	No. 1.	No. 2.
Maxillary radius	4·0	4·3
Fronto-nasal	3·7	4·0
Circumference	19·4	20·5
Longitudinal arc	14·0	14·5
Frontal longitudinal arc	4·7	5·1
Parietal longitudinal arc	5·0	5·2
Occipital longitudinal arc	4·3	4·2
Occipital (subinial)	1·8	2·4
Frontal transverse arc	11·8	12·7
Vertical transverse arc	12·8	13·1
Parietal transverse arc	13·2	12·8
Occipital transverse arc	10·8	11·0
Latitudinal index	·820	·816
Altitudinal index	·830	·816
Gnathic index	·500	·325
Capacity C.I.	84·	92·

Explanation of Plate VIII.

Figs. 1 to 4. Skull of a male Red Indian of Newfoundland.—Fig. 1, norma lateralis; 2, norma facialis; 3, norma occipitalis; 4, norma verticalis.

Figs. 5 to 8. Skull of a female Red Indian of Newfoundland.—Fig. 5, norma lateralis; 6, norma facialis; 7, norma occipitalis; 8, norma verticalis.

On the Stone Implements *of* Newfoundland. By T. G. B. Lloyd, C.E., F.G.S., M.A.I. [With Plates ix. x. xi.]

These implements belong to the class known as surface implements. Numerous discoveries of chisels, gouge-shaped implements, stone pots, spear-heads, &c., have been made in various parts of the island, a few of which have found their way into the Museum of the Geological Survey at St. Johns. Some have been carried away out of the country as "curios," whilst others have been preserved for use as hones by their discoverers. The localities at present known are comprised in the following list. Starting from St. Johns, from east to west, and passing round the island, they will be met with in the following order:—Fox Island, Randra Sound; Trinity Bay; Bonavista Bay; Funk Island; Torilinguet Island; Nôtre Dame Bay (Bay of Exploits and Hare's Bay); Granby Island, Sop Island, White Bay; Conche Harbour; How Harbour, Hare Bay; Bonne Bay; mouth of Flat Bay Brook, St. George's Bay; Codray River. It is probable that the foregoing list does not include many of the localities where stone implements have

been found, because such relics are generally regarded as of little value, and no record is kept of their discovery.

It is worthy of remark that the localities in the foregoing list are situated on or near the sea coast.

The stone implements which had been brought to notice previous to my visit in 1873, were, as far as I could learn, of the larger sorts, viz. stone pots, gouges, and spear-heads, with the exception of a few "sinkers" dug up at the Indian Burial Ground in Nôtre Dame Bay, until my discovery of stone relics of different classes at Sop Island and Conche Harbour.

Sop Island.—At the back of a small cove near the northern end of the island is a small piece of ground which had been converted into a potato patch by an Indian family then living on the island. In the blackish vegetable soil of which it is composed, and at a depth of a few inches below the turf, a considerable number of stone implements were discovered, such as chisels and pieces of broken pots; some of them had been found, previous to my visit, by the Indian people, and removed to their dwellings. On visiting the spot, I picked up, after a short search amongst the potatoes, two or three finely worked arrow-heads. Whilst I was thus occupied, my Indian guide set to work to remove the turf from the sloping bank between the potato ground and the sea-shore. This search resulted in the discovery of a good number of small arrow-heads, fragments of stone pots, and numerous chips and flakes. In many places the soil bore evident marks of fire; some small bones of birds, which had apparently been burnt, were scattered thereon. The arrow-heads, with the chips and flakes, lay together in small groups.

Conche Harbour [Plate ix].—A triangular-shaped peninsula is connected with the mainland by a narrow neck of land about a quarter of a mile wide, which separates the harbours of "Conche" and "Range." The highest part of the peninsula lies to the east, which is terminated on the coast-line by lofty and precipitous cliffs. On the west side the ground slopes gradually down towards the sea, and a level area between the foot of the sloping ground and the landwash is in part covered with marshy meadows and partly by a bare pebbly beach, on which are built the houses of the fishermen. The rocks in the harbour were formerly much frequented by bay seals. Near the southern end of the peninsula, on a sloping bank, about 28 feet above the sea, was discovered the collection of small stone implements described. A fisherman, named Flynn, who owns the ground at that spot, informed me that whilst clearing away the turf for a potato garden, he came upon what he supposed were the remains of a burial-ground. As well as he could remember, the following appearances presented themselves. Below the

surface of the turf, at a depth of about eighteen inches, there occurred, in descending order:—

1. A layer of yellow clay;
2. A layer of charcoal and ashes;
3. Slabs of large and small stones;
4. Human skeletons arranged in *natural* position, the bones of which crumbled to pieces on being touched. With them were mixed bones of seals and whales. The deposit of bones extended over the whole area of the garden, and may have continued beyond it; he also found measures, stone pots, "drinking-cups" of stone, some whole and others in fragments, and a stone "knife," about eighteen inches long.

A crop of potatoes standing in the garden prevented me from making a thorough search there; but on scooping amongst the soil in the furrows I gathered up pieces of clay, some decayed bones, and a few arrow-heads and flakes. Around the outside of the fence, however, a piece of a stone pot, smoothed on the under side, and showing the marks of a tool, and some pieces of charcoal, were found under the turf.

Having several days at my disposal, I set the Indian guide and one of the crew of our schooner to strip off the turf from the surface of a low sloping bank lying at a distance of about fifty yards from the garden. Underneath it, in the black soil, the greater number of the smaller implements were discovered. On the surface of the rock, forming part of the slope of the bank, the best finds were made. This spot is indicated by a cross on the map (Pl. ix.). At Sop Island the greater number of the implements were also found along the slope of a bank; but too much stress must not be laid on the circumstance, because in several places on the level ground arrow-heads turned up in considerable quantities in proportion to the size of the area searched. The average depth of the surface of the rock below the turf was from a foot to eighteen inches. Occasionally pieces of stone pots, and smooth, oval-shaped pebbles were met with; the latter did not bear either marks of fire or signs of having been used. Pieces of charcoal and chips denoted the presence of worked implements, as at Sop Island. At Conche Harbour a musket bullet, much corroded, was found in the river bank, just below the surface of the turf, which is about one foot thick.

