NOTICE OF GENERAL MEETING

The first general meeting of the Society for 1979 will be held in the Museum Education Building, North Terrace, Adelaide at

8.00PM MONDAY 26 MARCH 1979

AGENDA

1. Apologies.

2. Minutes of General Meeting held Monday 23rd October 1978 to be confirmed. A copy of these minutes is attached.

3. New Members.
The following new members have been elected to the Society.

   Mr. Phillip DIACK
   Mr. Neville SIMMONS
   Mr. Geoffrey DUTSCHKE
   Mrs. Pamela DUTSCHKE

4. Papers & Journals:
Papers and journals from other Societies and Organizations will be tabled at the meeting.

5. Business.
The Secretary to report on the following :-
   (a) Field Projects for 1979.
   (b) 'Magic & Medicine' Seminar, July 1979.
   (c) Petition.
   (d) Articles to be published in the Journal.

6. Speaker.
MR. DAVID TILBROOK, Curator of Conservation, S.A. Museum, will give an address to the Society entitled :-

   "MUSEUM CONSERVATION."

This address will be illustrated with slides.

7. Supper.
Coffee and tea with biscuits.

VERN TOLCHER,
Honorary Secretary,
213 Greenhill Road,
EASTWOOD. S.A. 5063.

Telephone Office 272 2311
Home  79 2193
ARCHAEOLOGICAL RECONSTRUCTION OF COASTAL SITES SOUTH OF ADELAIDE.

Unlike my address to the Society last year, when I was able to stand back as an uncommitted observer of the S.A. Archaeological scene, this paper places me well within that scene. Based on fieldwork, Museum sleuthing and outright plagiarism it is an attempt to gather together some of the scattered objects from the Crypt, some fragments of esoteric knowledge and fit them back in the land from whence they were, perhaps untimely ripped. Tonight I speak as an initiate of the Collector sect which I merely described last year. As such I fear the paper is neither entertaining nor witty.

Last year, whilst working at the Museum I indulged in a few days of field work on sites to the south of Adelaide. Apart from the desirability of escaping from the Goldsborough House basement from time to time, there were a number of reasons for these undertakings.

a) Obviously all archaeological sites close to Adelaide are threatened by the intensification of urban development and recreation. Hallet Cove is a vivid illustration.

b) The Museum receives a large number of enquiries about sites close to the city and most of our data was 30 years out of date.

c) My attention was drawn to two sites where in situ material had been located by Chris Mills of Environmental Studies at the Adelaide University.

The combination of all these events convinced me of the interest, importance and potential of the Fleurieu Peninsula as an area where a viable archaeological study needed to be conducted whilst some material remained. The following reconstruction does not pretend to be anything more than a working paper. By it I wish to stimulate members to come forward with any information they may have about sites in the area. In addition to more field work, more work needs to be done on the artifacts that have been collected from sites, on midden remains and on the marine resources they indicate were tapped by the Aborigines.

The paper I hope, will demonstrate just how much useful information can be extracted from areas already sadly affected by the forces of development and erosion. In the paper I have confined myself to the area of coastal sites adjacent the St. Vincent coast, south of Adelaide. All these lay within the territory of the Kaurna tribe in the contact period.

THE KARTAN SITES ON THE PENINSULA

The emergence of the Fleurieu Peninsula, as a peninsula is a comparatively recent event post-dating the arrival of men in the area by at least 10,000 years. 15,000 years ago the ocean beaches lay some 70 kilometres to the south of Kangaroo Island, and it appears that present sea levels were achieved only 6,000 years ago (Twiidale, 1976:54). This makes the formation of the present sandy beaches a recent event, even in terms of man's occupation of the area.

There are some sites dating to the much earlier occupation of the land which have been neither destroyed by the encroaching waters, or any other natural agents. They are indicated on Map 1, and of course represent only a fraction of sites originally belonging to the early period. All occur on higher land along the coast, giving a good view over the surrounding land.
All are close to supplies of water: ideal inland camp sites, in fact, sites where material is still intact have survived largely because of their isolation along the south coast. Other sites, such as on the very large site at Hallet Cove have been completely removed.

This early material was designated 'Kartan' by Tindale and Cooper and has been described in the following way by Ron Lampert, who has recently been working on the Kartan culture on Kangaroo Island. He writes, it is ".....made up mostly of large quartzite core-tools, predominated among which is the semi-unifacial pebble tool....Less numerous is the horse-hoof core....Tools made on flakes as opposed to cores, are found rarely on the island's surface. However, recent excavations at two open stratified sites reveal an association of core tools with flaked quartz." (Lampert, 1976:8-9)

At a site east of Waitpinga Creek which I examined there appeared to be a mixture of large tools and quartz flakes appearing together. This site appears to have only recently been uncovered by dune deflation and material appears to be largely undisturbed.

