

A FOSSIL CRANE FROM THE PLIOCENE OF KANSAS

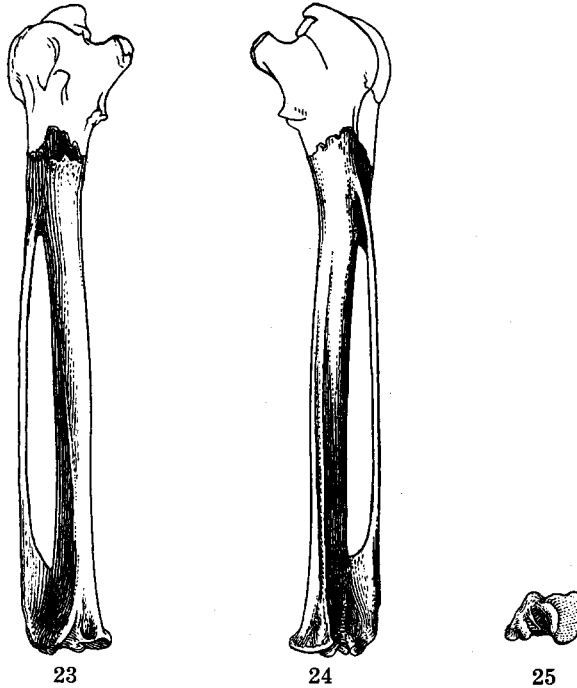
WITH THREE ILLUSTRATIONS

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Among vertebrate remains obtained by H. T. Martin during excavations in the Pliocene deposits of Sherman County, Kansas, there is the broken metacarpal of a crane that is allied to the living Sandhill and Little Brown cranes but that is obviously different. A description of this interesting bird follows. Drawings illustrating the type specimen have been made by Mr. Sydney Prentice.

Grus nannodes, sp. nov.

Characters.—Similar to the living *Grus canadensis* (Linnaeus)¹ but decidedly smaller, being less than two-thirds as large.



Figs. 23 and 24. TWO VIEWS OF TYPE SPECIMEN OF *Grus nannodes*, NATURAL SIZE. THE RESTORATION OF THE UPPER END, MISSING IN THE FOSSIL, HAS BEEN MADE FROM A SPECIMEN OF *Grus pratensis*, U. S. NAT. MUS. No. 19019.

Fig. 25. DISTAL VIEW OF END OF TYPE METACARPUS OF *Grus nannodes*, NATURAL SIZE.

Description.—Type (figs. 23 to 25), no. 3757, Univ. Kansas Mus. Vert. Paleont., fragmentary left metacarpus with the proximal end lacking, collected in July, 1924, by H. T. Martin. Conformation of bone practically identical with that of the living Little Brown Crane; tuberculum ulnare and tuberculum radiale projecting to the

¹*Ardea canadensis* Linnaeus, Syst. Nat., ed. 10, vol. 1, 1758, p. 141. (Hudson Bay.) This is the Little Brown Crane.

same level; the first with distal surface flattened, rather wide, curving slightly in lateral outline, somewhat broader externally than internally; the tuberculum radiale cut away at the sides so that it stands out as a distinct projection on its external margin, the margin toward the ulnar tubercle being marked by a slight pit; fornix metacarpi a broad, flattened plate with slightly curving surfaces, thin proximally and slightly thickened distally; third metacarpal straight and strong, somewhat flattened from above downward toward the distal end with a strongly marked sulcus tendini musculi on its external face, that is found as a depression for half the length of the bone, with sharply raised sides at its distal end; a slight muscular tuberosity near anterior end of the third metacarpal on the margin of the fissura metacarpi; fourth metacarpal a thin plate, flattened from side to side at its proximal end, narrowing distally to become flattened in the vertical plane at the fornix metacarpi, extending thus for a short distance almost as a knifelike edge; only the extreme distal end of the second metacarpal present.

Measurements.—Length from proximal end of fissura metacarpi to distal end of bone, 60.5 mm.; depth of proximal end just anterior to base of second metacarpal, 7.4 mm.; greatest depth of distal end of bone, 11.1 mm.; lateral diameter of shaft of third metacarpal near center, 5.6 mm.

Discussion.—The living gray cranes of North America are separated into two groups, the Little Brown Crane, *Grus canadensis* (Linnaeus), and the Sandhill Crane, *Grus pratensis*. Whether these two are specifically distinct or are subspecifically related is a matter of present-day controversy that does not require discussion here since there is no question but that two distinct kinds, whether they be species or subspecies, are found. *Grus nannodes* here described, so far as the specimen in hand is concerned, is identical with these two living forms in contour and sculpture, the basis for difference being entirely that of size. Apparently it was even relatively smaller than the Little Brown form than that bird is less than its large cousin the Sandhill Crane. The fossil bone is from a fully adult individual, so that there is no question as to its characters with regard to age. The finding of this species is particularly interesting in view of the recent record of a humerus identical with that of the living Sandhill Crane from the Pliocene of the Upper Snake Creek formation in Sioux County, Nebraska.²

With the fossil species *nannodes* and the living bird *pratensis* represented in the Pliocene of Nebraska and the living *canadensis* known from the Pleistocene asphalt beds of Rancho La Brea and McKittrick, California, one is led to suppose that there may have been three sizes among these birds in existence at the close of the Tertiary.

The type specimen of *nannodes* is heavily fossilized and is blackish slate in color, lighter at the extremities. In general appearance it resembles specimens of similar age from Sioux County, Nebraska.

Following is a partial list of the associated mammalian fauna with which the crane here described was found:

Rodentia	Perissodactyla
Mylagaulus sp.	Aphelops
Sciurus sp.	Hipparion
Carnivora	Pliohippus
Pseudaelurus	Artiodactyla
Machairodus	Prosthennops serus
Aelurodon	Prosthennops crassigenis
Borophagus cyonoides	Procamelus
Brachypsalis marshalli	Pliauchenia
	Dromomeryx?
	Blastomeryx

Of further interest was the discovery in a limited area fifteen feet by twenty feet, in the middle of the Pliocene exposure concerned, of the disarticulated skeletons of more than one hundred specimens of a new species of amphibian, *Plioambystoma kansensis*.

Washington, D. C., and Lawrence, Kansas, November 13, 1929.

² See Wetmore, Amer. Mus. Nov. No. 302, February 29, 1928, pp. 1-4.