No remains of any implements of bone or horn were discovered.

Small lumps of a black, carbonised substance, containing flakes and small pebbles, together with pieces of charcoal, were found in places. The freshly broken surfaces of the agglomerate show a shining lustre like bitumen. Small pieces of it placed

on a red-hot coal burn with a clear flame, and give off a faint smell. This substance has probably been formed by the flowing over, on to the ground, of seals' fat during its conversion into oil by boiling.

The collection made at Conche Harbour was the result of two men's work for two days and a half.

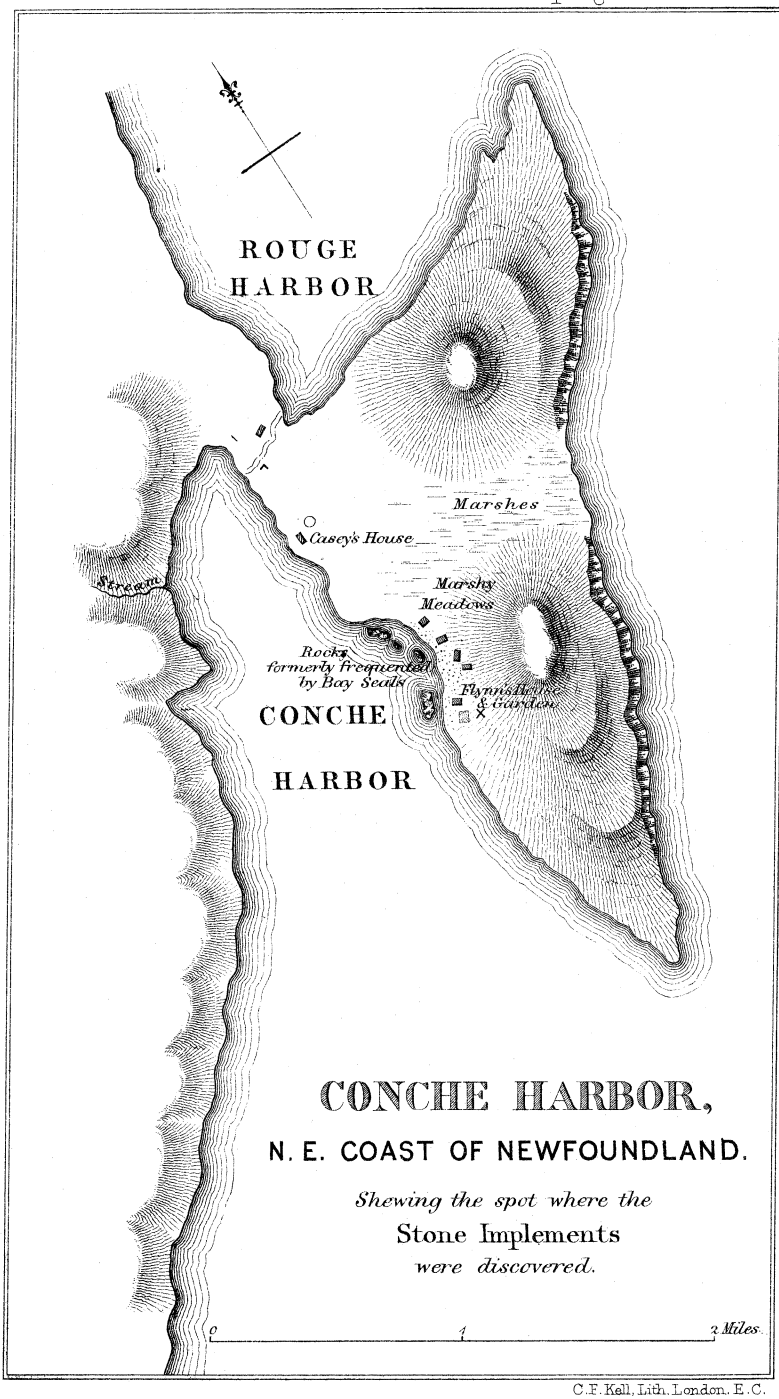
Judging from the vegetation now growing in the neighbourhood, it appears probable that formerly the land was covered with brush, consisting of dwarf Arabian fir, of which the greater part has been cleared away by the settlers.

Description of the Stone Implements.—They may be conveniently divided into nine classes, viz.:—1. Axe- and chisel-shaped tools. 2. Gouge-shaped tools. 3. Broken stone pots. 4. Sinkers. 5. Spear- and arrow-heads. 6. Scrapers or planes. 7. Fish hooks. 8. Objects in the course of manufacture, cores, flakes. 9. Whetstones, rubbing stones, and other miscellaneous articles.

1. These implements appear to have been fashioned out of rough pieces of stone by the simple process of rubbing down one end to a chisel-shaped edge. Two are of a soft magnesian stone. Fig. 4, Pl. x., represents an instrument which is the largest and most symmetrical of any I have seen, and is composed of chloritic slate. It has been used as a whetstone. Fig 5, Pl. x., is said to have been taken out of a Red Indian wigwam in the year 1810. The man who got possession of it said it fell out of the hand of an Indian, who was apparently occupied in skinning or cutting up some animal, as it was found to be covered with blood. The dark-coloured marks upon it may have been caused by blood-stains. None of the tools show any indications of having been mounted on handles.

