NOTICE OF GENERAL MEETING

The eighth General Meeting of the Society for 1981 will be held in the Museum Education Building, North Terrace, Adelaide at

8.00PM MONDAY, 26 OCTOBER, 1981

AGENDA

1. Apologies.

2. Minutes of Previous General Meeting.
   Minutes of the previous General Meeting, held Monday, 28 September, 1981 to be confirmed. A copy of these minutes is attached.

3. New Members.
   No new members have been elected to the Society.

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

5. Business.

6. Speaker.
   MRS. VALERIE CAMPBELL, Archaeologist and Vice President of this Society, to give an address entitled:

   NEW ZEALAND PREHISTORY

7. Supper.

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ARCHAEOLOGY OF THE SOUTHERN ADELAIDE REGION

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PART 2 - SITES AND SEQUENCES

This brief chapter is an attempt to give a broad outline of what is known of the history of the area south of Adelaide; to discover and account for changes in times past.

1. Early Sites

We do not know when Man first penetrated to the southern most shores of the continent, but we do know that flint was mined in Koonalda Cave, deep beneath the Nullabor Plain, 24,000 years ago. We can assume occupation of the much more benign areas of the Adelaide Region occurred at least as early. The early arrivals must have found a land quite different to the one we know, for 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 (Twidale, 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, nor 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 the extensive ones at Hallett Cove have completely vanished, though not before extensive documentation. There were, in fact, at least a dozen large sites in the vicinity of Hallett Cove. One of the largest sites, covering some hectares, was in the area of the present reserve east of the railway station. Generally the sites were only discovered after the land was cleared and cultivated, as most seem to be associated with a dark, indurated land surface some inches below the present soil level.

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 industry on Kangaroo Island. He writes, it is

"...made up mostly of large quartzite core-tools, pre-dominated among which is the semi-unifacial pebble tool....Less numerous is the horse-hoof core....Tools made of 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)

See Figure A.

At a site on the south coast recently 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 to be largely undisturbed.

Another site which appears to contain 'Kartan' material has been located at Sellicks Beach in a similar position to that at Hallett Cove.
Fig. A  Typical Kartan tools

from Lampert
2. Early Non-Kartan Sites

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 based on marine resources.

There are two sites just north of the Onkaparinga River which may throw light on the problems of this period of transition. One is an outcrop of aeolinite in which implements have been embedded in the rock. The material appears to be non-Kartan, yet its inclusion in consolidated rock implies considerable antiquity. Dating of the material has given a date of 7360 + or - 140 B.P. (Lampert, personal communication 10.2.78). At Moana, now sadly almost vanished, artifacts embedded in orange dune sands were possibly of a similar antiquity, as radiocarbon dates for hearth material excavated from adjacent white dunes indicate that these were occupied over 6,000 years ago.

Curiously high above the present level of the Onkaparinga River exposed in a road cutting, is a typical band of shell midden. It dates to almost 6,000 years ago when the course and level of the Onkaparinga was different. This layer is underlain by 'Kartan' material (Tindale: 1968;638).


Map 2 clearly illustrates that many more sites of the 'modern' period have survived to the 20th Century. All these sites appear to relate to the Holocene dating from 8,000 years ago when present sea levels were stabilised, the river valleys forming and the coastal dune systems of white sand were developing.

The known 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. Sites do not appear to exist more than a few hundred metres from these creeks, except where water is available from wells, as at Aldinga.

All appear to have developed within the coastal dune system as a result of Aboriginal occupation in these desirable camping areas. Unlike many Aboriginal coastal dune sites these show few remains of food debris, especially shell. Even allowing for their generally advanced state of erosion, there appear to be very few areas where there was ever any deep concentration of shell and food debris, such as one finds at Goolwa for example. Instead of shell, fish otoliths, crab claws and small pieces of bone are scattered about amongst the stone implements. In comparison with the Goolwa sites, the proportion of stone material to shell is extremely high.

