Allen's 'The Red-winged Blackbird.'[1] — Dr. Allen has presented in this monograph one of the best ecologic studies that has yet appeared, one that many other 'ecologists' would do well to take as a model, if they would save this line of research from degenerating into what has been aptly styled an "elaboration of the obvious." The author points out the correlation of the distribution of certain species of birds and other animals with certain environments and certain plant associations, and adds; "What are the adaptations of each species to its peculiar habitat, and how has each become dependent upon it? Questions such as these demand an intimate knowledge, not only of every phase of the life history of each bird, but also of every condition that might be imposed by its surroundings." With this prelude he proceeds to study one species, the Red-winged Blackbird (*Agelaius phœniceus phœniceus*) in a cat-tail marsh near Ithaca, N. Y. The detail and thoroughness of his studies are praiseworthy although, he states, that they form merely an introduction to a true knowledge of the life history of the bird and its relation to its environment.

The environment of the marsh is first considered and the area is divided into seven associations the characteristic plants, birds, mammals, reptiles and amphibians being listed under each. Temperature records for an entire year bring out the rather surprising fact that the average temperatures of the marsh and the adjacent upland differ by less than a degree.

In the study of the Redwing, migration, mating, song, nesting, young, fall migration, enemies, molt and plumage, food and food supply, and correlation of changes in food and stomach structure, and in the reproductive organs are considered. Published data on each subject are briefly quoted, followed by the results of the author's investigations. Incidentally one is impressed with the very little that subsequent writers have added to the accounts of Wilson, and Nuttall bearing upon many of these topics and what an opportunity for original contributions has been neglected. Under migration, Dr. Allen considers the arrival of four categories of birds independent of males and females which are well known to migrate independently. He distinguishes (1) "vagrants" — very early arrivals, representing irregular winter residents from not very far southward, (2) migrant [i. e. transient] adults, (3) resident adults, and (4) resident immatures. The last do not arrive till the "adults" have built their nests and consequently extend the breeding season over a considerable space of time. These facts of migration form another argument against the accuracy of comparisons based upon single first-arrival dates which the writer has emphasized elsewhere.

Dr. Allen's conclusions are that the Redwing is independent of the marsh so far as food is concerned, feeding mainly outside of its limits, that it has taken to nesting in the marsh for the shelter that is afforded

[1] The Red-winged Blackbird: A Study in the Ecology of a Cat-tail Marsh. By Arthur A. Allen. Abstract of Proceedings of the Linnæan Society of New York. Nos. 24–25, 1911–13] pp. 43–128. April 15, 1914.

to it and its offspring. It is generalized in structure and easily adaptable, but has as yet shown no specialization to a marsh environment. He thinks on this latter account that the bird may have only recently deserted the grassland for the marsh and this view is further strengthened by the fact that it reverts readily to nesting in the grassland and deserts the marsh almost as soon as the young are reared. There are many other important points in Dr. Allen's admirable monograph which cannot be touched upon here, but the work is well worthy of the careful perusal of every ornithologist. Twenty-two half-tone plates illustrate the habitats, nests, birds, etc.—W. S.

Beebe's Preliminary Pheasant Studies and Other Papers. — Mr. Beebe presents in a recent paper[1] some of the results of his study of the pheasants preparatory to issuing his monograph of these beautiful birds. The most important point brought out is the possibility of dividing the family into apparently natural subordinate groups according to the method of moult of the tail feathers. In the Perdicinæ the moult begins with the innermost feathers, while in the Phasianinæ it begins with the outermost. In *Polyplectron, Chalcurus, Argusianus* and *Rheinardius* (Argusianinæ of Beebe) it begins with the third pair from the center, and proceeds both ways, while in *Pavo* (Pavoninæ) it begins with the next to the outermost. This character forces *Ithaginis* and *Tragopan* into the Perdicinæ which is quite likely their true position.

In another recent paper[2] Mr. Beebe describes the development and plumage changes of the White Ibises basing his studies on the birds in the large flying cage at the New York Zoölogical Park. In conjunction with Mr. L. S. Crandall[3] he calls attention to the stiffness in the down feathers representing the tail of young ducks and their persistence on the tips of the juvenal rectrices. This condition is particularly noticeable in the Torrent Ducks of the Andes, *Merganetta*. Mr. Beebe has also republished[4] with additions an interesting paper on the 'Effect of a Postponed Moult upon the Sequence of Plumage in Certain Passerine Birds,' which appeared in the American Naturalist for 1908.— W. S.

Chandler on the Feathers of *Circus hudsonius*.[5] — In this paper the author describes in great detail the structure of the feathers of the Marsh

[1] Preliminary Pheasant Studies. By C. William Beebe, Zoologica, Scientific Contributions of the New York Zoological Society, Vol. I, No. 15, pp. 261–285. April, 1914.

[2] The Ontogeny of the White Ibis. By C. William Beebe, do., No. 12, pp. 241–248. February, 1914.

[3] Specialization of Tail Down in Ducks. By C. William Beebe, and L. S. Crandall, do., No. 13, pp. 249–252. February, 1914.

[4] Effect of Postponed Moult in Certain Passerine Birds. By C. William Beebe, do., No. 14, pp. 253–258. February, 1914.

[5] Modifications and Adaptations to Function in the Feathers of *Circus hudsonius*. By Asa C. Chandler. Univ. of Cal. Publ. in Zool., Vol. 11, No. 13, pp. 329–376, pls. 16–20. March 21, 1914.