NOTICE OF GENERAL MEETING

The second General Meeting of the Society for 1982 will be held in the Museum Education Building, North Terrace, Adelaide at

8.00PM MONDAY, 26 APRIL, 1982

AGENDA

1. Apologies.

2. Minutes of Previous General Meeting.
   Minutes of the previous General Meeting, held Monday, 22 March, 1982 to be confirmed. A copy of these minutes is attached.

3. New Members.
   The following new member has been elected to the Society:
   Kym M. GOODSELL.

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

5. Business.

6. Speaker.
   Mr. J.V.S. MEGAW, Head of Visual Arts, Flinders University and formerly Professor of Archaeology at the University of Leicester, will give an address to the Society entitled:

   CELTS IN SOUND OF MUSIC LAND: RECENT RESCUE EXCAVATION
   DÜRRNBERG bei HALLEIN, Austria.

7. Supper.

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

Telephone  Office  272 2311
            Home  79 2193
ARCHAEOLOGY OF THE SOUTHERN ADELAIDE REGION

ROBIN RADFORD AND VALERIE CAMPBELL

PART 4 - MATERIAL CULTURE

Whilst archaeologists have been traditionally interested primarily in tool-making techniques and typologies, in recent years there has been growing interest in reconstructing the diet and economy of prehistoric peoples. To this end increasingly refined techniques have been developed for the investigation of the ecology of the past. In South Australia such studies are in their infancy. In this chapter we attempt to combine the information obtained from early ethnographic accounts of the Kaurna with other scientific data to reconstruct a pattern of prehistoric life.

Population

The study area in the Southern Adelaide Plains and the northern watershed of the Fleurieu Peninsula fell within the territory of the Kaurna tribe (see Tindale, 1974:213). Unlike their neighbours of the Mount Lofty Ranges, Murray River and Encounter Bay areas, the Kaurna practiced circumcision. At the time of European contact the southern Kaurna, often referred to as the "Adelaide tribes", were reported to have been strategically weak due, at least partly, to the ravages of smallpox which had reached them from the east prior to the founding of the Colony of South Australia at the end of 1836 (Stirling, 1911).

In 1839 their population was estimated as 182 females, 188 children and 280 males, a total of 650 people, in an area 80 miles north to 60 miles south of Adelaide (Statistical Society Report, 1842). The Adelaide Aborigines, that is, those who lived south of the Torrens River, were thought to number no more than 300. They were divided into family groups of about 30, each occupying a defined territory and living independently. Early commentators sometimes write of the Aldinga, Willunga or Onkaparinga Aborigines, indicating this independence, but their comments generally refer to the whole tribe.

Larger gatherings of the Kaurna did occur at times during the Summer (Teichelmann and Schurmann, 1840:7), and this would have been a time for ceremonies, trading exchanges and fighting (Ellis, 1968:14).

The Adelaide Aborigines did not survive European intrusion for long. By 1839 the land as far as Willunga and Myponga had been surveyed, subdivided and offered for sale. Howchin (1933:6) states that the people whose territories lay within this area, were extinct by 1850, although Tindale claims that he was able to make contact with a few survivors when he began working in the area in the 1920's.

Eyre (1844:11 p.323) commented:

Child-bearing does not commence often before the age of sixteen, nor have I ever noticed pregnant women under that age....Mr. Moorhouse [ascertained] among the natives of Adelaide....that as many as nine children have occasionally been born to one woman; that the average number is about five; but that each mother only reared an average of two.

Housing

Housing was simple. Summer shelters consisted of a semi-circular structure of branches which would last for the 6 to 8 weeks they were required (see Angas, 1848: Plate XXI of a shelter at Rapid Bay). In winter bark, grass and earth were added to make a more substantial shelter, about four feet high, somewhat resembling a beehive cut in half (Angas, 1847a:8 [Gouger, 1838:53]).
Both sexes use but little clothing; especially in the summer, and when in the pursuit of game, fishing or engaged in any kind of exercise. (Angas, 1847a:84-5)

The Kaurna wore cloaks of possum or kangaroo skins sewn together with sinew thread. The cloak was worn over the left shoulder leaving the right shoulder and arm free (see Angas, 1847b: Plate VII). Women carried infants in kangaroo skin pouches, slung in such a way that the child could suckle without changing the position of the pouch. Both men and women also carried net bags for food, utensils, etc. For decoration, the children sometimes had kangaroo teeth plaited into their hair while "the men occasionally...tie[d] round their head a wild dog's tail". On special occasions such as a fight or a corroboree "or to pay their addresses", the men "plaistered" their hair and painted their bodies with ochre (Gouger, 1838:51).


