

*Vernaya fulva*. By Darrin P. Lunde

Published 2 November 2007 by the American Society of Mammalogists

***Vernaya* Anthony, 1941**

*Chiropodomys*: G. M. Allen, 1927:11. Not *Chiropodomys* Peters, 1868.

*Vandeleuria*: G. M. Allen, 1940:1048. Part, not Gray, 1842.

*Vernaya* Anthony, 1941:110. Type species *Chiropodomys fulvus* G. M. Allen, 1927, by original designation.

*Octopodomys* Sody, 1941:261. Type species *Chiropodomys fulvus* G. M. Allen, 1927, by original designation.

**CONTEXT AND CONTENT.** Order Rodentia, suborder Myomorpha, superfamily Muroidea, family Muridae, subfamily Murinae, *Micromys* division, genus *Vernaya* (Musser 1979; Musser and Carleton 2005). The type species for the genus was originally described as a member of the genus *Chiropodomys* Peters by Allen (1927). Subsequently *fulvus* was assigned to the genus *Vandeleuria* Gray and listed as a synonym of *Vandeleuria dumeticola* Hodgson by Allen (1940). Anthony (1941) considered *fulvus* morphologically distinct from both *Chiropodomys* and *Vandeleuria* and placed it in its own genus (*Vernaya*), changing the species name spelling from *fulvus* to *fulva* to agree with the new generic name. In December of 1941, the same month that Anthony (1941) proposed *Vernaya*, and working half the world away in Java, Sody (1941) proposed *Octopodomys* for *Chiropodomys fulvus*, apparently unaware that Anthony (1941) had already proposed *Vernaya* for the same species. Ellerman (1949) noted the problem and later *Octopodomys* was formally listed as a synonym of *Vernaya* (Ellerman 1961). *Vernaya* is known from a single extant species.

***Vernaya fulva* (G. M. Allen, 1927)**

Vernay's Climbing Mouse

*Chiropodomys fulvus* G. M. Allen, 1927:11. Type locality "Yinpankai, Mekong River, western Yunnan, China, 9000 feet altitude."

*Vernaya foramena* Wang, Hu, and Chen, 1980:393. Type locality "Wang-lang, Pingwu District, Sichuan province, 2490 m. in alt."

**CONTEXT AND CONTENT.** Context as for genus. *Vernaya fulva* is monotypic.

**DIAGNOSIS.** *Vernaya fulva* (Fig. 1) is most easily confused with *Vandeleuria oleracea* but is distinguished in having pointed claws on all digits except the 1st digit of the hand. In *Vandeleuria* both the 1st and 5th digits of the hand have a flattened nail (Allen 1940).

**GENERAL CHARACTERS.** *Vernaya fulva* is a small mouse (length of head and body 58–75 mm) with an exceptionally long tail (length of tail 120–133 mm). Pelage is soft and fluffy, ca. 8 mm along middle of back, 4 mm along middle of venter. Dorsal pelage is a rich brownish orange along midline of back and gradually blending into a rich fulvus orange on sides of rostrum, cheeks, neck, shoulders, dorsal surfaces of arms, and flanks. Fulvus color along sides of animal is most intense on shoulders and upper dorsal

