

The science of oceanography has gained much during the last half century from observations made at biological establishments on shore. The author naturally devotes most of the chapter regarding these stations for marine research to the celebrated Stazione Zoologica at Naples and to Anton Dohrn, "the founder, benefactor, director, the centre of all its activities, the source of its inspiration." There is no other laboratory where the study rooms are occupied by investigators of established reputation from all parts of Europe and America, attracted by the fame of the institution and its director. Its Aquarium on the ground floor is one of the sights of Naples.

All of the first seven chapters are filled with interesting details respecting the men, the ships, and the laboratories that have contributed to the creation of the modern science of the sea. The succeeding chapters—more than half of the book—are devoted to the physical characteristics of the oceans, under such headings as hydrography, ocean currents, plankton, submarine deposits, coral reefs, the sea-fisheries, etc., all discussed by a master in oceanography who has devoted a lifetime both afloat and ashore to gaining a knowledge of the sea.

To the plankton, which no one has studied more assiduously than Herdman himself, two chapters are devoted. The name is used to include all the small animal and plant organisms that drift about in the sea. The importance of the plankton in the scheme of nature can scarcely be overstated. Abundant in most seas, its innumerable and varied organisms constitute the food of young fishes of many kinds and also of great schools of migratory fishes such as the herring and mackerel. The luminescence of the sea surface is due largely to light-producing organisms composing much of the plankton. There is not space here for remarks on such important chapters as applied oceanography, the fisheries, and food matters in the sea.

The present writer had the privilege of knowing Herdman in Washington when the specimens obtained by some of the Pacific dredgings of the "Albatross" were being unpacked. Later on there were pleasant meetings in New York in company with the late Doctor Mayor.

Like his associates in oceanography, Murray, Agassiz, and "Monaco," Herdman devoted much of his private fortune to the furtherance of marine investigations. His

sudden death, just as he was about to start for the meeting of the British Association for the Advancement of Science, is a matter of profound regret. In the book he has left us, we have the most recent summary of oceanographic science.—C. H. TOWNSEND.

"WOODLAND CREATURES" BY FRANCES PITT.—A book of intimate studies of some of the forest-dwelling mammals and birds of the British Isles has just been issued under this title by E. P. Dutton and Company. The author is not only a keen and independent observer of animals in the wild but at great pains she has reared at various times all of the mammals and several of the birds she describes, so that her sketches, in addition to revealing a comprehensive background of woodland knowledge, have the special interest that attaches to the biographies of individual animals. The badger, the dormouse, the fox, the rabbit, and the squirrel are each assigned a chapter or more, while alternating with the accounts of these mammals are chapters devoted to the woodpeckers, the bullfinch, the sparrow hawk, the kestrel, various owls, and the magpie and the jay. The book is attractively illustrated.

"OUTWITTING THE WEASELS" BY HELEN HARRINGTON.—Two plays adapted by Helen Harrington from stories by Clara D. Pierson have recently been issued by E. P. Dutton and Company. Both of them are well suited for presentation by children and both inculcate wholesome ideas in a non-didactic, humorous, and delightful way. "Outwitting the Weasels," one of the two plays, has as its theme the protection of the birds—on the one hand, from the deliberate aggressor, represented by the boy with the sling; on the other hand, from that slipshod negligence, unfortunately not confined to childhood, which fails to replenish the empty drinking fountain or provide other necessities upon which the birds have come to depend.

THE BRITISH ASSOCIATION MEETING

For the fourth time in its history the British Association for the Advancement of Science, which was founded in 1831, held its annual session in Canada. The Toronto meeting opened on August 6, under the presidency of Major-General Sir David Bruce, K.C.B., F.R.S., the successor in office of Prof. Sir Ernest Rutherford, F.R.S., and was attended not only by many scientists from the Old

World but by Canadian savants and representatives from the institutions of learning in the United States. Through the papers read before the several sections and their subsequent discussion opportunity was given for a broad interchange of knowledge.

