

Oryzomys nelsoni. By Sergio Ticul Álvarez-Castañeda and Lia Méndez

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Oryzomys nelsoni Nelson, 1899

Nelson's Rice Rat

Oryzomys nelsoni Nelson, 1899:15. Type locality "María Madre Island, Nayarit, México."

CONTEXT AND CONTENT. Order Rodentia, suborder Sciuromnathi, family Muridae, subfamily Sigmodontinae, genus *Oryzomys* (Musser and Carleton 1993). *Oryzomys nelsoni* is monotypic (Musser and Carleton 1993).

DIAGNOSIS. In comparison with *Oryzomys couesi* males found on the Mexican mainland, skulls of females of *O. nelsoni* are larger and heavier. Rostrum of *O. nelsoni* is larger, swollen, and decurved; interparietal is broader antero-posteriorly, and molar teeth are broader. Zygomata of *O. nelsoni* are heavier but less broad than *O. couesi*, with sides nearly parallel and supraorbital ridges less divergent posteriorly.

GENERAL CHARACTERS. *Oryzomys nelsoni* is a large rice rat, with tail much longer than head and body (Fig. 1). Upper body is rich, ochraceous-buff color, most intense on rump and paling to warm buff on head, shoulders, and lower parts of flanks. Head and back are slightly darkened by blackish hairs; underparts are white with plumbeous underfur showing through in places. Outer and inner surfaces of ears are thinly covered with grayish hairs. Tail is dark except on first one-third or one-half of underside, which is pale yellow. Hind feet are scantily haired with whitish hairs. Skull is proportionately large and massive; upper outline rises high over anterior roots of zygomata (Fig. 2). Rostrum is heavy and strongly decurved; interparietal is broad antero-posteriorly (Goldman 1918; Merriam 1898; Wilson 1991). Palatine foramen of *O. nelsoni* is relatively short (Goldman 1918; Merriam 1898).

External measurements (in mm) of the type and 2 topotypes (Goldman 1918) are: total length, 324, 344, 320; length of tail, 190, 191, 185; length of hind foot, 38, 39, 37. Average, with parenthetical range, of skull measurements (in mm) for type and 2 topotypes are as follows: greatest length of skull, 35.8 (34.5–37.8); zygomatic breadth, 18.7 (18.2–19); interorbital breadth, 5.4 (5.2–5.6); width of braincase, 12.9 (12.8–13.1); length of nasal, 14.5 (14.2–14.8); length of anterior palatine foramen, 6.3 (6.1–6.7); palatal bridge, 6.9 (6.6–7.3); length of upper molar series, 5.3 (5.1–5.4). Dental formula is i 1/1, c 0/0, p 0/0, m 3/3, total 16.

DISTRIBUTION. *Oryzomys nelsoni* occurs only on María Madre Island (Fig. 3), Nayarit, México (Álvarez-Castañeda and Cortés-Calva 1999; Wilson 1991). No fossils are known.

ECOLOGY. *O. nelsoni* occurred in a damp area near springs and close to the summit of María Madre, ca. 550 m (Nelson 1899). This habitat has abundant herbaceous vegetation in the undergrowth (Nelson 1899).

The extinction of the Nelson's rice rat may have been caused by *Rattus rattus* (Wilson 1991). Nelson's rice rat may feed on seeds, fruits, weeds, and occasionally small fish and invertebrates (López-Forment et al. 1996).

REMARKS. After extensive trapping produced only a few specimens, *O. nelsoni* is believed to be rare (Nelson 1899). More recent trapping in the type locality known as the "Sacatal" (because of the unusually lush growth of grass), revealed only *Rattus rattus* (Wilson 1991). Although Hershkovitz (1971) listed *O. nelsoni* as a subspecies of *O. couesi*, Goldman (1918) and Hall (1981) maintain that it is a distinct species in view of its unique differentiation from mainland *O. couesi*. *O. nelsoni* is known from only by 4 specimens of the type series and is presumed extinct (Wilson 1991). It is listed



FIG. 1. *Oryzomys nelsoni* drawn from specimen 89202 of the United States Museum of Natural History. Drawing by Oscar Armendariz.



FIG. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of *Oryzomys nelsoni* (adult from Mexico, United States Museum of Natural History #89202). Greatest length of cranium is 34.9 mm. Photograph by Sergio Ticul Álvarez-Castañeda.

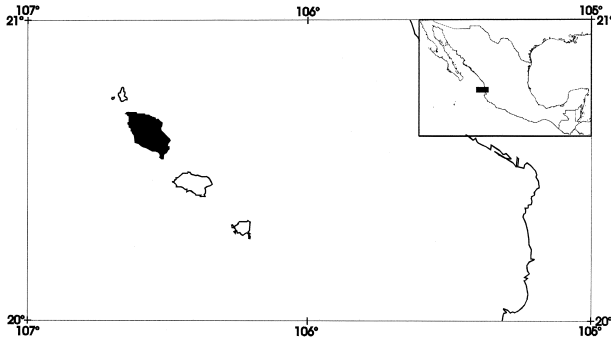


FIG. 3. Distribution of *Oryzomys nelsoni* in María Madre Island, Nayarit, México, from Álvarez-Castañeda and Cortés-Calva (1999).

by the Mexican government (Norma Oficial Mexicana 2002) as threatened.

Oryzomys is derived from the Greek words *oryza* for rice and *mys* for mouse, i.e., mice of the rice fields (Álvarez-Castañeda and Álvarez Solórzano 1997). The designation *nelsoni* is in honor of E. W. Nelson, who first described the species (Merriam 1898).

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