

Beauly Sub-Station, Beauly, Highland

Archive Report: the lithic assemblage (4004161)

Introduction

A lithic assemblage of three pieces of chipped stone was recovered during the course of the excavations at Beauly Sub-Station, Beauly. Two of the artefacts are flint scrapers and the third is a bipolar flint flake. It is these artefacts recovered from either the top soil or surface which are the focus of this report.

Methodology

The methodology, type and attribute terminologies employed for the analysis of lithics from Beauly Sub-Station follows the format devised and adopted for the *Southern Hebrides Mesolithic Project* (Finlayson *et al.* 1996, 2000). This built upon the research design used for the analysis of the lithic assemblage from Kinloch, Rùm (Wickham-Jones 1990), which was itself derived from the terminologies of technological analysis put forward by Tixier *et al.* (1980); subsequently enhanced (Inizan *et al.* 1999). It also incorporates aspects of Madsen's (1992) classification scheme for primary technological attributes. This format lends itself to the incorporation of later prehistoric forms such as Neolithic and Bronze Age projectile points and certain types of scrapers. A glossary of terms may be found at Appendix 1.

The database for the typological and technological analysis of the lithics has been compiled using Access™ 2010. References to specific artefacts will cite the catalogue number followed by the small finds number.

Top soil

Flint core scraper: Catalogue number 084: small find 001

A short convex scraper fashioned from a flake platform core which was probably abandoned due to its size. The retouch to create the scraping edge is abrupt and scalar with edge damage.

Flint angled scraper: 085:002

A secondary flint flake fragment with pitted cortex was modified to create an angled scraper. The scalar retouch is semi-invasive, direct and semi-abrupt.

Surface

Flint flake: 086:021

The secondary, irregular flake with a diffuse bulb of percussion was struck from a cortical platform using a bipolar reduction strategy.

Discussion and summary

The recovery locations of the three finds from Beaully Sub-Station are due to unknown taphonomic factors.

Applying a provenance based on the morphology of scrapers as casual finds without further corroborative evidence is generally not sound practice. Scrapers are common artefacts in the assemblages of later prehistory (cf. Finlay *et al.* 2000, 583). 'Thumbnail' scrapers and rounded scrapers with invasive retouch are typically Bronze Age (Edmonds 1995, 159-160; Hardy and Wickham-Jones 2007). The situation is more complicated for other forms. Angled and sub-angled scrapers are common in Mesolithic assemblages, e.g. they have the highest incidence of occurrence at Kinloch, Rùm (Wickham-Jones and McCartan 1990, 91). These together with convex and straight edge may, however, be found in Neolithic assemblages, with 'horseshoe' and 'disc-like' forms with invasive retouch indicative of the Late Neolithic (Edmonds 1995, 104-105).

The angled scraper (085:002) with semi-invasive retouch is the only lithic that may tentatively be ascribed to an archaeological period, i.e. the Bronze Age.

Dr Dene Wright

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Appendix 1: Glossary of Terms¹

Introduction

The definitions of terms is a composite from a number of different sources (i.e. Finlayson *et al.* 2000; Inizan *et al.* 1999; Wickham-Jones 1990, 2004). If other sources are used then the relevant section is referenced accordingly.

Glossary

Anvil: These coarse stone artefacts are recognised by distinctive wear patterns (Clarke 1990, Illustration 78). They may have also used as percussors (Finlayson *et al.* 2000, 72).

Anvil support: Refers to those occasions where the platform core is placed on an anvil for support to facilitate blank removals.

Blade: A blade is arbitrarily defined as an artefact which is twice as long as it is wide usually with straight parallel sides. Such examples may sometimes be referred to as 'true blades' to distinguish them (Wickham-Jones 2004, 69).

Blade-like flakes: The blade fits the metric parameters to be categorised as such, however, the morphology of the piece is more in keeping with that of flakes, e.g. they may often be irregular and do not have parallel sides.

Blanks: Collective term for blades and flakes (Wickham-Jones 2004, 69).

