

**Economic Ornithology.**—The food of the Horned Larks forms the subject of 'Bulletin No. 23' of the Biological Survey, by Mr. W. L. McAtee.<sup>1</sup> After a few paragraphs on their distribution and habits, some twenty pages are devoted to an exposition of their food habits and economic relations, and several pages more to the food habits of the California Horned Larks in comparison with those from other parts of the country. The food of Horned Larks outside of California consists of about one fifth insects and four fifths vegetable matter, the latter chiefly seeds of worthless or noxious weeds. The California Horned Larks are found to be almost entirely vegetarian, subsisting largely upon wild oats and waste grain, and are thus negligible as a source of injury to crops, and of no special benefit as insect destroyers. While "the charges made by farmers that the Horned Larks eat newly sown grain are confirmed, . . . the insects they eat compensate many fold for the seed grain taken." The conclusion is: "The horned lark by its services to agriculture earns a right to live, and deserves protection at the hand of man." The frontispiece, in black and white, shows a group of 'Horned Larks feeding on Amaranth,' while plate ii illustrates 'Seeds of Certain troublesome weeds eaten by Horned Larks'; the text-cuts represent various species of noxious insects these birds help to hold in check.

The economic value of the Grouse and Wild Turkeys of the United States, by the late Dr. Judd,<sup>2</sup> treats of the food habits of these birds, and also of the 'preservation and propagation' of the Prairie Hens and the Ruffed Grouse. They are all vegetable feeders, but also destroy many noxious insects. Except for the propensity of the Ruffed Grouse to extend its browsing proclivities to the buds of fruit trees, especially of the apple tree, they are quite harmless to agriculture, and are of considerable economic value as destroyers of weed seeds and harmful insects. Their commercial and other value as game is of great importance, and has led to the extermination of a number of species over considerable portions of their former ranges, notably in the case of the Prairie Hen and Wild Turkey. The Heath Hen, which formerly ranged over Connecticut and the eastern parts of New York, New Jersey, Pennsylvania, and Virginia, is now quite extinct except on the small island of Marthas Vineyard, on the coast of Massachusetts; the Prairie Hen has disappeared over much of its former range in Ohio and Kentucky, but has greatly extended its range westward and northward into Minnesota and Manitoba. Dr. Judd advocates the restocking of portions of its former range, which he believes can be readily

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<sup>1</sup> The Horned Larks and their Relation to Agriculture. By W. L. McAtee, Assistant, Biological Survey, U. S. Department of Agriculture. Biological Survey, Bulletin No. 23. Washington: Government Printing Office, 1905. 8vo, pp. 37, with 2 plates and 13 text cuts.

<sup>2</sup> The Grouse and Wild Turkeys of the United States, and their Economic Value. By Sylvester D. Judd, Assistant, Biological Survey, U. S. Department of Agriculture. Biological Survey, Bulletin No. 24. Washington: Government Printing Office, 1905. 8vo, pp. 55, with 2 plates,

accomplished if undertaken in the proper way. He also believes that the Ruffed Grouse may be successfully propagated in captivity.

The reports on the food habits of the various species are very full, and the paper is altogether a most valuable contribution to economic ornithology. There is a colored plate of the Ruffed Grouse (a winter scene), and a plain plate of the Sage Grouse, both drawn by Mr. Fuertes.

'Game Laws for 1905' is "a summary<sup>1</sup> of the game laws of the United States and Canada, that govern seasons, shipment, sale, and licenses." The legislation of 1905 is reviewed, by States and Territories, followed by a tabular statement of close seasons in each for different species of game; the 'shipment of game' is treated at length, giving a list of the game prohibited from export by each State and Territory and the exceptions under which a limited number of birds or head of large game may be exported under license; a list of game the sale of which is prohibited is also given in the same detail; and there is a tabular presentation of details respecting hunting licenses, bag limits, and export regulations. The local regulations in States where the laws vary in different townships and counties are also tabulated. The principal points are further graphically shown by the aid of a series of small maps. In this way any desired information about any State or Territory may be found at a minimum outlay of time and effort.

A glance at the maps shows that several of the Canadian Provinces, and sixteen States require residents to take out licenses for hunting, while all the Canadian Provinces and all but twelve of the States and Territories require hunting licenses of nonresidents. All of the States and Territories, except Mississippi, prohibit the export of game either wholly or at least of certain kinds. The British Provinces, and all the States and Territories except nine (all of those west of the Mississippi River except Oklahoma), prohibit the sale of protected game throughout the year. It is thus evident that the crisis in game protection is apparently safely passed, intelligent legislation having already placed a check upon the senseless slaughter that in a short time would have exterminated the game from wide areas where it now has a chance to slowly recover, at least to some extent, from the reckless depletion of former years.

**Proceedings of the Delaware Valley Ornithological Club.**— 'Cassinia' for 1905<sup>2</sup> contains the usual amount of matter, relating especially to the ornithology of Pennsylvania, New Jersey, and Delaware, including an 'abstract of the proceedings' of the Club for 1905. The first article is a biographical notice of Charles Lucian Bonaparte, by Dr. Spencer Trotter,

<sup>1</sup>Game Laws for 1905. A Summary of the provisions relating to Seasons, Shipment, Sale, and Licenses. By T. S. Palmer, Henry Oldys, and R. W. Williams, Jr., Assistants, Biological Survey. Farmers Bulletin No. 230. U. S. Department of Agriculture. 8vo, pp. 54, with maps, 1905.

<sup>2</sup>Cassinia, A Bird Annual. Proceedings of the Delaware Valley Ornithologica Club of Philadelphia, 1905.— 8vo, pp. 88, frontispiece, and 1 half-tone plate. Philadelphia, Pa., Feb., 1906, 50 cents,