MAMMALIAN SPECIES 827:1–8

Conepatus leuconotus (Carnivora: Mephitidae)

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Abstract: *Conepatus leuconotus* (Lichtenstein, 1832) is a mephitid commonly called the white-backed or American hog-nosed skunk. It is a sexually dimorphic species with a single white stripe along the back, and is 1 of 4 species in the genus *Conepatus*. It has been reported as far north as Colorado and throughout the southwestern United States including southern Arizona, New Mexico, and Texas. The species occurs throughout Mexico and as far south as northern Costa Rica. It has been reported in a variety of habitats from canyons, stream sides, rocky terrain, various grasslands, tropical areas, mountains, and coastal plains. Several populations have been extirpated and others may be declining throughout the range. DOI: 10.1644/827.1.

Key words: American hog-nosed skunk, badger skunk, carnivore, *Oryctogale*, rooter skunk, white-backed hog-nosed skunk

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Conepatus Gray, 1837

Viverra: Mutis, 1769:67. Not *Viverra* Linnaeus, 1758.
Viverra: Molina, 1782:288. Not *Viverra* Linnaeus, 1758.
Viverra: Boddaert, 1784:84. Not *Viverra* Linnaeus, 1758.
Viverra: Gmelin, 1788:88. Part, not *Viverra* Linnaeus, 1758.
Mustela: Daudin in Lacépède, 1802:163. Not *Mustela* Linnaeus, 1758.
Gulo: Humboldt, 1812:347. Not *Gulo* Pallas, 1780.
Gulo: Illiger, 1815:109, 121. Part, not *Gulo* Pallas, 1780.
Mephitis: Lichtenstein, 1832:plate 44, figures 1 and 2. Not *Mephitis* É. Geoffroy Saint-Hilaire and Cuvier, 1795.
Mephitis: Bennett, 1833:39. Not *Mephitis* É. Geoffroy Saint-Hilaire and Cuvier, 1795.
Conepatus Gray, 1837:581. Type species *Conepatus humboldtii* Gray, by subsequent designation (Palmer, 1904).
Marputius Gray, 1837:581. Type species *Marputius chilensis*: Gray, 1837 (= *Mephitis chilensis* É. Geoffroy Saint-Hilaire, 1803) by monotypy.
Thiosmus Lichtenstein, 1838:270. Type species *Viverra mapurito* Gmelin by subsequent designation, vide Kretzoi and Kretzoi (2000).
Mephitis: Lichtenstein, 1838:270. Part; not *Mephitis* É. Geoffroy Saint-Hilaire and Cuvier, 1795.
Mephitis: Gervais, 1841:10. Not *Mephitis* É. Geoffroy Saint-Hilaire and Cuvier, 1795.
Mephitis: d'Orbigny and Gervais, 1847:19. Not *Mephitis* É. Geoffroy Saint-Hilaire and Cuvier, 1795.
Lycodon Gray, 1865:145. Incorrect subsequent spelling of, but not *Lyncodon* d'Orbigny, 1844:685.
Ozolictus Gray, 1865:145. Incorrect subsequent spelling of, but not *Ozolictis* Gloger, 1841.

Fig. 1.—Adult male *Conepatus leuconotus* showing the key characters associated with the face, nose, and fore claws. Photograph by Jerry W. Dragoo.

Oryctogale Merriam, 1902:161. Type species *Conepatus leuconotus* Lichtenstein, 1838, by original designation.

CONTEXT AND CONTENT. Order Carnivora, suborder Caniformia, family Mephitidae (Dragoo and Honeycutt 1997; Wozencraft 2005). Currently, 4 species are recognized: *Conepatus chinga*, *C. humboldtii*, *C. leuconotus*, and *C. semistriatus* (Dragoo et al. 2003; Wozencraft 2005).

