

## Australian Archaeology



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## DEMPSEY'S LAKE PALAEOLOGICAL AND ARCHAEOLOGICAL SITE

Dempsey's Lake is a small lake some 6 km northwest of the centre of Port Augusta township, South Australia. The site was brought to my attention by Mr D. Williams (School of Biological Sciences, Flinders University) who, in association with Dr R. Wells, is investigating its palaeontological and stratigraphic aspects. Apparently, it is the site at which both Kartan tools and *Diprotodon* bones were found lying in close proximity by Cooper (1959), leading him to suggest that the tools and bones may have been associated. I met Mr Williams at Dempsey's Lake in May 1976, and spent a day and a half examining the site.

The site is on an eroded red sand dune running in a straight line from northwest to southeast, bordering part of the southwest shore of the lake, but extending beyond it to the southeast. This configuration suggests the dune must be part of the linear dune field formed by Pleistocene winds blowing from west-northwest and not a lunette or other shoreline feature of the lake (*cf.* Bowler 1975). Modern winds from the southwest have since stripped off up to 3 m of upper sand levels over part of the dune, exposing a firm calcareous horizon, on the surface of which lie bone fragments and many stone artefacts.

Despite the profusion of artefacts, not one was found embedded in the calcareous horizon, nor was a single artefact found encrusted with calcarenite. The situation may thus be contrasted with that at Lake Mungo, where Jones and Allen (Bowler *et al.* 1970) infer that most surface tools are associated with the calcareous Upper Mungo Unit, from a few stone tools actually embedded in it and a much larger number lying on the surface but coated with calcarenite. At Dempsey's Lake, all the stone artefacts, as well as some of the bones, appear to be a lag deposit, once embedded in overlying strata that have since been blown away. Other evidence to support this view may be seen in less eroded parts of the dune where artefacts lie exposed only about one metre from the surface in small wind deflated hollows, and well above the calcareous horizon. Also, within the major blowout itself, a single remaining pillar of the overlying deposit contained a stone flake *in situ* 1.5 m above the calcareous level. Of three charcoal concentrations in the calcarenite, two appear to be burnt tree stumps while the third is not obviously a hearth. It is thus extremely doubtful that men occupied the site during the formation of this horizon.

The only remains of large extinct marsupials found stratified by Mr Williams were in the calcareous horizon. There is thus no evidence for the association of these fauna with man at Dempsey's Lake.

## Culture and Chronology

Although the stone industry was not examined systematically, a large enough sample was sufficiently well exposed to assess its major characteristics. The steep edge scraper, made on a large, thick flake, appeared to be the most common implement. Others are flattish flake scrapers and some heavy core scrapers of horsehoof type. I saw none of the small tools such as tulas and pirris which are often found in abundance on late sites in the region, nor did I notice any of the kind of waste stone with which such tools are usually associated. I thus believe this industry is an early one, of the core tool and scraper tradition. However, the emphasis upon medium sized flake tools, rather than heavy core tools means that it is clearly not Kartan as Cooper had implied (1959), even though the site is located not far north of an area in which Kartan sites are numerous (Lampert 1976). With the tool types mentioned, and being made on a greyish silcrete, the industry looks remarkably similar to that from Lake Mungo. However it differs from the Mungo industry in having the tools large multidirectional cores and more waste flakes, indicating that men at Dempsey's Lake knapped stone on the spot (*cf.* Bowler *et al.* 1970) presumably from the silcrete that outcrops along the opposite bank, less than 2 km away.

Because the stratigraphic origin of the tools is within the upper levels of a linear dune, it seems likely that they were deposited there during the most recent phase of dune building activity, between 17,000 and 15,000 years ago (Bowler 1975). Such an age is consistent with the typological character of the industry.

## References

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#### AN ARCHAEOLOGICAL SURVEY ON PORT JACKSON, SYDNEY

#### Introduction

During the period April to December 1975, the Anthropological Society of New South Wales conducted an archaeological survey around Bantry Bay on the northern side of Port Jackson, Sydney. The area surveyed, formerly known as Magazine Reserve, was controlled by the Federal Government until 1974. The reserve, now under the control of Davidson Park Trust, had been closed to public access for 60 years while it was used as a naval explosives depot. The Society believed that this closure to public use would have assisted the preservation of Aboriginal relics in the area, and felt that an archaeological survey should be undertaken in 1975 to determine the nature and extent of such relics before they suffered damage by exposure to public use.

#### The Area

The area survey, approximately 2 km<sup>2</sup> at the head of Bantry Bay, includes several steep-sided valleys and many gullies covered with dense natural vegetation, though such introduced plants as lantana and bamboo are beginning to replace the indigenous flora in some sections. There are many exposures of sandstone appearing as low cliffs with overhangs at their base or as flat surfaces. Several creeks run down the valleys and gullies into Bantry Bay, where the rock platform and mudflats are covered at high tide. This intertidal zone carries a small range of molluscs which are likely to have provided a useful protein element in the Aboriginal diet.