Bulb of percussion: This attribute signifies where the core was struck to detach the blank. A pronounced bulb may indicate the use of a hard hammer, and a diffuse bulb invariably indicates the use of a softer hammer (Wickham -Jones 2004, 69). Bulb and lip and pronounced lips are associated with the use of soft hammer. Lip attributes may suggest the use of an antler percussor (Madsen 1992, 104-105). Experimental studies confirm this, although such studies are usually undertaken using flint of exceptional quality (cf. Ohnuma and Bergman 1982). Bulb attributes will vary with different raw materials (cf. Costa *et al.* 2005).

Chunk: These artefacts are generally a by-product, and do not have a platform or ventral face. Some chunks may have been used, e.g. *pièces esquillées* (Wickham-Jones 2004, 69).

Cores: The core is the artefact from which blades and flakes are struck.

Bipolar/bipolar cores: Indicates that cores are worked utilising an anvil. They may present with removals from both the proximal and distal ends due to the strike of

¹ Wright 2014

the hammerstone and the shock reverberation from the anvil, and there may be evidence of severe crushing damage, percussion ridges from repeated strikes, step and hinge terminations and the presence of cortex (Hayden 1991, 3).

Platform/platform cores: The term refers to the utilisation of a plain or simple platform which is struck to detach blades and flakes. These cores can be predominantly for either blade or flake production. A distinction that is ascertained by determining the most common form of blank removed. Some cores will be classified as non-specific platform referring to the removal of blades and flakes in broadly equal frequencies. The remaining category is for cores described as amorphous which represent irregular knapping sequences (Wickham-Jones 2004, 70; Finlayson *et al.* 2000, Table 2.5.3).

Core rejuvenation strategies: Knapping accidents will occur resulting in negative step and/or hinge terminations on the flaking surface of the core, which may be removed by a core rejuvenation blank to leave a clear flaking surface for future removals. Accumulations of material at the distal end of the core can be removed by the blank with a plunging termination. Strategies are also encountered when part of the platform surface is removed by a side blow (after Inizan *et al.* 1999, 153).

Cortex: Refers to the original surface of the nodule or pebble, which may be fresh, rolled, abraded, pitted or battered. Cortex may be either smooth/chalky or smooth/hard. The cortical attribute may indicate the possible source of the raw material (Wickham-Jones 2004, 69).

Dorsal and ventral faces of blanks: The upper face or dorsal is the flaking surface of the core prior to the removal of the blank. The lower face or ventral represents the fracture face of the blank having been detached from the core. The ventral and the core will conjoin.

Edge damage: Edge damage may result from the reduction strategy, use and other post-depositional factors such as ploughing, trampling, natural abrasion, and other unknown taphonomic processes (Finlayson *et al.* 2000, Table 2.5.1; Mallouf 1982; McBrearty *et al.* 1998; Neilsen 1991).

Flake: A classification of a blank. Metric variants distinguish flakes from blades. Flakes are also generally less regular than blades. They may be either modified or unmodified for use (Wickham-Jones 2004, 69).

Hammerstone: Hammerstones vary in hardness which may be indicated by the bulb of percussion on blanks, and the negative bulb of percussion visible on cores (Wickham-Jones 2004, 69-70).

Languette: Represents a knapping error creating tongue-like distal termination. They are associated with a soft hammer (Inizan 1999 *et al.*, 144).

Original pebble/nodule size: A medium sized pebble has been categorised as fist-sized. An approximate term based in the size of pebbles recorded on Islay (Finlayson *et al.* 2000, Table 2.5.2).

Patination: Discolouration of original fresh colour artefacts. Variations in patination may arise because of the nature of the soil matrix from which they were recovered. It may also indicate ground disturbance (Inizan *et al.* 1999, 147; Wickham-Jones 2004, 69).

Platform type: There are four types of platform referred to (Finlayson *et al.* 2000, Table 2.5.4).

Cortical: The entire blank platform is covered in cortex.

Simple/plain: Represented by a simple flaked surface.

Complex/faceted: Multiple flake removals define this form of platform. Examples of this strategy during the Mesolithic period are likely to be accidental.

Crushed: A collapsed platform associated with bipolar reduction.

Primary material: Cortex covers the dorsal surface of the artefact (Wickham-Jones 2004, 70).

