

**Fisher's Hawks and Owls from the Standpoint of the Farmer.**<sup>1</sup>—This is a condensed and very useful summary of the relations of Hawks and Owls to agriculture, based on Dr. Fisher's more elaborate 'Bulletin'<sup>2</sup> on the same subject. He considers first the 'Cause of the Prejudice against Birds of Prey,' and then refers to 'some characteristics of rapacious birds,' and to the 'food habits' of the principal North American species, and then proceeds to briefly treat of the species under the several categories of wholly "harmless species of Hawks and Owls," "wholly beneficial Hawks," "Hawks and Owls mostly beneficial," and "harmful Hawks and Owls." Among the latter are the Gyrfalcon, the Duck Hawk, the Goshawk, Cooper's Hawk, and the Sharp-shinned Hawk, the two latter, owing to the northern distribution of the others, being really the only species occurring in the United States in sufficient numbers to be of any particular importance as enemies of the farmer. These two species, with the Goshawk, Dr. Fisher believes, are the cause of the "unjust hatred and suspicion with which our Birds of Prey are held," in consequence of their often serious depredations upon poultry and game. The publication is timely and should do much to develop a more rational sentiment respecting the real character and the beneficial influence of most of these long-persecuted birds.—J. A. A.

**Beddard's 'Text-book of Zoögeography.'**<sup>3</sup>—In view of Mr. Beddard's excellent little work entitled 'Animal Colouration' (see Auk, X, 1893, pp. 195-198), and his many valuable contributions to technical zoölogy, the present work is not a little disappointing and will hardly add to the author's reputation as a careful and trustworthy investigator. The pages give evidence of either haste or carelessness, aside from the numerous typographical inaccuracies. Thus we are told, to cite a few examples, that *Gallinula chloropus* and *Totanus incanous* (p. 10) are among the comparatively few species "that have a world-wide range"; that the Curassows (p. 27) occur in California; among the genera enumerated as confined to the 'Palearctic Region' (p. 89) are *Perisoreus*, *Nucifraga*, *Cyanocitta*, and *Acanthis* (!); *Elasmognathus* (p. 109) is said to

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<sup>1</sup> Hawks and Owls from the Standpoint of the Farmer. By A. K. Fisher, M. D., Assistant Ornithologist, U. S. Department of Agriculture. Reprinted from the Yearbook of the U. S. Department of Agriculture for 1894 (1895), pp. 215-232, pll. 1-3, and 3 fig. in text.

<sup>2</sup> See Auk, X, 1893, p. 199.

<sup>3</sup> A Text-book of Zoögeography. By Frank E. Beddard, M. A. (Oxon.) F. R. S., Prosector of the Zoological Society of London, and Lecturer on Biology at Guy's Hospital. Cambridge: At the University Press. 1895. All Rights reserved. 8vo, pp. viii, 246. (Cambridge Natural Science Manuals' Biological Series.)

have been "separated by the late Mr. Alston" as a distinct genus of tapirs, whereas the separation was previously made by Dr. Gill, and rejected by Mr. Alston, who referred the Central American tapirs to the genus *Tapirus*; the genus *Rhea* (p. 111) is given as limited to the Chilian subregion, whereas it has a wide distribution in the Brazilian subregion as well; contrary to current views, the West Indian genus *Solenodon* is repeatedly referred to the family Centetidae. Besides numerous inaccuracies of this sort, more or less erroneous and positively misleading statements regarding the range of certain groups occur with surprising frequency, while typographical (?) errors (as *Cricetomys* for *Cricetus*, Rhympastidae for Rhamphastidae, *Mimocychna* for *Mimocichla*, *Pilohela* for *Philohela*, etc.) betoken, to say the least, great carelessness. The latest authorities are also frequently overlooked, as, for example, nothing later than Salvin, 1875, is cited on the birds of the Galapagos, although the whole subject was treated by Ridgway on the basis of much new material in 1889. And so on, as regards questions of classification where accepted modern views are ignored.

As regards the general subject, Mr. Beddard's chief authorities are Wallace, Trouessart and Heilprin, the latter by no means a very trustworthy guide. No reference is made to any recent papers on the subject of the geographical distribution of animals in North America, not even to warn readers against the heresies they must contain, judged from Mr. Beddard's point of view.

