

GENERAL NOTES

White Pelican from the Pleistocene of Oklahoma.—On July 24, 1950, Claude W. Hibbard collected two badly broken, incomplete fossil bones of a large bird (Univ. Mich. Mus. Paleo. No. 27551) in Beaver County, Oklahoma, near the west line of the SW $\frac{1}{4}$ of SW $\frac{1}{4}$ sec. 5, T. 5 N., R. 28 E. C. M. I am indebted to him for the opportunity to report on these and for a description of the locality in which they were found.

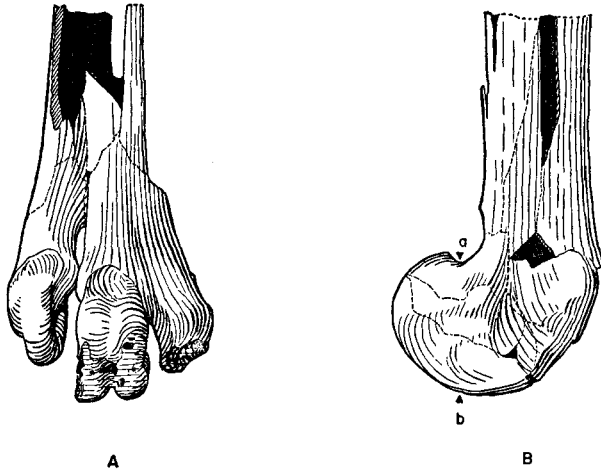


FIGURE 1. Bones of fossil White Pelican. A. Distal end of tarsometatarsus, anterior view. B. Distal end of tibiotarsus, medial view.

The bones are apparently those of a very large White Pelican, *Pelecanus erythrorhynchos*. They were found in the bank of an arroyo, about four feet above its bed, in a stream deposit of approximately "late middle Pleistocene" age. The exposure is in a dissected sink, and the deposit from which the bones were taken is stratigraphically above the Pearlette Ash member of the Crooked Creek formation. This ash is a well-known stratigraphic marker in the High Plains (cf. Hibbard, Contrib. Mus. Paleo. Univ. Mich., 7: 70, 1949). Part of the comparative material used in identification was lent by the University of California Museum of Vertebrate Zoology and by the University of Kansas Museum of Natural History through the courtesy of Alden H. Miller and Harrison B. Tordoff. Jane S. Mengel made the drawings.

The material (Fig. 1) consists of: a right tibiotarsus, including most of the distal one-third of the shaft, with the internal condyle nearly complete and the remainder of the distal articular surface lacking; a right tarsometatarsus with the distal end, including all three trochleae and the distal foramen, nearly intact but with the medial and anterior portions of the shaft missing. The shattered posterior surface of the shaft has been assembled as far as the distal end of the medial calcaneal ridge. The nomenclature of parts follows that of Howard (Univ. Calif. Publ. Zool., 32: 323-324, 1929). The bones were found in place, closely associated, in sandy silt and are apparently from a single individual.

TABLE 1
COMPARATIVE MEASUREMENTS OF WHITE PELICANS

Specimens	Greatest breadth tarsometatarsus at distal end (across trochleae)	Vertical depth of internal condyle of tibiotarsus*
Fossil—U.M.M.P. No. 27551	26.1 mm.	17.2 mm.
Recent 3 ♂♂, 4 unsexed		
Mean, with standard error	23.63 ± 0.26	15.38 ± 0.23
Range	22.2 — 24.2	14.5 — 16.3
Standard deviation	0.70	0.60

*Taken just in front of internal ligamental prominence (between points a and b of Fig. 1, B.).

The elements agree well with the corresponding bones of seven specimens of the present-day White Pelican in every respect except size. They are generally larger and heavier throughout than the Recent material I have examined. The shafts, particularly that of the tibiotarsus, appear relatively heavier in the fossil. The distal foramen of the fossil tarsometatarsus is also relatively larger, but the Recent bones show considerable variability in this character. Table 1 suggests that this individual was as large, or perhaps slightly larger, than the largest examples of *erythrorhynchos* occurring today. Compton (Condor, 36: 167, 1934) has recorded a left femur of a White Pelican from the upper Pliocene or lower Pleistocene Manix beds of California. This bone was only 0.5 mm. longer than the average of four Recent specimens which he measured. However, the tendency for certain late Pliocene and Pleistocene forms to be larger than their living relatives, indicated recently for *Gymnogyps* by Fisher (Pacific Sci., 1: 227, 1947), and for *Colinus* by Tordoff (Condor, 53: 23-30, 1951), may prove true for the present form as well.

The total length of the fossil tarsometatarsus may be estimated, since, as already indicated, the specimen includes a recognizable point proximally, the distal end of the calcaneal ridge. While subject to a small error, this estimate gives a clearer idea of the large size of the bird. Assuming that the fossil and Recent pelicans have similar proportions, this bone must have been approximately 140 mm. in total length. The length of the tarsometatarsus in seven Recent individuals, by contrast, averages only 121 mm. (114-126), notwithstanding the fact that one of these was the largest of 18 specimens in the University of Kansas collection. Should further material become available, qualitative differences may be found indicating that this large Pleistocene pelican is specifically distinct from *P. erythrorhynchos*.

According to Wetmore (Smiths. Misc. Coll., 99: 10, 1940) the "recent form" has been recorded from the Pleistocene of Oregon and Nevada (the latter marked "?Pleistocene"), in addition to the California record mentioned above.

No other fossil birds from Oklahoma appear to have been recorded in the literature, save for a small duck reported by Hibbard (Univ. Kans. Sci. Bull., 26: 369, 1939). This specimen also came from Beaver County, near the Kansas line, though it was not specifically mentioned as an Oklahoma record.—ROBERT M. MENGEL, *University of Michigan Museum of Zoology, Ann Arbor, Michigan*.

The Identity of *Anser nigricans* Lawrence 1846.—It had seemed strange to us that the type of *Anser nigricans* Lawrence, a name so far used for the Pacific Black Brant, should be a bird collected in January, 1846, at Egg Harbor, New Jersey, on the Atlantic coast.