

grape may be successfully produced." As already said, the general discussion of these 'Life Zones' is to be given in Part I of the Report, which is to appear later. We have here, however, some intimation of the great importance of the results of this well-planned and most successfully executed biological survey of a region of unexcelled interest to the naturalist.—J. A. A.

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Hatch's Notes on the Birds of Minnesota.¹—This volume is by far the most considerable contribution to the ornithology of Minnesota that has yet appeared. All previous publications have been of the nature of briefly annotated lists or fragmentary accounts of the birds of limited areas. The present, however, is a substantial little book of 487 pages, aiming to present a formal account of the ornithology of the State as a whole. Each species is dealt with at more or less length, to some of the most interesting or important ones several pages being devoted. The general distribution within the State, manner of representation, dates of arrival and departure, habits, song, nidification, etc., are treated of in nearly all cases. The matter is presented in an attractive and entertaining style which makes the book readable and interesting to all and will serve to recommend it especially to a class of readers among whom it will largely circulate within the State where it is issued. Not a few of the histories are written in the author's most exuberant, enthusiastic, and, it may be added, fanciful strain, presenting word-pictures of a vivid and lively kind which break acceptably into the usually monotonous and unimaginative character of such writings. Some of these sketches are perhaps a little too full of sentiment and imagery, but if so it is a fault that the general reader at least will no doubt readily condone. The pages of the book are here and there marred, in the opinion of the reviewer, by the introduction of ironical or vindictive remarks directed chiefly against what are denominated "poaching collectors" "carpet concluders," "the galloping herd of itinerant ornithologists," etc., etc.; but with an occasional thrust at offenders of higher rank, some of the foremost ornithologists of the land not escaping unscathed.

Dr. Philo L. Hatch, the author of these 'Notes,' coming to Minnesota in the early days of its history and devoting himself methodically to the study of the birds from the very first, has long been looked upon as the natural and unquestioned representative of the ornithological interests of the State. In the early days he stood almost alone, and enjoyed, so far as the observation of certain groups of birds was concerned, the exceptional and never-to-be-repeated opportunities afforded by a country just emerging from a state of almost primitive wildness. He was zealous and enthusi-

¹ The Geological and Natural History Survey of | Minnesota. | — | First Report | of the | State Zoölogist, | accompanied with | Notes on the Birds of Minnesota, | By Dr. P. L. Hatch. | — | Henry F. Nachtrieb, State Zoölogist. | — | June. 1892. | — | Minneapolis: | Harrison & Smith, Printers. | 1892.—8°. pp. 487.

astic in the extreme, being always ready to sacrifice everything in the interest of the birds. Professional engagements, however numerous or pressing, had to be postponed or were forgotten when any one was encountered who could impart a new ornithological fact or who indeed but proved to be a good listener when birds were under discussion. He thus acquired a very considerable fund of information bearing upon the avian fauna of his chosen State. His first extended presentation of the results of his observations appeared in the 'Bulletin of the Minnesota Academy of Natural Sciences' for 1874, in the shape of an annotated list of the birds of the State. It was in reality more nearly a list of the birds of Hennepin County, the locality where the author resided. From time to time Dr. Hatch published additional articles in the nature of 'reports of progress' and partial revisions and corrections of the original list. At first these were printed in the Bulletins of the Minnesota Academy. Later, after his appointment to the position of State Ornithologist by the Board of Regents of the University of Minnesota, they appeared in the annual reports of the State Geological and Natural History Survey. In 1880 a second 'List' was published in the Ninth Annual Report of the Survey. The annotations were very brief, and in other respects the list was a disappointment to those awaiting its appearance. Not long after this a final and much more voluminous report was promised and the manuscript it now seems was prepared and offered for publication, but for various reasons its appearance has been delayed from time to time until now through the efforts of the present State Zoölogist, Prof. Henry F. Nachtrieb, it is presented as No. I of a series of zoölogical reports which it is intended shall be issued under the supervision of the State Zoölogical Survey. It was certainly due Dr. Hatch now that he is far advanced in years, no longer a resident of the State, and his long labors in behalf of Minnesota birds probably ended so far at least as any active participation is concerned, that the results of his work should be preserved in permanent form by the State in which he labored. The volume has appeared as 'Notes' instead of as a 'Report' upon the birds of Minnesota, and is much less pretentious and elaborate in its general make-up than was originally intended. The plan at one time, if the writer is not mistaken, included illustrations. There are none with the present book.