The American Museum was represented at the gathering by President Henry Fairfield Osborn, who took part in the sections of zoölogy and anthropology, and by Dr. W. K. Gregory, who participated in the discussion regarding "The Origin of Land-living Vertebrates" and presented before two of the sections a paper, prepared in collaboration with Dr. Milo Hellman, on "The Dentition of *Dryopithecus* and the Origin of Man." Although unable to be personally present, Dr. William Diller Matthew contributed an account of his recent find in Texas under the title of "A New Link in the Evolution of the Horse." A paper by Dr. Clark Wissler on "The Segregation of Racial Characters in a Population" was presented by title.

The Museum has had the privilege of welcoming a number of the delegates on their way to and from the British Association gathering. Among those who visited the institution and established contact with its scientific staff may be mentioned: Prof. E. S. Goodrich, of Oxford, and Mrs. Goodrich, Mr. F. A. Bather, who has recently succeeded Sir Arthur Smith Woodward as keeper of geology, British Museum (Natural History), Prof. J. T. Cunningham, Prof. W. J. Dakin, Prof. Walter M. Tattersall, of Cardiff, Doctor Pritchard, of Melbourne, Australia, Prof. George Hickling, Dr. Clarence Tiveney, Dr. C. C. Hentschel, Dr. Kenzo Iguchi, of the Imperial University, Sapporo, Japan, Lady Henderson, Dr. Cuthbert Christy, Prof. J. W. Gregory, of the University of Glasgow, and Prof. D. M. S. Watson, of University College.

COMPARATIVE ANATOMY

DR. HEICHIRO MOTOHASHI, of the Imperial College of Agriculture, Tottori, Japan, has been in attendance at the American Museum, studying the osteology of the wild asses of Asia and using for the purpose skulls and skeletal material obtained by the Third Asiatic Expedition.

ASIA

HUNTING THE SUMATRAN RHINOCEROS.—In the July-August issue of NATURAL HISTORY, p. 527, allusion was made to a cable sent by Mr. Arthur S. Vernay in which he

announced that he had secured a female and young male of the rare Sumatran rhinoceros (*Dicerorhinus sumatrensis*). In a letter dispatched by Mr. Vernay a full report of this achievement, which he describes as the *grand coup* is given. These rhinos are very carefully protected because of their scarcity and it was only thanks to the generous interest that Sir Harcourt Butler, the governor general of Burma, has taken in the expedition that permission to secure specimens for the American Museum was accorded. The district chosen for the hunt was the Pegu Yomas, a rough, precipitous region of shale and sandstone, in the south-central part of Burma. Arrangements for the successful prosecution of the hunt were made by Mr. Hopwood, the conservator of forests, Tenasserim Circle, sixteen elephants being provided for transport and a detail of six military police mounted on ponies being ordered to accompany Mr. Vernay.

The plan of campaign was to work up each of the main streams that flow into the Pegu River, in the hope of coming upon wallows, and also to explore in similar fashion each of the feeders of these streams. For six days a careful survey of the country was made without revealing the presence of a dark form. On one occasion the party came upon a wallow that had been used twenty-four hours before. They settled down near it to await the possible return of the animal that had used it but although they lingered till the late evening, no rhino appeared to reward their vigil.

On the seventh day the party scoured country covered with creeping bamboo, a favorite food of elephant and rhino. The going was exceedingly difficult and not even a rhino track was discernible as compensation for the arduous search. Time was getting on and it was decided to make for camp. The way thither lay along a stream known as the Bahmalik Chaung. Mr. Vernay writes:

After a mile or so we found that the water in the stream was suddenly tinged with mud. We followed the discolored water upstream for 475 yards and ascertained that a feeding stream that flowed into the Bahmalik at that point was responsible for the brown tinge. Beyond the feeder the water in the Bahmalik was clear. We discussed the matter and came to the conclusion that the muddy discharge must be due to one of three things: (1) a local rainstorm, (2) a landslide, (3) elephants wallowing—the discoloration seemed too heavy to be caused by rhinos. Although the



Photograph by Arthur S. Vernay

A rough climb along the course of a muddy mountain stream to ascertain whether the brown discoloration of the water was due to a local rainstorm, a landslide, or a wild animal wallowing



Photograph by Arthur S. Vernay

One of the rewards of the effort depicted in the upper photograph.—This little rhino (*Dicerorhinus sumatrensis*) was adopted by Mr. Vernay and the other members of his expedition. The tiny fellow came to feel quite at home in the bamboo enclosure set aside for his use

hour was late, an occurrence such as this needed investigation.

