

The lost lithics of Booby's Bay: A Mesolithic assemblage from Cornwall

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Introduction

The Trevoze Head and Constantine Bay area, including Booby's Bay, appears to have been popular with Mesolithic people. It has also proved popular with flint-collectors since the early nineteenth century. As a result, lithic collections have become dispersed throughout the country, both in museums and in private collections (Wymer 1977), and recording has been unsystematic. One of the collections of Mesolithic lithic scatters from this area was brought to the Cambridge University Museum of Archaeology and Anthropology (CUMAA) in 1929 by A. C. Haddon. Clark, in *The Mesolithic Age in Britain* describes this collection as being "of especial importance" (1932: 43) as it includes the complete industry.

The Mesolithic is generally considered to have been the first major period of human occupation in Cornwall, although there is possibly some evidence of intermittent visits by humans at the end of the Palaeolithic (Berridge and Roberts 1986). As Jacobi (1973) notes, except for at rare sites where ecological and chronological data has been preserved, our main sources of data for the Mesolithic are the lithic industries themselves. Therefore collections such as this are vital for our understanding of this important period. This project aims to provide a detailed analysis of a sample of the CUMAA collection, working towards a re-contextualisation of the assemblages in order to gain a deeper understanding of the Mesolithic of Cornwall.

The site

Booby's Bay is the northern section of Constantine Bay, in the parish of St. Merryn, Cornwall. It forms part of the lowland isthmus which connects the raised cliff platform of Trevoze Head with the mainland. The geology of the area is predominantly Devonian slate (Norman 1977). Prehistoric artefacts have been found throughout this coastal area, beneath deposits of wind-blown sand (Taylor 2003). Johnson and David (1982: 85) report that the Mesolithic lithics at the nearby site of TV1 at Trevoze Head were found "at the base of the soil profile, resting on frost-shattered and soliflucted material, a position also suggestive of an early Post-Glacial status", and it is likely that the CUMAA collection originated in a similar stratigraphic position.

Figure 1 shows the location of Trevoze Head (Booby's Bay being slightly to the south of Trevoze Head) within southwest Britain. It also illustrates the suggested coastline at c. 8,300 BC in the early Mesolithic. Sea levels began to rise following the end of the last glaciation, as global temperatures rose and the ice caps melted. Although Booby's Bay is a coastal site today, this was only true at the very end of the Mesolithic, and the earlier the date of the site the further it would have been from the sea (Johnson and David 1982).

This coastal area appears to have been heavily exploited during the Mesolithic, with multiple lithic scatters found in the area. There is some confusion over the exact location of the find-spot of the CUMAA collection. Many of the lithics have 'Booby's Bay' or 'BB' written on them in pencil (the inclusion of the initials 'ACH' on one implying that these notes were written by A. C. Haddon himself), but a card label in a box of cores and unworked flakes

accessioned with the lithics analysed here conflates Booby's Bay and Constantine Bay: "Collections made by Dr. Haddon from Constantine Bay, nr. Padstow (=Booby [sic] Bay)". Johnson and David (1982) argue that this collection is actually from their nearby site TV1 (see Figure 2), and perhaps also includes artefacts from further along the coast towards the cliff top. Therefore it is unfortunately not possible to locate the exact find spot of the lithics.