Conepatus leuconotus (Lichtenstein, 1832)
American Hog-nosed Skunk

Mephitis leuconata Lichtenstein, 1832:plate 44, figure 1. Type locality "Río Alvarado [Veracruz]."
Mephitis mesoleuca Lichtenstein, 1832:plate 44, figure 2. Type locality "near Chico, [Hidalgo] Mexico."
Mephitis nasutus Bennett, 1833:39. Type locality "that part of California which adjoins to Mexico" [error of interpretation].
Marputius nasua: Gray, 1837:581. Name combination and incorrect subsequent spelling of *Mephitis nasuta* Bennett, 1833.
Thiosmus nasuta: Lesson, 1842:66. Name combination.
[*Mephitis*] *intermedia* Saussure, 1860:5. Type locality "Mexique."
M[*ephitis*]. *longicaudata* Tomes, 1861:280. Type locality "Dueñas, Guatamala."
Conepatus nasutus: Gray, 1865:145. Name combination.
Thiosmus mesoleuca: Gray, 1865:145. Name combination.
Conepatus leuconotus texensis Merriam, 1902:162. Type locality "Brownsville, lower Rio Grande, Texas."
Conepatus sonoriensis Merriam, 1902:162. Type locality "Camoa, Rio Mayo, Sonora, Mexico."
Conepatus mesoleucus: Merriam, 1902:163. Name combination.
Conepatus mesoleucus mearnsi Merriam, 1902:163. Type locality "Mason, Mason County, Texas."
Conepatus filipensis Merriam, 1902:163. Type locality "Cerro San Felipe, Oaxaca, Mexico."
Conepatus pediculus Merriam, 1902:164. Type locality "Sierra Guadalupe, Coahuila, Mexico."
Conepatus mesoleucus telmalestes Bailey, 1905:203. Type locality "Big Thicket, 7 miles [11.27 km] northeast of Sour Lake, Tex[as]."
Conepatus nicaraguæ Allen, 1910:106. Type locality "San Rafael del Norte, Nicaragua."
Conepatus mesoleucus venaticus Goldman, 1922:40. Type locality "Blue River (Cosper Ranch), 12 miles [19.31 km] south of Blue, Arizona (altitude 5,000 feet [1,524 m])."
Conepatus mesoleucus nelsoni Goldman, 1922:41. Type locality "Armeria (near Manzanillo), Colima, Mexico (altitude 200 feet [60.96 m])."
Conepatus mesoleucus figginsi Miller, 1925:50. Type locality "Furnace Canyon, western Baca County, Colorado."
Conepatus mesoleucus fremonti Miller, 1933:1. Type locality "Garden Park, near Canon City, Fremont County, Colorado."
Conepatus mesoleucus nicaraguus: Goodwin, 1946:437. Name combination and incorrect subsequent spelling of *Conepatus nicaraguae* Allen, 1910.
Conepatus mesoleucus filipensis: Hall and Kelson, 1952:335. Name combination.
Conepatus mesoleucus pediculus: Hall and Kelson, 1952:335. Name combination.
Conepatus mesoleucus sonoriensis: Hall and Kelson, 1952:335. Name combination.

CONTEXT AND CONTENT. Context as for genus. Currently, 3 subspecies are recognized (Dragoo et al. 2003; Wozencraft 2005):

C. l. figginsi Miller, 1925. See above; *fremonti* Miller is a synonym.
C. l. leuconotus (Lichtenstein, 1832). See above.
C. l. telmalestes Bailey, 1905. See above.

NOMENCLATURAL NOTES. Cranial characters and pelage patterns do not justify >3 species (subgenus *Marputius*) in Central America and South America (Kipp 1965) and only 1 species (subgenus *Oryctogale*) in northern Mexico and the southwestern United States (Dragoo et al. 2003). Central and South American species are in need of taxonomic revision. Additionally, *Conepatus mapurito* had long been used as the name for all members of the genus (Howell 1906).

Conepatus is derived from the Spanish *conepate* or *conepatl*, which means skunk. *Conepatl* may be derived from *nepantla*, which in the Nahuatl language signified a subterranean dwelling (Coues 1877). The specific name *leuconotus* is of Greek origin meaning white (*leuco*) back (*nota* or *notum*). Common names include white-backed hog-nosed skunk, badger skunk, rooter skunk, Texas skunk, and American hog-nosed skunk. Pelts of *Conepatus leuconotus* are of little commercial value today because of their short, coarse fur (Bailey 1931; Schmidly 1984).

