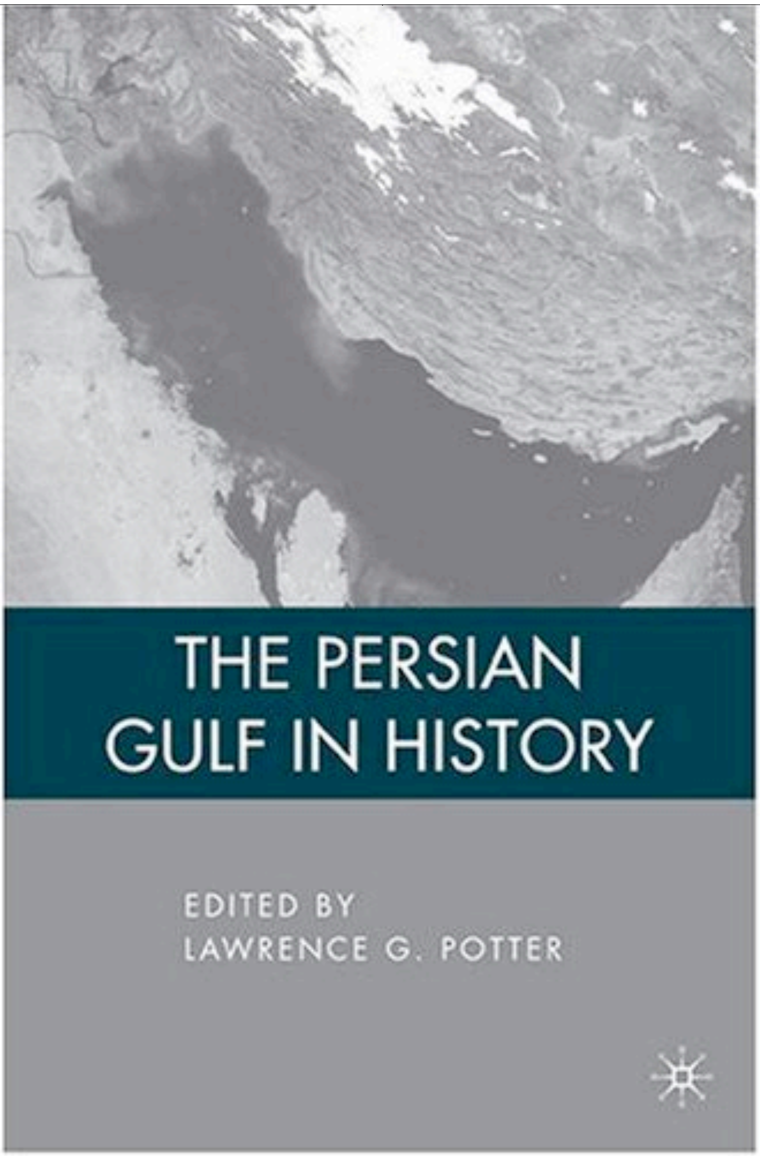

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PART I

GULF HISTORY AND SOCIETY

CHAPTER 1

THE ARCHAEOLOGY AND EARLY HISTORY OF THE PERSIAN GULF

D. T. Potts

In antiquity the Persian Gulf region was culturally diverse, containing at least four major regions and many more subregions. These included (a) southern Iran, from the Shatt al-Arab to the Strait of Hormuz, certainly not a homogenous area and one which is frustratingly understudied; (b) southernmost Mesopotamia; (c) northeastern Arabia (modern Eastern Province of Saudi Arabia and Kuwait), Bahrain, and Qatar, in whose material culture we can recognize enough similarities to justify such a geographical grouping; and (d) southeastern Arabia, the modern UAE, and, although technically outside the Gulf (except for Ras Musandam), Oman.

Our knowledge of the Arabian littoral and its offshore islands (Failaka, Bahrain, and the Abu Dhabi islands) is infinitely greater than that of its Persian counterpart. In spite of the fact that archaeological research in Iran has a much longer history than it does in eastern Arabia, the vast majority of surveys and excavations have been conducted in continental Iran rather than along the coast. Little survey or excavation has been conducted on the Iranian Coast[1] and offshore islands, with the exception of Tul-e Peytul (ancient Liyan), near modern Bushehr, where a large mound with Elamite occupation was sounded in 1913[2]; Kharg Island, where a French expedition excavated part of a Nestorian monastic complex and surveyed numerous other pre-Islamic tombs and monuments in 1959 and 1960[3]; Siraf, where an important site of the Sasanian and early Islamic era was excavated from 1966 to 1973[4]; and Kish Island, where a limited survey and soundings were carried out in the mid-1970s[5] . We have some notices in Greek and Latin sources on this coast and on some of the major islands (e.g., Qishm),[6] but these, although interesting, are of limited value.

In contrast, archaeological excavations in Kuwait, eastern Saudi Arabia, Bahrain, Qatar, the UAE, and Oman, which began with the opening of a few tombs on Bahrain in 1879,[7] have gathered in intensity during the past fifty years, particularly in the last two decades. We now have not only a large number of excavated sites from all periods but also a significant number of radiocarbon dates and detailed ceramic, metallurgical, faunal, numismatic, and other analyses. In comparison with Mesopotamia, southwestern Iran, or South Arabia, the number of indigenous written sources is small, yet their absence is certainly made up for by a robust archaeological sequence.

In this chapter I shall deal with the pre-Sasanian record of human occupation in the four major regions (a–d) defined above. As indicated already, the archaeological, epigraphic, and literary sources available for each region differ markedly in quantity and quality. On the one hand the trends and developments discernible in one region are not always documented in another, while on the other hand certain developments transcend the boundaries of these regions. Overall, however, the Persian Gulf constitutes a coherent region with a historical identity comparable to Mesopotamia, Egypt, or the Indus Valley.

THE EARLIEST POPULATIONS

Many who work on the Persian Gulf region may not have considered where the original populations actually came from, but there are several reasons why this should be studied. In the first place, there is no evidence to suggest continuity in population and occupation from the Middle (ca. 70,000–35,000 years ago) and Upper Palaeolithic (ca. 35,000–10,000 years ago)periods, when the earliest stone tools probably began to appear on sites in the region,[8] to the mid-Holocene period, that is, ca. 6000 B.C., when we see a marked increase in the size and number of archaeological sites along the coast and in the interior of eastern Arabia. These two facts suggest that we should not assume that hominids have lived continuously in the area.

Several factors may account for the discontinuity we see in the archaeological evidence. To start with, however, we should briefly review the geomorphology and historical hydrology of the Persian Gulf.[9] Worldwide sea levels during the last glacial maximum (ca. 70,000–17,000 B.P. [before present]) were as much as 120 meters lower than they are today. Hence, there was no Persian Gulf at all during the Late Pleistocene era.[10] Rather, the combined effluent of the Euphrates, Tigris, and Karun rivers formed a palaeo-river that drained into the Arabian Sea at the Strait of Hormuz. After 17,000 B.P., when the Flandrian Transgression began (and worldwide sea levels began to rise again), the valley through which this river ran gradually filled, reaching approximately modern levels by about 7000 B.P. Subsequently, sea levels have fluctuated in a fairly minor way, sometimes by as much as ± 1.5 meters relative to modern levels.[11]

The impact of these fluctuations on human populations around the Gulf would have varied. In the southern Gulf, certain areas along the flat coast of the UAE, which are now hills, were demonstrably islands, some islands off the coast of Abu Dhabi were in fact attached to the mainland, and some sites located inland from the modern coast (such as Tell Abraq) were actually close to the shoreline.[12] Further north, however, we can see evidence of more dramatic changes. Thus, for example, during the sixth millennium B.C., the trough between Bahrain and the eastern seaboard of Saudi Arabia was probably not yet full of water, meaning that Bahrain was still part of continental Arabia and not yet an island.[13] Significantly, the island of Failaka, in the bay of Kuwait, was submerged until about 2000 B.C.[14] This is supported, moreover, by the absence of any cultural remains of earlier date on Failaka, in spite of the fact that the bay of Kuwait itself has evidence of sixth-millennium B.C. occupation at several points (e.g. H3) along its shores.[15] How changing sea levels may have affected Kharg Island, or the bay of Bushehr and its peninsula, we do not know.

The infilling of the Persian Gulf will have submerged any Pleistocene and early Holocene archaeological sites that may have been close to the palaeoriver. Still, we might expect to find such evidence on what would have been higher terraces located farther back from the actual floodplain. On the Iranian side, archaeological survey has simply not been extensive enough to determine whether there is any such evidence. Certainly there is Palaeolithic occupation in the interior of Fars[16] and further north in the western Zagros (from Khurramabad northwards),[17] but this does not necessarily prove that human occupation occurred further south. In southernmost Iraq, an abundance of game (waterfowl, fish, mammalian fauna) in the riverine environment is likely to have been a magnet for early hunter-gatherer groups, but millennia of siltation and marsh formation have effectively blanketed any pre-Holocene remains which might have existed.[18] In northeastern Arabia, all along the Arabian shelf, there is a curious absence of any Palaeolithic occupation, despite the presence of numerous sites in western and central Arabia on the Arabian shield[19]; in the UAE, as noted above; and in southern Oman[20] and Yemen.[21]

SUBSISTENCE AND SOCIAL ORGANIZATION IN THE SIXTH AND FIFTH MILLENNIUM B.C.

