EDGE-GROUND AXES IN PLEISTOCENE GREATER AUSTRALIA - MORE EVIDENCE FROM S.E. CAPE YORK PENINSULA: A REPLY TO SUTTON

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INTRODUCTION

The Pleistocene antiquity of edge-ground artefacts in various parts of Northern Australia and New Guinea, including the Kimberley, western Arnhem Land and S.E. Cape York Peninsula, is no longer controversial (e.g. Jones and Johnson 1985; Schrire 1982; Rosenfeld et al. 1981). Even so, Sutton (1990:95 - this volume QAR) has rightly questioned the sufficiency of evidence presented by Morwood and Trezise (1990) in support of a minimum date of 32,000 b.p. for edge-grinding at Sandy Creek 1 in S.E. Cape York Peninsula. I welcome this opportunity to rectify this situation.

The excavation undertaken in the 1960s was undertaken under less than ideal circumstances. Shovels were used to remove all of the shelter deposits in 6-inch (15cm) spits to a depth of 2 feet 6 inches (75cm). A transect trench measuring 8 feet by 6 feet, and running east-west, was then similarly excavated to bedrock at a total depth of 10 feet (300cm) where an edge-ground axe was discovered. Subsequently, the majority of artefacts recovered in the excavation, including the axe, were lost. The decision to publish a report on the finding of the axe and its antiquity was only taken after detailed consideration of all surviving evidence from the 1960's excavation in the context of the stratigraphic and chronological evidence recovered in 1989. Additional details are outlined below.

PROVENANCE OF THE AXE

First, it should be noted that the two surviving participants of the 1960s excavation (Percy Trezise and Eddy Oribin) gave consistent accounts of both the stratigraphy they encountered and the location of the axe within the deposits. Trezise gave a detailed account prior to the excavation in 1989 and my findings closely match his description of the depositional sequence. As a further check, I interviewed Oribin afterwards without prior notification and found that his account corroborated that of Trezise. Other evidence for the existence and provenance of the axe include measured stratigraphic drawings undertaken by Oribin (a trained architect) showing the axe in situ, as well as photographs taken at the time of discovery.

Another point which should have been emphasized more in the Morwood and Trezise report was the fact that the basal rubble was literally as hard as concrete. In the 1960's excavation, the rubble was loosened with an ironwood bar before being shovelled out. Similarly, in 1989 I had to employ a crowbar to break up the deposit and a geological pick to do finer work. Since the axe was found actually embedded in the rubble and took several minutes to free (Trezise: pers.comm.), there is no possibility that it had slumped in from higher levels during the course

of the excavation. The axe was also separated by some 107cm of culturally sterile (with the exception of a single quartz core), concrete-like deposit from the overlying artefact-rich sands. Furthermore, the vertical movement of the axe by post-depositional disturbance some time prior to the excavation is unlikely.

ANTIQUITY OF THE AXE

Although Sutton examines the question of the axe's provenance, he does not critically assess the evidence for its chronology. Since none of the material excavated in the 1960's at Sandy Creek was dated, this represents a potential weakness in the argument advanced for the antiquity of the axe. On this issue I raise the following relevant points:

a) The trenches excavated by Trezise and then myself were located approximately 1 metre apart.

b) The major stratigraphic divisions (i.e. sand and underlying rubble) encountered in both excavations coincided closely in character and depth (Figure 1 and cf. Figure 2).

c) The cultural stratigraphies in the sand deposits in both trenches were virtually identical in the depths at which technological and typological changes occurred. In addition, the general disposition of artefacts in the basal rubbles of both trenches were remarkably similar. Trezise found a single quartz core in the upper part of the rubble, then an axe at the base, while I found a discrete flaking floor of crystalline quartz near the base of the rubble during the 1989 excavation and a single quartz core in the upper part of the rubble near the rear wall of the shelter in 1990.

Personally, I have no doubts about the existence or provenance of the axe. Nor do I have any qualms about using the radiocarbon dates from the 1989 excavation to provide a general chronological framework for the sand deposits excavated in the 1960's. On the other hand, there is at present only one radiocarbon date available for the rubble deposits at Sandy Creek 1. Although analysis of pollen samples both from near the top and from the base of the rubble exposed in the 1989 trench indicate that this entire depositional unit is of Pleistocene age (Stephens 1990:95), it is still not known whether the rubble accumulated rapidly or gradually. Therefore, age-estimates for levels of this unit above and below the date of 32,000 b.p. must necessarily be coarse-grained ones. I hope to rectify this situation in the near future by re-excavating Trezise's trench and removing a column sample from the outermost (east) baulk.

