

MEASUREMENT OF FLAKES AND BLADES

Recent publications have already drawn attention to some of the different ways of measuring flints and calculating ratios. Whilst compiling the Glossary entry relating to measurement, a number of problems and a certain amount of confusion were encountered. These are itemized below by Gilliam Wilson. This is followed by some methodological notes by Alan Saville and a more philosophical note by M. Pitts. Attention is also drawn to John Burton's article "Making Sense of Waste Flakes: New Methods for Investigating the Technology and Economics Behind Chipped Stone Tools." Journal of Archaeological Science 1980, 7, 131-148, though this was received too late for consideration in this issue.

METHODS OF FLINT MEASUREMENT: A SUMMARY OF THE STATUS QUO

By Gillian Wilson

Length: Three methods appear in the literature

- (i) Maximum dimensions of the piece (e.g. (inferred) Clark et al. PPS 1960).
- (ii) Maximum dimensions along bulbar axis (e.g. Smith 1965- followed by others).
- (iii) Maximum dimension at right angles to the striking platform (e.g. Alexander and Ozanne PPS 1960).

Breadth: Maximum dimensions at right angles to length.

Thickness: Maximum thickness of piece from ventral to dorsal face.

Measurement ratios:

- (i) L:B (Alexander and Ozanne PPS 1960; Bradley, PPS 1970; Bohmers, Palaeohistoria V).
- (ii) B:L (Smith 1965; Wainwright 1968).

Definition of Flakes v. Blades:

Blades are defined as

- (i) L:B = 2:1 (Bradley 1970)
- (ii) L:B = 3:1 (Alexander and Ozanne 1960)
- (iii) L:B = 5:2 (Smith 1965; Wainwright 1968)

Cores: Cores are usually measured along arbitrary maximum dimensions. Preliminary results of recent research suggests that standardised system of measurement may be viable.

Editorial Note:

One thing not mentioned in the note is whether to take the measurement to the nearest 5 mm as Smith, I. F. (1965) or to give more exact measurements as in Alexander and Ozanne (1960).

Obviously a standard code of practise is to be preferred and it would be useful to receive comments about this, with a view to an article for a future newsletter as well as a summary for the Glossary.

ON THE MEASUREMENT OF STRUCK FLAKES AND FLAKE TOOLS

By Alan Saville, June 1980

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Attention has recently been drawn in the literature (Farley 1979; Pitts 1978) to some of the inadequacies of metrical approaches to the study of struck flakes and flake tools in British post-glacial assemblages. The problems have largely arisen because of (a) failure to explain in detail the nature and methodology of the measurements used, with (b) a consequent variability in the measurements given, and (c) confusing methods of presenting the metrical data. These points will become immediately apparent to any student of lithic analysis: for example compare the flake data from Arretton Down (Alexander and Ozanne 1960), the flake and scraper data from Windmill Hill (Smith 1965), and the scraper data from Hurst Fen (Clark *et al* 1960). It is equally true that there are many theoretical, descriptive, and typological problems which beset these analyses, but in this note the writer will concentrate on explaining the measurement methods currently used in his own studies of post-glacial assemblages (e.g. Saville forthcoming).

The basic measurements involved are length, breadth and thickness, and these are taken in exactly the same way for all struck flakes which retain their bulb of percussion and striking platform. Only completely intact pieces are measured. The length is the maximum length along the bulbar axis at right angles to the striking platform, and is obtained by placing the flake or flake tool against graph paper ruled in mm divisions. The striking platform is aligned with the horizontal axis, usually with the dorsal surface of the flake downwards, and the measurement read at the distal tip. If the flake is thick or irregularly shaped then a set square placed against the flake will facilitate the alignment and the reading of the measurement. The breadth measurement is obtained at the same time by reading off on the graph paper the maximum horizontal distance between the lateral extremities of the flake, at right angles to the length. This is best explained by reference to fig. 1 from which it can be seen that in effect the length and breadth measurements define a rectangle around the flake. The measurements are recorded to the nearest mm, thus the flake illustrated is 59 mm long, and 29 mm broad. The thickness of the flake is measured using a slide gauge, and is taken at the point of maximum thickness between the dorsal and ventral surfaces, in a dimension which is approximately perpendicular to the ventral surface (fig. 2). The measurement is recorded to the nearest mm, or to mm subdivisions if practicable.

When measuring a sample, the values are tabulated prior to subsequent analysis. Only the length and thickness values are presented as raw data, since these suffice to describe the size of the population. (Weight can be a useful further size value for implements, but is