

Abu Dhabi Islands Archaeological Survey Project

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1997-1998 Season

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Dalma dig reveals UAE's oldest settlement site

With the main spring archaeological season now over, a summary of what we have been doing for the last few weeks is appropriate. We are delighted, therefore, to be able to report that our short season on Dalma has revealed evidence of the oldest houses yet discovered in the Emirates. Our Dalma team take up the story.

Oldest Houses in UAE discovered by Mark Beech and Dr. Joseph Elders

A short season of work in March on the island of Dalma by Mark Beech and Joseph Elders of the Abu Dhabi Islands Archaeological Survey, ADIAS, revealed traces of houses from the Late Stone Age. The Dalma site was first identified in 1992. The presence of imported 'Ubaid pottery from Mesopotamia and flint tools suggested that the houses date back to over 6,000 years Before Present, BP, the first time that houses dating to this period have been identified in the Emirates.

At least one round house, 7 metres in diameter, was identified. The cobbled floor and traces of the wooden posts which supported the walls and roof could be clearly identified.

The quality of the construction suggested that their inhabitants may have lived on Dalma for most of the year, rather than just being occasional visitors, the first evidence of permanent Late Stone Age settlement in the Emirates. Since by that time Dalma was already an island, this pottery is also the earliest evidence yet discovered of maritime trade in the Emirates.

A large amount of sherds from broken cooking and storage vessels was found in and around the house, including a small amount of fine quality

imported pottery from southern Mesopotamia. The greater part of the sherds found during the excavations consisted, however, of 'white wares.' These were locally-produced pots made of plaster (gypsum), with simple black-stripe decoration, copying designs of the 'Ubaid originals from Mesopotamia, but using locally-available material.

Stone tools found included knives, drills, scrapers, chisels and arrowheads. A large number of waste flint flakes were also found, indicating that the tools were made by the inhabitants of the settlement. Other finds included a number of beads and stone disks, some of which were perforated, suggesting that they might have been used as fishing net or loom weights.

The greatest number of finds consisted of the refuse of food consumed by the occupants of the settlement. Evidence in the form of bones and shells indicated that fishing, the gathering of shellfish and hunting, as well as animal husbandry, formed the basis for the economy of the early inhabitants of Dalma.

Fish provided the bulk of the diet. Important species included the grouper (*hamour*), needlefish, seabreams and tuna. Sharks and rays were also regularly consumed, some being very large. Work being carried out by Mark Beech as part of his doctoral thesis at the University of York in the UK suggests that some of the *hamour* were up to a metre in length, suggesting a surprising degree of sophistication in fishing techniques.

Other marine resources which were exploited included sea urchins, crabs, marine turtle, dolphin and dugong. Gazelle and Socotra Cormorant also

appear to have been occasionally exploited, while a small quantity of bones from domesticated sheep and goat were also recovered from the site. Large amounts of shells, representing refuse from the consumption of shellfish, were also found. These consisted mostly of pearl oysters, turban shells and clams.

The Dalma excavations, which were carried out this year with special support from Minister of Information and Culture His Highness Sheikh Abdulla bin Zayed Al Nahyan, have revealed for the first time a detailed picture of life in Abu Dhabi around 6,000 years ago. Further studies will be carried out on the finds, while samples will be submitted for radiocarbon dating to try to establish a more exact date for the settlement.

This year's work shows that the Dalma site is one of the most important of its kind anywhere in Eastern Arabia, as well as in the Emirates. Much more work remains to be done. The whole site covers an area of at least 100 metres by 80 metres, and it will take several years to excavate it fully and to study the remains.

The Merawah Excavation season

by **Nadia Iacono**

A second season of excavation of cairns on the island of Merawah was undertaken in March as part of continuing research into the island's history and pre-history. The primary focus of the work, carried out by Nadia Iacono, Soren Blau and Graham Wilson, all from Sydney, Australia, was to continue investigation of a number of stone cairns located on the island at Sites MR6 and MR12.

Preliminary results of remains recovered during excavations at sites MR 6.2, MR 6.4 and MR 12.1 included the following.

MR 6.2. Two parallel walls were exposed, built of local beach-rock. No associated artefacts were found, and a possible interpretation of the site is still being considered.

MR 6.4. Archaeological remains of a circular stone feature, approximately 90 cm high and 1.90 m in diameter were exposed, containing a small ceramic vessel. Weathered fragments of a human cranium were also recovered during the excavation, indicating the structure's use as a possible burial cairn. Site MR 6.3, immediately north west of MR 6.4, was investigated by the team in 1997, also yielding remains of an articulated human burial.

MR 12.1. One of eleven stone cairns located along a limestone ridge c. 200 m. southwest of

the village of Ghubbah was excavated. The cairn was exposed as a low, oval-shaped structure built directly on the bedrock, and approximately 55 cm. high and 2 m. in diameter. Incomplete and highly fragmented remains, in very poor condition, of two human inhumations were encountered. Post-excavation analysis is being undertaken by the team to further refine information associated with these remains. Detailed analysis will include testing for possible determination of age and sex, as well as pathological alteration of the remains.

