

in a healthy condition for four months being taken home to New York by way of France and England. This is we believe the first instance of a Petrel being kept alive in captivity for any length of time, not to mention a young bird going through the serious operation of feather growth. The necessary addition at times of cod-liver oil to the food that was masticated is all the more tribute to the patience and determination of the foster mother!

The book is attractively printed and well illustrated with half-tones from photographs.—W. S.

Lönnerberg on the Origin of the North American Fauna. This paper¹ read at the International Ornithological Congress at Copenhagen discusses the geological history of America and the probable incursions of birds that have taken place. The author's general conclusions are that the North American avifauna may be divided into three groups (1) Endemic birds, (2) Descendants of Old World Immigrants, and (3) Descendants of South American Immigrants. He regards the Wren-tit the Surf-bird, the Mockers, etc., the Wood Warblers, Vireos, Waxwings, Wrens, and Icteridae as more or less certainly of North American origin and explains that the effects of the ice age in driving endemic forms south has displaced many groups so as to obscure their geographic origin.

As South American incursions he mentions the Tyrant Flycatchers, New World Vultures, Tanagers, Goatsuckers, Swifts, Hummingbirds, and probably the Cracidae. The Parrots he regards as of Australian origin and considers that they reached South America at a very early period in the same way as did the marsupial mammals, and the Hylidae and Cystignathidae among the batrachians.

Papers of this kind are extremely interesting for those who enjoy theorizing and only by such means, coupled with facts that are constantly being brought out regarding relationship, the presence of fossil forms, etc., can we ultimately arrive at a clear idea of the origin of faunas. Prof. Lönnerberg has certainly presented some food for thought and his paper will be sure to arouse the interest of younger students who are just beginning to realize the importance of geographical distribution.—W. S.

Aves of Kükenthal and Krumbach's 'Handbuch der Zoologie.'

The bird volume of this important work² is contributed by Dr. Erwin Stresemann the first part appearing in the spring of 1927. It covers the definition and characteristics of birds and their morphology, treating of

¹ Some Speculations on the Origin of the North American Fauna. By Einar Lönnerberg. Kungl. Svenska Vetensk. Acad. Handlingar. Third Series. Band No. 6. 1927, pp. 1-24.

² Handbuch der Zoologie. Gegründet von Dr. Willy Kükenthal, herausgegeben von Dr. Thilo Krumbach. Siebenter Band. Sauropsida: Allgemeines, Reptilia. Aves. Zweite Hälfte. Erste Lieferung, Bogen 1 bis 7. Ausgegeben am 22 April, 1927. Aves von Erwin Stresemann. Pp. 1-112. Berlin and Leipzig 1927. Walter de Gruyter & Co.

the skin, bill, claws, feathers, skeleton, muscles and nervous system. The treatment is exhaustive and thoroughly up to date including references to the work of many American investigators, a feature too often omitted in European works of this kind, while there is a welcome array of figures in line and half-tone taken from various modern works.

The section relating to feathers is particularly interesting, considering their microscopic structure and pigmentation, the mechanical arrangement of the barbs and barbules, the nature of feather growth and of abrasion, the arrangement of feather tracts and of the flight feathers and their coverts, as well as a discussion of molt and the sequence of plumages.

The nomenclature of the skeleton and of the muscles is given in great detail and further elucidated by the excellent figures.

The structure of birds is attracting the attention of more and more ornithologists especially in connection with working out the phylogeny of the class and he who attempts such work must necessarily have anatomical and morphological training. As a guide for this purpose we know of no better work than Dr. Stresemann's admirable volume and with such a foundation as this work will provide important results should follow.

We wish the author every facility in the completion of his work and sincerely hope that an English edition may in the near future appear.—W. S.

Aves for 1926. Mr. W. L. Sclater has once more placed all ornithologists under obligation to him by his careful compilation of the ornithological titles for the *Zoological Record*¹ for 1926. They number this year 1089 and are arranged in the usual way by author and then indexed by subject, country and group, making reference easy and satisfactory.

Every year we emphasize the importance of ornithologists securing this invaluable index to the publications in their field, and of institutions rendering such financial aid as they can to the publication of the 'Zoological Record' of which it forms a part. Too much credit cannot be given to the Zoological Society of London for assuming the major part of the expense of publishing this work which for 53 years has been mainly responsible for keeping systematic zoology from hopeless chaos.—W. S.

Sushkin on the Classification of the Weaver-Birds. Dr. Sushkin has presented a vast amount of information on the anatomy and classification of the Ploceidae in this paper.² He discusses the structure of the bill, the tongue, and the body skeleton, especially the palatal surface of the skull, the pattern of which he regards as a very valuable phylogenetic character. He confirms most of the suggestions recently made by Dr.

¹ *Zoological Record*, Vol. LXIII, 1926. Aves. By W. L. Sclater, M.A. August, 1927. pp. 1-77. Zool. Soc. London Regents Park. London, N.W. 8. Price 7 shillings 6 pence.

² On the Anatomy and Classification of the Weaver-Birds. By Peter P. Sushkin. *Bull. Amer. Mus. Nat. Hist.*, LVII, Art. I, pp. 1-32, October 24, 1927.