

other veins of this district, nothing more has been done to it than simply to prove its existence.

DISCUSSION.

Mr. H. WOODWARD stated that Dr. Nicholson had presented to the British Museum some of the rich specimens of silver-ore mentioned in the paper.

Mr. D. FORBES corroborated the author as to the richness of the ore. A lump which had been submitted to him, weighing 295 lbs., contained no less than 187 lbs. of silver. He called attention to the resemblance between the vein-stuff from Thunder Bay and that from the Kongsberg silver mines of Norway, many specimens being so much alike that it was impossible to distinguish them.

2. NOTE on the RELATIONS of the SUPPOSED CARBONIFEROUS PLANTS of BEAR ISLAND with the PALEOZOIC FLORA of NORTH AMERICA. By J. W. DAWSON, LL.D., F.R.S., F.G.S., &c.

I HAVE only recently received the May number of the 'Geological Journal,' containing the interesting paper of Dr. Heer on the plants above mentioned, and beg to request permission to address to the Society a few remarks on their supposed equivalency with the American Devonian Flora.

The plants catalogued by Dr. Heer, and characterizing what he calls the "Ursa Stage," are in part representatives of those of the American flora which I have described as the "Lower Carboniferous Coal-measures" (Subcarboniferous of Dana), and whose characteristic species, as developed in Nova Scotia, I noticed in the Journal of the Geological Society in 1858 (vol. xv.). Dr. Heer's list, however, includes some Upper Devonian forms; and I would suggest that either the plants of two distinct beds, one Lower Carboniferous and the other Upper Devonian, have been near to or in contact with each other and have been intermixed, or else that in this high northern latitude, in which (for reasons stated in my Report on the Devonian Flora *) I believe the Devonian plants to have originated, there was an actual intermixture of the two floras. In America, at the base of the Carboniferous of Ohio, a transition of this kind seems to occur; but elsewhere in North-Eastern America the Lower Carboniferous beds are usually unmixed with the Devonian.

Dr. Heer, however, proceeds to identify these plants with those of the American Chemung, and even with those of the Middle Devonian of New Brunswick, as described by me—a conclusion from which I must altogether dissent, inasmuch as the latter belong to beds which were disturbed and partially metamorphosed before the deposition of the lowest Carboniferous or "Subcarboniferous" beds.

Dr. Heer's error seems to have arisen from want of acquaintance with the rich flora of the middle Devonian, which, while differing in

* Geological Survey of Canada, 1871.

species, has much resemblance in its general facies, and especially in its richness in ferns, to that of the Coal-formation.

To geologists acquainted with the stratigraphy and the accompanying animal fossils, Dr. Heer's conclusions will of course appear untenable; but they may regard them as invalidating the evidence of fossil plants; and for this reason it is, I think, desirable to give publicity to the above statements.

I may add that, since the publication of my paper in 1858, much additional material from the Lower Carboniferous Coal-measures has come into my hands from Nova Scotia, New Brunswick, and Newfoundland, which may throw light on the corresponding floras of the more northern regions, and which I hope to publish in the form of a Report similar to that lately issued on the Devonian flora.

P.S.—I consider the British equivalent of the Lower Coal-measures of Eastern America to be the Lower Limestone Shales, the *Tuedian group* of Mr. Tate (1858), but which have recently been called the "Calcareous Sandstone" (a name preoccupied by a Cambrian group in America). This group does not constitute "beds of passage" to the Devonian, more especially in Eastern America, where the Lower Coal-formation rests unconformably on the Devonian, and is broadly distinguished by its fossils.

DISCUSSION.

MR. CARRUTHERS stated that the list of the eleven Lower Carboniferous plants published in Principal Dawson's 'Acadian Geology' did not contain a single species found in Bear Island; but, on the other hand, some species and several well-marked forms were common to the Bear-Island deposits and the Devonians of North America, and he had no doubt that Prof. Heer had in his paper rightly correlated these floras. As to the age of these plant-bearing beds, found alike in Bear Island, Ireland, the Vosges Mountains, Canada, and Australia, Mr. Carruthers said that it was difficult to draw any lines which would separate the Palæozoic plants into clearly marked and distinct floras; but if the Devonian is to be retained as a system, all these plant-bearing beds belonged rather to that system than to the Carboniferous.

3. FURTHER NOTES on EOCENE CRUSTACEA from PORTSMOUTH. By HENRY WOODWARD, Esq., F.G.S., F.Z.S., of the British Museum.

[PLATES I. & II.]

ON December 21st, 1870, I laid before this Society descriptions of three new forms of Crustacea, obtained by Messrs. C. J. A. Meyer and Caleb Evans, during the progress of the "Dockyard Extension Works" at Portsmouth, from strata of Lower Eocene age. Since that date, these ardent collectors have pursued their studies of the beds exposed, and continued to secure all the fossils within their reach. Through their kindness I have from time to time been enabled to