Evidence of burials in three of the four cairns so far excavated on Merawah has so far been encountered., and continuing investigation of the cairns and analysis of the remains contained therein aims to contribute to a greater understanding of the significance of these structures, both within the context of the island's cultural occupation and the wider sphere of the Abu Dhabi islands as a whole. As far as is known, the ADIAS excavations on Merawah are the first to examine cairns on islands west of Abu Dhabi, and have the potential to provide us with details of unique burials for south-eastern Arabia. Although the structures appear clearly to be of pre-Islamic date, no definite dating has yet been possible.

In an attempt to obtain a date, Thermo-luminescent dating (TL) of the ceramic pot recovered from cairn MR 6.4 is being carried out in Sydney. Analysis is also being undertaken on the pot fabric.

Further work on the Merawah cairns is now being planned for the 1999 ADIAS spring season.

Geology study yields important results

As sponsors will know, we have been keen for some time to gain a better understanding of the pattern of sea level changes in the Arabian Gulf over the last few years, to give us a better understanding of the archaeological sites along the shorelines and also of the nature of the islands and coast.

This season, a major step forward has been made with the carrying out of extensive geological and geomorphological research.

The focus of the work was on Merawah. First the geology of the island was studied properly for the first time by two top specialists. Professor Graham Evans, formerly of Imperial College, London, and now associated with the Department of Oceanography at Southampton University, led the research, drawing on over 35 years experience of

the Emirates that began with his ground-breaking studies of Abu Dhabi's *sabkhas* in the early 1960s. He was assisted by Dr. Tony Kirkham, formerly a senior geologist with our sponsor the Abu Dhabi Company for Onshore Oil Operations, ADCO, who has recently carried out extensive work on the evolution of the shorelines of Abu Dhabi over the last ten thousand years ago or so.

In their study of the island, Evans and Kirkham found that Merawah had a more complete succession of late geological layers than anywhere else known on Abu Dhabi's coast and islands, with important discoveries including fossil corals from the Pleistocene period that have never previously been recorded in the area.

To plot the surface geography of the island, a series of nine transects were taken by two other team members, Dr. Robert Carter, who recently received his PhD from the Institute of Archaeology in London for his study of pottery from a major Bronze Age site at Kalba, and has also carried out work this year in Ras Al Khaimah, and Philippa Loates, a second year student of archaeology from the University of Manchester, taking advantage of her Easter vacation to get some local fieldwork experience.

A number of samples were collected for radio-carbon dating, while when the preparation of the mapping is complete, a detailed report on the geology and geomorphology will be prepared as a framework within which to interpret the archaeological landscape of the island.

After completing their work on Merawah, Evans and Kirkham moved on to study other important areas, including the Dabb'iya peninsula, Futaisi Island and Bu Khushaishah Island, helping to build up a more complete picture.

We are grateful to those who provided various facilities for their work, including His Highness Sheikh Hamdan bin Zayed Al Nahyan, who kindly permitted access to Bu Khushaishah (Al Aryam), and to ADCO, which loaned a theodolite for mapping and also permitted Evans and Kirkham to make use of their accommodation facilities in Dabb'iya.

Botany study of Merawah site

During fieldwork on Merawah in January and February this year, an extensive Late Islamic settlement site was recorded west of the village of Ghubbah, in association with a number of water catchment features.

As a result of the heavy rains of the 1997-1998 winter, these features were clearly recognisable because of the extensive growth of grasses on the

silt trapped within them.

Most of the natural vegetation on Merawah is of typically salt-tolerant species, and the grasses are unusual.

As part of multi-disciplinary studies of the island, Benno Boer, a botanist with the Environmental Research and Wildlife Development Agency, ERWDA, made a brief study of the grasses in early April. The results, when available, will help us to obtain a better picture of the natural resources available on the island.

Publications programme under way

One of the key tasks of any archaeological project is the publishing of results in a form that brings results of work to the knowledge of the academic community and of the general public.

It's easy enough to undertake the fieldwork and even the analysis that follows, but to bring results to a stage where they can be published is a time-consuming and expensive process.

A number of papers in academic journals about the work of ADIAS have already been published. Now, however, the first book has appeared.

Reporting on the results of the first preliminary season of survey on Sir Bani Yas, Dalma and Merawah, the book, with a gazetteer of sites found, is by Dr. Geoffrey King, the ADIAS Director.

The report, entitled simply 'Abu Dhabi Islands Archaeological Survey: Season One,' is published by Trident Press, with the support of Minister of Information and Culture His Highness Sheikh Abdulla bin Zayed Al Nahyan, (to whom our thanks).

Copies will be available in bookshops in due course, but ADIAS sponsors and recipients of this Newsletter who would like copies are requested to contact the ADIAS Co-ordinator.