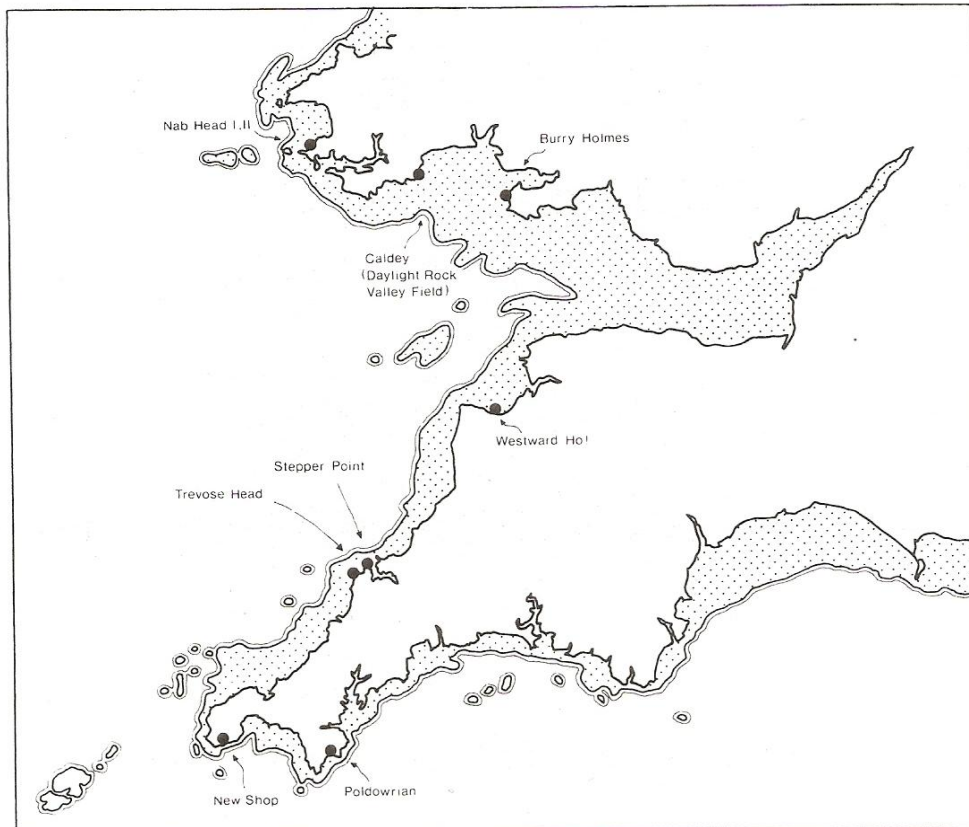
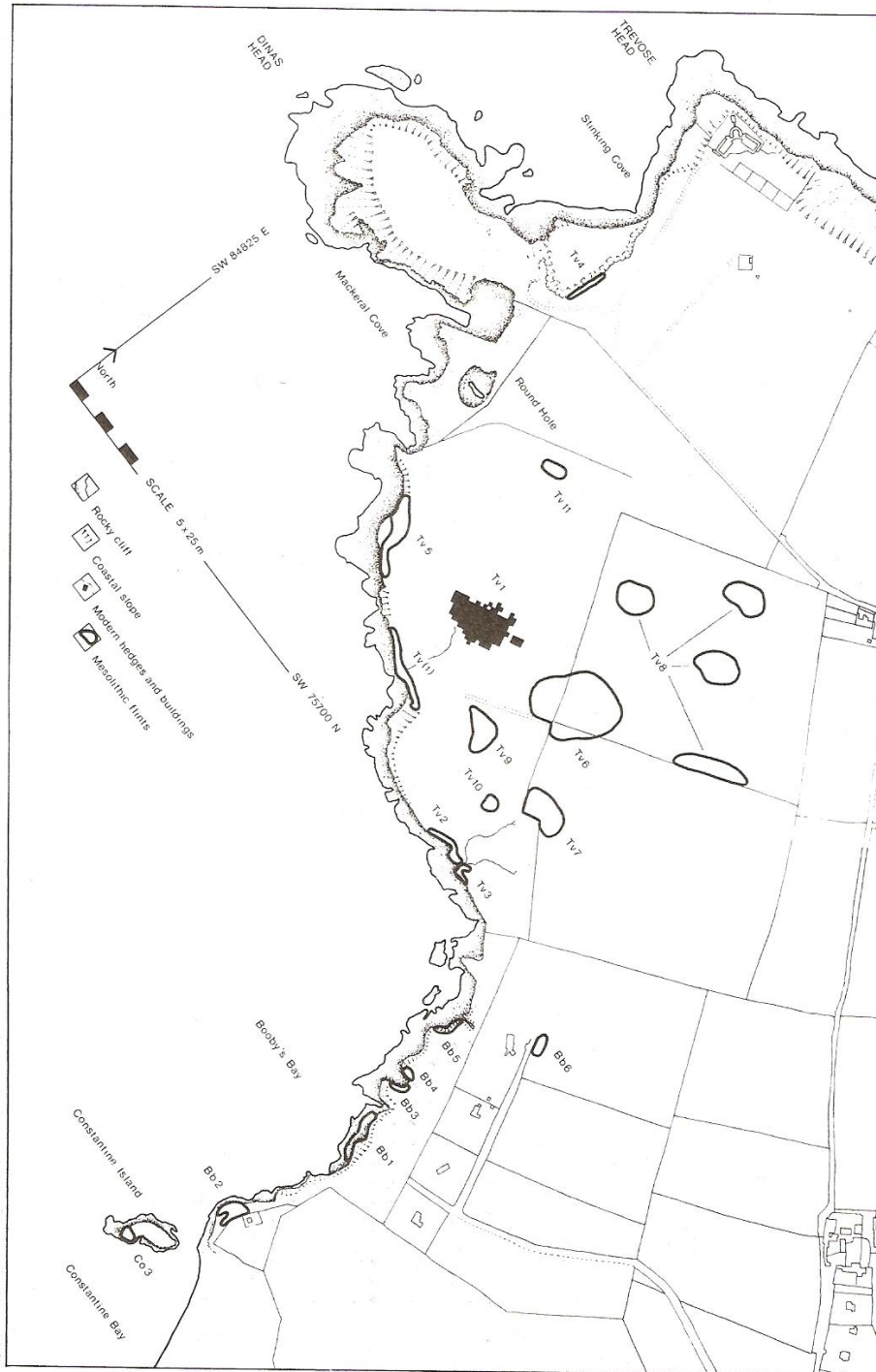


