

*Caribbean Journal of Science*, Vol. 40, No. 1, 155-157, 2004  
 Copyright 2004 College of Arts and Sciences  
 University of Puerto Rico, Mayagüez

## The Enigmatic Snipe *Capella* sp. (Aves: Scolopacidae) in the Fossil Record of Cuba

WILLIAM SUÁREZ *Museo Nacional de Historia Natural, Obispo 61, Plaza de Armas, Ciudad de La Habana, CP. 10100, Cuba.*  
*E-mail: geopal@mnhnc.inf.cu*

**ABSTRACT.**—The enigmatic fossil snipe *Capella* sp., previously known in the Greater Antilles by specimens recovered from the Bahamas and Cayman Islands, is recorded from three Quaternary cave deposits in western and central Cuba. This new material provides information about the paleoecology and ancient distribution of this taxon in the West Indies.

**KEYWORDS.**—Aves, *Capella* sp., Cuba, Quaternary, snipe.

Snipes are represented in the modern avifauna of the West Indies by the Wilson's Snipe *Capella delicata* (Ord), which is a non-breeding resident (Raffaele et. al. 1998), but the fossil record shows that more species were present there in the past. The first supposed evidence of an extinct snipe from the West Indies was published by Wetmore (1920), who described *Gallinago* (= *Capella*) *anthonyi*, based on specimens from two Quaternary cave deposits in Puerto Rico. Olson (1976) re-examined this extinct bird and concluded that it was not a snipe but a woodcock, transferring it to the genus *Scolopax*. Wetmore (1937:435) reported fossils from "Great Exuma" (= Little Exuma) Island, Bahamas, as *Capella delicata* (Ord), but noted that bones were larger than those of specimens available at that time. He suggested that this material may represent an extinct species. Morgan (1977, 1994) recorded a large snipe as *Capella* sp., based on fossils from cave deposits at Cayman Brac. Olson and Hilgartner (1982) noted six specimens of *Capella* sp. from New Providence Island, Bahamas. They summarized the fossil record of this enigmatic snipe, concluding

that it was similar in size in some skeletal elements to the Noble Snipe, *Capella nobilis* Sclater, from South America, whereas other elements were smaller, falling between the latter and the Wilson's Snipe in size. More recently, Olson and Rasmussen (2001) recorded a proximal half of a right humerus from an early Pliocene deposit (Yorktown Formation), Lee Creek Mine, North Carolina, as *Capella* aff. *media* (Latham). Humeri from the Bahamas and Cayman Islands are very similar to this last fossil in size and characters (Olson and Rasmussen 2001: 294).

Based on fossil specimens from Quaternary cave deposits in western and central Cuba, additional evidence of this snipe in the West Indies is document herein. The generic name *Capella* Frenzel is used instead of *Gallinago* Brisson, following Olson (1987:540).

### SYSTEMATICS

#### Class Aves

#### Family Scolopacidae Vigors

The Cuban fossils reported here are referable to *Capella* instead of *Scolopax* (a genus closely related to *Capella* and also represented by fossils in the West Indies), based on characters described by Olson (1976), especially those for the humerus: shaft proportionally slender, distal end not expanded, deeper olecranal fossa, ectepicondylar prominence high on shaft and greatly projected, head acute or pointed, and external tricipital groove well defined (see Olson 1976 for characters in *Scolopax*).

#### *Capella* sp.

(Fig. 1)

*Referred material.*—Cueva El Abrón, Sierra de La Güira, Municipality of Los Palacios, Pinar del Río Province, Cuba: right humerus, collection of the Museo Nacional de Historia Natural de Cuba, MNHNCu 75.4709; collected by Stephen Díaz-Franco and William Suárez on 21 March 2000. Cueva de Humboldt, Caguas, Municipi-



