

Abu Dhabi Islands Archaeological Survey Project

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Merawah yields more Stone Age finds, major new Late Islamic site

With the first phase of this winter's main season on Merawah now completed, significant results have been recorded. The work, from December 27th to February 6th, was in two parts. One was a further examination of the Late Stone Age site, MR-1, at the south western corner of the island, where flint arrowheads and other tools were first identified during the first ADIAS season in 1991. Thanks to recent rainfall and strong winds cleaning some of the surface sand off the site, a substantial number of flint tools had been exposed. All those noted were plotted and mapped, and photographed *in situ*, and were then picked up for recording and further examination. During this work, carried under by Salvatore Garfi and a new ADIAS team member, David Gilbert, from Britain's University of Cardiff, nearly 100 more flint arrowheads were found, bringing the total so far recovered from the site to nearly 200, the most extensive assemblage known from anywhere in the Emirates. A number of knives and scrapers were also recovered, as well as other artefacts.

Some of the nearly fifty small structures on the site were also plotted and drawn by Henriette Maren and Edward Gibbs.

The significance of the Merawah site was recognised during the first ADIAS season, but this year's work has underlined that the site is probably unique in the region, in particular because of the large number of flint arrowheads, many more than are normally found in assemblages of tools from Late Stone Age domestic sites.

Much more work is required on MR-1 to permit a full understanding of the site to be gained. On the principle of avoiding what the medical profession would call "invasive surgery" on what is a very

fragile site until we know more about it, drawing and recording of the structures will continue in a future season before we determine how, and when, to tackle undertake an excavation.

The second part of the activity undertaken was a detailed study, again by Sal Garfi and David Gilbert, of a late Islamic settlement area to the west of the village of Ghubbah.

A report by Sal Garfi on this work appears on Page 2.

One piece of further research into this settlement is already under way - that of a botanical survey of the surrounding area.

As a result of the substantial rainfall this winter, the flora of Merawah is currently very lush. In the area of the water catchment system near the Late Islamic settlement, the vegetation is significantly different from that found elsewhere on the island. We are grateful to the Abu Dhabi-based Environmental Research and Wildlife Development Agency, ERWDA, which has kindly agreed to loan us the services of its staff botanist, Benno Boer, to undertake a full survey of the vegetation. This will enable us to see whether there are any introduced plants, such as grasses, which might have supplemented the resources available to the inhabitants of the settlement.. There is no evidence of rudimentary agriculture ever having been practised on Merawah, apart from cultivation of the occasional date palm, but full details of the plants in the settlement area will help to paint a fuller picture.

Benno Boer also helped us in spring last year with a study of the vegetation in the area of the Mantiqa al-Sirra fortified structure, near Medinat Zayed.

Preliminary synopsis of results from Site MR-9 on Merawah

by Sal Garfi

Site MR-9 is an open camp site of probably Late Islamic date, consisting of clusters of stone-lined hearths, situated south west of the village of Ghubbah.

There are 160 hearths in all, varying in form and size. Most are polygonal, although there is a distinct cluster of rectangular hearths.

Most of the hearths average around 0.75 metres in diameter. At least four, however, are considerably more than a metre in diameter, and these are probably 'roasting pits,' presumably used in the past for specialised food preparation.

In all likelihood, the hearths represent camp sites which were probably occupied on a seasonal basis. They cluster in groups overlooking what is now a *sabkha*-filled embayment on the southwest side of the site, and an area of beach ridges, also with a shallow embayment which only floods at high tide, along the eastern side of the site. The hearths are also clearly situated on areas where limestone bedrock is present.

This season's fieldwork has also given us an opportunity to study the life-cycle of the hearths, and we now have a basic understanding of the way in which the hearths were constructed, used and re-used over time.

We are also now clearer in our minds as to how the hearths degrade through wind erosion and deflation. To the north, approximately one kilometre away, is Site MR-8. This is a well site of more than six wells which had previously been provisionally recorded by ADIAS.

What is distinctive about the wells, however, is that they were partially fed by water which collected on the plateau to the west along a channel lined with stone rubble and then, later, with low earthen banks. The plateau is up to 3 metres higher than the well site, but on top of it are shallow, naturally formed basins, which show evidence of feeding one into the other.

Water from these basins used to flow through gravity into two channels, one of which shows evidence of being cleared by people at some time in the past.

These then led to the lower earth and stone-lined channel which directed the water to the well-site.

This site is of very considerable interest since it shows how rainwater could have been collected and 'harvested' in the past.

(Editor's Note: Sal Garfi commenced the ADIAS study of the Late Islamic settlements and water

catchment systems on the island of Balghelam during two seasons of work in early 1996 and 1997. Besides its intrinsic interest as part of Abu Dhabi's archaeological heritage, the study is of further importance for two reasons.

As far as is known, hearth sites of the type identified on Balghelam and Merawah (and also on a number of other islands, like Liffiyah and the two Yasats) have not been previously recorded anywhere in the Emirates, suggesting a different pattern of settlement on the offshore islands.

