

# FOSSIL REMAINS OF A NEW, DIMINUTIVE BUBALUS (ARTIODACTYLA: BOVIDAE: BOVINI) FROM CEBU ISLAND, PHILIPPINES

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We describe a partial skeleton of a new species of *Bubalus* (*Bubalus*) from soft karst near Balamban, Cebu Island, Philippines. The specimen is likely Pleistocene or Holocene in age and includes left and right humeri, a left metatarsal, 2 posterior thoracic vertebrae, 2 left lower molars, and a pair of ungual phalanges. *Bubalus* sp. nov. differs from all previously described *Bubalus* in both the size and proportions of the skeleton and in possessing a unique combination of discrete character states. Possible autapomorphies for *Bubalus* sp. nov. evident in the metatarsal include a very broad dorsal longitudinal sulcus; a broad, triangular anterior cubonavicular facet; and a sulcus that bisects a small tuberosity on the proximolateral surface. Limb elements of *Bubalus* sp. nov. are less than two-thirds the length of corresponding elements of the Asiatic water buffalo, *B. (Bubalus) bubalis*, and are about 80% the length of those of the tamaraw, *B. (Bubalus) mindorensis*; they are similar in length to limb bones of the lowland anoa, *B. (Anoa) depressicornis*, but are more robust. Mass estimates based on regression equations for modern bovids suggests a mass of 150–165 kg for *Bubalus* sp. nov.; this is approximately 25% smaller than *B. mindorensis* (180–220 kg) and at least 15% larger than *B. depressicornis* (approximately 135 kg). The small size of *Bubalus* sp. nov. relative to other *B. (Bubalus)* is likely attributable to island dwarfing; this is supported by a consistent relationship between body size and island size in *Bubalus* sp. nov., *B. mindorensis*, and *B. bubalis*, and by the relatively larger dentition of *B. sp. nov.* relative to body size. *Bubalus* sp. nov. is the 1st fossil mammal to be reported from Cebu Island and is the only nonproboscidean documented from the Negros–Panay Philippine Faunal Region. In conjunction with the presence of *Bubalus* on Mindoro Island (and potentially Luzon), this specimen suggests that *Bubalus* may once have ranged throughout the Philippines.

Key words: Anoa, body size, Bovini, *Bubalus*, dwarfism, fossil, island biogeography, Philippines, Pleistocene, tamaraw