Primary technology: Refers to the procurement of raw material, preparation of cores and debitage products, such as blades, flakes, chunks and small fraction debitage (Wickham -Jones 2004, 70).

Reduction strategy: Refers to the use of either bipolar or platform reduction strategies (Wickham-Jones 2004, 71).

Regular/irregular blanks: Regularity is determined by a blank with a straight edge <10mm. Blanks with a straight edge of <10mm are classified as irregular (Wickham-Jones 2004a, 71).

Remaining platform size: This schema is taken from Madsen (1992, Figure 70).

Point: Where remaining platform represents <33.33% of blank width.

Small/narrow: Remaining platform width is c.33.33% of blank and length is <33.33% and >66.67%.

Broad/narrow: Remaining platform length is >66.67% of blank.

Large: The width and length of the remaining platform is >66.67%.

Retouch, angle of: There are four forms of retouch referred to in this study (cf. Inizan *et al.* 1999, 129-130; Woodman *et al.* 2006, 95). The first three categories are focused on the edge of the blank.

Abrupt: Marginally less than 90°.

Enclume: Use of anvil with angle at 90°.

Semi-abrupt: angle at approximately 45°.

Semi-invasive: Similar to semi-abrupt, although retouch extends across the surface of the blank.

Retouch, extent of: The extent of removals are classified as either short, semi-invasive, invasive or covering (Figure 6).

Retouch, position of: Direct retouch is visible on the dorsal face, conversely inverse retouch is seen on the ventral face. Alternate is where a blank has been modified by both direct and inverse retouch.

Secondary material: Artefact with cortex visible on the dorsal surface (Wickham-Jones 2004, 71).

Secondary technology: Refers to the modification of blanks into tools (Wickham-Jones 2004, 71).

Scrapers: Scrapers present with a blunt working edge (cf. Finlayson *et al.* 2000, Table 2.5.8).

Short convex: Convex scraping edge <10mm thick.

Short convex flared: As for short convex but where artefact narrows from scraping edge.

Short thick convex: As for short convex with scraping edge <10mm.

Short thick convex flared: As for short thick convex but flared.

Long convex: Scraper which is twice as long as it is wide with a scraping edge of <10mm.

Long convex flared: As for long convex but flared.

Long thick convex flared: Scraper which is twice as long as it is wide with a scraping edge of >10mm.

Disc: Continuous retouch to circumference of scraper.

Concave: Scraper with concave scraping edge.

Denticulate: Scraping edge is denticulated or presents with multiple notches.

Angled: A scraper with more than one scraping edge which meets to form an angled corner(s).

Sub-angled: As for angled but with rounded corners.

Straight: The edge is neither convex nor concave in plan.

Wide convex: A side scraper with retouch to longest axis.

Irregular: Scrapers which do not into the other classifications.

Fragment: Refers to a scraper fragment.

Siret fracture: Refers to a knapping error where the width of the blank is split. This may or not extend the full length of the blank (Inizan *et al.* 1999, 156).

Small fraction debitage: Debitage where metric variants are all <10mm (Finlayson *et al.* 2000, Table 2.5.5).

Tertiary material: Artefact without any trace of the original cortical surface present (Wickham-Jones 2004, 70).

Tool form types: General term for all tool forms. Apart from microliths and scrapers other tool forms are set out below (cf. Finlayson *et al.* 2000, Table 2.5.1).

Abruptly backed: Any artefact which has abrupt retouch to blunt edge.

Thin-backed: Refers to any artefact with fine retouch to blunt edge.

Point: Two or more convergent edges with retouch.

Denticulate: Edge is formed as a series of notches. Each notch may be as a result of single or multiple removals.

Thick denticulate: As for denticulate but where modified edge is >10mm.

Notch: Artefact with non-contiguous notch attributes. The notch may be as a result of single or multiple removals.

Miscellaneous retouch: Artefact with retouch that do not fit into any of the other categories.

Awl: Generally awls are fashioned on thick blanks and comprise of abrupt retouch on two sides to form point.

Trimming: Relates to the abrasion of an unretouched edge producing semi-invasive scalar removals. It is associated with the shaping of artefacts.