

## NOTES ON SOME STONE TOOLS FROM PASSISMANUA, NEW BRITAIN

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The Papua New Guinea National Museum holds 316 flaked stone artefacts collected by A. Chowning and J. Goodale in the Passismanua area of southwest New Britain. Interest in this collection has generally focused on the 'waisted blades' (Golson 1971; Shutler and Kess 1969; Bulmer 1977), the presence of which has led to an inference of some antiquity for the industry (Golson 1971; Shutler and Kess 1969; White 1971, 1979). The fullest description of the collection is given by Bulmer (1977). However, some aspects of the collection have been underplayed, and this note draws attention to them.

As the original report indicated (Chowning and Goodale 1966:150) and Lampert's subsequent investigation (1966:3) stressed, the artefacts came mostly from quarry and working sites near streams, and many flakes and flaked pieces were noted in addition to those collected. Additionally, Chowning and Goodale say they collected 'fairly complete implements', though the criteria used are not specified. The Museum's collection is not therefore a representative sample of the total industry.

The Museum's collection is composed of chert, with one exception discussed below. The material is heavily weathered or patinated, but was clearly capable of fine flaking, and was not a tough rock. Inspection of the total collection seems to me to lead to four main morphological groupings, but these are internally quite variable and not always absolute in their own right. The groups are: side- (usually double-side-) notched pieces; heavy, alternately flaked cores; flakes; retouched pieces. This classification is much less elaborate than that presented by Bulmer (1977:44) who sees at least 12 classes in the same material. I could not see sufficiently distinctive criteria to make such divisions, and suggest that a smaller number of groups with some internal variability gives a more appropriate picture of the collection.

The side-notched pieces vary from 40 to 180 mm in length. They are often made of large, end-struck flakes, in which case the ventral surface is flat or has been lightly retouched to make it so. Dorsal surfaces are heavily flaked. Only some artefacts exhibit attempts at flattening the larger end, or at rounding it or squaring it off by flaking; on other tools the larger end is irregular and asymmetrical in shape and plan. Nor is symmetry in overall plan or in side view always present, as could be expected with chopping tools. Thickness varies greatly, some tools being nearly as thick as they are wide and with a diamond-shaped cross section, while others are

lenticular in cross section and quite thin. The combination of varying thicknesses and amounts of retouch means that several different kinds of flaking can be observed -- flat, invasive; alternate; step-flaked where the edge is steep.

The most regular feature of these tools is the presence of a pair of notches, nearly always flaked into either side of the piece, opposite each other and nearer to the narrower end. Some occur almost at the end of the tool, but it is not clear if these tools are broken. Occasional pieces exhibit only a single notch, this being flaked into the thinner side of an asymmetrically sectioned tool. The notches are variable in length and depth, but all have been flaked by alternate flaking and are smoothly concave in plan. The form of the smaller end of the tool is quite variable and is often symmetrical.

The other main distinguishable group consists of cores, usually alternately flaked. A few are flaked only from one direction and these resemble Australian 'horsehoofs' in form. Apart from these, no clear formal attributes were noted.

The collection also contains a few small (ca. 20 x 20 mm) flakes and some much larger but quite thin flakes (60 - 120 mm in length) with minor amounts of edge damage, apparently prehistoric in origin. A few 'scrapers' on large chunky flakes and small cores were also noted. These carry some step-flaking on one or more edges and are similar to tools found widely throughout Papua New Guinea (White 1969; Downie and White 1978).

The same collection also contains one classic tanged (waisted) blade (No. NB 1/2) which is made in a tough volcanic or metamorphic rock and is ground all over both faces. It is symmetrical in plan and also about the cutting edge plane. It is larger than all the other side-notched pieces in the collection.

The collection as a whole clearly derives from a flaked stone industrial tradition. It may be one that is widespread throughout eastern Melanesia, since very similar artefacts, in similar material, have been found in Bougainville (Nash and Mitchell 1973). The waisted tools, however, do not seem to me to be similar to flaked adzes from the southeast Solomons, which are larger and without clear notching or waisting (Ivens 1931; Harrison 1931). Nor are they similar, except in general shape, to 'waisted blades' from mainland New Guinea. Bulmer's analysis (1977:48-53) shows that similarly shaped implements from Kosipe and Yuku are generally larger, thinner and with a much higher proportion of symmetrical bevels than those from Passismanua. Assumptions about equivalences of function are thus probably premature. It therefore also seems unlikely that morphological features of the Passismanua implements can be used as indicators of high antiquity. The discovery of the industry in an archaeological context would now clearly be useful.

#### ACKNOWLEDGEMENTS

I thank the Papua New Guinea National Museum, and especially Dr Brian Egloff and Mr Resonga Kaiku, for allowing me to inspect this collection.

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