

Megasorex gigas. By David M. Armstrong and J. Knox Jones, Jr.

Published 16 June 1972 by The American Society of Mammalogists

Megasorex Hibbard, 1950

Megasorex Hibbard, 1950:127. Type species, *Megasorex gigas* (Merriam).

CONTEXT AND CONTENT. Order Insectivora, Family Soricidae, Subfamily Soricinae, Tribe Neomyini. The genus *Megasorex* includes a single species, *Megasorex gigas*.

Megasorex gigas (Merriam, 1897)

Notiosorex gigas Merriam, 1897:227. Type locality Milpillas, near San Sebastián, Jalisco.

Megasorex gigas, Hibbard, 1950:127.

CONTENT. *Megasorex gigas* is monotypic.

DIAGNOSIS. The following diagnosis applies to both genus and species: size large; tail relatively short, less than one-third length of head and body, indistinctly bicolored; pinnae conspicuous; dorsal color dark brown to grayish brown, sparsely admixed with silver-gray hairs; venter slightly paler, the hairs shorter and sparser. Skull large, robust, the braincase rising slightly above the plane of the rostrum (Figure 1); dental formula as in *Notiosorex*, i 3/1, c 1/1, p 1/1, m 3/3, total 28; dentition unpigmented; unicuspid three, subequal;

posterior emargination of P4 slight, junction of labial blade and posterior cingulum angular; molars quadrate, slightly excavated posteriorly; mental foramen below middle of ml; mesopterygoid fossa and posterior border of palate broadly U-shaped. For more detailed descriptions, see Hibbard (1950:127-129) and Repenning (1967:56).

GENERAL CHARACTERS. Mean and extreme measurements in millimeters of five females and measurements of two males, all from Guerrero (after Davis, 1957), are: total length, 130.6 (130-133), 125, 130; length of tail, 41.0 (40-45), 47, 45; length of hind foot, 15.9 (15.7-16.0), 16, 16; length of ear from notch, 9.8 (8-11), 10, 10; weight in grams, 10.94 (9.5-11.7), 10.5, 12.0; greatest length of skull, 23.3 (22.8-23.8), 23.4, 23.2; cranial breadth, 10.74 (10.3-11.3), 10.4, 10.8; maxillary breadth, 7.18 (6.8-7.4), 6.8, 7.0; length of palate from tip of incisor, 11.30 (10.8-11.5), 11.1, 11.1; length of upper tooththrow from tip of incisor, 10.46 (10.2-10.8), 10.5, 10.3; least interorbital constriction, 5.46 (5.2-5.8), 5.3, 5.7. For additional measurements of individual specimens, see Goodwin (1969:37), Hibbard (1950:128), Jones (1966:250), and Merriam (1897:228). Repenning (1967:56) illustrated details of the mandible and the dentition.

DISTRIBUTION. *Megasorex gigas* occurs in southwestern México. Localities from which specimens have been obtained are plotted in Figure 2, and listed beyond in approximate order from north to south; localities omitted from the figure to preclude undue crowding of symbols are italicized. NAYARIT: 7 $\frac{10}{10}$ mi. ESE Amatlán de Cañas, 5000 ft. (Jones, 1966:249). JALISCO: 4 mi. SW Puerto Vallarta (KU 111388); Milpillas, near San Sebastián, 3850 ft. (Merriam, 1897:227). COLIMA: no precise locality (Repenning, 1967:56). MICHOACAN: Los Reyes, 4800 ft. (Hibbard, 1950:128); 7 $\frac{1}{2}$ mi. E Dos Aguas, 5600 ft. (Winkelman, 1962:108); 11 mi. E Dos Aguas, 4500 ft. (Winkelman, 1962:108). GUERRERO: Acahuizotla (Davis, 1957:174); 14 mi. S Chilpancingo, 3500 ft. (Orr, 1963:424); 5 km. N Agua del Obispo, 3250 ft. (Jones, 1966:249). OAXACA: San Vicente, Putla (Goodwin, 1969:42).

The known altitudinal range is from near sea-level in Jalisco to about 1700 meters in Michoacán.

FORM AND FUNCTION. A female captured in Guerrero in mid-June was completely clothed in fresh, short, dark grayish brown pelage. A male taken at about the same time was molting. New pelage was apparent on the venter, flanks, and anterior part of the head, and in a mid-dorsal lobe extending posteriorly nearly to the rump (Jones, 1966:250). Worn pelage is relatively long (about 5.5 mm.), and generally pale in color.

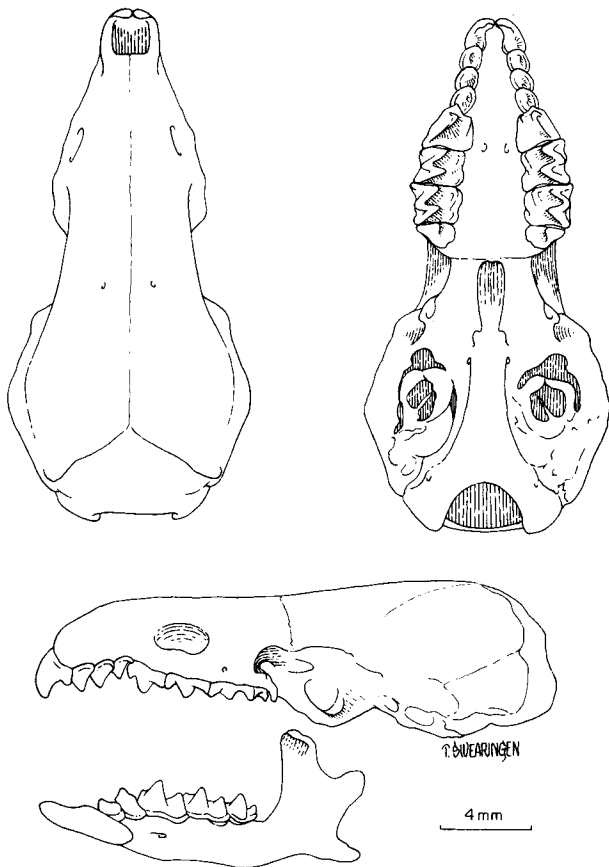


FIGURE 1. Dorsal, ventral, and lateral views of skull, and lateral view of lower jaw of *Megasorex gigas*, KU 99538, female, from 5 km. N Agua del Obispo, Guerrero.

