

## I.

SOME SCOTTISH CORE-TOOLS AND GROUND-FLAKED  
IMPLEMENTS OF STONE. BY A. D. LACAILLE, F.S.A.Scot.

## CORE-TOOLS.

In 1935 the writer laid before the Society a communication on some antiquities in the parish of Luss, Dumbartonshire. Reference was made to a sculptured rock situated in the lower reaches of Glen Finlas,  $\frac{1}{4}$  mile south of Shegartan Farm and 3 furlongs north-west of Rossdhu mid-lodge.<sup>1</sup> Near this rock, lying approximately on the 150-ft. contour, in the ploughed field to the north, north-west, and west, were found flakes, chips, and a bifacially worked leaf-shaped arrow-head of quartz, the last now preserved in the National Museum (fig. 1, No. 1). Surmising from these discoveries, which were made incidentally after recording operations, that it was likely more relics might be found here, the field was searched on several later occasions with the result that enough artifacts have been collected to show that an industry had been practised in the vicinity. In addition to worked quartzes, which include scrapers, the surface yielded specimens manufactured in several other native rocks, such as a narrow ground chisel of diorite (fig. 1, No. 2), a small flat ground axe-head of schist (fig. 1, No. 3), flakes of diorite, epidiorite, and lamprophyre. The fracture-features of all these materials offer scope for special study, but for the purpose of this paper it suffices to draw attention to two tools made in hyaline quartz of rather indifferent quality.<sup>2</sup> The implements are types so far unrecorded in Scotland, but they may be compared to forms recognized by the author in collections from the Tweed valley. Not only so, but the Loch Lomondside specimens bear a striking likeness to certain tools occurring in Mesolithic, Neolithic, and even later contexts in some parts of the Continent and south-eastern England.

The two artifacts from Luss consist of short, thick flaked axe-like implements, almost identical in size and appearance. The resemblance between them is enhanced by the character of their cutting-edge, which is that of the typical tranchet-axe. In one specimen (fig. 1, No. 4), evidently fashioned in somewhat more tractable rock than its companion, the essential feature is well marked. There is no doubt that in the second instance (fig. 1, No. 5) the craftsman intended that the transverse blow should remove a larger flake at the base than the recalcitrant quartz allowed.

<sup>1</sup> *Proc. Soc. Ant. Scot.*, vol. lxix. pp. 416-18.

<sup>2</sup> Technical features of this industry were discussed in my "Aspects of intentional fracture . . .," communicated to the Glasgow Archaeological Society on 19th December 1939, and to appear in the forthcoming volume of its *Transactions*.

Consequently, to achieve a perfectly efficient working-edge the end was treated by removing small squills. This method was also followed in the further trimming of the opposite face, and evidence of similar treatment appears on the accompanying artifact. Even in the more typical example (fig. 1, No. 4) the rock did not prove entirely responsive to primary flaking, as a pronounced lateral protuberance testifies.

