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Archaeological surveys in the harbour of ancient Kané

*Barbara Davidde & Roberto Petriaggi**

Further information concerning the remains of the ancient harbour of Kané and the commercial traffic along the coastal region of the Ḥaḍramawt have been acquired by an underwater archaeological survey carried out along the coast of Kané (present Bir'alī). The ancient sources, mainly the *Periplus of the Eritrean Sea* (Rodinson 1984; Casson 1989; Robin 1997), inform us that several trade routes to India, Persia, Egypt and other countries of the Western Mediterranean took place from the two harbours of the kingdom of Ḥaḍramawt, Moscha and Kané.¹

Only a few South Arabian epigraphic documents give any information about the importance and history of Kané harbour (RÉS 2687, CIH 621, CIH 728). For example, one mentions that in the years *ca* AD 225 the army of the Sabaeen king Sha'ar Awtar destroyed forty-seven ships moored in Kané bay. Another informs us that in July AD 360 some Yaz'anides princes from the Wadi 'Abadan (Nisab) bought five equipped ships at Kané harbour (Robin & Gajda 1994:113-137).

J.R. Wellstead, an English officer who explored the Arabian coast in 1834 aboard the ship *Palinurus*, describes two ports at Kané: the first was located in the northern bay, while the second, in the southern bay, was silted up at that time (Doe 1961: 191-198; 1970: 256-258).

Since 1985 the urban site of Kané has been the focus of excavations led by a staff of Russian, and recently French, scholars. The results of this systematic research are of great scientific value and allow us a better understanding of the history of this important town.

The archaeological site along the shoreline, with domestic remains, storage areas, is dominated by the rock Ḥuṣn-al-Gurāb with a fortress, some water supplies and a building identified as a lighthouse. The site appears to have been in use from the late first century BC until the early seventh century AD. This is supported by the rich corpus of ceramic material, glass (mostly imported) and hundreds of bronze coins found during excavation.

In the first-second centuries AD the artefacts testify to the predominance of contact with some areas of the Italian peninsula, Palestine, Asia Minor, Parthia, probably India, and some areas of the Persian Gulf and Socotra. Later (third-fourth centuries AD) a preferential relationship with areas of North Africa, East Africa and Mesopotamia is noted. In the final stages of the life of the site, the archaeological materials confirm intensive commercial exchanges with southern Palestine (Gaza), the region of Antiochia and Mesopotamia (Sedov 1992:110-137; 1994: 11-35).

We decided to try to increase our knowledge of the topography of the ancient harbour, and of the materials and goods shipped through it, by making an underwater survey. It was the first time such a programme had been followed in the history of excavations at Kané (Davidde 1997: 355-360). Thanks to a general agreement between the Russian Institute of Oriental Studies, the CNRS of Lyon, the Department of Antiquities of Ṣan'ā' and the Italian Institute for Africa and the East, our scuba team became part of the international archaeological mission.

In October 1996 we started our work with a visit to the top of the *Ḥuṣn-al-Gurāb*, the best place to view the topography of the site. We realised immediately that the southern bay was almost silted up. Hypothetical archaeological evidence could be identified after a careful geological study of satellite photographs confirming the ancient coastline.

In the first phase of the survey a systematic investigation was carried out looking for possible mooring structures, in front of the ancient warehouses (depth max. 5 m), as can be observed in many other Mediterranean harbours (Portus, Piraeus, Delos, Kenreai, Leptis Magna, Massalia, *etc.*) No structures or ceramic evidence was found. We extended the investigation to the west side as far as the southern bay without success because of the presence of sand.

Next, we started to explore the inner northern bay (max. 6-8 m depth), about 150 m from the coast and from the warehouses and houses standing on the sea-front. The northern bay is a large natural inlet cutting deeply into the coastline with the mouth of the inlet opening to the east. It is protected from winds coming from both south and west.

