

some reliable information regarding the birds of the region; and in choosing Mr. Swarth to prepare the account a wise selection was made, as no one has a better knowledge of Arizona bird life.

An interesting sketch of the physical features of the region with the characteristic birds and plants is presented, followed by a fuller description of the more important birds, their recognition marks, character of occurrence and habits. These sketches cover the Palmer's Thrasher, Cactus Wren, Verdin, Western Kingbird, Dwarf Cowbird, Desert Sparrow, Phainopepla, Zone-tailed Hawk, Texas Nighthawk, Arizona Crested Flycatcher, Desert Quail, White-winged Dove, Mearns' Gilded Flicker, Gila Woodpecker, Farallon Cormorant, Pallid Great Blue Heron and Black-crowned Night Heron.

Lists are added of birds seen during a short visit to the region in 1917: thirty species on the Papago Saguaro Monument, May 30-June 4; thirty-seven at Tempe and surrounding farm lands during the same period—eighteen being identical; fifty-two at Roosevelt Lake, June 5-11 and July 2-5; fifty-seven in the Sierra Ancha, June 11-July 2 and twenty-six at Globe, July 5-7.

Mr. Swarth's pamphlet will be of great value to anyone visiting the region and forms an important contribution to the ornithology of Arizona, as well as a record of the present status of the bird life of the region for future comparison.—W. S.

Economic Value of the Starling in the United States.—This report¹ is primarily a consideration of the food of the Starling based upon an examination of 2157 stomachs of the birds collected mainly in Connecticut, New Jersey and New York and upon field investigations carried on by the authors. The results of these studies show that the food of the Starling consists largely of injurious insects and that its food habits are either beneficial or neutral so far as man is concerned, the time during which it destroys crops or molests other birds being extremely short compared with the endless hours spent in searching for insects or feeding on wild fruits.

In the opinion of the authors the Starling is a more valuable bird than the Robin or Flicker and compares favorably with the House Wren. They think that while no legislation should prevent farmers or others from killing Starlings, when actually engaged in destroying crops, the bird should on other occasions be protected by law. They admit that the great abundance and notably gregarious habits of the bird may develop some minor food habit to such a degree that it may become serious, while the roosts often become a nuisance in towns or villages. Judging by our own experience we are inclined to think that the Starling can take care of

¹ Economic Value of the Starling in the United States. By E. R. Kalmbach and I. N. Gabrielson, Assistant Biologists, U. S. Department of Agriculture, Bulletin No. 868. January 10, 1921. pp. 1-66. Four plates and several diagrams.

itself without protective legislation, and that it might be as well to leave it in that category, as it is now in most of the states where it occurs. Then in case of any undesirable development in its habits, its numbers could be checked without waiting for the repeal of a law. The bird is not now shot for any purpose and is so wary that it is difficult to approach near enough to shoot it in any numbers.

The historical account of the introduction and spread of the Starling given by the authors of this report is not so accurate as that given in Mr. Forbush's report of 1915—a publication by the way which is not mentioned, although Mr. Forbush's investigations were carried on in part under the auspices of the Biological Survey. The Starling as a matter of fact was established at Trevese Pa. by 1904; at Philadelphia by 1905 and at Cape May, N. J., by 1910; all duly published records, the last of which would have made some change in the authors' chart on page 5 had they looked it up. The great roost too at Doylestown, Pa., described in 'The Auk' for 1917, pp. 338-340 is not mentioned.

In the earlier reports of the Biological Survey authorities and references were always given for statements and data quoted from others, either published or manuscript, and other reports on the same subject mentioned, but this practice has for some reason been discontinued in later years. This is not only very annoying to those who would like to trace such authority but is contrary to the custom of scientific publications and the best of the economic works, such as 'The Game Birds of California,' Forbush's reports, etc. The excuse of lack of space which might be made in the case of Government publications is hardly a valid one as the matter could easily be arranged so as to allow for quotation of authorities. In the present report, for instance, this information would be of far greater value than the long columns of technical names of insects upon which the Starling feeds which mean nothing to anyone but an entomologist, the more important ones having already been mentioned along with their English names in the text. These remarks on methods of publication however in no way reflect upon the conscientious work to Messrs. Kalmbach and Gabrielson and the unprejudiced attitude in which they have handled the rather difficult problem of the Starling's economic status. An excellent color plate from a painting by the senior author forms a frontispiece to the report.—W. S.

Mathews' 'The Birds of Australia.'—The last two parts of Mr. Mathews' work continue the treatment of the Muscicapidae, the former bringing to a close the eighth volume—the first of the Passeriformes, including two pages of corrections to the "Check-List" which is to be bound up with Volume VIII.

¹ The Birds of Australia. By Gregory M. Mathews, Volume VIII. Part 5. December 15, 1920. Volume IX, Part 1. February 15, 1921. H. F. and G. Witherby, 326 High Holborn, W. C. I. London.