

number of short papers to the *Comptes rendus* of the French Academy, among which those later ones relating to the habits and seed-like fructifications in *Callipteris*, *Neuropteris*, *Pecopteris* and *Sphenopteris* are especially noteworthy. His last great work, commenced in 1912 with the collaboration of his son, one showing where his chief interest centered, was entitled "*Recherches géobotaniques sur les Forêts et Sols fossiles et sur la végétation et la Flore Houillères.*" Influenced by his experience in the fresh-water basins of central France, he was an advocate, albeit an impartial one, of the allochthonous origin of coal beds.

He was elected to the Société Géologique in 1877 and hence was one of the oldest surviving members at the time of his death. He was elected a correspondent of the Institute in botany in the spring of 1885. Throughout a reasonably long life he was actively engaged in mining work and was long a resident of St. Étienne, where he was an honorary professor in the School of Mines. A few years ago he removed to Malzéville, a suburb of Nancy, where he died on July 22, his death undoubtedly hastened by the untimely fate of his son on the field of battle.

In Grand'Eury science has lost another admirable representative of the French school. Of a kindly disposition, generous and courteous in all his intercourse, well informed in all he wrote, he will be sadly missed among the depleted ranks of paleobotanists among whom he labored for over half a century. With the sorrow of Zeiller's death still heavy, we have now to lay wreaths on the tombs of memory for Grand'Eury, and for his recently departed colleagues—Lignier, of Caen, and Bertrand, of Lille—would that Cuvier were still alive to fittingly pronounce their éloges.

E. W. B.

#### SCIENTIFIC EVENTS

##### ORNITHOLOGICAL FIELD WORK IN 1917

It is stated in the *Auk* that, while war conditions have necessarily curtailed activity in various directions and especially in field work,

the museums have sent out expeditions and special collectors.

The Museum of Vertebrate Zoology of Berkeley devoted its attention chiefly to the southwest. H. S. Swarth visited southern Arizona and obtained material for a report on the birds found on the Apache Trail, while Grinnell and Dixon spent some time in the Death Valley region in California. In the north W. E. C. Todd was in the field five months in charge of the Carnegie Museum Expedition to northern Quebec. In tropical America the activity of previous years has decreased with the return of the American Museum Expeditions from South America but one party, comprising Messrs. Miller, Griscom and Richardson, spent four months collecting for the Museum in Nicaragua. In the West Indies, Haiti and San Domingo have been the center of attraction. W. L. Abbott, Rollo H. Beck, and Paul Bartsch visited the islands at different times and each secured some remarkable birds or made substantial additions to our knowledge of the local avifauna. In South America Beebe spent some time at the tropical laboratory near Georgetown, British Guiana, and Beck returned from southern Patagonia with rich collections of sea birds. From the Orient the American Museum Expedition to China, Yunnan, and northern India in charge of Roy C. Andrews returned after successfully completing its field work, and from Celebes, H. C. Raven sent some valuable collections of birds to the U. S. National Museum.

In the United States the work of the Biological Survey has been carried on with the usual activity in a number of states. In the south A. H. Howell continued his field studies of the birds of Alabama and Francis Harper visited the Okefinokee Swamp in Georgia and the everglade region in Florida. In the west H. H. T. Jackson began work on a biological survey of Wisconsin and H. C. Oberholser investigated the breeding ground of waterfowl in North Dakota. In Montana E. A. Preble collected in the southeastern part of the state south of the Northern Pacific Railroad, and Mr. and Mrs. Vernon Bailey spent some weeks studying the birds of the Glacier National

Park and collected material for a report to be issued in cooperation with the National Park Service. In the Northwest preliminary work on a biological survey of Washington was begun by W. P. Taylor and in the southwest E. A. Goldman collected in northern Arizona south of the Grand Canyon.

#### THE ANNUAL MEETING OF THE NEW YORK ZOOLOGICAL SOCIETY

THE New York Zoological Society held its annual meeting on the evening of January 8 at the Waldorf-Astoria Hotel. When Professor Henry Fairfield Osborn, president of the society, called the meeting to order, there were more than a thousand members and their friends present.

In his annual report Madison Grant, chairman of the executive committee, said that the attendance at the New York Zoological Park and at the aquarium showed a substantial increase over 1916. The attendance at the park during 1917 was 1,898,414, and that of the aquarium 1,595,118, making a total attendance of 3,493,532. The cost per visit was about 7 cents for these two institutions during the past year. The number of exhibits at the park is about the same as last year, although there has been a slight increase in the number of species. There are over 4,000 animals at the park at the present time. The collection at the aquarium shows a slight increase over last year, and there are now more than 6,000 living specimens on exhibitions.

In his report, Dr. Charles H. Townsend, director of the aquarium, said that present conditions were almost intolerable because sea water invaded the engine-room and passed throughout the basement of the entire building through the pipe galleries. The result was that the building was unsanitary. Application would be made to the city, Dr. Townsend said, for an appropriation of \$100,000 to remove the boilers and engines to the front of the building beyond the reach of sea water. One of the advantages of this alteration, he pointed out, would be increased exhibition space and more room for office work.

Dr. William T. Hornaday, director of the Zoological Park, after making his report, called

attention to the need of Congress ratifying the arrangement between the United States and Canada for the protection of migratory birds. Dr. Hornaday said that Canada had already accepted the proposal and diligently and forcefully carried it into effect, despite the distraction of her participation in a great war. The arrangement, he said, had been held up in the Foreign Relations Committee of the House of Representatives, and he urged that action be taken at once. He declared that our food supply depended to a large extent on the enactment of this bill, as the migratory birds feed on crop-destroying insects. A resolution which he offered urging the President and Congress to take immediate action was unanimously adopted by the meeting. Two series of pictures, one a motion picture taken in the Marine Biological Laboratory at Naples, Italy, by Dr. Edward Bosio, and the other a series of natural-color pictures taken by Mrs. Roy C. Andrews in the Chinese province of Yunnan, were shown for the first time. Pictures taken by Donald B. MacMillan on the recent Crocker Land Expedition sent out by the American Museum of Natural History and the American Geographical Society were also shown, as well as motion pictures taken in the New York Zoological Park by Raymond L. Ditmars.

#### WARTIME SERVICE OF THE UNIVERSITY OF CALIFORNIA

ACCORDING to the report presented by President Benjamin Ide Wheeler to the regents of the University of California at their December meeting, nearly three thousand students, alumni, former students and members of the faculty of the University of California are now in military or naval service. The University of California has organized and has been conducting since May 21 a school of military aeronautics, in which some five hundred flying cadets are now being trained in an eight-weeks course. A new contingent is admitted each week. The university is now teaching forty-five men in a school of navigation, conducted in conjunction with the U. S. Shipping Board, for the training of officers for the merchant marine. For the third time, a six-weeks' course is about to be begun for the