

Marsh at the head of Cayuga Lake, near Cornell University, Ithaca, New York, and cover a period of several years. Mr. Allen begins the paper with a description of the topographic features of the marsh, its climatic conditions and zonal position. The floras and vertebrate faunas of the several associations are described in detail. The following seven associations are distinguished: open-water, shore-line, cat-tail, sedge, grass, alder-willow, and maple-elm. Some attention is devoted to the succession of associations and the factors which control such succession. A graphic representation following a method commonly used by paleontologists to portray the persistence of faunas shows the associational distribution of the commoner birds and aids in making clear, this, to some, rather intangible segregation of species.

After thus describing its environment, the life history and ecology of the Red-wing are taken up, the following topics being considered: Spring migration, mating and song, nesting, the young, fall migration, enemies, molt and plumage, food and food supply, correlation between changes in food and changes in structure of stomach, and correlation of changes occurring in the reproductive organs.

Seven categories of individuals during the spring migration are distinguished. These, with their typical dates of arrival at Renwick Marsh, are as follows: "Vagrants", Feb. 25-Mar. 4; Migrant adult males, Mar. 13-Apr. 21; Resident adult males, Mar. 25-Apr. 10; Migrant adult females and immature males, Mar. 29-Apr. 24; Resident adult females, Apr. 10-May 1; Resident immature males, May 6-June 1; Resident immature females, May 10-June 11.

Mr. Allen solves the "mysterious disappearance" of the Red-wings for a period after the breeding season by finding that the period in question is that of active molt and that the birds then restrict themselves to the thick growths of tules where they are secure from their enemies. A correlation between the nature of the food and the structure of the stomach was discovered. The musculature of that organ becomes heavier when the birds are feeding upon seeds than when they are subsisting upon insects.

Perhaps the most novel thing in the whole paper is Plate XXI which shows the relative development of the testes and ovaries in resident and migrant birds. A gradual increase in size is demonstrated in both residents and migrants; but corresponding stages appear a month later in the latter

category, so that of two birds collected on any one day in March or April in the same locality, the organs of the resident will be much more fully developed than in the migrant.

Altogether the paper is an excellent example of painstaking, intensive work, replete with observations and relatively free from speculation. Mr. Allen has furnished a standard that future students in the same field may follow to advantage. It will also serve well as a source of information for teachers of ornithology.—TRACY I. STORER.

THE BIRDS | OF | EL PASO COUNTY | COLORADO | By CHARLES E. H. AIKEN | and | EDWARD R. WARREN | Director of the Museum, Colorado College | Parts I and II.—Colorado College Publication; general series, nos. 74, 75, 76; science series vol. XII, no. 13, I, pp. 4+455-496, 2 maps, 15 half-tone figs. on 8 pls.; II, pp. 2+497-603+9 (unpaged index), pls. IX-XXIV which contain half-tone figs. 16-45. Dates on covers: I, May, 1914; II, June-September, 1914. Our copy, both parts, received July 20, 1914.

We have here the most comprehensive county bird list that has come to our attention for a long time. It is far more than a faunal list, nearly every species being accorded more or less biographical treatment, besides full distributional consideration, and occasional critical or systematic notice.

The association of these two authors is a happy one. Mr. Aiken, truly a pioneer, came to Colorado Springs in 1871, and his large collections and notes covering a long period of years contribute to the completeness of the report. The junior author, Mr. Warren, has been doing bird work in El Paso County steadily for the past dozen years. To him has evidently fallen most of the work of compiling the text and seeing to the details of publication.

The paper includes, besides the main annotated list, paragraphs or chapters on topography, life zones, climate, history, bibliography, and analysis of the avifauna. Two maps acquaint the reader with the lay of the land; while forty-five half-tone cuts of birds, nests, and eggs add decidedly to the attractiveness of the paper.