FIG. 1. Wing elements of fossil and living species of *Capella* from Cuba. Left, right fossil humerus (MNHNCu 75.4709) of *Capella* sp. Center, right humerus of the extant Wilson's Snipe *Capella delicata*. Right, right fossil ulna (MNHNCu 75.4712) of *Capella* sp. Note similarities in characters of the fossil humerus as compared with the equivalent element in the skeleton of the Wilson's Snipe. All elements in palmar view. Scale = 1 cm.

pality of Yaguajay, Sancti Spíritus Province, Cuba: right humerus, Oscar Arredondo collection, OA 3138; collected by Oscar Arredondo, April 1974. Cueva del Salón, Cayo Palma, Municipality of Yaguajay, Sancti Spíritus Province, Cuba: left humerus (juvenile), MNHNCu 75.4711; right ulna, MNHNCu 75.4712; collected by Stephen

Díaz-Franco and Libán Fernández on 22 August 1997.

*Description and comparisons.*—The humeri and ulna agree in their general morphology with the equivalent elements in the skeleton of *Capella delicata*, but are larger than in the latter (Table 1). They are more similar in size to fossils of *Capella* sp. from the Bahamas, where the humeri are also slightly smaller than the single humerus reported from Cayman Brac (Olson and Hilgartner 1982; Table 1). The left humerus MNHNCu 75.4711 is slightly smaller and with the surface very porous and incompletely ossified, indicating it represents a juvenile individual. Measurements (mm) of this specimen (not included in Table 1) indicate that, although from an immature individual, it is larger than the mean for *C. delicata* (range, mean, and n, from Olson and Hilgartner 1982): total length 39.7 (35.2–40.3, 37.7, 14), proximal width 9.4 (8.2–9.7, 9.0, 14).

*Remarks.*—Two of the deposits in which *Capella* sp. was found in Cuba, formed as an accumulation of ancient pellets of the extinct barn owl *Tyto noeli* Arredondo, which apparently was an occasional predator on this snipe. The fossil humerus from the deposit at Cueva El Abrón was found at layer VII (1.00 to 1.60 m depth), in association with remains of other birds, including *Tyto noeli* Arredondo, *Falco kurochkini* Suárez and Olson, *Siphonorhis daiquiri* Olson, *Athene cunicularia* (Molina), *Torreornis inexpectata* Barbour and Peters, a new species of *Tyto* (Olson and Suárez in prep.), and other extinct vertebrates such as a new species of phyllostomid bat (Suárez and

TABLE 1. Measurements (mm) on fossils of *Capella* sp. from Cuba, Bahamas and Cayman Brac, in comparison with those of the living Wilson's Snipe *Capella delicata*. Sequence is: range (mean) n.

Character	<i>Capella gallinago delicata</i> *	<i>Capella</i> sp. (Cuba)	<i>Capella</i> sp. (Bahamas)*	<i>Capella</i> sp. (Cayman Brac)*
Humerus				
Length	35.2–40.3 (37.7) 14	40.5–41.4 (40.9) 2	41.2–42.2 (41.7) 3	44.0
Proximal width	8.2–9.7 (9.0) 14	10.1–10.2 (10.1) 2	10.2	11.5
Distal width	6.0–6.8 (6.4) 14	7.1–7.2 (7.1) 2	7.1–7.5 (7.2) 3	7.6
Ulna				
Proximal width	4.7–5.6 (5.0) 14	6.0	6.0	—

\*From Olson and Hilgartner (1982).

Díaz-Franco 2003). Some of these birds indicate the presence of savannas around the cave during the time of deposition (see Suárez 2000). A radiometric date ( $^{14}\text{C}$ ) from a sample of long bones of *Tyto noeli* recovered from this layer indicates a late Pleistocene age (see Suárez and Díaz-Franco 2003, for the datation and a more detailed description of the deposit). The material from Cueva del Salón was directly associated with remains of *Tyto noeli*, *Torreornis inexpectata*, and other aquatic birds, such as a rail (*Rallus* sp.) (W. Suárez pers. obs.).

