In 1907, acting Australian prime minister Sir John Forrest wrote to a Mrs. Cornish in response to her request for a reference for her husband, Hamlet, a man who had assisted Forrest some years earlier during an expedition to North West Australia. The prime minister assured her that he remembered her husband “very well” and had even presented him with a gun.¹ While Forrest may have remembered Cornish, historians have largely ignored him even though he left behind a rare account of late nineteenth-century North West Australia, a manuscript that is all that much more unique because it provides rare insights into the region’s
Northern Australia, where the last major phase in the history of pearling in the Indian Ocean occurred, encompasses some three thousand miles of discontinuous pearl fisheries that reached from Cooktown in northern Queensland to Shark Bay in Western Australia (map 7.1). Commercial pearling began along the Western Australian coast during the 1850s with pearling ports subsequently developing at Cossack (1860s) and Broome (1884). The industry became increasingly profitable...
and, together with the Torres Strait and Queensland fisheries, was for a time perhaps the most lucrative export industry in the Australian colonies (map 7.2). The Northern Australian industry became enmeshed with the Southeast Asian pearl fisheries in the Aru Islands, the Moluccas, and the Sulu Archipelago. Asian workers were brought to Australia to work as pearl divers alongside Aboriginal and white divers, a practice which led to the creation of diverse communities in places such as Thursday Island, Cooktown, Darwin, Broome, and Cossack.

By 1880, the year in which Hamlet Cornish first travelled to North West Australia, pearling luggers had long functioned beyond the colonial administration’s control. The pearling vessels that operated along the coast were often owned by white pastoralists and crewed by Aboriginal people. By 1880, the demand for labor in both the local pastoral and pearling economies was very high, so much so that “it became difficult to procure divers…. The pearlers...[resorted] to impressing the blacks into service [and] skilled fishermen were brought in from the Malay Archipelago, and in some cases the methods used in securing them were by no means regular.” Cornish’s manuscript provides us with rare account of the hostility and forced mobility to which these Aboriginal pearling laborers were subjected. Shortly after arriving on the coast, Cornish reported that “Just as we are about to camp a native comes towards us.... I recognize him as one who had been pearling; he gives us to understand that the natives are not afraid of the white fellow, and that they were going to kill us.... We told him to tell the native we would fight them.”

MAP 7.2. Indian Ocean and Southeast Asia showing centers for pearling.
Unfortunately, it is unclear how Cornish recognized that this Aboriginal man was a pearlshell diver. He probably spoke at least some English or the patois that was spoken by the mixed Aboriginal, Asian, and European crews that manned pearling luggers, or he may have worn some articles of European clothing. Months later, Cornish reported that he had encountered a party of whites searching “for their natives that [had] run away from the pearling grounds.” Accompanying this group was an Aboriginal man, Neah, who had apparently also once been Cornish’s employee. These reports suggest that parties of pearlers regularly operated “beyond the frontier” to secure needed Aboriginal labor by force. His account reveals that the principal pearling fleet during the 1880s operated in the general vicinity of the Dampier Archipelago and other offshore islands of the Pilbara. He also reports that Aboriginal divers were highly valued, and that they could “free dive” to a depth of ten fathoms. The hazards that impinged on these divers’ lives included the threat of sharks, poor treatment by whites, diseases associated with a poor diet while at sea, and the risk of cyclones.

Cornish’s account raises a number of questions about how the history of pearling in North West Australia fits into the history of pearling in the wider Indian Ocean world. The paucity of historical documentation about the kind of colonial frontier he describes, coupled with the existence of a significant number of sites known to be associated with pearling, makes historical archaeology an ideal vehicle to expand our knowledge and understanding of this otherwise “hidden history.” Historical archaeology also promises to deepen our understanding of how the Australian pearl fisheries compared with those in other parts of the Indian Ocean. Historical archaeological research elsewhere in the world, and especially in the Americas and Africa, provides a substantial body of work on topics such as labor and labor relations, ethnogenesis, creolization, and other cultural developments with which North West Australia can be compared. This chapter seeks accordingly to examine the Australian experience with pearling from a broader, multidisciplinary perspective, with a particular focus on a number of key themes: the ways in which humans have valued pearl products; human mobility across economic “frontiers”; the role that race and ethnicity played in how this industry was structured; and the connections between people, commodities, and markets that characterized the human story of the Indian Ocean from prehistory into the colonial era.
PEARL FISHERIES OF THE INDIAN OCEAN

Although pearl and pearl shell are among the most popularly traded animal products in the Indian Ocean since prehistory, there have been no substantive attempts to synthesize archaeological and historical information about these fisheries. Doing so requires us to remember that natural or wild pearls are rare and that acquiring even one necessitates the collection of many hundreds of pearl oysters or, in the case of freshwater pearls, mussels. In the Indian Ocean world, mother-of-pearl from the shell of the oyster has long been valued for decorative and functional objects, while pearls were highly valued luxury items of trade and consumption from the earliest recorded times to the modern age. Pearls and pearl shell produced by mollusks were valued because of their rarity and exoticness, values that were subsequently eroded with the invention of the “cultured” or “artificial” pearl in the twentieth century.

Major pearling industries have existed in at least three zones in the wider Indian Ocean world: the Persian Gulf, the waters between India and Sri Lanka, and an area extending from Northern Australia into the Indonesia archipelago (map 7.2). As noted earlier, significant pearling industries existed during the latter part of the nineteenth century along the vast Western Australian coast from Shark Bay in the south to the Kimberley in the north. Other significant pre-1900 colonial-era pearling fields existed in the Torres Strait between the tip of Cape York in Queensland and Papua New Guinea, as well as around the island of Aru in eastern Indonesia. Other areas such as the Mergui Islands south of Myanmar (Burma) were also investigated as potential commercial pearling fields during the late nineteenth century. Other noteworthy pearl fisheries, which are beyond the scope of this chapter, include those in Japan and the Sulu Sea adjacent to the Philippines.

