

and fruitlets, and in addition to those which are actually eaten, an equal, or even larger, number are wantonly destroyed by this bird. I have watched it for hours on plum trees destroying the buds wholesale, and similarly on currants."

"My year's record fully confirms the view I had previously held, largely founded upon observations in the field, that the bullfinch is for quite half the year most destructive in fruit orchards, causing considerable losses to growers, which far outweigh any little good it may do in keeping down the spread of weeds. Indeed, its value in this respect is extremely doubtful, for it certainly helps in the distribution of such weeds as the dandelion, dock, groundsel, ragwort, charlock, etc.¹

A report on "The Food of nestling birds,"² gives the results of observations of parents feeding the young and of examination of stomachs of nestlings of the Starling, House Sparrow, Song Thrush and Blackbird. The writer's conclusions as to the nature of the diet and economic value of nestlings agree with those of Judd which he quotes.

The great need of study of the relations of British birds to agriculture is brought out in a paper entitled "The Economic Status of Birds."³ The writer shows that a bird, which by the nature of its food is beneficial, may on becoming abundant come to be regarded as injurious. This case is illustrated by the California Linnet and the Starling. A brief summary of the economic value of British birds, by families concludes the paper.

Professor Collinge's discussion of "The Destruction and Dispersal of Weed Seeds by Wild Birds"⁴ shows that he is in sympathy with the view expressed by Mason in "The Food of Birds in India" which was reviewed in 'the Auk' for July, 1912, pp. 413-416. He says: "We cannot rely on weeds being kept down by birds, and the expense of cultivation to eliminate weeds is, I believe, not reduced in the slightest by the action of birds."

Professor Collinge notes the investigations of Beal, Judd, Kerner, Ridley and Darwin, on the distribution of seeds by birds, and contributes the results of some of his own experiments. 133 weeds of 7 species were grown from 54 droppings of the House Sparrow, 52 plants of 7 species from 38 droppings of the Greenfinch and 96 plants of 9 species from 50 of the Bullfinch. He concludes that seed-eating birds act as distributors of weed seeds to a much larger extent than is generally supposed. Taking this in connection with the evidence regarding the destruction of weeds, Professor Collinge states that he cannot regard seed-eating birds as beneficial.—W. L. M.

Henderson's The Practical Value of Birds.⁵ — This valuable little manual consists of tersely worded chapters on the Balance of Nature,

¹ Journ. Economic Biol. Vol. VII, pt. 2, June, 1912, pp. 50-57.

² Journ. Bd. Agr. Vol. XIX, No. 6, Sept. 1912. Reprint 6 pp.

³ Journ. Land Agent's Society, Oct., 1912. Reprint 5 pp.

⁴ Journ. Bd. Agr. Vol. XX, No. 1, April, 1913. Reprint 12 pp.

⁵ Univ. of Colo. Bulletin Vol. XIII, No. 4, April, 1913, 48 pp.

Rescue of crops, foliage and forests by birds, Quantities of food required by birds, Methods of investigation [of food habits], Necessity of bird protection and Systematic discussion. Under the last heading are given the main facts relating to the various orders and families, with more detailed notes on the most important species. All points made are supported by bibliographic references and the paper closes with a good bibliography. In fact Professor Henderson's publication is a concise and up-to-date compendium of information relating to economic ornithology and will be useful to all who are interested in the subject.— W. L. M.

Recent Educational Publications.—The Massachusetts Audubon Society has issued a third colored bird chart¹ for school and general educational purposes. It includes twenty species of winter birds from paintings by Louis Agassiz Fuertes and is even better than its predecessors. An explanatory pamphlet is by Winthrop Packard and furnishes such information as will be of assistance to teachers and scholars. The Meriden N. H. Bird Club has published a second annual report.² It is attractively printed and illustrated and presents numerous papers on how to attract birds, bird baths, bird enemies, bird boxes etc. The report does credit to the general manager of the Club, Mr. Ernest Harold Baynes.

From Alabama comes an admirable publication³ prepared by Commissioner J. H. Wallace, Jr. of the Department of Game and Fish. It contains a great deal of important information on the value of birds together with poems on birds and nature, attractive illustrations and hints and programs for the conduct of 'bird day.'

California contributes two more numbers of the forceful publication entitled 'The Western Wild Life Call'⁴ devoted respectively to the bill to prohibit the sale of wild game and that providing protection to the Dove, Band-tailed Pigeon, Shore-birds, Ducks, etc. The clear presentation of the need of action, by leading authorities, and the complete list of the state legislature with a call for every citizen to write to his representatives, form an admirable campaign document that could well be followed by other states in advocating similar legislation.— W. S.

¹ Twenty Winter Birds. By Winthrop Packard to Accompany Audubon Bird Chart No. 3. Published for the Massachusetts Audubon Society, By Milton Bradley Company, Springfield, Mass. 1913. Chart and pamphlet \$1.50.

² Second Report of The Meriden Bird Club, 1912. Boston, Mass. 8vo., pp. 1-82. With halftone illustrations and maps. One dollar, address Secretary of The Meriden Bird Club, Meriden, N. H.

³ Alabama Bird Day Book, 1913. Issued by the Department of Game and Fish. John H. Wallace Jr. Commissioner, pp. 1-84 colored plates from 'Birds and Nature' and original halftones.

⁴ Western Wild Life Call. Nos. 2 and 3. March 14 and 29, 1913. Published by the California Associated Societies for the Conservation of Wild Life.