

spring route, which crosses North America almost centrally from the coast of Texas to the Arctic Barren Grounds.

Most important of the 'new facts' are the statistics given under 'migration and temperature,' and under 'variations in the speed of migration' over different portions of the continent, in accordance with the change in the direction of the isotherms. The explanation given of the increase in the distance of daily travel after passing the northern boundary of the United States of such birds as visit Alaska and that portion of the Dominion of Canada west of the Makenzie Valley, is eminently reasonable and satisfactory. The subject is clearly illustrated by means of a map showing the 'Speed of the Robin in Migration,' which indicates not only the acceleration of the progress of the Robin as it advances northward, but also the position of the isotherm of 35° at monthly periods from January 15 to June 15.

Finally, 'The Unknown'! Among the chief mysteries that await solution are the winter haunts of the Chimney Swifts, which disappear from our ken the moment they leave the northern coast of the Gulf of Mexico in the fall until they reappear there the last week in March; another equally deep mystery is the winter whereabouts of the Bank Swallow. The route of the Cliff Swallow from Brazil to California, and how the Red-eyed Vireo reaches southern British Columbia at the same time it reaches Nebraska, and before they have appeared in any of the intervening country, are among the problems, says Mr. Cooke, "that continually vex and fascinate the investigator." It is certainly encouraging to see the "mystery of mysteries" of the old Gätkean and allied points of view dwindling to such small proportions in the eyes of modern investigators who trust to facts rather than to figments of the imagination in their attempts to elucidate the problems of migration. — J. A. A.

G. M. Allen's 'The Birds of New Hampshire.'¹—In this excellent paper of 200 pages, an attempt has been made, says the author, "to bring together a list of the species of birds known to have occurred within the State of New Hampshire during historic times, together with a general account of their distribution, faunal position, times of migration, and, in the case of the rarer species, a detailed list of the known instances of occurrence." While published records have been utilized, "a considerable body of unpublished facts relative to the birds of the State is here included," partly based on the author's own observations and partly on those of other ornithologists who have made generous contributions from their notes, and for which due acknowledgments are made. "The sequence of names and their spelling," the author states, "are strictly

¹ The Birds of New Hampshire. By Glover Morrill Allen. Proc. Manchester Institute of Arts and Sciences, Vol. IV, Pt. I, 1902 (1903), pp. 23-222. Published about June 15, 1904.

those of the American Ornithologists' Union, instead of those used by Mr. R. H. Howe, Jr., and myself in the 'Birds of Massachusetts' [*cf.* 'Auk,' XVIII, July, 1901, p. 278], since "it is believed that the use of the order more commonly adopted will make the list more convenient as a working basis for more complete catalogues." The list now given is considered as only a preliminary one, to be further perfected, especially in respect to the water birds.

Ten pages are devoted to a review of the literature of the subject, including a literal reprint of Jeremy Belknap's list of New Hampshire birds, published in 1792, in the third volume of his 'History of New Hampshire,' with pertinent comment and the equivalent modern names of the identifiable species, — all but about seven or eight out of a total of 130 names. A résumé is given of the later contributions to New Hampshire ornithology, together with a bibliography (pp. 194-204), numbering about 150 titles.

A discussion of 'The Faunal Areas of New Hampshire' occupies about eighteen pages (pp. 36-53). This includes a short account of the topography of the State, and an attempt to define in considerable detail the life zones. These include (1) the upper austral (= Carolinian Fauna), which, however, does not really reach New Hampshire, and is only suggested by a few sporadic instances of the occurrence of two or three 'upper austral' species; (2) the transition (= Alleghanian Fauna), which occupies the river valleys up to 600 feet, and under favorable local conditions up to 1500 feet, and the low area along the coast; (3) the Canadian (= Canadian Fauna), which includes a large part of the forested portions of the State; (4) the Hudsonian (= Hudsonian Fauna), limited to a few small isolated areas in the extreme northern part of the State, but, so far as known, not inhabited by any strictly Hudsonian species of birds; (5) the 'arctic-alpine,' restricted to the treeless barren summits of the highest peaks of the White Mountains, and also without any distinctively arctic species of birds. In describing and defining the limits of these several faunal areas the characteristic species of plants, mammals, and reptiles, as well as of birds, inhabiting them are mentioned, and much interesting information is incidentally included respecting the extension of the ranges of a number of birds through the clearing away by man of the heavy primeval forest.

There are also (pp. 54-61) extended remarks on certain phases of bird migration in the State, especially on the periodic incursions of the Red Crossbill and the White-winged Crossbill.

The very fully annotated list (pp. 62-186) includes 283 species, of which 29 are added in a postscript on the basis of a paper by Mr. Ned Dearborn on the 'Birds of Durham and Vicinity,' which appeared while Mr. Allen's paper was passing through the press. The annotations give, in many instances, the distribution of species of local occurrence in the State in considerable detail, in addition to the usual notes on the 'manner of occurrence,' dates of migration, etc. An elaborate index, giving refer-

ences to the plants and animals as well as to the birds, fittingly closes this excellent paper.—J. A. A.

Todd's Birds of Erie, Pa.¹—The field covered by the present list is limited to the 'Peninsula,' or Presque Isle, Presque Isle Bay, and the lake shore plain and its environs within about four miles of the city of Erie, or an area about six miles long and four miles wide. It is based primarily on observations and collections made by Mr. Todd, assisted by Mr. W. W. Worthington, during the periods March 21–May 31, and August 20–November 20, 1900, in the interest of the Carnegie Museum at Pittsburgh, Pa., the collections numbering nearly one thousand specimens, and on notes and collections made by Mr. Todd during several previous and subsequent visits to the locality. The notes of other observers are also used, as those of Mr. Ralph B. Simpson and others, on the birds of Erie, and also the collections made here during a number of years by the late George B. Sennett. There is thus a good basis for the exposition of the bird fauna of this interesting locality, which Mr. Todd appears to have fully utilized. An introduction of nearly twenty pages deals with the geographical position and physical features of the locality, and with the general character of the avifauna, and a summary of the manner of occurrence of the 237 species thus far recorded from this limited area. Then follows a very fully annotated list of the species, numbered consecutively from 1 to 237, with the inclusion, in smaller type and unnumbered, some 50 species that may be considered as of probable occurrence, with references to their nearest records of capture. Of the 237 species of known occurrence, 18 are classed as permanent residents, 88 as summer residents, 25 as winter visitants, 95 as transient visitants, 11 as accidental visitants. There is a map of the locality, and three half-tone plates, giving views of characteristic portions.

The list as a whole shows careful, detailed, and conscientious work, and thus adds another to the number of critical local lists, whose value as an accurate record of present conditions will only increase with the lapse of time.—J. A. A.

Hartert's 'Die Vögel der Paläarktischen Fauna.'—Part II² of this excellent and invaluable work has recently appeared, completing the

¹The Birds of Erie and Presque Isle, Erie County, Pennsylvania. By W. E. Clyde Todd. *Annals of the Carnegie Museum*, Vol. II, 1904, pp. 481–596, pll, xvi–xix. August 1, 1904.

²Die Vögel | der paläarktischen Fauna. | Systematische Uebersicht | der | in Europa, Nord Asien und der Mittelmeerregion | vorkommenden Vögel. | Von | Dr. Ernst Hartert | Heft II. | Seite 113–240. | Mit 22 Abbildungen. | — | Berlin. | Verlag von R. Friedländer und Sohn. | Ausgegeben im Juni 1904.