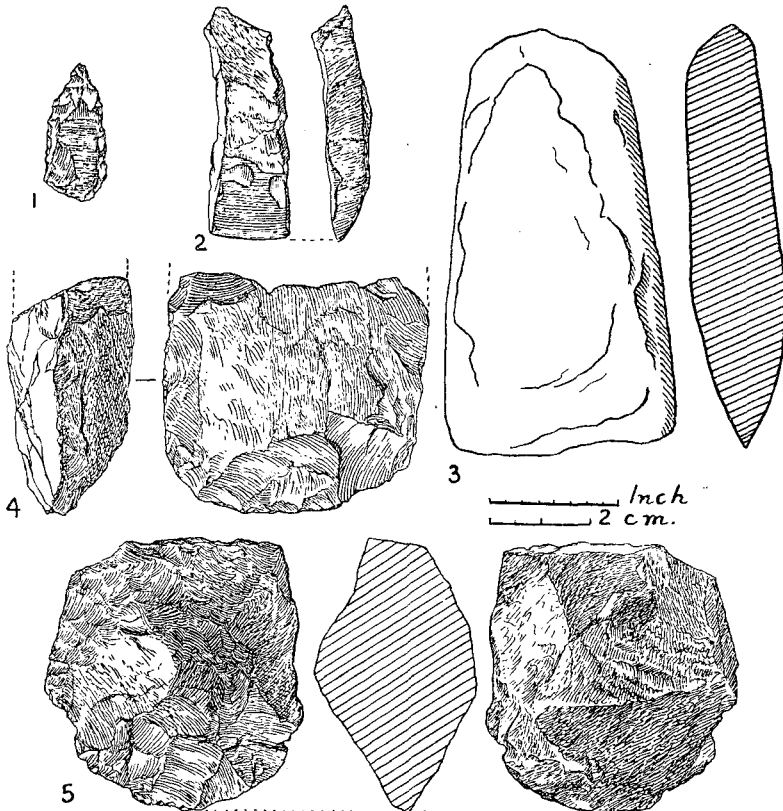


Fig. 1. Representative specimens of stone industry from Luss, Dumbartonshire.

Considering that these implements are manufactured in quartz, it is remarkable to find they may be referred to an important category of tools which were in vogue from Mesolithic times in Baltic lands, parts of Belgium, northern France, and south-eastern England. That the type long enjoyed favour is proved by innumerable French and English surface-finds.

So far as I know, core-axes have not been noted from the mainland territory north of County Durham (apart from specimens reported along the Solway Firth),<sup>1</sup> and for records nearer home one has to cross to Ireland.

<sup>1</sup> *Mem. Geological Survey of Great Britain: Carlisle, Longtown, and Silloth District, 1926, p. 79.*

The specimens described and other Scottish ones to be mentioned, if not large and strictly typical—probably due to the lack of suitable raw material—may reasonably be regarded as having some kinship with well-known implements which have their origin in the Forest Cultures. That in their Maglemose stage these made more than a mere superficial impression on Scotland is manifest in a number of bone artifacts, among which may be cited the very significant barbed point of deer-antler recently discovered at Shewalton.<sup>1</sup> The importance of this find can be appreciated when other relics of similar character from the West of Scotland are considered. Yet, the value of this point would be immeasurably enhanced were it possible to associate with it stone implements similar in facies to those of Clark's Period II Baltic culture.<sup>2</sup>

In the Luss stone tools we can at the moment only see a survival of the tradition into what, from artifact and other evidence, one assumes to be a local expression of Bronze Age craftsmanship. Nevertheless, these tranchets indicate that the Baltic culture had also definitely influenced Scottish stone industries, signs of which the writer thinks appear in an industry of the Kintyre raised beach. Whence or how this influence had penetrated into Loch Lomondside is a question to which an answer will doubtless come with future discoveries. An isolated instance in the form of a flaked flint fragment, seemingly of a core-axe or pick, from Ballantrae, Ayrshire, shown me a number of years ago by the Rev. Ian Muirhead, can only be brought up as a possible link with Irish flaked core-tools rather than as a hypothetical connexion with artifacts from a site on a route to and from the west (where worked bone relics exhibiting Baltic traits have been recognized), whose potentialities as a highway in prehistoric times remain to be examined from different angles.

As up till the present only surface-finds can be noted, the discoveries from Luss are reported to show that one more sort of stone implement can be included among the lithic products of this country. That kindred tool-types should appear in a region like Tweedside, which is prolific in other forms also having their origin in a Mesolithic and even earlier culture, is not altogether surprising, although the gaps are wide between the Border country and the nearest localities yielding allied pieces. The mixture of stone implements points to the varied needs of the folk who produced so many different kinds; but this diversity of artifacts, of archaic and advanced facies occurring in association, while increasing the interest of the Scottish stone industries, aggravates the problems which arise as to the penetration of the different types into the districts where examples have been discovered.

In facies, four specimens from the haughs of the Tweed, worked in

<sup>1</sup> A. D. Lacaille in *Proc. Soc. Ant. Scot.*, vol. lxxiii, pp. 48-50.

