

Western Bat Working Group

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Species Accounts

Developed For the 1998 Reno Biennial Meeting

Updated at the 2005 Portland Biennial Meeting

Lasiurus cinereus

HOARY BAT

Prepared by: Betsy C. Bolster

I. DISTRIBUTION: *Lasiurus cinereus*, a member of the Family Vespertilionidae, is the most widespread of all North American bats. This species ranges from near the limit of trees in Canada, southward at least to Guatemala, and from Brazil to Argentina and Chile in South America. *L. cinereus* is also found in Hawaii and the Galapagos Islands. Hoary bats are uncommon throughout most of the eastern U.S. and in the northern Rocky Mountains, but are more common in the prairie states and Pacific Northwest. They are highly associated with forested habitats in the west.

II. STATUS: Global Rank - G5. State Ranks: AZ - S3; CA - S5; CO - S5B; ID - S5; MT - S4; NM - S5; NV - S?; OR - S4?; TX - S4; UT - S3; WA - S?; WY - S4; AL - S2?; BC - S4.

III. LIFE HISTORY: *L. cinereus* can be distinguished from all other species by a combination of its large size (forearm of 46-58 mm), frosted fur, golden coloration around the face, rounded ears, blunt tragus and furred uropatagium. Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches, 3-12 m above the ground. Roosts are usually at the edge of a clearing. Some unusual roosting situations have been reported in caves, beneath a rock ledge, in a woodpecker hole, in a grey squirrel nest, under a driftwood plank, and clinging to the side of a building. Although thought to be highly migratory, wintering sites have not been well documented, and no specific migration routes have been discerned. Hoary bats are often found flying in waves of large groups during autumn migration, whereas spring migration is apparently less organized. This species tolerates a wide range of temperatures as illustrated by captures at air temperatures between 0 and 22°C. The ambient temperature at which individuals employ torpor also appears to be variable, as entry into torpor was observed in one study to vary from 5°C to 13°C. Hoary bats probably mate in the fall, followed by delayed implantation and birth in the following May through July. Females have from one to four pups annually, with two being the norm. Hoary bats usually emerge late in the evening to forage, although they occasionally have been observed flying during late winter afternoons or just before sunset. Evening emergence and capture times range from just over one hour after sunset to after midnight. The swift, direct flight of this species makes it identifiable on the wing from all other U.S. bats except molossids. Hoary bats reportedly have a strong preference for moths, but are also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps. Reported predators include jays, kestrels and snakes, and likely include hawks and owls as well.

IV. THREATS: Loss of roosting habitat due to timber harvest is likely the biggest threat to this species. Use of pesticides on public forest lands may also be a potential source of mortality to roosting bats and their insect prey. In suburban settings, where jays thrive in association with humans, this bird may pose a major threat to sleeping or hibernating hoary bats.

V. GAPS IN KNOWLEDGE: The habitat use and relationships of *L. cinereus*, especially regarding wintering sites, needs to be investigated more thoroughly. The impact of current timber harvest practices on roosting and foraging also should be examined.

VI. SELECTED LITERATURE:

Barclay, R. M. R. 1985. Long- versus short-range foraging strategies of hoary (*Lasiurus cinereus*) and silver-haired (*Lasionycteris noctivagans*) bats and the consequences for prey selection. *Can. J. Zool.* 63:2507-2515.

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Hickey, C. B. 1990. Use of torpor by free-living *Lasiurus cinereus*. *Bat Research News*, 30(4):67.

Shump, K. A., Jr., and A. U. Shump. 1982. *Lasiurus cinereus*. *American Society of Mammalogists, Mammalian Species*, 185:1-5.

Perkins, J. M., and S. P. Cross. 1988. Differential use of some coniferous forest habitats by hoary and silver-haired bats in Oregon. *Murrelet* 69:21-24.

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