ART. III.—*Newly discovered flint-chipping sites in the Walney Island locality.* By F. BARNES B.A., F.L.A., and J. L. HOBBS.

Read at Carlisle, April 7th, 1951.

THE late Mr T. W. Ogilvie, F.G.S., of Barrow, had a great interest in the flint-chipping site at North End, Walney Island, which has been fully described by the Hon. Marjorie Cross in these *Transactions*. Noting its relation to the 25 ft. raised beach, he formed the opinion that further sites might exist at Sandscale (on the mainland opposite North End) where conditions are similar. During 1945 he spent much time exploring this area and the positive evidence obtained has been published already (CW2 xlvi 68-69). Only his death in the following year prevented him discovering true artifacts, for a small team consisting of Mr J. P. Shields, Mr R. Walkden and ourselves, working for the Barrow Museum, followed Mr Ogilvie's lead and soon located small chipping sites along the coast as follows:—

(1) *Roanhead.* Knapping has taken place at several spots over an area of approximately 500 yards by 30 yards where the gravel "raised beach" is exposed among the sand dunes. A good example of petit tranchet derivative arrowhead (fig. 1, 1-2) of Grahame Clark's Class H (*Arch. Journ.* xci 32) was found here.

(2) *Sandscale.* One small site of about 20 square yards on the gravel immediately behind the first line of dunes, above high water mark. An exceptionally fine fabricator originated here (fig. 1, 2-2).