<sup>2</sup> *The Mesolithic Settlement of Northern Europe*, pp. 86 ff.

nodules, are apparently cognate to the tranchet forms from Dumbartonshire. Three may conceivably have served as hatchets, but they are to be distinguished from much bruised examples from Argyll raised-beach deposits noted by the Abbé H. Breuil in his classic contribution to our *Proceedings*.<sup>1</sup>

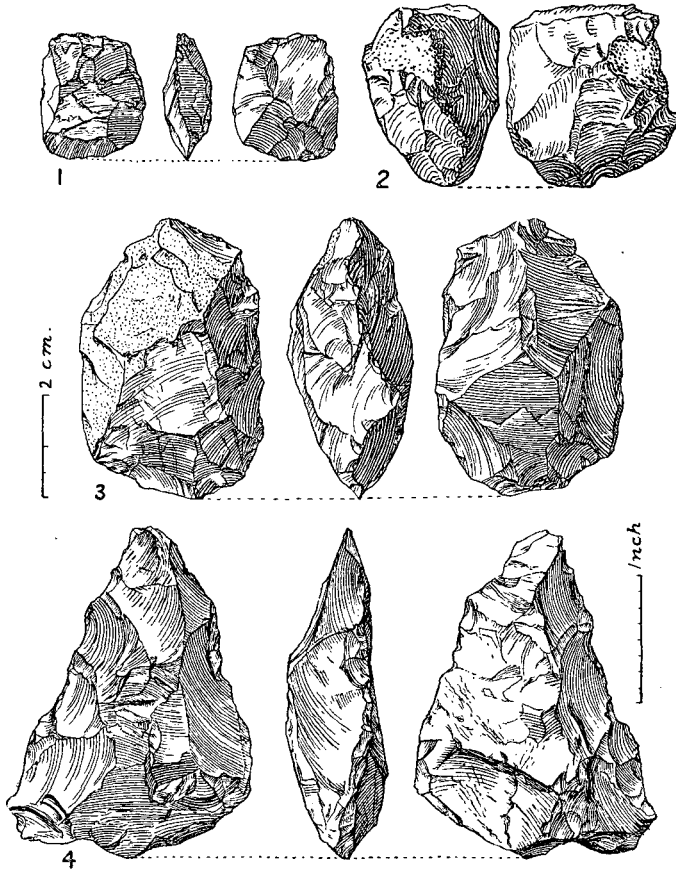


Fig. 2. Core-tools from Tweedside.

The character of two implements from the Tweed valley is immediately apparent, and, although slightly worn, they retain the keenness of edge given them by their manufacturers. The smaller (fig. 2, No. 1) of green chert was found near Dryburgh by our Fellow, Dr W. A. Munro. It possesses a cutting-edge formed by the intersection of two bezels, produced on the one face by delicate faceting and on the other by the skilful removal of a small transverse flake too. A larger and much thicker implement (fig. 2, No. 2), also collected by Dr Munro in the same district, is very

<sup>1</sup> Vol. lvi. p. 263 and fn.; also fig. 2, No. 18.

similar, only, the flaked bezel is backed against a convenient natural one which required no treatment. The rock, jaspilite, of which this artifact is made, responded well to the fairly bold flaking.

A third bifacial tool, larger than the foregoing, of green banded chert and found near Melrose by Mr C. J. Brown (fig. 2, No. 3), may justifiably be ranked as a core-axe, albeit inferior to most of the flint examples. Its lower end was treated in much the same way as the tools mentioned in preceding paragraphs. It is likely the nature of the material was found such that only comparatively small flakes could be removed from it in the blocking-out process. Another flaked artifact, in its appearance also recalling Maglemose implements, consists of a pointed core-tool of green chert from Dryburgh, now in Dr Munro's collection (fig. 2, No. 4). It may have served as an awl and, as a core-tool, is included in this series because of the character of the workmanship and its similarity to Danish implements regarded as its prototypes.<sup>1</sup> The sinuosity of the left edge was obtained by bold flaking, the clear definition and negatives of percussion indicating that a hammerstone was used to strike off flakes alternately from each face. An attempt would seem to have been made to dress the base whose edge is now injured, but the lateral margins and tip are intact. This implement may also be considered much as a hand-axe form, examples of which turn up occasionally in late contexts. The handiness of a tool of this sort and the many uses to which it could be put argue the long persistence of the type.