Apart from noting the early presence of man on the Peninsula (at least 18,000 years ago) little more will be said from Peninsula evidence at present. (See Lampert, 1976 for a recent discussion of the Kartan.)

PERIOD OF ADJUSTMENT AND TRANSITION.

As the Pleistocene period drew to a close about 8,000 years ago sea levels were rising rapidly. Over a period of a few thousand years the 'Kartan' people had to adjust as the broad river valleys in which they had hunted for thousands of years, turned firstly to marshes, then to tidal mud flats and finally were submerged altogether. Whilst each generation had only a small adjustment to make the overall changes demanded a drastic new approach as resources were reduced in area, and isolated. Meanwhile the expanding length of coastline offered the potential for a new emphasis in the economy of marine resources.

There are two sites just north of the Onkaparinga River which may throw light on the problems of this period of the transition period. One is an outcrop of aeolinite in which implements and shell have been embedded in the rock. The material appears to be non-Kartan, yet it's inclusion in consolidated rock implies considerable antiquity. Dating of the material has given a date of 7960 ± 140 B.P. (Lampert, personal communication 10.2.78). Close by, exposed in a road cutting, is a typical band of shell midden - but curiously high above the present river level. It's location suggests it may well be of considerable antiquity also, dating to a time when the course and level of the Onkaparinga was different.

At Moana, now sadly almost vanished, artifacts embedded in red dune sands were probably of a similar antiquity.
"MODERN" COASTAL SITES.

If we now look at Map 2 it is clear that many more sites of the 'modern' period have survived to the 20th century. All these sites relate to the modern geomorphological stage dating from 6,000 years ago when present sea levels were stabilised, the river valleys forming and the white coastal dune systems were developing.

The sites, generally hug the dune systems, being located immediately behind the sheltering fore-dune and a few hundred metres either north or south of the fresh water creeks which break through the dune system at regular intervals all the way down the coast. Shell middens do not appear to exist more than a kilometre from these creeks.

Of the sites marked the major ones appear to have been those located at Moana, Maslins Beach, Sellicks Beach, Carrickalinga and Normanville, to judge from Museum collections and records. These sites are all close to fresh water, whilst all but Carrickalinga and Normanville have access to both sandy beach and rock littoral. The similarity of all these sites suggest they belong to a single pattern of human behaviour.

The impression of these sites as cohering together is corroborated by a superficial inspection of stone material from them. All sites seem to have produced quite a lot of quartzite material, fashioned mainly into cores and scrapers, suggesting that the sites belong to the Small Stone Tool Tradition dating approximately between 6,000 and 2,000 years ago in other parts of Australia. Split pebbles and hammer stones are another common element in the collection, but finely worked points and blades do not seem to be common. Reinforced slate scrapers are found on all sites but Mr. R.D. Weathersbee informs me that they were particularly frequent at Carrickalinga. More detailed work must be done on the lithic collections to establish if this apparent uniformity can be validated.

Yet midden sites are basically eating sites and their value archaeologically generally lies in the light they can throw on the diet, seasonal movements and economy of the group forming them. Sadly eroded scattering of shells can tell us very little. The Museum's collection of non-lithic material from these sites fill a boot box. The most complete details of shellfish remains are found in Tindale's (Tindale, 1936:passim) account of the excavation in Kongarati Cave at Rapid Bay. He lists over 15 species occurring in the midden debris of the cave but unfortunately he gives no indication of the proportion of one species to another, so it is difficult to suggest which species were of most importance to the Aborigines. Combining Tindales' data with what other specimens existed in the S.A. Museum and with the help of the Curator of Marine Invertebrates, I have compiled a table of those most likely to have been important in Aboriginal diet.
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<tr>
<th>Habitat</th>
<th>sand species</th>
<th>Rock species</th>
<th>Comments</th>
<th>Scientific Name</th>
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<tr>
<td>Generally rocky</td>
<td>very common sand species</td>
<td>not very common</td>
<td>large, good eating</td>
<td>Macta sp</td>
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<td>Mustang gastropod</td>
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<td>Coquina Cookite</td>
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The list is interesting as it indicates a preponderance of rock species suggesting that the proximity of rocky platforms is important to the Aboriginal forager along our coastline. The Curator did point out that both the sand species, scallops and razor shells (pinna sp) are absent from the list although both would obviously be important potential food sources, suggesting a decided preference of the rock platforms as a foraging area.

