

There is a chapter on "my special friends" in which brief sketches of the habits and character of a number of common species are presented. Another chapter is entitled "some intruders" and discusses some of the most serious problems of the conservationist.

The author's attitude on these is admirable and is well set forth in a single paragraph—"We must make conditions as favorable as possible for the survival of the greatest number of individuals. If we start in to remove every individual or species that shows destructive tendencies we will have few left when the task is finished." Jays, crows, squirrels, snakes, skunks and most hawks he would deal with individually but the Sharp-shinned and Cooper's Hawks he finds universally bad.

The illustrations consist of a number of good half-tones.

Everyone with a place in the country should be interested in making it a bird refuge and a wild flower preserve, and as a handy guide Mr. Pellett's little book will be most useful; moreover one cannot read far without realizing that the author is a real lover of nature and has the ability to make what he has to say interesting to his readers.—W. S.

Bird Types in the Carnegie Museum.¹—Mr. W. E. Clyde Todd has followed the plan started, we believe, by the reviewer in 1899 (Type Specimens of Birds in the Academy of Natural Sciences of Philadelphia) of listing the type specimens of birds in the collection in his care.

The name of the species appears first with a reference to the place of publication and indication of its identity, if the name proves to be a synonym, then the catalogue number of the type specimen with its data in full.

The Carnegie Museum contains types of nearly 300 species and subspecies. These are mainly described by Mr. Todd but there are a few types of Anthony, Carriker, Ridgway, Oberholser, Hellmayr, and Sutton.

The species are arranged systematically and not by authors.—W. S.

'Aves' for 1927.—Once more ornithologists are indebted to Mr. W. L. Slater for compiling the 'Aves' for the 'Zoological Record.'² He has collected 1296 titles of books and papers on birds published during the year 1927. These are arranged alphabetically and then follows, as heretofore, a geographical arrangement and a systematic list of new species or notes on other species, making it possible to ascertain at a glance what papers there are dealing with a particular bird or group of birds, or upon the avifauna of any country or province, as well as papers on structure, physiology, habits, migration, nidification, evolution, etc.

The 'Zoological Record' is as absolutely indispensable to the working zoologist as a dictionary or encyclopedia is to the writer or editor. Its main-

¹ List of Types of Birds in the Collection of the Carnegie Museum, on May 1, 1928. By W. E. Clyde Todd. Ann. Carnegie Mus., Vol. XVIII., pp. 335-364, July, 1928.

² Zoological Record, Vol. LXIV. 1927. Aves. (Sept. 1928). Sold at their house on Regents' Park, London. N. W. 8. 7 shillings, 6 pence.

tenance deserves all the support that can be extended and, if a zoologist does not care to buy the entire 'Record,' let him secure the portion dealing with his speciality. For the student of ornithology this is the 'Aves' which Dr. Sclater has so carefully prepared.—W. S.

Madon's 'Les Corvides d'Europe.'¹—This report is the most voluminous that has yet appeared on the economic status of any family of European birds. The author states that he has been studying the subject in his leisure for 70 years which gives him another record. The number of stomach analyses which he contributes to the investigation is approximately 340 distributed among 5 of the 11 species reported upon. Practically all of these birds are considered as more injurious than beneficial, but we believe the author to be a stern judge, making the most of shortcomings of the birds and minimizing their useful services. The work owes its bulk largely to the detailed digest and critique that is made of the results of other investigators.

Except for the last named feature, the reviewer would class the report as a useful compilation of information on the economic relations of the European Corvidae and make little further comment. The rather severe condemnation of the volumetric system of reporting upon the food habits of birds—the basis of practically all American work on the subject,—however, requires some attention. A review is not the place for discussing this matter at length, especially since that has already been done in 'The Auk,' 29, 1912, pp. 449-464. It seems necessary, however, to explain again that users of the volumetric system do not regard it as perfect, nor do they so regard any other system thus far used. In economic reports a great deal depends upon interpretation, a necessity that is not done away with by the use of the numerical (favorite of our author), or any other, statistical method. Equivalent numbers, weights, or volumes, of such essentially diverse materials as compose the food of practically omnivorous creatures do not have equivalent economic values. Their relations must always be explained.

The volumetric system is frankly admitted to be one of rather rough estimates but in the case of long series of stomachs collected in diverse localities, and at all possible seasons, errors are certain to more or less balance, and an approximation to truth be reached. Madon objects that under the volumetric method soft and rapidly digested items of food do not receive the valuation to which they are entitled. He does not mention the converse of this proposition, namely, that under the numerical system the importance is exaggerated of all foods having specially resistant portions. The numerical system cannot be applied to bulk foods as ground up foliage, tubers, pulpy fruits, flesh, or carrion. Being thus incomplete why is it not better to adopt a method that can be applied to all foods?

¹ Les Corvides d'Europe, leur regime, ses relations avec l'Agriculture et la Chasse. L'analyse stomacale des omnivores. Mem. Soc. Orn. et Mamm. France, No. 1, 255 pp.; also published in Encycl. Orn. No. 3, 1928.