While we usually think about the importance of pearls only during the modern era, the economic and noneconomic value placed on pearl shell has a much richer prehistory. The oldest evidence in the Indian Ocean for human exploitation of pearl shell comes from the Widgingarri rockshelter in North West Australia, a site which contains evidence of Kimberley pearl shell brought from the Pleistocene coast three hundred kilometers away. The evidence from this site confirms that Australian Aboriginal people used marine shell during the Pleistocene for both utilitarian and decorative purposes and that some of the world’s oldest
known body ornaments are necklaces made from shell taken along Australia’s Indian Ocean coast. The oldest known pearl from an Australian site comes from the Kimberley coastal site of Brremangurey where it was found in an oyster-shell midden formed two thousand years ago.

Pearl shell continued to be valued by Aboriginal societies in more recent times (figs. 7.1 and 7.2). It was transported from the coast to communities thousands of kilometers away in central Australia by exchange networks. In the Kimberley region today undecorated pearl shell is called *guwan* and shell that has been decorated with engraving and pigment is called *riji*. Guwan and riji play an important role in Aboriginal ceremonies and dances that are performed to maintain complex indigenous social relationships. Aboriginal people value the brilliance and shimmer of mother-of-pearl (nacre), which symbolizes water and life. When used correctly, riji are believed to be capable of bringing rain, healing and attracting other people, and determining guilt.

The Australian evidence reminds us that pearls and pearl shell have no intrinsic shared universal value, and that humans are attracted to its aesthetic attributes in culturally defined ways. On the other side of

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**FIGURE 7.1.** Aboriginal men wearing pearl shell, North West Western Australia, late nineteenth / early twentieth century. (State Library of Western Australia, BA888/2, sourced from the collections of the State Library of Western Australia and reproduced with the permission of the Library Board of Western Australia.)
FIGURE 7.2. Montage of three images portraying the pearling industry, Australia, c. 1887. (Courtesy of the National Library of Australia, PIC/11565/104 LOC COLD STORE PIC KER BOX 6.)
the Indian Ocean, the oldest known pearls occur in sites in the Persian Gulf, where they have been collected for thousands of years. The oldest archaeological example of a pearl in the Indian Ocean, a pierced pearl bead dating to 5300 BCE, comes from the site of As-Sabiyah in northern Kuwait. Archaeological excavations at As-Sabiyah have revealed a small coastal community of herders, fishers, and traders who used shell to make jewelry, including mother-of-pearl decorative plaques. The discovery of pearls and mother-of-pearl ornaments at various sites indicate that pearl fishing was practiced throughout the Neolithic. As burials at the coastal sites of Umm al-Quwain and in the graveyard at Suwayh on the Oman Peninsula reveal, pearls were used in funerary settings. The existence of coastal middens highlight the wider economic value of shellfish such as oysters and clams, while the excavation of various artifacts demonstrates that mother-of-pearl shell was important in the production of implements such as fish hooks and buttons.

As a mid-fifth-millennium BCE cemetery at Jebel al-Buhais, Sharjah, reveals, Arabian Neolithic communities transported large numbers of pearls inland from the coast: sixty-two pearls were found at the site along with other valuable products, such as carnelian beads. The distribution pattern of Neolithic sites that contain pearls and economic pearl shell in the southern Gulf and Oman suggest the existence of widely distributed pearl fisheries in the Persian Gulf, the Gulf of Oman, and the Arabian Sea. Similar sites probably also existed along the Iranian coast on the Persian Gulf’s northern shore. It is possible that pearls were traded beyond the Gulf into Mesopotamia by a commercial network that provided a large number of coastal and inland locations in northern Arabia with access to Mesopotamian al-Ubaid ceramics.

Less evidence exists for pearl fisheries during the later Neolithic, perhaps because a period of greater aridity reduced the intensity of human settlement in the region. However, by the early fourth millennium BCE, there is evidence that pearlaring was again linked to the emerging city-states in the region. The discovery of a string of pearls at the city of Uruk (Warka) in southern Iraq indicates as much, while mother-of-pearl shell is associated with inlaid objects from the Royal Cemetery at Ur (mid-third millennium BCE). In his overview of the history of Gulf pearl fisheries, Robert Carter concludes that despite the importance of luxury goods in Bronze Age regional trade, pearls and pearl shell were not especially important trade items at that time.
However, archaeological materials from the Gulf, and especially from burials, indicate that this situation changed during the first millennium BCE. The Epic of Gilgamesh, for example, contains an early account of Gulf pearl diving: “Heavy stones he tied to his feet / and they pulled him down to the Ocean below / He took the plant, and pulled it up, and lifted it / the heavy stones he cut loose from his feet / and the sea cast him up on the shore.”

The trade in pearls and pearl shell from the Gulf to elite markets in Mesopotamia and further afield continued during the Greek and Roman periods. Historical accounts speak, for example, of the importance of the Bahrain fisheries. The Greek author Theophrastus (371–287 BCE), for one, reports that “the dimensions of the pearl are those of a fish’s eye of large size, and is produced off the coast of India and certain islands in the Red Sea [meaning western Indian Ocean].” Pliny’s Natural History reports that Gulf pearls were considered the most valuable in the ancient world:

The first place therefore and the topmost rank among all things of price is held by pearls. These are sent chiefly by the Indian Ocean, among the huge and curious animals that we have described as coming across all those seas over that wide expanse of lands from those burning heats of the sun. And to procure them for the Indians as well, men go to the islands—and those quite few in number: the most productive is Ceylon, and also Stoidis, as we said in our circuit of the world, and also the Indian promontory of Perimula; but those round Arabia on the Persian Gulf of the Red Sea are specially praised.

Archaeological evidence from the Mediterranean, the Gulf, and West Asia support these ancient accounts. When viewed together, the epigraphic, archaeological, and documentary evidence at our disposal points to the existence of an extensive trade network centered on the Indian Ocean, in which, from the first millennium BCE onward, pearls were an important luxury item directed to elites in the Mediterranean world and Asia.