The presence of *Capella* sp. in fossil deposits in Cuba is not unexpected, as remains of this snipe are known from the Bahamas and Cayman Islands as well. Many of the avian taxa found on these last islands are derived from the Cuban mainland (Brodkorb 1959; Olson and Hilgartner 1982; Steadman and Morgan 1985; Morgan 1994; Suárez and Olson 2003). The referred immature specimen from Cuba opens the possibility that this snipe was a year-round resident in the Greater Antilles, although Olson and Rasmussen (2001) considered this bird as a winter resident in the West Indies during the Pleistocene.

The material reported herein (four specimens) extends the ancient distribution of this form to Cuba, and will help, together with bones from the Bahamas and Cayman Islands, to resolve the taxonomic status of this enigmatic bird.

*Acknowledgements.*—The late Professor Oscar Arredondo kindly provided specimens from his collection for study. I express my gratitude to Steven D. Emslie, University of North Carolina at Wilmington, for comments on an earlier version of the manuscript. William Hilgartner, David Steadman, and an anonymous referee, improved the manuscript with their criticisms. Photographs are by Angel Rojas, Photographic Services of the Museo Nacional de Historia Natural de Cuba; composi-

tion of the figure is by Yadira Alegre, from the same institution.

#### LITERATURE CITED

- Brodkorb, P. 1959. Pleistocene birds from New Providence Island, Bahamas. *Bull. Florida State Mus., Biol. Sci.* 15(4):163-266.
- Morgan, G. S. 1977. Late Pleistocene fossil vertebrates from the Cayman Islands, British West Indies. Master's thesis, University of Florida, Gainesville.
- Morgan, G. S. 1994. Late Quaternary fossil vertebrates from the Cayman Islands. In *The Cayman Islands: Natural History and Biogeography*, ed. M. A. Brunt and J. E. Davies, 465-508. Kluwer Academic Publishers, Netherlands.
- Olson, S. L. 1976. Fossil woodcocks: an extinct species from Puerto Rico and an invalid species from Maltha (Aves: Scolopacidae: *Scolopax*). *Proc. Biol. Soc. Wash.* 89:265-274.
- Olson, S. L. 1987. On the extent and source of instability in avian nomenclature, as exemplified by North American Birds. *Auk* 104(3):538-542.
- Olson, S. L., and W. B. Hilgartner. 1982. Fossil and subfossil birds from the Bahamas. *Smithson. Contrib. Paleobiol.* 48:22-56.
- Olson, S. L., and P. C. Rasmussen. 2001. Miocene and Pliocene birds from the Lee Creek Mine, North Carolina. In *Geology and Paleontology of the Lee Creek Mine, North Carolina, III*, ed. C. E. Ray and D. J. Bohaska, 233-365. *Smithsonian Contributions to Paleobiology* 90.
- Raffaele, H. A., J. Wiley, O. Garrido, A. Keith, and J. Raffaele. 1998. *A guide to the birds of the West Indies*. New Jersey, Princeton: Princeton University Press.
- Steadman, D. W., and G. S. Morgan. 1985. A new species of Bullfinch (Aves: Emberizinae) from a late Quaternary cave deposit on Cayman Brac, West Indies. *Proc. Biol. Soc. Wash.* 98(3):544-553.
- Suárez, W. 2000. Fossil evidence for the occurrence of Cuban Poorwill *Siphonorhis daiquiri* in western Cuba. *Cotinga* 14:66-68.
- Suárez, W., and S. Díaz-Franco. 2003. A new fossil bat (Chiroptera: Phyllostomidae) from a Quaternary cave deposit in Cuba. *Carib. J. Sci.* 39(3):371-377.
- Suárez, W., and S. L. Olson. 2003. Red-Shouldered Hawk and Aplomado Falcon from Quaternary asphalt deposits in Cuba. *J. Raptor. Res.* 37(1):71-75.
- Wetmore, A. 1920. Five new species of birds from cave deposits in Porto Rico. *Proc. Biol. Soc. Wash.* 33:77-82.
- Wetmore, A. 1937. Bird remains from cave deposits on Great Exuma Island in the Bahamas. *Bull. Mus. Comp. Zool.* 80:427-441.