DIAGNOSIS

Conepatus leuconotus can be distinguished readily from other skunks by the color pattern of the dorsal pelage. It is the only skunk that lacks a white dot or medial bar between the eyes and has primarily black body fur with a single white stripe. The stripe starts at the forehead, widens at the shoulders, and extends down the back (it is sometimes absent on the rump) and onto the tail, making the tail predominantly white. The body of *C. leuconotus* generally is heavier and bulkier, and the tail is shorter (less than one-half the total body length) in proportion to the body than in other *Conepatus* or *Mephitis* species (Dragoo and Honeycutt 1999a, 1999b). *C. leuconotus* has a long, naked nose pad and

long claws. *C. leuconotus* is distinguished from striped hog-nosed skunks (*Conepatus semistriatus*) by a single dorsal stripe, whereas *C. semistriatus* have 2 stripes bilateral to the spine (Dragoo and Honeycutt 1999a, 1999b).

GENERAL CHARACTERS

The snout of *Conepatus leuconotus* is relatively long with a naked nose pad and resembles the nose of a small hog (Fig. 1). The nose pad (ca. 20 mm wide by 25 mm long) is about 3 times wider than that of *Mephitis mephitis* (Davis and Schmidly 1994). Ears are small and rounded, and the eyes are relatively small (Davis 1945, 1951).

Pelage of *C. leuconotus* is short and course (Bailey 1931; Davis 1945). *C. leuconotus* has a characteristic wedge-shaped white stripe on the head that extends onto, and may cover, the entire back. The tail is white along its total length dorsally, but ventrally it can be black or white at the base (Schmidly 1984). *C. leuconotus* from the northwestern part of its range (Arizona, New Mexico, and western Texas) has more white on the back, but there still is considerable variation with respect to stripe pattern (Dragoo et al. 2003).

Conepatus leuconotus has stocky legs and plantigrade feet. Its hind feet are broad and large with soles that are naked for about one-half their length (Gray 1865). Its upper body is powerfully built, and the fore claws are very long (Dragoo and Honeycutt 1999a, 1999b).

Morphological measurements (ranges, in cm) for 123 adult males and 88 adult females, respectively, are: total length, 39.7–93.4, 45.2–74.0; length of tail, 14.0–41.0, 12.2–34.0; length of hind foot, 2.2–9.0, 3.0–9.0; and length of ear, 0.8–3.6, 0.8–3.3 (Dragoo et al. 2003). Body mass ranges from 1.1 to 4.5 kg with males about 10% larger than females (Dragoo and Honeycutt 1999a, 1999b; Hall and Kelson 1952).

The skull of *C. leuconotus* (Fig. 2) is relatively deep, particularly in the temporal region and has large truncated nares (Gray 1865). The premaxilla is reduced to a slender oblique splint. Nasals and maxillae end posteriorly on the same plane, and the postorbital constriction is slight. Auditory bullae are not inflated, and the palate ends behind the upper molars (Merriam 1902).

Representative skull measurements (in cm, means for males and females, respectively, with ranges and sample sizes in parentheses) include: condylobasal length, 7.3 (5.8–8.5, n = 155), 6.8 (6.1–7.7, n = 115); zygomatic width, 4.9 (3.6–5.7, n = 148), 4.5 (3.9–5.3, n = 110); length of maxillary toothrow, 2.2 (1.9–2.7, n = 164), 2.2 (1.6–3.3, n = 118); mastoid width, 4.1 (3.3–4.7, n = 155), 3.8 (3.4–4.3, n = 114); interorbital width, 2.4 (2.0–3.0, n = 155), 2.3 (1.9–2.8, n = 113); postorbital width, 2.1 (1.7–2.7, n = 156), 2.0 (1.7–2.5, n = 115); width across canines, 1.9 (1.6–2.4, n = 162), 1.7 (1.4–2.0, n = 117); width across molars, 2.8 (2.5–3.4, n = 161), 2.7 (2.4–3.8, n = 116); and height of cranium, 3.0 (2.1–3.5, n = 154), 2.8 (2.4–3.2, n = 114—Dragoo et al. 2003).