The earliest evidence of occupation on the shores of the Persian Gulf dates to ca. 6000–5500 B.C., a time considered as a climatic "optimum" across much of western Asia and followed by an onset of aridity in about 4000 B.C.[22] Elsewhere in the region, agriculture (with an emphasis on barley and wheat), domestic animal husbandry (concentrating on sheep, goats, and cattle), and sedentary, village life (characterized by mudbrick or stone architecture, the use of lime plaster, groundstone, and ceramics) were already well established by this time.[23] The resource base and environmental conditions of the Persian Gulf differed from those on the plains of northern Mesopotamia or in the intermontane valleys of the Zagros.[24] Marine resources were abundant. Fish,[25] shellfish,[26] green turtles (*Chelonia mydas*),[27] and marine mammals (e.g., dugong[28]) provided protein, and the abundance of these resources prompted sedentary and seasonal occupation on the coast (sometimes alternating with a retreat to the higher elevations during the winter).[29] An outstanding example of one such community, excavated at Jabal al-Buhais in the interior of Sharjah, has recently been published in lavish detail. Not only does it illustrate the sort of material culture used by a typical mid-Holocene population in this region, but the discovery there of a cemetery containing hundreds of individuals at a site known as BHS 18 has also given us a fascinating glimpse of health, diet, pathology, nutrition, morbidity rates, and demography among one such group of early Arabians.[30]

In a low-rainfall environment without perennial rivers, cereal cultivation required well irrigation, and wheat and barley were cultivated, probably in a *bustan* arrangement wherein the shade of the date palm was used to shelter the cereal crops, using water raised from hand-dug wells.[31] The absence of rivers and springs was thus not an insuperable difficulty, particularly in an area as rich in groundwater (aquifers) as eastern Arabia.[32]

As neither wheat nor barley occurred naturally this far south, both species must have been introduced there.[33] Interestingly, we see the use of chaff in the earliest, indigenous pottery known in the region (the coarse, handmade redwares of the Eastern Province of Saudi Arabia), which was a by-product of cultivated, not imported, cereals.[34] Nor were sheep, goats, and cattle native to the region.[35] The fact that the earliest stone tools in Qatar, dating to the sixth and fifth millennium B.C., show strong similarities to the Levantine blade-arrowhead tradition[36] has prompted some scholars to suggest a movement of people from the southern Levant into the east Arabian littoral, together with their already domesticated sheep, goats, and cattle. Certainly those sites of this period in eastern Saudi Arabia, the UAE, and Oman, which have been excavated (and are not just known from surface finds), always yield bones of domesticated sheep, goats, and cattle. While early researchers were liable to classify such sites as the campsites of hunters and gatherers, primarily due to the predominance of finely pressure-flaked, barbed, and tanged arrowheads in the stone-tool inventory,[37] it is more accurate to categorize the societies that created such sites as herders who supplemented their diet by doing a bit of hunting, rather than hunters who did a bit of herding. The distinction is important, for, first and foremost, these people lived on the marine resources available in the Gulf and on the secondary products provided by their livestock. Fleece, hair, and milk products complemented the marine protein available from fish, shellfish, and marine mammals; and the terrestrial protein derived from mammals such as gazelle, oryx, and wild camel. Just as importantly, as we know from ethnographic studies in the region, sheep and goats are able to drink brackish water, which is unpotable for human groups, and convert it into potable milk that can be either drunk as is or turned into a variety of cheese-and yogurt-related products. Having a herd is thus tantamount to having a mobile water-purification system.[38] Yet to slaughter one's sheep and goats for their meat is obviously to destroy this capacity and to cut off the supply of secondary products. Hence, hunting wild fauna provides a meat supply without endangering the capital represented by a group's herd.

Ubaid Contact

Since the late 1960s, when diagnostic sherds of the so-called Ubaid type were found at a number of sites in the Eastern Province of Saudi Arabia,[39] the relationship between southern Mesopotamia and the Gulf region has been much discussed. In brief, sherds of well-fired (or sometimes over-fired) buffware with geometric decoration in black manganese paint—a characteristic of the initial, sedentary occupation of southern Iraq (e.g., at sites Tell Oueilli, Ur, and the eponymous Tell al-Ubaid)—have been found at sites on the coasts of Kuwait (H3); eastern Saudi Arabia (Abu Khamis, Dosariyyah, Ain Qannas); Bahrain (al-Markh); Qatar (Khor, Ras Abaruk, al-Da'asa); and the UAE (Jazirat al-Hamra [Ras al-Khaimah], al-Madar [Umm al-Qaiwain], Hamriyah [Sharjah], Marawah, and Dalma islands [Abu Dhabi]).

The Ubaid period in Mesopotamia[40] comprises five phases (Ubaid 0–4), extending from sometime prior to 6000 B.C. to about 4000 B.C., with a terminal or post-Ubaid phase lasting until ca. 3800 B.C. Thus, the evidence of contact between the population residing at the head of the Gulf and the inhabitants of the Arabian coasts must be seen in a broad chronological context and not viewed as something necessarily sudden or intense. The earliest Ubaid sherds found in the Persian Gulf come from H3 in Kuwait and date to Ubaid 2–3 times, while most of the sherds from further south date to Ubaid 3–4 times. Various explanations have been advanced to account for this north-south contact, ranging from seasonal fishing expeditions to traders in search of pearls. Certainly the contact seems to have been waterborne, for most of the sites are on the coast (the exception being those in eastern Saudi Arabia), and H3 has now yielded important fragments of reed-impressed bitumen that represent the remains of bitumen-caulked boats.[41]

Except for those inhabiting what is today northeastern Saudi Arabia, the native populations of the Gulf region did not apparently undergo much culture change as a result of these contacts. Sites in Saudi Arabia show a local, coarse, chaff-tempered redware alongside the imported Ubaid sherds, suggesting that some attempt was made to adopt the technology and culture of ceramics. But this was not to last, and an indigenous ceramic tradition did not develop in the region until the third millennium B.C. Apart from the use of ceramics, however, it is arguable whether the culture of southern Mesopotamia in the sixth and fifth millennia B.C. was very different from that of eastern Arabia or southern Iran. Because of the marshes that, in recent times, have covered much of southernmost Iraq, we have no archaeological evidence of this period south of Eridu, where, to be sure, mudbrick architecture was already in use, as is seen from the foundation of the site and where the residents were agriculturalists.[42] In the Gulf, on the other hand, the coastal dwellers probably lived, for the most part, in *barastis*, palm-frond houses well suited to the warm, humid climate of the region,[43] which left a distinctive signature, in the form of postholes, in the ground. Lithic industries, intensive fish and shellfish use, and herding are a hallmark of the Arabian sites, but as we have no excavated sites in the southern portion of Iraq to compare, it would be unwise to envisage a culture there that was technologically much further advanced or socially more highly organized than that along the coasts of Iran and Arabia. The contrasts in subsistence strategy, which to be sure were real, should not necessarily be interpreted as markers of profound sociological differences.

Mesopotamia and the Persian Gulf: First Contacts Attested in the Written Record

The fourth millennium in eastern Arabia is very poorly documented.[44] An aceramic dugong- butchering site on the island of Akab (Umm al-Qaiwain) provides one of the only excavated assemblages.[45] Interestingly, long tubular beads that are perforated at either end have been found there, which find parallels in fourth-millennium Mesopotamia.[46] The paucity of excavated sites, however, is probably not an indication of a genuine hiatus in human occupation. Were one able to get C14 dates for many of the unexcavated lithic sites in the region, occupation throughout the fourth millennium would almost certainly be apparent, as it is all along the coast of Oman.[47] In Mesopotamia, on the other hand, there is a wealth of evidence, but again, all of this derives from much further north than our area of concern. What is significant, however, is the fact that in the very earliest protocuneiform texts from Uruk, the southern Mesopotamian site at which writing seems to have been invented, the toponym DILMUN occurs.[48] This is a name that we can later, without hesitation, identify with Bahrain and the adjacent portion of eastern Saudi Arabia. References to a Dilmun axe in the Archaic metals list; to a Dilmun tax collector; and to officials involved with Dilmun, all suggests contact at this time as well as a degree of organization in Dilmun itself, which is belied by the paucity of archaeological evidence from this period (ca. 3400–3000 B.C.).

The dearth of archaeological evidence on Bahrain during the early third millennium stands in contrast to the situation in eastern Saudi Arabia, where sites such as Tarut Island, Abqayq, and Umm an-Nussi have yielded considerable numbers of imported Mesopotamian ceramic vessels of Early Dynastic I–II date (ca. 2900–2350 B.C.),[49] suggesting that the main population centers of Dilmun, at this time, may have lain on the mainland and not on Bahrain. Late Early Dynastic royal inscriptions from Tello (ancient Girsu, in the city-state of Lagash) attest to the import of copper (from Oman) and wood "of foreign lands" (teak from western India?) from Dilmun.[50] As neither Bahrain nor eastern Saudi Arabia was endowed with such raw materials, it appears as if Dilmun was already exercising a role that it enjoyed throughout its later history, much like Bahrain in the historic era (and more recently Dubai), that is, that of middleman in transshipping goods from further afield to ports in southern Iraq.

Magan and the Hafit and Umm an-Nar Cultures

The copper sent by Dilmun to Mesopotamia at this time almost certainly came from Oman, where the Hajar Mountains represent a source exploited intermittently from the fourth millennium B.C. to the modern day.[51] Around 3000 B.C. a type of above-ground, circular tomb, built of unworked stone with a dome-like shape and keyhole entrance, appeared in southeastern Arabia. Known as the Hafit tombs (after Jabal Hafit, near Al-Ain, where the first examples were excavated),[52] these monuments are effectively the only evidence we have of early third millennium occupation in the region.[53] Importantly, they have yielded evidence of collective burial, involving small numbers of individuals (families? kin groups?),[54] copper weaponry (daggers), and imported Mesopotamian pottery of the Jamdat Nasr type (named after the type site of the same name in south-central Iraq).

Within a few centuries, however, the cultural landscape of the Oman peninsula had changed radically, for while the tradition of collective burial persisted, now often involving hundreds of individuals interred over a century or more (e.g., at Tell Abraq, Hili, Unar 1–2 at Shimal, Umm an-Nar island),[55] major innovations appear as well. Circular fortifications, somewhat like Martello towers,[56] built of mudbrick or stone (or a combination of both) appear at various sites (e.g., Hili 8, Tell Abraq, Bidya, and Baat in the interior of Oman).[57] A refined ceramic industry,[58] possibly owing much technological inspiration (or even manufacture) to immigrant Iranian potters, an ever-expanding metallurgical repertoire,[59] and a sizable industry in the manufacture of soft-stone (steatite, chlorite, or chloritite) vessels,[60] all mark the so-called Umm an-Nar culture.

Moreover, beginning in the twenty-fourth century, Akkadian royal inscriptions (and later Ur III economic texts) refer to southeastern Arabia as Sumerian *Magan* (Akkadian *Makkan*), a region against which at least two Old Akkadian monarchs (Manishtushu and Naram-Sin) campaigned.[61] Until Cypriot copper began to be readily available in Mesopotamia in the eighteenth century B.C.,[62] Magan was the chief source of copper for the city-states of the south (e.g., Ur, Lagash). Omani soft-stone vessels have been found at sites in southern Mesopotamia (Ur), eastern Arabia (Tarut), Bahrain (Saar tombs, Qalat al-Bahrain settlement), Iran (Susa, Tul-e Peytul, Tepe Yahya), and the Indus Valley (Mohenjo-Daro). Conversely, imported ceramics of Iranian (black-on-grey and burnished greyware [Kirman, Baluchistan],[63] Kaftari-ware [Fars]),[64] and Harappan (black-slipped storage jars, painted vessels) origin,[65] as well as Harappan or Harappan-inspired seals (Ur, Susa, Qalat al-Bahain, Tell Abraq, Ras al-Jinz)[66] and genuine Harappan weights (Shimal, Tell Abraq),[67] indicate that there was considerable Arabian Sea–Persian Gulf and intra-Gulf traffic in the late third millennium B.C.