The skins, when used for garments, are prepared in the following manner. As soon as they are removed from the animal they are laid upon the ground, stretched out, and pegged down until dry; cold ashes or dust are rubbed over the surface for the purpose of absorbing the fat which may have exuded during the process of drying. The skin is then taken up and prepared for use, the larger have their inner layers shaved off by the katta, kandippa or wadna, and the smaller are rubbed lightly with stones, so as to make them loose and flexible. They are then stitched together, the wityo being the needle, and animal tendons being the thread....(Statistical Society Report, 1842).

Basedow has also described the cleaning procedure, claiming that the kidney-shaped slate artefacts, found principally south of Adelaide as far as Rapid Bay, were used in the scraping process. His account, from a Murray River informant, described the skins being stretched over a cylindrical rod, and the concave edge of the slate "scraper" being drawn down to remove all fat and flesh (Basedow, 1925:176).

Food Resources

The most detailed account of Aboriginal food resources is that in the Statistical Society Report which states,

These people are truly omniverous, but the nature of their food depends much upon the season of the year. In the spring vegetables and grubs are their chief subsistence, either in a raw or cooked state; in the commencement of the summer the eggs and young of birds, kangaroos, emus, fish, lizards and guanas, etc. During the hotter months opossums and the gum of the wattles (Acacia fragrans); in the autumn the tarmna or honeysuckle blossom soaked in water, the wodni and miranda, a small, stone fruit [quandong], and the mantiri, an indigenous berry. In the winter a variety of roots, and opossums and other animals.

Gouger gives additional information regarding the roots and vegetables specifying oxalis as especially important and "which resembled in appearance a small carrot", and in taste "coconut". Bokra (Kangaroo rats) and rabbit
bandicoots are other animals specified (Gouger, 1838:54).

The above omits to mention shell-fish or crabs which abound in the area.

Ellis states that there were:

considerable middens of Turbo, Fasciolaria, Unio and other molluscs, together with fragments of crustacea in the coastal dunes....(Ellis, 1968:20)

Such archaeological evidence attests to the exploitation of these elements of the coastal area but at the time of the survey not much remained of these middens and their scattered shells can tell us very little. The South Australian Museum's collection of shell from the same area only fills a boot-box.

The most complete details of shellfish remains are found in Tindale's (1936) account of the excavation in Kogarati Cave, north of 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 impossible to suggest which species were of most importance to the Aborigines.

J.B. Hack giving evidence on the Aborigines to the Select Committee (S.A.P.P. No. 165, 1860, question 2438) said that on the Coorong cockles "...are the horror of the blacks and are resorted to when there is nothing else to be had".

Combining Tindale's data with other specimens from coastal middens the following table has been compiled.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Comments</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oyster</td>
<td>Ostrea sp</td>
<td>-</td>
<td>Rock species</td>
</tr>
<tr>
<td>Limpet</td>
<td>Cellana sp</td>
<td>2&quot; diameter</td>
<td>Rock species</td>
</tr>
<tr>
<td>Black Periwinkle</td>
<td>Nerita Melanatragus</td>
<td>Small but extremely common</td>
<td>Rock species</td>
</tr>
<tr>
<td>Whelk</td>
<td>Dicothais textileria</td>
<td>Large species</td>
<td>Found under rocks</td>
</tr>
<tr>
<td></td>
<td>Austrococklea</td>
<td>-</td>
<td>Mudflat gastopod</td>
</tr>
<tr>
<td>Abalone</td>
<td>Haliotis sp</td>
<td>Large, good eating but not very common on peninsula</td>
<td>Generally rock species</td>
</tr>
<tr>
<td>Turban</td>
<td>Turbo sp</td>
<td>-</td>
<td>Rock species</td>
</tr>
<tr>
<td>Goolwa Cockle</td>
<td>Plebidonax deltoides</td>
<td>Very common sand species</td>
<td>Sand species</td>
</tr>
<tr>
<td>Southern Cockle</td>
<td>Macta sp</td>
<td>-</td>
<td>Sand species</td>
</tr>
<tr>
<td>Cockle</td>
<td>Venerupis sp</td>
<td>-</td>
<td>Sand species</td>
</tr>
<tr>
<td>Mussel</td>
<td>Modidus sp</td>
<td>-</td>
<td>Sand species</td>
</tr>
<tr>
<td>Helmet Shell</td>
<td>Cassis sp</td>
<td>-</td>
<td>Sand species</td>
</tr>
</tbody>
</table>