The advent of Islam in the seventh century does not seem to have disrupted the pearl fisheries in the western Indian Ocean. Islamic texts reveal the popularity of pearls as high-status and revered objects.
Medieval authors writing between the tenth and thirteenth centuries, such as the geographers al-Mas’udi and al-Idrisi and the Persian writer Al-Biruni, describe the Gulf fishery. Their accounts reveal that many elements of this fishery remained essentially unchanged from the medieval period until the nineteenth century. Medieval texts describe, for instance, the existence of two parallel extractive systems whereby individual fishermen working as independent divers competed with boat owners who employed paid divers. This was equally true centuries later. Al-Idrisi’s mid-twelfth-century account lists the principal pearl fields and reports that the center of the industry was on the island of Awal (Bahrain), which drew merchants seeking pearls from all parts of the world. Other important pearl fishing areas in the Gulf at that time included Sohar, Damar, Muscat, Al-Jabal, and Julfar. Al-Idrisi refers to three hundred fisheries in the Gulf and notes that these fisheries are “more productive than the seas of India and Yemen.” This industry was also reported to have a fleet of two hundred vessels manned by as many as 2,400 divers and haulers along with merchants and crew.

In the later medieval period the pearl trade was integrated into intercontinental trade routes that linked markets from China to Byzantium. Chinese sources attest to pearls being traded from the early Islamic period onward, not only from the Gulf but also from South Asia. Marco Polo’s purported account of Tabriz suggests that Indian pearls were brought to Hormuz and then Baghdad. Pearls also reached other markets such as Fatimid Egypt and the Byzantine Empire.

The arrival of the Portuguese in the Indian Ocean and the establishment of the Estado da Índia early in the sixteenth century had a direct impact on the pearl industry. Portuguese efforts to dominate existing trade routes led them to target Hormuz, which had controlled the lucrative pearl fisheries in the Gulf during the fourteenth and fifteenth centuries. Following the Portuguese capture of Hormuz in 1507, Gulf pearls were transported to Goa, from whence they were shipped, along with pearls from South India and Sri Lanka, to Europe, where the demand for pearl and pearl shell steadily increased.

The arrival of the Dutch and the English in the Indian Ocean early in the seventeenth century led to a steady erosion of Portuguese power, one consequence of which was that control of pearlring in the Gulf passed to the Persians. The key fisheries at Bahrain, Qatar, and Julfar accordingly exported the majority of their pearls to Surat in India rather than Goa.
Numerous European historical accounts describe the significance of the pearl fisheries, which still used boat-based pearl divers who descended using stone weights. Archaeological work on Al Khor Island has uncovered what have been interpreted as stone diving weights and stone-lined pits used to hold rotting oyster shells; the site, which was first occupied possibly around 1400 CE, was used for many years.36

The Gulf fishery came increasingly under Arab control after the seventeenth century. The centers that emerged were the same as the now-familiar modern pearling centers in the Gulf. These centers brought together Arab and Indian workers as well as African slaves who created a distinctive ethnic, linguistic, and religious community that cannot be considered as a mere annex of either the Iranian or Arab world.37 These developments heralded a shift in how the fisheries were organized, from a system of more centralized control to one composed of segmented fisheries linked to the tribal structures of Arab society. While Gulf pearls were still exported globally, control of the industry remained regional, even as British military and commercial power in the western Indian Ocean grew during the nineteenth century. One consequence of the establishment of this Pax Britannica38 was ever-greater Indian merchant involvement in shipping Gulf pearls to India for global distribution. Indians also played an important role as regional bankers beginning in the eighteenth century and Indian rupees circulated regularly in pearling ports.39

Pearls and pearling remained a central feature of social and economic life in the Gulf into the twentieth century.40 Many khaliji were involved in pearling and the industry produced much of the Gulf’s wealth. Pearling was, however, physically punishing and pearl divers’ lives were short.41 This reality encouraged the development after the eighteenth century of the kind of multiethnic workforce and hybrid society not found in many other parts of the Middle East. Nelida Faccaro, for example, describes two axes of urban life in the Gulf during the nineteenth century: the shantytowns (barasti) that were home to often destitute immigrants who supplied the labor needed by the pearling industry, and upper-class neighborhoods in cities such as Dubai where the merchants who marketed pearls were based.42 In addition to Indian laborers who performed many different roles and founded dozens of endogamous communities,43 communities in the Gulf included Africans, some of whom reached the region as slaves.44 The British
struggled during the nineteenth century to reconcile the practices of debt-driven slavery in the Gulf pearling industry with the growing antislavery movement in Europe. While the opening of the Suez Canal in 1869 and the rise of steam navigation in the 1860s heralded a realignment of international maritime trade patterns, pearls remained a significant commodity in the Gulf until the Great Depression suppressed demand for them.

Southern India and the Bay of Bengal have been other important centers for Indian Ocean pearling since antiquity. The pearl fisheries in the Gulf of Mannar off Puttalam in Sri Lanka were particularly important. The ancient Roman geographer Pliny described what he knew as the Taprobane pearl fishery and asserted that Sri Lanka produced more gold and large pearls than the Indians. Sri Lankan accounts describe a high demand for pearls by the kingdom’s nobility as gifts and to adorn clothes and other furnishings. Sri Lankan pearls, together with other luxury items such as gemstones, were probably traded in south Indian ports via intermediaries. Pearls were closely associated with royalty: the king owned the pearling fields, which provided an important source of income to the royal court. Pearls were also highly valued items, along with textiles, ivory, and gold, in the island’s trade with China from the fifth to eighth centuries. The rise of the Srivijaya Empire in Sumatra from the seventh to the thirteenth centuries disrupted Chinese access to the Sri Lankan pearl market. Chinese trade with Sri Lanka was revived, however, during the Ming dynasty (1368–1644), a revival personified by the Chinese admiral Zheng He’s expeditions into the Indian Ocean between 1405 and 1432, expeditions that included a visit to Sri Lanka. Another famous medieval visitor to the region, Ibn Battuta, provided an account of pearling at Mannar; his description highlights the similarities between the pearling industry at Mannar and those in Arabia.

It appears that Muslim merchants in Sri Lanka played an important role from a relatively early date in organizing the island’s pearling industry and export trade in other precious commodities such as gems. The presence of Gulf Arabs among Muslim traders and possibly pearl divers in late medieval Sri Lanka points to the existence of a vast network of mobile merchants and workers. The Portuguese and subsequently the Dutch presence in Sri Lanka did not disrupt the pearl trade and, in fact, facilitated greater access to European markets.
products grew in popularity in Europe as the demand for Asian luxuries and luxury materials increased in places such as Holland during the seventeenth century.

