NOTICE OF GENERAL MEETING

The 2nd General Meeting of the Society for 1985 will be held in
THE CONSERVATION CENTRE, 120 WAKEFIELD STREET, ADELAIDE
on
MONDAY 22ND APRIL 1985 AT 8.00 PM.

AGENDA

1. Apologies:

2. Minutes of the previous General Meeting:
   Minutes of the General Meeting held at the Conservation Centre, Monday
   25th March 1985, having been circulated in this Journal, to be confirmed.

3. New Members:
   No new members have joined the Society since the last meeting.

4. Papers and Journals:
   Papers and journals from other societies and organizations will be tabled
   at this meeting.

5. Business:
   The field trip "On the Trail of Tjilbruke", to be held on Thursday
   25th April 1985, to be discussed.

6. Speaker:
   Ms. Dorothy Tunbridge will address the meeting and the title of
   her address will be:-

   "Language as Heritage: The Flinders Ranges Example"

   Ms Tunbridge is a linguist working on Yura Ngawarl - the language
   spoken by the Adnyamathanha people of the Flinders Ranges.

7. Supper will be served at the conclusion of the address.
ABORIGINAL TECHNIQUES FOR OBTAINING WATER IN SOUTH AUSTRALIA

Tom Garie

When the first European settlers arrived in 1636, about half of this state’s Aboriginal population inhabited the relatively well-watered south-eastern part of the state. In this area, the Adelaide Plains and Mount Lofty Ranges, the River Murray and the South East, obtaining sufficient water was probably seldom a difficult task for the Aborigines but elsewhere “in the driest state on the driest continent”, the Aborigines’ ability to survive was dependent upon their specialized techniques in obtaining water. Aborigines were familiar with all the places in their own country where water could be found, ranging from deep, permanent waterholes and rockpools to the springs, soaks, claypans, ephemeral rockholes and the cavities in certain trees. All water sources were named points in the Aboriginal landscape and were usually enshrined in mythology. From an early age children were taught to memorize their locations and an individual’s knowledge of water sources often extended far beyond his/her own country.

Aborigines were also expert at finding and exploiting underground water. They dug wells in places such as creekbeds and coastal dunes where water was likely to be close to the surface or they dug at those spots where kangaroos, emus and dingoes, led there by their keen sense of smell, had scratched for water. The dingo is particularly skillful at sniffing out sub-surface water and Tindale has noted that this creature plays a vital role in the desert regions by opening up water sources for birds and humans (1). Most wells were only shallow but in some places Aborigines dug to great depths, through sand and sometimes solid limestone, to get water. According to Mathews, some native wells in the country to the north-west of Lake Eyre were up to 20 feet deep (2). Sturt described one well that he found in a creekbed in that area. It was 22 ft deep and 8 ft broad at the top and:

there was a landing place but no steps down to it, and a recess had been made to hold the water which was slightly brackish...

Paths led from this spot to almost every point of the compass and in walking along one to the left, I came upon a village of 19 huts (3).

To the east of Fowler’s Bay, Eyre found a number of wells sunk through the sand-ridges to a depth of 14-15 feet. They were:

only about two feet in diameter at the bore, quite circular, carried straight down, and the work beautifully executed. To get at the water, the natives placed a long pole against one side of the well, ascending and descending by it to avoid friction against the sides, which would have inevitably sent the sand tumbling in upon them (4).
Officers of the Aboriginal Heritage Section have recently recorded a number of wells at Marion Bay, Yorke Peninsula, where Aborigines have broken through the surface capping of limestone to get at the water below, the wells being about one metre deep and one metre wide. A much more impressive structure was seen by Worsnop near Arcoona, west of Lake Torrens. There, in an area of limestone, the Aborigines had:

sunk a well 12 ft deep, [and] had then in a westerly direction cut a drive 10 ft long, and tapped a most delicious spring of cool water... Down the sides of the well holes for the hands and feet had been cut in the hard limestone rock to give facility of access (5).