Other evidence for edge-grinding at Sandy Creek 1 is uncommon throughout the sequence. A single flake with a ground surface was recovered from the sand deposits in the 1989 excavation, while a complete edge-ground axe was found by Trezise hidden behind a boulder at the rear of the shelter. A fragment of an edge-ground axe was also recovered from a basal rubble at Sandy Creek 2, another rock shelter located 100 metres to the south, and radiocarbon dates from the upper part of overlying sand deposits indicate that this basal rubble is of Pleistocene antiquity. However, a more precise dating of this specimen must await the results of currently pending thermoluminiscence dates from the lowermost sand deposits at the site.

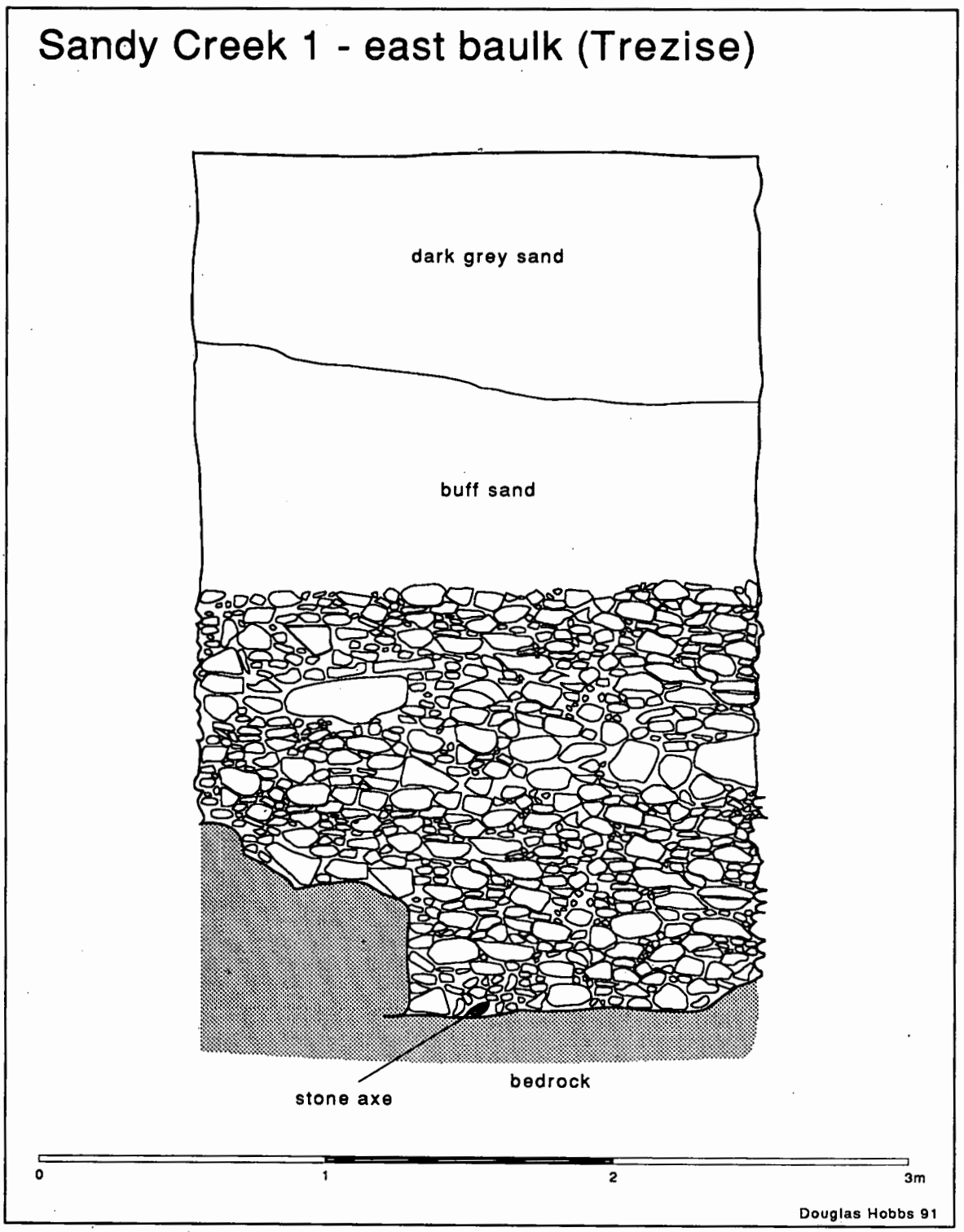

Figure 1. **The Eastern (outer) baulk of the trench excavated by Trezise at Sandy Creek 1 during the 1960's (see Morwood and Trezise 1989, Figure 2. for Oribin's original drawing).**

