

## Sharjah Miscellany

Besides the work reported upon in the two previous items, two other overseas archaeological teams worked in Sharjah during the last season. One, a British team directed by Carl Phillips, continued work at the major settlement site at Kalba, which has produced evidence of continuous settlement for a period of at least 2000 years, from as early as 2500 BC. The earliest levels of the site have yet to be reached.

A summary of work by the second team, from Spain, at Al Thuqaibah, follows, and is adapted from the preliminary report submitted to the Sharjah Directorate of Antiquities.

## Al-Thuqaibah

Between 13th February and 10th March 2000, a Spanish team from the Universidad Autonoma de Madrid, led by Prof. J.M. Cordoba continued studies in the Al-Thuqaibah area, on the Madam plain, not far from Jebel Buhays, and the site of a major Iron Age settlement.

The work included both excavations and a continuation of geographical surveys carried out in previous seasons, utilising both geo-magnetic and electro-magnetic methods.

The excavations included several soundings in an area outside the protective fence around the site. These produced evidence of walls, probably a new house, which has provisionally been dated to the second phase of the village. Numerous late Iron Age II period potsherds and stone objects were also recovered.

Stratigraphical soundings inside the complex formed by houses H1 & H2 have permitted confirmation, in principle, of the different typologies of Phases I and II at Al-Thuqaibah, which appears to have a greater extent of stratigraphy than any other settlement of the period in south-eastern Arabia.

## Abu Dhabi Archaeological Round-up

*(The following review, by Peter Hellyer, summarises some recent fieldwork by the Abu Dhabi Islands Archaeological Survey, ADIAS, and C14 dating results. See Page 7 for a report on the dating of ceramics from two sites on the island of Abu Dhabi).*

## Shoreline studies and new island sites

As part of continuing work to investigate the evolution of the shorelines of Abu Dhabi over the past few thousand years, along with evidence for changes in sea levels, Professor Graham Evans of Southampton University and Dr. Tony Kirkham paid visits to Marawah, Balghelam and al-Aryam (Bu Khushaishah) islands in mid-November 1999, and also carried out studies under the aegis of ADIAS on the shoreline to the north east of Abu Dhabi. As part of their work, they also visited several *Qasasir* (rock outcrops) in the shallow lagoon between al-Aryam and Futaisi.

Their investigations confirmed that Marawah has the most complete sequence of Pleistocene and Holocene geology yet recorded anywhere in the Arabian Gulf. Fossil corals recorded on Marawah have not been identified anywhere else in the region.

The research has been of considerable use to ADIAS in terms of understanding the evolution of the shoreline and coast over the last few thousand years. Clear evidence has been found of a higher sea level,

approximately 80 cm. higher than the present, around 4,000 years ago, while studies on Marawah have also showed that the shape of the island has changed considerably over the same period as a result of changes in shorelines and the infilling of bays and inlets. Evidence was also found on Marawah and on the *Qasasir* of the former presence of forests of large mangrove trees, whose fossilised root casts were identified on the surface of wave-cut platforms.

The results of this work have helped in the interpretation of archaeological sites on Marawah, in particular their location.

During the examination of the *Qasasir*, groups of small cairns were identified on the top of three of the outcrops. No sites of this type had previously been identified by ADIAS anywhere in the coast and islands of Abu Dhabi.

Further work was then undertaken by ADIAS in the area in late December, directed by the ADIAS Academic Director Dr. Geoffrey King

The short season of work showed that four of the *Qasasir* between al-Aryam and Futaisi contain a total of 36 individual small cairns, three in groups of 8, 10 and 17, and one single cairn. There are also a number of water catchment systems, comparable to that found on a small *Qassar* in the Dabb'iyah area.

The initial conclusion was that all of the cairns were man-made, although in the absence of any pottery or other finds nearby, it was impossible to suggest a date. Although small, it seemed possible that they might represent pre-Islamic graves. A test excavation of the largest cairn showed that it was certainly man-made, but that there was no burial, and it was not possible to determine its purpose. Further work is planned at a later date, to see if the reason for their construction can be established.

