APPENDIX.

ART. VIII.—*A New Cretaceous Bird allied to Hesperornis*; by O. C. MARSH.

THE genus *Hesperornis* and its near allies have hitherto been found only in a definite horizon, the Pteranodon beds, in the Cretaceous of Kansas, and all now known have been described and figured by the writer.* Recent researches in the Cretaceous of Montana have brought to light another form distinct from *Hesperornis*, and of smaller size, but evidently belonging to the same general group of gigantic swimming birds. A single specimen only has been found, associated with marine fossils of Fox Hills types, and certainly from a much higher horizon than that in which *Hesperornis* occurs.

The specimen secured is represented one-half natural size in the figures below, and is a most characteristic part of the skeleton. It is the lower half of the right tibia of a fully adult bird. It shows that the tibia as a whole was very long and slender, with the shaft hollow throughout. In its general features, the specimen resembles most nearly the corresponding part in *Hesperornis*. The general proportions of the two are similar. The cavity in the shaft of each is equally extensive, and is bounded by smooth, well-defined walls. The ridge for the fibula is equally developed, indicating that this bone was proportionately of the same length in both, and probably of the same form.

* Odontornithes, 4to, Washington, 1880.

The differences between the present fossil and the corresponding part in *Hesperornis* are, however, strongly marked. In the latter, the distal end of the tibia is curved inward, and the smaller inner condyle is especially prominent below. In the present specimen, the outer condyle is the lower, and the inner one is nearly on a line with the inner margin of the shaft, as shown in figures 1 and 3, below. These characters are of generic importance, and hence the present specimen may be regarded as distinct from *Hesperornis*. The new genus it represents may be called *Coniornis*, and the species may be known as *Coniornis altus*.

FIGURE 1.—Portion of right tibia of *Coniornis altus*. Marsh; front view.

FIGURE 1a.—Section of same; showing cavity.

FIGURE 2.—The same bone; seen from the right.

FIGURE 3.—The same bone; back view.

FIGURE 3a.—The same; seen from below.

All the figures are one-half natural size.

The present type specimen indicates a bird about two-thirds the size of *Hesperornis regalis*, Marsh, or about four feet in length, from the point of the bill to the end of the toes. It was recently found by Mr. J. B. Hatcher, near the mouth of the Judith River, in Montana.

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