The sand species razor shell (Pinna sp.) is absent, although it would have been a valuable source of food. At Moana the Murray mussel (Velesunio ambiguus) was also common, having been gathered in nearby Pedlers Creek.

Despite the lack of emphasis in early accounts, the coastal waters provided another important food - fish. At the best of times fish bones are fragile and their occurrence in middens often sparse. A few vertebrae have survived as well as the larger otoliths. 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 dozens of fish otoliths were noted. There were from Mullaway (Sciaena antarctica), and a large member of this species can attain fifty or sixty pounds in weight, a valuable contribution to any meal. Mullaway otoliths have also been noted at Moana and
Aldinga. Tindale's aboriginal informant, Milerum, a member of the Tanganekald people of the Coorong, indicated that Mullaway fishing was "one of the many attractions of a good campsite" (Tolcher, 1975:4).

At the Moana hearth site small rodents, snakes, lizards, kangaroo and wallaby remains indicate that a broad-base foraging pattern was practiced 6,000 years ago, although it seems to be perfectly compatible with the nineteenth century account from the Statistical Society.

The question of the seasonal movement by Aboriginal groups from the hinterland to the coast has attracted wide spread interest in recent years. Such a movement is well attested along the east coast of New South Wales (see for example, essays in Records of Times Past, ed. I. McBryde: 1978). The ethnographical evidence of this kind of movement by the Kaurna make it clear that they spent part of the year on the coast, and part in the timbered hills but there are ambiguities in the details. From the Statistical Society Report it seems that the early summer and autumn may have been the seasons favoured for a beach residence. The early spring occupation would coincide with the runs of Salmon, Mullet, Tommy Ruffs and the more frequent appearance of Mullaway. It would also avoid the problem of water shortages along the coast in high summer.

The listing of opossums and gum as part of the summer diet is indicative of a movement back into the hilly, forested country in the hottest summer months. Here water would be more readily available and the fierce temperatures ameliorated. An autumn return to the coast to take advantage of such fruits as the quandong, *mesembryanthemum*, mantiri (*Kunzia pomifera*) seems likely. Accounts seem to agree that winter was spent within the sheltering forests, which probably meant bushlands, and on the plains such as the Aldinga Scrub, rather than in the foothills with their higher precipitation and lower temperatures.

It seems that because of the mild climate, small distances involved, and comparatively rich resources of the southern region the range of Kaurna groups was much smaller than that of tribes further to the north. The seasonal movements were correspondingly slight.

**Food Procurement Methods**

Fishing and hunting were the primary occupations of the men, while women and children had the task of searching for roots, plants, lizards and the smaller marsupials (Edwards, 1972:11). The women carried kattas, heavy, pointed implements about five feet long which they threw "into the earth up to the depth of about eight inches" and were used for digging up roots and for constructing earth ovens (Gouger, 1838:54). Large grubs were extracted from the bark of trees by means of a hooked leaf or a barbed stick, a *pileyah* or *pirri*, which the men wore behind the ear (Angas, 1847a:83). Climbing trees was facilitated by a small stick, *wadna*, which was pointed and after being hardened by fire, was used to make a hole in the trunk large enough for a big toe to gain leverage (Gouger, 1838:53-54; Angas, 1847a:84; Cawthorne, 1844:61).

Small animals were caught by setting nets at the entrances to burrows, or by smoking or digging them out of the ground but as far as is known, the Adelaide natives did not set snares (Gouger, 1838:53). Larger animals such as kangaroos or emus were either netted or speared. Generally the men carried two kinds of spears; the *widna* which was eight to twelve feet long, with a plain, barbed or hooked head and a throwing distance of five to ten yards; and the *kaiya*, five to six feet long, and sometimes barbed. The latter was made in two parts and was thrown with a *midia* or propelling stick, for a distance of sixty to eighty yards. Game nets have been described up to one hundred feet long and four feet wide, with meshes of about three to four inches diameter.