2. These also appear to have been manufactured from any suitably shaped pieces of stone which came to hand. An exception to this, however, is manifest in the large and highly finished implement of chert shown in a photograph which was exhibited. It will also be noticed that the smaller ends of the specimen represented in fig. 5, Pl. x., and of another specimen exhibited, have been ground to an edge. The latter was found amongst the arrow-heads and other articles on the bank before described. The material is of soft magnesian stone and hardened clay. All the articles belonging to classes 1 and 2 show marks of fracture on their bevelled edges.

3. A comparison of the fragments of the stone vessels indicates that the larger ones, when whole, were from eight to nine inches in length and breadth, and about four or five inches in height, with a depth inside of some three inches or thereabouts. The smaller vessels were about the size of the one in the photograph,



C.F. Kell, Lith. London. E.C.

described at p. 33 of my first paper. One specimen appears to be a portion of a small oval-shaped vessel. The section of one, restored as in the woodcut, shows the original shape of one of the vessels. The sides slope outwards, and diminish in thickness towards the top. In some of them the rounding of the edges of the bottom is much greater than in others. The material of which the vessels are composed is impure steatite. It is found in abundance on the north-east side of Newfoundland.* It is obvious that the terms Potstone and Lapis ollaris imply that the material has been extensively employed in making utensils.

Section through centre of a stone vessel, one-eighth original size.

It will be observed that there are in some of the fragments small holes, made by some sharp-pointed instrument. Their purpose may have been to serve for the attachment of some kind of fastening to bind the broken pieces together. An Eskimo lamp of steatite, in the Christy collection, has a hole at each of the four corners for suspension. At p. 114 of "Wilde's Catalogue of the Museum of the Irish Academy" is a description, accompanied by a sketch, of a bowl-shaped vessel of impure potstone found in the Shannon excavations. It is described as a drinking-cup, and has the following dimensions:—$4\frac{3}{8}$ inches across the bowl, $5\frac{1}{4}$ inches as measured from end of handle to outside of rim, and $1\frac{1}{4}$ inch in depth. It appears from the sketch to have a small hole, which passes through from the handle into the interior of the bowl. If so, it may have served to carry a wick. In "Wilson's Prehistoric Annals of Scotland" (p. 147, 1st edition), a reference is made to some rude vessels of Lapis ollaris from the Island of Uyea. In shape and construction they differ from the stone vessels from Newfoundland.

The pieces of stone pot, when freshly dug up, were covered with a coating of the black soil in which they were found; besides which there was a hard layer of some black-coloured substance adhering firmly to the surface of the stone, which strongly resembles the cementing portion of the agglomerated mass already described. The larger stone vessels were probably used for boiling seals' fat, and the smaller ones, as suggested to me, may have been designed for lamps, as amongst the Eskimos. There is a small bowl-shaped vessel in the possession of Captain Knight, of St. Johns, Newfoundland, which much resembles some of those found in Scotland and Ireland, excepting that it has no handle. One of the same kind was found by Mr. Flynn in his garden,

* Dana, in his work on "Mineralogy," gives the following description of it:—"*Potstone* or *Lapis ollaris* is ordinary soap-stone, more or less impure. Slabs of steatite are extensively employed as fire stones in furnaces and stoves."

according to his description of it. He used it for some time as a saltcellar.

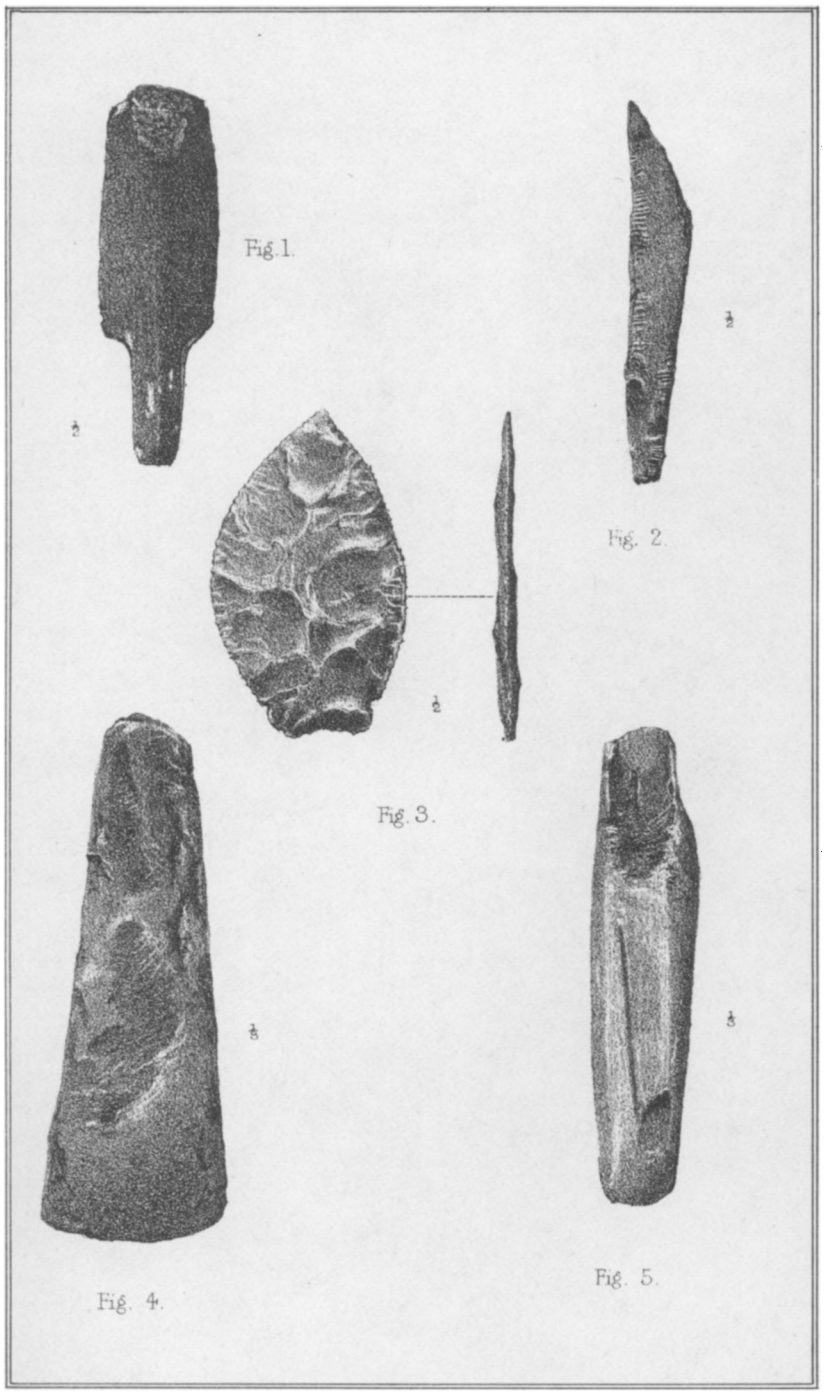
4. At page 35 of my former paper I described an egg-shaped piece of soapstone, which I stated, in my opinion, had been used as a sinker for a fishing line. Since then I procured three other stones of a somewhat egg-shaped form from the so-called Indian burial ground in Nôtre Dame Bay, one of which confirms, I think, my inference regarding its use. It is a small oval piece of soapstone, $1\frac{1}{4}$ inch long, pointed at the lower end (Pl. xi. fig. 14*). It has two shallow grooves—one horizontal and the other vertical—for the attachment of a line. On one side of the object there is a hook-shaped projection, which suggests the idea of a combination of sinker and hook for catching small fish. The sinkers without hooks may have been used with the hooks of stone, to be described further on. There is a method of catching lake trout in Canada as follows:—A small leaden sinker is fastened to the end of the line, above which is attached the hook. The sinker rests on the bottom, as in the ordinary Paternoster line.