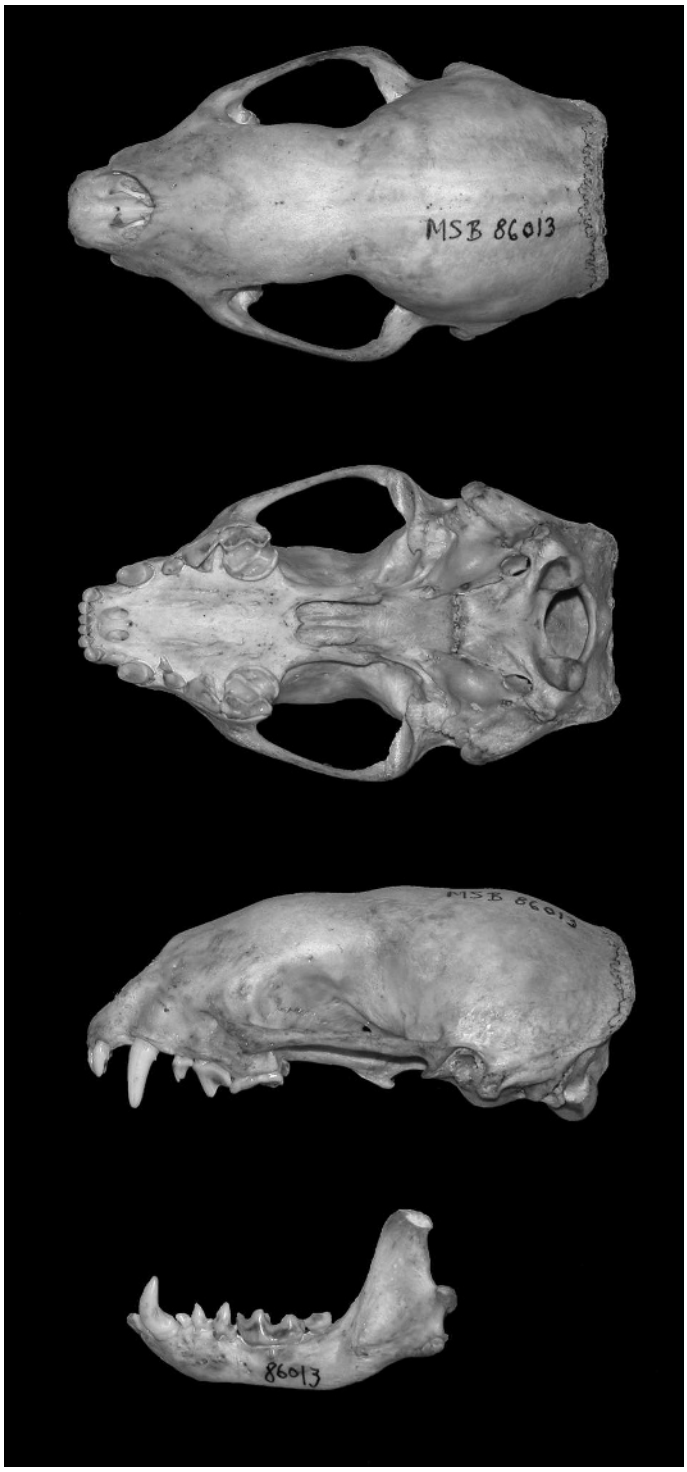

Fig. 2.—Dorsal, ventral, and lateral views of cranium and lateral and occlusal view of mandible of *Conepatus leuconotus* (Museum of Southwestern Biology 86013, adult male from Pipe Ranch, Socorro County Saw Mill Canyon, New Mexico).