#### GROUND-FLAKED IMPLEMENTS.

Such is the scarcity of ground-flaked knives of flint in the British Isles that an addition to the list of 133 specimens compiled by Dr J. G. D. Clark<sup>2</sup> ought to be noted. That an example, bringing the total for Scotland up to fourteen, may be noticed, is due to the find by J. E. Elliot on Blackhaugh Farm, Stow, Selkirkshire, which is now preserved in Melrose as part of the St Mary's School collection. The specimen here figured (fig. 3, No. 1) is almost circular and is fashioned in grey flint. It measures  $3\frac{1}{8}$  inches (0.08 m.) by  $2\frac{1}{16}$  inches (0.075 m.) and  $\frac{1}{32}$  inch (0.015 m.) in thickness. From the flake-scars on both faces, it appears that, fine and shallow as was the primary flaking which shaped the piece by means of a hammer softer than the flint—possibly of hardwood—it was followed by a more delicate removal of material. This operation was succeeded by the grinding of the two faces which smoothed down the ridges and provided the implement with a cutting-edge extending for quite two-thirds of a circle. The butt is noteworthy as consisting of a straight edge achieved by fine

<sup>1</sup> E.g. J. G. D. Clark, *op. cit. supra*, fig. 36, No. 8, p. 101.

<sup>2</sup> "Discoidal polished Flint Knives—their Typology and Distribution," in *Proc. Prehist. Soc. East Anglia*, vol. vi., pt. i., pp. 41-54.

retouches on both faces. In order to get rid of sharp corners the butt has been shouldered by careful necking, practised in such a way that the bevel of the scars occurs on one face. The bevels themselves bear evidence of having been dressed by most delicate retouching.

The Border counties have already yielded three comparable specimens, one each being recorded from Earlston, Coldstream, and Lauder, all in Berwickshire.

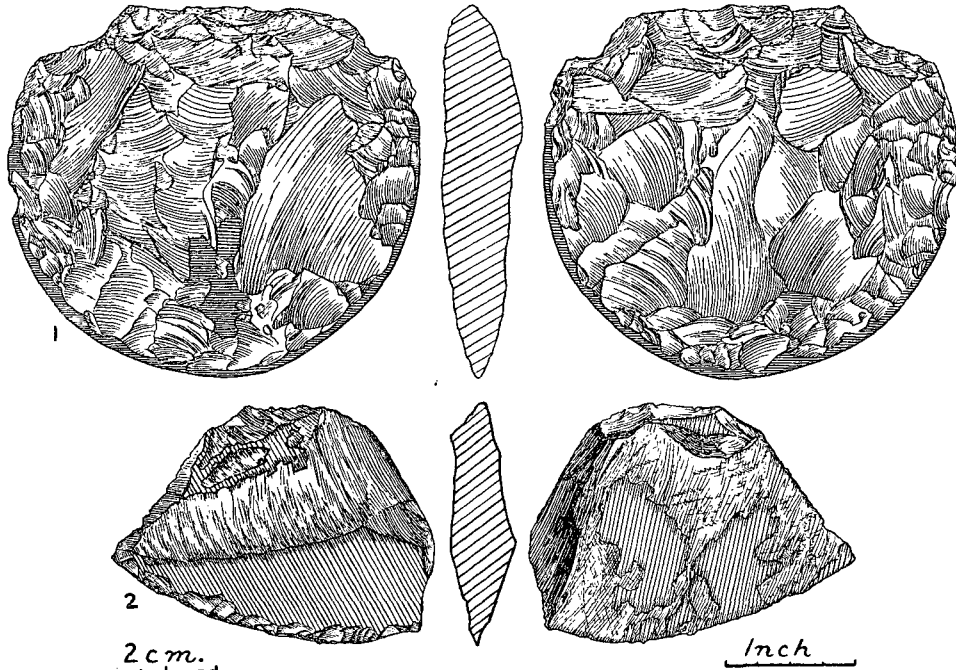


Fig. 3. Ground-flaked knives: 1. Stow, Selkirkshire; 2. Shewalton Moor, Ayrshire.

