Spotlight on Species

Drawing courtesy of Larry Munro

Bats of the South Okanagan-Similkameen

There are 16 different species of bats in British Columbia. Fourteen of these species are found in the South Okanagan and Similkameen which makes this region home to the richest bat diversity in all of Canada. The warm, arid climate and abundance of bat-friendly habitats such as grasslands, ponderosa pine forests, valley bottom riparian areas and rugged rock cliffs account for the high diversity of bat species in this area.

What is a bat?

Bats are mammals just like us. They are warm-blooded, have hair, bear live young, feed their babies milk and have five fingers and toes. Bats are the only mammals that can fly, They comprise the *chiroptera* order of mammals which means *hand wing* in Greek. They are nocturnal foragers feeding at night and roosting or settling to rest by day. During cold weather or times of scarce food supply, some bats go into a state of torpor (a form of hibernation) where they can lower their body temperature and metabolic rate. Some other bats will migrate to warmer, sunnier climates during the winter months. There are over 1,100 known species of bats in the world, living in every continent except Antarctica.

Bats are not blind

All bats can see but some use a special sonar system called echolocation. These bats make high frequency calls either out of their mouths or noses and then listen for echos to bounce from the objects in front of them. They are able to form pictures in their brains by listening to the reflected sounds.

Why do bats hang upside down?

Drawing courtesy of Larry Munro

A bat needs to hang upside down in order to drop into flight and to roost (rest or sleep). Its hind limbs are rotated 180 degrees so that its knees face backwards. Hanging upside also helps to conserve energy and to protect bats from predators as they can access spaces that other animals cannot reach such as the ceilings of caves and the slim branches of trees.

What do bats eat?

Insects: 70 per cent of all the bats in the world eat insects and many of them use echolocation in order to find insects. Many insect- eating bats can eat more than 1,000 mosquito-sized insects in an hour.

Fruit: these bats live in tropical climates and have very good eyesight and sense of smell

Nectar: these bats have long noses and tongues for harvesting nectar

Carnivores: these bats have sharp claws and teeth

Vampires: a few bat species found in Latin America eat only blood .

Bats in the vineyard: a benefit

Bats are a natural pest control and a free source of fertilizer- bat guano.

Spotted bats feed exclusively on moths.

A single bat can eat 20 to 25 moths in one meal. A colony of 100 bats could eat up to 2500 moths in one night.

I am eating insects not grapes.

Photo courtesy of Daniela Rambaldini

How can you attract bats to your vineyard?

Install bat boxes. Contact OSCA at 250-492-4422 or outreach@osca.org to arrange

Minimize use of pesticides

Use a cover crop of native plants to attract native insects

Maintain antelope brush shrub steppe grassland habitat around your vineyard

Photo courtesy of Mark Brigham

The Pallid Bat is considered to be one of the rarest mammals in British Columbia. In all of Canada, it is found only in the South Okanagan and Similkameen valleys.

The Pallid Bat

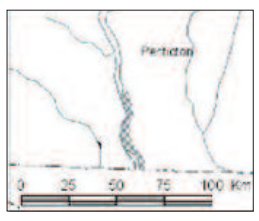
Latin name: Antrozous pallidus

Conservation status: Federally listed as Endangered. **RED** Listed in BC (endangered or threatened).

Characteristics and information

The Pallid Bat is the second largest bat in British Columbia with a body that measures 11.5 cm and a wingspan of 35 cm. Their fur is creamy white on the underside and pale yellow on the back. It is often referred to as the ghost bat as it has a furry white abdomen. The young are born in late May to mid-July. Unlike most bat species, the Pallid Bat commonly bears two young.

Habitat and distribution



Pallid Bats live in arid desert areas, often near rocky outcrops and water. In the Okanagan and Similkameen Valleys, they are restricted to low elevation grasslands and ponderosa pine forests in the vicinity of cliff faces. They forage over tracts of open grassland, sparsely covered with shrubs and often bordered by ponderosa pines; gravel roads may also provide foraging corridors.

Food habits

Pallid Bats are late feeders, leaving day roosts about 45 minutes after sunset. They feed on moths, beetles and other bugs and can eat up to 100% of their body weight each evening.

Pallid bats usually glean prey from the ground and the foliage of trees and shrubs and occasionally pursue insects in the air using echolocation. They consume large invertebrates including beetles, crickets, grasshoppers, moths and lacewings. There are records of this bat preying on small lizards and a rodent.

While hunting, Pallid Bats fly slowly, close to the ground, with rhythmic dips and rises. While hunting prey on the ground it listens for their rustling sounds.

Interesting facts

After feeding, Pallid Bats cluster together at the night roost and become torpid (lower their body temperature and metabolic rate) for several hours if temperatures are cool. A social bat, this species emits a variety of vocalizations for communicating in a colony – many of which are audible to the human ear. Pallid bats produce a musky skunk-like odour from glands on the muzzle which may be a defensive mechanism for repelling predators.

Threats

Extensive land development in the South Okanagan-Similkameen has eliminated or fragmented their habitat (low elevation ponderosa pine forests, grasslands and riparian areas). Heavy grazing may reduce availability of ground-dwelling insects. Pallid bats are very sensitive to human disturbance and are susceptible to cat predation.

What you can do to help bats

- ✓ Avoid the use of pesticides, particularly near wetlands and riparian areas.
- ✓ Protect known roosting sites from disturbance.
- ✓ Maintain water levels in ponds as sources of drinking water and foraging areas. Avoid filling or draining wetland areas.
- ✓ Discourage free-roaming domestic cats, especially near potential bat habitat.

Who are the bats of the South Okanagan - Similkameen?

All of the bat species in the South Okanagan Similkameen are insectivorous. They do not eat fruit. This is great for orchardists, vineyard owners and farmers as bats are a natural insecticide.

Of the fourteen bat species in the South Okanagan Similkameen, six are currently considered at risk or threatened. These include:

Townsend's big-eared bat
Pallid bat
Western small-footed myotis
Spotted bat
Fringed myotis
Western red bat

Photo courtesy of Wade Alcock

Townsend's big-eared bat.

Canada

South Okanagan Similkameen CONSERVATION PROGRAM

OKANAGAN SIMILKAMEEN CONSERVATION ALLIANCE