In the far west of the state, the Aborigines built dams of clay to retain the water flowing onto claypans after rains. One such structure was seen by Giles in 1873 at Pylebung, about 80 kms east of Gooldea. He described it as:

a circular wall or dam of clay, nearly five feet high, with a segment open to the south to admit and retain the rain-water that occasionally flows over the flat into this artificial receptacle... This piece of work was two feet thick on the top of the wall, twenty yards in the length of its sweep, and at the bottom, where the water lodged, the embankment was nearly five feet thick. The clay of which this dam was composed had been dug out of the hole in which the water lay (6).

Giles' Aboriginal guide told him that Kokatha people had built the dam and Giles subsequently saw a similar structure at Boundary Dam, just over the border in Western Australia. About thirty years later, the members of R.T. Maurice's expedition saw two dams at Paraminna, north-east of Maralinga. Murray, the party's surveyor, described the features:

Here the natives had made two excavations in the clayey bed of the lowest portion of an open saltbush flat, the excavated clay being built up and interlaced with twigs and branches into a horseshoe-shaped embankment about 2 ft high and a bottom width of about 3 1/2 ft.

Murray added that the dams were "fairly frequent in this region, Mr Maurice having discovered several in his travels" (7).

Water could also be obtained from the roots of certain trees and, indeed, mallee-dwelling tribes such as the Kokatha, of western South Australia, and the Ngarkat, of the mallee scrub south of the River Murray, relied to a great degree upon the water they extracted from the roots of several species of mallee, Eucalyptus microtheca, E. oleosa and E. transcontinentalis (8). Eyre has provided a detailed account of the method by which the Aborigines obtained the water:
Selecting a large healthy looking tree out of the gum-scrub, and growing in a hollow, or flat between two ridges, the native digs round a few feet from the trunk, to find the lateral roots... to the practised eye of the native, some slight inequality of the surface, or some other mark, points out to him their exact position at once... Upon breaking the end next to the tree, the root is lifted, and run out for twenty or thirty feet, the bark is then peeled off, and the root broken into pieces, six to eight inches long... they are then sucked, or shaken over a piece of bark, or stuck up together on their ends, and water is slowly discharged from them (9).

Eyre noted that about two-thirds of a pint could be obtained from a single root. The needlebush (Hakea leucoptera) also yielded water and was widely used by the Aborigines throughout the north of the state. According to Cleland and Johnston, metre-long sections of its roots were stood upright to drain into a wooden dish; heat was sometimes applied to hasten the flow (10). Other trees that yield water include kurrajong (Brachychiton sp) and desert oaks (Casuarina decaisneana) (11).

A number of other sources of water were exploited by the Aborigines. Morning dew could be mopped up with sponges of dry grass or shaken from the vegetation into wooden dishes. Water in inaccessible rock cavities or tree-hollows was also mopped up with sponges or sucked up through "straws" made by carefully removing tubes of bark from thin branches or roots (12). At Uliboennalenna in the eastern Musgrave Ranges, water in a large rock cavity could be reached only by a small circular hole through the rock above. Basedow noted that, to obtain the water:

the natives keep a primitive piston always in readiness, lying upon the surface near the hole. It consists of a rod about five feet long, around one end of which a bundle or "plunger" of grass is tightly wound. The rod is inserted into the hole, "plunger" foremost, and slowly pushed inwards through its whole length. Then it is quickly withdrawn and most of the water that had collected above the plunger is lifted to the surface where it is collected inside a small enclosure made of clay around the hole (13).

Hidden sources of water could be found by tracking ants, bees or wasps to them. Tindale notes that Aborigines tracked ants going down sinkholes on the Nullarbor Plain and this is reflected in the naming of one such water source, Ngalbatakaru, near Koonalda Cave, which means "descending place of the ants" (14). At least two species of frogs, Limnodynastes ornatus and Chiroleptis platycephalus, store water in their distended abdomens during their long periods of aestivation underground and could be dug up and squeezed dry by Aborigines in emergencies (15). The habits and movements of birds could lead Aborigines to water. Magarey states that large numbers
of zebra finches or cockatoos in a certain locality usually indicate the presence of water closely. Several species of pigeons, including crested doves and topknot and bronzing pigeons, are also reliable indicators. These birds fly in at dusk to drink and, by following the direction of their flight at this time, a person might find water.

