

AN EVALUATION OF THE FOSSIL CURLEW *PALNUMENIUS VICTIMA* L. MILLER (AVES: SCOLOPACIDAE)

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ABSTRACT

The holotypical tarsometatarsus of *Palnumenius victima*, from the late Pleistocene (Rancholabrean) of Nuevo Leon, Mexico, is not generically separable from the extant genus *Numenius* and falls within the lower size range of *Numenius americanus*, from

which it differs in only a few details. *Numenius victima* is tentatively retained as a problematic taxon that may represent a temporal or geographic form of *N. americanus*.

INTRODUCTION

With re-examination using better comparative material, many supposedly extinct taxa of North American Pleistocene birds have been shown to be synonymous with living forms, some of which, however, have retreated from North America into the tropics (for example, Olson, 1974). The process of re-evaluating nominal fossil taxa is still important to an accurate assessment of the effects of the Pleistocene on North American birds. In this connection I have restudied the supposedly extinct curlew *Palnumenius victima* L. Miller (1942), from late Pleistocene (late Rancholabrean) deposits in San Josecito Cave, Nuevo Leon, Mexico.

Palnumenius victima was founded solely on a complete left tarsometatarsus (LACM (CIT) 2944), and was diagnosed as follows (Miller, 1942:45): "Length about four-fifths that of *Numenius americana* [sic]; shaft almost uniform in transverse diameter throughout; outer cotyla almost the same level as the inner; inner trochlea less elevated." Neither this diagnosis nor the description that followed were organized in a manner that permits one to distinguish generic from specific characters.

RESULTS AND DISCUSSION

Miller quotes a communication from A. Wetmore in which the latter expressed the opinion that *Palnumenius* combined characters of *Numenius* with those of godwits, *Limosa*. Nevertheless, Miller clearly considered *Palnumenius* to be closer to *Numenius* and compared it in particular with the Long-billed Curlew, *Numenius americanus*, an extant species that occurs in Mexico in winter. My examination of the holotype of *P. victima* disclosed no characters linking it with *Limosa*, in which, for example, there is no closed medial hypotarsal canal (clearly shown in Miller's illustration of *P. victima*) and in which the inner trochlea is not as medially flared. I found no characters that will permit *Palnumenius victima* to be separated generically from *Numenius*. The genus *Palnumenius* L. Miller 1942 therefore becomes a junior subjective synonym of *Numenius* Brisson 1760. It thus remains to be determined whether *Numenius victima* can in fact be separated from the extant species of *Numenius*.

minutus, and decidedly larger and more slender than the tarsometatarsus in *Numenius phaeopus* or *N. tahitiensis*. It is smaller than in *N. arquata* or *N. madagascariensis*. The tarsometatarsus in a single skeleton of the rare Old World species *N. tenuirostris* (AMNH 547) was slightly smaller than the holotype of *N. victima*, with the most internal ridge of the hypotarsus being shorter than in either *N. victima* or *N. americanus*.

The holotype of *N. victima* is much larger than in the smallest of the curlews, *N. borealis* and *N.*

In stating that *N. victima* was smaller than *N. americanus*, Miller (1942) clearly did not have adequate comparative material. In curlews, as in many shorebirds, males are smaller than females. There was once a rather heated debate (Oberholser, 1918; Grinnell, 1921) about whether *N. americanus* can be divided into a large southern subspecies and smaller northern one. Although there is overlap between the two forms, the name *N. a. parvus* continues to be applied to the northern populations by some authors (Allen, 1980:7).

The tarsometatarsus in the smallest (USNM 499444, male) of seven skeletons of *N. americanus*

that I examined measures 72.9 mm, whereas the holotype of *N. victima* measures 72 mm. Ridgway (1919) records the tarsal length in skins of males of *N. americanus parvus* as ranging from 69.8 to 81.5 mm. In the Smithsonian collections I found skins of two males in which the tarsal length was 71.5 and 72 mm, respectively, when measured along the anterior face from the intercotylar knob to the distal margin of the middle trochlea, as one would measure a skeletal specimen. Thus, the holotype of *N. victima* falls within the lower size range of males of *N. americanus*.

As for the qualitative characters ascribed to *N. victima*, the supposed differences in the relative levels of the cotylae and of the inner trochlea were not apparent to me. The uniform transverse width of the shaft would also seem to occur in *N. americanus* (Fig. 1) and is affected by age in any case, as in juveniles the proximal end is wider than in adults. Perhaps by this, Miller (1942) was attempting to describe the fact that the internal cotyla in *N. victima* projects more abruptly from the shaft than in *N. americanus*, which is the case. Another apparently valid character of *N. victima* mentioned by Miller in his description, but not in the diagnosis, is the larger, more rounded and more distally located distal foramen, with a deeper extensor groove. The significance of these two relatively minor points cannot be evaluated without additional fossil and modern specimens.

The closest relative of *Numenius victima* is undoubtedly *N. americanus*, a species known to breed in central and western North America from southern Canada south to Utah, New Mexico, and Texas, and east to Michigan, Illinois, Iowa, and Kansas, although it is now absent as a breeding bird from the eastern parts of its range. The species is migratory and winters mainly from California to Texas and south to Oaxaca, Mexico, and Guatemala. In the breeding season it inhabits open grasslands, pastures, and shrub steppe. Because San Josecito Cave is presently situated amidst pine and live oak forest at 2,300 m above sea level (Kurtén and Anderson, 1980), the presence of *Numenius* at this site, even if a migrant, would indicate a more open environment in the late Pleistocene, as do certain of the fossil mammals (Kurtén and Anderson, 1980).

It cannot be ascertained whether *Numenius victima* was a migrant or a resident, nor is it possible at this point to say whether it represents a temporal or geographic variant of *N. americanus*, or a distinct, closely related species. Of the two new genera



Fig. 1.—Left tarsometatarsi of *Numenius*: A) holotype of *Palnumenius* (= *Numenius*) *victima*, anterior view; B) same, posterior view; C) small individual of *N. americanus* (USNM 499444, male), posterior view. Natural size.

and species of waterbirds proposed by Miller (1942) from San Josecito (the rail *Epirallus natator*, and *Palnumenius victima*) neither genus is valid but neither species can be dismissed unequivocally. Elsewhere I have shown the genus *Epirallus* to be a synonym of *Rallus*, with *natator* being a member of the *Rallus longirostris/elegans* complex (Olson, 1974) that is larger than any of the modern members of that complex. As with *N. victima*, it is uncertain whether its differences are of a specific or subspecific nature.

Thus, of the more than 42 species of birds that Miller (1944) ultimately reported from San Josecito, the only certainly extinct species other than raptorial birds and scavengers are the turkey *Meleagris crasipes* (see Rea, 1980; Steadman, 1980, for documentation of the validity of this species) and the large roadrunner *Geococcyx conklingi* (the specific validity of which has recently been questioned, however [Harris and Crews, 1983]). This supports the idea that most of the Pleistocene extinctions among North American birds involved large species that were for the most part dependent upon the mammalian megafauna (Lundelius et al., 1983; Steadman and Martin, in press).

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