Figure 1: Map of Southwest Britain showing Trevoze Head and suggested coastline at c. 8,300 BC. From Johnson and David 1982

Problems

There are a number of potential issues with the analysis of the Booby's Bay lithics at the CUMAA. Firstly, as previously noted, provenance is made difficult by the "imprecise use of site names" (Johnson and David 1982: 67); Haddon appears to have conflated the sites of Booby's Bay and Constantine Bay and did not state which spot within Booby's Bay the collection is from. The lithics in question may even have come from further up the coast at Trevoze Head. Even if it were possible to match the collection with a find-spot, the exact locations of these previous find-spots are unknown. Furthermore, it appears that the lithics may have been found at different times within the early twentieth century, as per the pencil notes on some of their surfaces – 1910, 1915, 1916 and 1918. This may have been due to Haddon himself collecting them at different times, or amateur flint-collectors wandering around the area and later selling or passing on their finds. Therefore it is likely that the lithics in this collection were not all collected at the same time and place. Indeed, Berridge and Roberts (1986) state that combinations of artefacts drawn from wide areas, and a mixing of material from different periods, occur in many of the collections from this area.



**Figure 2: Map of the Trevoze Head, Constantine Bay and Booby's Bay area.
From Johnson and David 1982**

Additionally, such surface sites often prove to be multi-period (Johnson and David 1982). This is further complicated by the assertion that Mesolithic people were picking up and re-working lithics from the Palaeolithic (Whitehead 1973), possibly as a result of raw material shortages (Johnson and David 1982). Thomas (1958) adds that at some sites in the area, for example Hudder Field at Gwithian, Neolithic industries were made on Mesolithic tools and waste flakes. Overall, we cannot be sure of the exact location of the find-spot or -spots – which may have been further influenced by coastal action – or whether these artefacts represent a coherent assemblage.

There is no stratigraphic data for this lithic scatter, precluding the drawing of conclusions about the spatial distribution of artefacts within the site, as well as our ability to place the artefacts into chronological context. Additionally, there is no burnt stone for thermoluminescence dating and little organic material due to poor preservation in the acidic soils (Berridge and Roberts 1986). Whitehead discusses the difficulties in dating the collection from nearby Booby's Point:

All the cores and flakes were lying directly on bedrock slate, so that there are no preceding or succeeding strata which allow the floor to be dated by geologic principle. There is nothing preserved which might enable radiometric or archaeobotanic investigation to be undertaken. (1973: 14)

Difficulties in dating and the lack of organic preservation make it difficult to place the site into an environmental context. However, on the basis of palaeoenvironmental data from other sites we can be relatively confident that the inland area was woodland at the time (Whitehead 1973). Typological dating is made more problematic by Thomas' (1958) assertion that "the Mesolithic culture found in Cornwall is extremely homogenous". For example, there has been confusion over what constitutes 'true Mesolithic' within another collection of lithics from Booby's Bay by Whitehead, which he originally believed to be Neolithic (Whitehead 1973) but later, on the advice of Mrs. Susann Palmer, decided were Mesolithic (Whitehead 1975). Additionally, at a nearby site, Norman (1977: 8) felt it "unwise to assign the Constantine Island assemblage to any particular cultural stage until firm dating evidence becomes available". Nevertheless, Clark (1932) and Jacobi (1973) argue that it is at least possible to divide the Mesolithic collections in Cornwall into Early and Late on typological grounds, including a consideration of the absence or presence of geometric microliths.