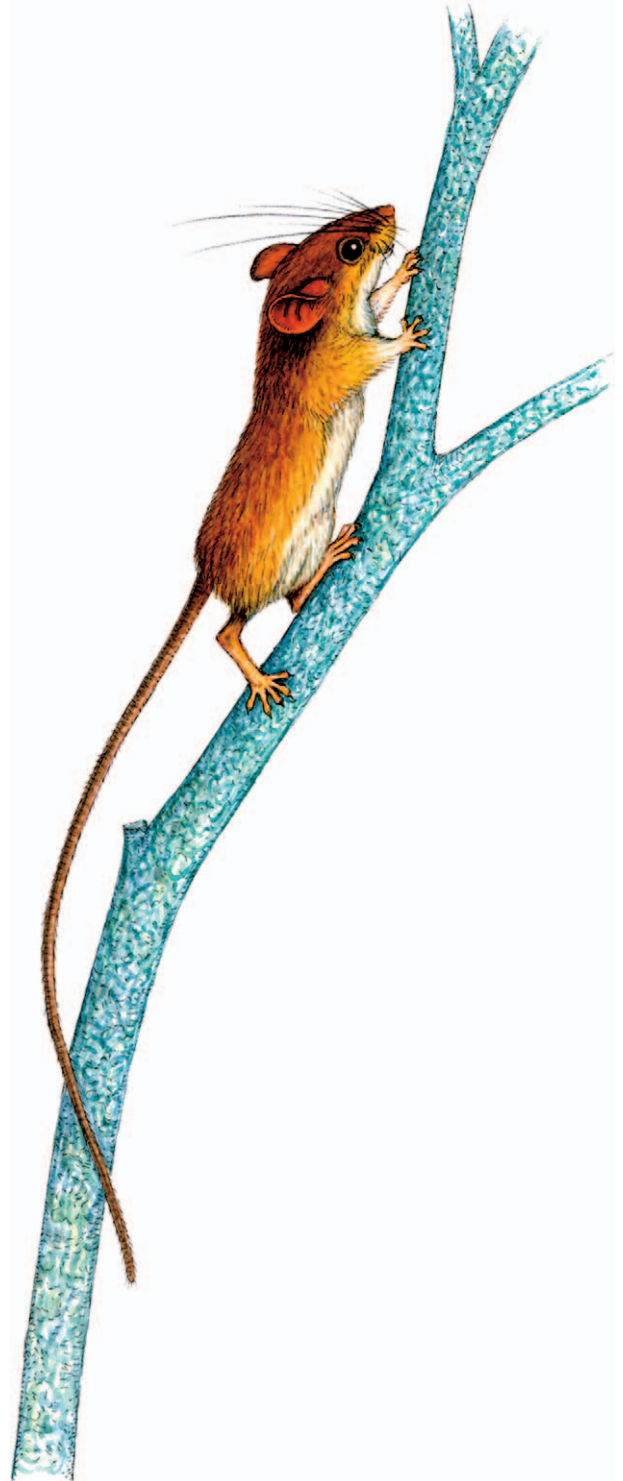


FIG. 1. Adult female *Vernaya fulva* rendered in watercolors using the stuffed skin of the holotype (American Museum of Natural History [AMNH] 43989) for reference. Used with permission of the artist, P. Wynne.

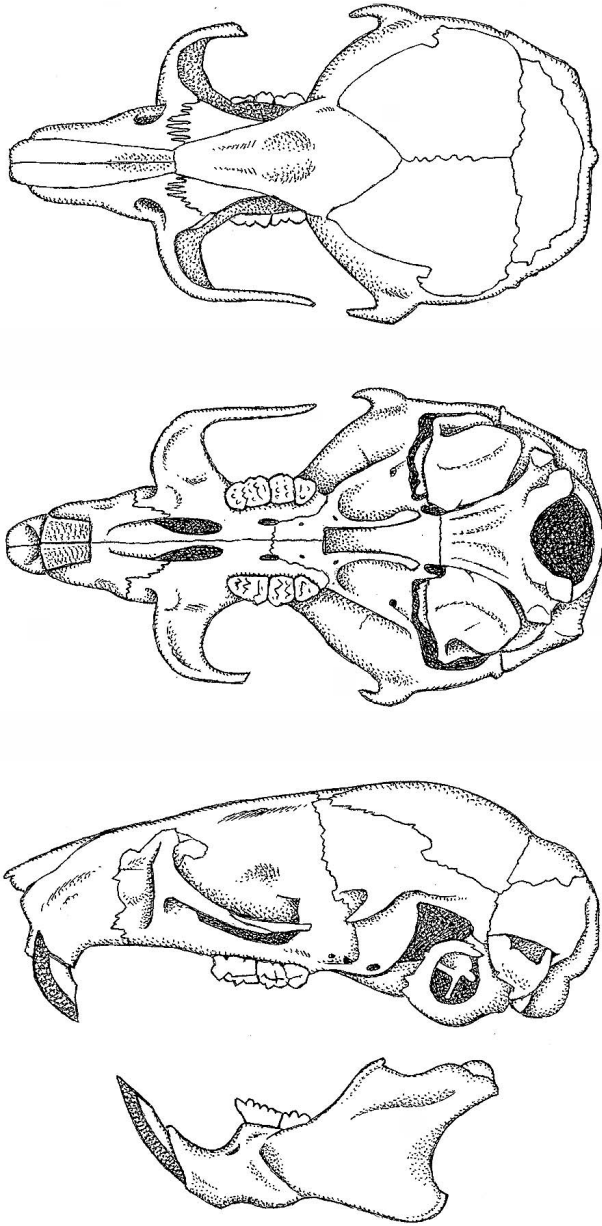


FIG. 2. Dorsal, ventral, and lateral views of skull and lateral view of mandible of an adult female *Vernaya fulva* from China: Yunnan; Mekong River, Yinpan-kai, 9,000 feet (American Museum of Natural History [AMNH] 43989 holotype). Greatest length of skull is 21.9 mm. Used with permission of the artist, P. Wynne.