We have found in this contribution several points of particular interest, to only two of which, however, can space here be spared for reference. Exception is taken by Aiken and Warren to the ruling of the A. O. U. Committee regarding the occurrence in Colorado of all three forms of *Astragalinus psaltria*, namely, *psaltria*, *arizonae*, and *mexicanus*. Oberholser's view, con-

curred in by the Committee, was that these are mere age differences. The authors of the present paper think that "there is one point that has been overlooked, with regard to the occurrence of these birds in El Paso County at least, and that is that *psaltria* alone is the breeding form, so far as at present known, the dark forms not making their appearance until later, *arizonae* coming in July, and *mexicanus* the very last of July and first of August. . . ." No dark-colored birds have been discovered breeding in the County. The differences involved consist only in the relative degree of extension of black on the dorsal surface.

In the mind of the reviewer it is contrary to distributional precedent for three *subspecies* to occur in a single place during the summer season in the way these goldfinches seem to do. It seems more likely that age *does* have something to do with the observed differences, and that these are heightened by the effects of wear so that the monthly succession described becomes explainable. Examination of skins from California, from which state the same three forms used to be recorded, tends to support this conclusion. [Incidentally, the reviewer fails to find good grounds for separating the Pacific Coast bird, "*hesperophilus*", from *psaltria*!]

Aiken and Warren devote nearly six pages to an account of the House Finch (*Carpodacus mexicanus frontalis*). Among the various features of this bird treated, the matters of systematic position and molts deserve comment. It is stated that comparison of specimens from El Paso County with others from California, Arizona and New Mexico, shows the local bird to possess various characters of color and dimensions which seem to warrant separate recognition. The bird of Colorado east of the mountains would retain the name *frontalis*, Say's description having been based upon a bird from the Arkansas Valley, while the more western and southern form would be called *Carpodacus mexicanus obscurus* McCall. The known wide variation in House Finches of the Pacific Slope suggests caution in considering these views, however.

As to molts, the authors' experience shows that young male House Finches acquire the red plumage, practically indistinguishable from the adults, at the first fall change. But one individual exception to this rule, as far as their material has shown, is cited. It may here be remarked that although this condition of affairs has been clearly stated in print before, Chapman, in *Bird-Lore* (vol. xvi, March-April, 1914, page 107), states

that the plumage changes in the House Finch "appear to be the same as those of the Purple Finch". This error is perhaps natural, in view of the close general similarity between the Linnets and Purple Finches. But the case teaches that extreme caution should be exercised in handling the often complicated problem of molts and plumages. Considerable irregularity is sometimes displayed within the same genus.

Returning to the paper under review, enough has been said to indicate its general features and value. The authors are to be highly commended on furnishing their locality with so useful a compendium of ornithological knowledge. Local interest should be largely increased as a result.—J. GRINNELL.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

AUGUST.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held in Room 101, East Hall, University of California, Berkeley, August 20, 1914, at 8 P. M. President Bryant was in the chair with the following members present: Mesdames Allen and Grinnell, Miss Swezy, and Messrs. Bryant, Camp, Carriger, Dawson, Evermann, Grinnell, Moran, Storer, Trenor and Wheeler. Several visitors were present.

The program of the evening was first presented. Mr. William Leon Dawson spoke on "The Shorebirds of 1914" and illustrated his remarks with a series of excellent lantern slides prepared from photographs made during the present season at Los Baños, Santa Barbara and elsewhere in California.

The business of the meeting was then taken up. The minutes of the Northern Division for July were read and approved, followed by the reading of the Southern Division minutes for June and July. The following were elected to membership: Dr. George Bird Grinnell, Miss Minnette MacKay, Mr. Enos A. Mills, and Mrs. Alfred Worcester. The following were proposed for membership: Miss Hazel King, 1898 Broadway, San Francisco, by Dr. William F. Bade; Mrs. Amy M. Bryant, 2533 Hill Court, Berkeley, by H. C. Bryant; Mr. Lee R. Dice, Prescott, Washington, Miss Amy E. Gunn, Mill Valley, Miss Frieda Lueddemann, Box 105, Los Gatos, Miss Mary S. Storer, 467 San Pablo Avenue, Fresno, all proposed by Tracy I. Storer; Miss Dorothy Conger, 2425 Oregon street, Berkeley, by Miss Susan B. Culver. The ten names pro-