

Among these are birds, of which Steller's Jay and Vireos are said¹ to eat the larvae, and Creepers and Nuthatches the eggs (p. 17).

European corn borer (*Pyrausta nubilalis*).—There is no need to comment on the seriousness of this pest, which despite great efforts and expenditures in fighting it, is now spreading over our maize growing region, doing great damage, and forcing drastic changes in farm practice. As a result of a study of the corn borer in Europe² much valuable information has been brought together by Messrs. K. W. Babcock and A. M. Vance, in which we find a little on the relation of birds to the pest. The species mentioned (p. 35) as preying upon the corn borer are Sparrows, Chimney Swallows, and Rooks.

Giant sugar cane borer (*Castnia licus*).—In Trinidad and northeastern South America this insect has developed into a serious enemy of cane, even exceeding in importance the small moth borers and froghopper, formerly regarded as pests of the first magnitude. In discussing the insect, Mr. H. Martyn Skinner, says,³ "Certain insectivorous birds are the principal natural enemies of *Castnia* in the adult stage, notably the 'kiskidee' (*Pitangus trinitatis*) and the 'boat-tail' (*Holoquistus lugubris*), the latter being very partial to the larvae also." These birds are protected, and encouraged by the erection of bamboo perches throughout the fields, latterly also by the establishment of bird reserves.—W. L. M.

Food Habits of *Tyrannus dominicensis vorax* in Barbados.—Mr. R. W. E. Tucker reports⁴ on the examination of 100 stomach contents of this Flycatcher which was suspected of being destructive to various beneficial insects. It was found that insects were the largest element of the food with fruits and lizards following in importance. The insects taken, however, were chiefly destructive forms and included larger numbers of the cane root borer and cane stem weevil, both important pests, than any other kinds. Only a few beneficial insects were taken and it is recommended that the bird be protected during a period when further investigations are made of its economic status.—W. L. M.

Economic Notes on Birds of the Malay Archipelago.—In a book by K. W. Dammerman on 'The Agricultural Zoology of the Malay Archipelago'⁵ is a chapter (VII) on mammals and birds in which 25 pages (294-319) are devoted to sketches of the more important groups of birds with special emphasis on their economic status. The author is favorable to bird protection but notes that the native youths have much to learn in this respect. The most injurious birds are Weaver-birds of the genera *Ploceus* and *Munia* which damage rice and cane, the Flower-peckers (*Dicae-*

¹ Patterson, J. E., Tech. Bul. 137, U. S. Dept. Agr., 19 pp., 18 figs., Oct., 1929.

² Tech. Bul. 135, U. S. Dept. Agr., 54 pp., 10 pls., 3 figs., Nov. 1929.

³ Suppl. Tropical Agriculture, Jan. 1930 (1929), p. 6.

⁴ Tropical Agriculture, Vol. VII, No. 3, pp. 68-69, March, 1930.

⁵ J. H. de Bussy Ltd., Amsterdam, 1929, 473 pp., 40 pls., 179 figs.

um) which distribute mistletoe seeds, Crows which feed on maize, millet, and other crops, and Parakeets which destroy fruits, grains, and vegetable. A section of the bibliography (p. 409) is devoted to publications on birds, some of which are chiefly economic in character. Four species of birds are illustrated in color and seven in black and white.—W. L. M.

Shorter Papers.

Ashby, Edwin.—Notes on the Fauna of Dirk Hartog Island, Western Australia. Introduction and Aves. (*Trans. Royal Soc. South Australia*, LIII, 1929, pp. 54-61).—A briefly annotated list of twenty-one species.

Bancroft, Griffing.—A New Pacific Race of Gull-billed Tern. (*Trans. San Diego Soc. Nat. Hist.*, V, No. 19, pp. 283-286. December 10, 1929.—*Gelochelidon nilotica vanrossemei* (p. 284), Salton Sea, Calif.

Berlepsch, Hans von.—Twentieth and twenty-first Annual Report of the Seebach Station for Bird Protection.

Bowen, W. W.—A New Kingfisher from East Africa: First Preliminary Paper on Birds of the Gray African Expedition—1929. (*Proc. Acad. Nat. Sci. Phila.*, LXXXI, pp. 627-631. February 18, 1930.)—*Halcyon albiventris prentissgrayi* (p. 627), Meru, Kenya Colony, with a discussion of the allied forms.

Bowen, W. W.—A New Nightjar from Angola: Second Preliminary Paper on Birds of the Gray African Expedition—1929. (*Proc. Acad. Nat. Sci. Phila.* LXXXII, pp. 1-2. March 14, 1930.)—*Caprimulgus rufigena quanzae* (p. 1) Quanza River Valley, Angola.

Bradshaw, F.—Sage Grouse in Saskatchewan. (*Canadian Field Naturalist*, XLIII, No. 9, pp. 197-202. December, 1929.)

Dickey and van Rossem.—A New Attila from El Salvador. (*Proc. Biol. Soc. Washington*, 42, pp. 217-218. December 14, 1929.)—*Attila spadiceus salvadorensis* (p. 217), Lake Oomega, Salvador.

Dickey and van Rossem.—A New Race of the Hairy Woodpecker from El Salvador. (*Proc. Biol. Soc. Washington*, 42, pp. 219-220. December 14, 1929.—*Dryobates villosus parvulus* (p. 219), Los Esemiles, Salvador.)

Friedmann, Herbert.—The Forms of the Orange-breasted Bush-shrike, *Chlorophoneus sulfureopectus* (Lesson). (*Occas. Papers Boston Soc. Nat. Hist.*, Vol. 5, pp. 251-253. January 20, 1930.)—*C. s. fricki* (p. 252), Sadi Malka, Ethiopia; with a review of allied forms.

Griscom, Ludlow.—A Review of *Eumomota superciliosa*. (*Proc. New Engl. Zool. Club*, XI, pp. 51-56. October 31, 1929), *E. s. euroaustriis* (p. 54), Lancetilla, Honduras; *E. s. dickeyi* (p. 55), Copan, Honduras, and *E. s. vanrossemei* (p. 55), Sacapulas, Guatemala, are described as new. These are "localized" in valleys and in view of the great variation in color found in the group it would seem possible that some of them, at least, might be cases of individual variation. The reviewer had so regarded the Guatemalan form.