A synthetic approach is precluded within the scope of this project by the dispersal of collections across the country, with Mesolithic artefacts from St. Merryn stored in museums including Cambridge, Truro, Plymouth, Oxford, Manchester and Birmingham (Wymer 1977), as well as in private collections. Furthermore, contextual information is unsystematically and patchily recorded and frequently unpublished, as many Mesolithic artefacts in this area were discovered as surface-finds by amateur flint-collectors rather than as part of archaeological excavations.

The Cambridge collection

The Mesolithic collection from Booby's Bay was brought to the CUMAA by A. C. Haddon, at that time Honorary Keeper of the New Guinea Collection, in 1929¹. These were given the accession numbers 1929.70 and 1929.71. The former is the subject of analysis here. At the same time, Haddon also delivered a collection of Mesolithic artefacts from the nearby site of Trevoze Farm, accessioned under 1929.72.

The 1929.70 collection consists of four boxes of unworked shells, two boxes of lithic cores and unworked flakes, a tobacco tin containing sediment from Constantine Island, and a box

¹ University of Cambridge, Annual Report of the Faculty Board of Archaeology and Anthropology, 22 April 1930

containing two bags of worked lithics. One bag contains 11 microliths ranging in length from 11-34mm, and the other eight retouched lithics ranging from 29-65mm. A sample from both of these bags will be illustrated and analysed in further detail.

Lithic analysis

Artefact 1

This blade is made on a fine-grained stone with heavy patination making it a light grey colour. It measures 65mm long, 21mm wide and 11mm thick. There is steep semi-abrupt retouch along all edges, and the proximal end has been retouched into a rounded shape. This piece was therefore probably used as an end-scraper, either at the proximal end or both ends – probably the latter, as there is wear on both. Several attempts have been made at thinning the piece; the bulb of percussion has been removed, and two removals have been made from the distal end on the ventral surface, the first resulting in a feather termination and an overlying second removal resulting in a step termination – presumably a miscalculation which ended prematurely. There is also a long removal on the distal surface from the proximal end, resulting in a hinge termination, although the striking platform is unclear as there is further retouch at this end. The ventral surface contains pencil notes reading ‘ACH 1915, Booby Bay, N. Cornwall’, implying that Haddon recovered it from Booby’s Bay in 1915.

Artefact 2

This blade is made on a fine-grained white stone and measures 39 x 13 x 4 mm. There is semi-abrupt marginal retouch along one side of the distal end, shaping the blade to a point. There is also a hint of a possible notch at this end, although this may be unintentional. This piece may have been used as a piercer or borer. There is even more marginal semi-abrupt retouch at the proximal end, possibly to thin and round the piece, potentially to facilitate hafting. Pencil notes on the ventral surface read ‘BB 1918’.

Artefact 3

This piece is a saw or microdenticulate made on a blade. It is made from a fine-grained stone with white patination, and measures 40 x 15 x 4 mm. Fine, marginal, inverse, denticulate retouch extends along one lateral edge of the ventral side. The piece has been truncated, presumably at the proximal end, based on thinning towards the distal end and the lack of a bulb of percussion. The thinness of this piece and truncation suggests that it may have been hafted, possibly within a composite sawing tool made from a long wooden haft and several hafted denticulates mounted in series to provide a serrated edge. Microdenticulates may have been used for processing plant fibres or cutting meat, and are most often found in the Early Mesolithic (Berridge and Roberts 1986).