The work is divided into five chapters as follows: (1) 'The General Facts of the Distribution of Animals'; (2) 'Zoölogical Geography'; (3) 'The Causes which influence the Distribution of Animals'; (4) 'The Fauna of Islands'; (5) 'Some Theoretical Considerations.' The 'general facts' given in the first chapter convey much general information, fairly well stated. The second chapter is devoted mainly to an exposition of 'Mr. Sclater's regions,' from the standpoint of Mr. Wallace. The slight importance of the actual facts of distribution, in Mr. Beddard's estimate, is sufficiently shown by the following extract from p. 78: "The question is, what system shall we adopt? The ideal system would be one which would agree entirely with the distribution of land and sea and their inhabitants; but that is unfortunately impracticable. The next best is obviously the plan to try; and Mr. Sclater's regions are, with an exception here and there, coincident with the continents and larger islands. The great thing is not to dispute the standard to be taken, but to agree in holding one standard." This illogical and unscientific platform is then followed by a recapitulation of Mr. Wallace's reasons for the retention of the Sclaterian regions, which are adopted in the pages which follow.

As necessarily follows in discussing "the causes which influence the distribution of animals," temperature is held as of slight importance, the first subheading being '*Distribution not dependent upon temperature*'! Yet he is compelled to admit: "That the range of animals is to a large degree dependent upon temperature is an undoubted fact; and to a certain

extent that fact does permit of the zonal arrangement of the earth." But he goes on to add, with strange disregard of facts, "only, however, as concerns the arctic regions" ! although he does later make the admission : "It is chiefly marine organisms which show a close interdependence of temperature and distribution."

Lack of space forbids a detailed analysis of the book, which, notwithstanding much that is unphilosophic and objectionable, and many loose statements, contains a great deal of information of value to the general reader, while not a few special points connected with distribution are discussed with ability and fairness. But on the whole the make-up and general character of the book is such as to suggest that it was prepared at the solicitation of a publisher in search of a work on this subject to fill a gap in a projected series of publications on natural history rather than from any innate fitness or desire on the part of the author to write on this particular topic. In other words, that it comes very close to the line of scientific hack-work.—J. A. A.

**Townsend on the Birds of Cocos Island.**<sup>1</sup>—It was Mr. Townsend's good fortune to be one of the first ornithologists to visit Cocos Island. It is of volcanic origin, and although only four miles long by three wide is heavily forested and well adapted to support a resident land-bird fauna. Situated midway between the mainland at Costa Rica and the Galapagos, the affinities of Cocos birds are of unusual interest. If the islet is simply an isolated volcanic cone, in other words, a true oceanic island, it would be natural to suppose that its resident land-birds would be derived from the mainland. But if Cocos is a portion of the submerged land which, as Dr. Baur<sup>2</sup> claims, once connected the Galapagos with the continent, we might expect to find a Galapagan element in the Cocos avifauna. Of the four species of land-birds secured by Mr. Townsend, *Dendroica aureola*, is Galapagan, *Cocornis agassizi*, and *Nesotriccus ridgwayi*, described as the types of new genera, are the obvious representatives respectively of the Galapagan *Cactornis scandens* and *Eribates magnirostris*, while *Coccyzus ferrugineus*, previously described by Gould from Cocos, has no near relative, though the genus *Coccyzus* is represented in the Galapagos by the mainland *C. melanocoryphus*. The affinities of the Cocos avifauna are therefore clearly Galapagan and give support to Dr. Baur's theory.

The previously little known *Creagrus furcatus* was found in marshes at Malpelo, and five species of Petrels are given from the vicinity of the Galapagos.—F. M. C.

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<sup>1</sup> Birds from Cocos and Malpelo Islands, with Notes on Petrels obtained at Sea. By C. H. Townsend. Bull. Mus. Comp. Zool., Vol. XXVII, No. 3, July, 1895, pp. 121-126. Two colored plates.

<sup>2</sup> American Naturalist, 1891, pp. 217-229, 307-326.