By this point in time, there seems to have been a very real divergence, in social-evolutionary terms, on the Arabian side of the Gulf from the social patterns we can see in Iran or southern Mesopotamia. There are several indications of a strong, kin-based society in Magan. The iconography of two people holding hands appears on a seal from Ras al-Jinz and on a tomb relief at Hili.[68] The Umm an-Nar tombs are entirely collective, showing no sign of any distinction between elites and nonelites in death. And although there are a few references to a *lugal-Magan,* or "king" of Magan, the account of Manishtushu's campaign, in which he crossed the Lower Sea—as the Persian Gulf was known in the Mesopotamian sources (appearing once in the Ur III period [2100–2000 B.C.] as the "Sea of Magan")—and subjugated thirty-two cities and their "lords" (*en*) before advancing to the metal mines and quarrying black stone (diorite, gabbro) in the mountains which he loaded on ships and sent back to Agade, does not suggest the existence of a unitary state. Unlike Mesopotamia, with its city-states united by the Akkadians under a central government,[69] or Iran, which, at least in the Elamite areas of Khuzistan and Fars, seems to have been a confederation of numerous groups and regions,[70] Magan appears to have been a society consisting of fishermen and herders along the coast— oasis-based strongholds, exemplified by the circular fortification towers on the coast and in the interior— and transhumant pastoralists, who probably moved seasonally between the coasts and the mountains.

During the last century of the third millennium B.C., when the Third Dynasty of Ur ruled over Mesopotamia, direct trade between Ur and Magan was instituted, often involving a merchant named Lu-enlilla, some of whose texts were excavated by Sir Leonard Woolley at Ur.[71] Textiles of the coarsest grade were routinely sent to Magan[72] in exchange for commodities such as copper and ivory, the latter being an Indian product that was being sold onward by a middleman.

On the other hand, Dilmun appears to have been structured differently with a true primate settlement system in which Qalat al-Bahrain, covering an area measuring 400 × 700 meters and 8 meters high, or roughly 15 ha., dominated the main island of Bahrain with only a few secondary settlements (e.g., Saar, Diraz) existing alongside it. Moreover, Dilmun appears to have been a far more mercantile society and one less engaged in primary production. Transshipping wood, copper, ivory, carnelian, and, eventually, tin (from Afghanistan, via Melukhkha [Indus Valley or Harappan civilization])[73] generated considerable wealth, as reflected in the accounts of the *alik Tilmun,* or Dilmun traders, from Old Babylonian Ur.[74] Significantly, the pattern of burial on Bahrain and in eastern Saudi Arabia was completely different from that in Magan. Instead of collective burials, which were used on a community-wide basis, the Dilmunites practiced individual inhumation, sometimes in conspicuously grand grave chambers covered with an earthen mantle (hence the great fields of over 150,000 burial mounds on Bahrain which still survive). In these, however, they placed relatively few objects, obviously loathe to take wealth out of circulation.[75]

By the late third millennium B.C. (and much earlier in Mesopotamia) many parts of the Near East had developed a sealing device with distinctive iconography. In some cases this took the form of a cylinder seal, in others a stamp seal. In the Persian Gulf different seal types were developed in Dilmun and Magan. In Dilmun a circular, usually a stone stamp seal with a raised, perforated back (known as a "boss") was used. The iconography of the earliest seals (so-called Persian Gulf seals), dating to the last two or three centuries of the third millennium B.C., is limited to fauna (bulls, snakes, scorpions) and flora. Most of the known examples come from Bahrain,[76] but specimens have also been found at Tell Abraq in the UAE, on Tarut island and at Dhahran in eastern Saudi Arabia, on Failaka (probably old when they reached the island), and, most interestingly, at Ur. A small number of the seals from Failaka and Ur are distinguished by the fact that, in addition to the usual animals (almost always a bull) they bear short texts written in Harappan characters.[77] As the Harappan script has not been deciphered,[78] we cannot say for sure what such texts signify, but some scholars believe these short inscriptions of four or five signs might be personal names added to the seals to identify their owner. Interestingly, the sequence of signs found on the seals from the Gulf and Ur is never replicated on any of the several thousand seals known from sites in the Indus Valley itself. This has led some scholars to speculate that the names, if they are indeed that, are not Harappan names, but may be in other languages (e.g., a Semitic language such as Amorite or Akkadian, attested in some of the cuneiform texts found on Bahrain).[79]A Harappan presence in the Gulf region[80] was mentioned above, and it is possible that Harappans married into some of the local groups with whom they traded. This might explain why someone with a strong Harappan identity, but of mixed parentage and bearing a non-Harappan name, had a seal with an unorthodox Harappan inscription on it.

Far fewer seals of a late third millennium date have come to light in the area of ancient Magan, and these are heterogeneous, consisting of triangular prism-shaped seals decorated on all three sides,[81] circular and square or rectangular stamp seals,[82] and even cylinder seals.[83]

Dilmun in the Late Third and Early Second Millennium b.c.

The collapse of the Ur III state around 2000 b.c. may have reverberated somewhat in the Gulf region, and the same may have been true of the collapse of the Harappan civilization a century later. Yet, apart from a cessation of references to direct trade between Ur and Magan, it is difficult to gauge the real effects of these geopolitical reversals in neighboring states. Certainly there is evidence in the cuneiform sources from the Isin-Larsa and Old Babylonian periods (ca. 2000–1700 b.c.) of renewed contact between Ur, one of southern Mesopotamia's most important outlets to the Persian Gulf (though not on the Gulf itself, in much the same way as Basra is not) and Dilmun, which continued to supply copper to merchants like Ea-nasir of Ur. Limited references also attest to links between Dilmun and Susa,[84] and the probable presence of Dilmun pottery (typical red-ridged storage jars) at Tul-e Peytul (ancient Liyan), along with Elamite inscriptions there, would suggest that Liyan was an important gateway for contact between the highlands of Fars (ancient Anshan) and the Gulf region.[85] The presence of Late Harappan pottery (Micaceous Redware) at Saar and Tell Abraq, almost certainly originating in Gujarat, suggest ongoing maritime trade between Dilmun and the Late Harappan world.[86] At the same time, overland caravans, probably used for diplomatic rather than commercial purposes, are known to have traveled between the important city-state of Mari on the Euphrates (near the modern Syrian-Iraqi frontier) and Dilmun.[87]

During the late third and early second millennium b.c. Qalat al-Bahrain continued to be inhabited,[88] Saar was a flourishing, planned settlement (with streets and houses laid out to a design repeated throughout the settlement),[89] and the temple at Barbar, with its impressive oval retaining wall of limestone ashlars, continued to be in use.[90] Evidence from the east Arabian mainland is less abundant and consists mainly of tombs excavated near Dhahran airport.[91] One important initiative that should be mentioned, however, was the foundation of an apparent satellite settlement by Dilmun on the Kuwaiti island of Failaka. As mentioned above, Failaka did not begin to emerge from the waters of the Gulf until ca. 2000 b.c. Shortly thereafter a settlement with houses made of coral-rock (Ar. *farush*)[92] was founded on virgin soil and the fact that the ceramics and small finds found there are entirely in the style of what we know from Bahrain strongly suggests that the colonists came from Dilmun.[93]

One of the most distinctive hallmarks of Dilmunite material culture in the early second millennium is the "Dilmun" stamp seal, a circular stamp seal with a raised, perforated boss much like its "Persian Gulf" predecessor, but with a much more varied iconography including humans and a range of motifs not seen in the earlier group.[94] Hundreds of such seals have been excavated on Bahrain and Failaka, and a handful have been found at sites in southwestern Iran (Susa) and the UAE (Mazyad, near Jabal Hafit). Among the many decorative elements found on these seals are several which are particularly identifiable with the region, including gazelle, date palms, and single-masted boats with upturned prow and stern.

The Wadi Suq Period in Oman (2000–1300 b.c.)

In comparison with the Umm an-Nar period, the early second millennium occupation of southeastern Arabia is much less well-represented. Twenty-five years ago some scholars attributed this to processes such as nomadization, perhaps attendant upon the domestication of the camel (*Camelus dromedarius*), decline triggered by economic collapse in Mesopotamia at the end of the Old Babylonian period, or a shift away from sedentary settlement precipitated by climatic change.[95] We still have very few settlements from the period ca. 2000–1300 B.C.,[96] despite the relatively large number of collective burials (no longer circular, but mainly long, narrow chambers with rounded ends, or roughly oval).[97] There is a palpable devolution in ceramics, from a technological point of view, although the metals industry continued to flourish—large quantities of weaponry, socketed spear/lanceheads and swords now dominate, and arrowheads become common, often with simple marks such as X on the flattened surface of the midrib.[98] We now know, furthermore, that the camel was not domesticated until the Iron Age,[99] and we have very equivocal climatic data, so the sorts of explanations in vogue in the 1970s are no longer tenable. Some settlements, like Tell Abraq, do show continuity of occupation,[100] as well as ceramics imported from Bahrain[101] and seal impressions of a type known in post-Harappan contexts in Gujarat.[102] However, there can be no denying the general paucity of settlement remains at this time.

On Failaka and Bahrain we can certainly chart stylistic changes in the ceramic assemblage,[103] but it is not so clear that this equates to a major break in the occupational or cultural sequences there. We are here, in Mesopotamian terms, in what has often been termed a "Dark Age," following the Hittite conquest of Babylonia, and prior to the full flowering of the Kassite state. Certainly much work remains to be done on this period.

Kassites, Elamites, and Dilmun

By the middle or third quarter of the second millennium B.C. the situation becomes much clearer. Whereas the earliest occupation on Failaka may have had the hallmarks of colonization from the south (Dilmun), the next phase of occupation on the island is just as easily identified as an influx from the north, this time from Mesopotamia. By this point in time the Kassites, an alien group possibly originating in northwestern Iran or the east Tigris region, had come to power.[104] The ceramic evidence from Failaka, coupled with a few seals and cuneiform inscriptions,[105] shows us that Kassite material culture suddenly appeared on the island, lasting into the final centuries of the second millennium.

