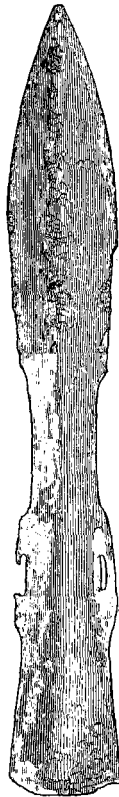


III.

NOTES ON SOME ARTICLES EXHIBITED TO THE MEETING, *viz.*,—A BRONZE SPEAR-HEAD, A SMALL UNLOOPED SOCKETED CELT, A SWORD-SHAPED STONE FROM SHETLAND, AND A TRIPOD BRONZE POT. BY PROFESSOR DUNS, D.D., F.S.A. SCOT.

I. *Bronze Spear-head.*—The specimen now submitted to the Society



Bronze Spear-head
found at Craigton.

was found in a tumulus at Craigton, near Kinross, in 1855, by the late Dr Annan, and forwarded by him to the New College in the following year. By mistake it was sent to the Library of the College instead of the Museum, and I was not aware of its presence till about a month ago. There are features connected with it which may interest the Society. The shape is exceedingly beautiful. Its whole length is $6\frac{2}{3}$ inches. The blade is 2 inches long and $\frac{7}{8}$ of an inch wide at its broadest part. The space between the bottom of the blade and the head of the loops is an inch in length,—a greater width than usually occurs in Scottish specimens. There is no similar form in the Museum. What, however, has most interested me in this specimen is the rich chocolate-coloured patina which covers it. This is so smooth, thick, and equal, as to present all the appearance of an artificial mineral varnish, laid on to protect the weapon from oxidation. It is known Sir W. Wilde held that some of the early manufacturers of bronze weapons sometimes varnished them to protect them from rust. In a paper in the Society's Proceedings of February 12, 1872, Dr J. A. Smith, says of a tinned bronze celt, "The celt, we may assume, was in all probability tinned to protect it from the influence of the weather, and keep its surface clean and free from the oxidation of the metal." If tin were used for this purpose, might not a mineral varnish have served the same

end? But the occurrence of highly glazed green patina on bronze weapons

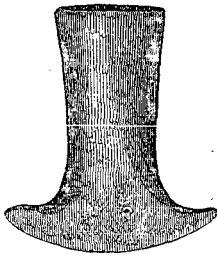
by natural oxidation is opposed to this supposition. Several specimens in the Museum well illustrate this. It is specially well marked on the beautiful knife-dagger from Dalineun, Lochnell, Argyllshire, presented by Dr Angus Smith of Manchester, on which the patina closely resembles a rich artificial enamel, though there is no reason to doubt that it is simply the result of natural oxidation. In the spear-head now noticed the patina is rich brown, a colour which is comparatively rare. There are, however, two or three implements in the Museum which are coated with brown patina. The first of these is a piece of a bronze sword from Ballagan, Strathblane, Stirlingshire, which has a well-defined coating of green next the metal, and above this, thicker and more compact, another of brown. The brown patina lies even more thickly on the flat celt E. 21 from Wigtownshire, whose surface is somewhat deceptive. At first sight the ornamentation on the weapon appears to have been made after the patina was formed, but a closer inspection shows that the ornaments had been made in the metal and that the covering follows their forms. In the flanged celt from Blair-Drummond Moss, the brown patina lies in a well-marked layer between the wings. In E. 39, from Tarland, a similar coating occurs in the groove and over the stop-ridge of the weapon. As regards the specimen now before us it is impossible to say what this substance is, because, to get a ponderable quantity for chemical analysis would imply injury to what makes the weapon of most interest.

Sir W. Wilde, referring to Irish forms on which patina of this kind occurs, says, "Many specimens, especially of the socketed variety (of celts), are covered with a brown coating of considerable thickness, and so complete as to obscure all traces of the original surface of the bronze; this, upon analysis, is proved to be chiefly iron; and was probably deposited on the surface of the implement while lying for a length of years in peat, which is frequently much impregnated with ochre, or bog iron," (p. 394.)¹ In a note, he adds, "No. 455, Tray Q., has four Irish letters rudely graven on one side, where it is thickly coated with brown iron incrustation, which can easily be cut with a knife, and as these letters must have been cut after the article had, by lying for ages in bog, acquired this deposit, it shows that they are of modern date compared with the age of the weapon. Professor Barker first informed me that this deposit was

¹ Catalogue of Antiquities of the Royal Irish Academy.

iron. A similar celt, No. 665, in Rail-case K., covered with a like natural deposit, has been carefully analysed by M. Gages, and found to present the following composition :—Traces of organic matter, silica and alumina, hydrous oxide of iron, or brown iron ore, and oxide of copper." This is all that we can say at present in explanation of the brown patina. In all the specimens with which I am acquainted it covers a green layer, indicating that it was formed after the ordinary oxidation had begun.

II. *Small Unlooped Socketed Celt.*—The specimen now on the table was found in Ireland in 1843. In that year, while the work of deepening the Shannon for the improvement of the navigation at Keelogue Ford was being carried on, the contractors dammed off a portion of the river, one hundred feet in width, and seven hundred feet in length. The loose



Socketed Celt, unlooped,
found in the Shannon
($2\frac{1}{8}$ inches long).

material at the surface of the bed of the river consisted of gravel and sand two feet in thickness. At the bottom of this many stone implements were found, specimens of which are in the New College Museum. Bronze implements were also found, about a foot of silty matter intervening between them and the stone forms. Among the bronze weapons were four socketed celts, three of which are mentioned in the Catalogue of the Antiquities of the Irish Academy; the fourth I have the pleasure of showing to the Society. Sir W. Wilde says :—“The simplest form of socketed celt is perfectly plain and unornamented, *without a loop*, $2\frac{1}{8}$ inches long, $1\frac{3}{8}$ wide across the cutting edge, and $\frac{5}{8}$ in the clear of the socket.” This form is very rare. I am not aware of the occurrence of any other specimens than those now referred to.

III. *Sword-shaped Stone from Shetland.*—I regret that I can throw little light on this form. I found it two or three years ago in the New College Museum in a drawer of minerals, with which it has no connection. It is marked “Shetland.” The specimen is very rare. It is formed of clay-slate, measures 9 inches in length by $1\frac{1}{8}$ inch in greatest

breadth, and bears a close resemblance in shape to many of the agave-leaved bronze implements found in other localities. A similar specimen is figured as a rare form in the Irish Academy Catalogue, p. 34.

IV. *Tripod Bronze Pot.*—The cooking-vessel now exhibited was found at the same time and in the same place as the spear-head first noticed in this paper. It is not, however, to be inferred, that they are of the same age. The tripod is most likely of a comparatively recent date. It will be seen that the places for the handle—the “bow” or “clips”—consist of an angular loop, the under side of the upper limb of which is worn smooth by the action of the hook of the “clips.” As there is no specimen in the Museum identical with this, I give its dimensions. At the widest part of the mouth the diameter is $7\frac{1}{2}$ inches; at the neck, it is $5\frac{1}{2}$ inches; the depth inside is $9\frac{1}{2}$ inches; at the widest part of the body the circumference is $30\frac{1}{4}$ inches; the feet are flat, $4\frac{1}{2}$ inches long, and about $\frac{1}{2}$ inch thick. [The annexed figures show the ordinary form of the mediæval bronze or brass pot and flagon.]