"Fish were hooked, speared, netted as may be convenient" (*Statistical Society Report*, 1842). The traditional use of fish hooks, which was generally regarded as confined to the Sydney area of the east coast, is doubt-
ful. Although Stephens wrote of "rough hooks and lines" in 1839 (Stephens, 1839:500) and Wyatt gave Aboriginal words for hook and line (Wyatt, 1878:171), Eyre stated that he had "never seen the natives use hooks in fishing of their own manufacture, nor do I believe that they ever make any, though they are glad enough to get them from Europeans" (Eyre, 1845:266-7). In the absence of any descriptions of the materials involved in their construction, and the absence of any fish hooks or files from any South Australian sites, we must conclude that this mode of fishing was probably one that was taken up at the time of European contact.

Although saltwater fishing was generally the preserve of the men, women were largely responsible for freshwater fishing and yabbing from the summer waterholes (Ellis, 1968:22).

The hunting spear known as the widna may have been used as a fishing spear, for there seems to have been no specialised spears for this purpose. Some early paintings show Aboriginal fishermen using long spears, (one such picture is featured by Edwards, 1972:7).

The fishing nets, such as those pictured by Angas were about thirty feet long and ended in pouches. Their size and mesh depended on the fish to be caught. These nets would be:

...stretched upon sticks placed cross-wise at intervals. A couple of men will drag this net amongst the rocks and shallows where the fish are most abundant, and gradually getting in closer as they reach the shore, the fish are secured in the folds of the net....These nets are composed of chewed fibres of reeds, rolled upon the thigh and twisted into cord for the purpose. (Angas, 1847b: Plate XXI).

Such a net was capable of holding seven to eight hundredweight of fish (Statistical Society Report, 1842), but its management needed several men. The nets would be ideal for capturing the runs of Mullet, Salmon and Bream.

Cooking Methods

Vegetables were eaten raw, roasted or steamed. Seeds were winnowed, ground between two flat grindstones into a black paste which was mixed with water and eaten like porridge (Ellis, 1978:8). Animals, fish and crustacea were roasted on open fires or in pits, or steamed in stone ovens (Ellis and Houston, 1976:5). At the Moana hearth site two types of hearth were discovered that indicated that the two methods of roasting lightly, and steaming have been practiced for some 6,000 years on the southern coast. The first type was some forty five cms across and only seven to ten cms deep. A few stones were present, and in several of these hearths small branches had been only partly consumed, indicating a small, low heat fire. These small hearths appear to be suitable for roasting the smaller game or fish.

The second type of hearth that was found was represented by two examples, both sixty cms in diameter. They consisted of a basin-shaped depression of consolidated fats and finely divided charcoal. One of these hearths was twenty seven cms in depth and contained many burnt hearth stones. The other was shallower and had no stones. These two appear to have been used in the manner described by Teichelmann and Schurmann.
Kanyandi, v.a., to stew or steam in a native oven, which
is a mere hole in the ground. . . . All their larger game, as
kangaroo, wild dogs, emu, emu eggs and different vegetables
were prepared in this way for eating. The whole process is
done in the following manner:—They dig a hole in the
ground, kindle a fire in it, and then add a sufficient
quantity of stones to be heated by the fire. During the
time these are heated, they prepare the game or vegetables;
when the work is done, they removed the stones and the
larger remains of the wood, and if they stewed a kangaroo,
they first fill the inside with part of the hot stones and
leaves of the gum tree. The kangaroo is then put into the
hole and covered with leaves, the remaining hot stones, bark
and earth; it remains there an hour or more, until steam
escapes from different parts; and when this takes place, the
meat, or whatever is cooking, is sufficiently done.
(Reichelmann and Schurmann, 1848:8)

Other accounts mention the use of reeds and water weeds in the earth ovens
and their use would explain the large numbers of very small shells of the Pond
Snail (Physastra tenuistrata) and other brackish water species, in the
middle deposit.