Artefact 4

This denticulated piece has coarser inverse denticulate retouch than Artefact 3, covering about two thirds of one lateral edge of the ventral side. It is made on a mottled grey fine-grained stone, with white-light grey patination, similar to Artefact 1. Despite a few possible removals on the distal surface parallel to the denticulated edge, the piece does not appear to have been made thin enough to be hafted successfully, particularly given its slightly twisted profile. It was therefore more likely hand-held. The piece has been truncated at the proximal end, resulting in a plunging termination. It measures 46 x 19 x 8 mm.

Artefact 5

This awl is made on a similar light-grey patinated fine-grained stone to Artefacts 1 and 4, and possibly also 3. It has abrupt parallel retouch along both sides of the distal portion of the dorsal side. The proximal end is cortex, implying that this piece was originally a long primary flake that was picked up for its already-pointed quality and then retouched to emphasise the point for utilisation as a piercer or borer. It measures 29 x 13 x 7 mm. Although the number 29.70 has been inked onto it, this piece does not appear to match any of the artefact descriptions for those accessioned under 1929.70. However, it does match that of 1929.71.7 – a ‘rough awl’. These two accession numbers (29.70 and 29.71) are recorded as being from the same site, and may have become mixed.

Artefact 6

This lanceolate point is made on a fine-grained white stone and measures 34 x 8 x 4 mm. There is abrupt marginal retouch along the distal half of both lateral edges and along almost all of the proximal half of the right-hand lateral edge on the dorsal side. This acts to produce a point at the distal end and a narrow thin base at the proximal end. This piece could have been used as an awl, piercer or borer. However, the narrowing and thinning of the base implies that this piece was hafted; Sieveking (1968) proposes that when hafted singly such microliths formed the barbs and points of arrows, and probably also fish-hooks.

Artefact 7

This microlith is made on the same light-grey patinated fine-grained stone that characterises this assemblage, and measures 24 x 7 x 4 mm. It is convexly backed with marginal abrupt retouch along the entirety of one lateral edge of the dorsal face. Particular effort appears to have been taken in the more invasive retouch towards the proximal end of this edge, in order to narrow the base of the piece, presumably to facilitate hafting. This piece may therefore have been hafted as a projectile point, like several other microliths in this collection (e.g. Artefacts 6, 8 and 9). The convex backed edge continuing down the whole of one lateral edge and around the base typifies this piece as one of Clark’s (1932) ‘pen-knife points’.

Artefact 8

This piece is an example of one of the obliquely backed blade forms in this assemblage. It has abrupt backing along one edge at an oblique angle to the axis of the piece, forming a point at the distal end. As such, it was probably hafted as a projectile point or armature. This was presumably further facilitated by the already narrow proximal end, which apparently did not require further retouch. This is the only relatively coarse-grained piece in the assemblage, made from a lightly pitted yellow-white stone. Petroglyphic analysis would be needed in order to source this stone, to discern whether it was just another type of beach pebble or if a more complex sourcing of the raw material was involved, potentially involving trade and exchange. This piece measures 22 x 8 x 3 mm.

Artefact 9

This piece ostensibly appears to be a backed point, with abrupt parallel backing along one lateral edge. However, it has been truncated at the proximal end, and the differences in colour between the centre (light grey) and the edge (white) of the snapped end reveals that the piece gained a white patina over the period following its deposition, and was broken more recently (Figure



Figure 3: Artefact 9

3). Therefore this piece may actually have been manufactured as a 'pen-knife point' (Clark, 1932), with the retouched edge continuing around the (now-removed) base in a convex shape, or, more likely, an obliquely backed blade with the un-retouched proximal section of the lateral edge now missing. It measures 18 x 8 x 3 mm.

Artefact 10

This piece is made from the same light grey patinated fine-grained material as many of the other microliths in this assemblage, and measures 24 x 6 x 2 mm. It is an obliquely backed microlith, made on a small blade, with parallel abrupt retouch used for the backing. It was probably hafted as a point or armature. The tip of the distal end has been snapped off. However, unlike Artefact 9, the truncated edge has the same patina as the rest of the piece, implying that it was broken before the deposition of the piece – or perhaps even thrown away as a result of the breakage.

Artefact 11

This obliquely backed blade is made on the same material as Artefact 10 and several of the other microliths in the assemblage, and measures 20 x 10 x 3 mm. It has the same blunting retouch typical of such pieces. However, this piece is backed on the right hand side, which is less common than those backed on the left. This is one of only two obliquely backed blades blunted from this direction in the collection (the other is not illustrated). This piece was truncated at the proximal end prior to or contemporaneously with deposition, as the patination is the same on this edge as on the rest of the artefact's surface. The date '1916' is pencilled on the ventral surface.