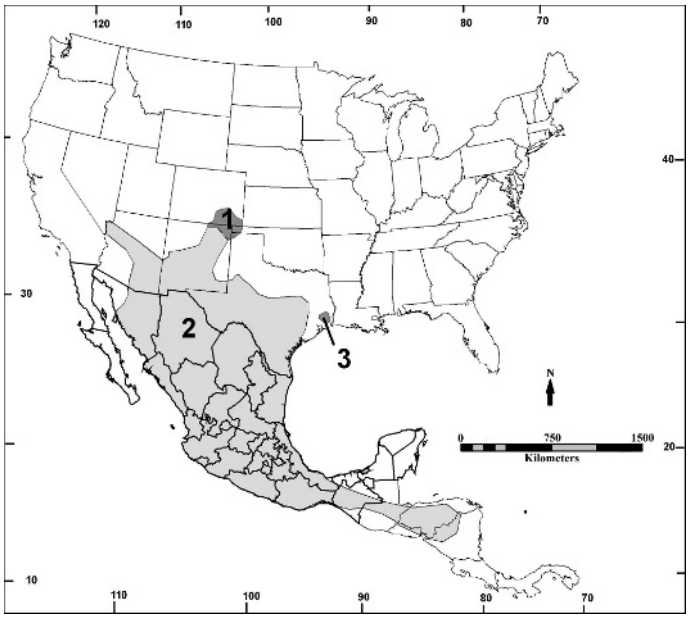

Fig. 3.—Geographic distribution of *Conepatus leuconotus*. 1, *C. leuconotus figginsi*, 2, *C. l. leuconotus*, and 3, *C. l. telmalestes*. Modified from Dragoo et al. (2003).

DISTRIBUTION

Conepatus leuconotus ranges from the southwestern United States throughout most of Mexico, excluding the Baja and Yucatán peninsulas, and as far south as northern Costa Rica (Fig. 3; Allen 1910; Goodwin 1946; Hall 1981). It has been reported as far north as Colorado (Warren 1921), Oklahoma (Caire et al. 1989), southern Arizona (Hoffmeister 1986), New Mexico (Findley et al. 1975), and much of Texas (Schmidly 1984). In Mexico, *C. leuconotus* has been reported from Zacatecas, Sinaloa, Sonora, Oaxaca, and Coahuila (Merriam 1902), Colima (Goldman 1922), Veracruz (Hall and Dalquest 1963), Michoacan (Hall and Villa 1949), and San Luis Potosi (Dalquest 1953). In Central America, it has been reported from Honduras (Goodwin 1942), Nicaragua (Allen 1910), and northern Costa Rica (Goodwin 1946).

FOSSIL RECORD

New World skunks 1st appeared in North America during the middle to late Miocene (Baskin 1998; Wang et al. 2005). A single immigration event from Eurasia led to the rise of the modern genera of skunks in North America and South America (Wang et al. 2005). *Conepatus* probably originated in Middle America (Hershkovitz 1972), and the earliest recorded appearance in the region is the early Pliocene (Wang and Carranza-Castañeda 2008). *Conepatus* was an immigrant into South America 2.5–2.4 million years ago; fossils have been found in faunas of Chapadmalalan age in Argentina (Hunt 1996; Marshall et al. 1983). Late Pleistocene remains of *C. leuconotus* have been found in Florida, New Mexico, and Nuevo León, Mexico (Kurtén and Anderson 1980).

FORM AND FUNCTION

Conepatus leuconotus is adapted for digging and resembles badgers rather than other species of skunks in this respect (Patton 1974). The rectangular-shaped scapula, strong forearms, and shape of the humeri of *C. leuconotus* resemble those of badgers (Van De Graaff 1969). The nostrils are located ventrally and open downward, sense of smell is acute, and the nose is used in locating and capturing buried prey (Bailey 1905). *C. leuconotus* also is a capable climber, although not as agile as spotted skunks of the genus *Spilogale* (Dragoo and Honeycutt 1999b; Patton 1974).

Dental formula for *C. leuconotus* is i 3/3, c 1/1, p 2/3, m 1/2, total 32 (Schmidly 1983). Carnassials are not well developed, and the trigonid of the lower carnassial is shorter than the talonid. M1 is large with a large crushing surface and is longer than it is wide; the outline of the molar is rectangular rather than dumbbell-shaped. P2 is absent (Kurtén and Anderson 1980). *Conepatus* reabsorbs milk teeth before birth (Slaughter et al. 1974).

