

chapter on 'acquired habits,' and on the 'argument from design,' and finally an Appendix (pp. 114-127) comprising a 'Key to the Woodpeckers of North America,' and 'Descriptions of North American Woodpeckers.' There is also a good index. The book evinces a thorough familiarity with woodpecker life and structure, gained through personal observation and study, and ability to impart such knowledge clearly and in an attractive way without any sacrifice of scientific accuracy. The book is thus well adapted to instruct and inspire amateurs, whether youthful or of more advanced years. Of the illustrations it is enough to say that the five colored plates are by Fuertes, and the text illustrations from drawings by J. L. Ridgway.—J. A. A.

**Shufeldt's Recent Contributions to our Knowledge of the Osteology of Birds.**<sup>1</sup>—In the first of these papers Dr. Shufeldt briefly reviews the osteological characters of the Sand Grouse, concluding that they belong where they are usually placed, between the Pigeons and Gallinaceous Birds, and form a suborder, the Pterocles.

In the Osteology of the Woodpeckers we are given a somewhat detailed and comparative account of the osteology of the North American Woodpeckers, which though somewhat uneven in its method of treating the various portions of the skeleton, forms a good work of reference. It is to be regretted that a single species was not selected for description and the various parts described in detail, the points wherein other species differed from this being noted. This would have condensed the paper and not only have saved much repetition, but enabled the user of this paper to at once find the information of which he is in search. This method is practically followed in discussing the sternum, and it is very convenient; when we wish to know the condition of the cranium in respect to the extent to which it is pitted by the roots of the feathers we are obliged to turn over page after page. Still it is most welcome to have the information in one paper, and the summary of characters towards the end of the paper condenses the general characters of the group into two pages. The question of the vomer is gone over and most will agree with Dr. Shufeldt that when this bone is present it is in its proper place, that the irregular ossifications are neither vomers nor palatines, but adventitious ossicles. Among other points well brought out is the great difference in the length and disposition of the hyoid. It may be noted that the first

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<sup>1</sup>On the Systematic Position of the Sand Grouse (Pterocles; Syrrhaptes). By R. W. Shufeldt. *American Naturalist*, XXXV, No. 409, January, 1901, pp. 11-16.

On the Osteology of the Woodpeckers. By R. W. Shufeldt, M. D. *Proc. Am. Phil. Soc. Phila.*, XXXIX, No. 164, pp. 578-622, pl. ix.

On the Osteology of the Striges. (Strigidæ and Bubonidæ). By R. W. Shufeldt, M. D. *Proc. Am. Phil. Soc.*, XXXIX, No. 164, pp. 665-722, pll. x-xvii.

metatarsal of *Picoides* is present, though concealed beneath the skin, as noted by Beddard.

The 'Osteology of the Striges' is not up to the standard of the paper on the Woodpeckers, for the descriptive matter is too long and too much scattered to be readily used; moreover we lack the summary of characters at the end, this not being compensated for by the fact that the main characters are given on two or three pages at the outset. — F. A. L.

Chapman on the Genus *Sturnella*.<sup>1</sup>—With the aid of a much larger series of specimens than has been available to previous writers on the subject, Mr. Chapman has been able to furnish the most valuable contribution to the history of this perplexing genus that has yet appeared. After characterizing the various races of Meadowlarks hitherto described, and pointing out the striking differences between the arid (*neglecta*) and the humid (*mag. a*) groups, the author considers the question of inter-relationships between the two. His conclusions are that the two groups were originally evolved in Mexico, *neglecta* occupying the table land and *magna* the lower humid areas, their relationships here being simply that of well marked geographic races.

Subsequently the two spread northward, *neglecta* covering the western United States and *magna* the eastern region. Still later the two forms, which in the north were quite distinct, have converged and intermingled, thus accounting for the presence of typical *magna* and *neglecta*, as well as intermediates or 'hybrids', side by side in Minnesota and Texas, a fact which is well established.

Due credit is given throughout the paper to Mr. E. W. Nelson, whose careful collecting in Mexico has cleared up the obscurity which had previously prevailed as to the relationships of the two forms in the south.

In emphasizing the fact that the main difference between the *magna* and *neglecta* groups is one of depth of color Mr. Chapman points out that the form recently described as *S. magna hoopesi* should be associated with the latter in spite of the extent of yellow on the sides of the throat. Unless it is deemed advisable to consider the above groups as representing two distinct species, no change in nomenclature is necessary.

Several interesting half-tones from photographs of skins and feathers illustrate the paper, and show clearly the contrast between the light and dark birds. — W. S.

Eaton's 'Birds of Western New York.'<sup>2</sup>—Mr. Eaton's list relates to "the western portion of New York State, extending eastward through the 'Finger Lake' region," and consisting of three east and west belts,

<sup>1</sup>A Study of the Genus *Sturnella*. By Frank M. Chapman, Bull. Am. Mus. Nat. Hist., Vol. XIII, 1900, pp. 297-320.

<sup>2</sup>Birds of Western New York. By Elon Howard Eaton. Proc. Rochester Acad., Vol. IV, pp. 1-64. Feb. 15, 1901.