The discovery of the cairns represents an interesting addition to knowledge of the archaeology of Abu Dhabi. Of particular interest is the fact that they are all a considerable distance away from areas of possible settlement.

During the process of the December work, significant new data was also gained on the pattern of settlement on the al-Aryam / Bahrani group of Abu Dhabi's offshore islands.

With the permission of Sheikh Hamdan bin Zayed Al Nahyan, a survey was first undertaken on the northern and western coasts of al-Aryam. Two groups of sites were identified, one a collection of four shell middens, of probable Late Islamic date, and the other the remains of a large Late Islamic village site on the eastern side of al-Aryam, overlooking the lagoon. Pottery from the village suggests occupation from the 17th or 18th Centuries until the early 20th Century.

One discovery at the site was the presence of a number of shells of the large edible marine gastropod *Terebralia palustris*, which now survives in the UAE only on the East Coast, at Khor Kalba and Khor Fakkan.

*Terebralia* is well-known from archaeological sites in the northern Emirates, from sites ranging in date from the 1st Millennium AD back to the Late Stone Age, but has never before been reported from sites in the Emirate of Abu Dhabi. It is also very rare for *Terebralia* to be found on Islamic sites, an indication, perhaps, that it was over-exploited by the former coastal inhabitants of the Emirates.

Studies into the distribution and dating of *Terebralia* in the UAE are currently being carried out by ADIAS environmental archaeologist Mark Beech and by Gary Feulner, Chairman of the Dubai Natural History Group, and the discovery of the species on al-Aryam is a major extension of its previously-known range.

It is not possible, however, to determine whether the *Terebralia* were collected locally, or whether they were imported to al-Aryam from further afield.

Following completion of the work on al-Aryam, a preliminary visit was also made to the western shoreline

of the island of al-Bahrani. A total of four sites from the Late Islamic period were identified, including an area of occupation, although the extent of the site was noticeably less than at the al-Aryam village site. A preliminary interpretation is that the al-Aryam village was the major centre of occupation in and around the lagoon between the three islands. Further work is planned. The results of the work are not dramatic, but show, once again, that there are still many archaeological sites on the coast and islands of Abu Dhabi that have yet to be recognised.

Logistic support for the onshore work was provided by the Abu Dhabi Company for Onshore Oil Operations, ADCO, while Sheikh Mohammed bin Zayed, Sheikh Hamdan bin Zayed and Sheikh Surour bin Mohammed granted permission for work to be undertaken on Marawah, al-Aryam and Balghelam, respectively.

## Wide range of results from C14 dating of Marawah & Balghelam hearths

Surveys by ADIAS on the coast and islands of Abu Dhabi have identified a large number of sites characterised by rectangular stone-lined hearths, or by low, roughly circular, mounds with evidence of burnt stone on the top and evidence of ash below.

These hearths, the vast majority of which have been identified on islands, have been found both in small groups of five or less, and in larger grouping. The two largest yet identified are on Balghelam (over 30) and on Marawah (a group of more than 150 at Site MR-9).

Dating of the hearths has proved in the past to be problematical. In some cases, Late Islamic pottery has been found in the vicinity - on Balghelam, for example - while in others, as on Marawah and Rufayq, pottery from the early 1st Millennium AD has been identified in the area. A few hearths of this type identified on the island of Ghanadha in the early 1980s by a team from the Department of Antiquities and Tourism in the Diwan of the Ruler's Representative in the Eastern Region were assigned an Iron Age date. On Marawah, dating of a hearth from MR-9 undertaken by ADIAS last year provided a date of between 320-200 BC.

Further study of these hearths was clearly necessary in order to assess their age, or their range of ages. In order to permit this, carbon samples were taken in early 1999 from the main groups of hearths on Balghelam and Marawah, and were submitted to the radiocarbon laboratory of the Scottish Universities Research and Reactor Centre, SURRC, at Scotland's University of Glasgow. The results provide important new evidence on patterns of occupation on Abu Dhabi's islands.