Scent glands of *C. leuconotus* are at the base of the tail on either side of the rectum. These glands are covered by a layer of smooth muscle that contracts to force secretions through ducts to nipples just inside the anal sphincter. The rectum is everted to expose the nipples, which can be aimed toward a target (Dragoo 1993). Two major volatile components ((*E*)-2-butene-1-thiol and (*E*)-*S*-2-butenyl thioacetate) and 4 minor components (phenylmethanethiol, 2-methylquinoline, 2-quinoline-methanethiol, and bis[(*E*)-2-butenyl] disulfide) are found in these secretions (Wood et al. 1993).

ONTOGENY AND REPRODUCTION

Conepatus leuconotus breeds from late February through early March; most adult females are pregnant by the end of March (Davis and Schmidly 1994). Typically, gestation lasts about 60 days. However, 1 captive female had a gestation period of >70 days (Dragoo and Honeycutt 1999b). Parturition occurs in April and May. In western Texas, 1 female contained a single embryo in late March and 2 others nursed young in April (Bailey 1905). Half-grown young have been observed in late July (Patton 1974) and mid-August (Leopold 1959), and by late August young begin to disperse. Litter size for *C. leuconotus* is 1–5 young, although 2–4 young are most common (Allen 1906; Davis 1945; Dragoo and Honeycutt 1999a, 1999b; Patton 1974). Females have 3 pairs of mammae, 2 pectoral and 1 inguinal (Bailey 1931).

ECOLOGY

Conepatus leuconotus occurs in canyons, stream sides, and rocky terrain (Patton 1974). It has been collected in a variety of habitats in Mexico, including open desert-scrub and mesquite-grasslands in northern and eastern Zacatecas (Matson and Baker 1986); tropical areas, mountains, and coastal plains of San Luis Potosi (Dalquest 1953); cornfields surrounded by brushland or adjacent to grassy plains and thickets of bull-horn acacia (*Acacia*) in Veracruz (Hall and Dalquest 1963); and thorn woodland and riparian forests of Tamaulipas, characterized by live-oaks (*Quercus virginiana*), pecans (*Carya illinoensis*), sycamores (*Platanus occidentalis*), and Texas persimmons (*Diospyros texana*) and an understory of briars, grasses, and weeds (Schmidly and Hendricks 1984). It also has been found in pine–oak forest in the San Carlos Mountains (Schmidly and Hendricks 1984) and in scrub and cacti of the Tamaulipan plain (Dice 1937). In Kleberg County, Texas, *C. leuconotus* occurs in mesquite-brushland, pastures, and native grassland, used exclusively for cattle ranching (Beasom 1974). Thorny brush and cactus are the predominant vegetation in the region of southern Texas where *C. leuconotus* occurs (Schmidly 2002).

During a spotlight survey on the Tehuantepec Peninsula of Oaxaca, Mexico, *C. leuconotus* was located in grassland (52%), marsh (29%), and scrub (19%) habitats (Cervantes et al. 2002). In those habitats, population density was 0.6 individuals/km^2 $\pm$ 0.17 *SE* in the wet season, and 1.3 $\pm$ 0.26 individuals/km^2 in the dry season (Cervantes et al. 2002). The elevational range of *C. leuconotus* is variable. In Arizona, *C. leuconotus* occurs at $<$2,743 m in pine–fir forests in the Graham Mountains (Hoffmeister 1986). In Mexico, *C. leuconotus* ranges up to 3,048 m (Cahalane 1961).

Conepatus leuconotus is sympatric with as many as 3 different skunk species within much of its range: *Mephitis mephitis*, *M. macroura*, and either *Spilogale putorius* or *S. gracilis*. These species may use the same den sites. Use of other resources, such as food items, differs among the species (Patton 1974).

Conepatus leuconotus is primarily insectivorous (Hall and Dalquest 1963). It is more insectivorous than other skunks (Bailey 1905; Seton 1926), but when insects are not plentiful, it is an opportunistic feeder and will eat a variety of small vertebrates and fruits (Dragoo and Honeycutt 1999a). In Texas and New Mexico, *C. leuconotus* is rarely seen drinking water, likely getting sufficient water from food (Dragoo, in press; Patton 1974).

