

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

training of chief storekeepers for the Ordnance Department of the U. S. Army.

The undergraduate men remaining at Berkeley are organized as a unit of the Reserve Officers Training Corps. A course in naval engineering will be inaugurated in January, which by one year of special training will qualify men for examination as ensigns in the Navy. Courses in naval architecture and military engineering are also to be offered. An institute for home service has been conducted at the request of the Red Cross, for the training of home-service relief workers. A military information office maintained by the university in the office of the alumni secretary has advised thousands of men as to how to find opportunity to serve the nation in its war-time emergency where their special training will be of most service.

The department of agriculture has turned practically its whole activity toward speeding up the production of food in California, with notable results. Special researches are being carried on at the request of the National and the State Councils of Defense by experts in the fields of agriculture, astronomy, botany, chemistry, economics, engineering, geology, medicine, psychology, zoology, etc.

Between April 6 and October 31, 1917, the University of California expended or administered for specific war purposes a total of one hundred and sixty-one thousand dollars.

The University of California Medical School has sent into service Hospital Unit No. 30, under Major E. S. Kilgore, with twenty-three members of the faculty of the medical school among its officers. The medical school has conducted thousands of examinations for military or naval service, and many other examinations for the California State Board of Health, in connection with the selective draft.

Dr. T. Brailsford Robertson, professor of biochemistry, has isolated the new growth-controlling substance, "Tethelin," and has given his patents to the university for the endowment of medical research. This new substance promises to be of great value in causing the rapid healing of wounds or fractured bones

which had previously refused to yield to treatment.

The staff of the Hooper Foundation for Medical Research are obtaining valuable results in investigations concerning anemia, shock, typhoid carriers, and other problems of war-time significance.

The University of California Dental School is giving free dental care to men who through defects of the teeth would otherwise be disqualified under the selective draft, and a large number of its faculty and alumni have become officers in the Dental Service of the Army.

The diversity of tasks which individual members of the faculty of the University of California are carrying on as war-time emergencies may be illustrated by brief mention of some of the activities in which some of the members of the faculty are engaged:

President Benjamin Ide Wheeler is chairman of the Committee on Resources and Food Supply of the California State Council of Defense, represented Governor Stephens at the conference of the states, and has been active in varied fields of war-time work. David P. Barrows, professor of political science, has been commissioned as a major and has gone to the Philippines, where his eight years of experience as director of education and as chief of the Bureau of Non-Christian Tribes will be of special value in military intelligence work. Dean Herbert C. Moffitt, of the medical school, is a major in the Army Medical Service and at the head of a hospital at a training camp, and so in charge of the health of some thirty thousand men. Comptroller Ralph P. Merritt is federal food commissioner for California. Gilbert N. Lewis, dean of the college of chemistry, has been commissioned as a major in the Ordnance Corps and has been sent to France for gas work. Dr. William Palmer Lucas, professor of pediatrics in the University of California Medical School, is in France, in charge of the Children's Bureau of the Red Cross for France and Serbia. Professor W. B. Herms, of the department of agriculture, has been making an entomological survey of sanitary conditions in the neighborhood of the cantonments of the western depart-

ment of the Army, to aid in preventing the spread of those diseases, such as malaria, which are carried by insects. Professors H. M. Hall and T. H. Goodspeed, of the department of botany, have been investigating certain native plants of California which can be used as a source of rubber in case of national necessity. Practically all of the members of the department of chemistry are engaged in confidential researches as to chemical problems the national authorities have asked them to take up. Professor Stuart Daggett, of the department of economics, has reported on the supply of iron and steel on the Pacific coast and Professor Henry R. Hatfield, of the department of economics, dean of the college of commerce, has reported on the relation of the state banks to the Federal Reserve System. Professor F. E. Pernot, of the department of electrical engineering, is in Washington aiding with various war-time electrical problems. Professor Charles Gilman Hyde, of the chair of sanitary engineering, designed fifteen miles of sewer system for Camp Fremont. Professor C. C. Wiskocil and his colleagues in the civil engineering department have made tests of airplane fastenings and woods to be used in the construction of airplanes. Professor C. L. Cory, dean of the college of mechanics, has investigated problems in the fixation of nitrogen from the air by direct electric arc furnace process. Professor B. M. Woods, of the department of mechanics, as president of the Academic Board of the School of Military Aeronautics, is directing the instruction given to the flying cadets. Professor George D. Louderback, of the department of geology, has reported on sources for a supply of manganese ores. Professor George M. Stratton, as a captain in the Signal Corps, is enlisting officer in San Francisco for the Aviation Service, and he and Professor Warner Brown, of the department of psychology, have developed tests to determine the fitness of young men to become military aviators. Professor William E. Ritter, director of the Scripps Institution for Biological Research, has investigated the supply of food fishes in the Pacific Ocean not as yet used by the fishermen and the canneries.

Professor C. A. Kofoed and Professor W. W. Cort, of the department of zoology, have investigated the hookworm, and organisms responsible for trench dysentery. Professor Lincoln Hutchinson, of the department of commerce, is in Washington as tin expert of the War Trade Board. Professor Joel H. Hildebrand has gone to Washington to become a captain in the Ordnance Department and to aid in coordinating the war-time researches of chemists throughout the country. George E. Dickie, of the department of military science and tactics, is the Pacific coast representative of the War Department and Navy Department Commissions on Training Camp activities. Professor H. B. Langille, of the department of mechanics, is an inspector of naval construction for the government, at the Union Iron Works.

SCIENTIFIC NOTES AND NEWS

M. PAINLEVÉ has been elected president of the Paris Academy of Sciences, succeeding M. d'Arsonval. M. Léon Guignard, professor of botany at the School of Pharmacy of Paris, has been elected vice-president.

THE Nichols Medal for meritorious research in organic chemistry has been conferred on Professor Treat B. Johnson, of the Sheffield Scientific School of Yale University. The medal is awarded annually by the New York Section of the American Chemical Society on the merit of the original communications published in the journal of the society.

At the last meeting of the New York Section of the Society of Chemical Industry, the Perkin Medal was presented to Auguste J. Rossi, by Dr. William H. Nichols, past-president of the society, and Dr. F. A. J. Fitzgerald gave an account of Dr. Rossi and his work.

DR. C. GORDON HEWITT, F.R.S.C., dominion entomologist and consulting zoologist, of the Department of Agriculture, Ottawa, has been awarded the gold medal of the Royal Society of Canada for the Protection of Birds, and has been elected an honorary fellow of the society, in recognition of his services to the cause of bird protection in England and in Canada,