

III.

BANCHORY MICROLITHS. BY Miss HILDA M. LESLIE PATERSON, F.S.A.Scot., AND A. D. LACAILLE, F.S.A.Scot.

THE RIVER TERRACES NEAR BIRKWOOD, BANCHORY, KINCARDINESHIRE. BY Miss HILDA M. LESLIE PATERSON.

On the right bank of the River Dee, about 300 yards from the confluence of that river with the Water of Feugh, in the parish of Banchory-Ternan, Kincardineshire, and at a spot where the south Aberdeen-Braemar road (A. 943) crosses a stream called the Burn of Beltie, there is a series of clearly defined terraces. These terraces continue at varying altitudes as far as the estate of Knappach, after which they become wider and less discernible as the valley stretches eastward towards Aberdeen and the coast, some sixteen miles away.

At Birkwood, 650 yards or so east of the Burn of Beltie, the surface of the low terrace stands 26 feet above the river; it is perfectly flat pasture land which has not been broken up for well over fifty years (fig. 1). The surface of the next, the fluvio-glacial terrace above, higher by some 30 feet, is undulating and escarpated, and extends from the base of the Hill of Maryfield to the south. It was on the low terrace and close to where a small woodland stream passes through a marshy hollow on its way to the Dee, about 400 yards south-west of Birkwood

House, that I found in a mole-hill, on the 16th March 1906, the first microlith of this collection (fig. 2, No. 32). This occurred some time after reading a most illuminating and instructive article, "The Home of the Pigmies," by the late Rev. Reginald A. Gatty, which was published in *Chambers's Journal* in 1905. The microlith or "pygmy flint," as these minute artifacts were then usually named, was immediately sent to Mr Gatty, who was greatly interested in its discovery, and requested me to forward it to Dr Joseph Anderson, at the National Museum of Antiquities, Edinburgh, as he (Dr Anderson) did not believe that pygmy flints were to be found in Scotland.

To Edinburgh it went accordingly, and Dr Anderson was convinced, and wrote stating that he did not think he had ever seen a finer one.

Since then the collection has increased steadily year by year, the fields on both the lower and upper terraces at Beltcraigs, Birkwood, Maryfield and Knappach yielding many beautiful specimens all showing the distinctive microlithic workmanship. A few specimens have been found on the left bank opposite my home, and the late Miss Outram recovered some small flints on the same bank near Inchmarlo Cottage farther upstream.

In 1912 I was asked to read a paper and exhibit the collection before the British Association at Dundee, and was there congratulated by Professor Boyd Dawkins on the new locality I had discovered.

By the beginning of 1935 practically all the usual Tardenoisian types had been included, with one exception, though, had I known it, several of that particular form had actually been in my possession for years, lying unrecognised in a mass of unclassified flint débris. This exception was the micro-burin, for, though most anxious to discover one, I was uncertain of its form until in March of that year, when searching in a field on the lower terrace at Maryfield, I picked up what seemed the long-looked-for object at last. It was sent to Mr A. D. Lacaille, who was then extending his researches on the repartition of the micro-burin in the so-called Scottish Tardenoisian, and who had most kindly sent me sketches to enable me to recognise the micro-burin. He confirmed my belief that I had found a true specimen, and described it as a "beauty." Once familiar with the form I made a careful investigation of all my collection of uncertain chips and pieces and forwarded the most likely objects to Mr Lacaille, who identified several others, and later four were figured by him in our *Proceedings* after exhibition at a meeting of the Society on 13th May 1935.¹ Besides these, I re-

¹ *Proc. Soc. Ant. Scot.*, vol. lxxix. pp. 443-5; *vide* also footnote, p. 425, *infra*.

covered other micro-burins from the same field on the lower river terrace at Maryfield.¹

Mr Lacaille happened to be in the north of Scotland about this time, and, calling on me, said that having regard to the constant stressing in certain archæological circles of the absence of stratigraphical data connected with Scottish microliths, he was most anxious to excavate in the low terrace. This was gladly agreed to, and a spot was chosen at some 400 yards south-west of Birkwood House and about 20 yards east of the place where I found the first microlith in 1906. A trench, 3 feet 6 inches long and 18 inches wide, was made and was cleared out to a depth of 2 feet 9 inches. At a depth of 2 feet 2 inches the first artifact, consisting of a delicate blade of grey flint, and an occasional one, were recovered, until a depth of 6 inches more, when sandy matter was reached, where humanly struck pieces became more numerous. That afternoon 11 worked specimens, including two fragments of small cores, were found.

Realising the significance of these discoveries Mr Lacaille asked Dr Graham Callander to join us, which he did, and it was arranged next evening that the excavating should be continued the following day. At Mr Lacaille's suggestion the trench was carried down to a depth of 3 feet 3 inches in yellow sand. At 2 feet 11 inches from the surface a diminutive core of greenish-grey flint and 11 other pieces were found. That same afternoon the excavation was enlarged to a width of 3 feet in the northern half and more flints were found. As on Tuesday, 14th May, nothing was found in the next 2 or 3 inches; but at a depth of 2 feet 11 inches a micro-burin and a core of red flint were got, and 14 flints were recovered mostly at a depth of 2 feet 9 inches to 3 feet—the greatest depth at which any were found being 3 feet 3 inches, where two were discovered. Small fragments of charcoal at all levels producing worked flints were also present, one piece of charcoal being found at the lowest producing point, nearly 3 feet 3 inches. This charcoal has been identified by Mr J. Cecil Mayby, Oxford, as *Quercus sp.* (Common Oak), and possibly derived from a single original log.²

The character of the constituents of the low terrace is shown in the diagrammatic scale drawing accompanying sketch profile of the lie from the road to the Dee south-west of Birkwood. The key-map shows the low right bank and fluvio-glacial terraces near Birkwood. On account of the nature of the latter its limits are necessarily indefinite,

¹ *Vide* footnote, p. 425, *infra*.

