

Bird being raised at the expense of a brood of some far more useful species. The European House Sparrow's numerous bad traits are recounted, and he is likewise credited with many good deeds. In the author's opinion, his good traits about balance his mischievous ones, as he is at present represented in Ontario, but he thinks the species should not be allowed to greatly increase. Of course, the Woodpecker, Cuckoos, Thrushes, Warblers, and Flycatchers, are highly commended and their protection strongly advocated. This useful pamphlet closes with a reprint of the Ontario 'Act for the Protection of Insectivorous and other Birds'; the species exempted from protection are "Hawks, Crows, Blackbirds, and English Sparrows." The 33 full-page original illustrations are not especially artistic, but will probably aid the farmer in distinguishing between his friends and foes.—J. A. A.

Stejneger on the Birds of the Kurile Islands.¹—This appears to be the first attempt to enumerate the birds of the Kurile Islands, which are, zoologically speaking, as yet a *terra incognita*. The only important collection of birds made there, since Steller's visit more than a century ago, was gathered by Capt. H. J. Snow, and passed into the hands of Capt. Blakiston and Mr. Pryer, who reported upon it in their paper 'The Birds of Japan', published in 1882. Dr. Stejneger's list is an attempt "to lay a foundation upon which others may build," and for this purpose he has "gathered together all of the materials and records" accessible to him. In most cases the information is meager and unsatisfactory, and should serve to call attention to this extensive chain of islands, "about 630 miles long," as an important field for zoological investigation. Dr. Stejneger's list numbers 146 species.—J. A. A.

Clark on the Feather Tracts of North American Grouse and Quail.²—At great expense of time and trouble Dr. Clark succeeded in securing either fresh or alcoholic examples of all the genera, and of nearly all the species of North American Grouse and Quail for the purpose of studying their pterylosis. In the present paper of a dozen pages and three plates we have the results of his investigations. As the field was nearly new, the paper proves a valuable contribution to pterylography and also to North American ornithology. The information is both interesting and instructive, but does not have a decisive bearing on any points of taxon-

¹ The Birds of the Kurile Island. By Leonhard Stejneger, Curator, Division of Reptiles and Batrachians. Proc. U. S. Nat. Mus., No. 1144, Vol. XXI, pp. 269-296.

² The Feather-Tracts of North American Grouse and Quail. By Hubert Lyman Clark, Ph. D., Instructor in Zoölogy, Amherst College. Proc. U. S. Nat. Mus., No. 1166, Vol. XXI, pp. 641-653, with plates xlvii-xlix.

omy. It is rather confirmatory, as would be expected, of conclusions based on other structural features. He ventures, however, to present diagrams of the "hypothetical relationships," respectively, of the genera of Quails and Grouse, based wholly on a study of their pterylography. He expresses regret "that the amount of labor involved in this investigation has not been productive of more considerable results"; yet hardly more could have been expected than the contribution of facts here presented. It is not likely that any one set of characters, however, fully known, will ever serve as a basis for a satisfactory phylogeny.—J. A. A.

Weed on the Winter Food of the Chickadee.¹—The scientific study of the food habits of our birds, now carried on at various Agricultural Experiment Stations and elsewhere, is placing in strong light the indebtedness of man to insectivorous birds. Mr. Weed's excellent paper on the winter food of the Chickadee shows that at this season the Chickadee's food consists very largely of the eggs of insects injurious to vegetation. "This destruction," says Dr. Weed, "of the myriad eggs of plant-lice which infest fruit, shade, and forest trees is probably the most important service the Chickadee renders during the winter residence." It also destroys the eggs of the tent caterpillar and the fall canker worm, as well as those of other noxious insects. Statistics are given of the results of stomach examinations, and a detailed account of how the investigations were conducted. The conclusion reached is that the Chickadee is "one of the best of the farmer's friends, working throughout the winter to subdue insect enemies of the farm, orchard, and garden."—J. A. A.

Weed on the Feeding Habits of the Chipping Sparrow.²—This is a detailed account of the number of times a pair of Chipping Sparrows fed their brood of young during "one long day in June," just before the young left the nest. It was found that the parents made nearly two hundred visits to the nest, carrying food to their young, during a single day. The precise nature of the food was of course not determined, but the most abundant elements were seen to be soft-bodied caterpillars, crickets, and crane-flies, while doubtless a great variety of other insects was taken. As this bird is an abundant, and at all times a harmless species, and commonly raises two broods each season, its utility as an insect destroyer is abundantly evident.—J. A. A.

¹ The Winter food of the Chickadee. By Clarence M. Weed. Bull 54, New Hampshire College Agriculture Experiment Station, Durham, N. H., pp. 85-98. June 1898.

² The Feeding Habits of the Chipping Sparrow. By Clarence M. Weed. Bull. 55, New Hampshire College Agriculture Experiment Station, Durham, N. H., pp. 101-110. July, 1898.