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DESCRIPTIONS OF ADDITIONAL FOSSIL BIRDS FROM THE MIOCENE OF NEBRASKA

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Field work for The American Museum of Natural History in the Snake Creek quarries of northwestern Nebraska, carried on during 1923 by Mr. Albert Thomson, has yielded other remains of birds, in addition to those placed on record by the writer in an earlier paper.¹

The new material in question, though consisting of only two specimens, representing two families, adds two species to the list of known fossil birds of this region, and is of especial interest since neither of the families concerned has been found previously as fossil in North America. One of these, the family *Aramidæ*, is here first recorded in a fossil state.

Descriptions of the two species mentioned follow:

Aramidæ

Aramornis, new genus

CHARACTERS.—Metatarsus (Figs. 1 to 4) similar to that of *Aramus* Vieillot² but lower end of shaft on anterior face more rounded, ala interna of inner trochlea produced as a slender projecting point; shaft relatively narrower in lateral width.

TYPE.—*Aramornis longurio*, new species.

Aramornis longurio, new species

DESCRIPTION.—Type, Amer. Mus. Nat. Hist., Pal. Coll. Cat. No. 6292, distal end of left tarso-metatarsus, from the lower horizon (Horizon A), *Merychippus primus* zone, of the Sheep Creek Beds, earliest phase of the Middle Miocene, collected in 1923 in the Snake Creek quarries, Sioux Co., Nebraska, by Albert Thomson.

Shaft somewhat slender, expanding gradually to form a widened base to support the trochlea, flattened above on anterior face, with a long groove leading to the inferior foramen, and an elevated ridge that passes to the base of the middle trochlea; on posterior surface rounded above, nearly plane below, with a faint excavation marking the facet of attachment of the hallux; inferior foramen at the lower end of a deep, well-marked groove; outer trochlea of moderate development, rather narrow, excavated on outer and inner faces, with a smoothly grooved articular face (projecting

¹Wetmore, A., 1923, 'Avian' Fossils from the Miocene and Pliocene of Nebraska,' Bull. Amer. Mus. Nat. Hist., XLVIII, pp. 483-507.

²Vieillot, 1816, Analyse, p. 58. (Type, by monotypy, "Courliri, Buffon"—*Ardea scolopacea* Gmelin.)

outer wing broken away); middle trochlea strong but somewhat narrow, separated by a deep external sulcus from outer trochlea, and projected well below level of outer trochlea; external and internal faces deeply excavated, with a strongly marked median groove, whose inner side on the posterior face is somewhat more abrupt and slightly higher than the outer; on posterior face margins contracted and cut away, particularly on inner side; inner trochlea separated by a distinct inner sulcus from middle trochlea, decidedly higher than others and produced much farther posteriorly; narrow

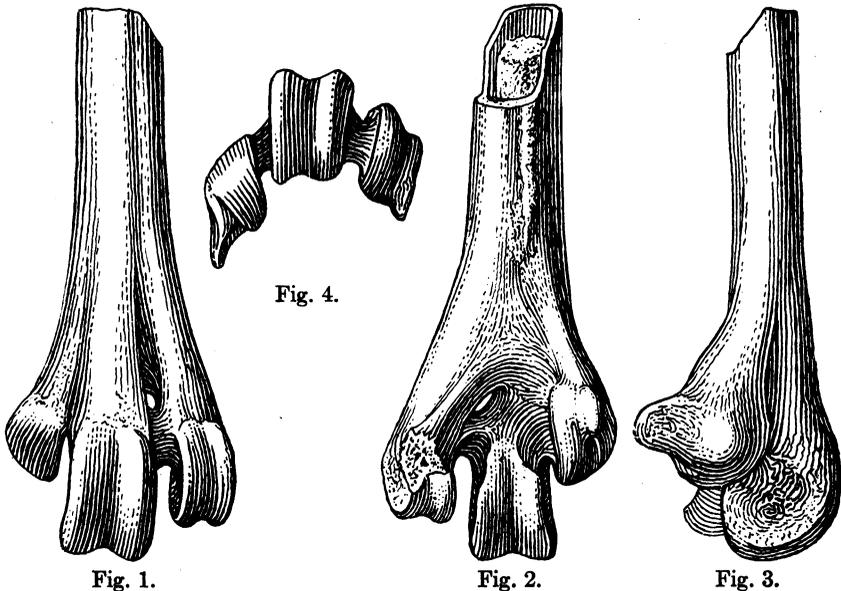


Fig. 1.

Fig. 2.

Fig. 3.

- Fig. 1. *Aramornis longurio* type, anterior view (X2).
 Fig. 2. *Aramornis longurio* type, posterior view (X2).
 Fig. 3. *Aramornis longurio* type, lateral view (X2).
 Fig. 4. *Aramornis longurio* type, distal view of trochlea (X2).

and flattened, deeply excavated on inner face, strongly rounded externally with a pronounced ala interna that is produced backward as a flattened, narrowed, projecting point with irregularly rounded end.

MEASUREMENTS.—(Of type). Smallest transverse diameter of shaft 5.9 mm., breadth across trochlea 15.6 mm., breadth of outer trochlea 4.9 mm., breadth of middle trochlea 5.8 mm., breadth of inner trochlea 4.5 mm.

REMARKS.—The metatarsus of courlans differs from that of typical cranes of the genus *Megalornis* mainly in the lessened elevation of the inner trochlea above the base of the outer, and the more rounded, less distinctly crested proximal margin on the outer base of this same trochlea.

Balearica offers close resemblance to the courlans in these characters, but is distinguished by more robust form, particularly of the trochlea.