5. Mr. John Evans, in his standard work on "Stone Implements," places the javelins and arrow-heads under the same heading, and remarks on the difficulty of distinguishing the one class from the other. The excess in numbers of the specimens in my collection, which are usually classed as arrow-heads, over those as to which, from their greater size, some doubt may exist, will make it more convenient to adopt a similar arrangement. Taking as my guide the classification given in chap. xvi. of Mr. Evans's book, I have divided the specimens into the following classes:—(*a*) Stemmed arrow-heads; (*b*) double-barbed triangular ditto; (*c*) abnormal forms.

Class *a*.—Two specimens. The larger one belongs to a kind not unfrequently found in Newfoundland. In my former paper I described one of them (see Pl. x. fig. 1) as a rudely-formed spear or arrow-head of a soft red slate, from Torilinguet Island. Judging from a perfect one of the same kind which I saw at St. Johns, Newfoundland, the one under consideration must have been from five-and-a-half inches to six inches in length, and, therefore, was more adapted from its size to form the head of a spear. The smaller one is of the same type and material as those marked A A A, *loc. ant. cit.*, only the tang is more neatly made.

Class *b*.—In point of numbers and excellence of workmanship, this forms the most important group. The specimens belonging to it show a gradual diminution of length from about three

* The lithographer has unfortunately represented this sinker in an inverted position. The pointed end should be directed downwards.



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STONE IMPLEMENTS, NEWFOUNDLAND.

inches down to five-sixteenths of an inch. They also differ in the relation of the lengths of the two sides to the base, thus giving to the more elongated forms a straighter contour in the sides than the shorter ones. Their bases are all hollowed out, some more than others (see figs. 9, 10, 11, 12; Pl. xi.). The larger ones have a notch cut in them on either side, near their bases; but in two instances where the bases are not hollowed out, there appear to be two notches instead of one on the same edge. The arrow-heads are made of hornstone and quartzite, which, judging from the finish of some of the specimens, form excellent materials for the purpose. Some of the specimens seem to have undergone the action of fire. One of the arrow-heads of quartzite shows marks of wear near the point. In a paper by Mr. Franks, F.R.S., &c., in the "Trans. Inter. Con. of Prehist. Archæology," for 1868, p. 267, is figured an arrow-head (fig. 1) which much resembles the shorter specimens from Newfoundland, but is apparently not so highly finished. At p. 29, in "Field and Forest Rambles" of Dr. Leith Adams, are figured two notched arrow-heads with square bases, from New Brunswick.

Class *c*.—Three specimens are exhibited. Fig. 3, Pl. x., represents a broad, flat implement of chert, of a somewhat leaf-shaped form. The base, above which are two notches, is slightly hollowed out. It is finely serrated all round the edges. Another specimen exhibited, but not figured, is an unequal-sided spear- or arrow-head, but of hard grey-coloured slate. It is more triangular in outline, and it agrees with it in having a sharp edge, a notch on either side, and a slightly hollowed-out base.

Fig. 13, Pl. xi. is of a triangular form, and of a ruder description than the preceding ones; like them it is notched and hollowed-out at the base. It appears to have been burnt in the fire.

Mem.—In the Christy collection, with one doubtful exception, *all* the notched spear- or arrow-heads are North American.

6. Is a group (of about fifty in number) of the class of implements generally termed "scrapers," for which various uses have been suggested—such as for scraping skin and planing wood; as also for the manufacture of articles of horn and bone, for fabricating arrow-heads and knives of flint, and as strike-a-lights.*

* Mr. John Evans, in the work before quoted, says of North American forms, at p. 362: "The arrow-head with a notch at the base on either side is a prevailing type in North America. The triangular form, usually but little excavated at the base, is also common there. For the most part the chipping is but rough, as the material, which is usually chert, hornstone, or even quartz, does not readily lend itself to fine work. They were made of various sizes, the smaller for boys, and those for men varying in accordance with the purpose to which they were to be applied."

