

BEST PRACTICES



Townsend's Big-Eared Bat (*Corynorhinus townsendii*)

Bats are the only mammals capable of true flight. They play an essential role in our ecosystem function and our economy. Bats are estimated to contribute nearly four billion dollars annually to the U.S. agricultural industry by preying on insects considered to be agricultural pests. The Townsend big-eared bat can be found from British Columbia, throughout the western U.S. and into central Mexico. This bat has been documented in every county in Washington State.

My, what big ears you have...

Townsend big-eared bats get their name from their very large ears. They are a medium-sized bat with very long ears, reaching a length of 1.5 inches (38mm). When their ears are laid back, they extend to the middle of its body! Their large ears are a specialized adaption specifically for feeding on moths, and, unlike other bats, they echolocate through their nostrils verses their mouth. They have a “softer” echolocation call best for capturing their moth prey, as the moths they feed upon are unable to hear the softer echolocation signals.



While most habitats in Washington are suitable for feeding, Townsend's distribution is most influenced by suitable roosting areas in locations near food and water. Roosting habitat and water in arid regions are the limiting factors for this bat's survival. These bats are found in large tree habitats, lowland conifer-hardwood forests, ponderosa pine forests and also in riparian areas around streams, lakes and wetlands.

This species uses snags and other hollow trees, as well as caves and built structures for roosting. They are moth specialists consuming insects gathered in flight and from foliage. Like all bat species found in Washington, they are insectivores (eat insects), foraging at dusk, night and dawn. When insect populations change, these bats will forage on the most available food source. Like many insect-eating bats they obtain most of their daily water needs through their food intake. Their remaining water needs are met by drinking water skimmed in flight from ponds, streams and wetlands.

Suitable roosts are essential for bat survival, provide hiding, resting, reproduction, nursery and hibernation areas. Night roosts differ from daytime roosts as they are used short-term for digesting food, resting and seeking refuge from predators. Longer term roosting is essential to meet temperature requirements. Temperature is a key factor for survival and development of young in nursery roosts and for winter hibernation.

All of our bat species give birth in the summer, usually to one pup. In winter, when prey is most scarce, bats hibernate using a life strategy called stupor. During hibernation they become inactive, lowering their body temperature and metabolic rate to conserve energy throughout winter hibernation.

Habitat loss and human disturbance are the major factors impacting bat populations. The loss of older forests and snag habitat used for roosting sites, use of pesticides impacting food sources, human disturbance of roosting

and hibernation sites, disease and loss caused by wind turbines present challenges for Townsend's big-eared bat and all bats in general. For more information on bat conservation, visit wdfw.wa.gov/publications/01504

***Echolocation**, is also called bio-sonar. Several kinds of animals emit calls, then listen to the return echoes to locate and identify objects. Echolocation is used for hunting and for navigation.*

Source: Stream Team News, Spring 2018