

## TWO WOODPECKERS FROM THE LATE PLIOCENE OF NORTH AMERICA

Alan Feduccia

*Abstract.*—Three bones from the late Pliocene Rexroad Formation, Meade County, Kansas, represent two species of woodpeckers, a large species comparable in size to the species of the ivory-billed group (genus *Campephilus*), but not of that genus, and a flicker, similar in size to modern *Colaptes auratus*. Because of the extreme homogeneity in the postcranial bones of the Picidae these bones are not assigned to a new species.

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Although woodpecker fossils are known during the Pleistocene, especially in North America (Brodkorb 1971a), the pre-Quaternary fossil record of the Picidae is extremely sparse, and is currently represented by only three valid species. *Pliopicus brodkorbi* (Feduccia and Wilson 1967) and *Palaeonerpes shorti* (Cracraft and Morony 1969), both known from the Ogallala Group in Kansas and Nebraska, respectively, are moderate-sized woodpeckers, possibly related to the melanerpine assemblage. *Campephilus dalquesti* (Brodkorb 1971b) is from the late Pliocene (Blancan) of Texas, and represents a large woodpecker, comparable in size to modern species of the ivory-billed group, genus *Campephilus*. Because of the extreme morphological homogeneity of the postcranial skeletons of the Picidae these generic allocations may be questioned; however, there seems at least little doubt that the abovementioned forms represent three species of Pliocene woodpeckers, one of large size. In addition to the abovementioned forms, Wetmore (1931) reported a fossil woodpecker, represented by a nearly complete right ulna, of flicker-like affinities in the Lower Pliocene Devil's Gulch Beds (Blancan), near Ainsworth, Nebraska. Becker (1986), likewise, reported a species of flicker (*Colaptes*), larger than modern *C. auratus* from the Oreana local fauna (Blancan), of Owyhee County, Idaho, which correlates

in age with the well-known Hagerman local fauna, thought to be slightly younger than the fossils reported herein from Rexroad Formation (see Feduccia 1975).

In their 1969 paper describing *Palaeonerpes shorti*, Cracraft and Morony discuss its relationships through a laborious four page section (pp. 4-7), giving detailed generic analyses as well as comparisons with fossils that were not actually examined, but seen only in published figures. I can now confirm few, if any, of their assertions concerning the generic distinctiveness of *Palaeonerpes*, and it seems possible that *P. shorti* belongs in the genus *Melanerpes*. Likewise, the generic distinctiveness of *Pliopicus brodkorbi* could also be questioned. Feduccia and Wilson (1967:4) stated that "*Pliopicus* seems to be most closely allied to the genus *Melanerpes*, . . ." However, I recommend leaving the above genera until a complete revision of the family is undertaken.

In addition to *Palaeonerpes shorti* and *Pliopicus brodkorbi*, Olson (1985) reported having examined fossils of a medium-sized woodpecker from the middle Miocene (late Barstovian) of New Mexico, which would represent the earliest known occurrence of the family, and Ballmann (1976) assigned the proximal end of an ulna from the late Miocene of Italy to the Picidae.

Two of the fossils reported here (Fig. 1)

are a left ulna (University of Michigan Museum of Paleontology no. 31711), and a left carpometacarpus (UMMP 24754), both from the Wendell Fox Pasture locality (UM-K3-53) (see Feduccia 1975), and represent a large woodpecker similar in size to species of the genus *Campephilus*. Although the ulna has no distinctive characters to ally it with any specific genus of large woodpecker, it is nevertheless not assignable to *Campephilus*, as it lacks the strong inward curve of the proximal end of the ulna found in the genus. In size the fossil most closely approximates *Campephilus melanoleucus* of all the forms examined. The fossil ulna measures 52.8 mm in total length; *C. melanoleucus*,  $n = 6$ , was 49.8–54.2 (mean = 52.1). The carpometacarpus measures 25.0 in total length; *C. melanoleucus*,  $n = 6$ , is 24.0–27.2 (mean = 25.4).

A third fossil element is the distal end of a right tarsometatarsus (UMMP 31881, from the Fox Canyon locality, UM-K1-47), that agrees very closely with the genus *Colaptes*. The tarsometatarsus of *Colaptes* is distinguished by lacking any substantial excavation of the trochlea for digit III when compared with that of other woodpeckers having a robust trochlea metatarsi tertii. This character presumably reflects the terrestrial habits of the genus. The greatest width at the level of the distal foramen is 2.9, for *Colaptes auratus*,  $n = 6$ , the same measurement is 2.5–3.2 (mean = 2.8). The specimen of *Colaptes* described by Becker (1986) is slightly younger than this fossil and slightly larger than living *C. auratus*. However, there is little to preclude the possibility that the two represent the same species or that both represent a Blancan form of modern *C. auratus*.

Two woodpeckers, one certainly different from those currently known in the fossil record, are represented by the fossils described herein. These fossils, together with those previously described, may possibly indicate a greater diversity of woodpeckers during the Pliocene of North America. Pending a

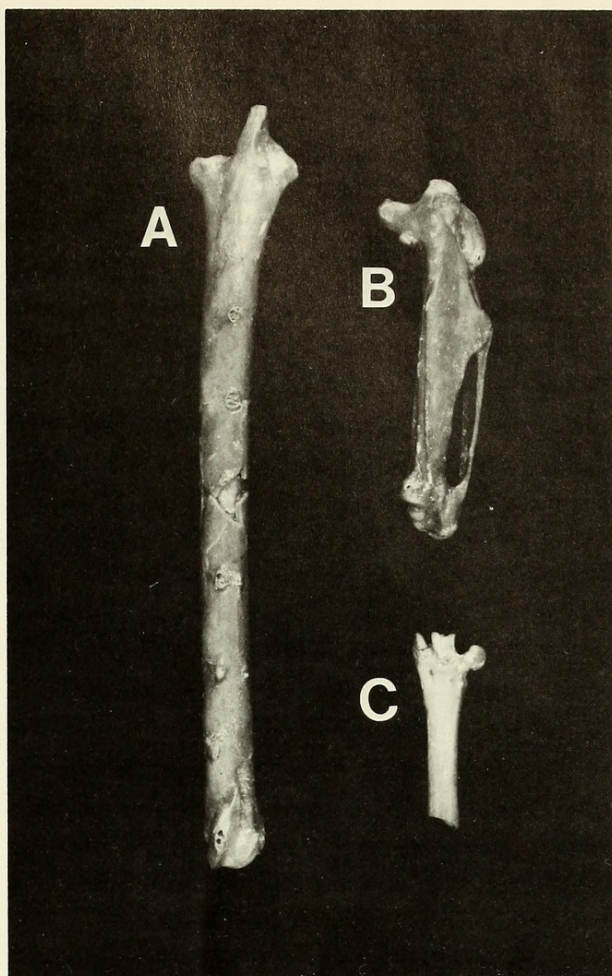


Fig. 1. A, Left ulna, 52.8 mm, anconal view, B, Left carpometacarpus, 25.0 mm, external view, of a large Pliocene woodpecker. C, Distal end of right tarsometatarsus, 13.6 mm, anterior view, of Pliocene *Colaptes* sp. Photo by Susan Whitfield.

complete review of the osteology of the Picidae, it seems most prudent not to assign new names to these fossils at present. They point, however, to the need for a thorough study of the postcranial osteology of the woodpeckers, and suggest the possibility that the living genera are oversplit.

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Department of Biology, University of North Carolina, Chapel Hill, North Carolina 27514.



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