RESEARCH NOTES

LAKE EYRE BASIN PROJECT:
ARCHAEOLOGICAL SURVEY OF
THE LOWER COOPER CREEK

Gilles Hamm

INTRODUCTION

The Lake Eyre Basin Project, currently being undertaken by the South Australian Museum, aims to survey the entire human history of the Lake Eyre drainage basin from its earliest settlement to the present day. This is a multidisciplinary enterprise involving anthropologists, historians, and archaeologists. The main focus of the archaeological work is to investigate and document evidence of human occupation before white settlement around Lake Eyre.

The principal research questions being addressed arise from recent and zone archaeological work by Lampert and Hughes (1987) and Smith (1987). When did the first and zone occupation of Lake Eyre commence? What attracted settlement to particular locales? What was the impact of climatic and environmental changes on people? Are there any distinctive patterns emerging from the archaeological record which tell us something about how people used this arid landscape in the past? Can any changes be seen in the way people made and used their stone tools? These are the types of questions being addressed by the archaeological team working in the field.

COOPER CREEK REGION

Cooper Creek, one of the most important stream systems to drain into Lake Eyre, begins its journey in central Queensland and ends it on the shores of Eastern Lake Eyre some 1,523 kilometres away (fig. 1). Ephemeral in nature, the Cooper is a true arid zone stream. Rainfall in this region of north-eastern South Australia ranges from 125mm in the west to 150mm in the north making it the driest place on the continent. The weather is hot in summer and cool to cold in winter, with extremely low and unreliable rainfall and a very high evaporation rate (Laut et al. 1977).

The major landforms in the eastern Lake Eyre region are the longitudinal dunefields of the Tirari and Sirzelecki deserts. Connected to these dune systems are a range of salt lakes and clayspans. Occassionally there are small, flat gibber plains or the remnants of salt lakes, mesa-like hills which form the highest land feature.

Vegetation consists mainly of chenopod shrubland, salt shrubland with an understorey of grass and forb, hummock grasslands and eucalyptus lining the channel proper.

LOWER COOPER CREEK

For the purposes of this study, the Lower Cooper region is defined as beginning at Lake Killamperpunny, where the Birdsville Track cuts the main Cooper channel, and continuing west for some 100 kilometres to the shores of Eastern Lake Eyre (fig. 2). This part of the Cooper is made up of a series of waterholes and ephemeral lakes which exhibit varying degrees of salinity. Much of the time the area is dry and only after local heavy rains do the waterholes fill with freshwater.

Among the most striking features of the Lower Cooper area are the ancient river and lake sediments exposed at a number of locations along the creek's course. The dating of these sediments, which are proving a rich resource for palaeontologists, has put their age at, at least, 100,000 years B.P.
ARCHAEOLOGICAL SURVEY

The main field survey of the Lower Cooper Creek was carried out by Dr Peter Velh and Giles Hamm, project archaeologists working under the direction of Dr Ron Lampert. Prior to this work being undertaken no prehistoric archaeological sites had been recorded in this region. The survey strategy was to reconnoitre both banks of the Lower Cooper and record in detail as many archaeological sites as possible. In addition to the transect following the Cooper to the shores of Lake Eyre, small transects were surveyed out from the Cooper into the Tirril dune fields.

After two major field seasons a total of 205 archaeological sites have been recorded for this area. Two ancient campfire sites have been investigated and sampled, producing radiocarbon dates of $11,830 \pm 320$ years B.P. and $11,770 \pm 180$ years B.P. These two sites are of major scientific significance, providing us with vital clues to when the first inhabitants might have occupied this area near Lake Eyre.

Considering most of the 205 archaeological sites are probably all late Holocene in age (i.e. younger than 5,000 years B.P.), it is truly remarkable that such a hostile, barren landscape has so much evidence of human occupation.

A unique pattern is emerging in the distribution of archaeological sites in relation to certain water sources and habitats. John Noonan, a hydrologist from Flinders University, has conducted a sampling programme to test water quality, at both waterholes and soakages. We await these results with great excitement.

From this years results it is envisaged that more detailed work in this region will be carried out in 1990. Certainly for the driest place on the continent it has not proved to be the poorest in terms of human habitation. It is clearly a unique and rare archaeological record.

Figure 1: Lake Eyre Basin
BIBLIOGRAPHY


Laut, P. et al. 1977. Environments of South Australia, Province 8 Northern Arid. Division of Land Use, CSIRO, Canberra.