

Dentition of Watom Island, Bismarck Archipelago, Melanesia

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ABSTRACT. Teeth belonging to two adults excavated from the Lapita level occupation of Watom Island (ca. 2,300 years before present [YBP]) are described and compared with three large dental series from New Britain, recent Thailand, and Mokapu, Hawaii. As far as can be determined from a sample of two individuals, the Watom teeth appear to be more like those from New Britain than Thailand or Hawaii. All teeth are free of dental caries, hinting that the Watom diet was not overly dependent on sticky carbohydrate foodstuffs.

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The current anthropological view about the origin of Polynesians recognises a link between a pottery type called Lapita ware and the first settlements in Polynesia (Howells, 1973; Green, 1979; Bellwood, 1979). This ceramic type has been found in several archaeological sites in Melanesia, suggesting that Polynesians originated from the Melanesian gene pool. However, various physical anthropological studies have shown that Polynesian skeletal and dental features are more like those of south-east Asians than Melanesians. Until recently there have been no studies on human skeletal remains found in association with Lapita ceramics. Even now, such studies are limited to a few fragmentary skeletons (Pietruszewsky, 1985, n.d.; Kirch, Swindler & Turner, 1989). Therefore, even small amounts of information are valuable in attempting to reconstruct the biological characteristics of the Lapita ware people.

Dental anthropology is proving to be a powerful adjunctive resource for biohistoric research. This is

because dental features such as incisor shovelling, cusp numbers and groove patterns are evolutionarily stable due to their polygenic inheritance. Even in very small populations, genetic drift has only a minimal effect, and major environmental shifts have almost no identifiable selective effect in blocks of time involving less than 5,000 years.

Given the theoretical importance of the Lapita-first Polynesian correspondence, and the methodological power of dental anthropology, a lengthy description of the Watom dentition is warranted.

Materials and Methods

The dentitions described and compared herein originated from 8 km wide Watom Island, located about 8 km offshore of New Britain's northern Gazelle Peninsula