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RADIOCARBON DATES FROM LONG BEACH, OTAGO, NEW ZEALAND

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A series of five radiocarbon dates were obtained from charcoal collected during a salvage excavation in December 1977 (N.Z.H.P.T. Permit No.1977/65) from stratified midden lying on a buried boulder ridge at the back of the Long Beach site, S164/20, just north of Dunedin.

Run No.	Years B.P. Old half life	Years B.P. Secular corr. new half life	Years a.d.	Provenance
R5753/2	311 \pm 86	403 \pm 89	1639 \pm 86	From Layer 2
R5753/3	440 \pm 57	478 \pm 58	1510 \pm 57	From Layer 2
R5753/4	476 \pm 57	511 \pm 58	1474 \pm 57	From Layer 4a
R5753/5	868 \pm 80	845 \pm 85	1082 \pm 80	From Layer 4b
R5753/1	712 \pm 57	710 \pm 59	1238 \pm 57	From Layer 4c

The dominant charcoal in two samples, R5753/3 and R5753/5, was large stems of Podocarpus totara-hallii and these dates are probably 100 years or more too old. The other charcoals were derived mostly from short-lived genera such as Leptospermum, Hebe, Coprosma and Myrsine, and are considered to be more reliable.

The site consists of successive layers of predominantly fish bone midden, laid down in the order shown above in sand accumulating on a boulder ridge, with a layer of relatively sterile wind-blown sand (Layer 3) between Layers 2 and 4a. The uppermost layer of midden, Layer 2, contained numerous Classic-style fish hooks and pendants. There were fewer artefacts in the complex Archaic level, Layers 4a, 4b and 4c, but a one-piece fish hook and some typically Archaic silcrete blades were found.

The Classic artefact assemblage, usually considered to have been brought into east Otago by the Ngai Tahu people, has been dated at Katiki Point and Taiaroa Head to the mid-18th century. The Layer 2 date, R5753/2, suggests that the influx had taken place at least a century earlier. A forthcoming report will examine the nature of this early Classic material and explore the differences between Archaic and Classic economies at this important site, one of the few New Zealand sites where Archaic material underlies a Classic deposit.