

I.

ON STONE IMPLEMENTS FROM NOVA SCOTIA AND CANADA, AND ON THE USE OF COPPER IMPLEMENTS BY THE ABORIGINES OF NOVA SCOTIA. BY PROFESSOR DUNS, D.D., VICE-PRESIDENT.

In the introductory chapter of "Acadian Geology," Principal Dawson says—"Nothing can be more striking to anyone acquainted with the American Indian than the entire similarity of the traces of pre-historic man in Europe to those which remain of the primitive condition of the American Aborigines . . . ; and it seems evident that if these pre-historic remains are ever to be correctly interpreted by European antiquaries, they must avail themselves of American light for their guidance. . . . One can scarcely open any European book on this subject, or glance at any of the numerous articles and papers on this fertile theme in scientific journals, without wishing that those who discuss pre-historic man in Europe knew a little more of his analogue in America." While I would not put the matter in this somewhat exaggerated form, the value of a comparative survey of the implements used by pre-historic tribes, located in widely separated geographical areas, will be acknowledged by all. It

was mainly this consideration which induced me to procure specimens of the remains of the extinct Indian tribes of Santa Barbara, California, described by me at a meeting of the Society in February 1878. By the kindness of an accomplished friend, the Rev. Dr Paterson, New Glasgow, Nova Scotia, I am able to exhibit some implements obtained in other districts of America. He says—"I send you by the Rev G. W. Sprott, of North Berwick, a few stone implements. I am sorry I could not send you any better. But it is scarcely possible now to get in this province any finely polished or worked implements. They have been so much sent abroad, or taken by visitors, or put into private collections in this country, that they are now rarely to be found. I send you specimens of such as are still picked up, though now comparatively rarely. In some parts of the United States they are found in great abundance. I send one from Lake Superior, known as a scraper, intended to be held in the hand and not to be hafted." I shall have to refer to this specimen shortly. Meanwhile, may I remind the Society that, in April 1879, in a short paper on "Smoothing Stones," I quoted the description given by an agent of the United States Indian Bureau, of the method by which the North American Aborigines prepare the skins of large mammals for use, and of the rubbing-stones for rendering them soft and pliable. It seems to me that all the larger implements now exhibited had been used for the same and analogous purposes. The term stone axes may or may not be misleading, according as we view them. They may have been originally employed even as weapons, and then come into use as tools, or they may have first answered as tools for one kind of work, and have then been pressed into work of another kind altogether. That some to which the name axe has been given could never have been equal to the work of an axe seems past doubt. Of this kind is the largest specimen, now exhibited; it is from the entrance to Pictou Harbour, Nova Scotia. It is of compact heavy greenstone, pitted all over with small holes, resembling those of vesicular trap, but in this instance due apparently to the influence of weathering on lime granules in the substance. A transverse section would, near the centre, give nearly a semicircle. The polishing is mostly

limited to one side. It is $8\frac{2}{3}$ inches in length, $2\frac{2}{3}$ inches in breadth at the broadest part where the bevel begins, and $1\frac{1}{2}$ inch at the narrow end. When the narrow end was grasped by the right hand, the tool could be worked with much force by the left hand taking hold of it crosswise. On the side next the worker the surface is flattened, as if to give a place to the ball of the palm.

The so-called scraper, referred to above, seemed to Mr Anderson, when shown to him recently, to be very unlike an American form. I cannot, however, have the least doubt on this point. Dr Paterson is an able and trustworthy observer, and that he would only have been too glad to find it foreign will appear from the following sentence from one of his letters to me :—"I should like much to get a specimen or two of European stone axes, for the purpose of illustrating and comparing with American, I will cheerfully give two or three American for one European, and do not mind whether it is British or Danish." So far as I have been able to see, there is no specimen very like this one in the Society's Museum. But I have one from Shetland, which bears considerable resemblance to it. In both cases it is clear that the rubbing has been most on one side. In the Lake Superior specimen a slight depression occurs on the least used side, in which the forefinger lies when the tool is grasped for work. This, like the flattened side of the tool just referred to, may be merely accidental. The Shetland specimen is of porphyry, that from Lake Superior is a porphyrite. One of the specimens is marked "Micmac Axe from Middle River Point, Pictou, Nova Scotia." Like the others, it seems to have been chiefly used on one side. "The Micmac," says Dawson, "still pitches his rude wigwam of birchwood within sight of the largest cities of Acadia, but he has entered into the Iron Age, and the stone weapons of his ancestors are as much objects of curiosity to him as to his neighbours of European origin." The other so-called stone axe is a granitoid form from Merigomish, Nova Scotia. I have been much interested in noticing that this limitation of the rubbing surface mainly to one side is not only characteristic of these American specimens, but of European ones also. It is so

with that from Shetland just mentioned, and also with one from Derbyshire, and another from Ireland, now exhibited. Among the specimens is one $2\frac{5}{8}$ inches in length, and $1\frac{6}{8}$ inch in breadth at the cutting edge, which the American archæologists call a "skinning knife," a much better designation, I am inclined to think, for an implement of this sort than the term "celt." This specimen is from Lake Superior, and is of coarse serpentine. A specimen is figured in Dr Abbot's "Stone Age in New Jersey,"* exactly resembling this one in shape and material.

The Arrow-heads now exhibited are from Nova Scotia, Lake Superior, and Canada West. The Lunenburg, Nova Scotia, specimens are three in number, one finished and two unfinished. The former is of a distinctly European type; one of the latter seems to have been intended to be similar in shape, the other is of the obovate form so common in America. A like difference is apparent between the two Lake Superior specimens. There are five unfinished forms from Merigomish, Nova Scotia. There is also one from Prince Edward's Island unlike the others, and differing, I think, in shape from any of the American forms in the Museum. The Canada West specimens are well made, and have quite a handy look about them.

When a year ago I had the pleasure of meeting Dr Paterson, it occurred to me to make inquiry, both as to the form and the materials of the prehistoric implements of the Canadas, and he informed me that he had himself found implements not of stone only, but of bone, and of copper also. The reference to copper was full of interest. "The bronze age," says Dawson, "never existed in North America; but in Nova Scotia, as in Canada, native copper was used for trinkets, though, from its scarcity, only to a very small extent." But the interest here is quite as much for the geologist as the antiquary. The Nova Scotia copper occurs "in masses varying from several pounds in weight down to the most minute grains, in the veins and fissures which traverse the trap." Dawson thinks it "probable that the metal has been deposited from an

* Smithsonian Reports, 1875.

aqueous solution of some salt of copper, in a manner similar to that of the electrotype process. Why this should have occurred, in trap rocks more especially, does not appear very obvious." But whatever may have been the natural chemistry of the deposit, it is clear that these masses supplied the copper from which the pre-historic copper implements were fashioned. I am able to show photographs of some of these, and of bone implements collected by Dr Paterson, and hope, in the long run, to get some specimens for the Museum. Most of the Nova Scotia specimens have been found by Dr Paterson himself. They are interesting as proving that the aborigines had the knowledge of this metal, and were able to fabricate it into various articles.