] 1496), b – drop pendant F3.ASL (KM 1683), c – long cylinder F6.(?) (KM 1687), d, e, g – long barrels with lenticular and plano-convex cross sections F3.265 (KM 1692), F3.PS (KM 1692), F6.990 (KM 1699), f – long barrels with ovoid cross section F6.945 (KM 1688), h – short cylinder F6.639 (KM 1608)
(Photos and drawing A. Andersson)

MATERIALS

The beads of the Failaka assemblage were made from a variety of minerals and rocks, alongside artificial and organic materials. The identification of materials work that is ongoing and this section seeks only to provide an impression of the Failaka assemblage, rather than an exhaustive list of materials. The identification of the bead material was determined by visual assessment.[5]

Stone

Among the beads made of stone, many belong to the silica group, such as chalcedony and quartz, which differ by having a crystalline and a cryptocrystalline composition respectively (Bishop, Woolley, Hamilton 2005: 130).[6] These two material types made up most of the bead assemblage and could be divided further by such criteria as colour, structure and transparency.

In general, chalcedony of different shades of red is identified as carnelian, while banded agate can have a variety of different colours (usually in shades of white, milky white, grey, but also green, brown, red and black), but is characterized by having a structure made up of concentric or irregular bands. Jasper is an opaque variety of chalcedony and can also be found in many colours (red, yellow, brown, green, gray-blue), which usually occur in spots or bands (Bishop, Woolley, Hamilton 2005: 132–134). In the chalcedony group of the Failaka bead assemblage, carnelian and banded agate are highly represented, while jasper is less common.

The quartz mineral family is also divided into varieties based on colour. At Failaka, milky quartz (white and translucent) is most frequent [*Fig. 4:g*], while other varieties, such as rock crystal (colourless and transparent), are rather rare (Bishop, Woolley, Hamilton 2005: 130). Also present in a very small amount is turquoise, which was generally a rare mineral during the 3rd to 2nd millennium BC (Lankton 2003a: 33; 2003b: 39). In the Failaka assemblage, beads manufactured from lapis lazuli and soft stone (such as steatite) are also found in small quantities.

Glass and faience

The main group of artificial materials includes glass and faience. In general, the artificial materials from Failaka have suffered much degradation from soil salinity, which sometimes makes it difficult to determine their material, let alone their original appearance. However, most of the artificial materials have been identified as glass or faience. The working of faience, as of metal, was carried out long before the invention of glass (Lankton 2003a: 37). The manufacture of glass first became widespread from the second quarter to the middle of the 2nd millennium and the production of beads was one outcome of this new technology (Lankton 2003b: 39; Moorey 1994: 192). This could provide a *terminus post quem* for the glass beads from Failaka, suggesting that

[5] Specialist petrographic and mineralogical studies of the materials represented in the collection are pending. The present remarks are based on the author's own research. I would like to thank Anna Hilton (M.A., stone vessel specialist, Kuwaiti–Danish Archaeological Mission to Failaka) and Helle Strehle (M.Sc., conservator, Moesgaard Museum) for their insightful comments regarding the identification of some materials in the Failaka bead collection.

[6] Individual crystals are visible in the composition of crystalline quartz, whereas they are not distinguishable to the naked eye in cryptocrystalline quartz.

this part of the assemblage could date approximately from the second quarter of the 2nd millennium until the abandonment of tells F3 and F6. However, glass is found in earlier contexts in the ancient Near East, where the occurrence of the material is described as an "...infrequent and irregular production of glass, predominantly for personal ornaments..." (Moorey 1994: 190–192). In this regard, the finds from Qala'at al-Bahrain of three glass beads in Period Ib contexts and two glass beads from a burial mound (BBM 20907) in Wadi al-Sail, Bahrain, both dating to the late 3rd millennium, are interesting and should be noted (Højlund, Andersen 1994: 391–392, Figs 1941, 1942, 1949; Højlund *et alii* 2008: 150, Fig. 17a, b). Dating of the glass bead material from Failaka to after the second quarter of the 2nd millennium cannot therefore be assumed.

Fig. 5. String of beads from Danish excavations on F6; the beads, made mostly of carnelian (KM 1691), are barrel and biconical-shaped) (Photo courtesy of the Kuwaiti–Slovak Archaeological Mission to Failaka)

Metal

In the Failaka bead assemblage there is a very low occurrence of metal beads and the examples so far recovered from the excavations are made of gold. This includes a few beads made solely of gold, as well as a composite bead, made of lapis lazuli with a gold cap. The combination of gold and lapis lazuli was aesthetically pleasing and much sought after in Mesopotamia (Moorey 1994: 89) [see ***Fig. 4:h***].

Organic materials

Beads made of organic materials were also present on Failaka, but in small amounts when compared to the group of beads made of stone and beads made of artificial materials. The organic materials included different types of worked shell, such as cowries, white shells likely belonging to the *Conomurex* sp. [see ***Fig. 4:a***] and a species of gastropod, *Conus ebraeus,* along with ostrich eggshell, bone and pearls. A few examples of beads made of bitumen and fossilized coral were also identified in the assemblage.[7]

Imported materials

Many of the beads recovered during the Danish excavations were clearly brought to the island. Most of the beads were made of stone not locally found on Failaka. Even though no definite statements can be made about the mechanisms that brought the beads to the island, it is clear that some of the materials came from very remote regions. The presence of lapis lazuli provides the best example as it is generally agreed that the source of this rock lies in modern Afghanistan, either in the Kokcha valley located in the region of Badakhshan or at an unconfirmed second source in the Chagai hills along the border of Afghanistan and Pakistan (Herrmann 1968: 28; Lankton 2003a: 32; Moorey 1994: 86).[8]