European sources reveal that the Sri Lankan pearling industry was rather conservatively organized. Francis Xavier, for one, visited the pearl fisheries in the early 1540s and observed local Pavara fishermen working for Arab overlords. The next documented shift in the industry occurred three centuries later after Sri Lanka became a British colony. In 1831, a commission recommended the abolition of existing monopolies in order to allow foreigners to play a greater role in the industry. The commissioners also note that pearl fishing techniques remained, as one official puts it, “antediluvian [and] primordial.”55 Some seventy years later, the colony’s superintendent of the pearl fisheries reported that the pearling camp at Marichchukaddi housed 20,000–30,000 people who came from all over Asia.56 Pearl fishing itself, he notes, was actually done by 4,090 Gulf Arab and 4,577 Tamil or Arab divers. Sri Lankan yields declined during the early twentieth century, with the industry’s last profitable years being between 1903 and 1907.57 As in the Gulf, the extraction of natural pearls in Sri Lanka nevertheless continued well into the twentieth century.

As this overview indicates, the extraction, commodification, and movement of pearl and pearl shell in the Indian Ocean world is of considerable antiquity. The rise of complex states and societies in Asia and the Mediterranean triggered a demand for luxury products, including pearl and pearl shell, which moved through complex long-distance trading networks. Major historical developments such as the rise of Islam did little to reduce the international movement of pearls, while the arrival of Europeans in the Indian Ocean probably only increased the market for pearls. Although the Industrial Revolution brought about a multitude of technological changes that revolutionized the production of many consumer goods, the pearling industry itself remained largely unchanged by these innovations. The industry likewise remained dependent on various forms of often highly mobile free and unfree labor. Labor and labor migration are topics of particular interest to both archaeologists and historians, and it is these topics that invite us to compare the pearl fisheries in the Persian Gulf and South Asia with those in North West Australia.
The lack of comparative studies of the pearling industry in the Indian Ocean underscores the need to examine the Australian pearl fisheries in light of pearling elsewhere in the Indian Ocean. A number of topics and issues are of particular comparative importance, including the ways in which labor systems differed between these geographically dispersed industries, how multiethnic settlements developed, and whether new, distinctive, hybrid sociocultural identities arose as a consequence of this interaction between different peoples. Other lines of inquiry include determining what kind of new material goods, cultural practices, and so on pearl trading networks introduced into local or regional communities, and assessing the impact of these introductions. Last, but far from least, is the question at the heart of this volume: How can archaeology deepen our knowledge and understanding of historical developments upon which the archival record may shed little or no light?

Pearling was a significant industry in Australia whose potential was recognized well before the country was colonized by the British in 1788. William Dampier, the first Englishman to explore parts of the Australian coast, reported the presence of pearl shell when he landed at Shark Bay in 1699. Other explorers likewise noted the existence of pearl shell and contemplated its commercial value. Maritime archaeology has yielded evidence of pearl shell extraction during the early nineteenth century that apparently occurred without the knowledge of colonial administrators. The cargo of the wrecked American vessel Cervantes (1840), for example, included pearl shell, presumably extracted from North West Australia a decade before the area’s settlement by Europeans. *Pinctada albina* shells were harvested by entrepreneurs at Shark Bay in 1850, but it was the larger *Pinctada maxima* shells found farther north along the coast, initially at Nickol Bay, that subsequently drove the industry’s growth. Beginning in the 1860s and for three decades thereafter, the port of Cossack was home to the region’s pearling fleet. By the 1880s, however, interest was focused increasingly even farther north to Roebuck Bay (Broome) in the west Kimberley (map 7.2). By the early twentieth century, Broome had the largest pearling fleet in the world. As noted earlier, this industry experienced a significant downturn in the 1920s following the Japanese invention of cultured pearls and suffered even
more when the Great Depression of the 1930s diminished the value of natural pearls still further.

Australia’s early colonies had relied heavily on convict labor, mostly from Britain. The transportation of convicts to Australia, however, basically ceased during the mid-nineteenth century. Although convicts had been sent to Western Australia, they were not allowed to work in the remote regions of the north, and thus did not play a role in the history of Australian pearling. As elsewhere in colonial Australia, Aboriginal people were seen as a potential source of cheap labor. The ways in which these peoples were dispossessed have been a subject of considerable historical interest, as have colonial attitudes about race and the ways in which cheap labor contributed to the nation’s development. Aboriginal peoples have also been the subject of historical archaeological research.

Historical accounts suggest that the frontier created by pearling and white settlement was sometimes characterized by poor treatment of Aboriginal people who were found to be excellent divers. Aboriginal men, women, and children who had been driven from their land worked in colonial fisheries during the early years of their operation. Government officials charged with upholding law and order in the North West often had a personal investment in the nascent pearling industry, and magistrates and justices of the peace used Aboriginal people deemed to have committed a crime, such as breaking the Master and Servant Act, as forced laborers in colonial towns such as Roebourne. The violence that often characterized life on the North West frontier is best illustrated by the massacre that took place at the Flying Foam Passage, the most famous pearling fishery in the north. There, local Yaburara people retaliated against sexual assaults by pearlers by killing two white settlers and a policeman. Several days of mayhem ensued across the Dampier Archipelago after these murders, resulting in the death of between five (according to contemporary colonial accounts) and sixty individuals (according to accounts twenty years later). As Ann Curthoys has noted, events at Flying Foam Passage illustrate how frontier violence, labor exploitation, and the use of imprisonment could be closely intertwined in the North West Coast’s pearling districts.

As elsewhere in the British Empire, racial difference in colonial Australia was enshrined in law. Aboriginal people were not viewed as the same type of colonial subject as the Europeans and were accorded none of the rights of citizenship. Laws enacted in 1871 and 1873 to regulate
labor practices in the North West pearl fisheries and prevent abuse of Aboriginal workers were often ignored by pearlers. Aboriginal people were frequently coerced into signing contracts they did not understand, while any offences they committed were handled by authorities whose interests were invariably aligned with those of local settlers.