Immediately, we found our first archaeological artefact: a truncated, pyramid-shaped, stone anchor lying at a depth of 6-7 m (Fig. 1). We marked out an area of the sea bed measuring about 300 m² as the

FIGURE 1. *The stone anchor.*



field for the 1996 survey. The site appeared very rich in archaeological finds: the stone anchor, ceramics, amphorae and five dead weights used as mooring stones. During dives we recovered 70 ceramic fragments and the stone anchor. The archaeological material has been delivered to Ataq Museum.

The main finds consist of: fragments of amphorae Dressel type 2/4 from the Italian peninsula (Fig. 3 inv. nos 30, 25; fig. 4 inv. no. 45; fig. 7 inv. no. 28; Zevi & Tchernia 1972: 37-40; Panella 1977: 133-177); four fragments of amphorae Pelichet Type 47 from south Gallia (Fig. 5 inv. no. 5; fig. 6 inv. no. 21; Laubenheimer 1989:105-138; one fragment of amphora Dressel type 2/4 maybe from the Koan region (Fig. 3 inv. no. 29; Joncheray 1972: 11-34). These materials date to the first to third centuries AD. We did not find any fragment of terra sigillata or fine pottery but perhaps these small, fine, objects lie beneath the sand.

In addition we found: a Nubian oil lamp (Fig 6 inv. no. 35A; Bietak & Schwartz 1987: 191); some rims of jars and some fragments of as yet unidentified amphorae;² one fragment of Dressel Type 2/4 amphora produced in Egypt (Fig. 2 inv. no. 44; Empereur 1986: 599-608); one fragment of a Dressel Type 24 amphora from the Black Sea region, the first evidence of trade with this region found at Kané, (Fig. 2 inv. no. 27).³ All of these materials confirm the change in commercial relationships during the first to fourth centuries AD, with a shift towards North Africa, East Africa and also towards the Black Sea.

The pottery from this area, dating from the first to the fourth centuries AD, confirm and enrich the data of the archaeological excavations in the town.

During dives along the coast more mooring structures were discovered, and five more rectangular stone blocks were found during surveys in the area. These objects are rough, too big to be stone anchors, and too large to be conveniently carried on board ship. We think that they are permanent mooring placements placed in the bay to give cargo ships a more secure mooring. Once moored, the ships could be unloaded by small boats and the goods carried ashore to the warehouses.

The results of these preliminary surveys confirm the presence of an organised mooring place in the northern bay at Kané.

A new survey will start, we hope, next year. We would like to complete the exploration of the bay to establish the extent of the archaeological area.

FIGURE 2. *Inv. no. 44: fragment of amphora Dressel 2/4 type made in Egypt. Inv. no. 27: fragment of an amphora Dressel 24 type from the Black Sea region.*

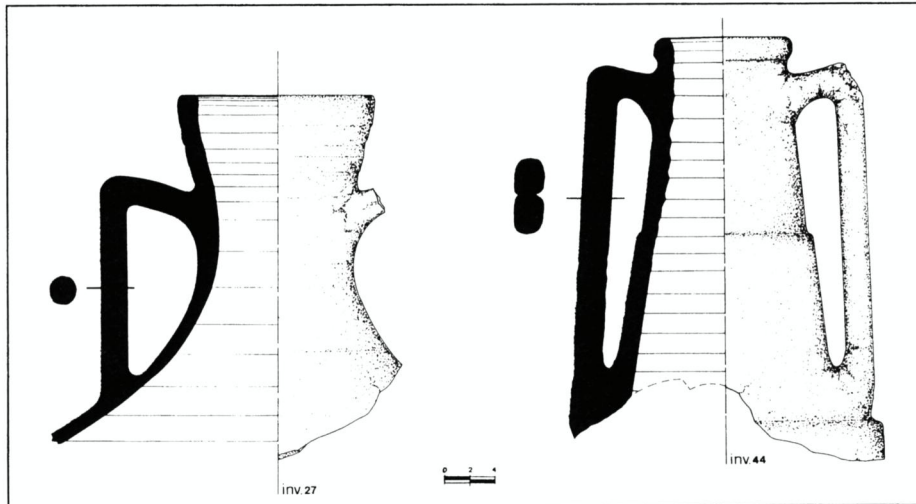


FIGURE 3. *Inv. nos 30-35: fragments of amphorae Dressel 2/4 type from the Italian peninsula. Inv. no. 29: fragment of amphora Dressel 2/4 type from the Koan region.*