Artefact 12

This piece is a textbook example of a microburin, produced as the waste-product from the production of a geometric microlith, by first working a notch into a blade and then snapping off the end piece (Sieveking 1968). Such pieces may have been utilised as piercers or borers. Microburins are the type fossil of the Tardeonoisian, but are also found elsewhere (ibid). Abrupt sub-parallel retouch is found in the notched section of this piece. It is made from the same fine-grained white stone as Artefact 6. The bulb of percussion has been removed, but so shallowly as to suggest that it may have been accidental, as a result of knocking against other stones. Pencil notes on the artefact read 'BB 1918' on the ventral surface and 'Burin typical' on the dorsal. It measures 28 x 11 x 4 mm.

Discussion

Although it is not possible to date the assemblage exactly, it can be dated on typological grounds to the Early Mesolithic, which Jacobi (1973) and Johnson and David (1982) state to be prior to c. 6500 BC. This is on the grounds that this assemblage is characterised by simpler non-geometric microliths, obliquely-blunted blade forms and points with convex blunting along one edge. Late Mesolithic industries contain more geometric microlith forms, including narrow blades with straight retouch, scalene triangles, rhomboids, rectangles and micro-crescents (Jacobi 1973). A Late Mesolithic assemblage is represented in the Relph collection from the nearby area of Polzeath (illustrated in Clark 1932: 159).

There is some disagreement within the literature concerning the type of stone used for the Mesolithic lithics from Booby's Bay. Clark (1932) refers to it as flint, but Whitehead (1973: 15) asserts that "the rock is extremely like flint, with a very smooth fracture, but is a dark grey chert with broad colour mottling, eventually developing a white patina". Johnson and David (1982: 70) claim that "the raw material is good quality beach-pebble flint now mostly patinated white or bluey-grey. A very few pieces are cherty". Regardless, the source of the raw lithic materials appears to be small local beach pebbles (Clark 1932, Norman 1977). Berridge and Roberts (1986) state that most Cornish Mesolithic flint and chert assemblages are from the same beach pebbles found on the coastline today, probably from the offshore Haig Frais Cretaceous chalk deposits. Similarly, Thomas (1958: 10) argues that "the source of flint in all periods in Cornish archaeology seems to have been the nearest beach, nor is there any need... to postulate import of the raw material". Unfortunately, Whitehead (1973) reports that it has not proved possible to provenance these rocks, although this collection might benefit from more recent petrographic analysis, particularly with regards to the unusual course-grained material used to create Artefact 8. Johnson and David (1982) warn, however, that past sources of raw materials may have since been submerged by rising sea levels.

Overall, the Trevoze Head, Constantine Bay and Booby's Bay area appears to have been an important location during the Mesolithic, from which both marine and land resources could be exploited (Johnson and David 1982). Johnson and David argue for Trevoze Head that "the tool kit appears standard for this type of mixed site. Most of the tools are multi-purpose and can be used for a wide variety of hunting and gathering" (ibid: 94). Johnson and David's lithics from Trevoze Head have marked similarities with those in the Haddon collection, particularly the obliquely backed microlithic blades and microburins (ibid: Figure 3, numbers 1-39). These sites may therefore have been used by the same groups. Thomas (1958) argues that the distribution of Mesolithic sites in Cornwall is largely coastal, often split into small groups, which he suggests might be suggestive of social organisation based on food-gathering territories. Using this model, perhaps the Trevoze Head and Booby's Bay sites might be part of the same social or cultural group.

However, the confusion over the find-spot of these lithics (Booby's Bay or Constantine Bay?), plus the fact that it is a scatter rather than a stratified site and may have been influenced by coastal action, combined with the variety of dates on the lithics and the discrepancies between these dates (1910-1918) and the date that Haddon brought them to Cambridge (1929), suggests that this is a collection of lithics from various sites along the coast, recovered over perhaps a decade. This variation in both time and space implies that the artefacts were not necessarily made by the same people at the same time, which makes contextualisation more problematic. Nevertheless, these lithics provide valuable evidence from an important period in the prehistory of Cornwall, and indeed of Britain. Further research aimed towards producing a synthesis of the lithics from this area which have been distributed across the country is much needed.

