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A New Species of Extinct Oryzomyine Rodent from the Quaternary of Curaçao, Netherlands Antilles

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ABSTRACT.—An extinct new species of Oryzomyine rodent, known since 1936 from the cave of Grot van Hato on the island of Curaçao, is described from abundant new specimens collected from owl-pellet deposits at three localities on the island.

INTRODUCTION

The island of Curaçao, lying close to the continental shelf of Venezuela, supports a single species of extant native rodent, the Pygmy Mouse *Calomys* (*Baiomys*) *hummelincki* (Husson, 1960; Musser and Carleton, 1993). However, remains of three extinct rodent taxa have been reported from caves and limestone fissures on the island; *Megalomys curazensis* (Hooijer,1959), *Oryzomys* sp. incertae (Wagenaar Hummelinck 1940), and the extirpated capybara *Hydrochoeris hydrochaeris* (Hooijer, 1959).

The *Oryzomys* sp. record was based on two mandibular rami preserving only their third molars, collected from Grot van Hato in 1936. The recent recovery of additional *Oryzomys* sp. material from Curaçao provides an opportunity to describe the taxon.

MATERIALS AND DESCRIPTION

Oryzomys curasoae new species
Figures 1-3

Holotype: A skull with complete palate preserving the upper molars (M^{1-3}). Deposited in the collections of the Section of Mammals and Birds, Natural History Museum of Los Angeles County (LACM) 96087.

Type Locality and Age: Fissure, 30 m below edge of north face of Tafelberg Santa Barbara, (UTM coordinates: ^{19}518570, ^{13}34570). The age of the specimens has not been determined radiometrically but the Black Rat (*Rattus rattus*) occurs in the uppermost portion of the Tafelberg fissure deposit together with *O. curasoae*, therefore indicating that extinction occurred after first European contact in A.D. 1499.

Synonyms: None.

Referred Specimens: Syntype, hemimandible with M_1-M_3 (LACM 96091). Topotype, partial skull (LACM 90688). Hemimandible, LACM 96089, Kueba di Noordkant, UTM ^{19}509870, ^{13}45960. Hemimandible, LACM 96090, owl pellet deposit, rock shelter, Ser'i Kura, Koraalspecht, Curaçao, UTM ^{19}511670, ^{13}37060. Hemimandibles, Zoological Museum of Amsterdam, ZMA 25.560 and 25.561, Grot van Hato, UTM ^{19}505730, ^{13}46700, (Hooijer, 1959), ZMA 23.448, five hemimandibles, Kueba di Hermanus, UTM ^{19}495896, ^{13}48720. Details of the cave sites appear in Wagenaar Hummelinck (1997).

Etymology: The specific epiphet refers to the type locality on the island of Curaçao, Netherlands Antilles. Suggested vernacular name: Curaçao rice rat.

Distribution: Known only from Curaçao.

Diagnosis of the New Species: The known elements of *O. curasoae* agree with the features *Oryzomys*, subgenus *Oecomys*, as defined by Hershkovitz (1960). This subgenus (considered a full genus by Carleton and Musser, 1984) is a complex assemblage

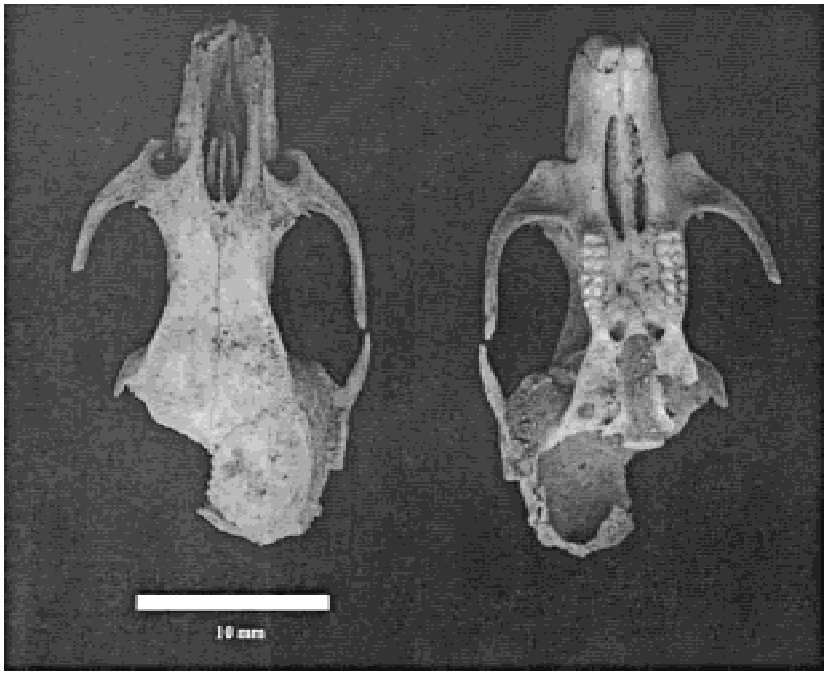

FIG. 1.

consolidated by Hershkovitz into two species, *O. bicolor* and *O. concolor* [including *O. trinitatus*; (Eisenberg 1989)], that overlap ranges along the northern coast of Venezuela. Skull; Rostrum distinctly more robust, and lacking tapered profile of *Oryzomys* (Fig. 1). Incisive foramina large, exceeding length of bony palate. Skull broad; zygomatic breadth equal to length of skull forward of palatine notch. Overall size large, amongst the most robust of *Oryzomys*.

