

from paintings by E. J. Detmold and are very pleasing in their delicacy although most of them are hardly to be considered seriously as portraits of live birds.—W. S.

'Aves' in the Zoological Record for 1917.¹—Since 1914 the Royal Society of London has been unable to continue the publication of the 'International Catalogue of Scientific Literature' but the Zoological Society has continued to publish the 'Zoological Record' and has recently issued the volume for 1917 which would have been Vol. N, Zoology of the 'International Catalogue.' The titles on Birds have been arranged by Mr. W. L. Sclater, who for several years has edited this subject with commendable devotion and skill. The titles number 707 as compared with 942 for 1916, the falling off of course being due to the war and its many distractions. Nevertheless, under the circumstances the number of papers is remarkable and is nearly 50 per cent. greater than those on all other vertebrates combined, nearly half as many as those relating to insects, and more than those in any group of invertebrates except insects.

As usual the papers are arranged under three main headings, 'Titles', 'Subject Index' and 'Systematic'. In the 'Subject Index' the titles are distributed under seven principal divisions: 'General', 'Structure', 'Physiology', 'Embryology', 'Ethology', 'Variation', and 'Geography'. As might naturally be expected the greater part of the publications are either faunal or systematic. The new generic and subgeneric names number 25, of which twelve were proposed by Mathews, five by Oberholser, two by Todd, and one each by Chapman, Chubb, Kuroda, Murphy, Richmond and A. Roberts, but very few of them affect North America birds. The 'Record' is indispensable to students who wish to keep in touch with current ornithological literature of the world and those who do not have access to the full volume should secure from the publishers a separate of the part relating to 'Aves.'—T. S. P.

Stresemann's 'Avifauna Macedonica'.—A collection of upwards of 3000 skins of birds representing 168 species was made in Macedonia by Dr. F. Doflein and Prof. L. Muller in 1917 and 1918 and deposited in the Zoological Museum at Munich. This collection forms the basis of the present exhaustive report² on the birds of that country by Dr. E. Stresemann.

Under each species there is a complete list of specimens, usually a large series, followed by paragraphs on the sequence of plumages, molts,

¹ Zoological Record, Vol. LIV, 1917, Aves. By W. L. Sclater, M.A., pp. 1-62, December, 1919. Printed for the Zoological Society of London; sold at their House in Regents' Park, London N.W., 8. Price, six shillings.

² Avifauna Macedonica. Die ornithologischen Ergebnisse der Forschungsergebnisse, unternommen nach Mazedonien durch Prof. Doflein und Prof. L. Muller-Mainz in den Jahren 1917 und 1918, von Dr. Erwin-Stresemann. Mit 6 Tafeln, München 1920 (July). Verlag von Dultz & Co. 8vo., pp. I-XXXIV, 1-270. [In German.]

geographic variation, individual variation, distribution and life-history, the last including field notes by Prof. Muller. There are also a bibliography and a historical introduction, an annotated list of Macedonian birds not contained in the collection and finally a nominal list of the 261 species recorded from the country with page references to the main text.

The study of the collection has been carried on with great care and a vast amount of detailed description and measurements is presented. The attention that has been given to the molts and plumages is deserving of especial commendation and it will interest American ornithologists to know that the comprehensive terminology proposed by Dr. Jonathan Dwight in this connection has been largely followed.

The nomenclature is up to date in every respect and includes references to the original description of every species as well as to the subspecies where it does not happen to be the "typical" race.

We notice only two new names proposed by the author: *Galerida cristata muhleii* (p. 62) for *Alauda ferruginea* Mühle 1844 (nec *A. ferruginea* Smith 1830); and *Budytes flavus macronyx* (p. 76), a new form from Vladivostok allied to *B. f. thunbergi*.

There are eight excellent views of Macedonia reproduced in half-tone and a number of diagrams showing variation in wing length in various species.

Dr. Stresemann is to be congratulated upon producing a report that is a model of its kind and in providing us with a thoroughly up to date work of reference upon the avifauna of a country about which we knew but little.—W. S.

Wood on the Eyes of the Burrowing Owl.—Dr. Casey A. Wood has published a valuable paper on the eyes of the Burrowing Owl¹ with a full technical description of their structure compared with that of other owls and a plate of the fundus oculi.

His conclusions are of especial interest to ornithologists. He says: "In spite of the fact that Bendire and Hudson refer to the animal as a diurnal owl, their accounts of its habits really bear out the writer's contention of a nocturnal animal with fairly good day vision, yet distinctly embarrassed, uncertain, and confused when the eyes are exposed to bright sunlight. Stress is laid by a number of observers upon the fact that this owl is seen at all times of day standing guard often on a little mound of earth in front of his burrow entrance, forgetting that as a much more interested householder, he also watches from the same post all hours of the night." Dr. Wood finds the eye structure similar in every respect to that of nocturnal animals.

¹ The Eyes of the Burrowing Owl with Special Reference to the Fundus Oculi. By Casey A. Wood, M.D., Chicago, Ill. Reprinted from Contributions to Medical and Biological Research. Dedicated to Sir William Osler, in Honor of his Seventieth Birthday, July 12, 1919, by his Pupils and Co-Workers. 8vo., pp. 819-823.