

'California Fish and Game'<sup>1</sup> for April contains an article of the insectivorous habits of the Herring Gull, by A. C. Burrill, a convincing argument in favor of the bird, while in 'Fins, Feathers and Fur,'<sup>2</sup> Thaddeus Surber has an interesting paper on the Pine Co. Minnesota Game Refuge as a playground, and there is a remarkable photograph of Mallards at Crane Lake, Illinois. Taking the opposite view from that expressed in the 'Audubon Bulletin' this journal unhesitatingly condemns the Crow and endorses the national crow shoot.—W. S.

**Report of the National Zoological Park.**<sup>3</sup>—The second annual report of superintendent Ned Hollister shows a slight increase in the collections, notwithstanding the restrictions of war times. The birds include 190 species, represented by 706 individuals in comparison with 182 species and 683 individuals in 1917. Among the more notable acquisitions of the year were six Keas (*Nestor notabilis*) and eight Wekas or flightless Rails (*Ocydromus*) from South Island, New Zealand; a pair of Straw-necked Ibis (*Carphibis spimicollis*) from Australia; a pair of Thick-billed Parrots (*Rhynchopsitta pachyrhyncha*) from the Chiricahua Mountains, Arizona; and a Santo Domingo Parrot (*Amazona ventralis*). Forty-five birds were hatched during the year, including several American Coots. This is apparently the first record of the breeding of this species in captivity, at least in this country. Waterfowl (Anseriformes) constitute the largest group in the collection. Of the 40 species represented, two-thirds are North American. These birds are kept in an enclosure provided with a large pond, where they can be readily seen, and thus form one of the most attractive exhibits in the Park. A noteworthy feature of the report is the complete list of mammals, birds, and reptiles by species and individuals and the care exercised in the use of correct scientific names.—T. S. P.

**Annual Report of the New York Zoological Society.**<sup>4</sup>—The report for 1918 shows commendable progress in the various activities of the New York Zoological Society in spite of adverse conditions due to the war. Two sections of this report contain notes of ornithological interest. The Department of Birds, in charge of Lee S. Crandall, Curator, and William Beebe, Honorary Curator, has maintained its collections "somewhat reduced in numbers but still rich in rare and unusual forms." Only 16 species new to the collection were added during the year. Of these, the most important

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<sup>1</sup> California Fish and Game. Published quarterly by the California Fish and Game Commission, Sacramento, Calif.

<sup>2</sup> Fins, Feathers and Fur, Official Bulletin of the Minnesota Game and Fish Department, Carlos Avery, Commissioner, St. Paul, Minn.

<sup>3</sup> Report of the Superintendent of the National Zoological Park for the Fiscal Year ending June 30, 1918. Reprint from Ann. Rept. Smithsonian Institution for 1918, pp. 66-81, Washington, Govt. Printing Office, 1919.

<sup>4</sup> Twenty-Third Annual Report of the New York Zoological Society, 1918, 8vo, pp. 156, 1919 (Dept. of Birds, pp. 67-70, Tropical Research Station, pp. 84-86). Office of the Society, 111 Broadway, New York.

were a male Argus Pheasant (*Argusianus argus*), an adult male Regent Bird (*Sericulus chrysocephalus*), a Green-backed Trumpeter (*Psophia viridis*), a Double-banded Puff-bird (*Bucco bicinctus*) "probably never before exhibited alive," and a chick of the Galeated Curassow (*Pauxi pauxi*). Among the birds bred in the Park during the year were three Upland Geese (*Chloëphaga magellanica*) and a Banded Curassow (*Craz sclateri*) — both apparently first records of the breeding of these species in the United States. The census of birds on January 1, 1919, showed 736 species represented by 2,406 individuals as compared with 813 species and 2,799 individuals the previous year. The number of species in some of the larger groups in the collection were as follows: Galliformes, 68; Columbigiformes, 61; Anseriformes, 54; Psittaciformes, 66, and Passeriformes, 332.

The Tropical Research Station in the Bartica District of British Guiana was compelled to suspend field work, but the Director, William Beebe, and the Preparateur, John Tee Van, "spent all the time available in a careful review of past collections and of zoological literature for records of the higher vertebrates of British Guiana, resulting in a preliminary check list" which will be published in the near future. The number of species of birds credited to the Bartica District is 426. An expedition in charge of Director Beebe sailed in February, 1919, to reopen the station on a new and permanent site at Katabo, at the junction of the Mazaruni and Cuyuni Rivers.— T. S. P.

**The Meaning of Natural Control.**— In a paper<sup>1</sup> with this title Mr. John D. Tothill calls attention to the obvious fact that in each generation of any animal, all but two individuals from the total progeny of each pair must perish. This mortality is due chiefly to natural control, and in explaining how the natural control of certain insects is accomplished the author makes certain interesting references to birds.

Among predatory enemies of insects the chief are birds and insects. In the case of the Forest Tent-caterpillar the percentage of destruction due to various enemies is estimated, and chickadees and mites together are credited with the destruction of 25 % of the eggs. Doubtless the major share of these fall to the chickadees. As further examples of the work of birds, the author states that the Cecropia moth in New Brunswick is held in check chiefly by the Downy and Hairy Woodpeckers, and that the Red-eyed Vireo is one of the chief factors in the control of the Fall Webworm.

In the tabulation of the enemies of the latter insect, birds are credited with a percentage of destruction of the broods, varying in different years, from 11.4 % to 89.5 %. In 1912, when the insect was fairly plentiful, a reduction in numbers was brought about chiefly by parasites (insects). In succeeding years the parasites gradually died out as the insect became rare, and control was maintained almost exclusively by birds.— W. L. M.

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<sup>1</sup> Proc. Ent. Soc., Nova Scotia, 1918, pp. 10-14.