Acknowledgements

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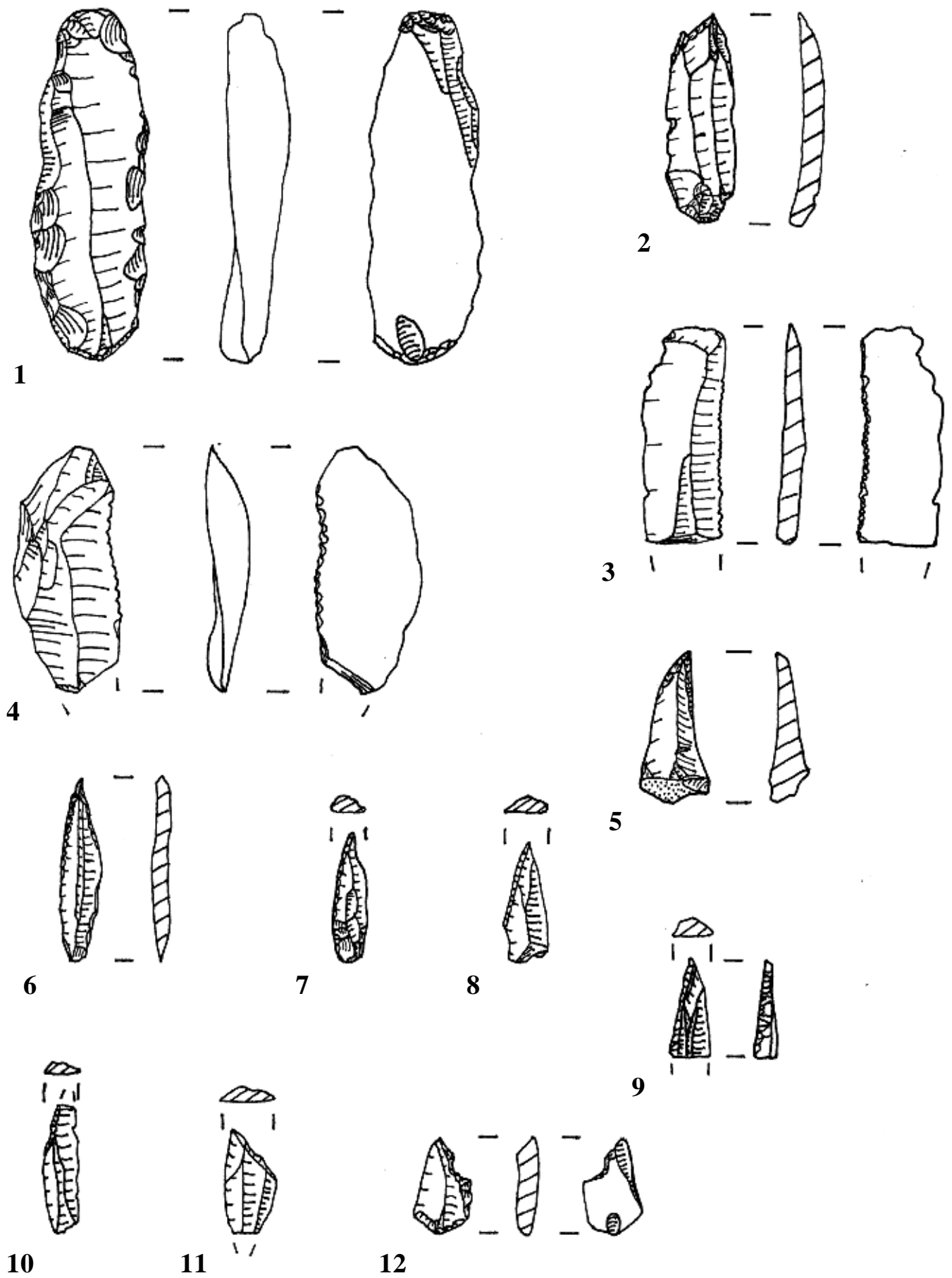
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Appendix: Lithic illustrations



Scale 1:1