² Report, dated Bio-physical Laboratory, Oxford, 11th December 1935.

but as survey shows that they approximate to the 200-foot contour this has been indicated for guidance. The spot excavated is marked X. The extremities of the line of profile are respectively the point A near the road and B at the water's edge, datum being taken at 135 feet O.D., the altitude of present river-bed.¹

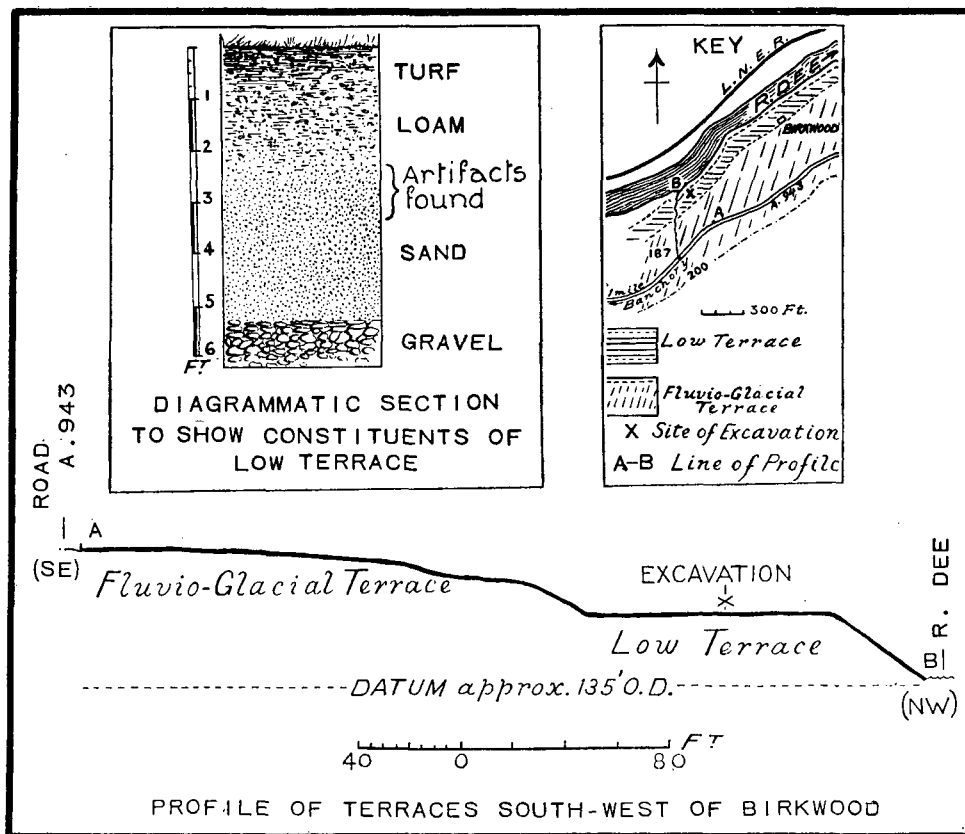


Fig. 1. Microlithic Site at Birkwood, Banchory.

COMMENTS ON THE ARTIFACTS. BY A. D. LACAILLE.

Up till now microliths recorded from Scottish sites have consisted of finds from the surface of rich agricultural land or in sandy areas,

¹ For this and other information relating to the terraces we are indebted to Dr Alexander Bremner, Aberdeen, whose work on the local deposits has proved of great value. (*Physical Geology of the Dee Valley*, University Press, Aberdeen, 1912; publication of the Aberdeen Natural History and Antiquarian Society.)

but it has been stated that some Tweedside implements exposed by the plough come from 12 inches of sandy clay resting upon gravel.¹ This is, of course, far from saying that the artifacts occur in a stratigraphical context. In the case of the specimens figured in the present notes we are confronted mainly with representatives of a collection from fields which have long been under cultivation. The lands from which these artifacts have been recovered are situated on the right bank of the river on the fluvio-glacial terrace at about 185 to 190 feet O.D., or from 50 to 55 feet above the River Dee, and on the narrow low river terrace 26 feet above the river near Birkwood.

