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The dhow’s last redoubt?
Vestiges of wooden boatbuilding traditions in Yemen

DIONISIUS A. AGIUS, JOHN P. COOPER, CHIARA ZAZZARO & JULIAN JANSEN VAN RENSBURG

Summary
Researchers from the MARES Project visited Yemen in February 2009 in order to investigate the building and use of traditional wooden boats (“dhows” in English) in the country. The survey covered the coastline from Aden to al-Salīf in the Red Sea, and visited centres of dhow building and use, including Ghurayrah (Ghureira), al-Mukhā (Mocha), and al-Khawkhah (Khokha). The project’s aim was to assess the state of the industry, establish a vessel typology, understand construction processes, learn about the use of these vessels, and compile a lexicon of boatbuilding and nautical terms. This article offers the preliminary findings of the survey, pending more comprehensive publication in the future. The survey found that, in all locations visited, the building of new vessels had rapidly diminished in the preceding decade, and has now all but ceased. The only ongoing activity witnessed during the survey was repairs to existing wooden craft. In formerly large boatbuilding centres, builders of wooden boats, mostly elderly, have ceased work, while younger men were building fishing craft using fibreglass — the material used in the great majority of vessels in Yemen today. A preliminary typology of surviving vessels was established. The double-ended cargo-carrying zaΚāyim (sg. zāΚīmah) and zawārīk (sg. zārūk) were recorded only as abandoned hulks. Double-ended ʿabārī (sg. ʿobrī) and the transom-sterned “large hūrī” (pl. hawārī), with its stern-quarter “fins”, continued to be used in small numbers for seine fishing and transporting livestock. Again, most examples were abandoned. Various forms of small log and plank hūrī “canoes” were observed, few still in use, while the log-raft ramaʃ survives on the Red Sea coast. The terms used for these vessel types form part of a linguistic survey of dhow activity in Yemen.

Keywords: Yemen, dhow typology, boatbuilding, maritime, ethnography

Introduction
The wooden dhow-building traditions of Arabia have suffered a series of blows since the mid-twentieth century, not least with the end of pearling in the Arabian-Persian Gulf, and the onset of oil-driven economic development. In the oil states, in particular, traditional ways of life have been set aside, and on the maritime front, boatyards and harbours have been subsumed under rapid urban and industrial development. The wooden dhow-building traditions of Arabia have suffered a series of blows since the mid-twentieth century, not least with the end of pearling in the Arabian-Persian Gulf, and the onset of oil-driven economic development. In the oil states, in particular, traditional ways of life have been set aside, and on the maritime front, boatyards and harbours have been subsumed under rapid urban and industrial development. Between 1990 and 2000, Agius (2002; 2005; 2008) investigated boat typologies, building practices, and maritime traditions of the Gulf States and Oman, but most of these traditions have since been swept aside. Dhow building has survived longest in areas least affected by the oil boom, namely coastal Yemen. Even here, however, the practice of building a variety of wooden boats for fishing and transportation is coming to a rapid end. Even a decade ago wooden boatbuilding was thriving, but boatbuilders have now abandoned constructing wooden boats entirely, as fibreglass boatbuilding takes over.

The MARES Project is currently investigating surviving wooden boatbuilding traditions in the Gulf of Aden and southern Red Sea. The work is, in some respects, a continuation of Agius’s previous ethnographic work in the Arabian-Persian Gulf and Oman, while an expanded team enables a more diverse methodological approach, including the systematic survey of boat distribution, architecture, and construction methods.

The fieldwork
Field research was carried out along the Gulf of Aden and Red Sea coasts of the Republic of Yemen over a three-week period in February 2009. Yemen was chosen in part because the country was a region not yet covered by Agius’s research, and also in the knowledge, based on previous fieldwork along parts of the Yemeni coast in 2007,1 that large wooden vessels and residual boatbuilding activities were extant.

