fact that they are to be especially sought for, these birds should be included in a separate list with an appropriate heading, as is customary in standard faunal papers. The author, however, commits the serious error of placing these birds in the body of his paper without even typographically distinguishing them from those that properly belong there. Examination shows that of the some 330 species given, about 42 are included as of probable occurrence. *Grus mexicana*, *Scolopax rusticola*, *Pavoncella pugnax*, and *Milvulus forficatus* have, it is true, been recorded from adjoining regions, where, however, they were too evidently accidental to deserve admission here.

The list itself adequately reflects our present limited knowledge of Maryland birds, the author having apparently made excellent use of the material at his command. It is attractively printed and we trust may prove an incentive to ornithological research in the region of which it treats.—F. M. C.

The Structure and Life of Birds.[1]—This work takes a place on an almost vacant shelf in the ornithological bookcase. Its purpose is best stated by the author, who in his preface remarks: "The aim of this book is an ambitious one. It attempts to give good evidence of the development of birds from reptilian ancestors, to show what modifications in their anatomy have accompanied their advance to a more vigorous life, and, after explaining as far as possible, their physiology, to make clear the main principles of their noble accomplishment, flight, the visible proof and expression of their high vitality. After this it deals, principally, with the subjects of color and song, instinct and reason, migration, and the principles of classification, and lastly, gives some hints as to the best methods of studying birds." The specialist reading this syllabus will probably doubt the author's ability to adequately treat of so many and such varied themes within the limits of 400 pages, and while it is true, that some subjects suffer at the expense of others, the book contains a vast amount of exceedingly suggestive and valuable information. Furthermore, at the conclusion of each chapter, a list of works is given for the assistance of those who would pursue the subject more fully.

In the accepted meaning of the word we should imagine that the author of this well conceived book could not be called an ornithologist. Rather he seems to approach his task from the standpoint of the anatomist or physicist, and here he is apparently at home. His chapters on 'The Skeleton of Bird and Reptile' (pp. 6–28), the evolution of birds from reptiles (pp. 29–59), 'Form and Function' (pp. 60–172), and 'Flight' (pp. 173–274) are important contributions to structural and functional ornithology.

[1] The Structure | and | Life of Birds | By | F. W. Headley, M. A., F. Z. S. | Assistant Master at Haileybury College | With seventy-eight Illustrations | London | Macmillan and Co. | and New York | 1895 | The Right of Translation and Reproduction is Reserved. | Sm. 8vo, pp. xx + 412.

When, however, he speaks from a more strictly ornithological point of view, or quotes the observation of others, he shows a lack of familiarity with these more distinctive phases of bird-life. This is particularly true of his remarks on 'Change of Colour without Moulting,' where he accepts as proven the theory that a practically white feather may become black by an influx of "pigment working its way to every part of the feather through channels as yet unknown"; for example, in the breast of the Dunlin, or head of the Little Gull or Black-headed Gull.

The one hundred pages devoted to 'Flight' should be read by all students of animal motion, while the philosophic ornithologist will find abundant food for thought in the chapters on color, reason, instinct, etc.

The chapter on migration will be read with special interest at this time when the publication of an English edition of Herr Gätke's book has awakened a fresh discussion of the many perplexing questions presented by this branch of ornithology. Mr. Headley here shows the lack of field experience more than in any other part of his generally excellent book. He thinks it unnecessary to "call in the assistance of the often-invoked glacial period" to account for the origin of migration and would seek a cause in the failure of the food supply both in the north and south, ignoring the fact that in the American tropics, at least, migrating birds begin their northward journey just as the rainy season sets in and the supply of both vegetable and insect food is greatly increased.

American students will read with some surprise of the orderly manner in which Old World birds are stated to migrate. In the fall the young birds are of course said to start first, a month or two later they are followed by the old birds, and after them come irregular flights consisting probably of cripples and young birds hatched late. "In the spring the order is reversed. First come the old cock birds . . . then old hen birds, then old hen birds and young birds mixed; then young birds alone; and, lastly, cripples in every stage of dilapidation."

These, however, are minor defects in a book which should have a marked influence in raising the character of ornithological research from the mere collector's level to the plane of scientific investigation.—F. M. C.

The A. O. U. Check-List of North American Birds, Second Edition.[1]—The second edition of the American Ornithologists' Union Check-List of North American Birds is uniform in style and typography with the first edition, published in 1886, but omits the 'Code of Nomenclature,' which was issued separately in 1892. The present edition is a reprint of the first edition, with such changes in nomenclature as have been found nec-

[1] Check-List | of | North American Birds | prepared by a Committee | of the | American Ornithologists' Union | Second and Revised Edition | — | Zoölogical Nomenclature is a means, not an end, of Zoölogical Science | — | New York | American Ornithologists' Union | 1895.—8vo, pp. xi + 372. Published Dec. 9, 1895.