The implements of this description from Newfoundland are more or less of a triangular form (see figs. 4, 5, 6, 7, Pl. xi.). They vary in length from about two inches to half-an-inch. The majority of them are made of hornstone. Two of them, however, are composed of opaque quartz, and one of hyaline quartz (fig. 6. Pl. xi.).

As well as I have been able to judge from a careful examination of their edges, none of them exhibit unequivocal signs of wear, such as I should imagine would be produced by planing wood or any hard substance. Nor do they show a smooth polish on portions of their top and bottom surfaces, such as would result from the process of hafting, like the tools fitted into handles by the Eskimos. The only signs of polish observable have been, probably, produced by blows of a pickaxe when grubbed up.

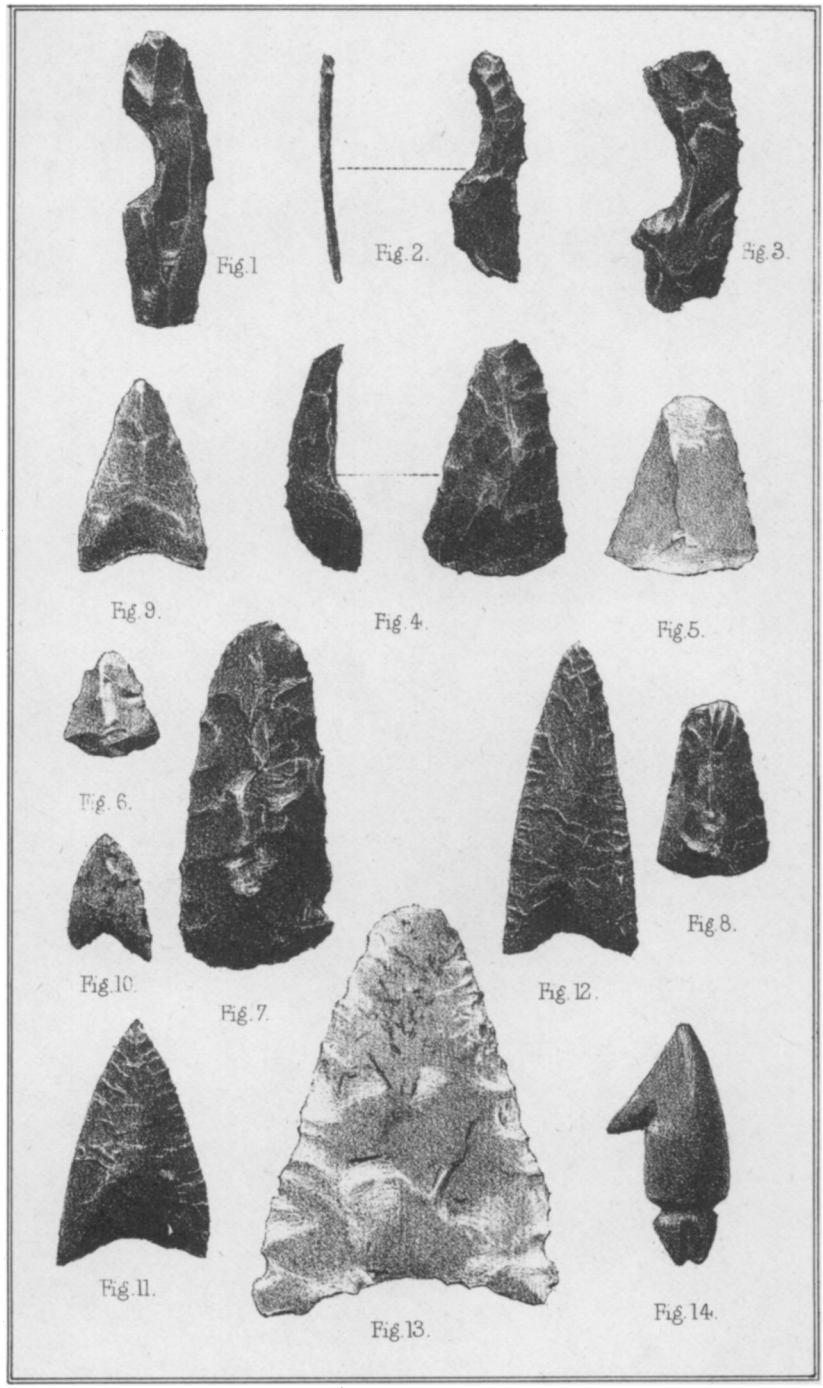
In some of the larger specimens the smooth surface, which formed the inside of the original flakes, increases in curvature from the butt end to the rounded edge, varying in sharpness of curve with the line of fracture (see fig. 4, Pl. xi.).

A peculiar form of scraper is exhibited. It is equilateral in shape, and shows signs of chipping all round the edges. On the upper and lower sides a portion of the surface is broken in an irregular manner, as if it had been struck by the repeated blows of some pointed instrument. It is, however, difficult, in most cases, to distinguish the marks of original chipping in the process of manufacture from those occasioned by subsequent use.

7. These peculiarly-shaped objects (figs. 1, 2, 3, Pl. xi.) appeared to me, when I first discovered them, likely to have been used as scrapers for rounding the shafts of arrows; but Mr. Franks has suggested they are the points of fish-hooks fastened into shanks of bone, which latter were bound round the end of a slip of wood. Such articles are used by the Eskimos. (See Klemm, "Werkzeuge und Waffen," 1858, p. 61.)

8. These consist of cores of hornstone, a number of flakes and chips, with a quantity of the raw material of quartz, hornstone, &c. Amongst them are some small flakes of transparent quartz, similar to those in the Eskimo case in the Christy collection.

9. Amongst this group, one object particularly attracted my attention on picking it up (Pl. x. fig. 2). It is a thin piece of micaceous slate, about 4 inches long and $\frac{5}{8}$ of an inch broad near the middle, and tapers towards both ends. After removing a portion of the red ochreous coating by washing, an examination showed four groups of small notches, arranged on one side



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STONE IMPLEMENTS, NEWFOUNDLAND.