Small Tool Tradition

These generalisations seem to hold for all of the sites but detailed examination may reveal the similarities to be more superficial than real. At Aldinga and Silver Sands for example, the generalisations hold, but a variety of detailed differences have been documented. The most valuable of these to the archaeologist is the apparent presence of at least two stone industries of different ages. The earliest of these is characterised by a high proportion of quartzite flakes and blades, some very attractive small cores and the occasional microlith. Ochre appears to be common on at least one of these sites. This industry seems to be associated with an orange sand. From a superficial study of the material, it appears that one could claim it belonged to the Small Tool Tradition of stone artifact
KARTAN AND EARLY NON-KARTAN SITES

- Kartan
- Early Non-Kartan

Scale

MAP 1
Fig. B  Australian small tool tradition: typical examples from Lampert
classification. In other parts of Australia this tradition dates from 6,000 years ago. Disappearing between 2,000 and 300 years ago in different parts of the country. If the tradition is contained solely within the orange sands we can suggest a date on geomorphological grounds, of between 6,000 years and 4,000 years ago for this material (John Firman, personal communication, November, 1979).

Just south of Carrickalinga Creek however, I investigated a site where an in situ hearth remained in uneroded dunes. The radiocarbon date for this site is 450 B.C. The date is well after the development of the white 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 stabilisation 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. Certainly the small amount of stone material remaining on this site suggested its affinities would be with the Small Tool Tradition. If this is the case, it brings its presence on the Peninsula another 1,500 years closer to the present and more in keeping with the general Australian picture.

A third site in the high white dunes at Aldinga appears to have a stone working tradition in common with the above; small quartzite flakes and a pirri point.

The occurrence of this microlithic phase is not restricted to the coastal dunes system. Microlithic sites have been reported from Morphett Vale, Willunga and McLaren Vale. All are in sandy material in elevated positions and the site at Willunga is in orange sand.

**Later Industries**

But to return to Aldinga. In the white sands overlying the orange, there appears on two sites to be a stone industry where split and worked beach pebbles are the most obvious element. Many pieces of quartz and tiny quartz flakes are also characteristic. Fish otoliths were common on one site. The overall differences strongly suggest some change in Aboriginal "material culture" or use of the dune system.

**Inland Sites**

Yet whilst it is the coastal sites which predominate in the records, there are a few other habitation sites recorded. The present development of Morphett Vale sprawls over what was once a very extensive site producing microlithic material, including many pirri points.

Out from Willunga, an elevated site close to a small depression which was probably once a lagoon, holds a commanding view over the surrounding country. Here recent quartz flakes in white sand over laid an orange-sand bearing microlithic material, rich with remains of water birds (Weathersbee). These sites attest to activities on the plains and the latter site may well help in understanding the annual pattern of life of the Aborigines of this area. Does this site represent a seasonal camp of the same people who used the Scrub? The archaeological sequence appears the same.

Similarly at Aldinga there is some extra data now available regarding the occupation of different habitats. The presence of the Aldinga Scrub, a "quite dense scrub nestling under the protection of the coastal sand ridges and extending backwards for about half-a-mile" (Fenner & Cleland, 1935:16), in an almost unaltered state since European settlement, has provided a unique area of study. Formerly girded on the landward side by a seasonal swamp on its north-eastern side, and by a deep lagoon to the south-east, the Scrub provided an ideal area of protection and foraging with easy access to the sea and the quartzite beach pebbles so common along the Silver Sands beach front.

Eighteen sites have been found within the Scrub, but all confined to its outer margins. Indeed it seems that campsites were developed just
'MODERN' HABITATION SITES

- Sites

Scale

MAP 2
inside the Scrub but close to the water resources on its boundaries. All sites appear to be uneroded and may well be stratified. Two exceptionally large sites offer great potential for further investigation. A.S.8 is located on the northern side of the Scrub. It is 100 metres long and probably 50 metres wide and has a dense scattering of quartzite flakes and cores. Retouched flakes and microliths were present. It is close to two wells, one almost certainly being known to the Aborigines.