There were, however, at least a few outraged voices over how Europeans treated their fellow human beings. In 1885, Reverend J. Gribble, a missionary stationed in the North West, reported on Aboriginal people being held in chains, the mistreatment of Aboriginal women by whites, and a system for allocating Aboriginal workers to pastoralist farmers that Gribble characterized as akin to slavery. Subsequent reports in the media, including the New York Times, and discussions in the wider colonial society reveal a great reluctance by white colonists to acknowledge that there was a problem. Gribble was vilified in the acrimonious debate that followed his revelations, which did little to change attitudes toward and treatment of Aboriginal and Asian workers in Western Australia. In 1886, the government magistrate in Roebourne also complained to the governor: “I find here in full force a disguised but unquestionable system of slavery carried out under the protection of the British flag. It is impossible for me to battle single-handed against the whole of the white population of the district unless strenuously supported by government.”

Asian workers were also an important part of the history of pearl-ling in the North West. Chinese pearlers who owned their own fishing leases dominated the earliest pearlring operations at Shark Bay during the 1850s. The colonial government restricted their access to leases in the 1880s after complaints by white colonists. While the pearling fleet apparently relied heavily on Aboriginal divers during the 1860s, high death rates among divers and the growing demand for labor led to the first attempts to introduce Malay divers (1871–75). The pearling industry attracted increasing numbers of Asian workers through the nineteenth and into the early twentieth century. Many of these individuals were described as “Malays” when, in fact, they came from Kupang, Batavia, Surabaya, Makassar, Singapore, the Sulu Islands, and the Philippines. Other divers came from China, Timor, and Japan.

Recruitment of these migrant workers appears to have been organized by the colonial pearlers, some of whom sailed to Southeast Asia to conscript crews. Reports that Australian pearlers treated Asian divers
poorly prompted Dutch officials at Batavia (Jakarta) to pass legislation to protect their colonial subjects who contracted to work in the Australian fisheries. Aboriginal employment peaked during the 1880s, after which Asians dominated the diving workforce. As a result, pearling settlements in northern Australia, such as Cossack and Broome, were often far more culturally diverse than “typical” Australian settlements of the time, incorporating Aborigines, various Asian and Southeast Asian peoples, and white pearling masters.

The extractive methods and techniques of Australian pearl fisheries changed quickly over time compared to other pearl fisheries in the Indian Ocean. During the Australian industry’s first few years, shells were collected easily by simply wading in shallow waters and tidal locations where they were to be found. Collected shells would be piled on the beach or hidden in coastal vegetation to be retrieved later. However, these early deposits were quickly exhausted because *Pinctada maxima*, the pearl oyster found on the North West Coast, takes five years to reach maturity and the colonial government failed to protect what were the world’s richest pearling grounds from overexploitation. By the 1880s, the main pearling grounds were already overfished and uneconomic.

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The Western Australian pearling fleet often used a larger “mother ship” from which a fleet of smaller boats operated. Pearling lugers tended to be ketch-rigged wooden vessels, approximately 13–19 m long, that collected shell from smaller boats during pearling voyages that lasted several weeks. Most pearl diving during the industry’s early decades entailed free diving where divers would “duck dive” and swim to the sea floor to collect shells, which were then hauled to the surface. Free diving dominated the fisheries until the introduction of hardhat-suit diving in the late nineteenth century. With the advent of hardhat diving, ship design changed to accommodate the necessary pumps and hoses, as well as the crew required for voyages that lasted many weeks. This shift to hardhat divers altered the industry in a number of ways. Pearling masters, for example, had to make a greater capital investment in the equipment that allowed divers to stay on the seabed for longer periods of time and harvest oyster beds more meticulously.

The movement of pearling ships and laborers in northern Australia often remained beyond effective colonial government control. Powerful pearling syndicates and companies arose in response to market demand and sought to link Northern Australia with Singapore, South Asia, and
Southeast Asia. The colonial administration struggled to regulate international shipping between Australia and Asia. Western Australia’s Pearling Act of 1886 attempted to levy an excise duty on the pearling fleet to combat the problem of ships purchasing supplies and other goods at non-Australian ports. It appears, however, that the act actually encouraged illegal trading and the importation of contraband goods, such as liquor, from Singapore and other Asian ports. Chinese vessels purchased shell directly from pearling ships on the high seas and carried it directly to Singapore, thereby avoiding the colonial export duty on this commodity.73

The Network of Pearling Sites in the North West

The North West Australian pearling industry cannot be viewed in isolation since these fisheries were enmeshed in a growing global economy that included the eastern Indian Ocean.74 North West Australian encounters with this global economy increased after the seventeenth century as the discovery of at least four Dutch East India Company wrecks and that of a British East Indiaman (1622) along this regional coast attest. Other visitors included Southeast Asian (Indonesian) praus on trepang harvesting expeditions,75 European explorers, American whalers, and colonial ships engaged in coastal trading. The impact of British colonization of the North West after 1861 included boom-and-bust capitalism and the vociferous exploitation of natural resources.

The pearling luggers crewed by Aboriginal and Asian divers that arrived on the scene in the mid-nineteenth century were simply the most recent participants in this region’s history of maritime encounters.76 Archaeological research into historical pearling runs the risk, therefore, of being a palimpsest atop a much earlier Aboriginal history. While we cannot ignore that pearl shell held great value for Aboriginal people and was an essential material in Aboriginal social, economic, and religious life, we must remember that these values are utterly at odds with the commercial value that colonial and Asian pearlers placed on shell. The need to carefully contextualize pearling in North West Australia is underscored by the fact that colonial economic and political power structures shaped Aboriginal and Asian workers’ lives. For some Aboriginal people, pearling meant being taken in chains from inland areas by white “blackbirders” to the coast where they were placed on boats, exchanged as commodities, and left on isolated islands or abandoned in
the open ocean.\textsuperscript{77} For others, however, pearling may have offered opportunities to improve the quality of their lives in ways they might not have otherwise had.