Lower dentition: $M_{1\text{-}3}$ toothrow length 5.07 mm. Pro-cingulum of M_1 subovate, not bilobate (Fig. 2). Apex of minor fold (mf) of $M_{1\text{-}2}$ extending to, but not beyond, midline of tooth. First minor fold (nf1) very well developed in $M_{1\text{-}3}$, the fold tight (angle of apex acute). First secondary fold (sf1) of M2-3 absent. Second secondary fold (sf2) moderately well developed in $M_{1\text{-}3}$ (obsolete or greatly reduced in extant members of the subgenus *Oecomys*).

Upper dentition: $M^{1\text{-}3}$ toothrow length 4.70 mm. Pro-cingulum of M^1 subovate, not bilobate (Fig. 3). Second secondary fold (sf2) present in $M^{2\text{-}3}$, especially well developed in M^2, Sf2 not apparent in holotype.

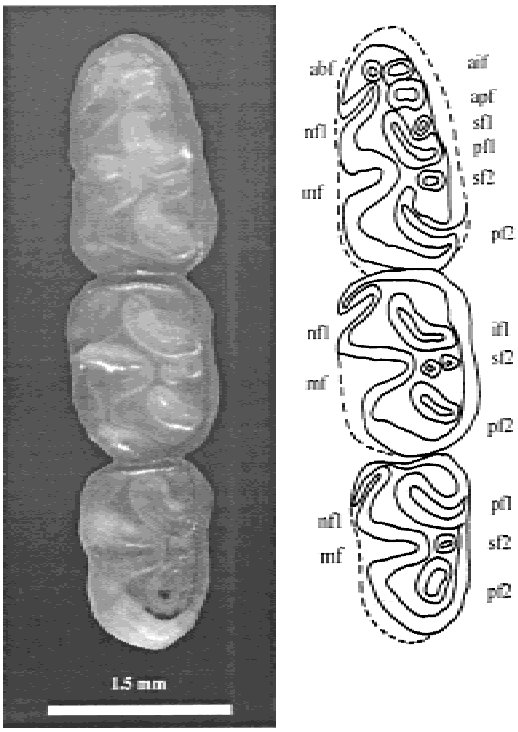

FIG. 2.

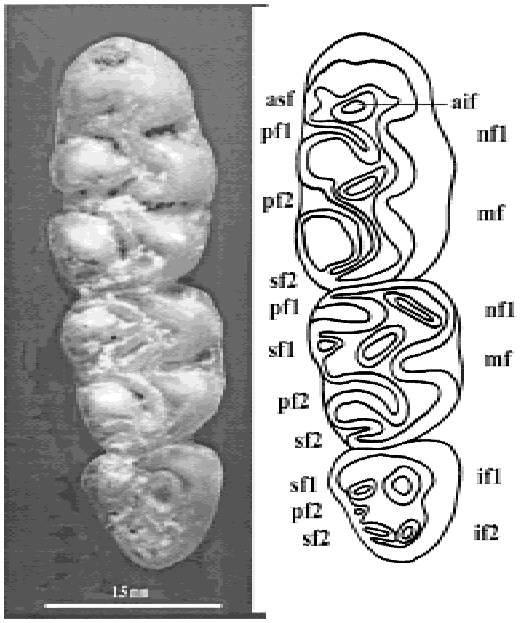

FIG. 3.

DISCUSSION

No attempt is made here to address the phylogenetic relationships of *O. curasoae* within the *Oryzomys/Oecomys* complex because the relationships of the extant mainland forms is in a state of flux. The isolation of Curaçao from the mainland (currently 70 km) dates from the Tertiary. *Oryzomys curasoae* has not been recovered from multiple excavations into Pleistocene cave deposits, but occurs in superficial contexts in these same caves. We interpret this to mean that the species was probably a late Wisconsinan arrival, exploiting the lowered sea-level and expanded Venezuelan shelf. We cannot exclude the possibility that *O. curasoae* arrived as a commensal of aboriginal humans, but the fact that another endemic Oryzomyine — *Megalomys curazensis* — was present on Curaçao in pre-Wisconsinan time (McFarlane and Lundberg, in prep.) demonstrates that these rodents were fully capable of 'sweepstakes' dispersal to the island. *Megalomys* and *Oryzomys* have not been found together in any time-constrained deposit in Curaçao. *Megalomys* may have become extinct before the arrival of *O. curasoae* or it could have been replaced by *O. curasoae* in a competitively driven 'taxon cycle'. Hooijer's (1959) contention that multiple species of *Oryzomys* occur on Curaçao has not been supported by our studies; we believe that all Holocene *Oryzomys* material is referable to *O. curasoae*, noting that the variation in tooth wear can accommodate the observed variation.

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