1 This work, a survey of hūrī (pl. hawārī) fishing canoes, was conducted as part of the University of Southampton Huri Project, directed by Dr Lucy Blue, in which Cooper participated.
Yemen’s rich natural fisheries support a large and growing fishing population. Indeed, the Yemeni government regards the industry as an important component in Yemen’s future economic development. However, growth in population and fishing is putting pressure on marine reserves, a situation that has contributed to Yemen’s shift away from wooden boatbuilding and towards fibreglass manufacture. Meanwhile, the use of traditional cargo “dhows” has diminished sharply amid competition from modern freighters and land and air transport, as well as the effects of changing trade patterns. The few remaining cargo vessels in use in Yemen are largely used to transport livestock and foodstuffs, as well as contraband and refugees from the African coast. In the mid-90s, Prados (1998a: 195) was able to say that, “… wooden boatbuilding … remains an integral and essential part of everyday commerce.” This is no longer the case. Such a decline argues for detailed documentation of traditional boats and ethnographic interviews of the people who built and operated them before both disappear. Yemen’s scarce fiscal resources, particularly for cultural programmes, mean that the chances of these boats being preserved in any other way are slim indeed.

Given the relatively limited time available, the MARES survey could cover only part of Yemen’s 1900 km coastline. For reasons of insurance limitations and ease of access the survey concentrated on the section of the Gulf of Aden and the Red Sea coast between Aden and al-Salīf — a section of coastline that was known to include sites containing vestiges of wooden boats and boatbuilding (Fig. 1). While the main survey continued on the Yemeni mainland, Julian Jansen van Rensburg pursued research into traditional vessels on the island of Socotra.

The Survey began in Aden, and in particular in the part of Ma‘allah (today called Dakkat al-Ghāz), which was formerly Aden’s dhow harbour. It also took in Little Aden and especially the fishing villages of Khīsah and Fuqum.
The survey then headed west, passing through ‘Imrān, and along a largely empty and exposed coast to the Bāb al-Mandab. From there it proceeded north up the Red Sea coast, taking in the village of Ghurayrah (Ghureira) and its eponymous creek, the former coffee port of al-Mukhā (Mocha), the fishing and former boatbuilding town of al-Khawkhah (Khokha), the city of al-Ḥudaydah (Hudeida), and finally the fishing town of al-Salīf.

**Methodology**

The fieldwork aimed to survey the distribution of traditional vessels; to observe and record the vessel types found; to investigate construction techniques; and to assess the state of traditional boatbuilding and usage by location. Equally, a linguistic survey aimed to gather terms for the various boat types and parts, as well as the broader material culture and activities associated with them. This was achieved through direct observation and survey techniques — note taking, photography, sketching, and scale drawing — as well as through ethnographic interview.

At each site, the team surveyed the vessels present. At minimum, this involved photography and the noting of basic features. In some cases, the team took the principal measurements, such as the maximum length, height, and width amidships of the relevant vessels. For selected vessels, the team endeavoured to make line drawings of the hull, and in one case — an incomplete and abandoned “large ḥūrī” (pl. ḥawārī, see below) — the team recorded the fine detail of the hull construction. The team also collected wood samples from different elements of various vessels in order to establish the type and provenance of the timbers used in boat construction, and to corroborate the contributions obtained from ethnographic interviewees.

At each site, the team sought out local boatbuilders and mariners. Interviews were conducted in Arabic, and were open, rather than being based on a questionnaire, since it was believed that a more formalized approach might deter informants or impose an agenda. In fact, interviewees were found to be almost always amenable to interview. Team members took field notes of interviews, made rough sketches, and voice-recorded interviewees where appropriate. In addition, digital video recording was used to document boat repair and maintenance activity where this continued.

One approach to handling this diverse data has been to create a computer database comprising photographs, measurements, terminologies, and field observations of the individual vessels recorded in Yemen. This database will allow the team to manage and interpret the data, while creating a legacy for future researchers. In addition to the data collected through fieldwork in Yemen, the MARES team has also initiated a survey of archival resources, investigating in particular photographic archives and models held by museums and private individuals in the hope of better understanding the recent history of vessel typologies in Yemen. These results will be published in the final field report.