Archaeological research reveals the existence of pearling sites in the North West across a range of distinct locales along the coast.\textsuperscript{78} Field surveys and research on islands in the North West archipelago, such as Barrow Island, and along the coastal Pilbara have begun the task of defining the industry’s geographic extent and the types of material evidence on land and underwater that resulted from pearling-era activities. Ballast mounds on the islands of the North West point to the places where vessels were loaded with cargoes of shell, while the excavation of wrecks and associated sites has yielded evidence of where vessels anchored and were repaired. Although pearling occurred mostly on the seabed, the bulk of archaeological evidence for pearling comes from coastal and island sites, some of which derive not just from pearling but from other activities such as food production and storage, ship repair, animal tending, colonial administration and mercantile work, and other important industries like whaling, mining, turtle hunting, and fishing. To distinguish the material remnants of pearling from this historical “noise,” it may help to think of the pearling industry not just as distinct sites separate from other locations, but as a set of past activities at places in a network. Some sites reflect fleeting moments, such as the ballast mound of stones substituted for a cargo of collected pearlshell. Other places were important nodes, once presumably well known to those who worked the pearling boats—for example, the rich pearlshell beds of the Flying Foam Passage, or the shores of Butchers Inlet at Cossack where the pearling fleet “laid up” to wait out the off-season. Together, these places, and the material traces of their use, potentially provide important insights into a past social and cross-cultural landscape. Separate places (which we recognize as archaeological sites) reflect past relationships in the social order of the pearling industry, as well as power relationships between people, and finally the economic relationships between North West Australia and distant markets around the world.

After half a century of “life,” in the second half of the nineteenth century, the network created by the pearling industry disintegrated, remaining only in people’s memories and the material record. This conceptualization of the archaeological record, which envisages a historical set of related activities in a network across a landscape, draws
on Timothy Ingold’s concept of “taskscape.” Similar to the idea of a social or cultural landscape, the taskscape is an array of related activities with spatial relationships (connections of varying importance). Very few oral histories of the pearling industry have survived, and the historical accounts from this colonial frontier are particularly rare. This fact makes the archaeological record, and the network of sites, the primary record for the interpretation of historical pearling and the tasks associated with it.

The largest “site type” associated with the pearling industry are ports, which can range from a place such as Cossack, which has extensive remains of occupational settlement, to sites located along the nearby Flying Foam Passage pearling fields, such as the Black Hawke Bay careening site and the Dolphin Island encampment, which, because they contain very little archaeological evidence, were likely used infrequently or for only short periods of time. Ports were essential to this industry, all the more so since the North West Pilbara coast has extreme weather conditions, including a powerful cyclone season. On several occasions, the entire fleet was severely damaged by cyclones. Regional tides often have massive ranges, especially in the Kimberley where macromareal tides occur and the difference between high and low tide can be as much as four meters. Natural harbors and protected anchorages are, moreover, rare along this coast; even the central port of Cossack left much to be desired, as the destruction of much of the pearling fleet there by a cyclone in 1881 attests. Much of the archaeological record of maritime activities at Cossack are found in intertidal contexts: a recent survey of Butchers Inlet at Cossack revealed the remains of many small lighters and luggers, a wrecked ship used as a licensed bar, and piles of ballast dumped along the inlet’s mangrove margins.

Cossack, which flourished between 1865 and the early 1900s, was the center of the pearling industry in the Pilbara and the most ethnically diverse settlement on Australia’s Indian Ocean seaboard. The port has been the subject of a number of archaeological investigations. Early research focused on the town’s built-up areas and wharf, and restoration work during the 1970s focused accordingly on rebuilding the principal elements of the town’s law-and-order precinct, which is now at the heart of tourists’ experience in this “ghost town.” Later research concentrated on ethnic diversity and segregation by examining the area where Asians lived and the Aboriginal camps on the town’s fringes. This
work revealed the spatial separation that existed at Cossack, a separation made manifest by the settlement’s division into several distinct areas. The central part of the town housed a law-and-order precinct, the main commercial stores (one run by a Japanese merchant family), the main dock, and the Customs House. The town’s Asian occupants and businesses occupied a precinct known today as “Jap Town,” which was characterized archaeologically by the presence of Asian ceramics and the remains of market gardens. The large quantity of artifacts recovered from this area are indicative of the large-scale importation of Asian goods and commodities into the port. A series of large camps around the town’s perimeter housed Aboriginal people, whose presence was revealed by evidence of foodways (shell and faunal remains), glass tool making (through knapping), adopted dress, and new practices such as smoking tobacco. Scattered among these deposits were small huts apparently occupied by Asian market gardeners. Furthest removed from the town’s center was a campsite where Afghan herders kept their camels.

Cossack deserves to be considered alongside other Indian Ocean port cities as part of a maritime world that was linked more closely to Dutch Batavia (Jakarta) and British Singapore than Perth. Other coastal ports associated with pearling on the North West Coast include Condon (1880s–c.1900) and Broome (Roebuck Bay), both of which have yet to be studied to the same degree as Cossack. Further north at Camden Harbour on the Kimberley coast is an example of a failed attempt (1864–65) at colonization, a failure that resulted in the deaths of both people and livestock and great financial loss to its investors. Whether pearling was conducted at Camden Harbour remains unknown. Settlements such as these hold out the promise of being sites from which we can compare how they were resourced by the Swan River Colony (Perth) and linked to the wider world via the Indian Ocean. Specific points of comparison between these settlements include their involvement in colonial resource industries (e.g., turtle processing, pearl shell, fishing) and the ways in which these settlements organized themselves spatially along ethnic lines.

Other sites associated with pearl fishing occur both inland away from the coast and in the Dampier Archipelago, the Montebello Islands, and Barrow Island. Archaeological surveys of these areas have led to the discovery of a wide range of historical sites (fig. 7.3). These discoveries
are particularly significant because documentary sources include little information about the use of these islands during the historical period. Materials recovered from the intertidal zone, including boat parts (particularly copper sheathing but also other metal components such as roves and oarlocks as well as capstans and winches), items thrown or lost overboard (typically alcohol bottles), and lost boat equipment (anchors, chain) reveal that the islands contain a mix of sites clearly associated with pearling camps and careening. Small camps adjacent to ship careening locations have been found to contain pearl shell, evidence of consumption (pipes, bottles, cans, food remains), food preparation (hearths, plates, cutlery), shelter (corrugated iron fragments, stone bases for small shelters, copper grommets from canvas sheeting), small docks, and the remains of structures to store supplies and pearl shell. Only a handful of more substantial settlements have been found in the islands: a sheep station on West Lewis Island that also functioned as a pearling base; a large Aboriginal camp at Bandicoot Bay on Barrow Island; two large drystone structures on Barrow Island at a site known as “South End”; and a careening site and seasonal residential settlement on the Flying Foam Passage at Black Hawke Bay.