surfaces of arms. Individual hairs of ventral pelage gray basally with pale buffy-white tips but the gray bases do not normally show through so the ventral pelage appears a pale buffy white in overall effect. Ears are brown, protruding above fur of dorsal pelage but not conspicuously enlarged. Mystacial vibrissae are thin, dark brown, and ca. 35 mm long. A fine line of dark brown superciliary vibrissae ca. 3–4 mm long vaguely defines the upper margin of the eye but there is nothing that can be described as a distinct eye-ring. A few short white submental and dark brown genal vibrissae are concealed within the pelage and are barely perceptible without magnification. Dorsal surfaces of hands are predominantly covered with orange-brown hairs but the distal portions of the digits are covered in more pale whitish brown hairs. Dorsal surfaces of feet are covered in rich orange-brown hairs. Hands have a flattened nail on 1st digit, all remaining digits of the hand bear sharp claws. Feet have sharp claws on all 5 digits. Tail is dark brown above, slightly paler below but not distinctly bicolored. Fine brown hairs covering the tail are visible only under very close examination. Hairs toward

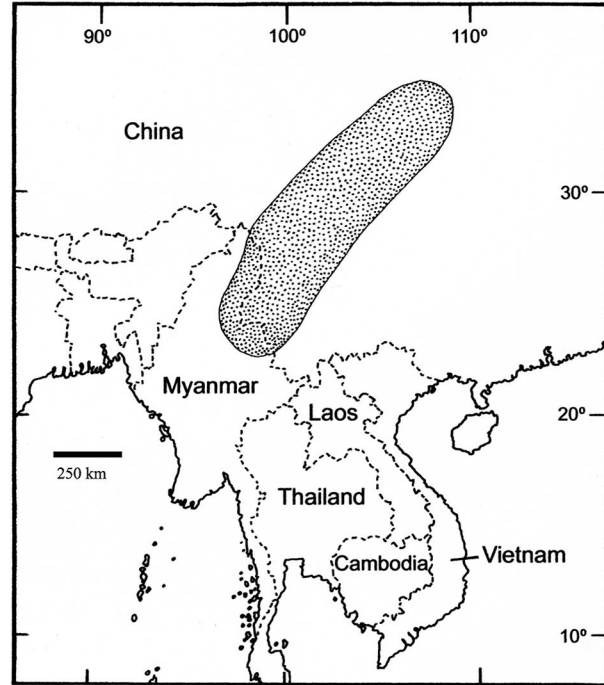


FIG. 3. Geographic distribution of *Vernaya fulva* based on Anthony (1941) and Zhang et al. (1997). The precise distribution is dependent on the availability of suitable habitat and is likely to be much more patchy. Used with permission of the artist, P. Wynne.

the tip of the tail are slightly longer than hairs toward the base but do not form a tuft.

Skull (Fig. 2) has a very short rostrum and somewhat inflated braincase. There is a conspicuous longitudinal depression beginning along the posterior half of the nasals and extending back through the interorbital region and onto the frontal bones. There are usually 2 unossified spots in the interorbital region; the one on the holotype's left side is about 1 mm long whereas the one on the right side is about half as long. These are covered by a thin membrane of periosteum and are difficult to discern without using a low-powered microscope. Incisors are ophistodont, pigmented yellow-orange, and ungrooved along their anterior face. Long incisive foramina extend posteriorly to a point just posterior to the anterior face of the 1st molars. Cusp pattern of upper molars is similar to that of *Chiropodomys* (Musser 1979:figure 4) but with cusp 7 more fully developed; cusps 1 and 4 more mesial, and cusp 9 closer to cusp 6. Lower 3rd molar is much shorter and simpler (Misonne 1969).

**DISTRIBUTION.** *Vernaya fulva* is known from a very limited number of specimens collected in northern Myanmar and China (Fig. 3). Locality records for northern Myanmar are from specimens reported by Anthony (1941). Chinese locality records are based on the holotype of Allen (1927), specimens reported by Li and Wang, (1995), and additional records mapped by Zhang et al. (1997). Specimens have been collected at elevations between 2,100 and 2,700 m.

**FOSSIL RECORD.** Remains of *V. fulva* have been found in late Pleistocene cave sediments in the Sichuan–Guizhou region of southern China along with 4 extinct congeneric species, *V. prefulva*, *V. pristina*, *V. gigantea*, and *V. wushanica* (Zheng 1993).