**Preliminary outcomes**

The fieldwork yielded preliminary insights into the state of wooden boatbuilding and use at various locations in Yemen, a typology of the main dhow types to be found at those sites, and a lexical dataset related to those types. An overview of these findings is presented here.
1. Boatbuilding activity and boat use

The MARES survey indicated a wide variation in activity between the major boatbuilding sites visited:

Aden and environs

A thriving hub of the British imperial maritime network, the port of Aden went into decline following independence in 1967. The remains of the traditional dhow harbour and boatyard can be found at Dakkat al-Ghāz (Fig. 2). However, much of the inter-tidal area that constituted the harbour has been reclaimed, and is now a lorry park. This appears to have happened after 1990, when Cooper visited Ma’allah and photographed the site. Wooden boat activity is today limited. The team recorded two wooden dhows — an ‘obrī (pl. ‘abārī) and a bōt (pl. abwāt) (see below for a discussion of boat typologies) — that had been hauled out and abandoned. A pile of wooden masts was also recorded. Local informants said that a large quantity of undressed timber at the site comprised locally grown woods known as damas (Conocarpus lancifolius Engl [Bilaidi 1978: 3]) and muraymira (Melia azaderach L. [Awadh Ali et al. 2001: 175]). These timbers formed natural crooks used to make futtock and floor timbers, and are indicative of an extensive former boatbuilding industry at the site.

The small modern dock at Dakkat al-Ghāz is still used by occasional traditional vessels: a moored ‘obrī at the time of our visit was from al-Khawkhah, and vessels sometimes bring livestock to Dakkat al-Ghāz from Somalia. The few other vessels in Ma’allah were fibreglass. Across the harbour, dhows could also be seen abandoned on the inaccessible island of Qulfatayn. Other abandoned examples of ‘abārī and large havārī were recorded at the Little Aden villages of Fuqum and al-Khaysah (Khīsah). In addition, small wooden dugout and plank “canoes” (also called havārī) were observed abandoned, and occasionally still in use, at various fishing settlements in greater Aden.

Ghurayrah

The lagoon at Ghurayrah, some 5 km north of the Bāb al-Mandab on the Red Sea coast, contained a remarkable assemblage of dhow types. To its north lies the associated fishing and former shipbuilding village, where a vessel was seen under construction as recently as 2007, as observed by Blue and Cooper. The lagoon’s southern shore contained an assemblage of thirteen large cargo vessels including double-ended zawārīk (sg. zārūk), zaKāyim (sg. zāKīmah), and ‘abārī, and a large transom vessel of unknown type, almost all of which were clearly abandoned and in a highly dilapidated state (Fig. 3). These were interspersed with a number of large havārī, some still in use. On the north bank of the lagoon, fringing the village, a number of other vessels, mostly large havārī, were also hauled up. The village’s boatbuilding yard stood idle, in it an incomplete ‘obrī that had been abandoned early in the construction process.

Mocha

Evidence of wooden boats at Mocha was limited to four large hūrī vessels abandoned on the beach of the town’s

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2 Blue and Cooper observed such a vessel at Dakkat al-Ghāz in 2007.

Or zāwārīq (sg. zārūq) final “k”, a voiceless velar stop, and “q”, a uvular occlusive, are often interchangeable.
southern bay; a number of dugout hawārī, none of which appeared to be still in use; and various ships’ timbers incorporated into beach huts. There was no wooden boatbuilding yard remaining in the town. Fibreglass boats dominated the fishing fleet.

**Al-Khawkhah**

Further north, the town of al-Khawkhah contained the largest number of wooden vessels found anywhere on our itinerary — over 100 in total. The overwhelming majority of completed vessels were large hawārī. However, all but one, which was anchored offshore, had been hauled up and abandoned, or at least “mothballed”, on the shores of the town’s lagoon. Small fishing vessels at al-Khawkhah included a number of abandoned dugout hawārī and the lashed log-rafts (known as ramas in the singular, the plural form probably being ramasāt), the latter being used for inshore reef fishing. Most working boats were open fibreglass fishing “canoes”.

