

A New Shorebird from the Upper Pliocene

BY J. ALAN FEDUCCIA

Department of Biology, Southern Methodist University

One of the avian fossils recovered from the Saw Rock Canyon local fauna of the Upper Pliocene of Seward County, Kansas, is the humerus of a scolopacine shorebird which closely resembles the Recent *Tringa solitaria*. Present evidence favors a late Hemphillian age for the fauna (Hibbard, 1964. Pap. Michigan Acad. Sci., Arts, and Letters, 49: 115-127), and the fauna is taken from a lower section of the Rexroad formation than are the Fox Canyon and Rexroad local faunas of the Rexroad formation of Meade County, Kansas. Many of the mammals in the Saw Rock Canyon local fauna are considered to be ancestral to those of the Fox Canyon and Rexroad local faunas (*op. cit.*). The Saw Rock Canyon locality is given in Hibbard (1950. Contrib. Mus. Paleontol., Univ. Michigan, 8: 113-192).

The fossil humerus was compared with those of 77 extant species representing the following genera: *Vanellus*, *Belonopterus*, *Stephanybyx*, *Hoplopterus*, *Ptiloscelys*, *Zonifer*, *Lobibyx*, *Afribyx*, *Hemiparra*, *Squatarola*, *Pluvialis*, *Charadrius*, *Eupoda*, *Oreophilus*, *Eudromias*, and *Zonibyx* of the Charadriidae; *Bartramia*, *Numenius*, *Limosa*, *Tringa*, *Actitis*, *Catoptrophorus*, *Heteroscelus*, *Arenaria*, *Limnodromus*, *Capella*, *Scolopax*, *Philohela*, *Calidris*, *Crocethia*, *Ereunetes*, *Erolia*, *Micropalama*, and *Tryngites* of the Scolopacidae; and *Phalaropus*, *Steganopus*, and *Lobipes* of the Phalaropidae.

The Saw Rock Canyon humerus is compared below with the Recent species which it most closely resembles, *Tringa solitaria*. Although certain of the Recent genera of shorebirds are not clearly distinguishable on osteological characters, the fossil so closely resembles Recent *T. solitaria* that I am not hesitant to place it in the genus *Tringa*.

Tringa antiqua, new species

Holotype.—Nearly complete left humerus (Fig. 1), The University of Michigan Museum of Paleontology (UMMP) no. V25800, from the Saw Rock Canyon local fauna, Rexroad formation (Lower Upper Pliocene). Locality: XI Ranch, Saw Rock Canyon, Seward County, Kansas. Collected by Dr. C. W. Hibbard and his field party.

Diagnosis.—Humerus similar to that of the Recent *Tringa solitaria*, but shorter. The fossil holotype measures 31.2 mm in total length; the

mean for four specimens of the Recent *T. solitaria* is 32.7 mm. In greatest width of distal end the fossil is slightly larger (5.3 mm) than *T. solitaria* (mean for 4 = 5.1 mm). The fossil humerus also differs from *T. solitaria* in having a relatively less robust shaft, less well-developed ectepicondylar prominence, but larger external condyle. The remaining characters fit within the range of variation of *T. solitaria*.

Discussion.—*Tringa antiqua* was probably a Pliocene equivalent of the Recent Solitary Sandpiper, *Tringa solitaria*. Whether or not it was the ancestor of the Recent species is impossible to determine. Although numerous shorebirds are known from the pre-Pleistocene fossil record of North America, this fossil is the first record of *Tringa*

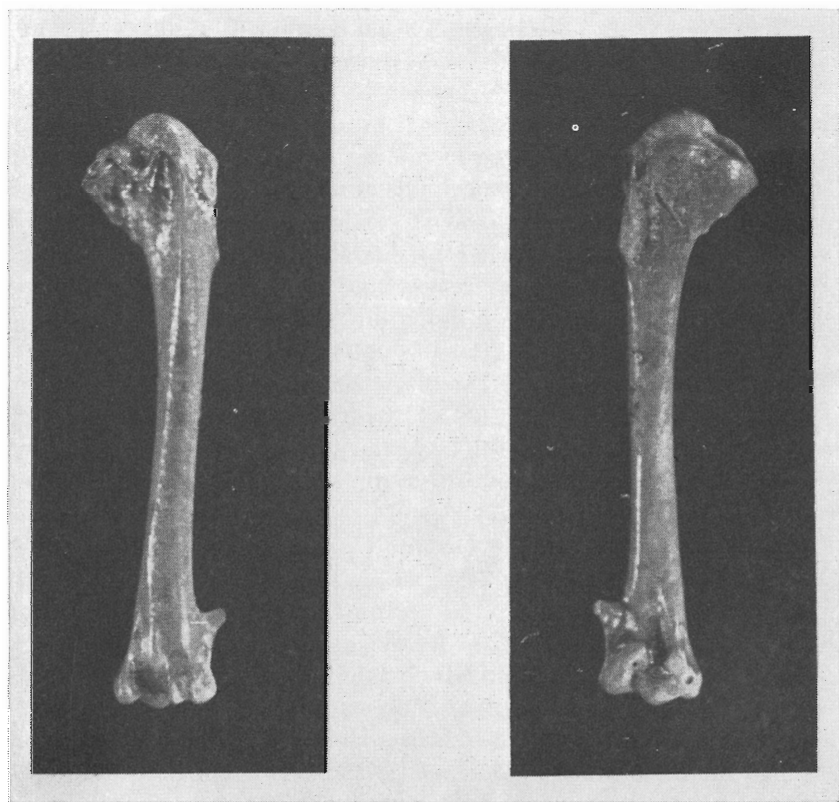


FIG. 1. Holotype of *Tringa antiqua* (UMMP no. V25800). Actual length of fossil, 31.2 mm.

prior to the Pleistocene. *Tringa solitaria* has been reported from the Pleistocene of Florida and Brazil (see Brodkorb, 1967. Bull. Fla. State Mus., 11(3): 99-220). The presence of *Tringa antiqua* in the Lower Upper Pliocene of North America is not surprising since many Recent shorebird genera extend far back into the early Tertiary, indicating the antiquity of the group.

I wish to thank Dr. Claude W. Hibbard for the opportunity to study this fossil. C. W. Hibbard and Bob H. Slaughter critically read the manuscript. The photographs for figure 1 were taken by John E. Ubelaker. This study was in part supported by a grant from the National Science Foundation, GB-6230, to N. G. Hairston, The University of Michigan, for research in Systematic and Evolutionary Biology.