

to insect pests and the fruit industry, are among the numerous subjects treated in the Report, but perhaps of even greater importance are the investigation of ground squirrels and wood rats in their relation to the dissemination of the spotted fever and the bubonic plague, and of means to reduce their number, and, where necessary, to effect their extermination. The scope and efficiency of the work of the Survey is thus extended year by year to meet new emergencies and conditions; its work along economic lines is thus of the highest importance to the general welfare, in addition to its biologic phases.— J. A. A.

Jacobs on the Purple Martin and Houses for its Summer Home.—

Mr. J. Warren Jacobs contributes further welcome information¹ regarding his success in supplying houses for the summer homes of the Purple Martin. This brochure of 38 pages contains a list of persons who have put up his martin houses, with many reports from correspondents concerning the success that has attended their use. These reports are followed by several pages "On Snakes as Bird Destroyers, and their Power to 'Charm.'" From the statements here made it is evident that snakes are quite destructive to not only the eggs and young of birds that nest on the ground, but also to those nesting in bushes and trees, and that even Martins nesting in bird houses are not wholly exempt from their attacks.— J. A. A.

'How to Attract and Protect Wild Birds.'—This second English edition of Hiesemann's well known work² presents many new features and shows that there is a large demand for the English version of this very useful and excellent manual of how to attract and how to promote the increase of wild birds, as well as how to protect them from natural enemies, based on the well-known devices and experiments made during many years of close study of the subject by Baron von Berlepsch on his estate at Seebach, Germany. The legal aspect of bird protection is not treated; protection here means the provision of nesting-places for birds that breed not only in holes in trees and in sheltered niches, but also for those that breed in the open, as in fields and marshes, and in thickets and woods. Protection, in other words, means the preservation, so far as possible, of natural conditions and haunts, as well as the erection of artificial nesting-sites. A chapter is devoted to the feeding of birds in winter, and the various methods employed are illustrated as well as described.

The author refers to the principle of utilitarianism that is now so widespread among all classes of society, but has the courage to say: "We do

¹ Second Supplement to Gleanings No. 5. The Purple Martin (*Progne subis subis*) and Houses for its Summer Home. By J. Warren Jacobs. Waynesburg, Pa. Issued November 1, 1910. 8vo, pp. 57-94, with halftone illustrations.

² How to | Attract and Protect | Wild Birds | By | Martin Hiesemann | Translated by | Emma S. Buchheim | With an Introduction by | Her Grace the Duchess of Bedford | Second edition with many revisions | With many illustrations | London | Witherby & Co. 326 High Holborn | 1911. 8vo, pp. 100, 40 text figures. 1s. 6d. net. Can also be ordered of the National Association of Audubon Societies, 1974 Broadway, New York City. (Note the change of address.)

not protect birds solely because they are useful, but chiefly from ethical and æsthetical reasons, as birds give beauty and animation to nature. We also wish to preserve their species, and hence the protection of birds signifies the preservation of the monuments of Nature." The very full and reasonable instructions here given would be of great service to those in any country who are willing to make a little effort for the preservation and increase of birds, and it is thus fortunate that the National Association of Audubon Societies is an agency for the sale of the work in America.—J. A. A.

Economic Ornithology in recent Entomological Publications.—

The oak pruner (*Elaphidion villosum*), a longicorn beetle that seriously injures oaks, hickories, peach and pear trees, is the subject of a recent circular of the Bureau of Entomology.¹ The author, Dr. F. H. Chittenden, says: "Among natural enemies of the oak pruner, Mr. F. H. Mosher records the Downy Woodpecker (*Dryobates pubescens*), the Blue Jay (*Cyanocitta cristata*), and the Black-capped Chickadee (*Penthestes atricapillus*). Mr. W. L. McAtee of the Bureau of Biological Survey, states that a species of *Elaphidion* is preyed upon by the Downy Woodpecker and by the Great-crested Flycatcher (*Myiarchus crinitus*)." Dr. Chittenden has also recently published an account² of the wild bird enemies of the potato beetle (*Leptinotarsa decemlineata*) in which the Chipping Sparrow receives fullest mention. Four species not recorded by Dr. Chittenden are the Starling, Chewink, Cliff Swallow, and Cedarbird, the complete list being: Bobwhite, Prairie Chicken, Sharp-tailed and Ruffed Grouse, Red-tailed Hawk, Nighthawk, Yellow-billed Cuckoo, Crow, Starling, English Sparrow, Chipping Sparrow, Chewink, Cardinal, Rose-breasted Grosbeak, Scarlet Tanager, Cliff Swallow, Cedarbird, Wood, Hermit and Olive-backed Thrushes, and Robin.

The writer of 'The Life History and Control of the Hop Flea-Beetle,'³ the subject of which is a chrysomelid beetle which has destroyed 75 percent of the crop in some seasons in certain parts of British Columbia, thinks it possible that the insect has some bird enemies, but mentions none. Biological Survey records furnish the names of two, the Killdeer (*Oxyechus vociferus*) and the Cliff Swallow (*Petrochelidon lunifrons*).

A few paragraphs in the Report on the Field Work against the gipsy moth and the brown-tail moth⁵ shows that interest in the bird enemies of these pests is unabated. As there has been but one⁴ complete list of the bird enemies of the gipsy moth published since the original report by Forbush and Fernald in 1896 and none complete for the brown-tail,⁶ revised lists will not be out of place in the present connection.

¹ Circular 130, Bur. Ent., Dec., 1910, p. 7.

² Bull. 82, Pt. VII, Bur. Ent., Feb. 1911, p. 87.

³ Parker, W. B., Bull. 82, Pt. IV, Bur. Ent., May, 1910, p. 48.

⁴ Forbush, E. H., Massachusetts Crop Report, July, 1900, pp. 33, 34.

⁵ Bull. 87, Bur. Ent., Aug., 1910, pp. 26-27.

⁶ The Gypsy Moth. Massachusetts State Bd. Agr., Boston, 1896, pp. 207-208.