The second site (A.S.13) is in a blowout on the southern margin of the Scrub. It appears to be an area where orange sand is overlain by white. That there is still in situ material in the orange sand is attested to by artifacts in erosion profiles and the eroding out of new material during a 6 month period. So, whilst the site obviously bears a mixture of materials from the two postulated periods, and has been heavily collected from for many years, it also offers the possibilities of further investigation of the relation of the two industries.

In Silver Sands itself considerable areas bearing implements have been located on old sand-dune surfaces but some 500-600 metres in from the coast. Greatly disturbed and interrupted by house construction, it still attests to the concentration of habitation in this area. Just south of Norman Road, on a vacant lot, an extended area of hearths and a wide scattering of bone offers potential for further investigation for, like the Scrub site described above, it is of special interest. Tindale tells that the flats, just to the east and south of these sites respectively, were used as skin processing sites. Details of this process are discussed in the next section but presumably the process took some time and one would expect small encampments to be in attendance for its duration.


One interesting type of site which occurs widely even now, although its presence forty years ago was much more common, is the hearth. Most hearths in the Adelaide area are a circle of stones 45 to 60 cms across. Generally the stones are blackened and cracked by the fire and the surrounding soil almost black and frequently greasy to feel.

The presence of such 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. It appeared to have been recently uncovered by slumping of the dune following wind erosion.

Eight 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. The hearth was 80 cms in length and the sand was heavily stained with charcoal for 10 cms beneath the main charcoal layer. As the hearth stones showed little change by heat, it would seem that the hearth was used only for a short time. This hearth was dated to 280 A.D.

This hearth was in marked contrast to the one at Carrickalinga which extended over an area of 2 metres by .6 metres but where no stones were present, and the charcoal material much more dispersed.

At Silver Sands an extended area of very fine carbonaceous material with split stones scattered through it is more than 2 metres in extent. It is inland about 500 metres, but several little hearths - similar to the Normanville one - have been noted in the fore-dune.

At Moana two clusterings of hearths have been noted. One group was located in an outlier from which the surrounding sand had been eroded. The site was rapidly deteriorating and so a small excavation was undertaken. In an area of less than 2 square metres the remains of 12 hearths were uncovered, indicating intensive utilisation of this section of the dunes. There appeared to be some variation in the type of hearth present: some were shallow circular structures surrounded by stones, containing large amounts of charcoal in discreet lumps. Three other hearths however,
were different. Being in excess of 60 cms, they were larger than those described above. Whilst some stones were present they did not seem to be so important to the structure of the hearths, whose form came from densely compacted charcoal forming a broad basin-shaped depression. In one instance the depth of this material was 29 cms. Two radiocarbon dates from these hearths indicated that they were over 6,000 years old.

The two differing structures probably represent different methods of cooking. The first are perhaps low temperature fires used for lightly grilling fish, shell fish or crabs. The latter style of hearth may have been used for roasting larger game or for steaming food using leaves and adding water to retain the moisture level.

Areas of hearths were also reported at the inland Willunga site. There is certainly considerable variety in the nature of hearths, all presumably serving different purposes, but all testifying to the use of the sand-dunes as habitation areas.

3. "Modern" Coastal Sites: C. Wells

Just as the legend of Tjilbruke recounts, a series of freshwater springs can still be located along the coast. Although only one is mentioned in the legend in the vicinity of Sellicks Beach, during the recent survey four wells of presumed prehistoric date were located; Cliffs Waterhole on the north-eastern margin of the Aldinga Scrub, the well in the Water Reserve, another south-east of A.S.13 and a fourth close to the Washpool lagoon. All wells now appear as depressions in the ground marked by grass and reeds. The well in the Water Reserve is some twenty feet below the surrounding dunes, with a steep descent to the small pool of dark still water.

4. Conclusion

Work so far has revealed a great wealth of archaeological sites remaining in the coastal zone, south of Adelaide. Often eroded the picture these sites provide is a fragmentary one. Additional survey work is needed in other zones, such as the river valleys and foot hills, to complement what is known but already the jig-saw is falling into place.

References


Acknowledgement

I wish to express my gratitude to Dr. R. Lampert for permission to use Figures A and B.