

Abu Dhabi Islands Archaeological Survey Project

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Good results from survey of oilfields, studies of hearth complexes continuing

Preliminary results are now being analysed of the ADIAS surveys of the main developed onshore oilfield areas, carried out from early November to early January with the support of the Abu Dhabi Company for Onshore Oil Operations, ADCO. The work was undertaken by Dr. Geoffrey King, Simon Aspinall, and Peter Hellyer, who were accompanied in many areas by ADCO's own field Environmental Engineers, part of a specially devised programme to train the Company's field personnel to recognise and to report sites. Initial indications are that the work has provided us with useful new information to enable us to get a better grasp of the patterns of human settlement on the coast and islands of Abu Dhabi and also to understand more about the way in which the desert areas were used.

Regular readers of the *Newsletter* will recall that our issue at the end of November reported briefly on the discovery of evidence of large-scale sulphur mining at Jebel Dhanna, the first such evidence from anywhere in the Emirates.

Elsewhere along the coast, following on from the autumn 1997 ADIAS survey of the Dabb'iya peninsula, further work was done on several adjacent islands, Qusabi, Bu Sharah and Rufayq, all of which are part of the Dabb'iya oilfield. All low-lying, and with extensive areas of *sabkha* salt flats, the islands nonetheless each yielded previously unrecorded archaeological sites. These were typical of such island sites, with the majority of sites recorded being scatters of pottery and molluscs, including pearl oyster shells, just above the current shoreline, or hearths and fireplaces, similar to those already identified on many other islands.

Most of these sites were identified on the island of Rufayq, the furthest west of the three, with the most interesting being a shell and potsherd scatter, (RU-3), on a raised beach, and a group of over 20 hearth sites, RU-5. Analysis of the pottery from RU-3 showed that, besides the usual Late Islamic assemblage, from the 17th Century onwards, there was also glazed pottery from the 15th/16th Century, the earliest yet found on such sites.

As part of its plans for development of the Dabb'iya field, ADCO is planning to drill two further wells on Rufayq, relatively close to both RU-3 and RU-5. At the beginning of this month, Salvatore Garfi, our Deputy Director and our expert on the hearth sites, accompanied by field assistant Nissar Hoath, undertook detailed mapping of the sites, and provided advice to ADCO on site protection prior to commencement of the drilling programme. We were pleased to welcome the Company's Deputy General Manager (Operations), Abdul Moneim Al Kindi, and the Head of Environment, Jens Jacobsen, as well as other ADCO staff, to the site on February 4th, the UAE's 2nd Environment Day.

The work on Qusabi, Bu Sharah and Rufayq has provided useful information to help us expand our mapping of settlements on Abu Dhabi's islands, while, thanks to ADCO, the newly discovered sites will now be formally protected as part of the Company's Health, Safety and Environment policy.

Results from other oilfields were sparser, but also useful. Several small hills in the *sabkha* in the Rumaitha field produced evidence of tabular flint and small-scale flint working, although no

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finished tools were located. The work, however, has enabled us to understand more about the use of these areas in the past. The *sabkha* is believed to have begun forming around 4,000 years ago, before which these outcrops would have been small offshore islands. While there is still much about the changing shorelines and the pattern of movement of the adjacent sand dunes which is not yet understood, the discovery of these sites will enable us to pinpoint more effectively areas for detailed examination during future work.

Further inland, we found the central areas of the Emirate to have little in the way of archaeological sites, with one exception. The large and often mobile dunes would always have offered heavy going for the nomadic inhabitants of the past. This is true even where, as in the Bab field, dunes are interspersed with frequent inter-dunal plains. Still more difficult for past inhabitants was the fact that there seem to have been few water wells. Where water did exist it was often saline. Except at times of good rainfall, there would have been little in the way of vegetation to encourage people to stop and camp. We were, therefore, not surprised that little was identified in the way of archaeological sites.

The area that proved to be the exception to the rule was to the north-east of the Sahil field, roughly west and south-west of the old Bedu camp site of Tawi Beduwa Shwaiba, examined by ADIAS in September 1997 at the invitation of Municipality Chairman and Ruler's Representative in the Western Region, HE Sheikh Mohammed bin Butti Al Hamed.

Thanks to the enthusiasm, local knowledge and desert driving skills of a number of young ADCO employees at Asab, we were able to locate several more old camp sites, each with the now easily-recognisable dense scatter of pottery sherds dating back over the last three or four hundred years. In some cases, the sites were in areas which remain in use as camp sites and as grazing areas for camels until today. Indeed, one of our guides, an Al Mansouri, led us to two sites not far from where his father still carefully tends a few palms in the middle of the desert.

These new sites help us to understand more about the way in which the desert was used in the last few centuries. Not surprisingly, the pattern appears to have a correlation with the pattern of the last 30 or 40 years, underlining once again the value of local knowledge, and we are delighted to have had the opportunity of developing our work in this way. We are indebted, yet again, to ADCO for their provision of logistic backing and other support for the survey programme.

More work on Balghelam

With the support and kind permission of Presidential Court Chamberlain HE Sheikh Surour bin Mohammed Al Nahyan, ADIAS Deputy Director Salvatore Garfi returned to the island of Balghelam in late January to collect environmental samples and ash and charcoal from several of the old hearths identified on the island in previous seasons.