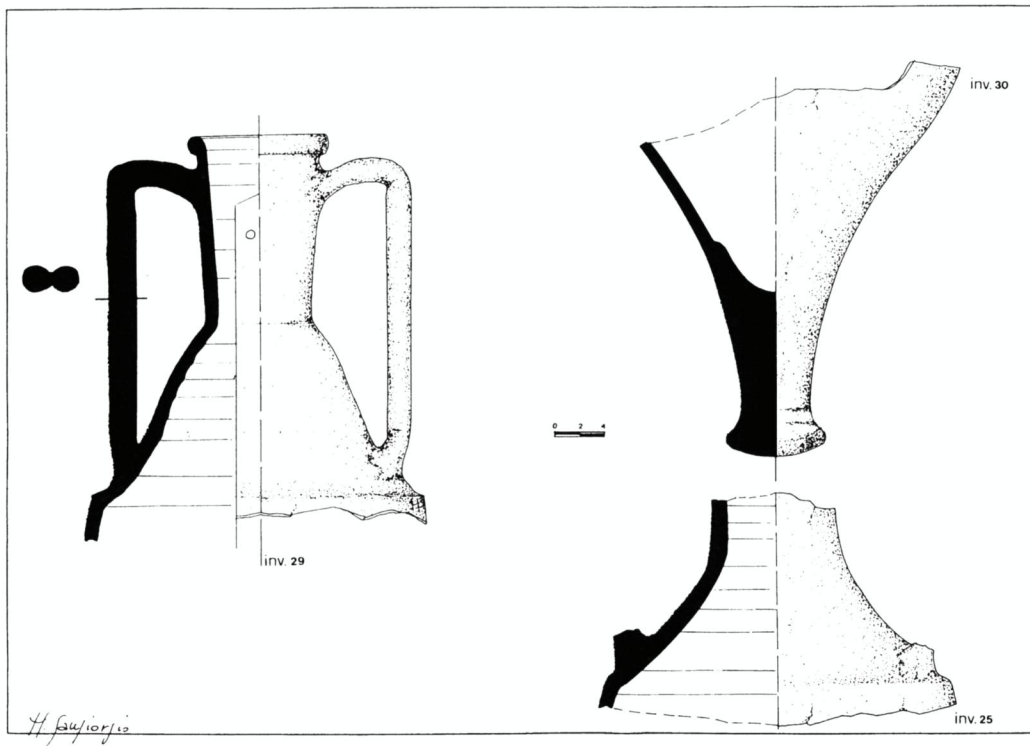


FIGURE 4. *Inv. no. 33: fragment of amphora Dressel 2/4 type Panella 5. Inv. no. 45: fragment of amphora Dressel 2/4 from the Italian peninsula.*

