

with figures, are given by Mr. Lucas, who compares them with the corresponding parts of *Phalacrocorax carbo*, *P. urile*, and *P. dilophus*. Mr. Lucas finds *P. perspicillatus* "to have been a much heavier bird than *P. carbo*, and a bird of weaker flight; with more robust and muscular legs, and a more slender and more feeble head and neck."—J. A. A.

Lucas on the Osteology of the Thrushes and Wrens.*—Mr. Lucas concludes "that the Miminæ hold a somewhat intermediate position between the Wrens and Thrushes, and if the characters described are of sufficient value to be considered *family* characters (which is extremely doubtful) each of the groups under consideration seems to have equal right in that respect.

"The Wrens, as represented by the species in hand, form a harmonious group, agreeing very closely with one another in their osteology, and presenting some well-marked distinctive characters.

"The Thrushes also, when compared with the Wrens, present well-defined characters, and while differing among themselves more than do the Wrens, these differences are nevertheless very slight.

"Aside from *Galeoscoptes*, the Miminæ are fairly well marked, having a very characteristic shape to the maxillo-palatine process. This maxillo-palatine is so entirely different from that of the Wrens that from what little experience I have had I should hesitate to unite two groups so dissimilar in this respect. On the other hand, *Galeoscoptes* has such decided leanings toward the Thrushes, not only in its skull, but in other portions of the skeleton, that it would seem to connect them with the Miminæ. Be this as it may, *Galeoscoptes* is certainly nearer to the Thrushes than any other member of its group, while *Harporhynchus* seems to be the farthest removed."

It would thus seem that the position of the Miminæ as a subfamily of the Turdidæ was more in accordance with the osteological characters of the Miminæ than is its present position among the Troglodytidæ. "In fact," says Mr. Lucas, "it seems more and more clear that the Miminæ should not be included in the very sharply defined family Troglodytidæ." On the other hand, he believes that the true affinities of both *Chamæa* and *Certhia* are with the Wrens.

Mr. Lucas's important paper is illustrated with figures of the skull, sternum, and pelvis in *Merula*, *Campylorhynchus*, and *Harporhynchus*.—J. A. A.

Shufeldt on the Osteology of the Ardeinæ.†—This paper contains a detailed description of the osteology of *Ardea herodias* and *Nycticorax violaceus*, with excellent figures of the principal parts of the skeleton in

* Notes on the Osteology of the Thrushes, Miminæ, and Wrens. By Frederic A. Lucas. Proc. U.S. Nat. Mus., 1888, pp. 173-180.

† Osteological Studies of the Subfamily Ardeinæ. By R. W. Shufeldt, M. D., C. M. Z. S. Journ. Comp. Med. and Surg., July and October, 1889. (Separates repaged.)