An analysis of the 'Notes' shows 295 species and 7 varieties formally credited to the State, and several others referred to under other headings as, for example, *Chen caerulescens* under *C. hyperborea* and *Junco hyemalis oregonus* and *Junco unnectens* under *J. hyemalis*. Some fifteen species are included upon what would seem to be, in view of the unusual character of the records, insufficient data. These would have very properly formed a tentative or provisional list. They are: *Colymbus nigricollis californicus*, *Urinator arcticus*, *Larus atricilla*, *Pelecanus fuscus*, *Anas cyanoptera*, *Somateria spectabilis*, *Branta nigricans*, *Nycticorax violaceus*, *Porzana jamaicensis*, *Picoides americanus*, *Pica pica hudsonica*, *Corvus ossifragus*, *Vireo noveboracensis*, *Merula migratoria propinqua*

and *Sialia mexicana*. Several other species to which more or less particular interest attaches might perhaps be included in this list, there being a general vagueness and lack of detail in the records relating to them. Indeed it will probably be felt by the critical reader that throughout the book a little closer adherence to dry detail and a greater array of facts and positive statements might have been introduced without detracting from its literary merit, and would have much enhanced the value of the work to students of ornithology.

To be more exact, *Ammodramus caudacutus* should have been *A. c. nelsoni*, *Seiurus noveboracensis*, *S. n. notabilis* and *Quiscalus quiscula*, *Q. g. æneus*. There are several similar distinctions of more recent date and perhaps less importance that might have been made.

The following Minnesota birds find no place in the 'Notes': *Larus franklini*, *Tringa fuscicollis*, *Tringa alpina pacifica*, *Speotyto cunicularia hypogæa*, *Chordeiles virginianus henryi*, *Tyrannus verticalis*, *Leucosticte tephrocotis*, *Acanthis linaria rostrata*, *Rhynchophanes mccownii*, *Ammodramus heslowii*, *Zonotrichia intermedia* and *Seiurus motacilla*. Some of these are common and well known species with which Dr. Hatch is well acquainted and their omission is due without doubt to some neglect or oversight. Several are only stragglers, but have been conspicuously reported, the identification resting upon the capture and preservation of specimens, which it is needless to say is the only entirely satisfactory foundation for the recording of new or exceptional facts. The volume is without tables, general summaries or any description of the topography of the State. There is no discussion of the faunal areas represented within the limits of Minnesota, nor is there any reference whatever to the interesting features presented by the State as a zoögeographical area and so well exemplified in its bird life. This is the more to be regretted since the author from his long residence in the State should be exceptionally well fitted to treat this phase of the subject in an intelligent and interesting manner. The classification and nomenclature are those of the A. O. U. Check-list. Following each biographical sketch is a statement of specific characters adapted for the most part from the descriptions given in the Ninth Volume of the Pacific Railroad Survey Reports. In order to assist the many who will use the 'Notes,' who know birds only by their common names, Professor Nachtrieb* has added a carefully compiled list of common names. A very good index, also prepared by Professor Nachtrieb, completes and enriches these nearly five hundred pages of bird lore, the appearance of which has been so long and expectantly looked forward to by students of Minnesota ornithology. — T. S. R.

Rhoads's Observations on British Columbia and Washington Birds.¹—

This paper is a final report of a collecting trip, some of the results of which have been already given in 'The Auk' (Vol. X, pp. 16-24). The

¹ The Birds observed in British Columbia and Washington during Spring and Summer, 1892. By Samuel N. Rhoads.—Proc. Acad. Nat. Sci. Phila., 1893, pp. 21-65.