

University examinations in Natural Science, in the departments of chemistry, biology, including botany and zoology, and in mineralogy, geology, and palaeontology, as successfully as he has done in the local paper of his native town, there cannot be the slightest doubt but that he will carry off the various prizes and gold medals of his year.

THE INTERNATIONAL FISHERY EXHIBITION IN BERLIN

Considering the small extent to which England and her Colonies were represented in this exhibition which took place in the early part of summer, it is possible that some of the features which interested me may have escaped the notice of the Press, and may therefore be new to the readers of the 'Varsity. The poor appearance which England made seems to have been owing to mismanagement on the part of the Committee in not making the extent and objects of the Exhibition sufficiently widely known, although a colleague suggested to me that, in the department of angling materials, at least, it could never have paid English manufacturers to advertise in a country so totally devoid of sporting instincts as Germany. Had Canada been more largely represented than it was, (I found only one exhibitor's name in the catalogue, Messrs. F. S. Andrews & Co., Halifax, *Neuschottland*—"Tinned Lobsters"), the characteristics of North American Fisheries could hardly have been more completely and systematically exhibited than they were in the Collective Exhibit of the U. S. Commission of Fish and Fisheries, which was indeed generally regarded as one of the most successful elements of the Exhibition.

The Exhibition was divided into two Sections, the one devoted to articles in forming the Collective-Exhibits of foreign countries, and the other to articles not belonging to these. Both Sections embraced the following classes:—

- I. Aquatic animals of all sorts, preserved or alive, and the products of these.
- II. Boats, implements and material of all sorts employed in Fisheries.
- III. Artificial breeding, and different stages of development of Fish.
- IV. Arrangements for transport of Fish.
- V. Arrangements for preserving and curing in all forms.
- VI. Models of Fishermen's houses and costumes.
- VII. Investigation of waters in relation to Fisheries.
- VIII. History of Fisheries.
- IX. Literature, Statistics, and Reports on Geographical distribution.

The perfection which has been attained by the authorities of the Zoological Gardens at Naples in preserving marine animals, rendered their collection, illustrative of the Mediterranean *fauna*, one of the best in the first class, although some collections on a smaller scale were also very successful. One in particular I noted, (a so-called Spiritarium), in which sea-anemones, jelly fishes, &c., beautifully preserved and distended, looked as if alcohol instead of sea-water were their natural medium.

The Berlin Aquarium, (the largest and most enterprising inland institution of the kind with which I am acquainted), had many interesting living forms on view, among them some male eels. A good deal of discussion has been raised within late years as to the mode of propagation of this fish, which perhaps excited more attention in Germany than elsewhere, as the eel is there regarded as a great delicacy. It was long thought to be hermaphrodite, as no difference could be detected in the large adult forms examined. It turns out now, however, that the males are small, rarely over 16 inches in length, and are to be found only in the sea, in the neighbourhood of the mouths of great rivers, or in these. A committee was appointed to report on the subject, information and specimens bearing upon it were advertised for, and a prize was offered for the solution of the question. A good many practical jokes seem to have arisen from the advertisement, as it was necessary to beg publicly that no further preparations should be sent to the members of the committee. Professor Virchow had, for instance, many nematoid worms from the intestines of eels sent to him in proof of the viviparity of the fish!

The facts referred to above have also been established by Professor Lackard and Mr. Kingsley with regard to the common American eel. I am not aware of any observations with regard to its breeding habits since its introduction into the Great Lakes.

In Class IV., the Berlin Aquarium exhibited a very complete apparatus for the transport of live fish. It consists of a tank capable of containing 24 tons of water, with two reservoirs of 12 tons each. One of the latter is placed higher than the large tank, but is connected with its floor in such a manner that the water on entering entangles air with it. The outflow, situated at the top of the transport tank, leads into the second reservoir, from which, in 15 minutes, it can be pumped into the first reservoir, while discharge from the latter into the transport tank lasts 3 or 4 hours. This arrangement ensures complete aeration of the water without a constant supply of fresh water, while it

does not give over hard work to the attendant. In this travelling aquarium 250 fish had been transported in the cars for three days and nights without a single one suffering.