On Bahrain the evidence is even clearer. Here we have more Kassite texts, which confirm that Dilmun was under Kassite political control.[106] This evidence is buttressed by an unprovenanced cylinder seal in the British Museum which refers to its owner's great-grandfather as *shakkanakku*, usually translated as "governor," of Dilmun.[107] Moreover, two letters excavated at Nippur,[108] one of the holiest cities in Mesopotamia, were written by a governor of Dilmun, Ili-ippashra, to his friend and probably fellow Kassite bureaucrat, Ili-liya. Ili-liya, a nickname for Enlil-kidinni, is attested in texts from the reigns of Burnaburiash II (1359–1333 B.C.) and Kurigalzu II (1332–1308 B.C.) so we can safely place these letters in the second half of the fourteenth century B.C. These important letters name the two chief deities of Dilmun, Inzak and Meskilak; report on the depredations of the Ahlamu, a Semitic-speaking group of nomads or semisedentary nomads who had been stealing dates right off of the trees in Dilmun; and speak of dreams predicting the destruction of the palace. While the Kassites were in control of Dilmun and presumably Failaka, their Elamite contemporaries were in control of the northern Iranian coast,[109] as demonstrated by several inscriptions from Tul-e Peytul dating to the reigns of Humban-Numena (ca. 1350–1340 B.C.), Kutir-Nahhunte, and Shilhak-Inshushinak (late fourteenth/early thirteenth centuries B.C.).[110]

Kassite rule ended abruptly in around 1225 B.C. when the Assyrian king Tukulti-Ninurta I (1243–1207 B.C.) defeated his Kassite counterpart Kashtiliashu IV (1232–1225 B.C.). The Assyrians, however, did not project their power into the Gulf. Rather, the ceramics from Failaka and Bahrain suggest that the Second Dynasty of the Sealand, the name given in Babylonian sources to a dynasty that arose in southernmost Iraq in the late second millennium B.C.,[111] was involved in the region after the fall of the Kassites and not the Elamites or Assyrians.[112] The only real sign of contact between the Gulf region and Elam in this period consists of a typical Middle Elamite, faience cylinder seal from Tell Abraq and possibly a few sherds with Elamite-looking profiles.[113]

Iron Age Dilmun and the Assyrian Empire

Over the next few centuries we have no historical information on events in the Gulf whatsoever. At Qalat al-Bahrain there is evidence of continuity in occupation,[114] but there is little if anything from Failaka, mainland eastern Arabia, or the coast of southern Iran that dates to the period between ca. 1200 and 800 B.C., and there is only slightly more information to be found in the UAE, where the Iron Age I occupation at Tell Abraq and several other sites (e.g., Kalba) can be linked to the first centuries of the first millennium B.C.[115] By contrast, the developed Iron Age (Iron Age II) in the region, from ca. 800–550 B.C., is abundantly represented through graves, an expansion of settlement (e.g., Tell Abraq, Rumeilah, Muweilah, Bida Bint Saud, al-Madam) that almost certainly reflect the growth of new water-management techniques,[116] abundant metal weaponry, and clearly differentiated ceramic traditions, seals, and stone vessels.[117] A temple complex seems to be present at the site of Bithnah, in the mountains of Fujairah, where evidence of a snake cult is strong as well.[118] Once again we see clear distinctions in the material culture of Dilmun and Magan.

Beginning with the reign of Sargon II (721–705 B.C.), the number of references to the Gulf region in Assyrian sources increases.[119] After describing his military exploits against Babylonia and Elam, Sargon says that "Uperi, king of Dilmun, who lives (*lit.* "whose camp is situated") like a fish, thirty *beru* [double hours, a unit of travel time] away in the midst of the sea of the rising sun, heard of my lordly might and brought his gifts" (Annals, Khorsabad palace, Salons II, V, and XIII, year 13, §41). Similar inscriptions elsewhere in Sargon's palace at Khorsabad (ancient Dur-Sharrukin) boast of the gifts sent by Uperi and probably one of his descendants named Ahundara/Hundaru upon their hearing of the might of the gods Assur, Nabu, and Marduk, thus making it clear that no actual conquest of Dilmun was involved. Moreover, they strongly suggest the existence of a kingship or at least a chiefly lineage in control of Dilmun during the late eighth century B.C. That a ruler of Dilmun should voluntarily choose to send gifts to the great king of Assyria at this time is hardly surprising, given how the other neighbors of Assyria had suffered at its hands. Interestingly, Ran Zadok has shown that the names Uperi and Ahundara/Hundaru are both Elamite,[120] and this is the first indication of any sort of link between Elam and Dilmun since the Susa texts of the earlier second millennium B.C. attesting to traffic in copper between the regions.

In the reign of Sargon's son and successor, Sennacherib (704–681 B.C.), we again hear of gifts being brought from Dilmun to the Assyrian court. This time, the dust of Babylon, a city destroyed by Sennacherib, was carried by the Euphrates all the way to Dilmun, according to a text from the *bit akitu* or "temple of the New Year's feast" at Assur (*ARAB* ii §438). From Dilmun came "workmen levied from their land, carriers of the head-pad, bronze spades, and bronze wedges, tools (which they use for) the work of their country, in order to (help) demolish Babylon."

During the reign of Esarhaddon (680–669 B.C.) a change can be detected in Assyrian relations with Dilmun. In one badly preserved text from Assur, Esarhaddon boasts of imposing tribute on a king of Dilmun called Qana (a West Semitic name). Beyond this, we have no insight into what brought about this state of affairs.

A much more complex relationship between Dilmun and Assyria is evident in the reign of Esarhaddon's son, Assurbanipal (668–627 B.C.). Three letters from Bel-ibni, Assurbanipal's governor in the province of the Sealand (southernmost Iraq), contain important allusions to Dilmun.[121] In one case (ABL 458), reference is made to Bel-ibni's having sent Idru, the messenger of Hundaru, king of Dilmun, to the Assyrian palace with the tribute of Bahrain. In another (ABL 791), Bel-ibni questions Hundaru's loyalty, suspecting him of making common cause with Assyria's great enemy, Nabu-bel-shumate, a Chaldaean outlaw/insurgent who, in Assyria's eyes, was an enemy of the state.[122] Like his father, Merodach-Baladan, Nabu-bel-shumate sought and was frequently given shelter by the Elamites, and Bel-ibni seemed to feel that Dilmun might have been doing the same. We also have a letter (*AAA* XX.C) from Assurbanipal to Hundaru, in which the Assyrian monarch asks, rhetorically to be sure, "Dost thou not know that I for my part am giving thee the kingdom of Tilmun, wherein thou shalt dwell, (wherein) thou shalt live under my protection? So in this wise shall my interests be guarded."

One final text of Assurbanipal's, the so-called Ishtar slab inscription from Nineveh (now unfortunately lost),[123] refers to the fact that Assurbanipal received annual tribute from Hundaru of Dilmun and Pade, king of Qade, as well as from kings of Kuppi and Hazmani, which may have lain outside of the Gulf region. Qade can easily be identified with Magan (Oman) thanks to the later trilingual Achaemenid inscriptions from Naqsh-i Rustam (DNa §3) and Susa (DSe 16, DSaa 31) in Iran where Qade and Maka, the Old Persian form of Magan, are equated. Moreover, Assurbanipal says that Pade lived in the capital of Qade, which he calls Iskie, and this is unquestionably Izki, in the interior of Oman, reputed in oral tradition to be the oldest town in the Sultanate.[124]

Several Iron Age sites in southeastern Arabia including Muweilah (Sharjah), Bida Bint Saud, and Rumeilah (both near Al-Ain, in the interior of Abu Dhabi), have columned buildings which recall those of the Iranian Iron Age at Hasanlu, Godin Tepe, and Nush-i Jan in the Iranian Zagros.[125] Moreover, certain ceramics—bridge-spouted vessels—of clear Iranian inspiration or manufacture or both, appear on both Bahrain and in southeastern Arabia,[126] while some of the bronze weaponry in Oman compares closely with that known in Iron Age Iran. Just how these connections were established, and what they signified, let alone what were the function(s) of the columned buildings, remains an open question.

The Neo-Babylonian Period

After the fall of the Assyrian empire in 612 B.C. we have ample evidence of Babylonian contact (in the Neo-Babylonian period) with the northern and central Gulf region, via ceramics and seals found on Failaka and Bahrain. In addition, Failaka has yielded intriguing evidence of a possible Babylonian establishment on the island. In 1953 a fragment of a large piece of ashlar masonry bearing the text "palace of Nebuchadnezzar, king of Babylon," was found.[127] Although this was long thought to have been carried there later (though precisely how is a mystery), the discovery of an inscribed bronze bowl[128] on Failaka bearing a dedication to Shamash (the Babylonian sun god) from Nebuchadnezzar (604–562 B.C.) makes it much more likely that there was indeed a Babylonian presence, specifically linked to Nebuchadnezzar, on the island. Even more importantly, the bronze bowl says Shamash "dwells in the *é-kara*," therby giving us the name of his temple, and a temple by this name appears in a Neo-Assyrian list of temples in Dilmun,[129] making it probable that these texts relate to a real Babylonian presence on Failaka. Moreover, a stone slab with an Aramaic inscription of a fifth/fourth century B.C. date in which the word *ekara* can be read has been found on Failaka.[130]

The final piece of evidence that suggests some degree of Neo-Babylonian hegemony in the northern or central Gulf region dates to 544 B.C., that is, only five years before Cyrus the Great's entry into Babylon. It is a private account in which reference is made to the brother of the *bel pihati Dilmun*, normally translated as "administrator" (whether civil, military, or commercial remains uncertain in this context) of Dilmun.

The Achaemenid Presence

The impact of the Achaemenid Empire on the Persian Gulf has long been debated.[131] While the conquests of Cyrus the Great, Cambyses, Darius I, and Xerxes, to name the most well-known Achaemenids, forged an empire that stretched from the Aegean to Central Asia and the borders of India, the extent of Achaemenid interest in the Persian Gulf is less well-documented. Herodotus twice refers to the inhabitants of the "islands in the Erythraean Sea," in one case saying that they formed part of the fourteenth satrapy[132] under Darius I (*Hist.* 3.89), and in another that they fought with Xerxes at the battle of Doriscus (*Hist.* 7.80). The continued existence of the fourteenth satrapy unit in the fourth century B.C. is confirmed by Arrian who says that on his voyage up the Persian Gulf (following the conquest of India), Alexander's admiral Nearchus (discussed later in the chapter) encountered Mazenes, the "hyparch of the country" (Arrian, *Indica* 34.1) or "hyparch of the province" (Arrian, *Indica* 36.1) on Oaracta (Qishm) (Strabo, *Geog.* 16.3.7).

An Achaemenid presence further north on the coastal plain of Iran is shown by Strabo's (*Geog.* 15.3.3) reference to a Persian palace "on the coast near Taocê." Taocê has long been identified with Islamic Tawwaj[133] and Elamite Tam(uk)ka(n), a place mentioned in a number of Persepolis fortification texts.[134] Whether the place is identical to the Achaemenid site at Borazjan, near Tawwaj, where a pavilion of finely masoned ashlars in the style of Pasargadae (and hence dating to the reign of Cyrus the Great) was excavated by an Iranian team before the revolution,[135] is unclear.

Failaka, in particular Tell Khazneh, has yielded numerous examples of horse-and-rider terracotta figurines,[136] a figurine type well-attested at Susa and in Babylonia during the Achaemenid era, and excavations at Qalat al-Bahrain have brought to light numerous local imitations of Achaemenid "tulip bowls" as well as a glass stamp seal showing a royal hero in Persian dress with a sphinx and winged bull, all motifs known from the Achaemenid "court style" of glyptic.[137] The reuse of the large building complex of the early second millennium at Qalat al-Bahrain during the Achaemenid period is well-attested by the material excavated there by Danish archaeologists. The finds include some intriguing evidence of snake veneration, consisting of the bodies of sea *(Hydrophis lapemoides)* and rat snakes *(H. ventromaculatus)* that had been carefully wrapped in cloth bags, placed in bowls, and deposited under the floors of two different rooms.[138] Whether Failaka and Bahrain were included among the islands of the fourteenth satrapy we do not know, but it is certainly possible, judging from the Achaemenid-related finds from Qalat al-Bahrain, that the island was ruled by some sort of governor, if not a full-fledged satrap who was resident in the main building complex there.