The second publication, non-academic in tone and aimed at a broader readership, is a summary review of ADIAS activity over the 1992-1997 seasons. Entitled 'Filling In The Blanks,' the book, written by the ADIAS Co-ordinator, Peter Hellyer, is sponsored by the Abu Dhabi National Oil Company, ADNOC, and is being produced by Motivate Publishing.

Results of some of the ADIAS work on Late Islamic sites are also referred to in another publication due to be launched later this month to coincide with the inauguration of the UAE stand at the Lisbon EXPO. The book, entitled 'The Marine Heritage of the Emirates,' includes a chapter on the history of the country during the Islamic era, written by ADIAS team member Dr. Joseph Elders. The book is being published by Trident Press, again with the support of the Ministry of Information and

Culture.

In press, and due for publication later this year, is a short paper on First Millennium AD pottery from a site at Ra's Bilyaryar, north east of Abu Dhabi, first identified by the Co-ordinator several years ago.

Pottery from Airport site published in journal

The pottery from the Abu Dhabi International Airport site has now been published in the latest issue of the leading bi-annual journal ***Arabian Archaeology and Epigraphy***.

Written by ADIAS ceramicist Beatrice de Cardi, the 13 page paper reports that the pottery from the site includes material from the Hafit period, around 3,100-2,700 BC, the Umm Al Nar period, c. 2,500-2,000 BC, and the 1st-2nd century AD.

De Cardi notes that the bulk of the occupation at the site, now enclosed and protected within the new Abu Dhabi Airport Golf Course, appears to have been during the Umm Al Nar period, with affinities both to the coastal culture represented by the site of Umm an Nar itself and period III at Hili 8, in Al Ain. Some of the pottery was probably imported from Mesopotamia or eastern Arabia.

As sponsors will recall, the site was examined during a six week excavation season in the summer of 1995, with the active support and sponsorship of Civil Aviation Department Chairman HE Sheikh Hamdan bin Mubarak Al Nahyan and the Abu Dhabi Duty Free.

The site also yielded substantial evidence of occupation during the Late Stone Age.

A full report on the Airport site is still in preparation.

(Photocopies of the paper in Arabian Archaeology and Epigraphy can be supplied to sponsors upon request. Please contact the ADIAS Co-ordinator, on telefax: Abu Dhabi: 453963).

Fieldwork continues

Despite the end of the main season of activity (and rising summer temperatures and humidity), some fieldwork is still continuing.

Earlier this month, with the permission of Minister of State for Foreign Affairs His Highness Sheikh Hamdan bin Zayed Al Nahyan, two further visits were paid to the island of Qarnein, to examine the area which has produced pottery from the early First Millennium AD, the first such evidence to be found so far offshore. The presence of further potsherds was recorded, while GPS locations were taken of the sites.

An initial report on the Qarnein pottery, written by

Geoffrey King and Peter Hellyer, was published in ***Tribulus***, bi-annual journal of the Emirates Natural History Group, last winter.

We are grateful to Sheikh Hamdan for his continuing interest in our work.

A preliminary survey has also been carried out by the Co-ordinator on one of the range of low hills rising out of the sabkha just to the west of the junction of the Al Ain Truck Road and the highway west to Tarif. No archaeological finds were made. Further study of the range of hills is planned to see whether they are of value in terms of the country's archaeological heritage.

A return visit has also been made by ADIAS environmental consultant Simon Aspinall to the Taweela area, which produced little new evidence beyond that recorded last summer.

Patterns of past land usage, of course, involve both areas that were used and those that weren't - and from such surveys we will be able to gain a better understanding of the past, as well as being able more accurately to identify those areas worthy of conservation and protection.

... And Finally

With the onset of hotter weather, our visiting ADIAS archaeologists have moved back to more temperate climes. Their work, of course, continues. Thus in Australia, analysis of some of the finds from the Merawah excavations is being undertaken. In London, various studies will be undertaken over the course of the summer, including dating and analysis of environmental remains from the Dalma site, and also of geological samples collected on Merawah by Professor Evans and Dr. Kirkham, including the previously unrecorded Pleistocene fossil corals.

Work is also continuing on the analysis of the Late Islamic potsherds collected during the 1997 work on the island of Balghelam and at Mantiqa al-Sirra, prior to a full comparative study of the Late Islamic pottery scheduled for the autumn, which will be carried out by Dr. Robert Carter in collaboration with the National Museum of Ras Al Khaimah..

In Abu Dhabi, work continues on collecting and cataloguing our existing data, while, as mentioned above, small-scale field work is also continuing.

With the end of the main fieldwork season, however, it is appropriate, once again, to thank the many sponsors who have contributed to the work of ADIAS over the course of the last twelve months.

Once again, a number of important discoveries have been made, underlining the fact that the study of the archaeology of the coast and islands of Abu Dhabi is a task well worth pursuing.

We look forward to further activity in the months and years ahead.