

Western Bat Working Group

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Species Accounts

Developed For the 1998 Reno Biennial Meeting

Updated at the 2005 Portland Biennial Meeting

Leptonycteris curasoae

LESSER LONG-NOSED BAT

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I. DISTRIBUTION: *Leptonycteris curasoae*, a member of the Family Phyllostomidae (New World leaf-nosed bats), is recorded in southern Arizona from the Agua Dulce Mountains in the west, north to Phoenix and east to southwestern New Mexico, south through Mexico to El Salvador. This species inhabits of the Sonoran desert scrub, semi-desert grasslands and lower oak woodlands in the United S. In Mexico, the lesser long-nosed bat occurs in coastal desert-scrub, thorn-scrub, thorn forest, pine-oak woodlands, and ponderosa pine habitat (Figure 1).

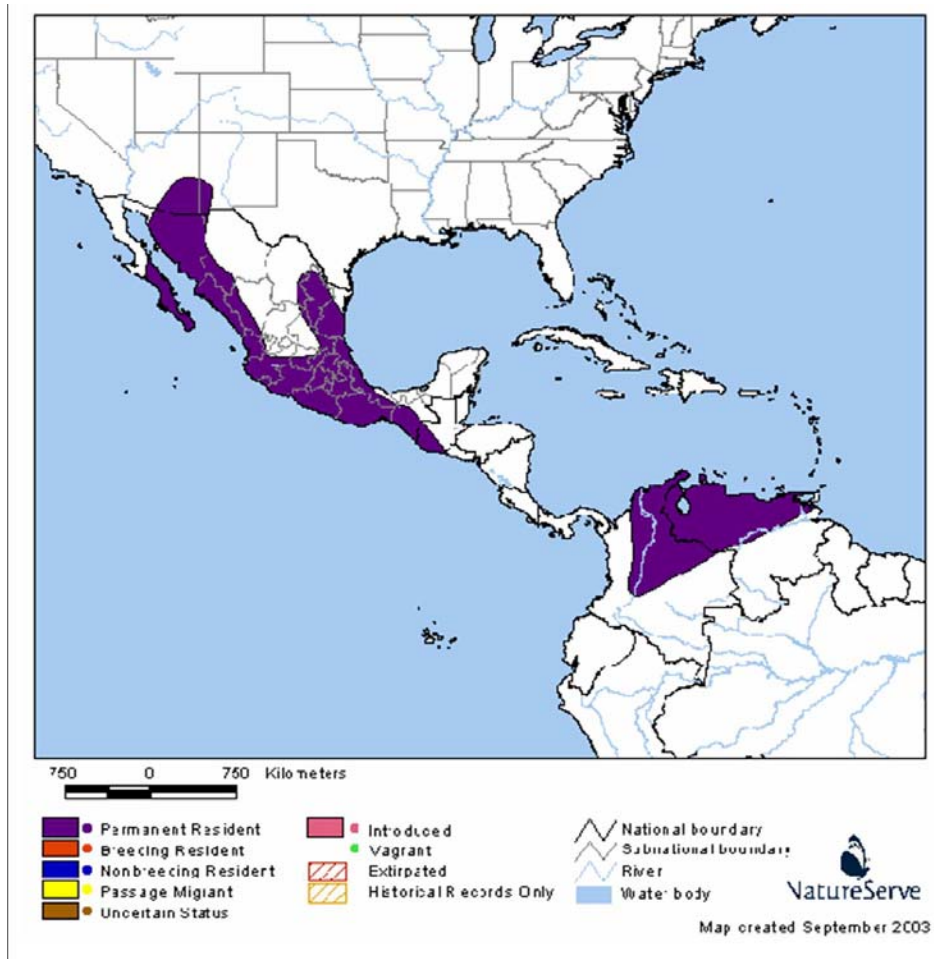


Figure 1. Range map (NatureServe).

- II. STATUS: Global Rank: G4; State Ranks: AZ - S2, NM - S1; Other Ranks: IUCN - VU; Mexico - Threatened; AGFD - Wildlife of Special Concern; USFS - Sensitive; Federally listed as endangered in 1988 due to long term population declines, reports of absence from historic roosts, decline in agave pollination, and concern for death of an ecosystem. Population decline information has been questioned due to improperly timed surveys and overestimates of historic populations. A 5-year review is underway in 2005 to ensure that the endangered classification is accurate.
- III. IDENTIFYING CHARACTERISTICS AND LIFE HISTORY: The lesser long-nosed bat is a medium-sized bat with relatively large eyes and a forearm of 51-56 mm. It has reddish-brown fur and an elongated snout and nose leaf, no tail, and the interfemoral membrane is reduced to a narrow band along each hind leg. This species does not hibernate, and is one of few bat species that undergo long distance migrations. They migrate south in the fall to Mexico, where they breed and spend the winter. Migration corridors are not known exactly, but data have shown use of two corridors during spring migration, one coastal and the other inland. Lesser long-nosed bats may follow the sequential blooming of agave, saguaro, ocotillo, palo verde, prickly pear and organ pipe cactus during their migrations, feeding on nectar and pollen. The tongue is long and tipped with brush-like papillae to lap up nectar. Some authors suggest pollination success of *Agave palmeri* is dependent upon this and other nectar-feeding bats. This bat roosts in caves and mine tunnels. Males form separate, smaller colonies from females. Females may arrive in southwestern Arizona as early as the second week in April and form maternity colonies from early May to late June/early July. Maternity colonies number in the hundreds to thousands and in a few places in the tens of thousands. Females give birth to one young per year, which are volant by the end of June. In Arizona, following break up of maternity colonies by the end of July, some bats move east to transient roosts at the higher elevations of southern Arizona and southwestern New Mexico. Others found at these eastern roosts beginning in mid-July might come directly from Mexico. Efforts to conserve and learn more about the life history of this species include: annual surveys of important roosts in Arizona, New Mexico, and Mexico, including simultaneous efforts; surveys for new roost locations, migration corridor studies, foraging studies, public education and information efforts, improved population census techniques, roost characteristics study, and roost protection at some sites.
- IV. THREATS: Threats to the lesser long-nosed bat includes loss of foraging habitat by fire; roost site disturbance from recreational caving, illegal immigrant/smuggler activities near maternity roosts near the Arizona-Mexico border; destruction of forage plants by development, grazing, and human exploitation of agaves for food and alcohol production; possible reduction in numbers of forage plants resulting from depressed pollination; and direct mortality by humans.
- V. SURVEY METHODS: Netting/capture effectiveness depends on habitat type. Identification: Morphologically distinct. Roost Location: Roosts in mines and caves, and is highly colonial. Identification at Roost: Easy to detect and identify in roost except in areas of overlap with *Leptonycteris nivalis*. Passive acoustic detection: Difficult to detect acoustically where range overlaps with *Choeronycteris mexicana*. Active acoustic detection: Indistinguishable in flight from *Leptonycteris nivalis* and *Choeronycteris mexicana*, except possibly at very close range (e.g. hummingbird feeders).
- VI. GAPS IN KNOWLEDGE: Continue gathering information on population size and trends; information regarding the timing of seasonal movements, migration routes used, and plant species and phenology along such routes; genetics of sub-populations; interdependence of the species with individual plant species and communities; location of important roosting areas; characteristics of ideal roosts.

VII. SELECTED LITERATURE:

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