In the Oman peninsula, material links with the Achaemenid world consist of short swords[139] and certain ceramic types (s-carinated bowls, tulip bowls). Just as important, moreover, is the fact that three of Darius I's (521–486 B.C.) own inscriptions give Qade as the Akkadian form of Old Persian Maka, clearly the cognate form of the older Akkadian *Makkan* (Sumerian *Magan*) which, as noted above, links this toponym with southeastern Arabia via the name of its capital, Iskie (i.e., Izki). Thus, from the time of Darius onwards, Maka or southeastern Arabia was part of the Persian Empire. Six of the Persepolis fortification texts,[140] moreover, use the Elamite form, Makkash. Two of these (PF 679 and 680) record the disbursement of wine to Irdumasda, satrap of Makkash, and in one case this occurred at Tamukkan, that is Taocê. Presumably the wine was distributed before Irdumasda embarked by boat on a trip back to his post somewhere in Oman. Four more texts (PF 1545, 2050; PFa 17, 29) record the disbursement of beer and flour rations for people going to or coming from Makkash. In one case, the flour was supplied to sixty-two men and their servants, all of whom were described as "Arabians," a strong indication that the destination, that is, Maka/Makkash, lay on the Arabian side of the Gulf (even though Arab settlement on the Iranian side of the Gulf, well-attested from the early Islamic to the modern era, may already date to this early period).

In describing the subject peoples of Darius I, Herodotus (*Hist.* 3.93) refers to the Mykoi, and these are certainly the inhabitants of Maka. Similarly, Xerxes lists the Maciya, an Old Persian gentilic from the toponym Maka, among the peoples "who dwell by the sea and dwell across the sea" (Daiva inscription), and Herodotus says the Mykoi fought with Xerxes at Doriscus in 480 B.C. (*Hist.* 7.68).

Interestingly, it was probably during the reign of Darius I that the Persian Gulf came to be referred to in this way. In older Mesopotamian cuneiform sources it had always been the Lower Sea, and in one case the "Sea of Magan," but around 500 B.C. the Greek geographer Hecataeus (excerpted by the later Byzantine writer Stephen of Byzantium)[141] used the term *Persikos kolpos*, that is, Persian Gulf, for the first time in a written source.

ALEXANDER'S EXPLORATION AND THE SELEUCIDS

In 325 B.C. Alexander sent a fleet under the command of Nearchus the Cretan from the mouth of the Indus River to Susa that was charged with exploring the coast of Iran. Convinced of Arabia's great wealth, Alexander dispatched three more naval expeditions a year later, all of which set out from Babylon.[142] The first, under Archias of Pella, got as far as Bahrain, known in Greek sources as Tylos (cf. Akkadian *Tilmun*, Sumerian *Dilmun*) or Tyrus (Arrian, *Anab.* 7.20.7). The second expedition, led by Androsthenes, also visted Tylos and its sister island Arados (modern Muharraq, just to the north of the main island of Bahrain, on which a place called Arad still exists), and is said to have sailed part way round the Arabian Peninsula. The third expedition, under Hieron, went all the way to Heroöpolis in Egypt, before returning to Babylon. These expeditions gathered an enormous amount of geographical, ethnographic, and botanical data, which was excerpted by later writers like Eratosthenes, Theophrastus, Strabo, Pliny, and Arrian, who have given us a description of the southern coast of Iran[143]; detailed descriptions of the flora of Tylos (Bahrain)[144]; a list of names of tribes and towns in eastern Arabia[145]; and the first detailed account of pearling in the Persian Gulf.[146]

Thereafter Alexander embarked on a program of colonization, founding an unnamed city[147] in southernmost Iraq, possibly near modern Kufa, and a second city, which Pliny calls Alexandria (Alexandria-on-the-Tigris) and which was probably meant to serve as an entrepôt at the head of the Persian Gulf to supersede Teredon, which had been founded by Nebuchadnezzar. After Alexander's death in 323 B.C. his Seleucid successors established a maximum of nine further colonies in the northern Gulf. At the head of the Gulf (perhaps near the mouth of the Tigris), was Seleucia-on-the-Erythraean Sea, a town which may have been sited with long-distance, Indian trade in mind. Further down the Iranian coast we find Antiochia-in-Persis, a settlement usually located at Rishahr, on the Bushehr Peninsula,[148] which was colonized by Greeks from Magnesia-ad-Maeandrum in Asia Minor according to a text of 205 B.C. found there. Badly damaged by flood, Alexandria-on-the-Tigris was refounded as Antiochia by Antiochus IV in 166 or 165 B.C. Later the town would have an illustrious career as a major economic center under the name Spasinou Charax (discussed later in the chapter). Finally, three more towns—Arethusa, Larisa, and Chalcis—are mentioned by Pliny (*Nat. Hist.* 6.159) but their locations are unknown, as is the location of Artemita in Arabia, mentioned by Cl. Ptolemy.

Of all these settlements the most important was probably Alexandria/Antiochia. This has been seen as the intended base for a Seleucid navy in the Gulf and as the new emporium for Babylonia's trade with India and the East. It was probably also the capital of the "satrapy of the Erythraean Sea,"[149] mentioned in 221 B.C. Whether or not a Seleucid navy was stationed permanently in the Gulf is, however, debatable. It is certain that, on occasion, ships were available and were used, as in the case of the return of Antiochus III from India in 205 B.C. (Polybius, *Hist.* 13.9). Antiochus sailed to eastern Arabia, possibly from Antiochia-in-Persis, in order to deal with the inhabitants of Gerrha, a rich trading city on the mainland (possibly the large, walled site of Thaj west of present-day Jubail). Polybius tells us that, after speaking with the Gerrhans, Antiochus sailed to Tylos, and then to Seleucia-on-the-Tigris in Babylonia (*Hist.* 13.9.4–5). All of this bespeaks the availability of ships, but this does not prove that Seleucid vessels were stationed off Qalat al-Bahrain or Failaka on a regular basis, as sometimes suggested.[150]

There is, however, archaeological evidence of significant Seleucid influence in the region. Of Antiochia-in-Persis we can say little since Rishahr remains unexcavated, but a decree sent to the "kinsmen and friends" at Magnesia by the citizens of Antiochia makes it clear that the Persian colony had the institutions of a Greek *polis*, complete with a representative council (*boule*).[151] On Failaka, where Danish and later French archaeologists worked in the 1950s and 1980s, a small, square fortification and several small Greek temples have been excavated, along with an important stele inscribed with forty-four lines of Greek,[152] and although the text contains a letter from one Anaxarchos to the inhabitants of Ikaros (the Greek name of Failaka),[153] replete with interesting references to gymnastic games and sanctuaries, there is no hint that the settlement there was constituted as a full-fledged *polis.*[154] On Bahrain, occupation of the large town at Qalat al-Bahrain continued throughout this period, and numerous burials have been excavated containing typical Hellenistic pottery and, in some cases, remarkably well-preserved wooden coffins.[155]

Several dozen smaller sites in northeastern Saudi Arabia, as well as the large, walled site of Thaj, built entirely of cut ashlar masonry, have common Hellenistic ceramics along with much local pottery and much glazed pottery that was probably manufactured in southwestern Iran or southern Babylonia or in both. Thaj has also yielded several Greek coins and at least one stamped Rhodian amphora handle.[156]

In southeastern Arabia there is little evidence from the Seleucid period outside of Mleiha, a sprawling settlement in the interior of Sharjah where a small number of Greek black-glazed sherds and a few stamped Rhodian amphora handles have been found among large amounts of local wares, mudbrick houses, and monumental, semi-subterranean tombs.[157]

Sites on the Arabian mainland and offshore islands have also yielded objects characteristic of the interior and southwestern corner of Arabia, including beehive-shaped, alabaster bottles with lids topped by handles in the form of a crouching lion[158] and small, cubical incense burners,[159] suggesting that overland trade, practiced since the Iron Age with the help of the domesticated camel,[160] was a factor in the local economy as well. Indeed Gerrha, the city visited by Antiochus the Great, was noted as an emporium for incense, and it may have been the city's wealth and economic importance which prompted the Seleucid emperor to make a special call on its inhabitants.[161] Gerrhan incense (ultimately of South Arabian origin) was exported to Babylonia (Strabo, *Geog.* 16.3.3), and Gerrhan merchants were said to mix with Minaean traders at Petra and in Palestine (Agatharchides, *Geog. Graeci Minores* §87). Gerrhan incense, obtained in Palestine, is mentioned in two of the Zenon papyri dating to 261 B.C. (P. Cairo Zen. 59536) and 260–258 B.C. (P. Cairo Zen. 59009), and Gerrhan traders—one named Temellatos (i.e., Taym-allat) and the other Kasmaios[162]—are attested on the Greek island of Delos in 146/5 B.C. and 141/0 B.C. We also have at least one typical

Nabataean sherd from a painted bowl excavated at Thaj, along with several Nabataean coins,[163] as well as two rock-cut, monumental tombs on Kharg Island, off the coast of Iran, which have been compared with Nabataean funerary architecture, suggestive of contact between northeastern and northwestern Arabia. One of the Kharg tombs, however, contained an inscription in Jewish Aramaic, dated to ca. A.D. 50, as well as graffiti of a menorah and a boat,[164] suggesting a more complex ethnic and religious mix in the region at this time. Jewish communities are well documented in southern Iraq during the period.[165]

Thaj, and a small number of associated sites in the northeast Arabian area (al-Hinna, Ayn Jawan, Qatif, Dhahran), provide us with a corpus of roughly fifty texts from this period.[166] Written in South Arabian characters, the texts are in a north Arabian dialect known as Hasaitic (after the modern name of the region, al-Hasa). This is most probably the language in which the letter to Antiochus III from the Gerrhans was written, since Antiochus required an interpreter to understand it (Polybius, *Hist.* 13.9.4). Most of these texts are found on tomb stelae, naming the deceased, one or more ancestors, and sometimes a kin or tribal affiliation. In addition, locally minted coin issues with the name of the solar deity Shams, written in South Arabian, have been attributed to this area.[167] These use as their model the tetradrachms of Alexander the Great and, later, of a diademed Seleucid sovereign.[168] Interestingly, when Antiochus III visited Gerrha he is said to have been given 500 talents of silver, along with 1,000 talents of frankincense, and 200 talents of *stacte*, a superior type of myrrh. The fact that small numbers of coins of this type minted by a king named Abyatha have turned up on Failaka and at Mektepini and Gordion suggests that they got there via Antiochus' army.[169] Antiochus returned to Babylonia, it can easily be argued, via Ikaros (Failaka), after which he headed to Asia Minor, hence the distribution of these exotic coins (which scarcely circulated outside of the Arabian peninsula otherwise) so far to the north.