In addition to shell fish the coast provided other important food - fish. At the best of times fish bones are fragile and their occurrence in middens rather fragmentary. A few vertebrae survive, and the larger otoliths, yet a single fish represented by such slender remains may provide far more calories and protein than is represented by quite a pile of shells. At Carrickalinga I noticed, not a few, but dozens of fish otoliths. These turned out to belong to the Mullaway - a large specimen which would make frequently 50 - 60lbs in weight a valuable contribution to any meal. These otoliths have also been noted at Moana. Tindale's informant, Milerum member of the Tanganekald people of the Coorong who indicated that Mullaway fishing was "one of the many attractions of a very desirable campsite." (Tolcher, 1975:4). This suggests that the coastal sites may well have been primarily fishing sites, with shellfish and crustacea forming a supplement to the diet.

The possibility of obtaining more data from most of these sites is remote. The sites at Moana, Maslins Beach, Sellicks Beach, Carrickalinga and Normanville appear to be the major ones located along the Gulf south of Adelaide. Of these Moana is almost entirely razed (Tolcher), Maslins Beach is reduced to a series of wind-blown depressions (Hughes, 1977), the Normanville middens all appear to have vanished completely. The condition of Sellicks Beach I do not know but it probably is very similar to Maslins. Just south of Carrickaling Creek however, I investigated a site, very like the above with one difference: there remained an in situ hearth, recently exposed and there is still some stratified deposit remaining in uneroded dunes. The radiocarbon date for this site is 450 B.C. although there is a high standard deviation as the sample was very slight. The date is well after the development of the sand dunes in the area and fits the picture of an aboriginal group camping over a broad area of a slightly developed soil surface, in established dunes. There appears to be only one period of occupation at this site suggesting that this particular dune area was not used before the stabilization of the dune systems and the formation of a soil profile, presumably only 2½ - 3 thousand years ago. If any later occupation occurred the evidence for it has disappeared or merged with the present site.

The second site investigated was also shown to me by Chris Mills. It is located in the sand hills 3 km south of Normanville.

The midden material is located in sand-dunes owned by I.C.I. The first evidence of the site is just north of the Yankalilla River. Some cockles and a few utilised pebbles occur here, but moving northwards in the deflation hollows of the eastern dunes, midden material becomes much denser with surface scatterings of cockles and pipi shells, occasional winkles, crab claws and small bones. Split pebbles of grey and white quartzite are common, some hammerstones are present and there are considerable quantities of small quartz flakes. This occurrence extends from
Yankalilla River northwards for approximately 500 metres. It appears to have eroded out of the overlying dune and is now unstratified.

The presence of a small hearth about 400 metres from the Yankalilla River was investigated on 3.5.77. The hearth was exposed in the eastern profile of western dune 1.3 metres below the present surface of the dune and approximately 4.7 metres above sea level (Australian datum). It appeared to have been recently uncovered by slumping of the dune following wind erosion.

8 hearth stones were visible, laid horizontally with 2 larger stones placed at each end. Most of the charcoal was beneath the stones and remained in fairly large discreet pieces. Little root penetration had occurred. The hearth was 80 cms. in length and the sand was heavily stained with charcoal for 10 cms. beneath the main charcoal layer. Leaching of very fine carbon particles continued for an additional 5 cms.* No saucer-shaped lens of darkened and hardened sand was apparent, and the hearthstones showed little change by heat. It would seem that the hearth was used only for a short time.

The hearth should date to a period after the formation of the dune between 6,000 and 3,000 B.P. Although stratigraphic corroboration is not available, it is probably synchronous with the midden remains in the adjacent deflation hollows. Two carbon samples were collected. In fact, the date for the hearth post dates the formation by over a thousand years, dating to 280 A.D.

The two carbon dates indicate that the utilisation of the dune system and its adjacent foreshore was well established by the time dune formation ended around 3,000 years ago. However, when considering the stone tools we may well discover some differences. Those noted at Normanville appear to be more like those associated with the last and more simple phase of stone-working, whilst those at Carrickalinga seem to definitely lie in the Small Tool Tradition. If this were the case it would seem that our south coast follows an Australia-wide pattern and the abandonment of careful stone working occurred somewhere between 500 B.C. and 300 A.D. Much more work would need to be done on artifacts to check this out, however. Work on these sites is additionally complicated by the loss of stratigraphic control during erosion and the danger of two levels of occupation merging.