Wooden boatbuilding had ceased at al-Khawkhah within the last decade, and the presence of several vessels abandoned in mid-construction suggests that the process happened rapidly (Fig. 4). Prados in the mid-90s had observed over sixty boats under construction in the town during his fieldwork: he described it as Yemen’s largest boatbuilding centre (1996: 51).

There were two centres of former wooden boatbuilding activity. The smaller of the two, south of the fish market, comprised at least three boatyards containing four large hawārī and an ‘obrī that had been abandoned during construction. One former boatbuilder said he had not built a wooden vessel there in eight years. Instead, younger men were building fibreglass fishing boats in the same location.

**Hudaydah**

Hudaydah is Yemen’s largest Red Sea port. Wooden boat construction and use appears in recent years to have been concentrated on the modern fishing harbour and market. The marina in the northern part of the market site contained dozens of fibreglass vessels, and a small number — less than ten — of double-ended ‘abārī still in use as fishing vessels. The area south of the main market buildings comprised a “graveyard” of some seventy abandoned wooden vessels, chiefly large hawārī and ‘abārī, and one bōt. A group of men was breaking up one of these vessels for wood to produce charcoal.

Within the central cluster of buildings at the site was a surviving and active boatyard and ships’ chandlers, the latter selling boatbuilding supplies including planking and hull preservatives. The former was the only boatyard in the survey where structural work on traditional boats was under way during the survey. The team observed a rudder being repaired, hull planking being replaced and caulked, and hull preservative being applied — all to an ‘obrī. Another ‘obrī, newly refurbished, was being prepared for launch. However the master builder overseeing the work said that no new vessels had been built at the site for some years.

**al-Salīf**

The most northerly site visited during the survey, al-Salīf is a relatively large fishing village located alongside an oil-exporting terminal. The bays around the village contained numerous wooden fishing ‘abārī and large hawārī that were still in use — indeed this was by far the largest number of wooden vessels still in use anywhere in the survey area. However, as elsewhere on the survey route, the local boatbuilding yard had been abandoned, with three vessels — a zārūk and two large hawārī — abandoned and unfinished. The family associated with the yard said that they continued to carry out repairs, but that new boats were not being built. An old boat was being broken up for its timber.
As elsewhere, fibreglass boat construction had started in al-Salīf, but here fibreglass construction followed a practice not observed elsewhere. In al-Khawkhah and the ĐaΡramawt, for example, fibreglass boatyards specialize in the production of the familiar “canoe”-type fishing boats with an outboard motor seen throughout the Yemen coast. However, fibreglass boats seen under construction at the al-Salīf fishing association building were clearly modelled on the double-ended wooden hūrī, and used an inboard motor.

Socotra

Due its isolated position, Socotra has until recently retained many dugout hawārī. Other traditional vessels found on the island include a sewn planked vessel known as a shirkah (Socotran Arabic), all surviving examples of which are abandoned, as well as a number of planked vessels from Oman and elsewhere that have been brought to the island and abandoned. However, it is the log-boat hūrī that has been the primary means of accessing the rich fishing grounds around the island. The log-boat hawārī of Socotra, like those on the mainland, originate in India (Jansen van Rensburg 2005a; 2005b; 2006; 2009). However modifications and repairs are undertaken locally by fishermen using an array of techniques, including sewing, to prevent further splitting of the hull. This technique was also used previously to maintain the shirkah. With the gradual increase in the import of fibreglass vessels the hawārī and other vessels are being abandoned, and few remain in use. With increasing economic development on Socotra, abandoned wooden vessels are being used to fuel lime kilns. Thankfully, with the opening of a craft museum on Socotra and the actions of several individuals, a few hawārī have been saved.

2. The vessels

The survey encountered a range of double-ended and transom-sterned vessels. The larger “dhow” varied in length from 16–24 m and in width from 3–7 m. All had motors, either inboard or outboard. Planks were fastened with cleated nails to crook timbers, and floor timbers were bolted to the keel.

Three main dhow-types were recognized during our survey. These included double-ended boats of different shape, powered by inboard motors, and sometimes with an extant mast or mast step. These were generically referred to as sanābīk (sg. sanbūk), although specific hull shapes attracted more precise names, such as ‘obrī, zārūq, and zāΚīmah. The general shape and structure of these hulls was quite similar from type to type, the main difference being in the bow and stern profiles, and overall hull size.