CHARAX AND THE PALMYRENE PRESENCE

The Seleucids had little luck in controlling any part of southern Iran and by the 140s B.C. the Parthians had expanded into Khuzistan and southern Babylonia.[170] Yet it was not Parthia but the small kingdom of Characene in southern Iraq that exerted most influence in the Gulf. Aspasine (Gr. Hyspaosines), who had been satrap of the Erythraean Sea under Antiochus VII (Pliny, *Nat. Hist.* 6.31.138), seized power amidst the collapse of Seleucid authority in the east and established himself as king by 127 B.C., refounding Alexandria/Antiochia as Spasinou Charax.[171] A Greek dedicatory inscription from Bahrain honoring Hyspaosines and his wife Thalassia names Kephisodoros as *strategos* of Tylos and of the islands.[172] Since we know that Aspasine died in 124 B.C., and that he only assumed the title "king" in 127 B.C., this gives us a fairly precise date for his subjugation of Bahrain. The anonymous *Periplus of the Erythraean Sea*, a Greek mariner's handbook written around A.D. 60–75 which sets out the sailing conditions, ports, and main products along the route between Alexandria in Egypt and the ports of western and southern India, calls Spasinou Charax and its port of Apologos the main emporium in the Persian Gulf.[173] Moreover, Charax and a number of other cities in southern Iraq, including Vologesias and Forat, were linked by direct caravan routes with Palmyra in Syria.[174] Thus, goods from the Mediterranean flowed eastward to Charax via Palmyra and then on to India via the Gulf, just as goods from India flowed westward in the opposite direction. Charax is specifically mentioned in nine inscriptions from Palmyra and Umm al-Amad dating to between A.D. 50/1 (or 70/1) and 193. In many ways, therefore, this "Characene corridor" was a southerly alternative to the better-known transcontinental Silk Route.

Because of the profitable trade that it generated Charax was, for the most part, left to its own devices by the Parthians, the major dynasty ruling Iran from the mid-third century B.C. (though in western Iran only from the 140s B.C.) to ca. A.D. 224 They do not seem to have meddled in its affairs until much later. In A.D. 131, as we know from an honorific inscription found at Palmyra, a Palmyrene citizen named Yarhai served as the satrap of the *Thilouanoi*, that is, the inhabitants of Thiloua/os (Tylos) for the king of Charax, Meredat. Coins issued by Meredat in A.D. 142 identify him as *basileus Oman*.[175] A text from Palmyra dated to A.D. 157 refers to "the merchants who have returned from Scythia [viz. India] in the fleet of Honainu (HNYNW), son of Haddudan (HDWDN)" and, as noted above, the latest Palmyrene caravan inscription mentioning Charax dates to A.D. 193.

Archaeologically, we have evidence from the first and early second century A.D. of a major site, possibly ancient Omana, at ed-Dur on the coast of Umm al-Qaiwain.[176] Contemporary finds are known from Mleiha, in Sharjah[177]; the tombs[178] and Qalat of Bahrain[179]; graves in eastern Saudi Arabia[180]; and a squatter settlement in the Seleucid fortress on Failaka. A rich mix of imports has been found on these sites. Numismatic evidence includes small numbers of late Seleucid, Characene, Elymaean, Parthian, Persid, Kushan, and Indian coins.[181] Roman glass has been found in sizable quantities at both ed-Dur[182] and Mleiha. Western, Roman ceramics (*terra sigillata)*,[183] amphora fragments inscribed with incuse letters[184]; Indian red-polished ware; and Namord ware from Kerman or Baluchistan[185] have also been recovered.

This is a period in which a sizable production of local coinage occurred, mainly in southeastern Arabia. At Mleiha a coin mold was discovered[186] while at ed-Dur hundreds of coins have been found both in hoards and scattered across the surface of the site. Like the earlier coinage from this region, these later issues are modeled on those of Alexander the Great, but the obverse head of Heracles is now much more debased than in the earlier issues, while the seated figure of Zeus on the reverse is sometimes abstracted into a stick figure, and the coin legends are in Aramaic.[187] The name of a king called Abi'el is repeated on most of this coinage, albeit often defectively written, and sometimes with a patronymic. The circulation of these coins, many of which are in base metal while some are in silver, was limited almost entirely to northeastern and southeastern Arabia, although at least one example has appeared in South Arabia. At Mleiha, the small, square fort with which the coin mold was associated may have been the seat of Abi'el's domain.

Late Parthian involvement in the affairs of the Gulf has often been inferred from the accounts of Ardashir's conquest of southern Iran (e.g., in the *Karnamak i Ardashir i Papakan*, Tabari and Ibn al-Athir), which refer to a Parthian vassal king named Haftanboxt (Haftavad of Ferdowsi's *Shahnama*) who ruled along the "coasts of the Persian Sea."[188] However, there has been too little archaeological work in coastal Iran to identify any of his "numerous castles." Similarly, in describing Ardashir's campaigns against Oman, Bahrain, and Yamama, the historians Tabari, Dinawari, and Ibn al-Athir say that he encountered and defeated a ruler named Sanatruq in northeastern Arabia. Some scholars have suggested a confusion made by a copyist between the toponym *Hatta*, a designation for a district in eastern Saudi Arabia, and *Hatra*, in northern Iraq, where Sanatruq (SNTRWQ) was a name attested in the ruling dynasty.[189] The name Sanatruq, however, was also attested in Adiabene (a kingdom and later satrapy of Parthia, located in the area of the Greater and Lesser Zab rivers in northeastern Iraq) and we should not exclude the possibility that a Parthian vassal by this name ruled over the district of Bahrain (by which the mainland, and not the island, is meant in the Arabic sources) during the early third century A.D.

With the rise of Ardashir in the first half of the third century, and the founding of the great Sasanian dynasty that ruled Persia from A.D. 224 to A.D. 642 , the Persian Gulf, so long a corridor of Characene and Palmyrene trade with the East, became a "Sasanian lake."[190] Almost a century after Ardashir's campaigns, eastern Arabia was devastated by Shapur II,[191] and although there are lacunae in the history of Sasanian political domination in the region, Sasanian control is amply documented in Bahrain (northeastern Arabia) and Mazun (southeastern Arabia),[192] in the centuries that preceded the coming of Islam.[193]

CONCLUSION

Neither the natural resources nor the environment of the Persian Gulf has changed appreciably over the course of the past 6,000 years. Indeed it could be argued that until the development of the cultured pearl and the beginnings of the oil industry, the local economic imperatives in the Persian Gulf were extremely stable. With respect to transshipment or transit trade, the nonlocal commodities changing hands did vary through time, and the organizational means by which they were moved certainly evolved. The administrative arrangements of Lu-Enlila at Ur were a far cry from those of the Dutch or English East India Companies several thousand years later, and the political involvements of neighboring states changed constantly.

The Persian Gulf has over millennia been characterized by contacts, often trade ties with and sometimes political domination by, neighboring states. Foreign trade has always played an important role in providing items not indigenous to the area, and local products such as pearls, dates, horses, and metals were exchanged for goods from far afield, including Iraq, Iran, East Africa, India, China, and the East Indies. A characteristic of long standing was the region's commercial relations with Mesopotamia. In every historical period there was an important port (whose name varied) at the head of the Gulf. Free trade more than political domination was in the interest of the Mesopotamian dynasties, and the Gulf peoples often enjoyed autonomy, for example in the centuries between the fall of the Achaemenids and the rise of the Sasanids.

In antiquity the Persian Gulf possessed highly developed spiritual as well as commercial traditions. For example, there is the religious significance of Dilmun and its deities in Mesopotamian literature. Much later, Failaka was accorded high regard as an isle of cult sanctuaries by the Greeks who accompanied Alexander. Both Judaism and Zoroastrianism were practiced during the Sasanian period. Nestorian Christianity was an integrating force that for three centuries brought the inhabitants of eastern Arabia, Mesopotamia, and southwestern Iran into close relations and helped unite a region that would later embrace Islam.

Throughout the entire period discussed here, the Persian Gulf constitutes a coherent region with remarkable stability in the identities of its subregions: southern Iran, southern Iraq, northeastern Arabia, and southeastern Arabia. In spite of linguistic and demographic changes over the course of six millennia, much of the archaeological record reflects those strong identities. Moreover, the subplots one can detect throughout the long history of this area—intra-Gulf relationships, particular attachments to particular resources and subsistence strategies—seem to have been remarkably consistent, notwithstanding those clear changes at a macropolitical or macroeconomic level which have been documented above. If any lesson is to be derived from these observations, then, it is that a longitudinal history of a region reveals patterns which more detailed studies of narrower slices of time simply cannot expose.

ABBREVIATIONS

(NB: titles of journals are italicized whereas those of a monograph series are not)

AAE	*Arabian Archaeology & Epigraphy*
ABL	R. F. Harper, *Assyrian and Babylonian letters belonging to the Kouyunjik Collections of the British Museum* Chicago: University of Chicago Press, 1892–1914.
BAR	British Archaeological Reports
BBVO	Berliner Beiträge zum Vorderen Orient (Berlin: Reimer Verlag, 1982–present)
CNIP	Carsten Niebuhr Institute Publications (Copenhagen: Museum Tusculanum, 1986–present)
DNa	trilingual inscription *a* on the tomb of Darius I at Naqsh-i Rustam
DSe	trilingual inscription *e* of Darius I at Susa
DSaa	Akkadian inscription *aa* of Darius I at Susa
EW	*East and West*
JA	*Journal Asiatique*
JAOS	*Journal of the American Oriental Society*
JASP	Jutland Archaeological Society Publications
JCS	*Journal of Cuneiform Studies*
JOS	*Journal of Oman Studies*
JRAS	*Journal of the Royal Asiatic Society*
MASP	Finkbeiner, U., ed. *Materialien zur Archäologie der Seleukiden- und Partherzeit im südlichen Babylonien und im Golfgebiet.* Tübingen: Wasmuth.
MDP	Mémoires de la Délégation (Archéologique) en Perse (Paris: Geuthner, 1900–present)
Or	*Orientalia*
PF	siglum for texts from the Persepolis fortification
PFIC	D. T. Potts, H. Al Naboodah, and P. Hellyer, eds. 2003. *Archaeology of the United Arab Emirates: Proceedings of the First International Conference on the Archaeology of the UAE* (London: Trident).
PSAS	*Proceedings of the Seminar for Arabian Studies*
TAVO	Tübinger Atlas des vorderen Orients (Weisbaden: Ludwig Reichert Verlag, 1972–present)
TMO	Travaux de la Maison de l'Orient (Lyon: Maison de l'Orient, 1980–present)
ZA	*Zeitschrift für Assyriologie*

NOTES

1. For sites in the interior of Laristan, see R. Pohanka, *Burgen und Heiligtümer in Laristan, Südiran* (Vienna, Austria: Sitzungsber. d. Österreichische Akad. d. Wiss., phil.-hist. Kl. 466 [= Veröffentlichungen der Iranischen Kommission 19], 1986); D. Schön, *Laristan - eine südpersische Küstenprovinz* (Vienna: Sitzungsber. d. Österreichische Akad. d. Wiss., phil.-hist. Kl. 553 [= Veröffentlichungen der Iranischen Kommission 24], 1990). In 2004 D. Kennet, University of Durham, began a survey program around Minab, inland from the Strait of Hormuz.
2. M. Pézard, *Mission à Bender Bouchir* (MDP 15, 1914); D. Whitehouse and A. G. Williamson, "Sasanian Maritime Trade," *Iran* 11 (1973): 29–49; D. Whitcomb, "Bushire and the Angali Canal," *Mesopotamia* 22 (1987): 311–36. New survey work was conducted around Bushehr and its hinterland in 2004. See R. A. Carter, K. Challis, S. M. N. Priestman, and H. Tofighian, "The Bushehr Hinterland: Results of the First Season of the Iranian-British Archaeological Survey of Bushehr Province, November–December 2004," *Iran* 44 (2006): 63–103.

