

these two forms, as well as of some bones of *Ardea candidissima*. The paper concludes with a 'Synoptical and Comparative Review of the chief Osteological Characters of certain species of North American Ardeinæ.—J. A. A.

Shufeldt on the Relationships of the Genus *Chamæa*. *—Upon a careful comparison of the structure, external and internal, of *Chamæa* with a variety of more or less closely allied forms, Dr. Shufeldt finds its closest agreement to be with the genus *Psaltriparus*, and that it thus has distinctly Parine rather than Troglodytine affinities. The principal forms with which comparisons were made are, among Wrens, the genera *Thryothorus*, *Salpinctes*, *Campylorhynchus*, and *Cinnicerthia*; among Tits, the genera *Parus*, *Lophophanes*, *Psaltriparus*, *Ægithaliscus*, and *Auriparus*; among other birds, the genera *Certhia*, *Regulus*, *Polioptila*, *Accentor*, etc. He first compares in detail their pterylography and topographical anatomy, and then their osteology and more or less their viseral anatomy. Figures of the skulls are given of eight species, including of course *Chamæa*. In the totality of its characters *Chamæa* is found to be much more closely related to the Bush-Tits than to any of the Wrens, unless it be the South American genus *Cinnicerthia*, which, however, is known to Dr. Shufeldt only from an examination of skins and plates representing its external characters. The last-named genus he conjectures, we fear without just grounds, may have, like *Chamæa*, Parine affinities. His passing remarks on *Perisoreus* are of interest, as showing that while in its external characters it so strongly recalls the Tits, it is essentially a Garruline bird, a comparison of the skeleton of *Perisoreus* with that of *Parus* at once dispelling the resemblance suggested by the external characters.—J. A. A.

Shufeldt's 'Studies of the Macrochires'.—Under this title † the author treats at some length several forms not belonging to the group of Macrochires, as *Ampelis cedrorum* (pp. 306-318), *Trogon mexicanus* and *T. puella* (pp. 318-338), and the North American Hirundinidæ (pp. 352-355) the latter with special reference to their relationship to the Swifts. *Ampelis*, as shown by Garrod, may be regarded as "an average Oscinine bird," with, says Dr. Shufeldt, "here and there in its economy traces of a Clamatorial type, such as is shown by its free lachrymal bone and a few other minor points." It apparently has no close morphological relationship with the Hirundinidæ. In the present memoir it was chosen on account of its average Passerine character for comparison with the other forms treated.

* On the position of *Chamæa* in the System. By R. W. Shufeldt. Journ. of Morph., Vol. III, No. 3, pp. 475-502.

† Studies of the Macrochires, Morphological and otherwise, with the view of indicating their Relationships and defining their several Positions in the System. By R. W. Shufeldt, M. D., C. M. Z. S., Captain, Medical Corps, U. S. Army (communicated by W. K. Parker, F. R. S., F. L. S.). Journ. Linn. Soc., Zoölogy, Vol. XX, pp. 299-394 pll. xvii-xxiv. (Published Oct., 1889.)