

tiphia aequanimis (p. 81) Palawan; *Orthotomus ruficeps nuntius* (p. 82) Sulu Archipelago; *Zosterops forbesi* (p. 83) Camiguin and *Oriolus xanthotus persuasus* (p. 83) Palawan.—W. S.

Palmer on Game as a National Resource.¹—In this report Dr. Palmer has presented a mass of information that is essential to the proper understanding of the game problem, and those interested in legislation, game reservations private or public, and the ethics of hunting, will find it invaluable as a work of reference. The principal kinds of game in the United States are first briefly considered, then the value of game from various points of view, and methods of increasing and maintaining the game resources.

Under the head of "value of game," the possibilities of game raising by farmers and the leasing of hunting privileges are considered as a means of profit and also the importance of hunting as an antidote for excessive brain work. In attempting to estimate game values in dollars and cents we learn that under normal conditions there are probably five million hunters in the United States and license fees for hunting should total nearly five million dollars, while New York alone estimates the value of its game supply at fifty-three million dollars. Interesting maps show the character of hunting restrictions in the various states, while the records of game killed show some surprising figures. In Pennsylvania it is stated that in 1919, 287,001 Ruffed Grouse, 5,181 Wild Turkeys, 46,319 Bobwhites, 27,769 Woodcock and 28,714 wild water-fowl were killed! In New York in 1918, 41,757 Ruffed Grouse, 8,999 Bobwhites, 19,249 Woodcock, and 114,643 wild water-fowl and in Minnesota in both 1919 and 1920 over two million game birds of various kinds were killed.

It is hard to understand the discrepancies in some of these figures while the Wild Turkey figures for Pennsylvania are surprising.

Space prohibits further quotations from Dr. Palmer's report but everyone interested in the game problem should read it carefully.—W. S.

Hewitt's 'The Conservation of the Wild Life of Canada.'²—This is a posthumous volume, the work of the brilliant Dominion Entomologist who for ten years so ably conducted the entomological service of Canada and did so much along the broader lines of conservation of wild life, and whose premature death in 1920 has already been recorded in these pages.

The admirable manuscript that he left behind on wild life conservation which is now published, covers the subject in a most satisfactory way, and while chiefly interesting to Canadians may be read with profit by everyone interested in conservation, and will prove a standard work of reference.

¹ Game as a National Resource. By T. S. Palmer. Expert in Game Conservation. U. S. Dept. Agr. Bulletin 1049. March 14, 1922. pp. 1-48.

² The Conservation of the Wild Life of Canada. By C. Gordon Hewitt, D. Sc., Dominion Entomologist and Consulting Zoologist. With numerous illustrations. New York, Charles Scribner's Sons. 1921. pp. 1-344.

As is natural, much of the volume relates to mammals and to game legislation, the chapters concerned more especially with birds being: "The Extermination of Wild Life," "The Game Birds and Larger Non-Game Birds of Canada," "Birds in Relation to Agriculture," and "Government Reserves for the Protection of Birds." The usual information with reference to attracting birds and providing nest boxes, etc., is clearly set forth, and brief accounts of the present and past abundance of the game birds, their habits, etc., are presented. In this connection we note that the author is satisfied that man's slaughter of the Passenger Pigeon and Great Auk was sufficient to account for their extermination, without resorting to fanciful theories.

Some "bird counts" by Mr. N. Criddle which are presented are interesting for comparison with similar counts at localities in the United States. An area of 76 acres, chiefly prairie, contained in three years 58, 72 and 74 pairs of breeding birds respectively, of from 21 to 27 species, while an area of 26 acres of woodland contained in the same years 65, 72 and 66 pairs, of 28 to 31 species. All in all Dr. Hewitt's work will present in concise form to all Canadians the same sort of information that the Biological Survey furnishes, in its bulletins, to the residents of the United States and is a most welcome contribution to the literature of conservation.—W. S.

Hartert's 'Die Vögel der palaarktischen Fauna.'¹—Three parts of this work reached this country during February last. No. XV (Bd III, 1), covers the Alcidae, Otididae, Gruidae, Rallidae and Tetraonidae. No. XVI (Bd. III, 2) treats of the Phasianidae and begins the additions and corrections which are continued in No. XVII (Bd. III, 3). This famous publication is thus rapidly approaching completion.—W. S.

Food Habits of Two Owls in Britain.—Like all previous studies that² of Dr. W. E. Collinge reveals a preponderance of good over harm in the feeding habits of the Barn Owl. Mice and voles constitute nearly 70 per cent of the food and injurious insects and birds (House Sparrow, Starling, and Blackbird) together, an additional 18 per cent. Shrews, miscellaneous small birds, and neutral insects compose the remainder of the diet.

The Little Owl (*Carine noctua*), a bird introduced in to the British Isles and now common, also is reported³ upon by Dr. Collinge. Game-keepers and poultry-raisers have condemned the species and have destroyed large numbers of the birds as "vermin." The present study of its food habits is based on the examination of 212 stomachs and 260 pellets, besides various lots of material brought to the nests. It was found that

¹Berlin, R. Friedlander & Lohn.

²The Barn-owl. Journ. Ministry Agr. 28, No. 10, 1922, pp. 1-4.

³The Food and feeding habits of the Little Owl, *ibid.*, Nos. 11-12, Feb.-March, 1922, pp. 1-17.