

Early Agriculture in the Highlands of New Guinea: An Assessment of Phase 1 at Kuk Swamp

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ABSTRACT. The wetland archaeological evidence for Phase 1 at Kuk Swamp, Wahgi Valley, Papua New Guinea, is evaluated in terms of previous interpretations of the artificiality and agricultural function of the palaeochannel and palaeosurface. The evaluation concludes that the current evidence is insufficient to warrant claims of artificiality for the palaeochannel and some palaeosurface elements. Drawing on previous multi-stranded arguments proposed by Jack Golson and Philip Hughes, new lines of multi-disciplinary evidence suggest a revised interpretation of the wetland archaeological evidence for Phase 1 at Kuk does not negate a long-term trajectory towards agriculture in the highlands of New Guinea from the Early Holocene.

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Agriculture in the highlands: an old concern

The development and antiquity of agriculture in the highlands of New Guinea, particularly its antiquity, have been continual concerns since the first archaeological excavations in the region. Bulmer sought to elicit signatures of a transition to agriculture from the lithic assemblages collected during her excavations at Yuku and Kiowa rock shelters in 1959–1960 (Bulmer, 1964, 1966). She suggested that “the direct proof of agriculture must depend on pollen analysis, on the future fortunes of archaeology in obtaining organic remains, and on the analysis and dating of ditches and drains of agricultural derivation” (Bulmer, 1966: 152).

In this paper, multiple forms of evidence claimed to indicate the presence of agriculture in the highlands of New Guinea at approximately 9,000 radiocarbon years before present (B.P.) are assessed. The main focus of the paper is a presentation of the wetland archaeological evidence for

Phase 1 at Kuk Swamp, the only site for which agriculture at 9,000 B.P. has been claimed (Golson, 1977, 1989, 1991; Golson & Hughes, 1980; Hope & Golson, 1995: 824). Although the specific interpretations have changed through time, it has been consistently argued that wetland agricultural practices were conducted as part of a broader land use strategy that included dryland environments within the catchment (Bayliss-Smith, 1996: 509). The evolution of these interpretations will not be reviewed here because the aim of this paper is to interrogate the evidence upon which they have been based.

The interpretation of agricultural activities at Kuk at 9,000 B.P. has always been controversial. Golson originally viewed the artificiality of the evidence for Phase 1 with scepticism and uncertainty (Golson, 1977: 613–614). Since then, he has referred to the agricultural interpretation of Phase 1 as “indirect and unusual” (Golson, 1982: 56), “possible” (Golson, 1991: 484) and as being based on