

Comment on the Human Skeletal Material from Pea, Tonga, Site To.1

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ABSTRACT. Some pathological features evident in the human skeletal material from the Lapita site at Pea, Tonga, Site To.1, are reinterpreted. Some reordering of the remains between individuals is suggested, and previous suggestions that there is evidence of either metastatic carcinoma or early Pagets disease in the cranial vault are not supported.

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This Lapita-associated material excavated by Poulsen (1987) has been exhaustively analysed by Taylor (1987) and Spennemann (1987). The comments here relate to some contentious points, mainly of pathology, and should be read against the previous analyses.

Material

1. Mandible. The right mandibular condyle has been broken off post-mortem, but sufficient neck remains to indicate that some abnormality was present in this region during life though whether congenital or pathological (trauma or infection) cannot be said (Fig.1). A cranial fragment bearing the right temporomandibular joint surface is preserved and shows the articular eminence to have been largely obliterated, with formation here of a new, rough-surfaced fossa. The mandible thus probably belongs to at least some of the cranial fragments.

2. The maxillary fragment shows a more advanced and carious pathology than does the mandible (Fig. 2), and a considerably larger dental arch. Even allowing for mesial

drift of the lower teeth as a result of long-standing loss of the incisors, it seems the arches are incompatible.

3. From (1) and (2) above, it follows that the maxillary fragment is probably from another individual, with the mandible belonging to the main individual. This is different from the picture presented by Spennemann (1987), though it must be said that a decision either way is of no great moment.

4. The mandibular pathology, which would influence function and musculature, renders its morphology unsuitable for determining biological relationships.

5. The cervical spine has been said to show "remarkably severe" osteoarthritis (Spenneman, 1987). Chapman (1972) gives a reasonably objective grading for vertebral degeneration, and on her criteria I would grade these changes as slight to moderate. It is to be noted that osteoarthritis occurs only in synovial joints, and is not applicable to the joints between vertebral bodies.

6. It has been suggested that the cranial vault shows evidence either of metastatic carcinoma or early Pagets disease (Spenneman, 1987). I find no evidence of metastases, though there are some normal depressions of meningeal origin (arachnoid villi). The vault structure lies