

V.

NOTES ON A DEPOSIT OF FLINTS WORKED TO A LEAF-SHAPE,
FOUND AT BULWARK, OLD DEER, ABERDEENSHIRE. EXHIBITED BY
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Sometime ago I heard from Mr Alexander Gray, New Deer, of the discovery of a deposit of flint implements, which excited my curiosity in consequence of their being described as "all of the same kind," and of "an oval form," but "roughly finished." Having asked Mr Gray, in whose possession they were, to be so good as to let me see them and tell me the circumstances of their discovery, he very obligingly sent the flints for exhibition to the Society, along with the following narrative of the manner in which they were found :—

"As requested, I now send you a package containing the flint implements found at Bulwark, in the parish of Old Deer, which embraces the whole find, with exception of two that I have been unable to obtain.

In accordance with your wish to know the circumstances under which they were found, I may say that Old Deer, or Deer, as it was formerly called, is one of the ancient parishes of Buchan, and is about twelve miles distant, in a westerly direction, from Peterhead. The hill of Bulwark is on the western boundary of the parish, and has an elevation of 465 feet. The old castle of Clackriach is about half a mile distant, lying to the north-east, and the Abbey of Deer about two and a half miles in the same direction ; while the old castle of Federate may be seen to the north-west, about four miles distant. Near the foot of the hill, to the west, lies the primitive village of Bulwark, where you may still see houses standing built partly with stone and partly with turf.

On paying a visit to the spot where the flints were discovered, I found an old quarry in the centre of a cultivated field, from which stones for building purposes and macadamising the roads had been taken : its depth is about 15 feet, while the circumference would extend to forty yards or thereby. It is cultivated on the west side to the very brink ; and on the other side, where the find was got, there are a number of square feet around the edge lying barren, apparently never having been under cultivation. It is now the wish of the proprietor to fill up the quarry and bring the whole field under cultivation, and for that purpose all the material that is required is being taken from the bank, so as to gradually bring it up to the surface level. The bank is composed of loose drift stones of various sizes, to the depth of three or four feet ; and while

one of the Deer district road contractors was providing stones for the repair of the roads one of his workmen came upon these implements about nine inches below the surface, lying in association between two stones of about six inches square, but without any covering, as far as he was able to ascertain. Along with these there was a circular disc, which unfortunately he, thinking it was of no importance, threw away, and cannot now find it; besides, there was a quantity of flint chips, which were buried to a considerable depth."

The flints are thirty-four in number, varying from $3\frac{1}{2}$ inches in length by $1\frac{3}{4}$ inches in breadth to $1\frac{1}{2}$ inches in length, and all roughly dressed

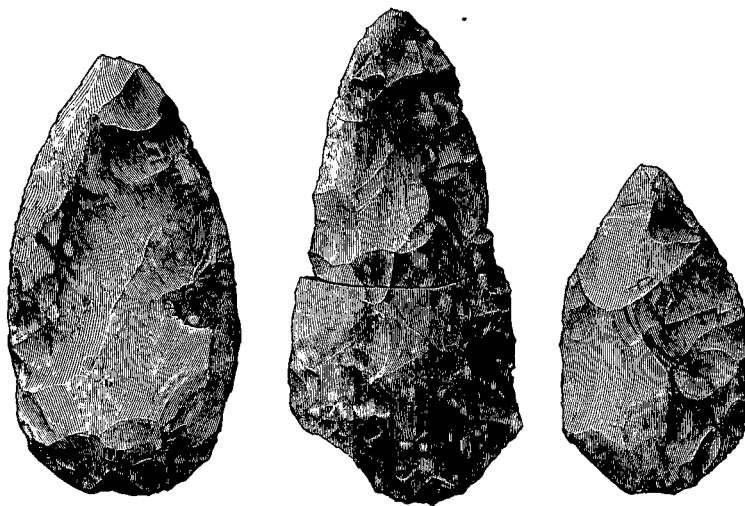


Fig. 1. Three of the thirty-four Implements found at Bulwark, Old Deer, Aberdeenshire.

to a leaf-shape. I have selected the three here figured (fig. 1) as typical of the general form and finish of the implements.

