

the total pagination is now xii + iv + 922. According to the statistical summary, the total number of forms (sub-species) ascribed by Sclater to the Ethiopian Region, as he limits it, is 4439. This list of African birds is published by Taylor and Francis, London; price 21s per part.—J.G.

"A Systematic Classification for the Birds of the World," by Alexander Wetmore (Proc. U. S. Nat. Mus., 76, January 8, 1930, pp. 1-8), reached us just at the critical time when it could be put to immediate practical use. Accepting it as the latest and most authoritative word as to the constitution and sequence of the higher groups down to families, and likely to hold with a fair degree of permanence for many years, we are using it as our guide in installing the 50,000-odd birds contained in the California Museum of Vertebrate Zoology in our new quarters in the Life Sciences Building, University of California. This sequence is, of course, also that followed in the new, fourth edition of the A. O. U. Check-list. Doubtless other museums will in due course also rearrange their collections to accord with this system.—J.G.

PUBLICATIONS REVIEWED

MCATEE ON NATURALIZING GAME BIRDS. Since the native game supply has been shot off almost, or in many places quite, to the vanishing point, sportsmen demand that the supply be recouped. The method of recoupment sportsmen see and insist upon is the bringing in and planting of exotic species. Granting this demand from the sportsmen, which evidently *must be met* no matter how unwisely or thoughtlessly grounded, it becomes the duty of the United States Department of Agriculture to offer advice, as sound as possible under the condition imposed.

To this end Mr. W. L. McAtee, of the Survey staff, has drawn up a list of "Game Birds Suitable for Naturalizing in the United States", and this selected list of species, together with well-considered general comments, has been issued as Circular No. 96, United States Department of Agriculture (November, 1929, 24 pp., 14 figs.).

Critical perusal of this circular convinces the present reader that it has been written studiously to harmonize with the special notions of the shooter, of the fish

and game administrator, and of the commercial game breeder—those who, for various reasons, urge the introduction of non-native game species. It seems to us plain that Mr. McAtee all through this report adroitly avoids commitment to any positive statement of his own with regard to the basic desirability of attempting to introduce alien species at all. Apparently granting, then, that it is desirable to do so, he proceeds to meet, as best he can by careful marshalling of facts and words, the arguments that recently have been advanced elsewhere against the introduction of non-native species. We think his reasoning on nearly every point is eminently "logical" (to use a word that he himself employs in the course of his discussion)—save in one quite crucial factor, that involving the idea of sufficiency of food supply for native *plus* introduced gallinaceous species. He says, "The food supply for game birds can be increased almost indefinitely, however, if the effort be made" (an unassailable statement, with the "if"). But: "No introduction should be considered without prior attention to the food supply, and effectively increasing it if necessary"—another wise statement which, taken fundamentally, as it should be taken, negates the entire question of the propriety of attempting to plant additional species in a region already possessing closely related native species.

Toward insuring the "success" of plantings of foreign game birds, down-to-date recommendations are made by Mr. McAtee in regard to the importance of minutely studying habitats. The conditions which obtain in the territory to be stocked must be thoroughly known, as also the environmental factors under which the candidate for transplantation naturally lives. The discussion under this head is worthy of the closest heed by fish and game administrators. But we doubt not that despite this, the present method of haphazard, trial-and-error introduction, which prevails, for instance, to the nth degree here in California, will go on far into the future. In this connection Mr. McAtee presents climatological and vegetational maps of the United States, which must prove instructive to sportsmen who are wont to urge introduction of game species from almost any part of the world into almost any part of our own extremely variable country. Such maps, while in the large adequately significant, are, however, mis-

leading as to detail. For example, we note on a vegetational map, the Sacramento-San Joaquin Valley of California marked "tall grass"; hence, by context, a suitable habitat for certain tinamous!

Of course, all those of like mind with the present reviewer can but deplore the prospect of the many admittedly hardier, more aggressive, more adaptable Eurasian gallinaceous species dominating in America, to the probable final extinction of most if not all of our native kinds of upland game birds. Think of the hunter-naturalist climbing Mount Pinos at some future day, to seek a specimen of the local race of the native Sooty Grouse, only to reach the fir-clad upper slopes and put up some species of Oriental pheasant!—J. GRINNELL.

OUTDOOR HERITAGE* is a book which every Cooper Club member will want to read. It deals with those natural history subjects which hold the interests of all bird students, and it was written by a member of the Club whose success in picking out and presenting nature lore is acknowledged throughout the state of California.

Among the subjects treated in the 465 pages are the following: First there is a chapter treating of the more characteristic topographic and physiographic features of the state, along with some general statements as to the principles of animal and plant distribution. A rather full interpretation of former animal life of the state as it is revealed by fossil deposits will especially interest persons whose studies of animals have been limited to living types. Next, in turn, the animals and plants of California's valleys, mountains and deserts are treated and the more conspicuous and curious forms are indicated and described. Trees and features of them peculiar to California take up one chapter. Another on the fishes of the state contains much from the rich, first-hand experience of the author. Accounts of the principal kinds of game birds and mammals cover the whole state. Two chapters are devoted to the subjects of parks and recreation. The final chapter is devoted to conservation problems.

The task of writing a general natural

history of California can be considered in no sense a simple one. Such a great lot of reliable and well selected facts have been assembled in the present work that it might have been fairer to overlook such obvious slips as the statement (p. 76) that . . . "in the wren-tit, California may boast of the only bird family peculiar to America," or (p. 283) the unqualified assertion that "the cottontail is a burrowing rabbit." The implication of richness of the vertebrate life in certain sections of the state seems scarcely justified when comparison is made with more humid areas of the United States.

Fortunately, the book has a complete index so that particular species may be looked up. A bibliography, arranged by chapters, contains forty pages of references to works dealing with the out-of-doors in California.

We have the author's own statement that he has been "most at home in writing chapters which deal with vertebrates" and his admission of regret that he should "have to resort to the printed word." Even if this book does not always stir its reader to go into the field and make firsthand nature studies it will serve well as a source of reliable facts concerning the out-of-doors. No other single volume contains so much natural history matter covering so many fields in California as this one. Strangers to California who are acquainted with the plant and animal life of another region and who wish to learn quickly the peculiarities of California's fauna and flora are the persons likely to profit most by reading this book. Even those naturalists whose lives have been spent in California will find much material new to them in some chapters.

Aside from its value as a source of natural history information this book is useful as a guide to the problems and progress of conservation in the state. Its writer has had better opportunity than any other person in late years to keep in touch with such developments and he has drawn upon this experience to provide a theme for this work. This has been done so successfully that the chapters toward the end, the ones given over entirely to conservation subjects, have for us more of real interest than the early ones.—JEAN M. LINSDALE.

*Outdoor Heritage | By Harold Child Bryant ||
of the series | California | Edited by | John Russell
McCarthy | Powell Publishing Company | Los
Angeles | 1929. Octavo, pp. 14+465, 14 ills. Price,
\$5.00.

LAING AND TAVERNER ON BIRDS OF THE
MOUNT LOGAN DISTRICT, ALASKA.—This
wording is gatherable from the rather