Or sanābūq (sg. sanbūq): final “k”, a voiceless velar stop, and “q”, an uvular occlusive, are often interchangeable.
The "obrī" is a double-ended vessel with an inboard motor, characterized by a straight, raking prow and a stem-post that terminates at or slightly above the sheer line. The largest recorded was at Dakkat al-Ghaz: it was 22.8 m long, 5.8 m wide, and 2.6 m high amidships (Fig. 5).

Another double-ended vessel, the "zarūk", is characterized by straight but foreshortened stern- and stem-posts, which end approximately two-thirds of the way up the bow (Fig. 5). A "zarūk" observed at Ghurayrah was the largest vessel of any the team surveyed. It was 24 m long and 6.2 m wide. One informant said the "zarūk" had a typical capacity of 300 tons.³

The term "zarīmah" refers to a double-ended vessel with inboard motor, characterized by a curving bow profile. Informants who used this term or sketched this type were interviewed in locations where the "zarīmah" no longer existed. However, vessels matching their description were recorded at Ghurayrah (Fig. 5). A former builder of "za'ayim" living at Fuqum said the "zarīmah" had a capacity of up to 500 tons and a keel length of 15–24 m.⁶

Two examples of the "bōt" were observed, in Aden and Hudaydah. These were transom-sterned vessels with a box-like cross-section and blunt bow profile, having an inboard motor (Fig. 6). Informants unanimously identified this vessel as "not Yemeni", and variously attributed its origins to Oman or India. The MARES team subsequently observed similar craft in use in Djibouti.

³ Abdo 'Umar Bulghaith, interviewed 10 February 2009.

⁶ Muhammad ‘Alī Najjār, a boatbuilder, interviewed 10 February 2009.
The “large hūrī”

The most common of the larger vessels of the Yemeni Red Sea coast, the “large hūrī” is transom-sterned and powered by two outboard motors, or occasionally one (Fig. 7). While its bow is almost identical to that of an कobrī, it is distinguished by having two sweeping “fins” at its stern quarters, these being a continuation of the hull planking. The opening above the low transom and between the fins was used to pay out and gather in seine nets. The type varies in length from 14 to 20 m and in width from 2.5 to 4.5 m. The term “large hūrī” was used by the team to distinguish it from the various forms of smaller fishing canoes that were also called hūrī. Interviewees referred to it simply as a hūrī, unless likewise distinguishing it.

Transom “sanbūk”

A large dhow was recorded at Ghurayrah that was similar in its hull shape to the ‘obrī, except that it had a transom stern. The vessel measured 23.5 m in length and was 7.1 m wide. We tentatively associate this type of boat with the description of a sā‘iyah that informants outlined elsewhere, but the identification is by no means certain.

Galbah8

In the Aden area, the galbah was a plank fishing vessel around 11 m in length, characterized by small transom stern and an outboard motor (Fig. 8). In the Red Sea, however, the term applied exclusively to fibreglass vessels of various forms (Fig. 9).

Ramas

The ramas is a small punted log-raft made with logs lashed together and onto two cross-timbers with rope (today synthetic). Although most were abandoned, some were still being used for inshore fishing (Fig. 10).

3. Boatbuilding

Although the survey did not record boatbuilding in progress, ethnographic interview, the presence of numerous abandoned boatyards, and a large number of unfinished ḥawārī and ‘abārī enabled the construction sequence of these craft to be established. Indeed, the survey encountered remarkable variations in the approach to building wooden vessels, even within the same boatyard. In one boatyard at al-Khawkhah, the team found the construction of ‘abārī followed a sequence familiar to vessels in other areas of the Red Sea. The first piece to be laid is the keel, followed by stem- and sternpost timbers and the samakah timber through which the propeller shaft is fitted. The hull shape is then established by building up futtocks and planks in parallel, i.e. the approach is neither shell- first nor frame-first, but a mixed method.9 In contrast, yet in the same boatyard, the “large hūrī” was built in a quite different sequence, in that the keel and stem- and sternpost are added at the very end of the hull construction sequence. Having built the hull up from its garboard strakes, including all planks and framing timbers, the builders roll the hull to one side, and affix the prepared keel by bolting it to the floor timbers.