Techniques for conserving water supplies were also practised. In the Flinders Ranges, near Crystal Brook, Eyre came across a spring covered over with foliage:

it was evident that the natives themselves sometimes contemplated its being quite dried up, and had taken this means as the best they could adopt for shading and protecting the water (16).

Small rockholes and wells were covered over with rocks or foliage to reduce evaporation and to prevent the contamination of the water by animals. In the Everard Ranges in the north-west of the state, the Aborigines filled rockholes with sand to reduce evaporation (17).

Water was carried short distances in wooden or bark dishes, with a twist of grass to reduce the spillage. In the eastern half of the state, animal skin waterbags were used, enabling hunting parties to extend their range or to provide a reserve supply while travelling. The waterbags used by the Lake Eyre tribes were usually made from the skins of kangaroos or wallabies, the hair was singed off and the skin soaked in an astringent mixture of acacia bark and water. The skin was then left to dry, pinned into the required shape with animal bones and fur-string. When dry, the skins were sewn up with animal sinews. These bags could hold up to 5 gallons (16) and, in the Flinders Ranges, Eyre found two waterbags in a deserted Aboriginal camp “each containing six to eight quarts” (19). The people of the River Murray and Coorong also used waterbags made by removing the skin intact from an animal and then tying closed the limbs and body openings (20). The use of waterbags has also been reported in Central Australia, but the tribes of the Western Desert did not use these items (21).

The Aborigines’ skills in water procurement enabled them to occupy the most inhospitable parts of Australia, where even today few white people venture. They had intimate knowledge of all the waters in their own country and were expert at exploiting other sources and at interpreting the signs of the animals, birds and insects. They had developed specialized techniques for extracting water from plants and, as some of the accounts of early explorers indicate, the Aborigines sometimes displayed great ingenuity in obtaining water.
Periods of drought, however, could cause great distress and suffering to the Aboriginal people. When water and food were scarce, the old people and the young children may not have been strong enough to survive the rigours of travel and occasionally a whole family group may have perished when they found a previously reliable water source had dried up. With the exhaustion of the water supply in one area, local groups sought refuge at permanent waters in the territory of neighbouring groups. Kinship and ritual links facilitated this sharing of resources but if the conditions continued to deteriorate, groups may have been forced to seek refuge in the territory of distant, potentially hostile, tribes. If the drought was prolonged, people may not have been able to return to their own land for several years, perhaps longer. Hardships such as there were not confined to the arid north and west of the state; tribes in the South-east would also have occasionally experienced bad droughts, with even the River Murray sometimes ceasing to flow.

References cited:


(3) Sturt, C. Narrative of an Expedition into Central Australia 1849, vol 1 p.386-387.

(4) Eyre op cit, vol I, p.219-220


(14) Tindale, N. B. Aboriginal Tribes of Australia 1974, p. 64.


(16) Eyre op cit, vol 1, p. 46.


(20) Eyre op cit vol. II, p. 313

THE UNIVERSITY OF ADELAIDE

ANTHROPOLOGY SEMINARS: FIRST TERM 1985

VENUE:
Room 3.140, South Wing Medical School, off Frome Road

TIME:
2.15pm on Tuesdays unless otherwise specified. Please note that the first seminar (first week) will be held on a Friday at 12.15 noontime

16 APRIL
TERENCE E. HAYS (Visiting Fulbright Fellow, Anthropology, Australian National University)
"Myths of Matriarchy and the Sacred Flute Complex of the Papua New Guinea Highlands"
Chairperson: John Gray

23 APRIL
JOHN BROWETT (Department of Geography, Flinders University)
"Restructuring in the South Australian Wine Industry 1961-1984"
Chairperson: Andrew Lattas

30 APRIL
STEPHEN BOGGS (Anthropology, University of Hawaii)
"The Struggle between Capital and Labour in Nineteenth Century Britain and America: An Anthropologist's Perspective on the Marxist Labour Theory of Value"
Chairperson: Roy Fitzhenry

7 MAY
SUSAN BARHAM (Anthropology, University of Adelaide)
"Australian Gambling and Egalitarianism"
Chairperson: Michael Roberts

FRIENDS OF CLASSICAL ARCHAEOLOGY LECTURES

The following lectures will be held during April and May this year. Members of the Anthropological Society are welcome to attend.