**FORM AND FUNCTION.** Dental formula: i 1/1, c 0/0, p 0/0, m 3/3, total 16. Females with 8 mammae (Allen 1927).

**ECOLOGY.** Little known but apparently adapted to climbing through thick, tangled vegetation. According to Anthony (1941), of the 2 specimens from northern Myanmar one was “trapped on an open hillside, covered by thickets of low shrubbery and heavy growth of bracken. The trap line was set along a line of low cliffs and rocky outcrops,” and the other was collected from a trapline “set just below the crest of a ridge on slopes from which the original

forest had long been removed and its place taken by bracken and low shrubbery, tangled and difficult to penetrate in places.”

**CONSERVATION STATUS.** IUCN vulnerable (Baillie 1996).

**REMARKS.** The genus was named for Mr. Arthur S. Vernay, patron of the American Museum of Natural History and principal sponsor of many museum expeditions including the Vernay–Cutting Burma expedition, which resulted in the capture of the holotype of *V. fulva*. The specific epithet is from the Latin *fulvus* meaning “reddish yellow” (Jaeger 1959), and refers to the animal’s reddish coloration.

I acknowledge Patricia Wynne for producing all 3 figures for this report.

#### LITERATURE CITED

- ALLEN, G. M. 1927. Murid rodents from the Asiatic expeditions. American Museum Novitates 270:1–12.
- ALLEN, G. M. 1940. The mammals of China and Mongolia. American Museum of Natural History, New York, 11, part 2:621–1350.
- ANTHONY, H. E. 1941. Mammals collected by the Vernay–Cutting Burma expedition. Field Museum of Natural History, Zoology Series 27:37–123.
- BAILLIE, J. 1996. *Vernaya fulva*. In: IUCN red list of threatened species. www.iucnredlist.org (28 September 2007).
- ELLERMAN, J. R. 1949. The families and genera of living rodents. Volume 3. British Museum (Natural History), London, United Kingdom.
- ELLERMAN, J. R. 1961. Rodentia. Volume 3. The fauna of India including Pakistan, Burma and Ceylon. Mammalia. Zoological Survey of India, Calcutta, India.
- GRAY, J. E. 1842. Descriptions of some new genera and fifty unrecorded species of Mammalia. Annals and Magazine of Natural History 10:255–267.
- JAEGER, E. C. 1959. A source-book of biological names and terms. 3rd ed. Revised 2nd printing. Charles C. Thomas, Publisher, Springfield, Illinois.
- LI, X., AND T. WANG. 1995. [Discussion of taxonomy of *Vernaya*’s climbing mouse.] Zoological Research 16:325–328 (in Chinese with English abstract).
- MISONNE, X. 1969. African and Indo-Australian Muridae: evolutionary trends. Annales Musée Royal de l’Afrique Centrale, Tervuren, Belgique, Serie IN-8, Sciences Zoologiques 172:1–219.
- MUSSER, G. G. 1979. Results of the Archbold Expeditions. No. 102. The species of *Chiropodomys*, arboreal mice of Indochina and the Malay Archipelago. Bulletin of the American Museum of Natural History 162:377–445.
- MUSSER, G. G., AND M. D. CARLETON. 2005. Superfamily Muridae. Pp. 894–1531 in Mammal species of the world: a taxonomic and geographic reference (D. E. Wilson and D. M. Reeder, eds.). 3rd ed. Johns Hopkins University Press, Baltimore, Maryland.
- PETERS, W. 1868. Hr. W. Peters machte eine Mittheilung über eine neue Nagergattung, *Chiropodomys penicillatus*, so wie über einige neue oder weniger bekannte Amphibien und Fische. Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin 16:448–461.
- SODY, H. J. V. 1941. On a collection of rats from the Indo-Malayan and Indo-Australian regions (with descriptions of 43 new genera, species, and subspecies). Treubia 18:255–325.
- WANG, Y., J. HU, AND K. CHEN. 1980. A new species of Murinae—*Vernaya foramena* sp. nov. Acta Zoologica Sinica 26: 393–397 (in Chinese with English summary).
- ZHANG, Y., et al. 1997. Distribution of mammalian species in China. China Forestry Publishing House, Beijing, China.
- ZHENG, S. 1993. [Quaternary rodents of Sichuan–Guizhou area, China.] Science Press, Beijing, China (in Chinese with English summary).

Associate editors of this account were KRISTOFER HELGEN, PAMELA OWEN, and ERIC RICKART. Editors were VIRGINIA HAYSEN and MEREDITH HAMILTON.

DARRIN LUNDE, DEPARTMENT OF MAMMALOGY, AMERICAN MUSEUM OF NATURAL HISTORY, CENTRAL PARK WEST AT 79TH STREET, NEW YORK, NEW YORK 10024.