FIGURE 7.3. Barrow Island: aerial of Bandicoot Bay settlement during excavation; inset of flaked glass artifacts (D26-002). (Photograph by the author.)
Other types of historical sites include burials and historical engravings by Aboriginal people and ship’s crews. Some of the engravings of ships by Aboriginal people actually exist at sheep stations well away from the coast, the best known of which are probably those found on the rock surfaces around the colonial pastoral station at Inthanoo-ná. The boats in these engravings have been interpreted as colonial vessels; one even appears to show a diver under a sailing boat, an image that apparently memorialized sea-based work and was probably made after Aboriginal people returned to the station at the end of the pearling season. These engravings reveal Aboriginal peoples’ attempt to communicate information about colonial events, and to construct and maintain identity in a period of great change and increased mobility.

The sites listed briefly above suggest that historical archaeology may be able to shed light on the nature and quality of everyday life along the North West Coast in a way that the traditional historical record cannot. There are few historical accounts of these places, so archaeology has the potential to help redress this documentary deficiency. Archaeology’s ability to deepen our knowledge and understanding of life along this coast is also important because, in some places, we cannot expect indigenous oral histories to shed substantive light on local developments, especially in the islands where Yaburara people lived around the pearling grounds before the Flying Foam massacre. Finally, archaeology has the potential to reveal some of the illicit or otherwise “hidden” practices to which Hamlet Cornish refers. The archaeological record provides clear evidence, for example, of the presence of indigenous and Asian peoples at pearling locations. An especially compelling form of such material evidence comes from the manufacture of glass tools from bottle fragments using traditional Aboriginal knapping technology. The assemblage found at the settlement at Bandicoot Bay on Barrow Island, for example, is dominated by evidence of the manufacture of glass tools, many of which are of a distinctive type known as “Kimberley Points,” a well-known tool made in stone as well as glass after the nineteenth century. That these artifacts are found at settlements such as Cossack, Shark Bay, and in the Kimberley underscores the need for comparative research across the North West to better understand these distinctive artifacts’ range of forms, their stylistic analogues to stone and shell artifacts, and their function. Comparative analysis of these assemblages should also shed light on Aboriginal survival and adaptation strategies.
and the maintenance of traditional practices. On Barrow Island, there appears to be archaeological evidence of the substantial mobilization and translocation of Aboriginal people as laborers at pearling sites in the Kimberly about which we currently know very little. Further work in 2014 at the “South End” settlement on Barrow Island revealed two stone buildings with massive stone walls. One of these buildings contained the remains of chain links, which suggests that the structure was used to incarcerate workers. There were rumors that illicit pearlers used Barrow Island as a barracoon during the 1870s, rumors that historical and archaeological analyses are attempting to confirm.\

**TOWARD A HISTORICAL ARCHAEOLOGY OF PEARLING**

The discussion not only highlights the importance of both archaeological and historical evidence in investigations of Australia’s pearling fisheries, but also demonstrates that these pearling sites were not isolated from other parts of the Indian Ocean world. The historical archaeological evidence currently at our disposal reveals how important information from sites and objects can reveal hitherto “hidden histories.” Material remains, such as tools made from glass bottles or the images of ships on rock faces, allow us to appreciate that the pearling industry was made up of individual people who gave expression to their lives in various ways. In settlements such as Cossack, the repeated actions of individuals formed assemblages of artifacts that, although large, cannot conceal evidence of these men, women, and children’s ethnicity and cultural identity. Imported Asian materials such as ceramics and food containers attest to the maintenance of various forms of Asian ethnic identity as well as the continuing maritime connections between North West Australia and ports elsewhere in Asia. As excavations of camps on Barrow Island and around Cossack confirm, the maintenance of Aboriginal ethnicity and identity in colonial contexts likewise left a clear archaeological signature. Further research will only deepen our understanding of how these various places differed from one another and the ways in which different Aboriginal peoples reflected their experiences through material culture.

What do the historical sources at our disposal reveal? Surviving documentary sources can shed at least some light on various aspects of people’s lives in the past. The records of government magistrates and the
colonial secretary’s office can allow us to map who was present in the North West and discern the pattern and general structure of colonial settlement as it unfolded. Without such records, we would not have any sense of the strong relationship that existed between pastoral farmers and the pearling industry, the depth of which is illustrated by archival and other reports that Aboriginal people who worked on sheep stations often entered into contracts that required them to work on pearling vessels. While firsthand accounts like Hamlet Cornish’s are rare, they nevertheless provide crucial insights into how the colonial frontier operated and how the pearling and pastoral industries came into existence and functioned. In short, understanding this complex history depends on the complementarity of history and historical archaeology. When used in tandem, these disciplines can enhance our knowledge and understanding of these colonial events in ways that would otherwise be impossible.91

Comparing the Indian Ocean pearling fisheries over deep time suggests that the situation in North West Australia was similar in some ways to that in the Persian Gulf. Archaeological evidence from the Gulf highlights human uses of pearl shell and pearls for both utilitarian and economic purposes over millennia. In both Northern Australia and the Gulf, local peoples were the first to transport shell products along their own trade networks, networks that presaged the global networks that characterize the present day and age. Future examination of the archaeological record in southern India and Sri Lanka will undoubtedly uncover similar prehistoric networks, especially since the epigraphic record reveals the high value that South Asian elites placed on pearls over time.