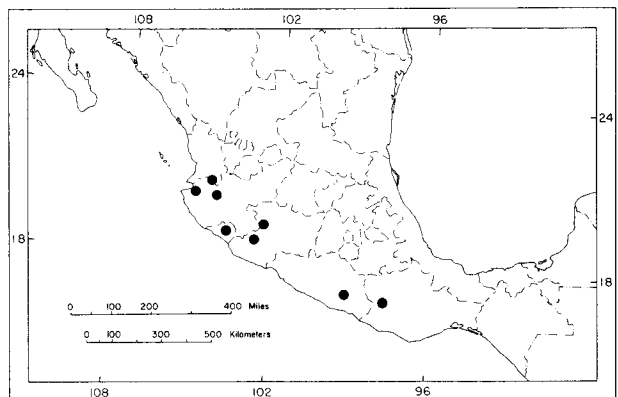


FIGURE 2. Records of occurrence in western México of *Megasorex gigas* (see text for list of localities).

Davis (1957:175) noted the presence of small, white, dorsal spots on two of nine specimens examined from Guerrero. A sparse sprinkling of white or silver-gray hairs is apparent in two of the four specimens available to us (KU 98879, a female from Nayarit, and KU 111388, a male from Jalisco).

The elliptical flank glands are prominent, but relatively less so than in *Notiosorex*. In a male from Jalisco (KU 111388), captured on 26 March, the sparsely-haired glandular areas measured about 7×4 mm. In females (KU 99538, 98879), captured on 14 June and 17 September, respectively, the glands are less than one-half that size.

The only pertinent reproductive data available is that a female (KU 99538) was lactating when captured on 14 June 1964 near Agua del Obispo, Guerrero.

ECOLOGY. *Megasorex gigas*, as a number of other kinds of shrews, has been considered rare. Only about 20 specimens have been reported. However, more than half of these were captured along the highway between Chilpancingo and Acapulco, Guerrero. Perhaps when the ecological requirements of the species are better understood, it will be found to be commoner than currently supposed.

According to Merriam (1897), the holotype and two other individuals were captured near a stream in damp situations beneath the cover of logs and rocks, in weedy vegetation away from heavy forest. Davis (1957) reported specimens from along a stream in tropical deciduous forest at an elevation of 2800 feet. Jones (1966) reported specimens from the deciduous forest of a wet canyon in Guerrero, in an area otherwise semi-arid and characterized by scrubby vegetation. A specimen from Nayarit was taken in a moist situation among lava rocks (Jones, 1966). An individual from near Puerto Vallarta, Jalisco, was captured beneath a boulder along a creek running through dense forest.

Individuals have been captured in snap-traps baited with rolled oats, tuna, and walnut meat (Jones, 1966), and in sheet-metal livetraps baited with meat (Davis, 1957).

REMARKS. *Megasorex* has been regarded as a synonym of *Notiosorex* by some authors. We follow Repenning (1967) and other recent sources in according *Megasorex* generic rank.

ETYMOLOGY. The generic name *Megasorex* is formed from the Greek *mega*, meaning "large" or "great," and *sorex*, the classical Latin name for shrew. The specific name *gigas* is derived from a Greek word meaning "giant."

LITERATURE CITED

- Davis, W. B. 1957. Notes on the Mexican shrew *Megasorex gigas* (Merriam). *Southwestern Nat.* 2:174-175.
- Goodwin, G. G. 1969. Mammals from the state of Oaxaca, Mexico, in the American Museum of Natural History. *Bull. Amer. Mus. Nat. Hist.* 141:1-270.
- Hibbard, C. W. 1950. Mammals of the Rexroad formation from Fox Canyon, Meade County, Kansas. *Contrib. Mus. Paleo., Univ. Michigan* 8:113-192.
- Jones, J. K., Jr. 1966. Recent records of the shrew, *Megasorex gigas* (Merriam), from western Mexico. *Amer. Midland Nat.* 75:249-250.
- Merriam, C. H. 1897. Descriptions of five new shrews from Mexico, Guatemala, and Colombia. *Proc. Biol. Soc. Washington* 11:227-230.
- Orr, R. T. 1963. An extension of the range of Merriam's desert shrew. *Jour. Mammal.* 44:424.
- Repenning, C. A. 1967. Subfamilies and genera of the Soricidae. *Geol. Surv. Prof. Paper* 565:iv + 1-74.
- Winkelman, J. R. 1962. Mammal records from Guerrero and Michoacan, Mexico. *Jour. Mammal.* 43:108-109.

D. M. ARMSTRONG, DEPARTMENT OF INTEGRATED STUDIES, UNIVERSITY OF COLORADO, BOULDER, 80302; J. K. JONES, JR., THE MUSEUM AND DEPARTMENT OF BIOLOGY, TEXAS TECH UNIVERSITY, LUBBOCK, 79409.