3. M.-J. Steve, *L'île de Kharg: Une page de l'histoire du Golfe persique et du monachisme oriental* (Neuchâtel: Civilisations du Proche-Orient Série I, Archéologie et environnement 1, 2003).
4. See e.g. D. Whitehouse, *The Congregational Mosque and Other Mosques from the Ninth to the Twelfth Centuries* (London: British Institute of Persian Studies [= Siraf III], 1980); N. M. Lowick, *The Coins and Monumental Inscriptions* (London: British Institute of Persian Studies [= Siraf XV], 1985); M. Tampoe, *Maritime Trade between China and the West: An Archaeological Study of the Ceramics from Siraf (Persian Gulf), 8th to 15th Century A.D.* (Oxford: BAR International Series 555, 1989).
5. D. Whitehouse, "Kish," *Iran* 14 (1976): 146–47.
6. See, for example, W. Tomaschek, *Topographische Erläuterung der Küstenfahrt Nearchs vom Indus bis zum Euphrat* (Vienna, Austria: Sitzungsberichte der Kais. Akad. d. Wiss. in Wien, phil.-hist. Cl. 121 (1890), 1–88; A. Berthelot, "La côte méridionale de l'Iran d'après les géographes grecs" in *Mélanges offerts à M. Octave Navarre par ses élèves et ses amis* (Toulouse, France: Edouard Privat, 1935), 11–24. D. T. Potts, "The Islands of the XIVth Satrapy," in *Draya tya hacâ Pârsâ aitiy: Essays on the Archaeology and History of the Persian Gulf Littoral,* ed. K. Abdi (Oxford: Archaeopress, in press).
7. H. Rawlinson, "Notes on Capt. Durand's Report upon the Islands of Bahrain," *JRAS* 12 (1880): 13–39.
8. Since the 1920s claims have been made for the discovery of Palaeolithic stone tools at numerous sites in eastern Arabia, but most of these proved to be incorrect. More recently, evidence has begun to mount and, with the benefit of modern methods of lithic study, it now seems that there are indeed sites of Palaeolithic date in the Oman peninsula (e.g., S. McBrearty, "Earliest stone tools from the Emirate of Abu Dhabi, United Arab Emirates," in *Fossil Vertebrates of Arabia,* ed. P. J. Whybrow and A. Hill (New Haven, CT and London: Yale University Press, 1999), 373–88. Recently, archaeologists working in Abu Dhabi have discovered more tools of Palaeolithic type at Barakah, in western Abu Dhabi and at Jabal Faya, in the interior of Sharjah.
9. K. Lambeck, "Shoreline Reconstructions for the Persian Gulf since the Last Glacial Maximum," *Earth and Planetary Science Letters* 142 (1996): 43–57; J. T. Teller, K. W. Glennie, N. Lancaster, and A. K. Singhvi, "Calcareous Dunes of the United Arab Emirates and Noah's flood: The Postglacial Reflooding of the Persian (Arabian) Gulf," *Quaternary International* 68–71 (2000): 297–308.
10. Pleistocene is the term given to the geological era extending from ca. 1.8 million to 10,000 years ago. Holocene refers to the period since the end of the Pleistocene and hence encompasses our own era.
11. R. Dalongeville and P. Sanlaville, "Confrontation des datations isotopiques avec les donnés géomorphologiques et archéologiques: A propos des variations relatives du niveau marin sur la rive arabe du Golfe persique," in *Chronologies in the Near East,* ed. O. Aurenche, J. Évin, and F. Hours (Oxford: BAR International Series 379 (1987), 568–83; P. Sanlaville, R. Dalongeville, J. Évin, and R. Paskoff, "Modification du tracé littoral sur la côte arabe due Golfe persique en relation avec l'archéologie," in *Déplacements des lignes de rivage en Méditerranée* (Paris: Éditions du CNRS, 1987), 211–22.
12. R. Dalongeville, "L'environnement du site de Tell Abraq," in *A Prehistoric Mound in the Emirate of Umm al-Qaiwain: Excavations at Tell Abraq in 1989,* D. T. Potts (Copenhagen, Denmark: Munksgaard, 1990), 139–40; R. Boucharlat, R. Dalongeville, A. Hesse, and M. Millet, "Occupation humaine et environnement au 5e et au 4e millénaire sur la côte Sharjah-Umm al-Qaiwain (UAE)," *AAE* 2 (1991): 93–106; P. Bernier, R. Dalongeville, B. Dupuis, and V. de Medwecki, "Holocene Shoreline Variations in the Persian Gulf: Example of the Umm al-Qowayn Lagoon (UAE)," *Quaternary International* 29–30 (1995): 95–103.
13. See Lambeck (note 9).
14. R. Dalongeville, "Présentation physique générale de l'île de Failaka," in Y. Calvet and J. Gachet, eds., *Failaka fouilles françaises 1986–1988* (TMO 18, 1990), 39.

15. See for example, R. Carter, H. Crawford, S. Mellalieu, and D. Barrett, "The Kuwait-British Archaeological Expedition to As-Sabiyah: Report on the First Season's Work," *Iraq* 61 (1999): 43–58.
16. For example M. Piperno, "Jahrom, a Middle Palaeolithic Site in Fars, Iran," *EW* 22 (1972): 183–97; M. Piperno, "Upper Palaeolithic Caves in Southern Iran: Preliminary report," *EW* 24 (1974): 9–13; M. Rosenberg, *Paleolithic Settlement Patterns in the Marv Dasht, Fars Province, Iran* (Ann Arbor, MI: University Microfilms, 1988).
17. See generally P. E. L. Smith, *Paleolithic Archaeology in Iran* (Philadelphia, PA: American Institute of Iranian Studies, Monograph 1, 1986).
18. D. T. Potts, *Mesopotamian Civilization: The Material Foundations* (Ithaca, NY: Cornell University Press, 1997), 52; J. Zarins, "The Early Settlement of Southern Mesopotamia: A Review of Recent Historical, Geological, and Archaeological Research," *JAOS* 112 (1992): 55–77.
19. J. Zarins, "Archaeological and Chronological Problems within the Greater Southwest Asian Arid Zone, 8500–1850 b.c.," in *Chronologies in Old World Archaeology*, ed. R. W. Ehrich, 3rd ed. (Chicago: University of Chicago Press, 1992), 42–62.
20. For example P. Biagi, "An Early Palaeolithic Site Near Saiwan (Sultanate of Oman)," *AAE* 5 (1994): 81–88.
21. H. Amirkhanov, "Research on the Palaeolithic and Neolithic of Hadramaut and Mahra," *AAE* 5 (1994): 217–28; H. Amirkhanov, *The Paleolithic in South Arabia* [in Russian] (Moscow: Nauka, 1991); N. M. Whalen and K. E. Schatte, "Pleistocene Sites in Southern Yemen," *AAE* 8 (1997): 1–10.
22. The literature on this topic is vast, but see A. G. Parker, G. Preston, H. Walkington, and M. J. Hodson, "Developing a Framework of Holocene Climatic Change and Landscape Archaeology for the Lower Gulf Region, Southeastern Arabia," *AAE* 18 (2007): 125–30. Also U. Neff, S. J. Burns, A. Mangini, M. Mudelsee, D. Fleitmann, and A. Mattar, "Strong Coherence between Solar Variability and the Monsoon in Oman between 9 and 6 k yr Ago," *Nature* 411 (2001): 290–93.
23. See for example O. Bar-Yosef and R. H. Meadow, "The Origins of Agriculture in the Near East," in *Last hunters, First Farmers: New Perspectives on the Prehistoric Transition to Agriculture,* ed. T. D. Price and A. B. Gebauer (Santa Fe, NM: School of American Research Press, 1995), 39–94.
24. S. Cleuziou and M. Tosi, "Hommes, climats et environnements de la Péninsule arabique à l'Holocène," *Paléorient* 23 (1998): 121–35.
25. For example, M. Beech, "The Development of Fishing in the UAE: A Zooarchaeological Perspective," PFIC (2003), 290–308, with bibliography. Also M. Beech, *In the Land of the Icthyophagi: Modelling Fish Exploitation in the Arabian Gulf and Gulf of Oman from the 5th Millennium B.C. to the Late Islamic Period* (Oxford: British Archaeological Reports International Series 1217 [=Abu Dhabi Islands Archaeological Survey Monograph 1], 2004.
26. For example, E. Glover, "Molluscan Evidence for Diet and Environment at Saar in the Early Second Millennium B.C.," *AAE* 6 (1995): 157–79.
27. J. Frazier, "Prehistoric and Ancient Historic Interactions between Humans and Marine Turtles," in *The Biology of Sea Turtles*, vol. 2, ed. P. L. Lutz, J. A. Musick, and J. Wyneken (Boca Raton, FL: CRC Press, 2003), 3–6.
28. H. Jousse, M. Faure, C. Guérin, and A. Prieur, "Exploitation des ressources marines au cours des Ve-IVe millénaires: Le site à dugongs de l'île d'Akab (Umm al-Qaiwain, Émirats Arabes Unis)," *Paléorient* 28 (2002): 43–60; H. Jousse and C. Guérin, "Les dugongs (Sirenia, Dugongidae) de l'Holocène ancien d'Umm al-Qaiwain (Émirats Arabes Unis)," *Mammalia* 67 (2003): 337–47.
29. See for example, W. Lancaster and F. Lancaster, "Tribe, Community and the Concept of Access to Resources: Territorial Behaviour in South-East Ja'alan," in *Mobility and Territoriality: Social and Spatial Boundaries among Foragers, Fishers, Pastoralists and Peripatetics,* ed. M. J. Asimov and A. Rao (Oxford and Providence, RI: Berg, 1992), 343–63; J. C. Wilkinson, *Water and Tribal Settlement in South-Eastern Arabia* (Oxford: Clarendon Press, 1977).

