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RESULTS OF C14 ANALYSIS ON SAMPLES FROM  
THE WARRINGTON SITE, OTAGO

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Salvage excavations in the eastern part of the Warrington site (I44/177 - see N.Z.A.A. Newsletter Vol.26, No.4) in December 1985 revealed a succession of undisturbed cultural strata, extending on average to 1.5 metres below the present surface, the lowest cultural layer resting on old beach deposits. Each cultural horizon was sealed by wind deposited sand in the part of the site the samples came from. The following radiocarbon results were obtained from cockles (Chione stutchburyi), originally brought to the site as a food resource - almost certainly from the adjoining Blueskin Bay estuary.

Lab No.	Layer	Age in years B.P. based on Libby half life	Conversion to years A.D.
NZ 7352	3	348 $\pm$ 55	1602
NZ 7353	5	490 $\pm$ 55	1460
NZ 7355	5b	455 $\pm$ 55	1495
NZ 7357	7	580 $\pm$ 55	1370

Midden and artefacts excavated from the dated layers generally support this chronological sequence.

Layer 3 contained typical Classic Maori artefacts such as a broken whale-ivory cloak pin, a perforated human tooth, and worked items of greenstone. Structural remains included postholes and scoops, and midden was mainly fish, shellfish, sea mammal, dog, small bird and rat.

Layers 5 and 5b are part of a cultural horizon that was split by a thin deposit of clean dune sand in places, and quite un-defined in the south part of the excavation where the sand coloration faded into a fairly clean matrix that was uniform with the sterile surrounds. Artefacts from the level 5 horizon include broken bone composite fish-hook points (barbed) and a bird spear, flakes of local cossyrite phonolite resulting from adze manufacture and solid pieces of moa bone that look sub-fossil. Postholes and fire scoops were present, and midden was similar to that in Layer 3.

Level 7 varied in complexity, from several clearly

defined lenses at the southern end of the excavation to a single layer of cleanish sand containing sparse cultural material to the north. Midden was mostly the same as in the upper layers, but included the sternum of a small moa species. Artefacts included a barracouta lure point in moa bone and the reject end of a dog jaw that was probably made into hook points. The level 7 cockles that were dated came from the upper part of this moa hunter horizon.

The eastern part of the I44/177 site complex is overlapped by the Classic Maori site I44/194, comprising level 3 dated at 348 years B.P. by sample NZ 7352 above. Older deposits than the moa hunter aged material found in level 7 during the 1985 excavation may occur in higher dunes towards the western edge of the site where more recent excavation (permit 1986/32) has revealed the one prehistoric cultural level of moa hunter age - as indicated when the site was recorded in 1982. The extent to which site I44/194 overlapped site I44/177 was unknown at the time both sites were recorded on the basis of surface evidence, so in the excavations at Warrington so far (1983-1986) the number of the earlier site has been used on the basis of the presence of obvious moa hunter material in each excavated area. If the deposits sampled and the dates obtained are a true reflection, it would appear that moa became locally extinct sometime around 1500 A.D.

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