A small knife of light bluish-green Arran quartz-felsite (fig. 3, No. 2), found on Shewalton Moor, Ayrshire, is also illustrated as an example of a ground-flaked implement, the evidence of workmanship upon which presents an interesting contrast to that borne by the flint specimen from Blackhaugh Farm. The Ayrshire tool,  $2\frac{1}{2}$  inches (0.0615 m.) long and  $1\frac{1}{16}$  inch (0.043 m.) wide, consists of a flake one face whereof shows an inclined striking-platform and a pronounced swelling near the point where fell the blow detaching the piece from the core. This feature and a marked concavity on the other face indicate that this rock possesses some of the properties of conchoidal fracture. Grinding reduced the swelling and smoothed down the more protuberant parts of the separation surface, but the operation was not extensive as it left the original roughness in several

slightly sunken areas which expose the structure of the rock. The treatment, however, smoothed and sharpened the lateral margin of the flake. On the obverse this cutting-edge was delicately retouched, but, as the diminutive flake-scars prove, only *after* this surface had been ground to the edge and to remove irregularities and flake-ridges.

While we might comment on the attractive appearance of this specimen whose surface is relieved by numerous gleaming particles of quartz, technical aspects concern us here. To make the piece more symmetrical, a few flakes were detached from the end and side respectively opposite the striking-platform and cutting-edge. The steepness and contour so achieved, together with the conveniently abrupt platform, are such that the instrument fits snugly within the embrace of the bent index-finger of the right hand, and these features permit of the application of considerable pressure. Its thinness in section and angular plan would exclude the tool from the scraper class.

Any attempt at this stage to elaborate on what was written by Dr Clark on the subject of ground-flaked knives would be redundant; but it may be remembered he pointed out that wherever they occur there is also evidence of the Beaker-folk. This holds for the Scottish examples already found, but there is no report of beakers from Selkirkshire, although the characteristic pottery has been discovered in localities in adjacent counties not distant from the finding-place of the Blackhaugh Farm knife. Considering then the records of beakers from the Tweed valley, the possibility always remains that Selkirkshire will contribute its quota. In any case, this particularly beautiful implement is an addition to the map showing the distribution of the type.

The Shewalton specimen, despite small size and material, bears some comparison with ground-flaked flint knives of triangular shape, although in workmanship it seems inferior. It also evokes other considerations in view of the fact that the polishing applied on the edges of the Selkirkshire example causes the latter implement to be included in a definite category. In Ireland are found stone knives, the faces of which are polished, but not the edges. Now, the Shewalton implement was ground on both faces, and the polishing was deliberately removed afterwards along the edge of one face. Taking into account the known communication and trade existing in prehistoric times between northern Ireland and south-western Scotland, one is tempted to regard the specimen found on the sandy wastes of Shewalton Moor as an intermediate form. Its technical aspects may also be examined in view of a suggestion put to me in discussing the production of delicate Egyptian stone knives, namely, that the faces of the rough-out were finely ground in order that the subsequent flat minute faceting should run inward more readily in the finest of scales.

In respect of associations, the fact is well known that Shewalton Moor

has yielded a great variety of antiquities indicating long occupation. The Bronze Age is well represented, and in this connexion it must not be overlooked that the cutting-edge of the metal axe is recalled by that of the small knife. The author has picked up fragments of beaker pottery at Shewalton, and this ware has also been found at no great distance from the prolific sandy expanse near the mouth of the River Irvine.

In conclusion the writer wishes to express his indebtedness to Dr Munro and Mr Brown for having once more so generously placed collections of stone implements from Tweedside at his disposal, and for permitting him to figure examples which help to throw more light on Scottish lithic industries.