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PROCEEDINGS

OF THE

BELFAST

Natural History and Philosophical

SOCIETY.

APRIL 13.—(Public Meeting)—Mr. Patterson, V.P.,
in the chair.

The Rev. Dr. M'CosH read a paper, comprising "a sketch of a Tour on the Continent of Europe, with remarks on the lower and higher Educational Institutions in Prussia." Dr. M'CosH began with giving a brief account of a journey which he had made in the previous summer. He had entered the Continent at Hamburg; visited Kiel; remained some time at Berlin, inspecting the educational institutions; proceeded thence to Wittenberg and Halle, at which latter place he made himself acquainted with the system pursued in the university, and in the famous Orphan House School; gone from that to Leipsic and Dresden; passed through the Saxon Switzerland to Prague, where he visited the university, and thence to Vienna, where he also visited the university, and made himself acquainted with the system of upper schools set up in Austria; dived thence into Styria, where he visited the famous cave of Adelsberg, and saw the *Proteus Anguinus* of the dark caverns; gone on to Trieste; crossed the Adriatic to Venice; and travelled through Lombardy, past the Lakes Como, Lugano, and Maggiore, into Switzerland; where he remained some time enjoying the scenery, and visiting some of the universities, such as Zürich; and found his way home, passing through Basle and Heidelberg, where

he remained some time, and attended lectures at the university, by Bonn, where the university session was breaking up, and thence through Belgium and Holland. Dr. M'Cosh gave an account of interesting interviews which he had with eminent men, such as Baron Von Humboldt, and the eminent botanist, Braun, and with distinguished metaphysicians, such as Trendelenburg, Erdmann, Ulrichi, Schenkel, and, also, with the Chevalier von Bunsen. He also spoke of a meeting of the Academy of Sciences at Berlin, which he attended, and where many eminent men were present. But he dwelt chiefly on the educational institutions of Prussia. He gave an account of the famous reformatory school near Hamburg, conducted by Dr. Weichern. In regard to the lower schools he had become a convert to the system which requires that every child be educated. He entered the country with all the strong prejudices of a Briton against compulsory education. But, inquiring most anxiously among the thoroughfares and byelanes of the great cities of Germany, he could not discover those idle, outcast children whom he had been in the habit of seeing every day in the streets of the large towns at home. In Prussia, and he believed now in nearly all the German States, every child must be in the course of receiving instruction at home, or in public or private schools. If the parents cannot pay for instruction, a provision is made for its being done by the district or state. Where parents are able, but not willing, the fee is taken from the father's earnings. The compulsion is not felt by the people. They know that the child must be educated, and at once take the necessary steps. Many were the complaints which he heard from the people when he got into their confidence as to their Governments, but he never heard them utter a word against their school system, because it required universal education. Ragged schools are unnecessary in Prussia, for the whole children are swept off the streets, and are busy receiving useful instruction in the schools—as the rule, children must be in the course of receiving instruction from the age of six to fourteen. Exceptions are allowed in the case of children engaged in public works, but then they must have a certain amount of knowledge before they enter, and they must continue to attend evening classes and Sunday schools. In Prussia, the proportion of the whole population attending schools is about 1 in 6.7, whereas in England it is only 1 in 12, and even in Scotland, only 1 in 7. Dr. M'Cosh then gave an account of the great middle

schools of Germany. These are divided into two classes, the *Gymnasium* and the *Real Schule*, in the first of which the chief attention is given to languages and literature, and in the second to science and literature. Having received authority from the Education Office in Berlin to visit any school in Prussia, he inspected a sufficient number to enable him to judge of the system, which, in respect of the thoroughness of the organisation, and of the accuracy of the instruction conveyed, is worthy of all the commendation which has been bestowed on it. Indeed, it is the *one* thing which we should (after somewhat modifying it and putting it more under local management) borrow from Germany and carry out in this country — in England, where the old endowed schools do not supply the want; in Scotland, by elevating and widening the burgh schools; and, above all, in Ireland, where the need is still more felt, by reforming the old endowed schools, and substituting new ones. In Prussia, the children enter the preparatory schools (*Vor Schule*) at about six years of age; continue there about three years, and, at the age of nine or ten, they enter the upper schools, either in the classical or scientific departments, as their parents may select. The course of instruction in the *Gymnasium* and *Real Schule* continues eight or nine years, and embraces not only the branches taught in our grammar schools or academies, but those taught in the first years of our university courses. He was astonished at the number of pupils in attendance, as well as the minutely accurate character of the instruction imparted by a set in each school of able and learned professors. In Berlin there is a number of such schools; at one of them he found an attendance of about one thousand learning the higher branches, and at others there is an attendance of six or seven hundred. At Wittenberg, with a population under ten thousand, he found that there were no fewer than 250 boys from the town and neighbourhood learning classics. Halle is a town with less than thirty thousand inhabitants, and yet it has 550 learning classics, and 450 the higher branches of science. In Prussia there are attending schools as follows:—

	Boys.	Girls.
Elementary Schools,	1,322,747	1,292,736
Middle Schools,	44,786	52,123
Higher Burgh Schools,		23,845
Pro Gymnasien,		2,944
Gymnasien,		35,013

It is a most interesting circumstance that similar upper schools—classical and scientific—are being planted all over the various States of Austria, and, on visiting that country, he found them in a state of great activity, and well supported. When he surveyed this state of things all over the German States, and found it fast extending into Switzerland, he regretted that the divisions of sects and interests in this country was so hindering the progress of a higher education. Dr. M'Cosh concluded with giving some account of the university system, which is remarkable for the great number of professors and the great division of labour among them, and in the particular, specific, and thoroughly searching and minute character of the instruction given. He objected, however, to the want of discipline exercised over the students by the authorities.

APRIL 20.—(Private Meeting)—Mr. Patterson, V.P., in the chair.

Mr. HYNDMAN gave an account of the proceedings of the Dredging Committee nominated by the British Association, with a grant of money in aid of their investigation. These operations were chiefly carried on by Dr. Dickie, Mr. Waller, and himself, who, at different times during the summer, explored the coast and channel from Ballygalley Head to the south of Donaghadee, extending their researches into sixty fathoms water off the entrance of Belfast Bay. On the 23d June a steamer was engaged and brought from Belfast by Mr. Patterson, accompanied by several other gentlemen, when the Turbot Bank, off the Gobbins, and the deep water adjacent were examined. Lists of the various species obtained have been made out for publication. Of these the most interesting were two species of *Brachiopods* added to the Irish Fauna, *Argiope cistellula*, hitherto only found off the Isle of Skye and Zetland, and a new species *Terebratula capsula*, so named by Mr. J. Gwyn Jeffreys, and identified as the same found lately at the Channel Island along with *Argiope*. These specimens were shewn to be peculiarly interesting both to geologists and zoologists, from their being among the few living representatives of a tribe that formerly existed in great numbers, but have become extinct. Several other shells were also noticed as being found dead on the Turbot Bank, which are not known as living nearer than the coasts of Norway and Greenland, giving rise to an interesting inquiry as to the origin of these shells—different opinions prevailing whether they are to be considered as living on our coasts, or as fossils washed out