

Bulletin No. 16
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Bats in Alaska

General Characteristics and Distribution

Only six species of bats can be found in Alaska.¹ The geographic ranges of most species are limited to the Southeastern part of the state; however, *Myotis lucifugus*, the little brown bat, has been sighted throughout much of the State south of the Arctic Circle.² Four other bat species can be found in the Alexander Archipelago (the Alaska panhandle) - Keen's long-eared bat (*Myotis keenii*), long-legged myotis (*Myotis volans*), California bat (*Myotis californicus*) and the silver-haired bat (*Lasiorycteris noctivagans*). There is one record of a big brown bat (*Eptesicus fuscus*) found in the interior of Alaska.

The distribution of bats appears to be latitude sensitive, limited by geographic barriers, roost availability, climate, length of night, and prey availability. Bats are only found in forested areas; no bats have been found in the treeless regions of the western and Arctic tundra or Aleutian Islands. Being nocturnal animals, bats sleep during the day and hunt and feed during the night. Alaska bats feed on insects such as moths, mosquitoes, beetles, mayflies, caddis flies and midges. The decreasing length of summer nights at high latitudes reduces foraging opportunities and thereby caloric intake, which potentially limits the distribution of these mammals.

Bats may roost in multiple areas depending on the time of day, their pregnancy status, prey availability, etc. Because many bats choose to roost or nest in hidden areas such as closets, attics or the eaves of buildings, occasionally humans come into contact with bats.

Rabies among Bats in Alaska

Unlike some regions in the Lower 48, rabies virus is NOT well-established or enzootic among bat populations in Alaska. Since August 1973, 147 bats from around the State have been evaluated for rabies virus; only a single little brown bat obtained from Ketchikan in the Tongass forest area in 1993 has tested positive for rabies. The bat, found on the ground crawling and squeaking, was confirmed by the Centers for Disease Control and Prevention (CDC) to have had the silver-haired bat variant of rabies.

Manifestations of Rabies in Bats

- Fly during daytime (common)
- Remain in "open" night roosts or in atypical places by day
- Roost alone
- Fly slowly or uncertainly, sometimes blundering into objects while in flight
- Unable to fly; paralysis and weakness leading to tremors and vocalization or death
- Move in an uncoordinated manner or thrash on the ground
- Animals may be thin, dehydrated and hypothermic
- Noise elicits squeaking from infected bats - healthy bats are quiet and motionless

Other potential disease concerns

Histoplasmosis is a respiratory disease caused by a fungus that grows in soil enriched by bird and sometimes bat droppings. The vast majority of human cases are found in the Ohio and Mississippi River valleys and adjacent areas where warm, humid conditions favor fungal growth. Cases of histoplasmosis have NOT occurred in Alaska.

Experimental work has shown that bats can harbor other potential zoonotic agents, such as *Salmonella spp.*, *Toxoplasmosis gondii*, and Ebola virus; however, bats have NOT been implicated as the direct cause of a human case of these diseases to date.³

Recommendations and Resources

1. In Alaska, rabies post-exposure prophylaxis is NOT commonly indicated for persons who come into contact with bats. However, each exposure should be carefully investigated as for other potential rabies exposures, keeping in mind the geographic location of the incident, the circumstances of the exposure (e.g., bite, scratch, sighting), and the behavior of the bat, to determine if rabies post-exposure prophylaxis is indicated. The Section of Epidemiology is available 24 hours a day for consultation on what constitutes an exposure or to answer any other rabies-related questions.

8 AM to 5 PM Mon. - Fri. (907) 269-8000
All other times (800) 478-0084

2. Controlling rabies in bats by programs designed to reduce bat populations is neither feasible nor desirable.⁴ However, there are numerous resources with information on appropriate methods for excluding bats from a residence or another building.

www.batcon.org (Bat Conservation International)
www.cdc.gov/ncidod/dvrd/rabies/bats_&_rabies/bats&htm

3. If you see a downed bat exhibiting unusual behavior, contact local animal control, Alaska Department of Fish and Game, or the Section of Epidemiology to assist in submitting the animal for testing and to determine if an exposure has occurred.

References

¹www.state.ak.us/local/akpages/FISH.GAME/notebook/smgame/bats.htm

²Parker DI, Lawhead BE, Cook JA. 1997. Distributional limits of bats in Alaska. *Arctic* 50(3):256-265.

³Hoar BR, Chomel BB, de J. Arguez Rodriguez F, Colley PA, 1998. Zoonoses and potential zoonoses transmitted by bats. *J Am Vet Med Assn* 212(11):1714-1720.

⁴CDC. Compendium of Animal Rabies Prevention and Control, 2001. National Association of State Public Health Veterinarians. *MMWR* 50(8):9.

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