Conversely, stone such as the different types of chalcedony and quartz are widely distributed and pinpointing the original source of these materials is difficult (Moorey 1994: 93–94). In respect to carnelian, the traditionally cited source of this material is the Indus valley area in present-day Pakistan and northwest India. This is due to the large deposits of carnelian in the region and the expertise of the Harappan culture craftsmen, flourishing in the Indus valley. They were skilled producers of carnelian beads, that were traded extensively in the 3rd millennium BC. With the decline of Harappan culture in the early 2nd millennium, connections with the Indus valley weakened (Boivin, Blench, Fuller 2009: 264; Lankton 2003a: 35; 2003b: 39). However, carnelian can occur both as pebbles in alluvial deposits and as deposits in rock formations and is reported in regions such as Anatolia, Iran, Oman, Egypt, western Arabia along with Pakistan and northwest India, demonstrating the difficulties of source identification from material alone (Moorey 1994: 97). In future studies, other variables, such as stylistic comparisons, the study of technological aspects of manufacture and scientific analysis will be productive

[7] I would like to thank Aiysha Abu-Laban (Phd. fellow, Field-director, Kuwaiti–Danish Archaeological Mission to Failaka) for her identification of the *Conomurex* sp. shells.

[8] Other known sources of lapis lazuli are located in the Pamir mountain range and at Lake Baikal. The Pamir source is considered unlikely, as it is largely inaccessible due to its location high in the mountains. The lapis lazuli from the Baikal source is reported to be of poor quality, but could possibly have been exploited occasionally (Herrmann 1968: 28).

paths towards approaching the question of source areas for the minerals and rocks represented in the Failaka bead assemblage.

At present it can be said that there was a widespread trade in basic and luxury commodities in the 3rd and 2nd millennium BC. It involved both raw materials and finished products that circulated between the different regions participating in long distance trade and it appears that the Dilmun 'satellite' settlement at Failaka was involved in the procurement of beads from distant regions.

MANUFACTURE

Most of the beads and pendants from F3 and F6 do not appear to have been made on the island. The excavations at Failaka have so far uncovered no evidence of stone bead workshops, either specialized or on a smaller scale, such as, for instance, a cottage industry setting. From ethnographic investigations of stone bead production in India, areas of manufacture might be expected to contain evidence such as kilns, stockpiles of raw materials, tools, bead roughouts, chipping debris, blanks and beads broken during manufacture (Kenoyer, Vidale, Bhan 1991). Even though the visibility of these remains in the archaeological record would depend on processes of discovery, discard, waste disposal, recycling and abandonment, their general absence at Failaka so far would indicate that there was no stone bead manufacturing industry at the island.

The assemblage of stone beads at Failaka is for the most part made up of finished products, and only a few blanks and semi-drilled products have been identified, suggesting that the beads were not manufactured on the island. If production had taken place on the island, the assemblage would likely contain a larger quantity of blanks and beads broken during manufacture. The identification of the beads as finished products is based on the vast majority being drilled and polished, which are normally among the final steps in bead manufacture (Kenoyer 2003: 18). The processes involved in the manufacture of beads include mining, preparation and shaping of raw materials into bead blanks, then perforating and finishing the objects by grinding and polishing (Kenoyer 2003). Most of these steps not only require specialist knowledge, but are also very time consuming processes. As such, beads are valuable goods and in the case of the stone beads from the Failaka assemblage, they must have been transported great distances to reach the island.

The production of glass or faience is particularly difficult to recognize in the archaeological record and in general, archaeological information on identified places of manufacture is scarce. The possible archaeological remains of glass or faience production would not only include kilns, but also evidence such as glass ingots, crucibles, molds, specialized tools and waste products (Moorey 1994: 182, 202–203). At Failaka, there is indication of some type of glass production taking place, taking the form of pieces of raw glass. This production was related to Period 4B occupation at F3. However, the nature and scale of this production is not clear and it is not known if this might have involved the manufacture of glass or faience beads (Flemming Højlund, personal communication, 2014).

While no semi-finished products of organic materials have been recovered from the Danish excavations, there is at present little solid evidence from Failaka for or against the local manufacture of

beads made from materials such as shell, ostrich eggshell, bone and pearls. Some indication might be found in raw materials from the F6 excavations, consisting of such evidence as fragments of ostrich eggshell and imperforated pearls, but this matter will need further investigation before a conclusion can be reached.

CONCLUSION

The mineral and rock materials used to make most of the beads are not and were not locally available on Failaka and the lack of any archaeological evidence pointing towards manufacture at the two tells, F3 and F6, suggests that the beads were brought to the island. The beads were likely transported as part of an extensive trade in commodities between Mesopotamia and regions to the south, reached through maritime trade in the Gulf. The beads made of artificial and organic materials could have been manufactured locally, but this question remains to be resolved by further study of this part of the bead assemblage.

The relatively low number of beads found at F3 might indicate that the settlement and temple courtyard were not a focal area for the storage or use of beads on the island. Conversely, the significantly larger amount of beads found at F6 indicates that a sizeable part of the bead assemblage was associated with activities taking place on this site. The significance of this pattern of spatial distribution begs further analysis in detail. This preliminary analysis does seem to indicate that most of the bead material from the F3 and F6 was related to the buildings on site F6, and perhaps by implication, to the economy of the temple and the "Palace".

The analysis of the bead assemblage is ongoing and while this paper has provided an introductory description of the bead assemblage, many aspects of the beads, such as their materials, origin, manufacture and spatial distribution will need to be further analyzed in order to test the hypotheses presented here.

ACKNOWLEDGEMENTS

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