agriculture. He was honored by election to the presidency of the Royal Society in 1906.

Dr. Saunders possessed a pleasing personality and was much beloved by those who knew him well. He was kind and considerate to all and ever ready to listen and help those who came to him for guidance and assistance. He was a good administrator, consistent, quiet and firm, with an excellent judgment of men and affairs, and these qualities no doubt contributed largely to his success as chief officer of the Experimental Farms. He never exaggerated to force home a truth, no matter how important it was, but contented himself in all his writings with a plain statement of the facts as observed and of the deductions that might safely be drawn therefrom. Anything of the spectacular or sensational, for the purpose of publicity or advertisement, were particularly abhorrent to him.

The name of Dr. Saunders is honorably and inseparably identified with the establishment and work of the Dominion Experimental Farms. To this end he labored long and earnestly and, as is well known, successfully. Canada gladly and gratefully acknowledges the benefits which those services have bestowed upon her agriculture.

FRANK T. SHUTT

THE MUSEUM OF VERTEBRATE ZOOLOGY OF THE UNIVERSITY OF CALIFORNIA

AMONG the research museums of America is one which in view of the brief period of its existence and the relatively small fund available for its maintenance has made such phenomenal growth and published such important results that it deserves the consideration and respect of all American naturalists. I refer to the Museum of Vertebrate Zoology of the University of California. This institution is only six years old, having been established in 1908 through the liberality and public spirit of Miss Annie M. Alexander. For years previously Miss Alexander had been engaged in amassing collections of West Coast mammals, and had conducted important expeditions reaching northward far into Alaska. There being at the time no museum on the Pacific coast with which she could cooperate in building up the splendid research collections she had in view, she sought and obtained the cooperation of the State University at Berkeley. During the first year a temporary building was erected, the cost of which was shared equally by the university and Miss Alexander.

Modern work in systematic zoology has demonstrated over and over again the futility of attempting critical studies of the relations and variations of species, or of the problems of their distribution, without the illuminating aid of large series of specimens from many localities. Keenly alive to this need, Miss Alexander, by her own efforts and those of her assistants in the field, has already brought together the largest collections ever made of West Coast terrestrial vertebrates—collections sure to be of inestimable and increasing value as time goes on. Her field explorations have extended from the deserts and mountains of southern California northward and westward to Prince William Sound in Alaska. Among the areas already worked in detail are the great interior valley of California, the Colorado Desert and other deserts and mountains of southern California, Owens Valley, the Mt. Whitney region, the Trinity Mountains in northern California, Humboldt Bay on the northwest coast, the Modoc and Goose Lake region of northeast California, certain mountains and deserts in northern Nevada, Vancouver Island and other parts of British Columbia, and the Sitkan and Prince William Sound regions in Alaska.

The magnitude of the collections—consisting mainly of birds, mammals, reptiles and batrachians—is surprising in view of the relatively brief period covered by the field work, the museum already containing more than 21,000 mammals, about 25,000 birds, more than 1,300 sets of birds' eggs, and upwards of 5,500 reptiles and batrachians.

Based on these rich collections, the university has issued a series of highly important faunal and systematic papers, illustrated by plates, text-figures and maps, some treating of the faunas of special areas, others of the species of particular groups. In nearly all cases

these contributions possess the merit and freshness of having been written by the men who actually did the field work on which they are based. The authors are Joseph Grinnell, the able and energetic director of the museum, and several assistants, past and present, namely, Harold C. Bryant, Joseph Dixon, Edmund Heller, Frank Stephens, Harry S. Swarth, Walter P. Taylor, and Miss Louise Kellogg.

The museum has adopted a most liberal policy in regard to the loaning of specimens, so that responsible naturalists engaged in revisions of groups may have the benefit of its material. In my own case, particularly in my studies of the big bears of Alaska, of which Miss Alexander has amassed the largest and most important collection in existence after that of the United States Biological Survey, I have enjoyed such unusual courtesies in the unrestricted use of specimens and field notes that I feel it a privilege as well as a duty to make this slight acknowledgment of the generosity and spirit of cooperation shown both by the founder and the director of the museum.

C. Hart Merriam

SCIENTIFIC NOTES AND NEWS

The American Society of Naturalists, in affiliation with the American Society of Zoologists, the Botanical Society of America, and the Society of American Bacteriologists, will hold its thirty-second meeting at Philadelphia, under the auspices of the University of Pennsylvania, on Thursday, December 31. The morning session will be open for papers on evolution, genetics and related subjects from members or invited guests. The program of the afternoon will be a joint symposium with Section F of the American Association for the Advancement of Science on "The Value of Zoology to Humanity." The annual dinner will be held in the evening of the same day.

The American Physiological Society, the American Society of Biological Chemists, the American Society for Pharmacology and Experimental Therapeutics, the American Society for Experimental Pathology and the Society of American Naturalists, will meet in the laboratories of the Washington University, St. Louis, on December 28, 29 and 30.

The New York Academy of Sciences and its affiliated societies had a general meeting at the American Museum of Natural History, on Monday, November 2, when Professor Reginald A. Daly, of Harvard University, gave a lecture on "Problems of Volcanic Action," which was followed by a reception.

Professor William Henry Bragg, who holds the chair of physics at the University of Leeds, is giving a course of four lectures on X-rays and crystals at Brown University, as part of the celebration of the hundred and fiftieth anniversary of its foundation.

Dr. Felix von Luschan, director of the Royal Museum of Ethnology in Berlin, and professor of anthropology in the University of Berlin, who was a guest at the Australian meeting of the British Association, is at present in this country, having been unable to return to Germany. He lectured last week at the University of Chicago.

Professor David Todd has returned to Amherst College, having made successful photographs of the corona of the recent solar eclipse from the estate of Count Bobrinsky, about a hundred miles southeast of Kieff. Owing to the mobilization, his instruments did not arrive in time, but he was able to obtain a camera and lenses that could be used.

Dr. Cyril G. Hopkins, head of the department of agronomy of the University of Illinois, has returned to his work after a year's leave of absence. Dr. Hopkins during the last year has been working for the interests of the south with the "Southern Settlement and Development Association," with headquarters at Baltimore.

President A. C. Humphreys, of the Stevens Institute of Technology, will act as president of the International Gas Congress, which meets in San Francisco next September.

The Alvarenga Prize for 1914 has been awarded by the College of Physicians of Philadelphia to Dr. Herman B. Sheffield for an essay entitled "The Fundamental Principles