The distribution of food was bound by taboos and restrictions, only partly
understood by Reichelmann who described them as follows:—

When the men arrive, a fire is lighted, and the women
deliver the vegetable food to the husband; he begins to eat,
throws the worst parts to his favorite wife and the
children, and one part he distributes amongst his friends,
and those males that are unmarried. If the men have been
successful in hunting, then the women enjoy generally the
bones of the meat; but when the men do not return in the
night, the women generally reserve those parts the men are
accustomed to eat until they return. The different sexes,
and almost every age, have certain food which the others are
not permitted to eat. The wild dog, for instance, is food
for the elders; the newly circumcised are prohibited to eat
fish; women with child are prohibited to eat certain food
and generally live upon vegetable. (Reichelmann, 1841:7)

Other Items of Material Culture

Early commentators praised the beauty of the skin cloaks and the superior
quality of the various mesh bags and nets made by the Kaurna. Other utilitarian items, also perishable included the tookoo, a shovel, which was made of
wood, hollow and oval in shape. They caught the eye of European writers and
although perishable were preserved in pictures and words (e.g. Eyre’s sketch of
a basket Plate V:7, opp. p. 312). Other items of the Kaurna’s material
culture were less well known.

Wood seems to have been the preferred material for weapons, although reeds
and grass-stick (Xanthorrhoea) were also utilized. The widna (or
unwidna), kaiya (or kyah) and midla have already been mentioned. Cawthorne described several other implements used by the Aborigines “in the
district of Adelaide”. The cootpe was very similar to the kaiya except
that the lighter end of the latter was made from reed and not from
glass-stick, and the former was slightly shorter and lighter. He described two
kinds of wooden shields; the mulabakka and the wocaltee. The important
difference between the two, derived from the manner of construction, is that
while the latter was useful for only a short time (until it dried out), it was
less apt to break when struck hard; also a penetrating spear tended to lodge firmly (Cawthorne, 1844:50-4). The wirri (or wirra) came in various sizes and was both a fighting and a hunting club. The tantannakoo was a large wirri, heavier and with a pointed rather than a club head. The cutta wirra was another fighting stick, two-edged and used for close combat. Finally the waarpoo was a wooden dagger, held between the fourth and little finger.

Needles were made from the fibula of a kangaroo or emu and rubbed to a point on a stone, but to date none have been reported from archaeological sites. Similarly few axe-heads have been found (in the Southern Adelaide Region) although the word kandappi meant a chisel or hatchet, made from flint and fastened "to a hand" by gum. The handle may have been made from the grass-tree, Xanthorrhoea (Angas, 1847b: Plate II).

Although there are thousands of scrapers, flakes and the cores from which they were struck, and hammerstones are abundant, we know that elsewhere in Australia the assemblage of stone tools changed through time, and so far we can only only surmise as to the situation in this area (see Section 2).

Certainly, the prehistory of the Adelaide Region is far from complete, but it is certain that Aboriginal man ranged across it in his seasonal quest for at least sixteen millennia, witnessing its transformation from an area of inland hills to its present form. He naturally adjusted his way of life, his implements and possibly his beliefs to accommodate these changes. The archaeological record provides the bare outlines of the intellectual and economic processes involved. As further details are sketched in we will develop a fuller picture of life prior to European arrival, but we must rely on the scattered pieces of ochre and some painting sites in the Mount Lofty Ranges, to remind us of the artistic life of the people. Similarly, the all too brief account of the stone arrangement at Moana (Mountford, 1939:119-120) and a brief note on a Museum card referring to another at Myponga comprise the slim evidence of their ritual life available to date. Tindale's record of the Legend of Tji:rbukl (Tindale, 1936:500-1) again is but a reminder of the legendary wealth that vanished with the last of the Kaurna.

If we can at least investigate the past of the people of the Adelaide Region and document it, we will have paid some tribute to them. If we can preserve some of their sites for posterity, we may remember another way of life, one that moved with the land and the seasons.

Acknowledgements

We wish to acknowledge the help of Mr. N. Pledge, Curator of Palaeontology, Mr. W. Schneider, Curator of Invertebrates, and Mr. J. Glover, Curator of Fishes, all of the South Australian Museum, for their help in identifying specimens and offering suggestions. Mr. D. Evans of the Fishery Department provided useful data regarding fish movements.
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