Modern courlans, of which two species are known, *Aramus scolopaceus* (Gmelin) of South America, and *Aramus pictus* (F. A. A. Meyer) of Florida, the Greater Antilles, Southern Mexico and Central America, frequent fresh or slightly brackish marshes and wooded swamps, where they feed usually on snails, particularly on *Ampullaria*.

The family has not been known previously in a fossil state.

Psittacidæ

Conuropsis fratercula, new subspecies

CHARACTERS.—Humerus (Figs. 5 and 6) similar to that of modern *Conuropsis carolinensis* (Linnaeus)¹ but smaller, less than three-fourths as large.

DESCRIPTION.—Type, Amer. Mus. Nat. Hist., Pal. Coll. Cat. No. 6292a, left humerus, nearly perfect, from the lower horizon (Horizon A), *Merychippus primus* zone, of the Sheep Creek Beds, earliest phase of the Middle Miocene, collected in 1923 in the Snake Creek quarries, Sioux Co., Nebraska, by Albert Thomson.

Caput humeri rounded but somewhat produced at the point, giving a slight angular appearance, narrow and elongated from side to side; incisura capitis wide, deeply cut, excavated internally under head; tuberculum inferior strongly produced as a narrow, blunt margined plate; crista inferior extending as a well marked shelf, with a cribriform series of perforations in the extreme inner angle of the fossa to allow entrance of air-cells into shaft; tuberculum externum produced in a ridge with a heavily impressed excavation below marking the attachment of the tendon of the supracoracoideus; surface of shaft sharply angular internal to this point, rounded below; coraco-humeral groove deeply impressed at lower end above tuberculum inferior, wide and open for most of course, and so broad as to be faintly indicated beyond center of bone; bicipital surface smooth, slightly curved, with an abrupt proximal margin above the coraco-humeral groove, and also abruptly delimited by a declivous margin on inner border for proximal two-thirds of length; crista superior (point partly missing) produced as a thin angular plate that extends outward, and then, toward the point, tends to curve inward; a broad area of insertion for the pectoralis major; shaft strong, somewhat flattened, but smoothly rounded; nutrient foramen closed, marked by a slight pit slightly external to middle at a point near the center of the shaft; ectepicondylar process at the summit of a long, low ridge that passes down, broadening as it goes, to the base of the radial trochlea; radial trochlea narrow, strongly projecting, with abrupt sides, sharply truncated on proximal end, where it is slightly undercut; ulnar trochlea small, expanded at inner end and tapered externally, so that in outline, seen from below, it appears triangular with the points well rounded; entepicondylar process strongly projecting as a narrow plate that terminates distally at the level of the lower margin of the ulnar trochlea; tubercle for pronator brevis somewhat elevated, especially at upper proximal end; depression for brachialis

¹*Psittacus carolinensis* Linnaeus, 1758, Syst. Nat., 10th Ed., I, p. 97 (South Carolina).

inferior small and very slightly marked; attachments for pronator longus and flexor carpi ulnaris marked by small, more or less rounded depressions; olecranal depression faint; sulcus anconeus medius broad and open covering two-thirds of width of lower end of bone; sulcus anconeus lateralis narrow, bounded by sharply raised lines.

MEASUREMENTS.—(Of type). Total length, 29.5 mm., greatest breadth of head 10.6 mm., lateral diameter of shaft at center 3.4 mm., intercondylar breadth 6.4 mm.

REMARKS.—The present species is of peculiar interest as it represents the first known parrotlike bird to be described as a fossil from North America. Within historic times the subspecies of the Carolina parakeet

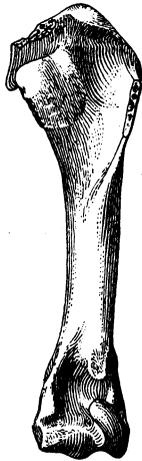


Fig. 5.

Fig. 5. *Conuropsis fratercula* type, anterior view (X2).

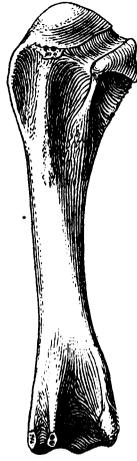


Fig. 6.

Fig. 6. *Conuropsis fratercula* type, posterior view (X2).

known as *Conuropsis carolinensis ludovicianus* (Gmelin), distinguished from the typical form of Florida and the region east of the Appalachian Mountains by somewhat duller coloration and larger size, ranged north into Nebraska and eastern and northeastern Colorado, where, however, it has long been extinct. The fossil humerus here characterized as *Conuropsis fratercula* in form reproduces so closely the humerus of the modern bird (represented by skeletons from Florida) that the two would be inseparable were it not for their disparity in size. The difference may be appreciated on comparison of the following humeral measurements of *Conuropsis carolinensis carolinensis* (U. S. Nat. Mus. Cat. No. 223857) with those given for the type of the fossil: Total length 36.2 mm., greatest breadth of head 12.3 mm., lateral diameter of shaft at center 3.8 mm., intercondylar breadth 7.7 mm.

In an earlier paper¹ I commented on the great similarity in the humerus of Columbiform and Psittaciform birds. The characters there outlined of position of ectepicondylar tubercle with others of minor value, while diagnostic, are perceptible only after careful study. I may now indicate one point by which this bone may be identified at a glance in these two groups. In the parrotlike birds the insertion of the tendon of the supracoracoideus muscle is always indicated by a distinct pit or depression of irregular elongate form, while in all pigeons this insertion is characterized by a slightly roughened surface without any marked excavation. This distinction holds in all of the considerable number of species that I have been able to examine.

¹Wetmore A., 1922, Bull. Amer. Mus. Nat. Hist., XLVI, p. 319.