Conepatus leuconotus is taken as prey by canids (coyotes [*Canis latrans*], dogs [*C. lupus*], and foxes [*Vulpes vulpes* and *Urocyon cinereoargenteus*]), felids (*Puma concolor* and *Lynx rufus*), badgers (*Taxidea taxus*), and birds of prey such as great horned owls (*Bubo virginianus*) and eagles (*Aquila chrysaetos* and *Haliaeetus leucocephalus*). These predators are nondiscriminatory and opportunistically eat any of the skunk species (Dragoo, in press).

Conepatus leuconotus is host to numerous parasites, including fleas (*Pulex*) and ticks (*Ixodes texanus*), intestinal roundworms (*Psyalopteris maxillaris*), cestodes (*Oochoristica* and *Mesocestoides*), subcutaneous nematodes (*Filaria martis*), and *Skrjabingylus chitwoodorum* from the frontal sinuses (Patton 1974). *C. leuconotus* in western Texas is infected with several species of helminths (*Filaroides milksi*, *Filaria taxidaea*, *Gongylonema*, *Macracanthorhynchus ingens*, *Mathevotaenia mephitis*, *Oncicola canis*, *Pachysentis canicola*, *Physaloptera maxillaris*, and *P. rara*—Neiswenter et al. 2006). In natural habitats, *C. leuconotus* is not known to survive for $>$3 or 4 years (Patton 1974), but in captivity (Fig. 1) can live for $\geq$14 years (Museum of Southwestern Biology, Division of Genomic Resources NK 136990).

Roadkill surveys have proved to be one of the most successful means for detecting *C. leuconotus* in Texas (C. A. Meaney, in litt.). Because of its primarily insectivorous diet, it is not easily trapped using standard baits (Bailey 1905; Dragoo 1993). Road surveys often are the most effective means of monitoring populations (Dragoo 1993).

Much of what is known about the ecology of *C. leuconotus* is based on anecdotal data collected with museum specimens. Only a handful of studies have been conducted on *C. leuconotus* in Texas and Mexico, and there are no radiotelemetry data to describe home ranges, movement, and dispersal of *C. leuconotus*.

BEHAVIOR

Conepatus leuconotus generally is solitary, but females and young commonly are found together until the young disperse in late summer (Davis and Schmidly 1994). *C. leuconotus* primarily is nocturnal, but it may forage during the warm parts of the day in winter (Davis and Schmidly 1994). It is known to feed during the heat of the day in summer in Texas (Davis 1951). Normally during the day, it retreats to underground burrows, brush piles, or rock crevices (Davis 1945; Leopold 1959). It dens in hollows in the roots of trees or fallen trunks and in cavities under large rocks or in rock piles (Audubon and Bachman 1851; Bailey 1905). Dens also have been reported in caves, mine shafts, and woodrat nests (Hoffmeister 1986). *C. leuconotus* will use abandoned burrows of other animals or dig its own (Warren 1942).

When threatened, the 1st response of *C. leuconotus* is to flee to cover. During flight, it may turn to its pursuer and, depending on the level of threat, stand on its hind legs and take 2 or 3 steps toward the pursuer. Then it will come down hard on its front paws and exhale in a loud hiss. Finally, it will draw its paws under its body, kicking dirt backwards. A defensive, frightened *C. leuconotus* will crouch, stomp its front paws, raise its tail and hold it flat against its back, and

bare its teeth. In this position, it will bite and spray a predator (Dragoo and Honeycutt 1999b). *C. leuconotus* can squirt noxious liquid from anal scent glands, either as a mist when the threat is not specifically located, or as a stream directed toward a specific threat. The mist can be emitted while on the run (Dragoo, in press). *C. leuconotus* has been observed to take refuge in prickly pear cactus (*Opuntia*) when aggravated (Patton 1974).

Propensity for rooting by *C. leuconotus* is comparable to that of feral hogs (*Sus scrofa*—Davis and Schmidly 1994). While foraging, it will dig up areas of soil 12 m in diameter to a depth of several cm (Miller 1925).

