

RECENT LITERATURE.

Bannerman's 'Birds of Tropical West Africa.'—It seems but a few years ago that our knowledge of African birds was restricted largely to the coastal districts and the publications that had appeared were all in the form of technical annotated lists. Now with the opening up of the country travel through much of the interior is an easy matter and our knowledge of its bird fauna advances by leaps and bounds, while every year sees the publication of a thoroughly up to date volume on the birds of some portion of the "dark continent."

The latest of these, which promises to outdo all of them in completeness and appearance, is Bannerman's 'Birds of Tropical West Africa' the first volume¹ of which is before us. West Africa made famous by the exploits of Du Chaillu and by John Cassin's reports on the Du Chaillu bird collections on the Ogowe, Muni and other rivers and later noted for the discoveries of George L. Bates, has remained perhaps the least known of the various regions of Africa and rich as its avifauna has been shown to be there was always opportunity of striking discoveries. And now we have a work as complete in every detail as a modern ornithology for one of the United States or for some country in Europe. Splendidly printed and illustrated, with text figures and colored plates by the best artists; up to date nomenclature with important synonymy, descriptions, notes on field identification, range, habits, etc., and with keys and detailed explanation of their use, and a preface covering zoogeography, history, glossary of terms, etc. In fact, as an editor once said of a book sent for a review, it is an unsatisfactory volume insasmuch as we can find nothing wrong with it!

We are indebted to the four West African Colonial Governments for the publication of this admirable work, the entire expense having been borne by the governments of Gambia, Sierra Leone, Gold Coast and Nigeria, as explained in a preface by Lord Passfield, Secretary of State for the Colonies. The limits of the work are wisely extended to take in the entire coastal region from the Senegal River to the Congo, extending east to longitude 20° E. and including the islands from the Cape Verde group to the Gulf of Guinea. The main life areas of West Africa based on vegetation are (1) the mountains of Cameroon etc., (2) the Sahara Desert, (3) thorn scrub region, (4) grass woodland (tree-savanna), (5) tropical and equatorial forest and (6) coastal mangroves.

These are susceptible of further subdivision on the basis of bird popula-

¹ The Birds of Tropical West Africa. With Special Reference to those of Gambia, Sierra Leone, the Gold Coast, and Nigeria. By David Armitage Bannerman. With Preface by The Right Honorable Lord Passfield, Secretary of State for the Colonies. Maps and Coloured Plates. Volume one. Published under the Authority of the Secretary of State for the Colonies by the Crown Agents for the Colonies. 4 Millbank, Westminster, London, S. W. 1. 1930. Crown 4to. pp. i-lxxv + 1-376. Price 22s. 6d. net. Post 1s. 6d.

tion and our author says that each is characterized by a definite association of species. "It can readily be understood," he continues, "that the birds that have their habitat in the dense forest country would not long survive if transported to the inhospitable wastes of the Sudanese arid belt, and vice versa, where conditions would be entirely foreign to them; but it is not so apparent why the birds of the Upper Guinea or Ubangi Savannas should show such marked differences from those of the Lower Congo Savanna, or why the birds of the Upper Guinea forests should differ in marked degree from those of the Lower Guinea forest." Evidently there is still much to be learned about the history and distribution of the West African avifauna even after the present day facts are presented. The main text of the present volume covers the Struthioniformes, Colymbiformes, Procellariiformes, Pelicaniformes, Ciconiiformes, Anseriformes, Falconiformes, and Galliformes, including about 190 species and subspecies; there are eight colored plates from paintings by the late Major Henry Jones, two maps and 119 text figures from drawings by H. Grönvold, Roland Greene, F. W. Frohawk, and W. P. Tenison.

We shall look forward to Mr. Bannerman's succeeding volumes with great interest.—W. S.

Kleinschmidt's 'The Formenkreis Theory.'—We are under obligations to Rev. F. C. R. Jourdain for his painstaking translation of Kleinschmidt's volume¹ on the 'Formenkreis Theory,' but even with the care taken to present the author's arguments and expressions as nearly verbatim as can be done in a translation, we remain more or less dazed by a mass of verbiage and somewhat in doubt as to just what the author is endeavoring to place before us.

There would seem to be two principal problems discussed (1) an attempted explanation of descent more or less at variance with the accepted theory of evolution, and (2) the use of the "Formenkreis Theory," there explained, in practical nomenclature.

In the discussion of the theory as an explanation of descent we are taken back to the writings of Kant in 1775 and we must confess our inability to see in what way Dr. Kleinschmidt's views differ from these or just what claims he has to originality in his presentation of the theory. Our author sums up his discussion of the errors in the "old theory of evolution" by stating that the Formenkreis Theory "upholds the indications found in nature as to independent sources of life," yet he admits that their may be a relation between the several independent creations ("between root and root") but it is "quite a different kind of relation than between their com-

¹ The Formenkreis Theory and the Progress of the Organic World. A Re-casting of the Theory of Descent and Race-Study to Prepare the Way for a Harmonious Conception of the Universal Reality. By O. Kleinschmidt, Dr., h. c. Translated by the Rev. F. C. R. Jourdain. With 16 plates from photographs and 53 text figures by the author. London, H. F. and G. Witherby, 326 High Holborn, W. C. [1930] pp. 1-192. Price 10s. 6d. net.