(Full Size)

of the stone, at pretty nearly equal distances apart. The notches are all about the same length.

Besides this, there are two awl-shaped tools of hornstone, somewhat similar in shape to the one figured in "Ancient Stone Implements" (fig. 227, p. 289). They differ from it, however, in the absence of chipping at the sides. One of them shows marks of wear at the point; the other is partially serrated on one side. It is stated in the work above referred to that similar boring instruments of flint have been found in Denmark, in company with scrapers and other tools. The holes in some of the fragments of stone vessels may have been bored with such like instruments. The rubbing stone and flat pieces of slate, apparently whet-stones, do not require any special remarks.

Suggestive remarks on the probable use of the implements belonging to Classes 1, 2, *and* 6.

I premise that the names "axes," "chisels," and "gouges," have been given to certain stone implements from their resemblance to the ordinary forms of such tools of steel as are in use amongst the carpenters of the present day, and I have no doubt that in many cases these terms are applicable to them. In many parts of the world the natives use them for cutting wood and cleaving skulls. The New Zealanders employ them for cutting wood, &c., and in North America the charred trunks of trees are fashioned into dug-out canoes by their means, the hardness of the material giving to them the necessary qualification of a cutting instrument. The implements from Newfoundland belonging to the same classes are, I venture to think, with one exception,* but ill-adapted for such purposes. They are made of a soft and friable stone, and would soon become useless. Schoolcraft (vol. i. p. 91) says: "Fleshing instruments of stone are often mistaken for a small axe." He then goes on to describe a species of hand-chisel, blunt, that it may not cut the skin, and yet of sufficient edge and hardness to permit of a stout, jerking blow. "It required no crease, as if to bind it, and was often of very rude workmanship."

Amongst some notes on the Eskimo seal fishery on the north-east coast of Labrador, given me by Captain Arthur Juckman, of St. Johns, an experienced sealing skipper, I find the following account:—"Having previously 'skulped' (taken out the entrails and removed the skin), the Eskimos separate the fat from the seal's skin with an 'oodloo.' After having dried the

* The "cut-throat," or knife used by the Newfoundland fishermen for splitting codfish, much resembles in shape the quartzite implements found at L'Anse du Diable, Labrador. (See paper on them.)

skin on a frame, they scrape it with an iron instrument about 4 inches long and 3 wide. The tool is bent round into a gouge-like shape, and is fastened by nails or rivets to a wooden handle. The tool is grasped in the middle of the hand, and by a thrusting movement the Indian scrapes away the vellum from the inside of the skin. The part of it under treatment rests on a wooden board lying on the knees of the operator. The hair is taken off by the oodloo."

As another instance of the employment of gouge-shaped instruments in preparing skins, I will mention the method practised by the Montagnards of the interior of Labrador. The instrument, which is called by the Micmac Indians "Saskadedagan," some few of whom use it in preference to the ordinary "Jee-ge-gan," or scraper, is made by chopping through the leg-bone of a bear in an oblique direction.* The rounded end thus produced is notched with a file, so as to form a serrated edge. A quantity of shot is then plugged up in the hollow of the bone, to give it weight. A strap of sinew or a cord is passed through two holes bored in the articular end of the bone. The implement is used in the following manner:—The deerskin is first of all thrown over a post stuck upright in the ground. A fold of it is then grasped tightly in the left hand, and drawn in a slanting direction towards the body. The tool is then grasped in the middle of the right hand, with the strap passing round the wrist, to prevent the hand from slipping, and the operator detaches the vellum from the part of the skin above the left hand by a series of sharp downward blows.†

The Red Indian Pond trapper, Johnny Joe, told me he had used stone "gouges" found in Newfoundland for breaking holes in the ice to catch beavers. The ordinary tool for the purpose, as supplied by the Hudson's Bay Company to the Indians of Canada, is a common carpenter's chisel. Peculiar shaped chisels, of hammered copper, have been found in the district of the Ottawa river, which are supposed to have been used for a like purpose.

If the relative forms of the stone implements and the other tools

* For drawings of the Saskadedagan and Jee-ge-gan, see the author's paper on the 'Caribou of Newfoundland,' in final part of the "Reliquiæ Aquitanicæ," about to be published.

† The "Jee-ge-gan" is made out of the marrow-bone (metatarsal) from a deer's hind leg. The bone is split open with an axe for a portion of its length. The edge to be used for scraping is then thinned down to a sharp bevel on either side. The tool is grasped in both hands, and is pushed forwards against the skin with the scraping edge square with its surface. The skin is laid upon a post driven obliquely into the ground.

The Inland Columbians dress skins by spreading, scraping off the flesh, and, for some purposes, the hair, with a piece of bone, stone, or iron, attached to a short handle, and used like an adze. (Bancroft, p. 271.)

just described be taken into consideration, and allowance made for the softness of the material, in most cases, I think, we shall not be far wrong in arriving at the conclusion that the chisel-shaped instruments were used, amongst other purposes, for skinning seals and other animals of the chase; while the gouge-shaped tools served for removing the vellum from the skins, and both kinds were of service in hollowing out the vessels from the soft material of which they were composed. The question may be asked, "How did the 'stone people' cut their wood for firing?" In answering this question, it must be borne in mind that the semi-civilised Indian of North America, even with his tomahawk of steel, is very economical in the matter of wood. When camping without the company of the white man, who requires plenty of warmth, a few boughs are sufficient to make him a comfortable fire. His reply to the question, "Why do you not make a larger fire?" is, "Large fire no good; can't get near large fire; small fire, creep close." So that tools for hewing down trees to make big fire logs are not indispensable. It is a singular circumstance that no stone implements, as far as I am aware, have hitherto been found on the old camping grounds of the Beothucs in the interior of the island.