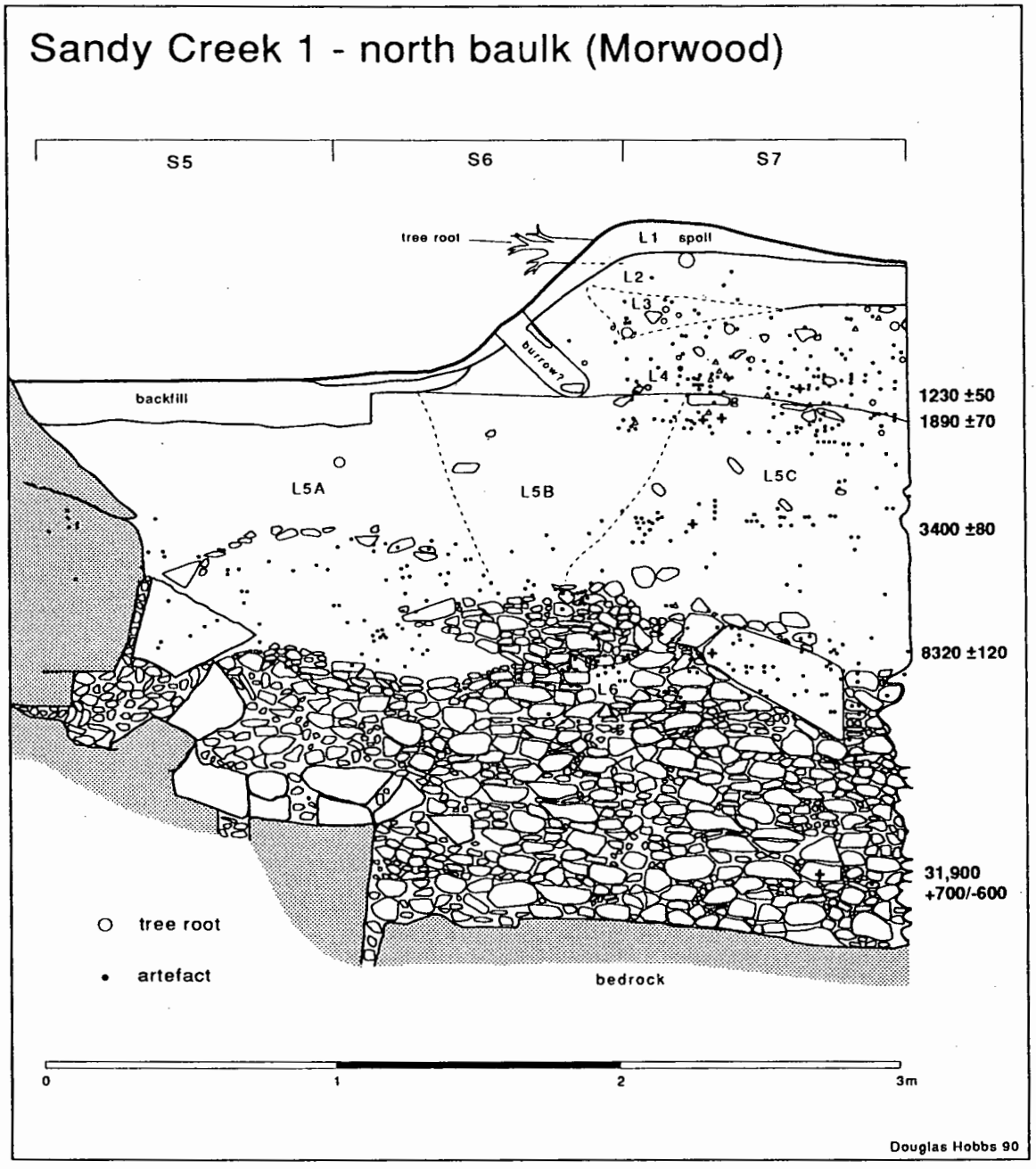

Figure 2. **The northern baulk of the trench excavated at Sandy Creek in 1989. Trezise's trench lies parallel to and 1 metre distance behind this section. The uppermost deposits on the left were removed during the 1960s excavation while Layer 1 is some of the resulting spoil. Layers 2, 3, and 4 are grey, organic-rich sands. Layer 5 is a compact orange sand. Layer 6 is concreted sandstone rubble containing pea-sized concretions.**

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