Within the same vessel type, the team noted variations in the construction sequence between locations. In al-Khawkhah, the planking of the large hūrī was applied in an upward direction, starting with the garboard strake (see also Prados 1998a: 199–201). However, in al-Salīf builders of the hūrī preferred to attach the sheer strakes immediately after the garboard strakes and initial shape-giving futtocks.10 The intermediate strakes and framing timbers were added afterwards. Even though the outcomes

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7 The 2007 Southampton University survey had focused on recording these smaller ḥawārī — either dugout or plank-built vessels. The MARES survey retained a complimentary focus on other types of boat, most of which were larger.

8 Alternatively, the initial voiced velar stop /ɡ/ is pronounced as the voiced alveolar affricate /j/.
are entirely similar, the variation in approach at different yards on the same coast perhaps reflects concomitant variations in the paths of transmission of the underlying boatbuilding skills.

**Linguistic enquiry**

The survey identified a range of names applied to different Yemeni vessel types. Of these, *sambūk* is today applied quite generically, covering the vessels also known as *zawārik*, *zarāyim*, and ‘*abārī*: none of these vessels resemble the large transom-ended, curved-prow *sanābīk* that plied Yemeni waters during British rule in the south (Howarth 1977: 36), which are no longer found, nor do they resemble the *sanābīq* of the Gulf or Oman (Howarth 1977: 36; Agius 2005: 18). Even more generically applied was the term *hūrī*, historically referring to dugout fishing canoes, but today referring to fibreglass vessels, and also to the “large *hūrī*” discussed above. Linguistic informants also provided other names for vessel types that no longer exist in Yemen. These names, and their historical usage, are discussed below. Of course vessels referred to historically are unlikely to correlate in precise form to modern vessels given the same name.

**Sanbūq (pl. sanābīq)**

The word *sanbūq* (in Yemen, also *sanbūk* (pl. *sanābīk*)) has been applied to a diverse set of vessels in a wide variety of Western Indian Ocean locations for almost a millennium. It has been commonly known over the centuries, with cognates in Mehri, Ḥaḍramī, and Amharic (de Landberg 1920–1942, iii: 1985–1986, n. 1; Glidden 1942: 71). It is also found in Greek *sambūke* (*σαμβούκη*), which seemingly came about because of the Greek presence in Egypt and the Red Sea before the Christian era. An attempt has also been made to derive the word from Persian, through Middle Persian *sambūq* (al-Jawālīqī 1969: 177–179; Tabrīzī 1982, ii: 1170; Glidden 1942: 71; Agius 2002: 85–86). This is possible, but there is a greater possibility that the nomenclature derives from Sanskrit *ṣambuka*, and there may also be links with Malay *sampan* (Kindermann 1934: 43) or Chinese *sanpan* (Yajima 1976: 24).

The earliest mention of *sanbūq* in Arabic sources comes from the mariners’ tales recounted by the captain, Buzurg b. Shahriyār (*d. 1009*), who reports a cargo *sanbūq* sailing to China (al-Rāmhurmuzī 1883–1886: 190). The Moroccan traveller, Ibn Baṭṭūṭah (1368–1389 or 1377) speaks of a *sanbūq* functioning as a coastal ferry (1968, ii: 17, 181, 183, 198, 251). The Egyptian historian, al-Maqrīzī (1441–1442), mentions the name in the context of a war fleet in the Red Sea during the Ṭūlūnīd period (868–884) (1853, ii: 180). We also find the name in sixteenth-century Portuguese sources: Afonso de Albuquerque (*d. 1515*), Duarte Barbosa (*d. 1521*) (1918–1921, i: 7, 9), and Vasco da Gama (*d. 1524*) (1869: 75–76, 79, 80, 109) often mention the *sambucho* or *zambuco.*

De Albuquerque notes that Portuguese caravels “were guided by small or large vessels called *sanbūq*[s].” He also remarks that they were undocked, and describes them moreover as “having no nails” (1875–1884, iv: 206), a probable reference to the former Indian Ocean practice of stitching hull planks (Agius 2008: 161–167). In the same period, the Italian Ludovico di Varthema, who lived in Yemen for some time, reports a type of “flat-bottomed” *sanbūq* (1863: 154).