While there are clear similarities between the Indian Ocean’s pearl fisheries, there are also important differences that must be acknowledged. In the Gulf, and presumably in South Asia as well, pearling and the trade networks that supplied this prized commodity to various parts of the world developed gradually over several thousand years. Major changes in and around the Gulf, such as the advent of Islam, apparently did little to change the basic structure and operation of the long-distance trade in pearls even though the composition of the industry’s workforce and the management of the pearl trade did change with the passage of time. In Northern Australia, the shift from the indigenous procurement of shell to a commercial industry geared toward supplying a global
market occurred rapidly, and was also intimately bound up with the suite of changes brought about by colonialism. Archaeological work in Australia suggests that a useful avenue for future research would be to compare pearling settlements such as Cossack with communities such as Marichchukaddi in Sri Lanka or some of the shantytowns and urban settlements associated with pearl fisheries in the Gulf, all of which housed ethnically and culturally diverse populations. Historical archaeological models that have been used to examine ethnic and cultural identity in the Americas can provide a starting point from which to explore hybrid forms of cultural expression in the Indian Ocean, where transregional labor migration as well as complex long-distance trade networks were integral components of this oceanic basin’s history. Examining the Australian pearling industry in such contexts can also challenge the prevailing perception that Australia was essentially a product of Eric Hobsbawm’s “long nineteenth century” and was a world unto itself, separate from the larger Indian Ocean world of which it was an integral part.

Because it is a heritage landscape unique to the northern parts of their country, Australians continue to be interested in the history of pearling. However, while this history remains a popular topic, modern accounts of pearling are often romanticized and perpetuated by communities and companies for the purposes of tourism and revenue. Broome, for instance, remains renowned for pearls and its diverse cultural history. Beyond Broome, however, the early colonial-era pearling industries in the Torres Strait and the Pilbara are less well known. Two signs that stand in the center of the historical ghost town of Cossack graphically illustrate pearling’s mixed legacy in the early twenty-first century. The first sign, erected by the local council, reflects common tropes about the colonial era and the pearling industry, the essence of which is that Cossack was the industry’s center during the nineteenth century before being eclipsed by Broome. The second sign, erected by the local Aboriginal community, focuses on the negative impact that the pearling industry had on Aboriginal people. As these conflicting tropes attest, the history of the Indian Ocean’s pearl fisheries must encompass not only pearls, but also the tens of thousands of Africans, Arabs, Indians, Sri Lankans, Southeast Asians, and Aboriginal Australians whose lives were intimately bound up with the extraction and marketing of these lustrous precious objects.
NOTES

2. This manuscript is held in the State Library of Western Australia, Perth (MN110, ACC7511A).
14. Evidence for the movement of marine shell along Australia’s Indian Ocean coast during the Pleistocene comes from: Widgingarri, where baler shell was brought in thirty-two thousand years BP; Riwi, where tusk shells occurred thirty thousand years BP; Mandu Mandu Creek at Northwest Cape, where cone shells occur at thirty-two thousand years BP; and on Barrow Island, where recent excavation demonstrates the Pleistocene nonutilitarian use of shells. See Jane Balme and Kate Morse, “Shell Beads and Social Behavior in Pleistocene Australia,” *Antiquity* 80, no. 310 (2006): 799–811.


24. R. Carter, 9, citing tablet 11, lines 288–92.

25. Donkin, Beyond Price, 49.


28. R. Carter, Sea of Pearls, chap. 2.

29. R. Carter, 45.

30. R. Carter, 45, citing al-Idrisi. Julfar would become Ras al-Khaimah, a major modern center for pearling.

31. R. Carter, 45, citing al-Idrisi.

32. R. Carter, 58.


34. R. Carter, Sea of Pearls, 55–57.

35. R. Carter, 91.


40. Potter, introduction, 2.
41. Potter, 9.
42. Potter, 31.
47. Pliny, Natural History, book 9, ch. 54.
50. Osmund Bopearachchi, foreword to Weerakkody, Tāprobanē, xix.
54. Mahroof, 111.
56. Woolf, 88–89.
58. In 2015 a research project was funded by the Australian Research Council to conduct a comparative study of pearling in the Indian Ocean World. The project, Pearls, People, and Power: Global Commodity History and Material Culture in the Transformation of the Indian Ocean World,
16th–20th Centuries, is led by Professor James Warren at Murdoch University. For an overview, see Donkin, Beyond Price. A useful timeline for the Gulf is presented in R. Carter, “History and Prehistory of Pearling.”


60. Some Aboriginal people were convicts. See Kristyn Harman, Aboriginal Convicts: Australian, Khoisan, and Māori Exiles (Sydney: University of New South Wales Press, 2012).


66. “Slavery in Western Australia,” New York Times, 19 September 1886, http://query.nytimes.com/gst/abstract.html?res=9A06E2DD1E30E533A2575AC1A96F9C94679FD7CF&legacy=true. This article states, “The English Government, which has always stood as the foremost power in demanding the abolition of slavery and the slave trade, is now brought face to face with the fact that the natives of Western Australia are subjected by the Queen’s subjects to a system in involuntary servitude, which is characterized by all the horrors of slavery as practiced in barbarous countries.”


70. Green, “Princes to Paupers.”


73. Stanbury, “Mother-of-Pearl Shell Cultivation,” 95–96.


75. The earliest external encounters in northern Australia involved visiting Makassan traders, best known for establishing trepang processing
across Northern Australia and initiating important cross-cultural encounters before and during European colonization. Trepang processing has been described as Australia’s “first industry” and it is likely that pearl shell was a commodity exported and exchanged along with trepang, minerals, timber, and animal products.


77. John Durlacher describes how an Aboriginal man named “Cockroach” and his two wives swam to East Lewis Island from the mainland in the 1870s to avoid retribution. Durlacher, Landlords of the Iron Shore (Western Australia: Hesperian Books, 2013).


82. Paterson and Gregory, “Commemorating the Colonial Pilbara.”


85. Garrat, McCarthy, and Shaw.


87. To date, very little work has been done on historical burials. It is clear, however, that some were Malay.

88. Detailed in Paterson, “Towards a Historical Archaeology.”


90. Results of the Barrow Island archaeology project will be published when analyses are completed.


92. I am thinking here of work by Kent Lightfoot and Matthew Leibmann, and on Spanish sites in the Caribbean rim. Much of this work is summarized in Alistair Paterson, *A Millennium of Cultural Contact* (New York: Routledge, 2016).