Of the whole thirty-four implements, eight are of a cherty stone and twenty-six of flint, about half of these being of brownish flint, and the other half greyish, inclining to white. The greater number are merely flaked to a leaf-shape, but a few are also roughly worked to both edges.

The occurrence of this interesting deposit is suggestive of some curious problems in Scottish archæology. First, as to the source of

supply of the raw material, it is known that there is no chalk formation in Scotland from which an unlimited supply of flint could be obtained, and hence the supply of the raw material is much more limited, both as to the size of the nodules and the frequency of their occurrence, than in England and Ireland, where the natural supply from the chalk-beds exists. Consequently, the relative numbers of flint implements of the larger varieties, such as axes, spear-heads, and the leaf-shaped knives, are few in Scotland, while the smaller varieties, such as arrow-heads and scrapers, are abundant. But the inhabitants of the Buchan district could never have had much difficulty in obtaining a supply of flint sufficient for their needs, and probably also sufficient to furnish a supply for exchange with the natives of other districts less favourably situated with respect to the natural supply of the raw material. There is in Buchan a drift deposit of the denuded remains probably of an old chalk formation which extends from the coast near Peterhead to a distance of eight or nine miles inland, and patches of drift of the same nature occur in some other localities on the Aberdeenshire coast. It is thus described by Mr T. F. Jamieson :¹—

“The source from which the natives of the Buchan district might have obtained their flints can readily be pointed out. There is a low, moory ridge, extending from the coast near Peterhead for about eight or nine miles inland, to a place called the Bog of Ardallie. The height of this ridge is from nearly 300 to 500 feet above the sea, and it is all overspread with water-worn pebbles of flint, generally in greatest abundance along the crest of the ridge. These flints have been derived from some bed of chalk that probably once existed there, as the characteristic fossils of the Chalk period may be detected in them. The flint gravel is several feet thick in some places, as, for example, in the Den of Boddam. Patches of the same nature occur in a few other spots in the north-eastern part of Aberdeenshire, but nowhere in anything like the same abundance as along this ridge. The natives, therefore, could have no difficulty in obtaining any quantity of flint.”

In a “Note on the occurrence of native Flints in Aberdeenshire,” communicated to the Society in 1874 by Mr Ferguson of Kinmundry, F.S.A. Scot., the same geological feature is referred to as “an enormous accumulation, over a considerable part of the district, of water-worn chalk-flints,” which he describes as follows :²—

¹ *Proceedings*, vol. vi. p. 240.

² *Proceedings*, vol. x. p. 515.

“Running slightly to south of west, there is a ridge of high ground, taking its rise nearly at Buchanness, and stretching across the country continuously for eight to ten miles: at its eastern extremity it branches. One of the forks terminates south of Buchanness in the mass of granite called Stirling hill. The other runs north of Buchanness, and may be said to terminate in the granitic escarpment of the Black hills. All along the shore, wherever between these points the rocks admit of a beach, quantities of water-worn flints are found mingled with the other pebbles, evidently washed up by the waves. They are also found, although sparingly, on the southern ridge, or Stirling hill. But on the Black hill, and neighbouring hill of Invernettie, the surface is almost covered with them. This ridge, at the distance of about seven and a half miles from the sea at Salthouse-head, attains an inland distance of about five miles from the coast opposite Slains. The flints are met with on the surface at various points along that line. The ridge is bare and moorish, but covered with peat and heather, and this prevents the flints from being accurately traced. At this point, however, seven and a half miles along the ridge, and five miles from the sea, they have been laid bare.

They occur at the extreme verge of the parish of Old Deer, and are principally seen at the farm of Bogingarry, on the lands of Kimmundy. The ridge of hill here trends to the north, coming round again towards the west, so as to expose to the south a deep bay, with a considerable slope to the south. The hill is covered with moss and heather, and is partly planted. The south face of the hill has been under cultivation for the last fifty years. The flints are seen on the surface, commencing pretty far up on the east side of the hollow, and, following at the same height the crescent form of the bay, disappear among the heather, which has not yet been removed, on the extreme west. They are in great abundance, covering a space of from twelve to twenty yards in breadth.