30. H.-P. Uerpmann, M. Uerpmann, and S. A. Jasim, eds., *Funeral Monuments and Human Remains from Jebel al-Buhais* (Sharjah, UAE and Tübingen, Germany: Department of Culture and Information and Kerns Verlag, 2006). For the human remains, see H. Kiesewetter, "Analyses of the Human Remains from the Neolithic Cemetery at al-Buhais 18" (Excavations 1996–2000), 2006, 103–380.
31. S. Cleuziou and L. Costantini, "Premiers éléments sur l'agriculture protohistorique de l'Arabie oriental," *Paléorient* 6 (1980): 245–51.
32. J. M. Marsh, I. Sagaby, and R. R. Sooley, "A Groundwater Resources Databank in the Kingdom of Saudi Arabia," *Journal of the Geological Society of London* 138 (1981): 599–602.
33. D. T. Potts, "Contributions to the Agrarian History of Eastern Arabia II. The Cultivars," *AAE* 5 (1994): 236–75.
34. G. Willcox and M. Tengberg, "Preliminary Report on the Archaeobotanical Investigations at Tell Abraq with Special Attention to Chaff Impressions in Mud Brick," *AAE* 6 (1995): 129–38.
35. H.-P. Uerpmann, "Problems of archaeo-zoological research in Eastern Arabia," in P. M. Costa and M. Tosi, eds., *Oman Studies: Papers on the Archaeology and History of Oman* (Rome: Serie Orientale Roma 63, 1989), 164; M. Uerpmann, H.-P. Uerpmann, and S. A. Jasim, "Stone Age Nomadism in SE Arabia: Palaeo-Economic Considerations on the Neolithic Site of Al-Buhais 18 in the Emirate of Sharjah, UAE," *PSAS* 30 (2000): 229–34; H. Kallweit, "Remarks on the Late Stone Age in the UAE," PFIC (2003): 61–63.
36. H. Kapel, *Atlas of the Stone Age Cultures of Qatar* (JASP 6, 1967), 18.
37. See generally M. Uerpmann, "Structuring the Late Stone Age of Southeastern Arabia," *AAE* 3 (1992): 65–109; R. H. Spoor, "Human Population Groups and the Distribution of Lithic Arrowheads in the Arabian Gulf," *AAE* 8 (1997): 143–60.
38. Lancaster and Lancaster, "Tribe, Community and the Concept of Access to Resources," 345.
39. The bibliography on this topic is long. For earlier material and a good overview of the problem see M. Uerpmann and H.-P. Uerpmann, "'Ubaid Pottery in the Eastern Gulf – New Evidence from Umm al-Qaiwain (UAE)," *AAE* 7 (1996): 125–39.
40. Again, there is an enormous bibliography on this topic. For the most recent statement see J. Oates, "Ubaid Mesopotamia revisited," in K. von Folsach, H. Thrane, and I. Thuesen, eds., *From Handaxe to Khan: Essays Presented to Peder Mortensen on the Occasion of His 70th birthday* (Aarhus, Denmark: Aarhus University Press, 2004), 87–104 with extensive bibliography.
41. R. Carter, "Ubaid-Period Boat Remains from As-Sabiyah: Excavations by the British archaeological expedition to Kuwait," *PSAS* 32 (2002): 13–30. Also J. Connan, R. Carter, H. Crawford, M. Tobey, A. Charrié-Duhaut, D. Jarvie, P. Albrecht, and K. Norman, "A Comparative Geochemical Study of Bituminous Boat Remains from H3, As-Sabiyah (Kuwait), and RJ-2, Ra's al-Jinz (Oman)," *AAE* 16 (2005): 21–66.
42. For more background on Mesopotamia in the Ubaid period, see the papers in E. F. Henrickson and I. Thuesen, eds., *Upon This Foundation: The 'Ubaid Reconsidered* (Copenhagen, Denmark: CNIP, 1989), 10; R. Matthews, *The Early Prehistory of Mesopotamia: 500,000 to 4,500 b.c.* (Turnhout, Belgium: Brepols, 2000).
43. Cf. W. Dostal, *The Traditional Architecture of Ras al-Khaimah (North)* (Wiesbaden, Germany: TAVO, Beheft B 54, 1983).
44. M. Uerpmann, "The Dark Millennium: Remarks on the Final Stone Age in the Emirates and Oman," PFIC, 74–81.
45. Jousse, Faure, Guérin, and Prieur, "Exploitation des ressources marines au cours des Ve-IVe millénaires"; Jousse and Guérin, "Les dugongs (Sirenia, Dugongidae) de l'Holocène ancien d'Umm al-Qaiwain (Émirats Arabes Unis)."
46. A. Prieur and C. Guérin, "Découverte d'un site préhistorique d'abattage de dugongs à Umm al-Qaiwain (Emirats Arabes Unis)," *AAE* 2 (1991): Figs. 4–5.
47. P. Biagi, "A Radiocarbon Chronology for the Aceramic Shell-Middens of Coastal Oman," *AAE* 5 (1994): 17–31.

48. R. K. Englund, "Dilmun in the Archaic Uruk Corpus," in *Dilmun: New studies in the Archaeology and Early History of Bahrain*, ed. D. T. Potts, BBVO 2 (1983), 35–37; H. J. Nissen, "Ortsnamen in den archaischen Texten aus Uruk," *Or* 54 (1985): 226–33.
49. D. T. Potts, *Miscellanea Hasaitica* (CNIP 9, 1989); J. Zarins, "Eastern Saudi Arabia and External Relations: Selected Ceramic, Steatite and Textual evidence—3500–1900 b.c.," in *South Asian Archaeology 1985*, ed. K. Frifelt and P. Sørensen (Copenhagen, Denmark: Scandinavian Institute of Asian Studies Occasional Paper 4, 1989): 74–103.
50. The texts can be found in several different compilations. Perhaps the most convenient source for all of the texts relating to Dilmun (and Magan) is W. Heimpel, "Das untere Meer," *ZA* 77 (1987): 22–91.
51. The literature on copper ores and copper metallurgy in Oman is large. For a convenient source with full bibliography, see now L. R. Weeks, *Early Metallurgy of the Persian Gulf: Technology, Trade and the Bronze Age World* (Boston and Leiden, Netherlands: Brill, 2003).
52. D. T. Potts, "Eastern Arabia and the Oman Peninsula during the Late Fourth and Early Third Millennium B.C.," in *Ǵamdat Nasr: Period or Regional Style?*, ed. U. Finkbeiner and W. Röllig (Wiesbaden, Germany: TAVO, Beiheft B 62, 1986), 121–70.
53. Occupation at the settlement of Hili 8 may have begun around 3000 B.C., coeval with the Hafit tomb tradition, but I have queried the C14 dates and suggested these may have been run on charcoal from timber that was already old when it was used. For the arguments, see D. T. Potts, "Re-writing the Late Prehistory of Southeastern Arabia: A Reply to Jocelyn Orchard," *Iraq* 59 (1997): 63–71.
54. The argument has been made for the later Umm an-Nar graves and would apply to the Hafit graves as well since these are also collective, albeit involving fewer individuals. See K. W. Alt, W. Vach, K. Frifelt, and M. Kunter, "Familienanalyse in kupferzeitlichen Kollektivgräbern aus Umm al-Nar, Abu Dhabi," *AAE* 6 (1995): 65–80.
55. There is a very large bibliography on Umm an-Nar tombs. For a recent discussion with extensive bibliography see S. Blau, "Fragmentary Endings: A Discussion of 3rd-Millennium b.c. Burial Practices in the Oman Peninsula," *Antiquity* 75 (2001): 557–70. On the skeletal remains in these tombs and what they can tell us, see S. Blau, "Limited yet informative: Pathological alterations observed on human skeletal remains from third and second millennia B.C. collective burials in the United Arab Emirates," *International Journal of Osteoarchaeology* 11 (2001): 173–205.
56. Named after Mortella on Corsica, these round towers are attested as early as the fifteenth century. They became particularly popular in the Napoleonic era. With a height of up to 12 meters and extremely thick walls, these towers could withstand cannon fire. An elevated surface near the top served as a gun platform. See S. Sutcliffe, *Martello Towers* (Newton Abbot: David and Charles, 1972).
57. D. T. Potts, "Before the Emirates: An archaeological and historical account of developments in the region c. 5000 B.C. to 676 A.D.," in *United Arab Emirates: A New Perspective*, ed. I. Al Abed and P. Hellyer (London: Trident, 2001), 40 with earlier bibliography.
58. S. Méry, *Les céramiques d'Oman et l'Asie moyenne: Une archéologie des échanges à l'Âge du Bronze* (Paris: Éditions du CNRS, 2000).
59. Weeks, *Early Metallurgy of the Persian Gulf*.
60. H. David, "Styles and Evolution: Soft Stone Vessels during the Bronze Age in the Oman Peninsula," *PSAS* 26 (1996): 31–46.
61. All of the relevant texts can be found in W. Heimpel, "Das untere Meer," *ZA* 77 (1987): 22–91.
62. A. Millard, "Cypriot Copper in Babylonia, c. 1745 B.C.," *JCS* 25 (1973): 211–13.
63. See, for example, D. T. Potts, *Ancient Magan: The Secrets of Tell Abraq* (London: Trident, 2000); D. T. Potts, "Tepe Yahya, Tell Abraq and the chronology of the Bampur sequence," *Iranica Antiqua* 38 (2003): 1–24.
64. D. T. Potts, "Anshan, Liyan and Magan c. 2000 B.C.," in *Yeki bud, yeki nabud: Essays on the Archaeology of Iran in Honor of William M. Sumner*, ed. N. Miller and K. Abdi (Los Angeles: Cotsen Institute of Archaeology, 2003), 156–59.
65. S. Méry, *Les céramiques d'Oman et l'Asie moyenne: Une archéologie des échanges à l'Âge du Bronze* (Paris: Éditions du CNRS, 2000).

66. P. Amiet, *L'âge des échanges inter-iraniens, 3500–1700 avant J.-C.* (Paris: Notes et documents des Musées de France 11, 1986), 150; S. Cleuziou, G. Gnoli, C. Robin, and M. Tosi, "Cachets inscrits de la fin du IIIe millénaire av. notre ère à Ras' al-Junayz, Sultanat d'Oman," *Comptes Rendus de l'Académie des Inscriptions & Belles-Lettres 1994* (1994): 453–68. S. Cleuziou and M. Tosi, *In the Shadow of the Ancestors: The Prehistoric Foundations of the Early Arabian Civilization in Oman* (Muscat: Ministry of Heritage and Culture, 2007).
67. See most recently S. Ratnagar, "Theorizing Bronze-Age Intercultural Trade: The Evidence of the Weights," *Paléorient* 29 (2003): 79–92.
68. S. Cleuziou, "Early Bronze Age Trade in the Gulf and the Arabian Sea: The Society behind the Boats," PFIC (2003), 145.
69. See generally M. Liverani, *Akkad, the First World Empire: Structure, Ideology, Traditions* (Padua: Sargon, 1993).
70. See generally D. T. Potts, *The Archaeology of Elam: Formation and Transformation of an Ancient Iranian State* (Cambridge: Cambridge University Press, 1999).
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