Fri. 12 April: "Mesopotamian archives and Mesopotamian history", an illustrated lecture by Prof. Norman Yoffee, Dept. of Anthropology, University of Arizona, to be held at 8 p.m. in Law Lecture Theatre 2, Third Floor, Ligertwood Building, University of Adelaide.

Mon. 22 April: "Greek influences on C19 art and architecture", an illustrated lecture by Mr. R.H.A. Jenkyns, Lady Margaret Hall, Oxford, to be held in conjunction with the Classical Association of South Australia at 8 p.m. in Lecture Theatre 2, Third Floor, Ligertwood Building, University of Adelaide.

Mon. 6 May:
"Quamdiu stat Colysaenum...! (while the Colosseum stands...): present state and future prospects of Rome's ancient monuments." An illustrated lecture by Janet DeLaine, to be held in conjunction with the Classical Association of South Australia at 8 p.m. in Lecture Theatre 1, Second Floor, Ligertwood Building, University of Adelaide.
The Society has received a brochure referring to the above Society, and to the interesting programme of films that will be shown during first term 1985. Unfortunately delivery of this notice will be too late for the first two films on the list below.

At 7.30 p.m. in the Little Cinema except Ancient South America on 28th March, which will be in the North Dining Room.

28th MARCH - ANCIENT SOUTH AMERICA - North Dining Room includes films on the civilisations of South and Central America, including Cortez' Conquest of the Aztecs.

11th APRIL - ANCIENT CHINA - Little Cinema Xian - a highly rated film on the city of Xian and the tomb of Chin's first emperor, plus "Times of Jade and Bronze" and "Times of Silk and Gold" - two Magnus Magnusen films on early China.

9th MAY - A MEDIEVAL MISCELLANY - Little Cinema A series of films on the Vikings, the Anglo-Saxons and Medieval Society. Includes "The England of the Anglo-Saxons", plus films on Viking ships and Viking explorations, and a reconstruction of life in a medieval manor.

30th MAY - ANCIENT EGYPT - Little Cinema including AKHENATON THE LOST PHARAOH TUTANKHAMUN THE IMMORTAL PHARAOH TUTANKHAMUN'S EGYPT THE EGYPTOLOGISTS

13th JUNE - UNDERWATER ARCHAEOLOGY - Little Cinema includes a film on recovering anchors and cannon from Cook's ENDEAVOUR, "Preserving the Vasa", recovering treasure from a Spanish galleon, and a video "The Year They Raised the Rose", i.e. getting Mary Rose above the surface.

There will be no admission charge, but a donation will be requested to cover costs of the evening which will include wine, cheese etc.
Heritage display at the State Library.

Heritage Week begins Sunday, April 14, and to celebrate, the Department of the Environment and Planning, in conjunction with the State Library, is staging an exhibition to mark the occasion.

The exhibition, South Australian Heritage, commences Wednesday, April 10, and will remain on display in the State Library until May 3. The many photographs in the exhibition will provide an insight into our state's living history.

Over forty photographs of South Australian heritage sites will be displayed - ranging from the grandure of Carrick House to the modesty of an early pine log hut.

Aboriginal Heritage is also a valuable part of our state's past, and will be represented in this exhibition by pictures of aboriginal paintings and artifacts.

Shipwrecks, too, are some of the more dramatic additions to the Heritage list. The exhibition includes several photographs of South Australian shipwrecks, like the 'Ethel' and the 'S.S. Ferret'.

The exhibition displays a variety of books about our heritage and a continuous audiovisual slide show will point out many of the features of our heritage locations.

Preserving our heritage is becoming an issue of importance to increasing numbers of people. It poses a challenge, to find a compromise between the old and the new, progress and history - to the benefit of all South Australians, now and in the future.

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DATE: April 10 - May 3.
VENUE: STATE LIBRARY.

For further information please contact:

Anne Murphy
Publicity and Promotions
State Library.
(Direct) 223 8907
(switchboard) 223 8911