

From a standpoint of mechanical style, much pains have been taken to facilitate ready reference within a minimum of space. The titles are arranged in double column on the pages, with omission at times of unnecessary parts; Arabic numerals are uniformly employed, and usages already familiar in standard bibliographies are for the most part followed. A helpful feature is the indication by means of initial letters, of the library where some of the less common publications were consulted. The names of authors and the date of each paper are in bold-face type as paragraph headings, but it appears that the former would have stood out better had the numerals been in Roman type instead. To the reviewer's eye also the capitalization of English common nouns, pronouns and verbs in titles makes reading less easy. In a work of this nature, proof-reading is unusually difficult, but has been remarkably well done, and in many respects the bibliography is a model of its kind. The only important slip noticed is listing of J. Cossar Ewart's paper on down plumages under 'Cossar, Ewart J.' It may be mentioned also that (Capt.) C. C. Abbott who wrote on the fauna of the Falkland Islands in 1861 is not the (Dr.) C. C. Abbott, an American, with whose works his is listed. The publication of additional parts to serve as a subject index are implied in the Introduction and will be eagerly awaited, for they will make at once available the material gathered in this vast compilation of titles. With their appearance Dr. Strong will have produced a guide to literature that will prove indispensable to the serious student of birds and will have rendered a lasting service to the science of ornithology.—G. M. ALLEN.

Dr. Grinnell's 'Bibliography of California Ornithology.'—In two previous installments, the late Dr. Joseph Grinnell has published a bibliography of California ornithology carrying the listing of books and papers up to the end of 1923 ('Pacific Coast Avifauna,' no. 5, 1909; no. 16, 1924). The manuscript for the present or third part,¹ taking the bibliography to the end of 1938, was essentially complete at the time of his death in May 1939, and has been finished and put through the press by Dr. Alden H. Miller and Mrs. Grinnell, who have prepared the indexes to authors and bird names included. Several pages include earlier references previously overlooked, but the main portion consists of 200 pages of titles lately added to the voluminous literature on birds of this State. Dr. Grinnell has had a not inconsiderable share in encouraging the preparation and publication of papers on Californian ornithology, so that in more ways than one, the completion of the bibliography is a lasting memorial to his own life work. As was his habit, the listing is done with meticulous care in reproducing titles and references exactly as published, so that, for example, in journals using Roman numerals, the references give these as in the original, or where Arabic numerals are employed as in volume numbers, these are reproduced in the citation. Here one may protest against the practice of using Roman numerals for any except unusual purposes. Long ago, Dr. R. M. Yerkes (*Science*, n. s., 20: 309-310, 1904) showed by a simple trial, in which ten chosen students wrote the numbers 1-100 in Roman and in Arabic numerals, that it takes three and a third times as long to write the Roman numerals, and the chance of error is twenty-one times as great; while it takes three times as long to read them and the chance of error in so doing, is eight times as great as when using Arabic numerals!

¹ Grinnell, Joseph. *Bibliography of California Ornithology / third installment / to end of 1938 / Pacific Coast Avifauna*, no. 26, pp. 1-235, December 8, 1939; Cooper Ornithological Club. Price \$4.00.

In issuing this third index to the literature of Californian ornithology, the Cooper Club has provided what is undoubtedly the most thorough listing for any limited area in North America.—G. M. ALLEN.

Forbush and May's 'Natural History of the Birds of Eastern and Central North America.'—The popularity of Forbush's 'Birds of Massachusetts and other New England States' (1925-29) very soon resulted in exhausting the edition of at least the first volume, so that sets of all three volumes are now difficult to secure. The Directors of the Massachusetts Audubon Society have therefore taken the necessary steps for the publication of this new and abridged edition¹ which forms a single volume at a popular price and includes the original colored plates by Fuytes and Major Brooks. Dr. John B. May, who assisted with the publication of the first edition, has undertaken the preparation of the abridgment. By omitting the descriptions of plumages, the paragraphs on measurements, molts, and occurrence in Massachusetts, and by condensing those on ranges, identification marks, and nesting, to the smallest compass, as well as by editing and cutting the main text, he has succeeded in reducing the three volumes to a single one of convenient size. The order of the species as well as the nomenclature have been changed to conform with the last edition of the A. O. U. 'Check-list.' The 'Introduction' gives a brief account of the history of the work and a sketch of Forbush's life. As if all this were not enough, Dr. May has broadened the scope of the book by the addition of short accounts of over one hundred other species regularly found as breeding birds, migrants, or winter visitors east of the 95th meridian, taking in therefore eastern North America from a little west of the Mississippi River. The many species of casual occurrence in the area are gathered in a nominal list at the back of the volume instead of being accorded a regular place with details of records in the body of the book. Four additional new plates by Roger Peterson are added to illustrate some of the birds now included.

While it is true that the general accounts written by Forbush for the different species in the main part of his text are treated from a sufficiently broad point of view to be widely applicable, nevertheless one does not lose sight of the fact that they were prepared from the standpoint of New England and especially Massachusetts. The result is that the new edition, by the omission of a large amount of local matter, loses much of its particular interest without a corresponding gain in thus stretching it to cover eastern and central North America. It would have been much more valuable if instead we might have had a new edition with Massachusetts conditions brought down to date and some account of the many changes and interesting new points made out in recent years of bird study. Thus there is no indication of the occasional and perhaps regular presence of the Western Grebe on our coast in winter, nothing on the changing status of the Ring-necked Duck, or on the recent expansion of gull and tern colonies, nor any attempt to work in new information such as that now available on the Bicknell's Thrush, while from the general nature of the sketches very little data on migration could be given. As a piece of book-making, the volume is well printed and the proof-reading has been excellently done. On the shelf beside the original volumes, the abridgment stands a little higher, since the explanations of each plate, instead of occupying a facing page, are given an extra inch of space at the bottom of each, while as a

¹ Forbush, Edward Howe, and May, John Bichard. *Natural History of the Birds of Eastern and Central North America* revised and abridged with the addition of more than one hundred species. Large 8vo, xxvi + 554 pp., 97 col. pls., 1939; Houghton Mifflin Co., Boston, Massachusetts. Price \$4.95.