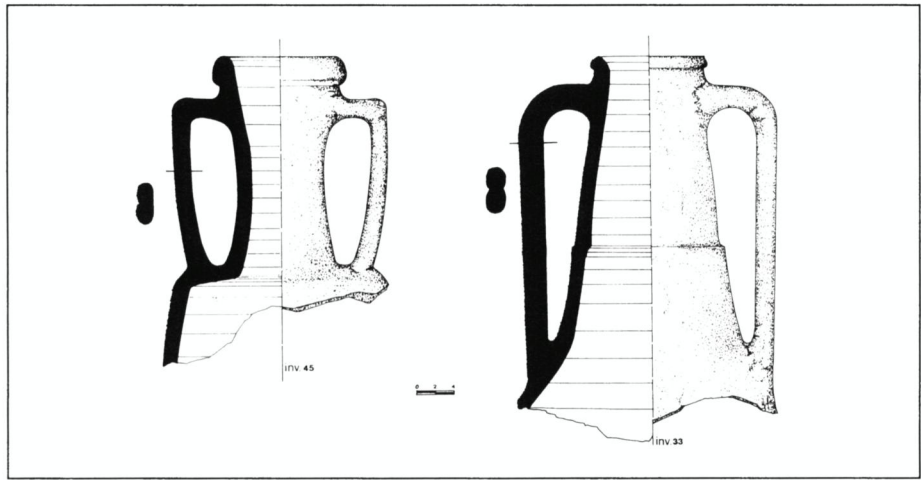


FIGURE 5. *Inv. no. 5: fragments of amphorae Pelichet 47 type from South Gallia.*

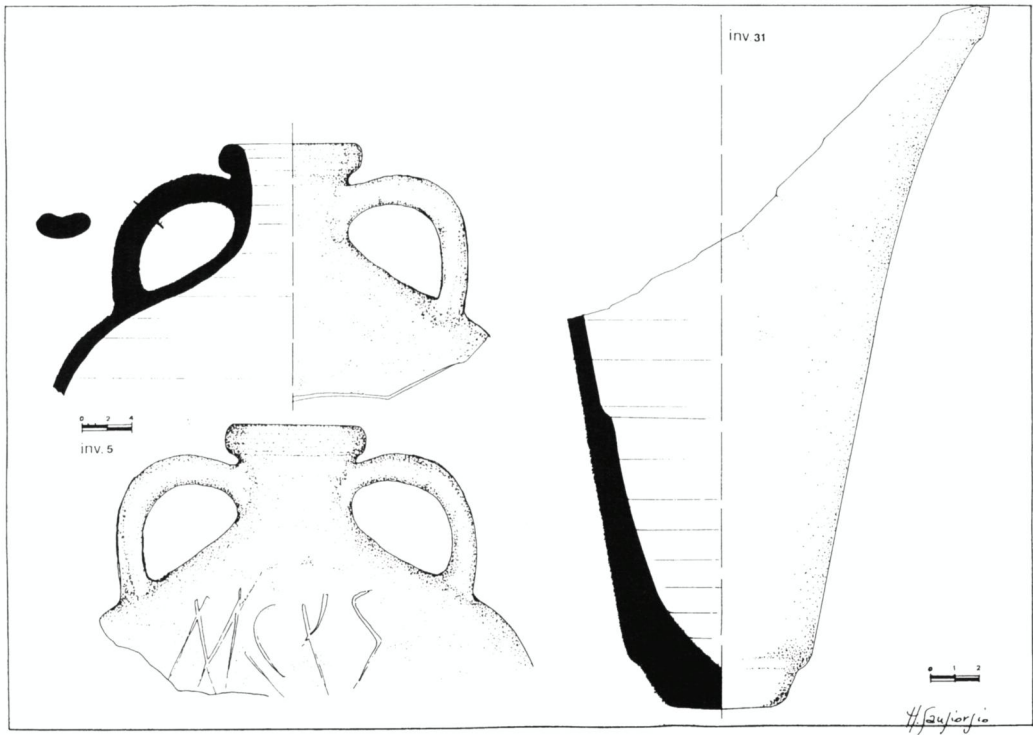


FIGURE 6. Inv. no. 21: fragment of amphorae Pelichet 47 type from South Gallia. Inv. no. 35A: Nubian oil lamp.