Four samples were taken from hearths on Balghelam. Of these, one, at Site BG 5/6, produced a calibrated radiocarbon date of 2100 +/- 170 BC, *i.e.* around the beginning of the Second Millennium BC, 4,000 years ago. Pottery from the Barbar period in Bahrain, of roughly the same date, has also been recovered in the area.

Of the other three Balghelam hearths, one from Site BG-3 produced a date of 595 +/- 195 BC, and two more from Site BG-5/6 produced dates of 1705 +/- 175 BC and 580 +/- 180 BC.

Five samples were taken from hearths at Site MR-9 on Marawah. These produced calibrated dates of 2080 +/- 200 BC, 600 +/- 200 BC, 300 +/- 100 BC, 250 +/- 150 BC and 260 +/- 130 AD.

Together, these indicate that the hearth sites were used in the following periods:

Late Umm al-Nar / early Wadi Suq period (c. 2100 BC to 1700 BC), the late Iron Age, (c. 600 - 580 BC), the 'Hellenistic' period (c. 250 BC) and the late pre-Islamic period (c. 175 BC).

The results show that the simple, but effective, technology represented by these hearths was not only

used over a very long period, but extended back much further than had been suspected, to around 2,000 BC, or 4,000 years ago. Use is also suspected to have extended into the Islamic period, although as yet there are no C14 dates to confirm this. Further samples have been taken for dating from other groups of hearths on the island of Rufayq. Results are expected later this year.

### ADIAS Academic Director Dr. Geoffrey King comments:

"The coast of the UAE was known to Classical authors like Strabo as the land of the Ichthyophagi, the fish-eaters. Increasingly archaeology is giving concrete form and chronological evidence, based on Carbon 14 (C14) analysis, to date the great antiquity of the fishing tradition in the economy of the coast. The quality and quantity of the fish and shell-fish in the waters of the Gulf is such that in all periods since very ancient times, the harvesting of the sea has persisted by man using technologies which survived down to the onset of the modern oil period. Indeed, some older inhabitants of the UAE still know exactly how to use the stone-lined fish baking hearths of a type that we now know were in use at least as early as 4000 years ago.

This is supported by the new C14 results, which show that small stone-lined hearths for baking fish have continued in use and virtually unchanged since very ancient times through the Islamic period.

This new evidence should be seen against ADIAS's broader archaeological research in the Western Region of Abu Dhabi over the past decade which has found very widespread evidence of Late Stone Age settlements and smaller sites, concentrated mainly on the islands off the coast. These have been dated so far principally by finely-made stone tools and weapons and sometimes ceramics of types known elsewhere in the Arabian Gulf and Iraq, and all dated to the Late Stone Age, about 5000 BC. There are also a very large number of sites which are dated by pottery to the Later Islamic period, from about 15th-16th C. These are very widespread in the coastal region of Abu Dhabi.

All of this is now quite well known in terms of UAE archaeology but the new data provided by the C14 results from Balghelam and Marawah offers an entirely new range of dating for occupation on the islands off the Abu Dhabi coast.

The Carbon 14 analysis by the SURRC has been applied to burnt ash and wood samples taken from archaeological sites on the islands of Marawah, west of Abu Dhabi, and of Balghelam, east of Abu Dhabi which hitherto have lacked any obvious means of dating such as ceramics or flints. The C14 results, however, offer a whole new range of dating that demonstrates settlement on these islands across a considerable period of time.

The results are of great interest as they represent evidence of periods which have been markedly absent in Abu Dhabi coastal archaeology so far. It is only the use of C14 analysis that has allowed us to recognise the extent of human activity during these periods, although further data is now becoming available as a result of the study of the pottery assemblages from a number of the sites.

These results indicate a far broader range of dating for the Abu Dhabi islands than hitherto suspected."

**G.R.D. King**