

and it has only been advanced in the case of the Flickers, Meadowlarks and a few other rather anomalous cases.— W. S.

Annual Report of the Chief of the Biological Survey.¹— Mr. E. W. Nelson's report as chief of the U. S. Biological Survey for the year ending June 1919, contains much of interest. The amount of appropriations available for the work of the Bureau was greater than ever before, including \$592,000 from the Federal Government and over \$800,000 appropriated by State Governments and other bodies for work in cooperation with the Survey. It is estimated that the destruction of noxious animals resulted in a saving of live stock valued at five millions and of forage and crops valued at fourteen millions.

The bulk of the report deals with the destruction of noxious mammals. The ornithological work consisted largely of investigating charges against various species of birds. Among these was the destruction of fish by Mergansers and Pelicans, the case of the former being held open while the latter was proven harmless to species used as human food. The Night Herons in Louisiana were charged with being injurious to the frog industry but this was disproved as was the charge against the White-winged Dove of destroying grain in Arizona. In the case of the Bobolink, while charges of damage to crops in the lower Delaware Valley were found to be groundless, there was found to be great damage to the rice crop in the southern states and an open season for shooting these birds was granted from Pennsylvania and New Jersey southward.

Much additional information of this nature is contained in the report which seems to show that several species regarded as beneficial when the effort toward bird protection was initiated must now be regarded as injurious at certain times and places and necessary steps taken for their control.

It is welcome news to learn that in addition to various publications of the Survey noticed in these columns during the past year, we may look at an early date for the appearance of reports on the birds of New Mexico and Alabama.

The supervision of the National Bird Reservations during 1918-1919 has been in charge of Dr. G. W. Field while Mr. G. A. Lawyer has conducted the administration of the migratory bird treaty.— W. S.

Shufeldt on the Birds of Brazil.²— In the August number of the 'Bulletin of the Pan American Union,' Dr. Shufeldt has compiled a popular account of the birds of Brazil illustrated by a number of photographs, mainly from specimens in the U. S. National Museum. The paper is arranged systematically beginning with the Rhea and reaching the Parrots on the ninth page, all the rest of the avifauna being disposed of in a couple

¹ Report of Chief of Bureau of Biological Survey. pp. 1-24.

² Birds of Brazil. By R. W. Shufeldt, M. D. Bull. Pan-American Union, August, 1919, pp. 159-176.

of paragraphs. While the treatment is thus rather uneven a great variety of matter is presented in connection with the species that are considered in detail, covering general history, fossil birds and habits of specimens in the Washington "Zoo."—W. S.

The Food of Australian Birds.¹—Dr. J. B. Cleland presents a summary of investigations relating to the food of Australian Birds done by himself and Messrs. J. H. Maiden, W. W. Froggatt, E. W. Ferguson and C. T. Musson. The data is presented under the following headings: Broad Summary of Results, Detail Summaries and Verdicts on Individual Species, Food of Birds from the Botanical Aspect, List of Birds Feeding on Particular Foods, and Tabulated Results of Examination of the Contents of Stomachs and Crops Examined. In the summaries one finds nothing conveying an idea of the volume of food items, in the absence of which it is difficult to conclude just what are the important foods. Now that Professor W. E. Collinge of St. Andrew's University has adopted and championed the volumetric system of food analysis, it is to be hoped his colleagues in the British Dominions also will realize its advantages. In the discussion in the booklet reviewed the majority of the species are commended. The principal exceptions are: the Crow, Starling, and House Sparrows which for best results should be kept under strict control, the Silver-eyes, which must often be suppressed for the welfare of cultivated fruit, certain Parrots which destroy grain and the bee-eaters. Pigeons, Doves, Quails, most Waterbirds and the Honey-eaters are mentioned as having no marked economic significance.

Points of interest may be noted in connection with the lists of birds feeding on particular foods. The longest list, 73 species, is of birds feeding on ants, a group of insects that a certain school of biologists defines as "specially protected," the models for "mimicking" insects in all orders. Small comforts here for either the "mimics" or the biologists. Caterpillars and other stages of Lepidoptera are cited with 68 bird enemies, flies with 59 and grasshoppers and their allies with 35. Thrips are recorded from the stomachs of four species, probably a better list of enemies of these minute insects than could be made with present knowledge for birds of the United States. However, all of the other lists of birds feeding on weed seeds and groups of destructive insects could easily be exceeded from American records.—W. L. M.

The Ornithological Journals.

Bird-Lore.² XXI, No. 5. September–October, 1919.

William Brewster. By Frank M. Chapman. A beautifully written and appreciative sketch of his life and works.

The Spotted Sandpiper. By C. W. Leister.—An account of its home life with admirable photographs.

¹ Science Bul. No. 15, Dept. Agr. New South Wales, July, 1918, 112 pp.

² D. Appleton & Company, Harrisburg, Pa.