SILVER-HAIRED BAT

Lasionycteris noctivagans Le Conte, 1831
(Vespertilionidae)

Global rank G5 (05Nov1996)
State rank S2 (14Nov2008)
State rank reasons
Only four known specimens of this species have been collected in Southeast Alaska. Abundance, population trend and distribution relatively unknown but suspected rare. Loss and fragmentation of forest habitat as a result of deforestation is probably the greatest concern regarding this species (Cryan 2003).

Taxonomy
No subspecies are recognized.

General description
The silver-haired bat receives its name from its dark, silver-tipped fur. Fur is usually dark brown to black, with silvery-white tips giving a frosted or silvery appearance; may also appear yellowish. Wings are black as are ears and interfemoral membrane; ears short, rounded and hairless with blunt tragus (Kunz 1982).
Length (cm) 12 (total)
Weight (gm) 16

Reproduction
Breeds in late September; fertilization is delayed until spring. Gestation lasts 50-60 days. Litter of 1-2 young is born in June-July, sometimes later in the north. Sexually mature in first summer. Volant (able to fly) at about 3 weeks. Maternity colonies are small (Parsons et al. 1986).

Ecology
Densities probably low. Usually roosts singly, but occasionally in groups of up to 3-6 (Barclay et al. 1988).

Migration
Generally migrates south for winter. Found only during spring and fall migration over major part of range. Migrates in waves along southern shore of Lake Manitoba in May and early June (Barclay et al. 1988). There is some evidence that migration does not occur in British Columbia (Cryan 2003).

Food
Forages for small to medium-sized flying insects over small water bodies within forested areas, and over forests, in openings, and along edges.

Phenology
Leaves roost to forage relatively late; Manitoba migrants emerged from roosts typically 30 minutes after sunset in spring (Barclay et al. 1988). Activity peaks 3 hours after sunset and later at 7-8 hours after sunset. May be active at low air temperatures, but roosting migrants in Manitoba became torpid at air temperatures below 20 C (Barclay et al. 1988). Active throughout the year in southeastern Virginia and northeastern North Carolina; winter activity occurred on evenings when air temperature was 13° C or higher (Padgett and Rose 1991).

Habitat
Prefers forested (frequently coniferous) areas adjacent to lakes, ponds, and streams, but often occurs in areas distant from water as well. During migration sometimes occurs in xeric areas. Summer roosts and nursery sites are in tree foliage, cavities, or under loose bark, sometimes in buildings. In Manitoba, migrants roosted typically in narrow crevices in tree trunks (Barclay et al. 1988). See Vonhof and Barclay (1996) for information on characteristics of roost trees in British Columbia. See Campbell et al. (1996) for roost characteristics in Washington. Rarely hibernates in caves. Relatively cold tolerant. Young are born and reared in tree cavities or similar situations. In South Dakota, maternity aggregations were primarily located in woodpecker-created cavities in ponderosa pines (Mattson et al. 1996).

Global range
Range is from southeastern Alaska and much of western Canada south of the Northwest Territories south to central California, northern Mexico, and east through Georgia (Yates et al.

1976, Hall 1981). Known also from Bermuda. Winters in the Pacific Northwest, in scattered areas of the southwestern United States, and at middle latitudes of the eastern United States approximately south of Michigan and east of the Mississippi (Cryan 2003). Males seem to stay farther south in spring and summer than do females, except for populations in British Columbia that do not appear to migrate (Cryan 2003).

State range
Unknown, but suspected to be very restricted. Appears to reach its northern limit south of 59° N, in temperate rainforests of Southeast Alaska (Parker et al. 1997). This species has been reported to occur as far north as Prince William Sound (Manville and Young 1965), but specimen data is lacking to substantiate this claim (Parker et al. 1997). *L. noctivagans* may migrate from interior British Columbia to Southeast Alaska in winter because of milder climate (Parker et al. 1997). Only four known specimens have been collected, all from Southeast Alaska during winter (Hall 1981, Parker 1996, Parker et al. 1997, MacDonald and Cook 1999). A juvenile was found in a boat shed on the Taku River near Juneau in November 1964 (Barbour and Davis 1969). The second was found dead in a woodpile at Wrangell during February 1992. Two other specimens were collected in January 1995: one was found dead clinging to the side of a house in Petersburg; and another was found alive in a house entryway in Ketchikan (Parker et al. 1997, MacDonald and Cook 1999).

Global abundance
Unknown, can be locally common in some areas.

State abundance
Unknown, but suspected rare.

Global trend
Unknown.

State trend
Unknown.

State protection
Managed in Alaska as a nongame species.

Global threats
Habitat loss and fragmentation as a result of clearcutting and other causes of deforestation constitute one of the greatest concerns to these "tree bats" (Parker 1996, Parker et al. 1996).

State threats
Timber harvest in Southeast Alaska is a specific concern. Forty-two percent of the most productive forests in Southeast Alaska were clearcut harvested by 1990 (U.S. Department of Agriculture 1991, 1993 in Parker 1996) and extensive logging has continued since then (Parker 1996, Parker et al. 1996). Clearcutting eliminates potential roosting and foraging habitat of these “tree bats” (Parker et al. 1996).

Global research needs
Although widely distributed, little information is available on migratory patterns. Further research into relationships between western and eastern groups may facilitate interpretation of seasonal movements (Cryan 2003).

State research needs
Little is known about this species’ biology and ecology. Research is needed on various life history parameters such as foraging strategies, prey availability, and reproduction. Roost site selection, habitat preferences, and hibernation ecology require study. Further research is needed to determine if females migrate to Southeast Alaska in winter, as specimen records suggest, or whether both sexes occur there throughout the year, as in southwestern B.C. (Parker et al. 1997). Measure bat use in forest types to identify important habitats (e.g. roosting, breeding, foraging).

State inventory needs
Intensive surveys are needed throughout Southeast Alaska to determine the distribution and abundance of this species. Areas proposed for timber harvest should be inventoried. Document distribution and abundance in second-growth habitat.

State conservation and management needs
Areas of mature forest should be managed to ensure and adequate supply of roosting and foraging sites. Due to species rarity, efforts should be made to avoid known roosting, breeding, or foraging sites. In areas of active logging, potential bat roost trees (i.e. forest patches with large numbers of suitable cavity trees) should be identified and protected.

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