In the description given by Cormack of the interior of a "Red Indian" grave, no mention is made of any stone implements amongst the various articles deposited therein. (See "Journ. Anthrop. Inst.," vol. iv. p. 32.)

The Scrapers.—These form a series of implements of the hardest kind of stone, and are characterised by a similarity of form and style of workmanship. They vary in size down to such as can be conveniently grasped between the thumb and fore-finger. The planes of their working forces meet at angles, which make them more suited for abrasion by a backward than by a forward movement of the hand. The hardness of the material may account in a measure for absence of any unequivocal sign of wear, and their mode of occurrence will render it probable that some of them at least had not been turned out of the work-shop. I therefore venture to hazard the opinion, that amongst other uses to which they may have been destined, were the fashioning of arrow- and spear-shafts, much in the same way as broken glass is used at the present day. Although it may be objected that a square edge would have served such a purpose better, the wide application of tools for scraping purposes would not admit of forms specially adapted for one class of operation. They may also have served for scraping the vellum from the skins of such small animals as the beaver, musk rat, and hare. Whether they were also employed in the fabrication

of arrow- and spear-heads, I do not feel competent to form an opinion.

At this stage of the inquiry the question naturally arises, Who were the makers of the stone implements? According to the accounts of the early navigators who visited Newfoundland, it appears that the savages of the island painted themselves of a roan colour, used bows and arrows and spears, and killed a great store of the various animals of the chase. At that period, I imagine, they used only arrow- and spear-heads of stone. In later times, long after the first settlement of white people on the island, and when the "red men" had learnt, to their cost, the abuse of firearms, in exchange for the articles of iron and other metal which they pilfered from their merciless enemies, we hear they manufactured stone pots, and made use of stone implements in preparing skins, and found out the superior qualities of the steel axe and iron arrow-heads.

A comparison of the stone implements found in various parts of Newfoundland with those used by the Eskimo on the one hand, and others found in many parts of the American continent, shows that they have, as a whole, certain characters common to both classes. For instance, the chisel and gouge-shaped tools are of a type prevailing over a great part of North America. The arrow- and spear-heads exhibit no very distinctive forms, although those having notches in them are of the North American type. The scrapers, fish hooks, and stone vessels resemble those in use amongst the Eskimo. The latter were, it appears, manufactured in late times by the Beothucs, according to Mr. Peyton.

Sinkers of stone are used in trawling by the fishing Indians of Vancouver Island, and have been found in several places in North America. (See Evans, p. 212.)

The absence of any remains of earthenware in Newfoundland affords but little assistance in the inquiry, since amongst the Assineboines and the Eskimo the art of pottery-making is not known.

Any surmises regarding the age of the Indian relics from Sop Island and Conche Harbour must necessarily be vague, because the amount of time required for the accumulation of a covering of vegetable soil of a certain thickness cannot be accurately determined. The discovery of a musket-ball gives us no data to go by. However, as no articles of European manufacture have yet been found amongst the stone implements, we may, for the present, infer that they belong to a period antecedent to the settlement of Europeans on the island.

If it be allowable to draw any conclusions regarding the ethnic relations of different tribes inhabiting adjacent countries,

from the similarity or dissimilarity of their implements, it seems that the evidence is pretty equally divided between the Eskimo and the Beothucs. (I have omitted any mention of the Montagnards and Nasquapees in this connection, because I have failed in obtaining any information of their employment of stone implements.)

In default then of any existing knowledge of the occupation of Newfoundland by the Eskimo, although it is stated by Cartwright that they used to visit the shores of the island, as the Montagnards do now occasionally, I think that the balance of the evidence is in favour of the Beothucs as the aboriginal stone-folk of Newfoundland.

It will be seen from the preceding account of the aborigines of Newfoundland, that the "Beothucs," or Good-night Indians, possessed, in many respects, characteristics belonging to many of the tribes inhabiting the North American continent, whilst, on the other hand, they appeared to differ from them in certain peculiarities, which were as follows:—

1. Lightness of complexion.
2. The use of trenches in their wigwams for sleeping places.
3. The peculiar form of their canoes.
4. The custom of living in a state of isolation far apart from the white inhabitants of the island, and their persistent refusal to submit to any attempts to civilise them.
5. The non-domestication of the dog amongst them.
6. The art of making pottery was unknown amongst them.

In any endeavour to reconcile the peculiar characteristics of the Beothucs with those which mark other North American tribes, we must bear in mind the following circumstances:— Lightness of complexion cannot be considered as a distinctive mark of difference of race. Amongst the North American Indians are found tribes varying considerably in depth of colour, the copper-coloured tinge being peculiar to some of them, whilst others are not darker than Spanish gipsies.* See Haidahs of British Columbia and other coast races described in Bancroft's book.

The trenches used as sleeping places were probably designed for protecting the inmates of the wigwams, in case of surprise by their enemies, the white fishermen and Micmac Indians, and also as a shelter from the inclement winds of the spring and fall. The bank outside the trench would assist in keeping off the wind, which blew through the chinks in the birch-bark lining. In

* I have not included the practice of using unguents and painting with ochre amongst the peculiarities of the Beothucs, because similar customs are practised amongst existing tribes of North America.

camping out in the snow in Canada, I have experienced the good effect of a bank of snow piled up around the camp.*

The peculiar shape of their canoes was probably due, as I stated in my former paper, to an adaptation of form to circumstances. The Beothucs, who passed their summers on the sea coast, would require a boat capable of withstanding an ordinary sea, and well adapted for steering when used with a sail. A birch-bark canoe, having the ordinary rounded form of bottom and lowness of gunwale, would not be sufficiently seaworthy, I should imagine, for making such voyages as to Funk Island in search of Great Auks and the eggs of various sea birds.

