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A HUMAN BURIAL FROM OPITO, MERCURY BAY, COROMANDEL PENINSULA

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This paper presents a forensic report on a single human burial from Opito. The material is not very well provenanced. No information about burial posture is available. In 1913 the skeleton was given to the Auckland Museum (Catalogue No. 5661) along with a cache of 14 adzes which was found with it.

The burial was found eroding out of sand. Although the skeleton was not removed by controlled excavation the bone material is in good condition, though somewhat brittle. The skeleton is almost complete (Figure 1). Measurements were taken on cranial and infracranial bones (after Pietrusewsky, 1969: Appendix 1 and 2). These are presented in Table 1.

Sex

The individual was male. This was determined from discriminant function sexing based on the lengths of the right femur and tibia (Houghton and De Souza, 1975: Equation 8) and confirmed by the morphology of pelvis, cranium and sacrum.

Age

The age at death was estimated to be  $25 \pm 5$  years on the basis of the condition of the left pubic symphysis and the spheno-occipital synchondrosis. The unfused state of the sacral vertebrae also suggests this age, although sacral fusion is an irregular process.

Stature

This was estimated to be  $1716 \pm 12.4$ mm on the basis of the lengths of the right fibula, femur and tibia using regression formulae developed by Houghton, Leach and Sutton (1975).

Pathology and trauma

There is slight to moderate arthrosis in the lower lumbar vertebrae. In addition there is sacralisation of the fifth lumbar vertebrae. Two lower right ribs have fused at their dorsal ends. This appears to be the result of a fracture. An X-ray failed to show any fracture line, suggesting that the injury occurred a long time before death. The condition of the lateral ends of both clavicles suggests that a strenuous activity, such as the paddling of canoes (Houghton, pers.comm) was

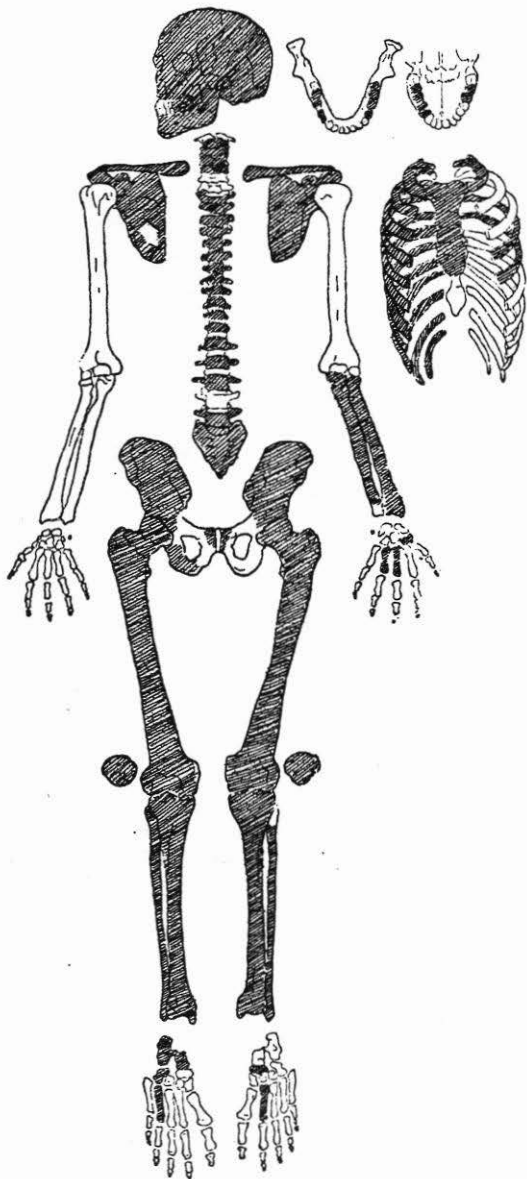


FIGURE 1. Opito burial. Shaded areas indicate bones present.

regularly undertaken. There are squatting facets on the distal surfaces of both tibiae, and on the corresponding surface of the right calca neum.

Dental wear is moderate in relation to age at death (Table 2). There is subgingival calculus present on the molars and premolars. Periodontal disease is evident. It was advanced rather than chronic at the time of death. The left mandibular second molar has cervical caries. There is marked recession of the bone in both mandible and maxilla. There is also a possible periapical spherical rarefaction of bone involving the left maxillary canine.

The cause of death is unknown. Radiographs of the femora and tibia show an absence of Harris lines, indicating a healthy childhood and adolescence. The angle of tibial torsion is very high at 45°. This suggests that this individual may have walked in a slightly pigeon-toed manner (Baker, pers.comm.).

#### Discussion

In summary this man apparently led an active and healthy life, with the exception of some dental infection. The dentition fits the pattern proposed for the early period in the eastern Coromandel by Houghton (1977). Considered together with the pathologies present in the dentition it indicates that the diet consisted primarily of soft foods rather than tough and fibrous material such as fern root, or dried fish and shellfish (Houghton, 1977; Olsen, 1979).

The fact that a cache of adzes was found with the remains of this individual suggests that the burial is Archaic. It is hoped that the adzes will be found and described and the burial dated. This report and that information could then contribute to the growing body of data on the antiquity, age at death and sex of prehistoric individuals interred with grave goods in New Zealand (see for example Leach, 1977).

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TABLE 1: (A) Cranial Measurements (cm)

Basion-nasion length	11.0	Bigonial diameter	8.9
Basion-prosthion length	10.0	Symphysis height	3.0
Minimum frontal breadth	9.1	Minimum ramus breadth	3.25
Upper facial height	6.7	Ramus height	6.8
Orbital height	3.5	Bicondylar width	10.9
Orbital breadth	3.8	Mandibular length	10.1
Nasal height	5.0	Total facial height	11.7
Nasal breadth	2.6	Bizygomatic breadth	12.9
Maxillo-alveolar breadth	3.7	Cranial length	17.6
Maxillo-alveolar length	4.1	Maximum cranial breadth	14.1
		Cranial height	13.5

TABLE 1: (B) Infracranial Measurements (cm)

		Left	Right
<u>Clavicle</u>	Maximum length	14.8	14.8
<u>Radius</u>	Maximum length	24.0	N.A.
	Radial diameter	2.2	N.A.
<u>Femur</u>	Maximum length	44.3	44.3
	Maximum head diameter	4.45	4.45
	Anterior-posterior diameter	3.0	3.1
	Lateral diameter	2.6	2.6
	Sub trochanteric anterior-posterior diameter	4.1	4.5
	Sub trochanteric medium-lateral diameter	4.0	3.9
<u>Tibia</u>	Maximum length	35.8	35.6
	Transverse diameter	2.7	2.8
	Anterior-posterior diameter	3.6	3.5
<u>Fibula</u>	Maximum length	N.A.	34.6
<u>Patella</u>	Height	4.45	4.45
	Width	4.4	4.2
	Thickness	2.3	2.2

N.A. means Not Available

TABLE 2: Degree of Toothwear

		LEFT							RIGHT								
		M3	M2	M1	P2	P1	C	I2	I1	I1	I2	C	P1	P2	M1	M2	M3
Maxilla:	AP	3	4	4	5	AP	A?	AP	AP	AP	AP	AP	AP	AP	4	2	CA
Mandible:		3	4	6	5	AP	AP	AP	AP	AP	AP	AP	3	3	6	2	AA

AP = absent post-mortem; AA = absent ante-mortem; CA = congenitally absent

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