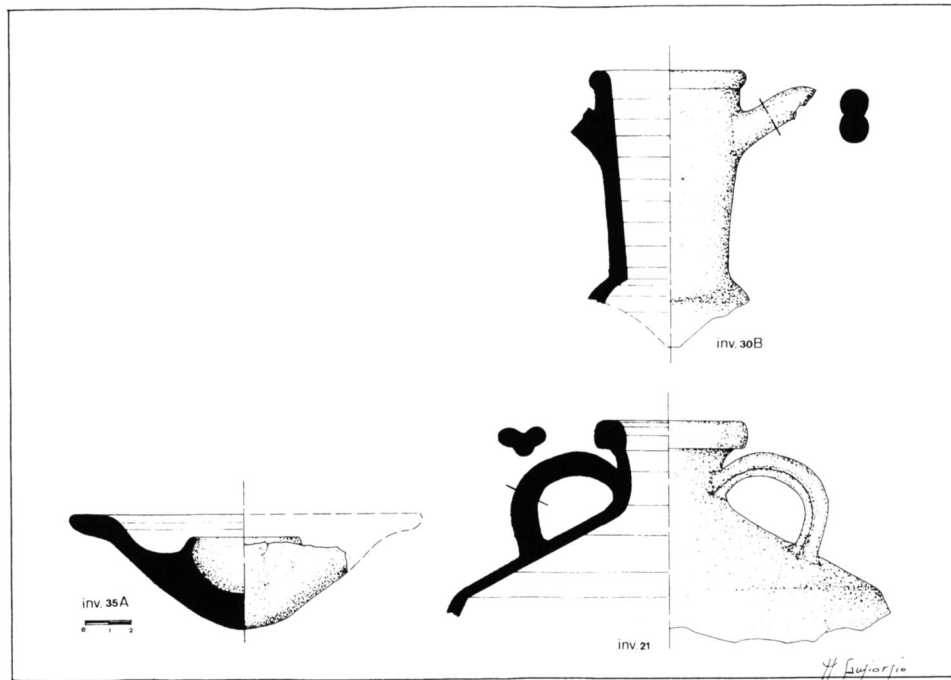
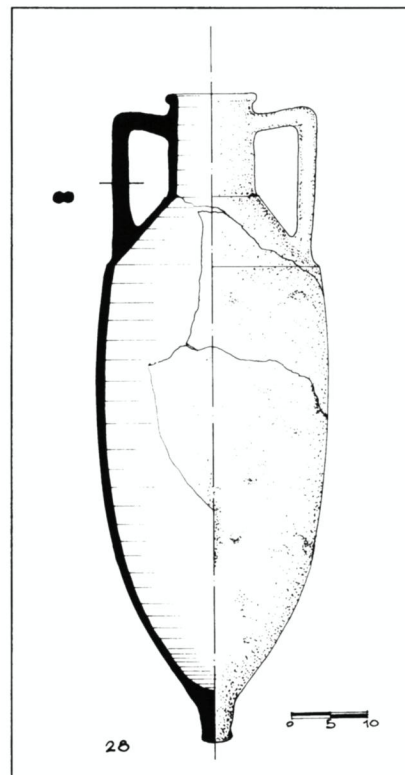


FIGURE 7. Inv. no. 28: fragment of amphora Dressel 2/4 type from Pompeii.

Notes

- * Members of the Italian Archaeological Mission in the Republic of Yemen - Italian Institute for Africa and the East, Rome.
- ** All drawings by Marco Sangiorgio of the Italian Mission.
- ¹ Herodotus, *Historiae* III.97; III.107-113; *Periplus Maris Erythraei* 21, 23-28, 31, 32, 25, 54, 57, 65; Strabo *Geographia* I: 2.32; XVI: 4.2, 4.19, 4.25; 4.767-9, 4.780-2; XVII: 819; Pliny *N.H.*: 154161.101, 162; XII: 52, 66, 81, 88; *Res Gestae*: 18, 23, 26. Concerning commerce and trade routes in Arabia Felix see also Hourani 1963; Desanges 1971; Groom 1981; De Romanis 1996; Tchernia 1997 (with previous bibliography).
- ² We await the results of the petrographic analysis which will determine the fabric and origin of these items.
- ³ We thank Clementina Panella for this information.



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