The statement that the canoe could be folded up like "a cocked hat" seems to be a doubtful one. Even if it were capable of such an alteration in form, I do not think it would have added much to its portability.†

It is difficult to account for the fact that the dog was unknown amongst them, unless on the supposition that the Newfoundland dog of the island is not indigenous, but is merely the degenerate descendant of the "distinguished members of the Humane Society" belonging to the British Isles. It may have been introduced by the early colonists from England.‡ However that may be, so useful an animal to man is almost invariably found in company with the savage of America, and its remains have been discovered in association with those of prehistoric man in Europe. Even supposing the above supposition to be a correct one, it still remains a remarkable circumstance that the Beothucs should not have obtained it from their friends the Montagnards of Labrador.

The practice of making pottery is by no means universal amongst the Indians of the American continent. It is unknown amongst the Eskimo. The Apinulboines (or stone boilers) of the north-west, and the Montagnards of Labrador (according to Hind), make use of birch-bark cooking vessels, in which the water is heated by throwing in hot stones; it may be inferred that such a contrivance would scarcely be adopted by them if

* "The Kouragas make tomb-like excavations round the sides of the room, where the occupant reposes on his back, with his knees drawn up to the chin." —(Bancroft, p. 74.)

"The Aleuts sleep in a kind of concave trench, which is dug all round the inside of the house." (Bancroft, p. 89, in a note.)

† Bancroft says of the dug-out canoes of the Puget Sound Indians: "The form varies amongst different nations according as the canoe is intended for ocean, sound, or river navigation, being found with bow and stern, or both, in various forms—pointed, round, shovel-nosed, raised, or level." (See Swan's "North-West Coast," pp. 79—82.)

‡ I am inclined to believe that such may be the case. The wolfish appearance of the Indian dog of North America contrasts strongly with that of the Newfoundland dog of both hemispheres.

they were acquainted with the art of manufacturing earthenware vessels.* The stone pots of the Beothucs appear to have been used for boiling deers' fat in, and may also have been used as lamps, like those of the Eskimo. As far as I am aware, none have been found sufficiently large for ordinary cooking purposes. They may have been used for boiling the tallow in the preparation of the pemmican before described.

The branches of the great Algonkin nation, recent and modern, include the aborigines of Montreal, the Chippeways and Crees of the north-west of Canada, the Montagnards and Nasquapees of Labrador, besides the Ottawas and Abenakis. In short, they embrace the whole of the Indian tribes, extending from beyond the head of Lake Superior to the Atlantic coast, with the exception of the Eskimos. To endeavour to trace out the origin of the Beothucs from among such a numerous assemblage of different tribes, having many characteristics in common, would be waste of time.

Some have, however, indulged in the supposition that the Beothucs originally came from Scandinavia. But before seeking for traces of them in so distant a source, it appears to me a more rational proceeding to attribute their probable origin to some ancient migration of a branch of the Algonkin nation, caused by their having been driven out by war, as in the case of the historical dispersion of the aborigines of Montreal by Iroquois and Hurons.

Some of the peculiarities which distinguished the Beothucs from other Indians of the Western Continent were of a kind such as might easily have arisen amongst a people debarred for a long period from free communication with other tribes. Others, in all probability, resulted from an alteration in external circumstances, which necessitated changes of habit and modes of life. In fact, they were an adaptation of requirements to means, such as might have originated among a people formerly living in the interior of a continent, but now compelled to obtain a livelihood under such altered conditions as an insular life would necessitate.

Regarding their ultimate fate, there is less difficulty in forming a reasonable conjecture. Amongst the various reports thereon to be found in the foregoing pages, those which seek to attribute their sudden disappearance to having perished on the island bear the strongest marks of truth about them, and the signi-

* Since writing the above, I have been informed that there are some boiling stones which belonged to the Beothucs in the Edinburgh Museum. They were presented, along with two skulls, to the late Professor Jameson, by Cormack, the explorer.

ficant fact, that about that time there only remained of them fourteen individuals. It may, I think, be reasonably concluded that these few poor wretches, forced to leave their habitations and wander about during the severity of winter, eventually died of starvation on the island; thus affording another instance of a people "improved off the face of the earth by the bearded stranger from the rising sun."

My best acknowledgments are due to Mr. A. W. Franks for much advice and assistance during the preparation of the foregoing pages; and to Professor Busk, for the descriptions and drawings of the Beothuc skulls. I am also much indebted to Mr. John Evans for his valuable work on "Stone Implements," without which I should not have attempted the task of describing the stone implements of Newfoundland.

EXPLANATION OF PLATES IX. TO XI.

Plate IX.

Map of Conche Harbour, on the north-east coast of Newfoundland. The spot where the stone implements represented in the succeeding plates were found is indicated by a small cross.

Plate X.

Fig. 1. Broken spear-head of soft red slate, one-half natural size. 2. Fragment of micaceous slate, exhibiting four groups of small notches on the sides, one-half natural size. 3. Thin, broad, leaf-shaped arrow-head of chert, with finely-serrated edges, one-half natural size. 4. Chisel or axe of chloritic slate, one-third natural size. 5. Gouge-shaped tool; the hollowed-out end is directed upwards in the figure; the other end has been ground to an edge; one-third natural size.

Plate XI.

Figs. 1 to 3. Stone objects, probably the points of fish-hooks. 4 to 8. Various forms of stone scrapers. 9 to 12. Triangular stone arrow-heads, with hollowed-out bases. 13. Triangular stone arrow-head, hollowed out at base, and notched on each side. 14. Soapstone sinker for fishing net; the pointed end should have been directed downwards.

N.B.—All the objects in Pl. xi. are figured of natural size.

Mr. PARK HARRISON exhibited a series of Photographs of Easter Island Tablets, and read the following note:—

NOTE *on five* HIEROGLYPHIC TABLETS *from* EASTER ISLAND.

By J. PARK HARRISON, M.A.

THE discovery of three incised tablets of hard wood in some of the houses in Easter Island was alluded to in this Journal, and a