Secondly, many of the sites appear to be associated with water catchment systems of varying levels of sophistication. At least on a seasonal basis, access to fresh water appears to have been available of many of Abu Dhabi's offshore islands, at least in the Late Islamic period. This directly contradicts the prevailing, but inaccurate, belief that the islands were almost completely without fresh water resources, with the exception of Dalma.

Further investigation of this question of the availability and use of fresh water resources is planned).

Merawah - the second phase

The second phase of this season's work on Merawah commences early next month, with the arrival of our team of Australian archaeologists to continue investigations of the stone cairns on the western end of the island, not far from the Late Stone Age site at MR-1.

As sponsors may recall, excavation of one cairn last year exposed an undisturbed burial, within a tomb of a previously unknown type. Unfortunately, however, despite extensive effort in laboratories both in Australia and New Zealand, we were unable to obtain a satisfactory Carbon 14 dating of bones from the skeleton.

This year's excavation, under field co-directors Nadia Iacono and Soren Blau, and being carried out with the support of our sponsor, leading Australian bank ANZ Grindlays, will examine another cairn, and we hope either to find more material on which Carbon 14 tests can be carried out or to find a burial with associated artefacts that will give us some idea of dating.

The suspicion is that the cairns may be related to the MR-1 Late Stone Age site, but until we obtain something to permit definite dating, that must remain a mere hypothesis, attractive though it may be!

Soren Blau, our "bones expert," is currently helping the Department of Antiquities and Museums of Ras Al Khaimah in the excavation of a Third Millennium BC tomb at Shimal.

Also during the second half of March, we will be

continuing our geomorphological study of Merawah, with the help of Professor Graham Evans, who was the first scientist to recognise the international importance of Abu Dhabi's *sabkhas*, over thirty years ago.

The purpose of the research is to provide us with a greater insight into the changing sea levels on the coast and islands of Abu Dhabi over the course of the last few thousand years - something that will, in turn, permit us to have a better understanding of the coastal and island sites.

Professor Evans will be accompanied by two students from the Geography Department of the School of Oriental and African Studies of London University, another example of the multi-disciplinary approach that is necessary in modern archaeology.

We are, as always, most grateful to our Patron, His Highness Sheikh Mohammed bin Zayed Al Nahyan, for permitting us to work on Merawah.

Further investigations on Dalma

Taking place at the same time as the work on Merawah will be another short season on the 'Ubaid-related Late Stone Age site on Dalma. As sponsors may recall, this is the earliest settlement yet identified in the Emirate of Abu Dhabi, with the imported 'Ubaid potsherds on the site also providing the earliest evidence of the Emirate's maritime trade. It probably dates to the Fifth and Fourth Millennia BC.

Joe Elders and Mark Beech will spend two to three weeks on site, selecting more material that can be used to try to get some confirmed dates, while Mark Beech will be continuing his assessment of the environmental remains.

Collaborative research gets under way

As sponsors may know, one of the main ADIAS associated research projects, the Environmental Research Programme, is now getting under way - the preparation of a reference collection of the country's fishes. Being carried out by Mark Beech of Britain's York University, with support from The British Council, the project will permit archaeologists to identify the fish bones found on archaeological sites throughout the country, and to relate these to species in the Gulf's waters today.

We are delighted that this project is being carried out in close co-ordination with the Environmental Research and Wildlife Development Agency,

ERWDA, whose Secretary General, Dr. Saif Al Ghais, has commented that the research being undertaken by Beech represented an important contribution to the Agency's work.

"One of the main concerns of ERWDA is the preservation of our marine resources," he said. "If we are to understand how to conserve our marine life, we need to study not only those fish which are to be found in our waters today, but also to gain a better understanding of how the people of the Emirates harvested this valuable resource in the past. This research programme tackles both topics. When complete, it will also provide ERWDA with a reference collection of the skeletons of our fishes which will be of great use not only in our own work, but also for scientists from elsewhere."

ADIAS involved in Lisbon EXPO

At the request of Minister of Information and Culture His Highness Sheikh Abdulla bin Zayed Al Nahyan, members of the ADIAS team are assisting in the preparation of a major display pavilion for the Ministry at the forthcoming EXPO in Lisbon, Portugal, which runs from late May until the end of September.

The theme of the pavilion, being co-ordinated by the Fairs and Exhibition Department, is the marine and maritime heritage of the Emirates

Although the full list of contents of the archaeological part of the Ministry display has yet to be finalised, it is probable that it will include items from the Late Stone Age sites on Dalma and Merawah and also from the late pre-Islamic site on Sir Bani Yas.

There will also be a wide range of exhibits from other emirates.

Preparation of the archaeological component of the exhibition, including related literature, is being co-ordinated by ADIAS team member Henriette Maren, with assistance from ADIAS Director Dr. Geoffrey King and the Project Co-ordinator.

We are grateful to HH Sheikh Abdulla for inviting us to participate in what will be the last great world EXPO this century.

Note: Public lecture on fish research

Sponsors may like to note for their diaries that ADIAS and The British Council are co-sponsoring a talk by Mark Beech on his fish research to the Emirates Natural History Group early next month.

The meeting, on March 3rd, takes place at the Cultural Foundation in Abu Dhabi, commencing a 8.00 pm.

All are welcome