

## Australian Archaeology



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CAVEAT EXCAVATOR: A SEA BIRD MIDDEN ON STEEP HEAD  
ISLAND, NORTH WEST TASMANIA

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'Nihil Desperandum' (Cicero, Caligula *et al.*)

Archaeologists, even if they are not pessimistic by nature are constantly being reminded of the inadequacy of the data upon which they attempt to write history. Ethnographers, observing the minutiae of daily life comment upon how little of it is fossilised into a non-decayable form capable of being interpreted in the future. Wanderers along a sea beach after a storm will note the piles of ancient shell being washed into the surf, or the wind polishing to shiny smoothness what once was a sharp edge. Dogs gnaw the bones from kitchen tables and hyenas rip and spread the carcasses of game killed by bushmen. Seals and crocodiles with stones in their bellies, like the lead belts of be-rubbered scuba divers, crawl laboriously up sandy cays and die, the pebbles out of place in such a sandy environment. Hermit crabs carry their temporary molluscan homes up tropical beaches. A whole new subject - taphonomy, destined surely to usurp economics as the 'dismal science' - is being developed to analyse the various processes by which objects become incorporated within the fossil or archaeological records. However, if the Devil really wanted to tempt the faithful with his 'sports of nature', he would not have chosen his Tasmanian namesake who has filled many a cave with carnivorous debris, but rather birds whose contribution to the archaeological record has been more versatile and ubiquitous. Jungle fowls of Arnhem Land build huge earth mounds; emus walk around with foreign stones in their crops; owls drop their faecal pellets full of rat bones onto the carrion heaps of hunters, and hawks remove evidence of fish heads and other half eaten food; magpies collect shiny glass and tinfoil for their nests. It is also reasonably well known that some sea birds build shell middens (cf. for an independent observation of the same phenomena see Horton 1978 in press) and we should like to describe one of these from Tasmania.

During an archaeological search of Steep Head, a small island 3 km to the west of Hunter Island in the Hunter Group in north west Tasmania, we made a systematic search for any trace of shell midden in order to see whether this islet had been used by Tasmanian Aborigines in the past or whether it was beyond their capacity to reach (see Jones, Allen and Stockton, this volume). Because it was probable that any Aboriginal visits would have been fleeting, and the resultant debris limited to the odd meal, we were looking carefully for any trace of shells.

On a ridge some 70 cm wide at the top and 15 m long, connecting two high points, we saw some shells and small bones stratified in loose stony soil. The location of this site, compounded by the fact that both sides of the ridge fell away almost vertically 70 m to a

sullen, growling sea, precluded any doubts in our mind that this could have been a human camp. Clearly it is the location of an old nest or feeding place of a sea bird, probably the large Pacific Gull (*Larus pacificus*). We decided to excavate this sea bird midden (designated SBM1 in the Sea Bird Site Survey Register of Tasmania) in order to see what it contained. The excavation was carried out by Allen sitting astride it, using the 'open area' method of excavation, the total bulk sample being put into a plastic bag for later detailed laboratory analysis following the technique advocated by Coutts (1970), Coutts (1977:8), Coutts, Witter, Cochrane and Patrick (1976) and Coutts and Witter (1977). Shells and bones were found over an area of about 200 sq cm and stratigraphically speaking, in loose soil down to a depth of 2-3 cm, showing that the site had probably been used over a reasonable length of time - i.e. that it had been a regular feeding/nesting place.

The analysis of the shellfish was carried out by Dr Kathy Conover and of the birds by Dr Jeannette Hope, the results being tabulated below (Table 1). It can be seen that the prey consisted of birds including the mutton bird (*Puffinus*), crab/crayfish and rocky coast gastropods - the limpets, *Celanna solida*, and warrener *Subrinella undulata*.<sup>1</sup> The latter was represented by both operculae and body whorl fragments. Large gulls drop these types of turbo shells repeatedly on rocks until the shells break (Mr Melvin Everret, pers. comm.). They can then get at the flesh. The far greater minimum numbers of this shell species represented by operculae rather than body shells show that often the flesh was carried to the eating perch still attached to the 'cats-eye'.

In terms of species of shell and bird, this assemblage could be lost in a species list from a genuine Tasmanian Aboriginal midden. Both gull and man foraged amongst the mutton bird rookeries and the mid-littoral zones of the rocky shorelines. The operculae had a length distribution of  $20.5 \pm 2.8$  cm (N=13). This corresponds to whole shellfish weighing slightly greater than 24 gm each, with 8.5 gm steamed flesh (field experiments at Rocky Cape, north Tasmania, 1967). Similar sized *Subrinella* are common on west coast Tasmanian middens. For example a foreshore midden at Sundown Point in 1977 contained operculae with a length distribution of  $19.0 \pm 3.1$  cm (N=25) (Mr D. Ranson, pers. comm.).

Quite obviously, from its location this bird midden would never be confused with a human one, and despite our initial jeremiad, even if such bird debris was dropped onto a genuine human midden, its contribution to the latter would be statistically insignificant even to pedants. However casting aside the levity of this note for a moment, there are a few archaeological situations where such bird middens could genuinely be misleading.

One is the situation which led us to this midden, that is, looking for the merest palimpsests of Aboriginal occupation on islands which might have been at the outermost range of the capacity of

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<sup>1</sup> Sample held in the archives, Department of Prehistory, Research School of Pacific Studies, The Australian National University, under Jones, Rhys (SBM 1, 1977)

TABLE 1 Faunal content of the sea bird midden (SBM 1)

Common name	Linnean name	No. of individuals
<i>Mollusca</i>	chiton	? - 21 segments
Limpets	<i>Cellana solida</i>	14
Mussels	<i>Brachidontes rostratus</i>	1
	<i>Modiolus pulex</i>	4
Warreners	<i>Subminella undulata</i>	3 (body whorl fragments - minimally 1 individual)
		13 operculae = 13 individuals
<i>Crustacea</i>		
crab or cray claw fragment		1
<i>Aves</i>		
Mutton birds	Procellariiformes of <i>Puffinus</i>	2
Diving petrel	Pelecanoididae	2

Aboriginal watercrossing technology. Two or three such bird middens incorporated into a soil horizon or buried by drifting sand where the ground level was not excessively steep or remote, might easily be confused for the odd snack of a daring or desperate traveller during a brief sojourn on the island. Where tiny scatters of shell are to be invoked as evidence for such human actions, then at least the possibility of an avian origin must first of all be discounted.

The second kind of situation is one which is likely to increase in future research as we move from the 'cowboy' phase of Australian archaeology to detailed micro-regional studies involving systematic sampling of the total range of archaeological manifestations down to the last supper. At a certain point it might become genuinely impossible to distinguish between the snack of a bird or a man.

Those who aspire to such precision must make sure that their research design does not become finer than the limitations of the archaeological record.

Dr Jeannette Hope has reminded us that bird middens are not confined to rocky coasts, but that the same processes can be observed on the lagoons and river banks of inland Australia. Here, like the ancient Aborigines of Mungo, water birds have hunted for the fresh water mussel *Velesunio ambiguus*, and the empty shells become scattered on lake shores and thus incorporated into lunette and other sand deposits. Add this to burnt termite nests being probably indistinguishable from cooking hearths made from ant beds (Chapman 1977) and we may on occasions have to retreat to the final fastness of the archaeologist. The unique mark of man is the artefact, the modified piece of stone. But wasn't there also a case of birds seen dropping little pebbles and thus flaking them? As we said in our title - let the digger beware, but never we hope, despair.

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