

apparatus. Their school microscope, with objective eyepiece, rack focussing stand with firm foot, is priced at 35s. We welcomed old and tried friends in the Becker's Sons' balances, and a new one in the Dobbs's dynamometer, which appeared among Messrs. Townson and Mercer's display. Mr. Thomas Wyatt exhibited the appropriately named Massey series of apparatus for practical mechanics, and some Haldane Gee instruments of better construction than those on the market in former days. The stills and ovens of Messrs. Brown and Son are well known to chemists; they should be well known to science masters.

We have not space to describe the extensive exhibit of books by Messrs. Arnold, G. Bell, Clive, Macmillan, Methuen, and the Cambridge and Oxford University Press.

Some of the amateur exhibitors were at too little pains to show their work effectively, and we would remind them of the necessity of making clear at once, by diagram or otherwise, the main point of their exhibits. If a plan of the exhibits could be added to the catalogue it would be helpful. The trade exhibits are of undoubted utility, especially to country workers, but it is to be hoped that the invaluable display of resourcefulness and ingenuity springing from our school laboratories will not be relegated to a subordinate position. The thanks of all who had the good fortune to see this successful exhibition are due to the hon. secretaries, Mr. D. J. P. Berridge and Mr. G. H. Martin, for their skilled cataloguing and organisation.

The president of the association next year will be Prof. H. E. Armstrong, F.R.S., who has given the society much help since its foundation. G. F. DANIELL.

VARIOUS INVERTEBRATES.¹

THE fourth volume of zoological reports on the *Discovery* collections is full of interest and fine workmanship. It well deserves its beautiful "get-up." Dr. H. F. Nierstrasz describes the single Solenogaster in the collection—naming it rather awkwardly *Proneomenia discoveryi*, sp. n., and takes a survey of the family Proneomeniidae. Prof. G. H. Carpenter gives an account of a remarkable collembolon—*Gomphiocephalus hodgsoni*, g. et sp. n.—apparently an ancient connecting link between Poduridae and Entomobryidae. In contrast to these two cases of sparse material, we find Mr. W. M. Tattersall reporting on more than ten thousand schizopods, mostly referable, however, to one species. He and Mr. Holt have been able to add ten to the previous list of seven South Polar schizopods, and the present memoir as some interesting results as regards life-history and distribution. The collection includes no species of schizopod common to both polar regions, but all the genera save one, *Antarctomyxis*, are represented in northern waters. The northern species are quite distinct from their southern allies.

Similarly Dr. R. N. Wolfenden notes that the Antarctic copepod fauna is distinct from that of Arctic seas, and that the species which are typical of the Antarctic and most numerous do not extend far into the southern Atlantic at least. The *Discovery*, like the *Gauss*, was fortunate in finding the interesting crinoid *Promachocrinus*, which was one of the prizes of the voyage of the *Challenger*. Prof. F. Jeffrey Bell deals with this re-discovered treasure, and with a number of interesting new forms; he also directs attention to the "bewildering" variability of several species, e.g. *Cycethra verrucosa*. His memoir has numerous illustrations of a certain dry humour, as when he notes that "even the most recent writers on echinoderms have not yet promulgated the doctrine that difference in size is a specific character, though I am not quite sure that in practice they do not sometimes act as though they had." It has been supposed that none of the Antarctic echinoderms has free-swimming larvæ, but Prof. E. W. MacBride and Mr. J. C. Simpson describe the plutei of a sea-urchin and an ophiuroid. They also found an unsuspected brood-pouch in *Cucumaria crocea*, a well-known holothurian.

Bell's *Antedon adriani* yielded two species of Myzostomum, which Dr. Rudolf Ritter von Stummer-Traunfels deals with.

¹ National Antarctic Expedition, 1901-4. Natural History. Vol. iv., Zoology. Pp. 280; 59 plates. (Printed by Order of the Trustees of the British Museum, 1908.)

One is new, *M. antarcticum*, illustrating the common experience that every new species means another new species—of parasite; the other, *M. cysticum*, has been previously recorded from Ross's Sea in the Antarctic, from off the east coast of Japan, and from the tropical West Atlantic—a remarkable distribution which finds its explanation in the antiquity of the myzostomid group and in the uniformity of deep-water conditions. The sipunculids are represented by some thirty specimens. These Mr. W. F. Lanchester describes under the title *Phascolosoma socius*, n. sp., and in so doing makes some interesting critical remarks on the relative value of the systematic specific characters in this group. Two new sea-anemones are described by Mr. J. A. Clubb, but the most interesting part of his report is the description of the sixteen "brood-pouches" of *Cribrina octoradiata* (Carlgren) from the Falkland Islands. Each pouch arises as an invagination of the three layers of the body-wall, retains its external pore, and usually contains two embryos. In reporting on the tetractinellid and monaxonellid sponges, Mr. R. Kirkpatrick describes twenty-two new species of the latter, and establishes four genera. Some of the records of Antarctic distribution are striking, e.g. that of *Esperiopsis villosa*, Carter, a form frequently recorded from high northern latitudes, but only from one intermediate station, viz. in deep water off the Azores; or that of *Sphaerotylus capitatus* (Vosmaer), an Arctic form, not reported from any intermediate locality—as yet. There are no fewer than nineteen plates illustrating this memoir, and there are twelve illustrating Mr. T. F. Jenkin's admirable account of the Calcareae, which teems with novelties, two new families, six new genera, and new species galore. Altogether, it cannot be doubted that the *Discovery* was true to her name.

THE DANISH NORTH-EAST GREENLAND EXPEDITION.

THE account of the Danish North-east Greenland Expedition, given by Lieut. A. Trolle before the Royal Geographical Society on December 7, 1908, is printed in the January number of the society's journal, with several instructive illustrations and a map. During this expedition, which lasted two years, the little-known fjords and coast of north-east Greenland were explored, and much other valuable scientific work was accomplished, though the tragic death of the leader, Mylius Erichsen, and his two companions, Hagen and Brönlund, while on a sledge expedition, gives melancholy interest to it. In his lecture Lieut. Trolle only referred in general terms to the results of the scientific work carried on by the various observers during the expedition, as these will be published later, but the subjoined extracts from the paper, and the two illustrations here reproduced by permission of the Royal Geographical Society, will show that the expedition was marked by notable achievements.

The object of the expedition was to explore the last of the hitherto unexplored parts of Greenland. The whole of the west coast from 78° N. lat. to Cape Farewell is, as is well known, under the administration of Denmark. On the east coast there is a Danish colony at Angmasalik, while great parts of the coast had been mapped by Captains Holm, Garde, Ryder, and Amstrup. The stretch from 72° to 77° N. lat. had been explored, chiefly by Clavering and Sabine, by the *Germania* Expedition, by the English whaler Scoresby, and the Swedish explorer Nathorst. From 77° N. lat. and farther north the country, however, was practically unexplored, though the Duke of Orleans, on the *Belgica*, in 1905, had gone as far as 78½° N. lat., and from his ship had seen part of the outer islands.

The north-west had chiefly been explored by British and American expeditions, and the chief merit of the *Danmark* Expedition is that it has now supplemented what was still wanting in a knowledge of the outlines of Greenland by exploring the whole of the north-east coast.

The expedition consisted of twenty-eight members, and a characteristic feature of its organisation was the unusually large scientific staff and proportionately small crew, in the proper sense of the word. Thus there were six