We started up the little stream. The ascent was difficult, even formidable, and to us in our impatience to reach the goal the climb seemed interminable. After a time there appeared in front of us a stretch worse than any we had previously traversed. The water was now very thick. It confirmed our conclusion that there must have been a landslide and, as we were feeling very weary, we sent our two natives up to investigate. These men climb like cats and soon were lost to sight.

After ten minutes or so they reappeared gesticulating wildly. We knew that the big moment had come. Slowly we made our way up. We wanted to save our breath for the final effort, when steadiness of aim is all-essential. At length we reached our natives. They informed us they had heard a grunt. We listened, and presently we too heard a sound that meant rhino.

The way beyond was narrow and steep. We thought that over the top of the rocks about twenty yards above us there must be a flat place, for beyond was an old landslide. We wanted to have a look at this flat place without being observed ourselves. As there was room for only one individual at a time, I led the way and Percy-Smith followed close behind. I clambered to the spot and with the utmost care peeped over. Not ten yards away was a rhino in a wallow. I pulled back, fortunately found a place that offered good support for my feet, and then straightened up again. As I came into view this second time the rhino—a female—saw me. She made one plunge, when a lucky shot in the brain killed her.

As Mr. Vernay approached the wallow, a small object emerged from behind the fallen animal. It was a baby male rhino about one month old. It charged viciously but ineffectually. This little rhino was transported to camp in a bamboo basket, quickly and skillfully made by the two natives. It took milk out of a bottle and was a camp pet for several days. It was then sent to Rangoon, to be placed in the Zoo. But it did not survive and, as a consequence, it will be mounted with its mother in an American Museum group.

THE DINOSAUR EGGS.—The famous dinosaur eggs collected in Mongolia last summer by the Third Asiatic Expedition have recently been prepared for exhibition and are now on view. They belong to nine different groups and show considerable variation in size and surface markings. The largest and by far the most important group consists of thirteen eggs in the rock, two weathered out but still intact, and at least two more represented by broken shells lying on the surface

near the nest. President Henry Fairfield Osborn is to give the general scientific description of the eggs and the microscopic study of the shells is to be undertaken by Dr. Victor Van Straelen of the University Libre of Brussels. Doctor Van' Straelen' has recently published a paper regarding the structure of some fragments of supposed dinosaur eggs from the Cretaceous of southern France and is well equipped for the task assigned to him.

Plaster casts of three of the Mongolian eggs have been made and sets have been sent to the following institutions: Geological Survey of China, Peking; British Museum, London; Natural History Museum, Brussels; U. S. National Museum, museums of Yale, Princeton, the University of California, and the State University of Iowa, Buffalo Society of Natural Sciences, and the Cincinnati Zoological Park Association. Also a single cast has been sent to each of the more important museums of Australia.

HISTORY OF THE EARTH

THE GEOLOGY OF GREENLAND.—A contribution by Dr. Edmund Otis Hovey, late curator of geology and invertebrate palaeontology, American Museum, is printed as the leading article in *The American Journal of Science*, Fifth Series, Vol. VIII, No. 45. It is entitled "Geology of Northwest Greenland and Its Relation to the Flora, Fauna, and People of the Region" and is a timely article on an area which at the present time is attracting attention in connection with the recent return of Captain Donald B. MacMillan from its fastnesses. As the head of the party sent out to relieve the Crocker Land Expedition, Doctor Hovey gained knowledge at first hand of Greenland and its phases of interest, and this knowledge has been supplemented by extensive and painstaking reading. As a result his article gives an informing picture of this Arctic land where the conditions of life are comparable to those along the edge of the continental glacier during the Ice Age. The account closes with this significant statement:

"The recent possession of firearms by the Eskimo has exterminated caribou from the southern portion of the Smith Sound area and restricted the musk ox to the more inaccessible north coast of Greenland and the wilds of Ellesmere Land to the west, while it already threatens the numbers of seal and walrus in the sea and the polar bear on the sea ice. The possession, furthermore, of the steel trap at