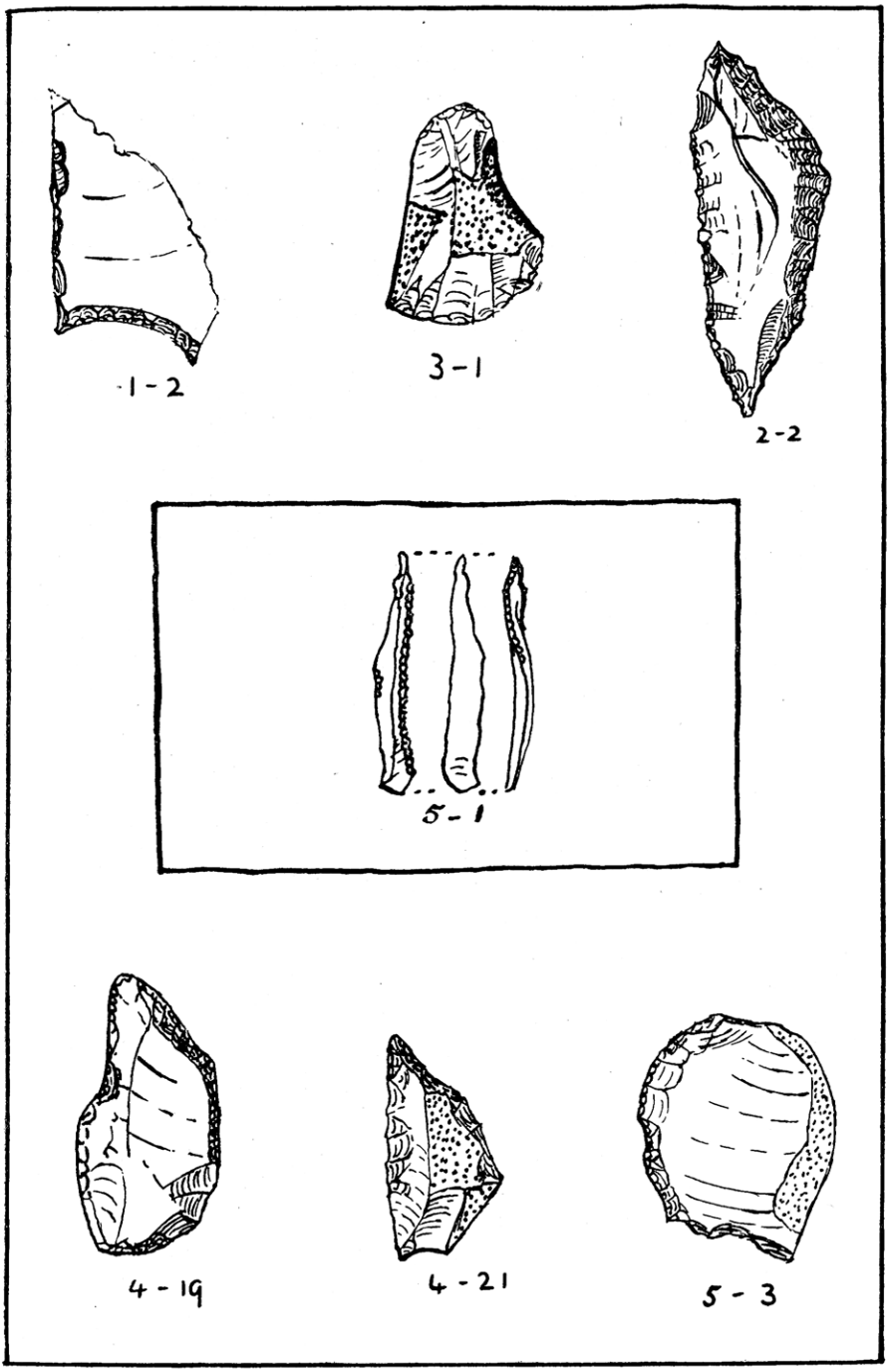

Fig. 1.

Reports that broken flints were occasionally found on ploughland south of Biggar Village re-directed attention to Walney Island and, aided by some valuable assistance provided by Miss F. I. Clark and pupils of Walney Modern School, further discoveries were made.

(3) *Cow Leys Scar.* In a field here the plough turns up flint artifacts, chips and cores. There are two distinct sites separated by a distance of about 70 yards. On the more northerly and minor site, near Lamity Syke Pit, a small "anvil stone" was found.

(4) *Cross Dike Scar.* The plough again reveals evidence of a considerable industry in the field east of the disused reservoir. Artifacts, which include several excellently worked scrapers (fig. 1, 4-19, 4-21) are found over a wide area comprising the northern half of the field; the perforated implement of "mace-head" type reported in CW2 xlvii 244-5 was found within a few yards of the south hedge of this field. During September 1950 Mr J. T. Robinson (a former pupil of Walney Modern School) found on this site a pestle which he has presented to the Barrow Museum (5243/S.4-3). The first tool of this type from Walney Island, its description is as follows: Formed of a cylinder of grey sandstone rounded at the top. Length 3 3/8 in., average diameter 1 5/8 in., weight 8 oz. The flattened base shows considerable traces of use, and pittings on the side suggest a secondary use as a hammer-stone.

(5) *Trough Head.* Flints, including a blade, a scraper (fig. 1, 5-3), and a microlithic point (fig. 1, 5-1) — referred to later — have been picked from the steep cliff of boulder clay, here about 40 ft. high, where the sea is eroding the fields of South End farm. These fields immediately behind the cliff contain much broken and flaked flint. A slice from a broken "mace-head" (2 3/4 in. by 1 3/4 in. and 3/8 in.

thick; probable original diameter was 3 1/2 in.; diameter of perforation at surface 1 in., minimum diameter on slice 5/8 in.; of fine sandstone) also was found here and although only a thin slice remains it clearly shows the method of perforating by pecking out from both sides. Flint nodules, some retaining portions of the chalk matrix, are plentiful at the foot of the cliff, i.e. the presence of chalk proves that the nodules have *not* been water-rolled, the inference being that they have dropped straight out of the boulder clay. Small fragments of pottery of a Bronze Age type have also been picked out of the cliff 3 ft. from the surface.

(Identification of Sites: Normal National Grid References, using O.S. 1 in. Map. New Popular Edition, 1947, Sheet 88: Roanhead—34/195757; Sandscale—34/184741; Cow Leys Scar—34/192651; Cross Dike Scar—34/197646; Trough Head—34/204629).

By reason of the thinness of the deposits and the comparatively small area in each case except at Cross Dike Scar (where the plough has probably scattered the concentration) sites 1 to 4 inclusive are of lesser importance than the North End, to which perhaps they may be regarded as subsidiary or satellite sites, for all the artifacts found are of the same type and workmanship as those from the major site. Those from 1 and 2 are similarly sand-blasted, but those from the cultivated land are of course unpolished.

It is likely enough that the shifting sand of the mainland sand dunes, and ploughing on Walney Island, may reveal further sites where flint knapping occurred; unfortunately it is even more probable that coast erosion, the erection of sea defences and the laying down of land to permanent pasture have obliterated all trace of others. This new evidence, however, showing such a widespread industry, leads to speculation on two most puzzling

problems—the period or periods of occupation and the provenance of the flint.