GENETICS

Conepatus leuconotus has a diploid chromosome number of 46 and a fundamental number of 80. Its karyotype consists of 38 metacentric and submetacentric autosomes and 6 acrocentric autosomes. The largest of these chromosomes has a prominent secondary constriction midway along the longer arm, which represents the nucleolar organizer region. The Y chromosome is minute and stains positive for heterochromatin (Woodward 1994). There are 19 pairs of biarmed and 3 pairs of acrocentric autosomes. C-bands are localized at the centromeres, but chromosomes 16, 19, and the Y chromosome display large pericentromeric C-bands. The metacentric X-chromosome has a C-positive centromeric region and the Y-chromosome is small and subtelocentric (Perelman et al. 2008).

DNA from the displacement loop and cytochrome-*b* gene showed 0.98% sequence divergence between eastern and western forms of *C. leuconotus* (Dragoo et al. 1993). Based on mitochondrial DNA, *Conepatus* is the more basal group of the North American skunks, and the stink badger (*Mydaus*) is at the base of the skunk radiation. Mitochondrial DNA (Dragoo and Honeycutt 1997) and nuclear DNA (Flynn et al. 2000) indicate that all skunks represent a unique family, Mephitidae. Morphology and mitochondrial DNA from most of the recognized taxa of American hog-nosed skunks suggest only a single species (Dragoo et al. 2003).

CONSERVATION

Populations of *Conepatus leuconotus* have been declining for many years throughout most of the historical range in the United States, and there is evidence that the species is undergoing a distribution-wide decline (C. A. Meaney, in litt.). *C. leuconotus* currently is not protected under the Endangered Species Act, although the subspecies *C. l. texensis* was listed as a candidate species for Endangered Species Act listing until 1997 (C. A. Meaney, in litt.). The International Union for the Conservation of Nature and Natural Resources (2008) has designated *C. leuconotus* as Least Concern (LC). The conservation status of *C. leuconotus* varies at the state level in the United States. In Arizona, it is classified as a predator and in Texas it is classified as a furbearer; it is legally harvested year-round in both states (C. A. Meaney, in litt.). In Colorado and New Mexico, it is classified as a nongame species and in Oklahoma it is listed as a Category II Species of Concern; there are no hunting or trapping seasons in either state (C. A. Meaney, in litt.). The United States Forest Service considers *C. leuconotus* to be a sensitive species in Colorado, New Mexico, Oklahoma, Texas, and throughout its entire Region 2, which includes Colorado (C. A. Meaney, in litt.).

In southern Texas, several populations of *C. leuconotus* may now be extirpated (Dragoo et al. 2003; Schmidly 1983). Eighty percent of all museum specimens representing *C. l. texensis* from Texas were collected between the mid-1800s and 1900, 13% between 1901 and 1950, and 7% after 1950 (Dragoo et al. 2003). In southern Texas, the range of *C. l. texensis* and its population numbers are greatly reduced (Dragoo et al. 2003; Stapper 1989), and it now is largely absent from the Rio Grande Valley where it was once relatively common (Schmidly 2002). The eastern Texas subspecies, *C. l. telmalestes*, is presumed extirpated throughout its range in the Big Thicket region (Schmidly 1983); no new specimens have been collected in this area since 1905, and 7 years of concentrated research within the range of this subspecies has revealed no direct evidence of its continued existence (Dragoo et al. 2003). A clear footprint in mud (1996) and 2 skulls found on the ground (1997 and 2000) are the only recent evidence of the occurrence of *C. leuconotus* in Colorado (C. A. Meaney, in litt.); no complete specimens have been collected in Colorado since 1932 (Armstrong 1972; Miller 1933).

Threats to *C. leuconotus* include degradation, fragmentation, and loss of habitat; fire suppression that alters plant communities; interactions with feral *Sus scrofa* and striped skunks (*Mephitis mephitis*); road mortality; long-term control of predators and insect pests; disease; and grazing (C. A. Meaney, in litt.). It is likely that the conversion of native vegetation to row-crop agriculture partially is responsible for the declining numbers of *C. leuconotus*; 95% of the native vegetation in the Rio Grande Valley has been transformed from subtropical plant communities to cotton, sorghum, sugarcane, vegetable crops, and citrus orchards (Tewes and Schmidly 1987). However, habitat modification may not be the primary direct cause; population declines may be associated directly with use of agricultural pesticides that contribute to a loss of prey items.

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