

FOSSIL REMAINS OF WHAT APPEARS TO BE A PASSERINE BIRD FROM THE FLORISSANT SHALES OF COLORADO.

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The specimen here to be described was collected by its present owner, Prof. Ira E. Cutler, of the University of Denver, Denver, Colorado, and forwarded to the United States National Museum for description. [My attention was called to it by Mr. Charles W. Gilmore, of the National Museum, at whose request the following description has been made:]

According to Professor Cutler the specimen was found early in August, 1915, in a gutter beside the road leading out of the town of Florissant, Colorado, in a locality where no specimens have heretofore been discovered. It was fully half a mile from the much-worked beds, from which so many fossils have been taken for a number of years past.

It would seem that Professor Cutler retained the bones of this fossil bird, and what I have before me at this writing are simply impressions of them; that is, the portion of the matrix or slab lifted off of such parts of the skeleton as were discovered. Fortunately, these impressions are tolerably sharp, but they are by no means as accurate for scientific description as the bones themselves. No other parts of the skeleton were found, however, after a rather long and careful search. I have made a negative of this specimen which shows it natural size, and a reproduction of a print from this is given in Plate 60, while in the reproduction of a second print, Plate 61, the bones of the lower extremity have been outlined by me carefully in ink, in order to show their size and the positions they severally occupy in the matrix. On the side of the slab where the impressions are the surface is smooth, while upon the other side it is overlaid with a finely granulated and extremely thin concretion. (Here may be noted the number of the specimen, namely 8541, U.S.N.M.). This piece of shale, as is shown in the plates, is in three pieces, and each averages about a millimeter and a half in thickness. The upper and largest piece (1) presents upon its surface the impression of the bones of a part of the lower extremity of an average-sized bird;

this, by the toes, is extended onto the smallest piece of the slab (2); while on the remaining piece (3) there is the impression of the hinder two-thirds of the pelvis, five (5) coccygeal vertebrae, and the upper portion of the left femur. No other bones are anywhere visible.

So far as these impressions seem to indicate they are of bones that may easily have belonged to some passerine bird of medium proportions. I have made comparisons with several skeletons of *Passeres* belonging to the collections of the United States National Museum; and, taking everything into consideration, in so far as the common American representatives of that group are concerned, I find it comes as near a bird of the size of the Purple Grackle (*Quiscalus purpureus*) as any other. So little of this fossil, however, has been thus far discovered that it should occasion no surprise to find that these bones belonged to some other species of an entirely different group, not passerine at all.

The skeleton of the Purple Grackle with which I have compared it is No. 16708, from an individual collected on April 29, 1883, by Mr. L. M. McCormick. In slab 1 of the plates, *a* invites attention to the impressions of the lower end of a tibiotarsus, bearing its normal relations to the tarso-metatarsus (*b*) of the same limb. As *a* is imperfect, nothing would be conveyed by giving its length; *b* has a length of 3.1 cms., the corresponding bone in *Quiscalus purpureus* having a length of 3.9 cms. It will be noted that *c* is but faintly impressed upon the slab, and I take it to be the other tibiotarsus, the distal extremity of which is missing. This bone in *Quiscalus* has a length of 5.5 cms., and the imperfect part of the specimen on the slab measures 4.6 cms. in length. *d* invites attention to the impressions of the toes, in which the proximal joint of hallux measures considerably less than in *Quiscalus purpureus*, the latter having a length of 1.4 cms., and in the fossil but 9 mm. (approx.).

Passing to the remaining portion of this slab (3) it is to be noted that the impression of the *femur*, which occupies about its normal position in the skeleton, is of exactly the same size as we find it to be in the Grackle with which I am comparing it. It does not admit, however, of obtaining its length, as only the impression of the upper portion is to be found on the slab. The impressions of the *five coccygeal vertebrae* are in all respects just what we would find were they made by those of the Grackle. The *pygostyle* is off the slab. Such parts as are shown on the slab of the impression of the *pelvis* (3) I have measured and compared with the corresponding parts in the Grackle's skeleton, and, in measurements at least, they are practically in agreement.

It is quite possible that the bones that made these impressions were those of a passerine bird about the size of the Purple Grackle, but they are of such a nature, with respect to perfectness, number,

and kind, that there is no certainty about it whatever. On the other hand, if passerine, they surely do not represent *Quiscalus purpureus*, but only a form about its size, and there is a long list of them.

My impression is that the specimen is of a passerine bird, one with a short hallux and rather short tarso-metatarsus, but that is as far as we should go until more material representing the same species comes to light.

PLATE 60.

The slab containing the impressions of the bones of the pelvic extremities, 1 and 2; and 3 those of a part of the pelvis and upper portion of the left femur. All natural size. Reproduced from the author's photograph.

PLATE 61.

The same, with *a*, *b*, *c*, and *d*, giving the limb bones as outlined in ink, to better present their number, positions, and proportions.



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