As anticipated by W. G. Collingwood, who stated that traces of intensive prehistoric occupation of the coast-line of our area would eventually be discovered (CW2 xxxviii 160), sites have now been found from the Scottish shore of the Solway—Eskmeals—Roanhead—Walney Island—to Hilbre Isle in the Mersey.[1] No doubt many other sites remain to be discovered. The difficult point of dating the Walney sites can hardly be settled definitely at this stage. The occupation layer at the main North End site shows no depth—even midden deposits have a depth of one inch only—thus the inference is that the finds do not represent a long or continuous period of occupation.

Yet various types of arrow-head from leaf-shaped to Bronze Age tanged and barbed have been found; again many of the artifacts could even be paralleled by finds from such late sites as the Scottish Lake Dwellings (PSAScot. *passim*). Although probably not associated in time, it should also be recorded that with curious persistence old iron bloomeries seem to be sited near the flint-chipping floors (e.g. at Eskmeals, Roanhead, Sandscale, Walney North End, and, less certainly, at Cross Dike Scar). It is worth remembering that there is considerable evidence of Bronze Age settlement in Plain Furness[2] and the sites under discussion are not inconsistent with a suggestion that the Bronze Age inhabitants of Furness became aware of the existence of flint in the coastal shingles and established summer camps on the coast to exploit it.

Special reference must be made however to site 5, Trough Head. The implement noted before (fig. 1, 5-1)

[1] Henry Ecroyd Smith, "Archæology in the Mersey District, 1870", Liverpool, T. Brakell, 1871. H. E. Smith also makes several references to the site in various volumes of the *Trans.* of the Historic Soc. of Lancs. and Ches. *circa* 1870.

[2] CW2 xxvi, 47-55, and xxxiii, 163 *et seq.*

was submitted through Miss Clare Fell to Dr J. G. D. Clark, who pronounced it to be a true microlith. Unfortunately, he considered the associated material very indefinite. Miss Fell is of the opinion that the only true scraper from here (fig. 1, 5-3) might be as late as Bronze Age and that while perforated implements originated with the Maglemosian culture in Mesolithic times, they are more common from Bronze Age associations in this country. The large type, to which the broken slice and other Walney perforated pebbles belong, is usually late. We must remember also that Dr Clark himself has given instances of microliths in Bronze Age contexts.[3]

Thus, while the discovery of a true microlith is most interesting, all that can be claimed at present is that the discovery *may* prove to be the first evidence of a Mesolithic occupation of Walney Island. Careful search will be continued here, but without undue optimism, as erosion at this point has been rapid for centuries, and remains of an occupation layer—if one ever existed—may have been long obliterated.

As to the second problem, regarding the provenance of the flint. Miss Cross in her first article (CW2 xxxviii 160) mentioned Dr Goodchild's theory that the glacial débris brought down from the Lake District includes flint, comprising the vestiges of a former Cretaceous deposit, entirely eroded out by the ice.[4] Later it was suggested that the flint may have been imported by human agency.

[3] J. G. D. Clark, "The Mesolithic Age in Britain", C.U.P., 1932: see Appendix V, "Microliths in Late Contexts".

[4] The Geological Survey appears to admit the possibility of the theory:—"[after the invasion by the Rhaetic Sea near the end of the Triassic Period] sedimentation continued for some time, but our direct record of the rocks laid down finishes at the Lias near Carlisle. Some of the later formations were probably deposited but were removed by denudation following the great earth-movements in Tertiary times." T. Eastwood, "Geological Survey, British Regional Geology; Northern England", 1946, 6-7. It is interesting to note that several flints are said to have been picked up on the slopes of Bowfell.

A long and systematic search of the shore shingles and gravel deposits has elicited the following facts which, so far as we know, have not been recorded previously:—

(1) Flint is present in the shingle along the Irish Sea coast at least from Roanhead to beyond Trough Head at South End, Walney, a distance of over seven miles.

(2) While single flints can be found at almost any point on that stretch of coast wherever shingle has accumulated, the distribution of the material is not even, but seems to be gathered in quite definite pockets.

(3) Such a concentration of flint pebbles is present in the beach shingle opposite each of the new sites now reported; but some of the pockets have apparently no chipping floor nearby, e.g. at Earnse Point or Bent Haw Scar.

(4) Although cobbles as large as a four-inch cube have been found, most of these sea-rolled flints are no larger than a walnut.