The simpler arrangements which are adopted in the fish shops of large German towns for keeping fish fresh might well be imitated nearer home. Indeed, one may see the fish-hawker in Berlin fish out by means of a net from a tank, something like a water-cart, which he drives, several struggling carp, tench, pike, or pike-perch for the selection of the housewife, who thus is assured in the most practical way of their freshness.

In the 7th class, the exhibition of amber by Messrs. Stantien & Becken, from Königsberg, Prussia, where it is found more abundantly than anywhere else in the world, was most attractive, as was the collection of upwards of 3,000 "inclusions," exhibited by Dr. Sommerfeld, of the same place.

Prominent in class 8th were the papers as to privileges, &c., exhibited by various guilds; but one article, classified here, certainly secured more attention than these. It was the model of a huge pike 19 feet long, which was caught in the "Kaiser's Wog," near Kaiserslautern in 1497—the original of which was eaten at the Palgrave Philip's Electoral Table. It deserved a better fate, for 237 years before it had been placed in the water by the hand of the Emperor Frederic the II., and provided by him with a gilded band, bearing a Greek inscription to that effect, which was preserved in the Treasury at Heidelberg.

Professor Virchow's collection of shell-fish and fish-remains, dug out from the rubbish of the citadel mount, at Hissarlik, the probable site of Old Ilium, and partly from the oldest layers of the rubbish, prove that oysters, cockles and mussels frequently formed part of the *menus* of the Old Trojans. Among these shells some had evidently been used for purposes of ornament, and the purple-shells (*Murex* sp.) had all been opened in a particular manner, plainly having been used merely for the extraction of the once much-valued purple dye, which the animals produce, which, however, went out of use with the decline of the Roman Empire.

R. R. W.

'Varsity Sport.

—MR. RANDOLPH, of Rutgers, informs me that the Athletic Association of American Colleges decided last April to admit Canadian Colleges to their union. No official notification of the resolution has as yet been received, which, however, is no obstacle to a recognition of the liberal spirit indicated by the measure. It is a new step on the part of the Association which marks activity of management and expansiveness of policy, whilst serving as an additional evidence of the friendly sentiment in our regard prevalent among our neighbors on the other side of the lake.

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The scores of the QUEEN'S OWN RIFLES BATTALION match, last Saturday, prove to be the best ever fired over the ranges by that regiment. An idea of the unpublished figures can be gained from the fact that sixty points secured only the eleventh prize. K. Company was represented by merely ten men, and want of practice in the new firing position,—head to the target,—placed this spare number at a great disadvantage. In the skirmishing match, G. Company stood first, with K. third, and it is rumored that one of our corporals is to get the first prize for judging distance. Next Saturday the firing will be completed, which will enable us to give more satisfactory details.

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—At the meeting Thursday, the following were elected a committee to arrange and carry out the Annual Athletic Sports this year:—President, Mr. ARMOUR; Secretary and Treasurer, Mr. CAMPBELL; Representatives of the Fourth Year, Messrs. RUTTAN, GWYNNE and BLAKE; of the Third, Messrs. MICKLE, BLAKE and LANGSTAFF; of the Second, Messrs. GEORGE, MCKAY and BROADFOOT; of the freshmen, Messrs. NICOL, WYLIE and PRATT. The members of the various sub-committees were afterwards chosen. Some changes have been made in the programme of last year. For kicking the football a tug-of-war has been substituted, between teams of four men from each year, the first heats of which will take place to-day, and the final heat has been put in place of the three-legged race on the day of the major sports, Friday the 15th Oct.

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—The Chairman, Mr. RUTTAN, explained at length, the object of the gymnasium meeting on Thursday, stating that Dr. WILSON had promised that the College Council would grant a sum equal to what might be subscribed by the under-graduates. An appropriate place has been set apart in the Society Building, and it now rests with the students themselves, whether the project is to be carried out or not. The object is highly commendable; so let everyone subscribe as liberally as his means will permit, and let the COLLEGE have one at least, of the many athletic institutions so common and matter-of-course, among English and American Universities. The names of the Committee ap-