Digging was resorted to with the object of ascertaining if there existed any geological or other data to fix chronologically the position of some microliths, noted over twenty years ago from the lower part of 2 feet of loam resting upon the terrace.² The excavation, not extensive on account of limited time at disposal and a late and severe snowstorm supervening, had, nevertheless, the result of determining the constituents of the low terrace of the right bank of the Dee near Birkwood, and it was particularly fortunate that several characteristic artifacts were recovered from a deposit undisturbed until broached by Dr Callander, Miss Paterson and myself in the course of the investigation in May 1935. The objects revealed by spade and riddle do not differ typologically from those which have rewarded Miss Paterson's continuous scrutiny of the surface of the fields near her home. The charcoal, identified as *Quercus sp.*, if it be associated with the humanly worked and struck pieces in the fine sand from the depth of 2 feet 5 inches to 3 feet 3 inches, beyond testifying to climatic conditions favourable to the growth of the Common Oak, does not go far in establishing the age of the pieces. Still, it is thought that we are furnished with information assisting to lay a surer foundation for the study of Scottish stone industries, and more specially for the closer examination of those of Tardenoisian facies.

The Deeside microliths impress by their similarity to those of the Tweed valley, and, indeed, putting aside the question of material, collections of microliths from localities near the two rivers might well be grouped together.

A comparison forces itself between the Tweed and Dee artifacts on the one hand and the collection from Shewalton Moor, Ayrshire, on the other. Reasons were advanced for regarding the Ayrshire microliths as later than the generality of specimens from Tweedside,³ and,

¹ *Proc. Soc. Ant. Scot.*, vol. lxi. p. 318.

² *Man*, 1913, No. 58.

³ *Proc. Soc. Ant. Scot.*, vol. lxiv. p. 48.

while the same views may not now all be held, some evidence emphasises differences and similarities. The fact that the microliths and associated artifacts discovered at Shewalton Moor appeared to belong to an industry of more evolved character than those of the Tweed valley, as known then, was commented on in the detailed description of the Scottish sites and other localities producing microliths: and examination of their industries since 1928, as opportunity served and the courtesy of collectors permitted, generally upholds the opinions expressed several years ago. It is recognised that the disparity may not be of great significance, and that differences consist principally of those suggested by the presence of certain types in a group or groups. Until now discoveries are such that one cannot apply to Scottish microliths the advanced methods of study practicable elsewhere.

Most recorded Scottish sites yielding artifacts of Tardenoisian facies also produce forms of implements usually ascribed to the Neolithic and Bronze Ages. It is not easy to determine if such are only strays dropped on sites pertaining to these industries with which we are concerned, but in Miss Paterson's collection examples suggestive of Neolithic or later stage of culture are few: a number of those which do occur are trimmed in the same way as the microliths of conventional forms. On the other hand, there are several pieces of sorts which can be paralleled in the products of the earlier phases of the Tardenoisian industries represented in England and beyond the Channel.

As all but the few artifacts from the tentative excavation have been surface finds from a fairly extensive area it is not feasible meantime to adopt the spectrum method of summary. For these brief notes one is restricted to an examination of selected specimens and to some of the comparisons they suggest. It seems that the Deeside implements of Tardenoisian facies found by Miss Paterson exemplify what so far is purest of the Scottish microlithic industries.

To the prevailing shades of the native flint and the local pebbles is greatly due the beautiful appearance of the Deeside microliths, and the fine quality of the material has permitted of the most delicate workmanship. Variety of stone and colours is not the marked feature that exists in the Shewalton Moor and even the Tweedside collections. The characteristic so common in lots of Scottish microliths, namely that of diversity of material, is almost entirely absent from the Birkwood collection.

The industries of the Birkwood district include geometric, sub-geometric microliths, and very small implements usually pointed and trimmed in characteristic manner. Core-scrapers, graters, and micro-

burins have been found, but diminutive round steep scrapers of the kind which are a feature of the microlithic industries of the Tweed valley have not so far been picked up. Awls, of the type which occupy a prominent place in the Shewalton Moor collection, are not common, Nos. 11, 12 and 13, fig. 2, being exceptions, but they are much more delicate than any Ayrshire specimen.

Geometric forms are not numerous.¹ Trapezes and trapezoidal forms have not been found as on the Shewalton Moor. This fact, I think, may indicate that the Ayrshire microliths belong to a later group than those from Deeside.

In the geometric and other microliths the bulb of percussion is invariably wanting, the flake or blade having been truncated. In the few instances where the bulb or part of it remains the implements depart from the more usual microlithic form, and are larger although they may be trimmed in microlithic technique.

Though Miss Paterson has at times figured some of these examples, it is only now that the real importance of her series appears. Fig. 2, Nos. 1-40, shows a series representing the local microlithic industries. Figs. 4 and 5 illustrate various implements and cores:

A brief reference in the *Proceedings* to Scottish micro-burins drew attention to some examples from Deeside which compared with specimens from the Tweed valley.² In the present notice three in fig. 2, Nos. 34, 35 and 36, are figured to show variations. Others in Miss Paterson's collection are mostly of the type represented by No. 34. No. 36 has the notch on the left instead of on the right, as is more usual. The notched flake, No. 33, is included here, as similar pieces have been shown to be associated with the micro-burin. All (Nos. 34, 35 and 36) are butt-ends of flakes, but the piece of flint in which is fashioned the micro-burin No. 36 is without bulb of percussion. It will be recalled that notched flakes similar to the present instances have been stressed in descriptions of microliths from the Tweed valley, and it is from the Border river-basin also that micro-burins are recorded.³ Shewalton Moor has yielded neither notched flakes nor micro-burins. These notched flakes have of late years been intensively studied in connection

¹ The only perfect geometric microlithic found by Miss Paterson was picked up by her on the high terrace at Birkwood and sent me after MS. went to press. It consists of an equilateral triangle of grey flint.

² *Cit. sup.*, vol. lxxix, pp. 443-45.

³ It is hoped to refer later to the repartition of the micro-burin in Scotland. Recent research proves that examples are by no means scarce. Up till now Miss Paterson has recovered a score of micro-burins, several of which compare with variants referred to and figured by M. E. Vignard in his "Les Microburins Tardenoisians du Sébillien" in *Compte Rendu*, pp. 75-76, Congrès Préhistorique de France, X^{ème} Session, 1931, Nîmes-Avignon.

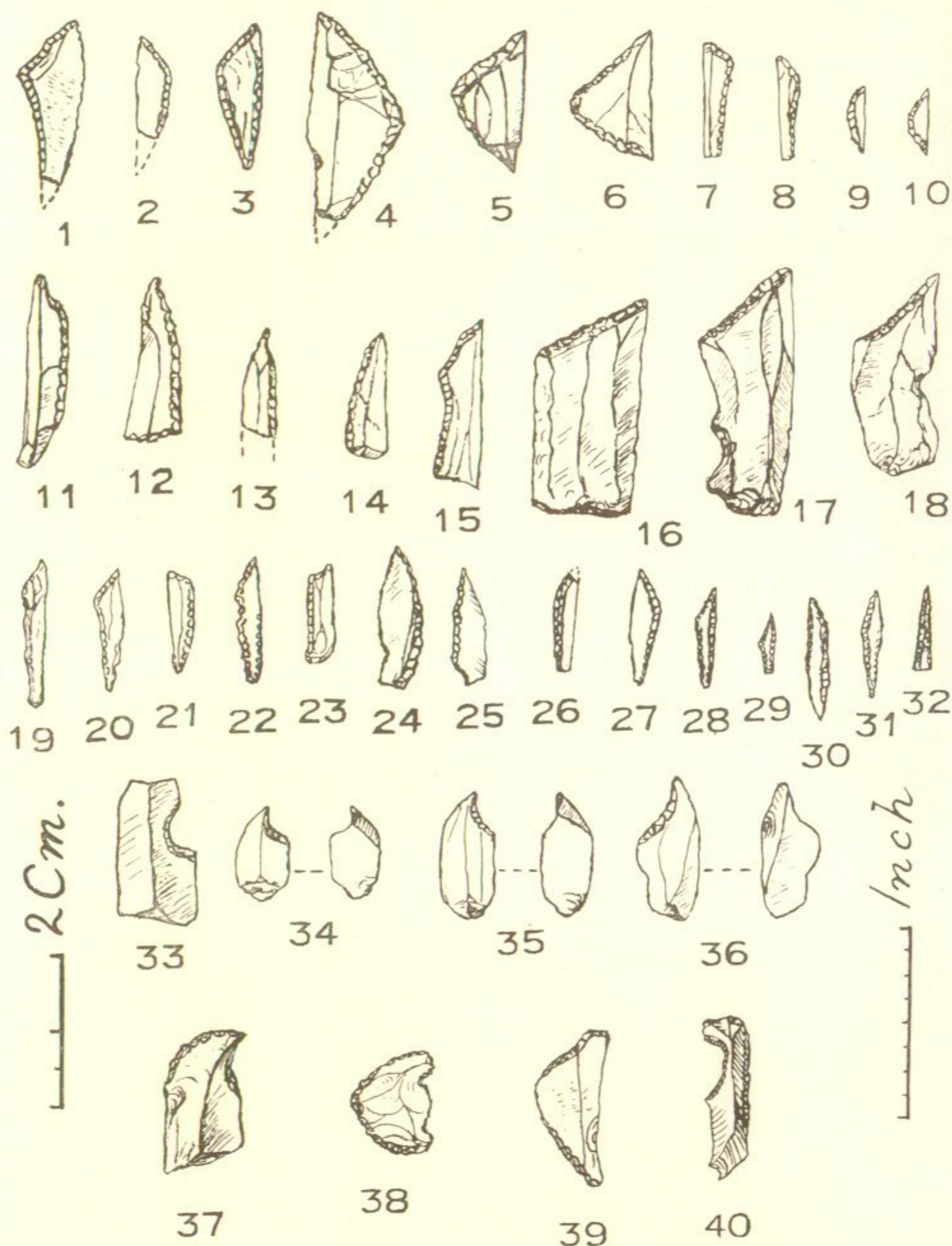


Fig. 2. Banchory Microliths.

with the question of the production of the micro-burin and to determine whether it is a true tool or merely waste from the manufacture of certain implements of geometric shapes.¹

The triangles are represented by Nos. 1-6 in fig. 2, the first three being scalene and the second nearly isosceles. Only in the case of No. 3 has the third and longest edge also been trimmed, and that not wholly, the other examples being worked only on two edges. Nos. 7 and 8 are of the sub-triangular shape already noticed in Scottish collections. Nos. 9 and 10, diminutive crescents with blunted arc, are similar to examples already found in south-eastern and south-western Scotland. The thick points, Nos. 11 and 12, differ in that the base of No. 12 has been dressed in addition to the right edge, which in both artifacts is steep. No. 13 is trimmed to an elongated and awl-like point along part of the left edge and wholly along the right. Nos. 14 and 15 compare with Nos. 11 and 12, but they bear the trimming on the more usual left edge. It may be observed in No. 15 that the dressing near the point of the implement is more delicate than on the longer lower part of the edge.

Thanks to Dr W. A. Munro, who kindly sent me a series of recent Tweedside finds for study, I am able to say that Nos. 16 and 17, which I had hitherto regarded as unparalleled in any other Scottish microlithic collection, are closely matched by a smaller and patinated obliquely pointed truncated blade. The two Deeside examples, however, retain the bulb of percussion. No. 18, with notched right edge, is also obliquely ended, but the uppermost edge, while trimmed in exactly the same way as Nos. 16 and 17, and similarly to all accompanying microliths, is very slightly concave. Among Dr Munro's microliths is an analogous specimen.

To judge from other Scottish collections, consisting of products of Tardenoisian facies, the most numerous artifacts are narrow pointed flakes and blades steeply battered down one or more edges. It is not surprising, therefore, that in the Birkwood collection these prove to be abundant and a set is figured as the range 19 to 29. Nos. 30, 31 and 32 are the same in character, but may perhaps more accurately be called steeply dressed rods. Of all these No. 23 with its small lateral extension calls for notice as furnishing an example similar to one figured in the report on the Dryburgh Mains collection acquired by the Museum.² No. 24 approaches the crescent in form, but can hardly be put in the same category as Nos. 9 and 10. The extremely delicate point, No. 32, apart

¹ The subject has not been neglected in Great Britain, but it has not been so keenly followed as on the Continent, where theory has passed into actual experiments in the production of the piece in various materials favoured by prehistoric man.

² *Proc. Soc. Ant. Scot.*, vol. lxi, No. 33, fig. 1, p. 319.

from the fact that its discovery in 1906 caused Miss Paterson to become the collector of this classic Scottish series, is noteworthy as comparable with the needle-like flint points found on the Glenluce Sands and exhibited at the Glasgow Exhibition in 1911.¹

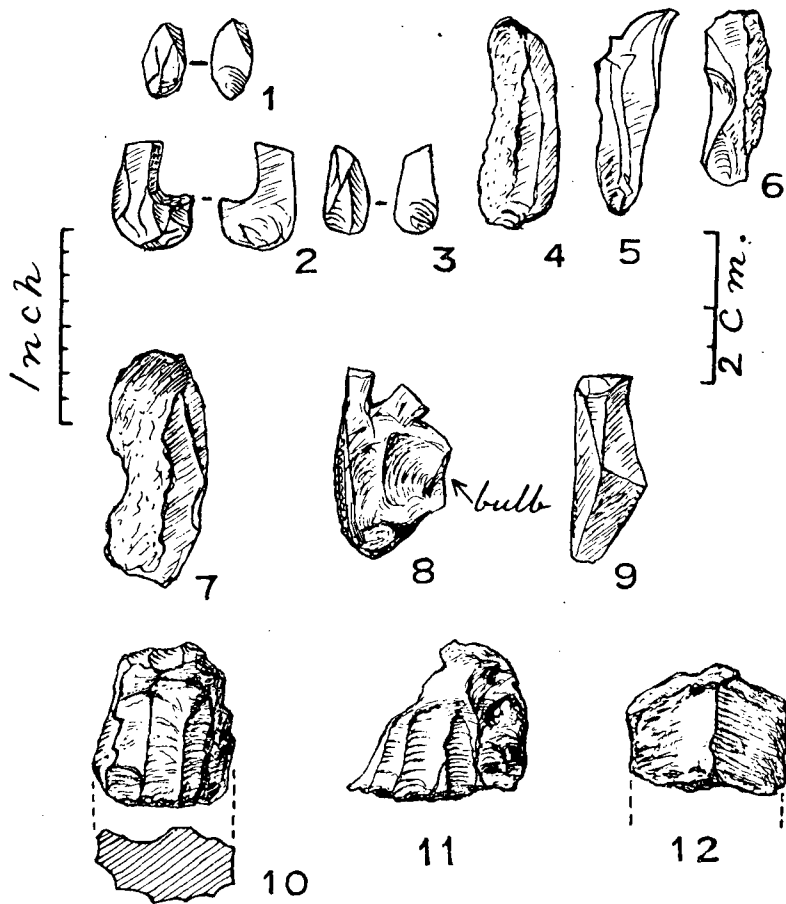


Fig. 3. Banchory microlithic industry: Artifacts from the trench in the low terrace.

The last four specimens, Nos. 37, 38, 39 and 40, have been included on the merit of their odd shapes coupled with the microlithic technique evident in the trimming of each. I recall that Dr W. A. Munro possesses an implement found near St Boswells, Roxburghshire, which, both as regards shape and trimming, bears a close resemblance to the curious

¹ *Historical Catalogue of the Scottish Exhibition, Glasgow, 1911, p. 831.*

beaked specimen, No. 37, fashioned in a truncated flake.¹ The workmanship and almost perfect semicircularity would justify a place for No. 38 among geometric microliths. To the geometric series might also have been added the triangular No. 39, but the blunting of the short edges only extends for a short way, whereas in Nos. 1, 2, 3, 4, 5 and 6 the trimming has been carried along the edges to the apex. In No. 40 is exemplified one of these oddly shaped specimens met with occasionally in microlithic series.

Several distinct shades of flint of excellent quality appear, but No. 38 is of chalcedony. Grey flint, mottled in some cases, which predominates, went to the manufacture of Nos. 1, 2, 3, 4, 5, 6, 9, 11, 13, 14, 30 and 32. In No. 10 a band of yellow is visible in the grey body. Nos. 7, 12, 20, 21, 23, 24, 25, 33, 34 and 36 are of light grey flint, a shade banded with brown in Nos. 19 and 27, and tending to a lighter hue in No. 28. Dark brown has been used for No. 17, and light brown streaked with pink for 16. In the preparation of Nos. 26, 31 and 37 red material served; this in No. 39 is tinged with brown.

Series 1-12 in fig. 3 represents some specimens from the trench in the low terrace south-west of Birkwood. The illustration includes the smallest and largest objects recovered with the exception of a lump of quartz, which appears to have been split intentionally and to have been subjected to the action of fire.

In such a concentration of struck pieces on a site yielding microliths it is not surprising to find that flakes predominate. Except in the case of the blade, No. 9, the bulb of percussion remains, and No. 12 is only a fragment of a flake of schistose grit included because of this evidence of use of so coarse a material with good flint of several shades. In each instance the bulb presents itself as a rounded swelling rather than the accentuated part of a cone.²

No. 1 is a micro-burin without notch, *langue d'aspic*, of brown flint, and may have served.³ No. 2, a thin truncated notched piece, may be compared with the surface-find, No. 33 in fig. 2.

Nos. 3, light grey flint, 4, fawn cherty flint, 5, light mottled flint, 6, grey cherty flint, 7, dark grey flint, 8, light brownish-grey flint, and 9, also dark grey flint, have either been removed from near the

¹ The excavations in the Lower Greensand near Farnham, Surrey, by Mr L. S. V. Venables, have yielded a number of curved points which are very similar to the Scottish example No. 37, *supra*. They were regarded as being remarkable enough to be specially noted and figured in *Proc. Preh. Soc. East Anglia*, vol. vii., pt. ii., p. 276.

² The production of this wide rounded bulb of percussion in certain flakes struck from cores has been demonstrated by M. Léon Coutier, the results of whose experiments in flint fracture are regularly contributed to the *Bulletin* of the Société Préhistorique Française.

³ Cf. examples figured by M. E. Vignard, *loc. cit.*, *supra*.

outside of struck nodules or from the body of flaked cores, their original situation being determinable by the presence or absence of cortex. Specimens of cores are Nos. 10 and 11. The second, of red Buchan flint of rather poorer quality than usual, retains a portion of crust. From the former, of green flint, little more could be struck.

The only dressed example from the excavation is No. 8, an irregular splintered flake of light brownish-grey flint, which is delicately and steeply blunted along part of one long edge in precisely the same manner as the microliths represented in fig. 2.

Respecting the remaining two dozen specimens (which need not be illustrated), mainly small flakes, several blades, core-trimmings and spalls, out of some thirty found by excavation, no comment seems to be called for except to state that several are fire-crackled.

Mention has been made that few artifacts common in the industries of Neolithic and Bronze Age cultures find a place in the series collected locally over a period of thirty years. Some implements, however, found near Birkwood recall kinds occurring in pre-Neolithic industries, their presence indicating certain needs of the people who produced them. In this respect it has been observed that the Tweed valley, much like the valley of the Dee, yields many forms and implements common to both regions but absent elsewhere. Moreover, artifacts occur in very similar conditions. Thus, in fig. 4 are represented larger specimens, some of which, it is hoped, will later be compared with other Scottish examples.

Two graters, No. 1, light yellowish-grey flint, and No. 2, light brown flint, are of special interest in this collection, as graters have not received attention from writers on Scottish stone implements. Both are worked in truncated flakes, No. 1, the larger, being thick and not inferior in technique to an Upper Palæolithic tool. Its features are distinct. One thick spall was removed in the first place to give the typical edge. The facet so exposed was further treated by removal of three tiny flakes, and the top had one flake detached from it to produce the desired narrow chisel-edge. At the lower end, and on the same side as the graver-face, the edge bears delicate trimming. Although fashioned in an irregular portion of a flake, the working-end of the small graver (No. 2) was produced in characteristic manner. At the tip two small facets are visible, and one flake was detached obliquely from the other face.

A spall of dark grey flint from the making of a graver is represented by No. 3. Indications of resolution on the narrow side show that the material proved refractory. It is interesting to observe that the spall itself could have served as a graver.

As one can infer from the presence of graters in the collection

that bone-working was practised, the saw, No. 4, was probably similarly associated. The flake of grey flint, along one edge of which were made the delicate teeth, appears to have been broken, but a small blade of light brown flint, with notched rather than denticulated edges, also found near Birkwood, is truncated.

No. 5 represents an implement fashioned in a complete blade of dark grey flint, the bulb soft and diffused. It is steeply trimmed along

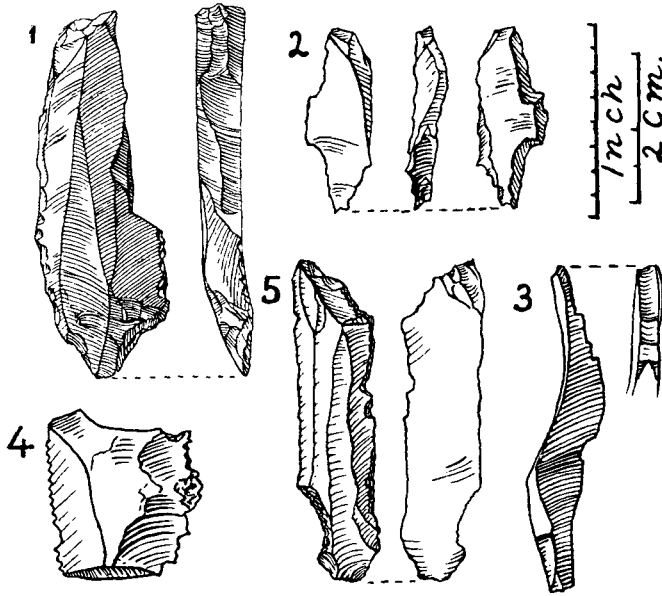


Fig. 4. Banchory microlithic industry: Gravers, etc.

part of the two long edges, but the feature to which attention is drawn is the curious dressing on a corner of the bulbar face opposite the rounded swelling. No similar instance of this peculiar working has been noted among any lots of Scottish stone implements. It may be said that this specimen resembles one of these flat gravers occurring occasionally in Aurignacian industries.¹

Considering the number of implements collected by Miss Paterson, the proportion of cores recovered by her is relatively large. The prevailing form is conical, and, although variations occur, few exceed $1\frac{1}{2}$ inch in length. In the case of those of approximately round section the width is generally no more than $\frac{3}{4}$ inch, small flakes having been

¹ In a local Upper Palæolithic collection trimming of an end on the bulbar face occurs on various thin and thick flake implements. Some particularly fine specimens before me from Le Pech de Saint-Sour (Dordogne) show a striking likeness to this Deeside artifact.

removed until the core became reduced to a size making handling difficult. Several have served as scrapers without trimming, while some show delicate retouch of the edge. Concerning the last category, it may be said that the base of the core projects and the face inclines upward, leading one to infer that it was the intention of the craftsman to produce a scraper of the type fairly common in the Aurignacian. Steep conical cores could not be used so conveniently as those with projecting bases and gently sloping faces. This conclusion seems borne out by the fact that the edges of the conical steep cores show no signs of utilisation but only the marks of blows dealt upon them to detach flakes. One core, not figured, thicker than its fellows, after being flaked has served as a percussion implement.

The series of cores from Birkwood and its neighbourhood is such that one would like to see the whole set illustrated, but for the purpose of demonstrating the foregoing remarks, and to show the principal types, eleven are represented in fig. 5.

No. 1, of dark red flint, a common type near Banchory, consists of a half-pebble, two-thirds of which have been struck for flakes, leaving the rest corticed. Nos. 2 and 3, of light grey flint, are the sort of core ordinarily found in the district, the first being of the most usual size met with and the second rather smaller. No. 4, grey and fire-crackled flint, may be regarded for the locality as a medium-sized core. As in the case of the preceding two, flakes have been detached from it to such a degree that no cortex remains. Nos. 5 and 6, both of grey flint and roughly prismatic (one wide, the other narrow), are of rare form. In No. 7, of blood-red flint, is a core somewhat similar to No. 1, but with sloping flaked surface, the rear retaining the crust. Its shape, admirably adapted to firm pressure of the hand, naturally leads to the pair 8 and 9, respectively of yellowish and speckled honey flint. Much use was made of these as proves inspection of the edges. The top of the smaller (No. 8) is obliquely faceted in such a manner that a narrow chisel-like extremity is provided. The strong suggestion of a graver-end is supported by the unmistakable evidence of wear. The wide facets at the top of No. 9 do not bear these indications, but it should be said in respect of this specimen that it is among the largest cores belonging to Miss Paterson. Nos. 10 and 11, of grey flint, are particularly finely trimmed scrapers, the edges dressed in much the same way as the microliths. Were No. 10 longer of body it would afford a very close parallel to a typical Upper Palæolithic keeled scraper.

Grey flint of varying shades was the principal material used on this part of Deeside, but browns, as might be expected in the north-east

BANCHORY MICROLITHS.

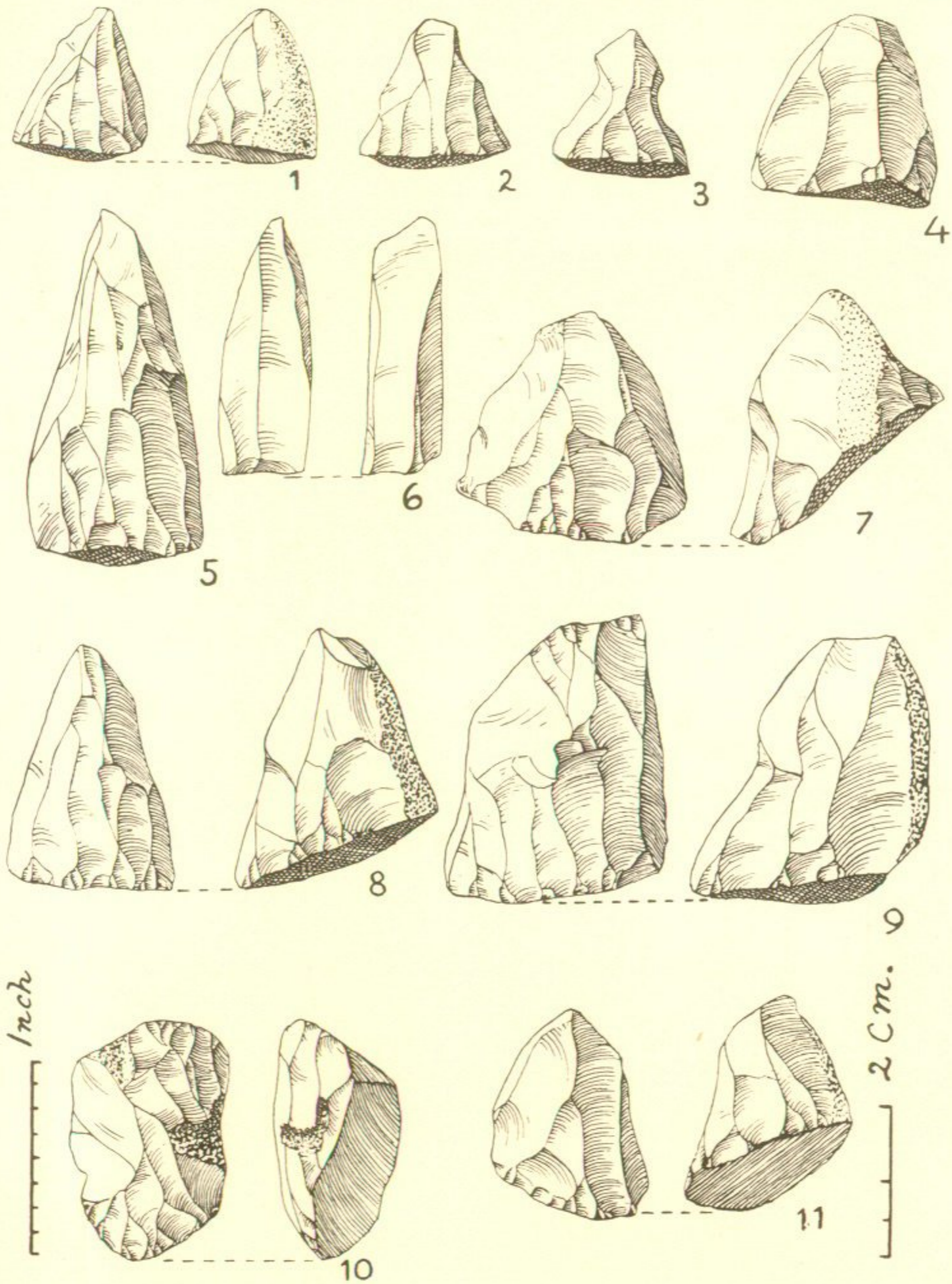


Fig. 5. Banchory microlithic industry: Cores and Core-scrapers.

of Scotland, are well represented. The proportion of other hues to the colours prevailing in the selected specimens may be taken as the same for all the local lots. To judge from the cores, a great number of which retain much of the crust, the original size of the nodules used was far from large, this apart from the small size of the flakes struck from them.

That humanly worked pieces, identical to finds from the ploughed surface of the fluvio-glacial terrace, should be present at a considerable depth in the low terrace is comprehensible. It would appear that the people who produced these stone implements had their habitations and working-sites sometimes on the fluvio-glacial terrace and sometimes on the contemporary flood-plain. The latter is now, of course, buried under subsequently deposited alluvium, while implements left on the surface of the fluvio-glacial terrace remain unburied or quite near grass level according to circumstances such as agricultural operations. One suggestion explaining the occurrence of the flints at slightly varying depths in the low terrace is that in favourable conditions these folk established themselves near the river, from which they retired in times of floods. They would return to the bank in better season, but during the intervals their implements were covered with water-borne sand. Some of the flints from the highest occupation level would gradually come to the surface by different accidents, such as those upheavals caused by the works of agriculture. The no inconsiderable part played by burrowing animals in turning up worked flints impressed me last year when I inspected the corresponding terrace at Inchmarlo Cottage.

Determination of the age of the alluvial deposits of the low terrace will go far to fix the chronological position of the local microlithic industries. Dr Bremner tells me that the amount of material removed by river erosion before the time of this terrace, the present surface of which lies 26 feet above the river, is enormously greater than that since removed. The conditions under which erosion acted in the earlier period were probably very different from those of the later.¹

The success attending the small excavation in the low terrace at Birkwood suggests that extensive exploration here would be illuminating. Research and fortuitous discoveries in the past year or so prove that kindred industries are more widely distributed in Scotland than has been suspected. Further work ought to show their greater repartition; and it is in this conviction that the necessity for recognition of the different types and the characteristic workmanship is pleaded in excuse for tedious detailing of the artifacts referred to in the foregoing paragraphs.

¹ Letter, dated Aberdeen, 19th January 1936.