(5) A piece of blue-grey flint (approximately a one-inch cube) was excavated from the "cliff" of boulder clay (here only 10-12 ft. high) near the Cow Leys Scar sites. Only a fraction of one surface was exposed and the flint was firmly embedded in the boulder clay. Several small nodules of honey-coloured flint were found about 12 ft. above the beach after part of the cliff near Cross Dike Scar had slipped, in circumstances which suggested that they had been buried rather than that they had been disturbed and fallen from the surface. At Middle Hill and at Trough Head unrolled flint pebbles were found in the débris of recent falls of cliff; one small nodule, with thick chalk crust intact, was picked out of the boulder clay about 2 feet above the foot of the cliff, while the flint present in the sea-washed shingle here is rolled smooth, the pebbles tending to decrease in size progressively as the sea is approached. Nearer North End, excavations for the commercial removal of gravel

have been made to a depth of about ten feet opposite North Scar, and examination shows that a low percentage of flint pebbles is included. Most of the specimens of raw flint obtained are honey coloured and of rather poor quality, though the better quality blue-grey flint, used for the finest implements, is never entirely absent.

(6) Flint flakes and nodules have also been picked up along or adjacent to the Walney Channel shores—on the mainland at Ormsgill and Westfield Point, and on the Island (a) in ploughland near Latona Street, (b) between Jubilee Bridge and Water Garth Nook, (c) near Long Rein Point, (d) at Sheep Island. Strangely enough extended search has so far failed to produce any specimens at Piel Island or Rampside.

These facts and our actual observations presented difficulties in accepting a theory that all the flint was brought by man. Although even in its densest concentration on the beaches the exposed unused flint never comprises more than a minute fraction of the total shingle, the quantity is still far too large, and far too much of it is composed of very small pebbles—quite useless for even such a poverty industry as the sites indicate. Nor is the distribution consistent with any suggestion that a store of flint, accumulated by man at the North End, has been spread southwards down the coast by a north to south drift of the shingle through the centuries.

Though the presence of flint has been proved both in the gravel at North Scar and in the boulder clay farther south the proportion is insufficient for easy demonstration *in situ*. Where the clay matrix has been washed by the sea, however, the softer rocks were broken up comparatively quickly, the remaining harder boulders and pebbles being rolled and spread out, rendering the presence of flint easily noticeable.

These observations and specimens of flint were submitted to Dr K. C. Dunham of H.M. Geological Survey who, after sectioning specimen flints, writes: —

"I find the textures of the flint pebble from the Trough Head boulder clay (E.23753) and of a worked flake (ENQ 1091) are in all important respects identical. Both are composed mainly of chalcedonic silica in which the grain size does not exceed 0.005 mm., and both contain remains of sponge spicules preserved in 'quartzine'.

I am, therefore, satisfied that the flint used by primitive man here could have come from the boulder clay. I am not, however, certain, and I do not think you can be certain, that no flint is carried up on the shingle directly by the sea; both under-sea outcrops of boulder clay, and conceivably, of chalk, could contribute to the shingle."

In conclusion reference may perhaps be made to the flint sites found on the South Yorkshire Moors which raise similar questions, for the material is not the poor quality flint of the Yorkshire Wolds, but probably nodules and pebbles left as a very sparse residue by the melting glaciers (Armitage, "Early Man in Hallamshire", 1939, 8). Armitage also records the care and thrift with with which the Yorkshire flint was husbanded; ". . . the implements were made smaller so that less flint might be needed, and scarcely a flake has been wasted. Even the tiniest scraps were used, so that Mr Armstrong found exquisite scrapers, too small to cover a threepenny piece." (*Ibid.* 9-10). These words would apply very aptly to the poverty industry of Walney Island, Roanhead and Sandscale. A further interesting parallel typologically is provided by flints found on Kersal Moor, where again the material was gleaned from the glacial gravels. (*Trans.* Lanc. & Ches. Ant. Soc. xxv 83-84).

It is obvious that close attention must continue to be given to the coast-line of our area, particularly the coastal shingles and gravels of the 25 ft. raised beach, as it forms such a hopeful source of advancing knowledge of local pre-history.

Acknowledgements: In addition to those already named, our grateful thanks are due to Mr F. H. Smith, B.Sc., for his helpful information; to the Hon. M. Cross for her drawing of the microlithic point (fig. 1, 5-1); and to Dr K. C. Dunham for permission to cite his above-quoted report.