In the nineteenth century, Karl Klunzinger (*d. 1861*), classifies the *sanbūq* as the most common Red Sea type (2000: 295), while Richard Burton (*d. 1890*) sailed on a two-masted, 50-ton pilgrim *sanbūq* from Suez to Jeddah, which carried ninety-seven pilgrims (1964, i: 188).

**‘Obrī (pl. ‘*abārī* or ‘*abriyyāṭ**)

The name ‘*abārī* comes from Arabic ‘*abara* “to cross over (the sea)”, by extension a boat which journeys from one point to another (Lane 1984, ii: 1936). Given the meaning, one would expect to find a boat term in classical Arabic sources related to this verb-root but none has been found (Agius 2002: 46–47). Hunter (1877: 83) mentions an ‘*abra* which he says is a small boat of 5 to 15 tons from al-Mukalla. More recently, Hawkins uses ‘*abra* generically to refer to “all manner of small craft which can be anything from decrepit all-purpose boats in Aden to the sleek ferries of Dubai Creek” (1977: 81). Moore (1925: 123) is a little more specific: he says an ‘*abra* had a lowered bow and elevated stern, while Serjeant (1974: 134) speaks of a Mehri ‘*abriyya* *sanbūk*, which might or might not be similar to the ‘*obrī* encountered during the MARES fieldwork.

**Zārūk (pl. zarārik or zarākāt**)

In classical Arabic, the verb-root *zāriqa* carries the meaning of “piercing with a spear” and *zāriqah* is the word for “spear”; by extension this root gave the word *zawraq* “a skiff; a small boat” (Lane 1984, i: 1227–1228)

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11 For reports on the *sanbūq* from the Ḥaḍramī chronicles, see Serjeant 1974: 58, 69; see also Agius 2008: 141–170.
with the meaning of light and fast; it is mentioned by Ibn Jubayr (d. 1217) (1952: 64). The Yemeni term zārūk seems to be related to this. At the turn of the twentieth century, de Monfreid (d. 1976) often speaks of zarārik in the southern Red Sea (1934: 14, 106, 220); he gives the impression that it was the most common vessel of his times, but this could be a generic term for various boat types.

**Za'imah (pl. za'āyim)**

The name seems to be associated with one of the meanings of the verb-root za'ama “(the camel that) conveys (someone to a desired place)”; hence za'imah is the “conveyor” with reference to the laden camel (Lane 1984, i: 1232). That would perhaps explain the Yemeni application of the name to a type of cargo boat.

Our informants sketched a double-ended vessel with a curved bow profile and spoke of its large size — descriptions which correspond to a drawing by Hawkins (1977: 79). The MARES team identified an abandoned vessel at Ghurayrah as such.

**Sāiyah (pl. sāiyāt)**

Informants in Yemen referred to a type of large transom-sterned vessel of this name, but the MARES team identified no such actual vessel with certainty. The name may have come from the verb-root sa'ā meaning “to go along with vigorousness” and the word sā'i signifies “a messenger that journeys with haste”, which would fit well with the nomenclature sāiyah (Lane 1984, i: 1367). Yemenis have adopted the feminine usage, as several names of vessels in Arabic do. Johann Ludwig Burckhardt (d. 1829) describes a sāiyah as the smallest type of dhow “only nine feet [2.7 m] across the beam” (1822: 8–9).