This brief summary of the shell middens along the St. Vincent Gulf indicates something of the use of the Gulf resources by Aboriginal people. It suggests that their activities along the Gulf followed a fairly set pattern of behaviour. Camps were always located within easy walking distance of freshwater creeks, in the shelter of the foreshore. Presumably fishing could take place anywhere along the beaches, but access to rocky littoral provided easy foraging of a wide variety of desirable shellfish. The Goolwa cockle or pipi was also regularly collected to judge from the remnants of middens.

The historical records confirm this general picture, and fill it out a little. Tindale (Tindale, 1936:496) quotes the description with which Angas accompanied his painting Fishing at Second Valley.
"They use a seine twenty or thirty feet in length, stretched on sticks placed cross-wise at intervals. A couple of men will drag the nets among the rocks and shallows, where the fish are most abundant, and gradually getting closer as they reach the shore, the fish are secured in the folds of the net."

Such a technique would be ideal for securing the smaller species such as mullet and bream; both listed by Ellis and Houston (3,1976:26) in their list of foods for the Kaurna people.

The question of how Mulloway or Jew Fish (Sciaena Antartica) were caught presents some difficulties, for this fish attains a length of up to five or six feet and a weight of fifty to sixty pounds (Stead, 1908:66). If caught at this stage netting hardly seems the most appropriate means of taking these fish. Yet the Aboriginal tool kit for the area seems very poorly adapted for any other kind of fishing. The straight hunting spear may have been used (There are early paintings showing this occurring at Port Noarlunga (Edwards; 1972:7)) but there does not appear to be corroborative literary evidence (Ellis, personal communication, 23.10.78). Mr. David Evans of the Fishery Department described Coorong natives spearing Mulloway as these carnivorous fish fed in the shallows during high tides (personal communication 20.10.78). Overall the evidence for the use of fish spear along the Gulf seems fairly slim so I have made a very crude check on the size of Mulloway otoliths from Carrickalinga. Ten were collected. Of these four were 1.7 cm. in length. A reference otolith obtained by Mr. John Glover of the S.A. Museum from a specimen estimated to be between 45 and 60 cms. in length is 1.6 cm. This extremely small sample suggests that 40% of the Mulloway caught, were in fact, only about 60 cms. in length; a size readily netted in the manner already described. Of the remaining six only one exceeded 2 cms. in length (2.3 cms.) but to evaluate the size of these, additional reference specimens would need to be collected. At present it would seem justifiable to assume that Mulloway, too, were netted, often well before attaining their maximum size.

All over Australia the question of the seasonal movement of Aboriginal people from the hinterland to the coast has received a lot of attention. It is certainly well attested along the Eastern coast of New South Wales. (See for example various essays in Records of Times Past ed. I. McBryde, 1978.)

The ethnological evidence of this kind of movement by the Kaurna (Ellis, 1976:116) indicates that the tribe was able to congregate in greater numbers along the coast during the summer, when fish was more plentiful. With the onset of cooler weather the people dispersed to the more heavily timbered plains and foothills, which provided more shelter and probably more reliable sources of food, such as kangaroo rats and possums.

A way of cross-checking the suggestion of summer congregations based on increased fish is to actually check on fish movements. Unfortunately, little is known - or at least published - regarding fish movements. The Curator of Fish believes that there are seasonal migrations up the Gulf. The "runs" generally occur in spring or early summer. Salmon, Mullet and Tommy Ruffs would be readily netted at these times. Mr. Evans implied that Mulloway is also more plentiful at this time, though available all year.
One problem would confront Aboriginal groups during the high summer. The little creeks, on which occupation would appear to be based, generally dry up as the season advances. This fact, coupled with the presumed spring and early summer fish migrations lends support to the notion that September and October were perhaps the most likely months for large gatherings in the dunes, small groups can be assumed to be present at most times of the year.

Very few of the sites along the coast still exist. Twenty thousand years of Aboriginal history has almost vanished during the twentieth century A.D. There are sites other than the middens that deserve description also, but I hope I have been able to show that much can still be salvaged and there is considerable potential for more information to be gathered and bought together. I would welcome such information from any members.

ACKNOWLEDGEMENTS:

I wish to thank the Board of the South Australian Museum for providing the funds for the two Carbon Dates.

I would also like to thank the Curators of Fishes, Marine Invertebrates, Anthropology and Archaeology for their help and comments during the preparation of this address; and Mr. Evans of the Fisheries Department.

I also relied on the reports of Vern and Helen Tolcher, "Archaeological Assessment of the Moana Sandy-dunes." and of Andrew Hughes' report of a "Midden Site at Maslin's Beach."

VAL CAMPBELL

REFERENCES:


