III.

A FLINT WORKSHOP ON THE HILL OF SKARES, ABBRDBENSHIRB.

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No county in Scotland is richer in prehistoric flint relics than Aberdeenshire, which is probably explained by the fact that the only extensive deposit of flint in the country occurs within its boundaries. The presence of flint nodules has been noted in other parts, as in the raised beaches round the coast, but they exist in superabundance only in Aberdeenshire, where the deposit extends diagonally across Buchan for a distance of eight or ten miles. Implements fashioned from this material have been collected in large numbers in many parts of the county, even in such a remote corner as the Cabrach, near the source of the Deveron, and I am able to report a site where they were manufactured well up Strathdon.

The site of the flint factory, the subject of this paper, lies on the Hill of Skares, in the parish of Culsalmond, in the Garioch, a highly cultivated stretch of country, famous as a corn-growing district, which lies near the centre of the county. The greater part of the Garioch consists of a large natural basin, broken up by small, rounded hills and ridges, and drained by the river Ury and its tributaries: its northern and eastern boundaries are marked by the Foudland Hills and a lower range which extends eastwards and then south as far as the hill of Barra; while on the south, Benachie, a very beautiful hill with three prominent peaks, separates it from Donside and the Vale of Alford. The parish of Culsalmond, forming a north-western sector of the basin, sweeps up to, and includes, the hills of Skares and Tillymorgan, the former a hog-backed hill rising very steeply on its northern flank and sloping more gradually on its southern face. The top is covered with heather, which is girdled by a belt of trees on the middle slope, and the highest point attains a height of only 1078 feet above sea-level.

A rough cart-track makes its way up the southern slope of the hill, and where it emerges from the trees strikes sharply towards the summit of the western shoulder. Some 20 yards west of the turn in the track, near the edge of a shelf on the hill-side, about 300 yards south of the

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1 Locally pronounced Garry, the article always being used.
2 This part of the hill is named "Hill of Killmidden" on the O.S. map, but I think the name is wrongly spelt. This was the old name for the whole hill of Skares. I have only heard it once used, and then it was distinctly pronounced Culmedden. In Macdonald's Place-names of Strathbogie, p. 21, it is "Culmeadden," meaning "the hill-back of the middle," or "middle hill." Certainly "the middle back" accurately describes it, as it lies between two higher hills, Foudland and Tillymorgan.
highest point in the hill, at an élévation of 950 feet above sea-level, is the place where the flints were found. It is a dry, sunny spot, sheltered from the north by a quick rise in the ground, and commanding a very fine and extensive view in the opposite direction. To the south and south-east lies the fertile Garioch, studded with numerous plantations of trees, and to the south-west appears the more rugged upper part of Strathbogie with the Buck o’ the Cabrach rising behind. Three important prehistoric sites stand out prominently in the landscape—the vitrified forts on Dunnydeer and Tap o’ Noth, and the massive stone fort on the Mither Tap of Benachie.

My attention was attracted to the site of the workshop—if we may use the term—some twenty years ago, by the presence of three or four skelbs of flint, of different colours, lying on the upturned edge of one of the wheel-tracks. A few minutes’ picking with a pocket-knife revealed some others, from which it was evident that this was a place where flint implements had been fashioned in early times. The soil here, as over the higher part of the hill, is only about 3 inches in depth, and consists of a mixture of slaty soil and decomposed moss and heather. It took several days to examine the site, although the whole flint-bearing area extended over a space of only 9 feet in diameter, because there was no other method of separating the flints from their half-peaty matrix than by sifting the soil through the fingers. Every fragment of flint seen, no matter how small, was picked up, and ultimately about as much as could be held in one hand was recovered. The chips, which showed the usual numerous varieties of yellows and reds seen in Aberdeenshire collections of flint, were small, as a rule varying from the size of a pin-head to little more than ¼ inch across; a few of larger size were found, but none reached an inch in greatest diameter. The point of a leaf-shaped arrow-head, a scraper, and part of another worked flint flaked all over the surface were also found. About 20 yards to the east, at the bend in the cart-track, the basal portion of a second leaf-shaped arrow-head was also picked up. Nothing to indicate the kinds of tools used to produce the flakes was seen, and no traces of fires were observed. Many of the chips, no more than ¼ inch in size, showed that a smaller chip had been flaked off before they had been detached from the original flake. Trial diggings were made in a number of places in the vicinity, but they failed to produce a single fragment of flint. I think I have searched every rabbit-burrow on the hill—and they are very numerous—but I have never noticed a piece of flint thrown up by these animals. However, on some spaces that had been “skinned” in cutting “sods” for fuel, on the top of the western shoulder of the hill, I have got a barbed arrow-head and several other small flint implements.
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Although this discovery resulted only in the recovery of a handful of chips and three worked flints, it is of some importance, because the number of discoveries of Scottish prehistoric flint workings recorded is not numerous, and, while it is quite different in character from any of these, it is complementary to some of them.

Before referring to recorded Scottish sites where flint was worked, I may mention several new localities which have been brought to my notice. On rough ground on the hill-side above the farm of Broomhill, Strathdon, is a spot where flint flakes used to be found in considerable numbers. It was a regular source from which the neighbouring farming population got their supply of flints wherewith to light their pipes. When I visited the place, about three years ago, there were only a few small-sized chips to be seen; but when we consider that flakes of a size suitable for use with the "fleerish" were found formerly, we may infer that the deposit originally contained many fair-sized flints. I have been told of a spadeful of chips having been exposed in casting peats in the Moss of Wartle, parish of Rayne; of a barrowful (probably an exaggeration) found while digging a ditch on the farm of Torries, parish of Oyne; and of a quantity unearthed in an excavation for a proposed private bridge over the Shevock, above the farm of Wraes, parish of Kennethmont.

The hill of Skelmuir, in Buchan, is well known as a place where flint flakes are numerous, and some good examples of anvil-stones, of which we have several specimens in the Museum, have been found there. I have heard local collectors of antiquities speaking about the flint "smiddies" on the hill, but I have been unable to find a printed description of any of these sites. At various places on both sides of the river Ythan, between Ellon and the sea, flint chips and flakes have been found in numbers sufficient to indicate the "very spots where the people seem to have sat and wrought at them"; they also occur on the surface of some of the kitchen-middens in the same district, and more plentifully in the neighbourhood of some of the shell-mounds; and at one place on the Sands of Forvie, which lie to the north of the estuary of the Ythan, not only were abundant chips and flakes seen, but on turning up the underlying soil a stratum of black carbonaceous matter, apparently the remains of numerous fires, was met with. Large numbers of flint flakes were discovered on what once had been a dry knoll in a wettish tract of country,

1 Wraes is locally called Vraes, and the same peculiarity in pronouncing the w as v is seen in other words beginning with wr. Wrangham, a farm three miles distant, is pronounced Vrangham; wright, vricht; wrong, vrang; wrought, vrocht; and wreathe (of snow), vrath. A terminal w is sometimes pronounced in the same fashion: snow becomes snyaave; sow (corn), shaave; maw (sea-maw), myaave; law (hillock), lyave; and tyave, to struggle, may be cognate with the Old English verb tew, to lug or pull.

within "an area of about 15 to 20 yards in circumference," on the Blackhill, near Boddam.\textsuperscript{1} There is a very good record of a discovery made while reclaiming some moorland at Hindstones, parish of Tyrie, in the northern part of Buchan, where at least a peck of flakes, ranging from the breadth and thickness of the hand to about ½ inch in breadth, were found in a hole about 1 foot deep scooped out of the red subsoil, quite near a "Picts' circle," one of a group which once existed there. The discoverer carefully notes that there was a complete absence of dressed flints.\textsuperscript{2} About a hatful of small, flattened pebbles of flint split in two by a blow on the edge, some of the moieties of which fitted exactly, were recovered from a stone cist found at Cross-stone, near Ellon.\textsuperscript{3} These are all Aberdeenshire examples, but there are a few more, which fall to be noticed, in other parts of Scotland.

The supposed site of a manufactory for arrow-heads was discovered on the Bin Hill, near Cullen, Banffshire.\textsuperscript{4} Sir Daniel Wilson mentions the discovery, about 4 miles north of Port Ellen, Islay, of a cist containing a human skeleton, and a large quantity of flakes and chips which on being removed from the grave formed a heap measuring 18 inches to 2 feet in height, and the finding of a quantity of flakes in cists which were discovered under two cairns on the estate of Wells, Roxburghshire.\textsuperscript{5} Important discoveries of large numbers of flint cores, flakes, chips, and slightly worked objects have been reported from the 30-foot raised beach at Campbeltown, Argyll, in circumstances which showed that they had been worked during the formation of that beach, when the water encroached much further on the land than it does at the present day.\textsuperscript{6} The first find was at Dalaruan, in the north-west part of the town, where a Bronze Age cinerary urn and incinerated human bones were found in a cavity partly excavated in the gravel of the beach. The occurrence of the flints in the beach underneath the urn showed that the manuacture of the flint had taken place long anterior to the Bronze Age burial. The second find took place at Millknowe, some 300 or 400 yards south-west of Dalaruan, where flakes and skelbs of flint were discovered in great abundance in a dark layer covered with 2 feet of shingle and with the same depth below. This dark deposit, evidently produced by the occupation of the site by a prehistoric people, extended a distance of 7 yards, varied from 3 inches to 6 inches in thickness, and gradually tapered out at the edges. Besides the flints, it contained fragments of burnt wood and numerous animal bones, with a few fish bones. A zinc bucketful

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\item \textsuperscript{1} Proc. Soc. Ant. of Scot., vol. x. p. 512.
\item \textsuperscript{2} Ibid., vol. xxxvii. p. 366.
\item \textsuperscript{3} Ibid., vol. vi. p. 246.
\item Evans, Ancient Stone Implements, second edition, p. 280.
\item Prehistoric Annals of Scotland, second edition, vol. i. p. 177.
\item Proceedings, vol. xxviii. p. 266.
\end{itemize}
taken from the dark layer yielded no less than "four hundred and ninety-eight pieces of flint, mostly very small chips and scales, such as fly off during the process of breaking." Many pieces of quartz which had apparently undergone severe burning were observed, but no shells and not a scrap of pottery were recovered. The deposit was not confined to one spot, but little nests of similar dark material were found at frequent intervals. Three large nodules of flint, with large slices broken off each of them, weighing respectively 5 lbs., 7½ lbs., and 10 lbs. 1 oz., were found at the same level and not far apart, about a depth of 5 feet in the beach. The discoverer had little doubt that the flint had been brought from Ireland, as the large nodules were "apparently identical with the flints of the opposite coast of Antrim." After discussion, he rejected the theories that they were transported hither by drifting seaweed or by the action of ice.

At the Glasgow Exhibition of 1911 Mr Ludovic M'L. Mann exhibited two hoards of large, selected, partly worked flint flakes found in the Rinns of Galloway, which he believed had been imported from the north of Ireland.\(^1\) One hoard consisted of seventy-seven flakes tightly packed together, with two hammer stones, one of white quartz and the other of greywacke, and a semicircular rubbing stone. The deposit was discovered about 1½ or 2 miles east of Portpatrick, covered by a growth of 8 feet of peat, touching the bole of a large, decayed oak tree, which had been overgrown by the peat. The other hoard, which was also found packed close together about 7 miles east of Portpatrick, contained one hundred and fifty-six flakes of flint.

The instances of flint deposits previously mentioned relate almost entirely to collections of split nodules, flakes, and chips, the only objects bearing evidence of further work being the three implements in the Hill of Skares find, and the slightly dressed Campbeltown flakes. But two discoveries of collections of secondarily worked flints found in association have been described to our Society. The first of these consisted of thirty-four roughly dressed, oval objects, twenty-eight of flint and six of a cherty nature, which were found 9 inches below the surface of the ground, on the Hill of Bulwark, Old Deer, Aberdeenshire.\(^2\) They were placed between two stones about 6 inches square, without a cover stone so far as could be ascertained, and many chips were found buried to a considerable depth in the immediate vicinity. The second discovery is recorded by Mr Mann, and I was fortunate in visiting the site with him subsequently, when a few more specimens were obtained. The site occupied a slight ridge on the farm of Culmore, Wigtownshire, overlooking Luce Bay, and from

\(^1\) *Catalogue of the Scottish Exhibition, Glasgow*, p. 813.

"the space of a few yards" over six hundred and thirty-six chippings and cores of flint were recovered, many of the chippings being mere skelbs; ten unbroken nodules were got, and some of the flakes bore evidence of having undergone the action of fire; eighty good implements, including arrow-heads, scrapers, saws, borers, and knives, and thirty with very slight secondary working, were found, as also four hammer-stones of quartz and quartzite, and a rubbing stone of sandstone. An uncommon feature of some of the implements was the retrimming of portions of their surface, a peculiarity commented on by Mr Mann, and noted by him on some of the flint implements in his collection from other parts of Wigtownshire. The original flaking was covered with a distinct patina, while the later flaking showed sharp unpatinated ridges, from which it was inferred that they were implements belonging to an older period which had been brought to this spot to be refashioned.

Doubtless many sites approximately similar in character to some of those referred to have been turned over during farming operations and in peat-cutting in Scotland, especially in Aberdeenshire, without being recognised, far less recorded; but when those about which we have some information are compared, they throw some light on the methods and customs of the ancient Scottish workers in flint. One of the primary processes in the manufacture of flint implements is indicated in the collection of small split nodules found in the cist at Cross-stone. They were split by a blow on the edge. This, however, was not the only method of breaking down a nodule of flint into flakes. Perhaps a more frequent process was to strike off one end of the pebble and remove longitudinal flakes from its entire circumference by striking them off by blows on the truncated end. After sufficient flakes had been detached, or it was impossible to remove more, the central portion of the nodule was discarded as waste, which when found is termed a core, or nucleus, by archaeologists. From a small farm in the parish of Insch, Aberdeenshire, I have got more than one hundred of these cores, besides many implements and flakes, but they were found scattered over the farm. There must have been a considerable amount of flint-working on this place, the raw material used being complete nodules which, so far as we know, had been brought here from a distance of over 20 miles, as there is no known natural flint deposit nearer than Buchan. This would seem to indicate a business in raw flint radiating from Buchan for long distances over the north-east of Scotland. The site of the Strathdon flint working lies nearly 40 miles as the crow flies from the nearest Buchan deposits; and as much of the intervening country is still rough and hilly, we can realise that it was a matter of no little difficulty for the inhabitants of

the hill-country to secure their supply of this very necessary material during the Stone and Bronze Ages. The flint-using people on the Bin Hill, Cullen, had a flint supply nearer at hand on the shore at Boyndie Bay, west of the town of Banff.\(^1\) The Campbeltown discoveries, which fortunately were carefully exploited and clearly recorded, were surprisingly unproductive of finished implements, such as scrapers or arrowheads. It would appear that the flint-workers had their raw material brought from Ireland to the head of Campbeltown Loch, not in small quantities, but, as has been suggested, by the canoe load, had squatted down on the raised beach there at the time when it was being formed, and had flaked down their flint nodules. Whether they completed the manufacture of the implements at this place and carefully removed the finished objects, or whether they contented themselves with performing the simple operation of striking off the flakes, carrying away the best of them, and leaving only the rejected pieces, it is impossible to say. In referring to this discovery, however, it has to be remembered that the relics were found under circumstances which seemed to indicate that they were fashioned during the formation of a raised beach which since that time has been elevated some 30 feet above sea-level. Not only has this rise taken place in the interval, but I have seen evidence of what I believe to be a distinct depression of the land, in widely separated parts of the west of Scotland, since neolithic times. As these land movements would probably extend over a long period, the Campbeltown worked flints seem to belong to a very remote time. This may explain the absence of well-known types of neolithic flint implements in the deposits.

The discoveries near Portpatrick demonstrate a more advanced condition of trade, inasmuch as they consisted only of fine selected flakes, apparently consignments of partially manufactured goods packed up for transport from one district to another. The theory that these two parcels of flint and the Campbeltown discoveries betoken a traffic between the north-east of Ireland and the nearest points of the south-west coast of Scotland in very early times is not at all unreasonable. Other prehistoric relics discovered in the south-west of Scotland bear traces of Irish influence. As an instance, I think it will be found that the hollow-based arrow-head of flint (not the lop-sided variety), which is not at all uncommon in Ireland though comparatively rare throughout Scotland, is found in greater numbers in Wigtownshire than in any other part of Scotland.

A further development in the Scottish flint industry seems displayed in the Bulwark find of roughly-fashioned, oval objects. In recording this discovery Dr Anderson said that they seemed "to point to another

variety of conveyance from the source of supply. The carriage of selected nodules from the place where they were found to the place where they were broken up for manufacture is a previous stage. We have here the material partially manufactured, roughly blocked out for arrow- or spear-heads, and apparently so treated that it may be easily transported to a distance and bartered away in places where there is no natural supply of flint."¹ To the discoveries on the Hill of Bulwark and in the Rinns of Galloway, and perhaps to those at Campbeltown, that on the Hill of Skares is a fitting sequel. The absence of cores and nodules, either broken or whole, and the presence of small flakes only, seem to indicate that the flints were brought there in a partially manufactured condition, either as simple flakes or perhaps roughly dressed, after which they underwent the final process of shaping and flaking. From the small quantity of waste material remaining it is obvious that the number of objects which had been fashioned must have been small, and it is peculiar that each of the three worked pieces left should represent a different class of implement. Possibly the kind of implement produced would many a time be determined not only by the original shape of the flake but by the shape it took after being further broken. The absence of all traces of fire and of any other evidence of human occupation, and the small quantity of flint chips on the site on the Hill of Skares, indicate that it was not inhabited for any length of time. It seems to have been occupied only for the time necessary to fashion a few flint implements, which operation accomplished, the flint-worker and his friends had passed on to some other place. Whether we see in this site evidence of a visit from a travelling arrow-head maker or of a local craftsman we cannot say.

The collection from Culmore indicates a site quite different in character from all the others except the one on the Sands of Forvie. Flints in the raw state, as waste pieces partly manufactured, or as finished implements of different sorts, the evidence of fire, and the presence of hammer stones and a rubbing stone, seem to indicate that more than a temporary visit had been paid to the spot. The Culmore flint folk could get a supply of the raw material in the raised beach on which they lived, and they dwelt in a district with a comparatively good climate and a plentiful food supply in the neighbouring Luce Bay, a combination of conditions found in few parts of Scotland.

Outside Aberdeenshire, flint must have been a scarce and valuable commodity in Scotland during Neolithic and Bronze Age times. I have been surprised at the number of small, irregular, pitted nodules of flint on Glenluce Sands which bear traces of attempts to remove flakes from them. It is quite evident that the flint-workers there had not a super-

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fluous supply of the commodity; because if they had, it is difficult to understand why they should have wasted time in treating such unpromising material.

In recent times, granted suitable conditions, and especially before means of communication were so highly developed, the tendency was for goods to be manufactured near the source of the raw material, as in the case of the iron industry in the midlands of Scotland. This does not seem to have obtained with the flint industry in prehistoric times. Whatever future discoveries may reveal, there is no evidence, so far, to indicate that East Aberdeenshire, in spite of its abundant supply of raw material, was a great centre for manufacturing flint implements for export to other parts of the country. Doubtless many of them would be carried considerable distances, but we do not know of any large refuse-heaps which would have accumulated had there been manufacturing on a large scale, and any evidence with which we are familiar, small though it be, points rather to a trade in raw or partly manufactured material. Two papers dealing with the Aberdeenshire flint deposits, read to the Society more than forty years ago, touched on this question. The first paper stated that the examination of some of the small pits, a few yards in diameter and 12 to 18 inches deep, dug into the flint bed on a brae-face at the Den of Boddam, yielded no flakes. However, mention was made of a large quantity of chippings which had been found in the same locality by another archaeologist. In the second paper it was noted that no flint nodules occurred at or near the spots where flakes were found abundantly, nor in districts where nodules abounded did flakes occur, from which it was concluded that material used in manufactories must have been conveyed there from a considerable distance. Discoveries recorded since these views were expressed in no way refute them.

These records certainly give us some information regarding the prehistoric flint trade in Scotland, but they tell us very little regarding the actual method of working the flint, of transforming the nodule into the finished arrow-head, scraper, or whatever tool was desired. Only in the Culmore find and in one of those near Portpatrick was there discovered any tool which might have been used in the manufacture of flint, and that was the hammer stone. From the conchoidal fractures and bulbs of percussion seen on flint flakes we know that they must have been struck off with a sharp blow. But, while the hammer stones may have been the instruments used for this purpose, we must remember that these objects have frequently been found on dwelling sites belonging to a period long after flint implements ceased to be made, or where no flints were seen. There is little doubt that they were used for triturating or pounding

2 Ibid., vol. x. p. 514.
down foodstuffs. Some of the smaller examples, which have been found in considerable numbers on the Glenluce Sands, would have been of little use for this purpose and may easily have been utilised in the manufacture of flint, but others are so large that the preparation of food seems a more feasible explanation of their purpose. If required in working flint, we do not know whether they were used to strike the flint directly or as a hammer to strike a flaking tool. Two of the smallest hammer stones in my collection were found on the farm of Jericho, which lies at the foot of the Hill of Skares, in a field that borders the market-stance on the Hill of St Sairs on the south side of the farm. They were found on the highest part of the field, where many small skelbs of flint have been seen scattered over a considerable area. Flint implements have been found over the most of the farm, but this is the only place where small chips are also found in quantities. I have no doubt that a flint workshop existed hereabout, although I have been unable to locate the exact spot.

It would have been important to learn that the Skelmuir anvil-stones were found directly associated with flint flakes or chips, but I do not know if such a fact has been placed on record.

We have still much to learn about the methods adopted by the old flint-workers in producing the different varieties of implements and tools with which we are familiar. Sites of flint factories and of the habitations of the people who used the implements turned out may still be detected by careful and methodical investigation of rough country and even of cultivated ground. In the event of any land being reclaimed in counties like Aberdeenshire, Wigtownshire, or Berwickshire, where plenty of implements have been found, archaeologists should if possible endeavour to get into touch with the people who are undertaking the work and ask them immediately to report discoveries of flint in any form.

A few words may be said about other antiquities found in the neighbourhood of the Hill of Skares. Four farms, Waulkmill, Colpy Farm, Jericho, and Upper Jericho, encroach on the south-east and south slopes of the hill. A carved stone ball with six knobs was found on the first-mentioned farm, in the field which borders the hill on the south-east. Immediately to the south-west of this field is a croft on which is the site of the cairn where the three stone cups described by me last session were found. This site is marked on the O.S. map, which also states that a stone cist was discovered in 1860 on or about the site. On Colpy Farm, the adjoining place, the map also records the discovery of a stone axe, and the sites of a stone circle and of a cairn, between which an urn was found. To the record for this farm I can add discoveries of a flint axe and of three other stone axes, now in my collection. From the farm of
Jericho I have secured four stone axes, and from Upper Jericho three. Besides these, I have got more than one hundred arrow-heads and several hundred other implements of flint from the three last-mentioned farms.

On the right bank of the Jordan, a small burn that runs down the glen, is St Mary's Well, on the farm of Jericho. This spring is correctly placed on the O.S. map, but, following the incorrect statement in the New Statistical Account that it lies on Colpy Farm, certain writers have been misled.

This does not exhaust the list of Biblical and religious place-names of this very limited area. I have mentioned the hill of St Sairs on the south side of the farm of Jericho. The summit of this hill has been for several centuries the site of St Sairs Fair. It has now become little more than a horse market, although it still attracts caravan folk from the environs of London. In spite of the remoteness of the locality it remains one of the largest horse fairs in Scotland. According to local tradition, there is the site of a church in the small plantation on the south side of the market stance. The late farmer of St Sairs, who is now about eighty-three years of age, told me that in his young days the outline of a rectangular building overgrown with grass was plainly visible, and that when his father was rebuilding the farmhouse they dug into the mound in the hope of getting some large building stones, but without success. All trace of this structure has now disappeared, as the site has been encroached upon by a quarry.