**Jalbah or Galbah (pl. jilab/gilab or jalbāt/galbāt)**

The name jalbah does not occur in classical and medieval lexicography. From the verb-root jilaba we have “to transport things, such as camels, sheep ... slaves or any merchandise” (Lane 1984, i: 438, 440); hence, it might be said that the ship that carried them was called jalbah. The jalbah was a well-known Red Sea vessel; it is first mentioned by Buzurg ibn Shahriyār (d. 1009) with reference to a journey from Oman to Jeddah (al-Rāmhurmuzī 1883–1886: 93–94). Cargo jilab were used to trade goods from Egypt to Aden and return, according to the Genizah letters (tenth–thirteenth centuries) (Agius 2008: 116–117). Ibn Jubayr says that a jalbah was a pilgrim-cargo boat with sewn planks (1952: 63). Some were large enough to carry camels from Jeddah to Yemen, says Ibn Baṭṭūṭah (1968, i: 158). Portuguese diaries report a type that was a small sailing or rowing vessel used on the southern Red Sea coast. In the greater Aden area, galbah is a term applied to a relatively small transom-ended wooden fishing boat (c.11 m). However, on the Red Sea coast the term was invariably used to refer to fibreglass vessels, whatever their form.

**Hūrī (pl. hawārī)**

The origin of the name hūrī stems from Hindi hōrī and ultimately from Sanskrit hōḍa (Agius 2002: 119–121; 2008: 123, n. 73). Other than the dugout “canoe” this is perhaps the most familiar vessel of that name and the term also applies to a wide range of small plank-built fishing vessels found in every place we surveyed. In many locations it is also applied to the type of fibreglass fishing vessels mainly manufactured in the Ḫaḍramawt area, and found throughout Yemen. The name is also applied to the much bigger “large hūrī” described above.

**Ramas (pl. ramsāt)**

Ramas is a name of Demotic origin (from the root r.m.s.) (Agius 2008: 122). It appears in Hieratic, and is also a cognate term with Somali ramsi and its variant, Ethioptic. It has survived in the Red Sea, the Horn of Africa, and the Ḫaḍramawt area. The classical Arabic term is ramath.

The earliest mention of the term in classical Arabic sources is a verse from a pre-Islamic ode of Abū Ṣakhr al-Hudhali (second half of the seventh century AD) (Montgomery 1997: 195); also found in a Ḫadith, sometime after the seventh century; the Andalusian lexicographer Ibn Sīda (1007–1066) sets a definition of ramath, describing it at some length. We have then no sources mentioning this name until the nineteenth century: Burckhardt sailed in Nubia on a rāmūs “a small raft of reeds”, though elsewhere he described it as constructed of four trunks of date-trees, worked by a paddle 4 feet long (1.2 m) (Agius 2002: 128–130; 2008: 120–121). Barrett Miles (1994: 414) reports that in the early twentieth century he saw Socotrans sailing from the island to Muscat on a ramas made of “three logs about six feet [1.82 m] long, the central one being the longest”. Moore (1925: 138) came across a three- to four-log ramas in Massawa, Eritrea.
Conclusion

As recently as 1996, Prados was able to write that, “…wooden boatbuilding continues to thrive in Yemen.” (1996: 50). The situation has changed radically in the intervening time. The MARES fieldwork suggests that the building of new wooden dhows in Yemen may now have ceased, and that the only work currently conducted in traditional boatyards is repair work on existing vessels. Reports from the Ḥaḍramawt and Maḩra, to which this survey did not extend, suggest that this was the first area of Yemen to start the transition to fibreglass boatbuilding, and hence there are few vestiges of the wooden tradition. The area north of al-Salīf remains an unknown quantity.

It appears that Yemenis are witnessing the end of the practices of wooden boatbuilding, and the maritime traditions associated with it. In the Arabian-Persian Gulf and Oman, the wealth of the state and of individuals has enabled the preservation of some traditional vessels, either in museums or as hobby craft, and the archiving of documentary information on maritime activity in research centres. However, Yemen’s relative poverty means that none of the surviving wooden dhows are likely to be preserved in a cultural-heritage context, a fact that argues for assiduous recording of these vessel types and their associated oral and craft traditions before they are lost entirely.

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References

Agius D.A.


Basch L.

Bilaidi A.S.

Burckhardt J.L.

Burton R.

da Gama V./trans. H.E.J. Stanley


Glidden H.W.

Hasslöf O.

Hawkins C.W.

Howarth D.

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