

observations on shore birds were made, is to become a switching yard and covered with oily trackage'.

A colored plate of the Hudsonian Curlew, from a painting by Brooks, forms the frontispiece of the report and there are twelve plates of half-tones from photographs of birds and nests and a sketch map, forming altogether a most valuable and interesting contribution to Canadian ornithology.

A curious feature is the use of binomials only in the headings of the list following the practice of the senior author. Inasmuch as subspecific names are used in the body of the text wherever specimens have been secured (and in several cases where they were not!) it is hard to see that this practice serves any purpose except to cause annoyance and waste of time for the subsequent author who may wish to quote references under the proper subspecific headings.—W. S.

'**Birds of the Chicago Region.**'—This excellent little booklet¹ presents a list of the 371 species or subspecies of birds recorded from the area surrounding the southern end of Lake Michigan, and including portions of Wisconsin, Illinois, Indiana and Michigan. The character of occurrence, migration and nesting dates, and more exact data on rare forms, are given and 92 species are marked with an asterisk to indicate that they are extinct, accidental or listed on the basis of sight records only. A map and a bibliography complete the work.

We have but one suggestion to offer on the plan of the list, i. e. the use of "Transient" instead of "Migrant" for birds which pass through in the spring and autumn. The "Summer Residents" and "Winter Visitants" are also "migrants" and the more distinctive term would appear more satisfactory.

It is more than twenty-five years since the appearance of Mr. Woodruff's list covering practically the same field and with the vast increase in local bird students in that time a new publication on the subject is most welcome.—W. S.

Ball on 'Hybrid Ducks.'—This interesting paper² is mainly devoted to detailed descriptions of a cross between the Hooded Merganser (*Lophodytes cucullatus*) and the Golden-eye (*Glaucionetta clangula americana*) recently obtained by the author and another in the Boston Society of Natural History. He also discusses some hybrids between the Golden-eye and Smew recorded by Suchetet and a Black Duck and Mallard hybrid.

By way of introduction a list of hybrid Ducks recorded since 1907 is presented. While its date of publication is prior to 1907 we might call

¹ Birds of the Chicago Region. By Edward R. Ford, Colin C. Sanborn and C. Blair Coursen. Program of Activities of The Chicago Academy of Sciences, Vol. 5. Nos. 2-3, May, 1934. Pp. 1-80. The Chicago Academy of Sciences, 2001 North Clark Street, Chicago. Price 50 cents.

² Hybrid Ducks, including Descriptions of Two Crosses of *Bucephala* and *Lophodytes*. By Stanley C. Ball. Bulletin 3, Peabody Museum of Natural History, Yale University 1934. Pp. 1-26, pll. I-III.

attention to a hybrid Mallard \times Green-winged Teal in the collection of the Academy of Natural Sciences of Philadelphia (see Auk, 1903 p. 209) which cross is not mentioned in Mr. Ball's list. Three plates illustrate his paper.

Mr. Ball calls attention to the lack of detailed description in the records of many hybrids and has done a good piece of work in presenting such a careful account of the specimens which he has studied.—W. S.

Kendeigh on 'The Rôle of Environment in the Life of Birds.'—This voluminous paper¹ is too full of detailed information for adequate review in the space at our disposal and deserves careful reading by all interested in the problems which it discusses. The author has considered especially Temperature, Relative Humidity, Solar Radiation, Food, Precipitation and Wind, and in less degree Biotic Competition and Physiographic Features—all or most of them with relation to the distribution, migration and abundance of birds. The Physiology of the Temperature of birds and their resistance to low and high air temperatures is discussed including the effect of age, sex, relative humidity, light, wind, natural conditions and season on survival time—these based on experiments on English Sparrows. There is also a special discussion of the distribution, migration and abundance of the Eastern House Wren, which is the species most referred to throughout the paper, and a final Discussion and Summary reviewing the physiological processes in birds and their behavior responses; and the factors controlling distribution, migration, abundance, and the rôle of animals in ecological communities.

Quoting just a few of the author's conclusions: he considers that "the northward distribution of the House Wren during the breeding season appears to be limited primarily by low night temperatures, for which the shortening of the daily periods of darkness does not entirely compensate."

That its "wintering area is limited on the north by the low night temperatures combined with long daily periods of darkness, short daylight periods, low intensity of solar radiation, snow and lack of available food."

With regard to migration he concludes that "the northward spring migration is regulated and timed in an important manner by increasing night temperatures, decreasing daily periods of darkness, increasing daily periods of light, and increasing daily maximum temperatures. In the autumn, southward migration is regulated by decreasing night temperatures, increasing daily periods of darkness, decreasing daily periods of light, and, for some species, decreasing food supply." He adds "there is no reason to believe that the stimulus for the migration of passerine birds is due to the effect exerted by any one external or internal factor." All of this harks back in some degree to the earlier theories of migration.

We commend Mr. Kendeigh's paper to the careful study of our readers, he has certainly presented much food for thought.—W. S.

¹ The Rôle of Environment in the Life of Birds. By S. Charles Kendeigh. Ecological Monographs IV, pp. 299-417. July, 1934.