While all the pottery that has so far been found in association with such hearths has proved to date to the Late Islamic period, Carbon 14 dating on ash taken from a hearth on Merawah last year provided a date of between 320 BC to 200 BC, significantly earlier than we had expected.

An attempt to date the ash from Balghelam will now be undertaken, to see if we can obtain a sequence of dates related to such hearth sites, now been identified on a number of islands.

Merawah studies continue

As reported earlier, our studies of the varied and complex archaeology of the island of Merawah are continuing this season, with the kind permission and support of our Patron, HH Sheikh Mohammed bin Zayed Al Nahyan.

During the period from mid-December to mid-January, Henriette Maren and Edward Gibbs completed a third month-long season of drawing the structures on the Late Stone Age site, MR-1, at the south western tip of the island.

MR-1 has already yielded a profusion of finely-made flint arrowheads and other stone tools, while a number of new surface finds were made during the course of the mapping work, including a stone pendant.

Several hundred square metres of the site have now been painstakingly drawn, with the outlines of some of the stone structures being clearly visible. This work will help us to determine our strategy for future excavation of MR-1, one of the most prolific Late Stone Age sites identified anywhere in the Emirates. It is especially notable for the presence of architectural remains and large mounds, deserving of future excavation.

Other work so far this season on Merawah included the excavation, by Dr. Robert Carter, Bernadette McCall, from the University of Sydney, and Philippa Loates, from the University of Manchester, of another small stone cairn on the western end of the central ridge of the island. Fragments of bone confirmed that the cairn was a grave, but insufficient skeletal material in a state

of reasonable preservation remained to permit us to collect samples for dating. There were no other finds. Two of these cairns have now been examined. Although the structures appear to be of pre-Islamic date, perhaps Bronze Age, we have yet to find diagnostic material to assign a clear date to this group of sites. More work is required. During his weeks on the island, Robert Carter also examined the pottery assemblages from many of the islands visited by ADIAS. He is currently in the process of comparing his results with the pottery at the National Museum of Ras Al Khaimah, which will permit information on the pottery from Abu Dhabi's islands to be integrated with that from the coast and mountains of much of the northern emirates.

Bab's unique glass

In our last *Newsletter*, we mentioned the discovery in late November of a site near the Bab oilfield, then named Bab-1, but subsequently, following further work in the area in late December, assigned the new number of Bab-12. The site lies on the route of the new Tarif to Medinat Zayed road.

When it was first found, one of the artefacts located was a fragment of the neck and mouth of a blue glass bottle. A second fragment was found during a return visit in January, shortly before the road-building teams were due to cross the site.

Examination of the glass suggests that it is from a moulded bottle of Persian manufacture, and could be as early as the 12th/13th Century AD.

Apparently insignificant though two fragments of glass may seem to be, ADIAS Academic Director Dr. Geoffrey King notes that no other archaeological finds of this period have been reported anywhere near to or on the coast of Abu Dhabi or on its islands. Two fragments of a single bottle, found almost by accident, represent, therefore, the only archaeological data relating to Abu Dhabi's history at this period - evidence, yet again, of the importance of even the smallest bit of information in terms of piecing together a picture of the history of the Emirate.

An eggshell puzzle

Another interesting find at the Bab-12 site was an extensive scatter of fragments of ostrich eggshell, more than we had previously recorded anywhere in Abu Dhabi. During the course of our subsequent survey work in ADCO's oilfields, many more sites with fragments of eggshell were

found, some with only a single piece, and others with well over a couple of hundred fragments.

The extinct Arabian sub-species of the ostrich, *Struthio camelus syriacus*, is known to have been present in the western emirates, while there is also historical evidence of ostrich eggshells being used for decorative purposes and for water containers. It is not possible, therefore, to say whether the discovery of the shell fragments confirms that ostriches were once present.

Examination of the shell fragments, however, has thrown up a series of interesting questions.

The thickness of the shell fragments is very varied, ranging from around 1mm in thickness to 3 mm. The thinner shell appears, for the most part, to be little abraded by erosion of any kind, suggesting that it might, perhaps, be of more recent date, while the thicker shell is often heavily worn and pitted, perhaps suggesting a much older date.

Several years ago, during a survey by a team from London's Natural History Museum and Yale University of the western coastline of Abu Dhabi, fossil eggshell dating to the Late Miocene period, five or six million years ago, was found. The fossil shell, a bit thicker than the thickest piece we have so far measured, was provisionally attributed to an early ancestor of the ostrich. We have now commenced enquiries about the possibility of dating some of our eggshell, to see whether we can obtain a range of dates that will help us to understand the variations in thickness. A new element in the archaeological areas examined by ADIAS, but one which others in recent decades have noted as being of importance in the faunal history of the desert in the past. It might yield new information about the evolution of Abu Dhabi's environment and wildlife.

Finally ...

Part of the task of ADIAS is that of sharing the information we find with the broader academic community, particularly with other archaeologists working elsewhere in the Emirates. From such sharing, not only can we obtain data that will help us to understand our own discoveries better, but Abu Dhabi's archaeology can be more securely integrated into the picture of UAE archaeology as a whole.

As part of this process, Dr. Geoffrey King and Peter Hellyer will both be delivering papers related to the work of ADIAS at a seminar being organised by the American University of Sharjah this month. Copies of the papers will be available for any sponsor who wishes to obtain them.