About 1830, in cutting a ditch to carry off the surface water from the garden of the farm-house of Bogingarry, the bed of flints was come upon, and found to be of considerable thickness. The ditch ran from south-west to north-east, traversing the flint-bed, and a short cross ditch lay in the line of the bed.

When I saw the ditch first it had been open a good many years, and had become partly filled up. It had, however, a singular appearance. It was crossed by the road to the house, and the water-run of the bridge was choked with rounded flints of all sizes. Above the bridge the bottom of the ditch was covered with rounded flints, brought down by torrents. The layer of soil was extremely thin, and below it the ditch was cut through a stiff yellow clay, scarcely a pure clay, more like a yellow clayey gravel, and so hard as to be pierced with difficulty. Except in the bed itself, very few flints are to be seen amongst the clay. The top end of the ditch and the cross one are in the bed. The flints lie closely packed together, embedded in the already mentioned

clayey matrix. Many of them weather when exposed to the air, becoming white, and in some cases they shiver into flakes. When newly taken out of the bed they usually break with a clear fracture, but soon they become hard, and lose their facile cleavage.

Flints are also found on the surface of the hill of Skelmuir, adjoining Bogingarry. This hill is separated from the hill of Kimmundy by a valley and a deep morass, called the Bog of Ardallie. South-westward they are found in great abundance on the hill of Dudwick, in the parish of Ellon. This seems to be their southmost limit. I learn from a paper by Mr Christie, of Banff, published in the *Edinburgh Philosophical Magazine* for 1831, that they occur at Boyndie Bay, in that shire, and also in a mass of diluvium covering the high grounds between Turriff and Delgaty Castle. The flints at Boyndie Bay are found strewed along the shore, and contain traces of zoophytic organic remains. Those at Delgaty are likewise characterised by the remains of sponges, &c.

The station at the latter place is ten miles from the sea, and is the highest ground in the neighbourhood. The flints are found, as already mentioned, in a mass of clay cresting the hills. None are found in the hollows, except when washed down by streams."

Sites which supply evidence of more or less extent of the local manufacture of implements from this native supply of flint are scattered over the greater part of the neighbouring district. Mr Jamieson notices the discovery of such sites on both sides of the river Ythan, between the village of Ellon and the sea, and on the north bank of the Ugie, also near its mouth. Mr Ferguson notices a number of finished implements found at different places in the neighbourhood of Old Deer, and quotes Mr James Dalgarno, *Corr. Mem. S.A. Scot.*, and Rev. Dr Longmuir, as the authorities for the occurrence of deposits of implements, chips, and flakes at Fernie Brae, at the hill of Arnage, at Moreseat, and on the Black hill, near Boddam. Mr Sturrock found a quantity of flint chips and flakes, with hammer and anvil stones, at Skelmuir.¹

Mr Ferguson, however, notices a curious circumstance,—that no flint nodules are found at or near the spot where the flakes are found so abundantly, nor in those districts in which the nodules abound has he ever met with the flakes; and he concludes from this that the material used in the manufactories must have been conveyed there from considerable distances.² Mr Jamieson also notices another curious fact, which

¹ *Proceedings*, vol. xiv. p. 314.

² *Proceedings*, vol. x. p. 514.

seems to show that the early inhabitants dug pits into the flint-nodule-bearing gravel-bed to obtain a supply of the nodules, which, as is well known, are much more easily worked when fresh from the bed. At the Den of Boddam he noticed a great many small pits or excavations which the country people assign to the ancient inhabitants, calling them "Picts' Camps" or "Picts' Houses." They are generally a few yards in diameter, and now only a foot or two in depth, but they are made in the flint gravel, and extend over several acres of ground on the face of a sloping bank, "giving it a sort of honeycombed or pock-pitted appearance." He also notes that he did not observe any heaps of manufactured flints, though Mr Dawson had seen on one spot a large quantity of chippings, apparently the debris of a manufactory.

But it is unusual to find, as in this case at Bulwark, a quantity of roughly dressed implements, all of the same kind, placed together as a single deposit; and this seems to me to point to another variety of conveyance from the source of supply. The carriage of selected nodules from the place where they are found to the place where they are 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.