

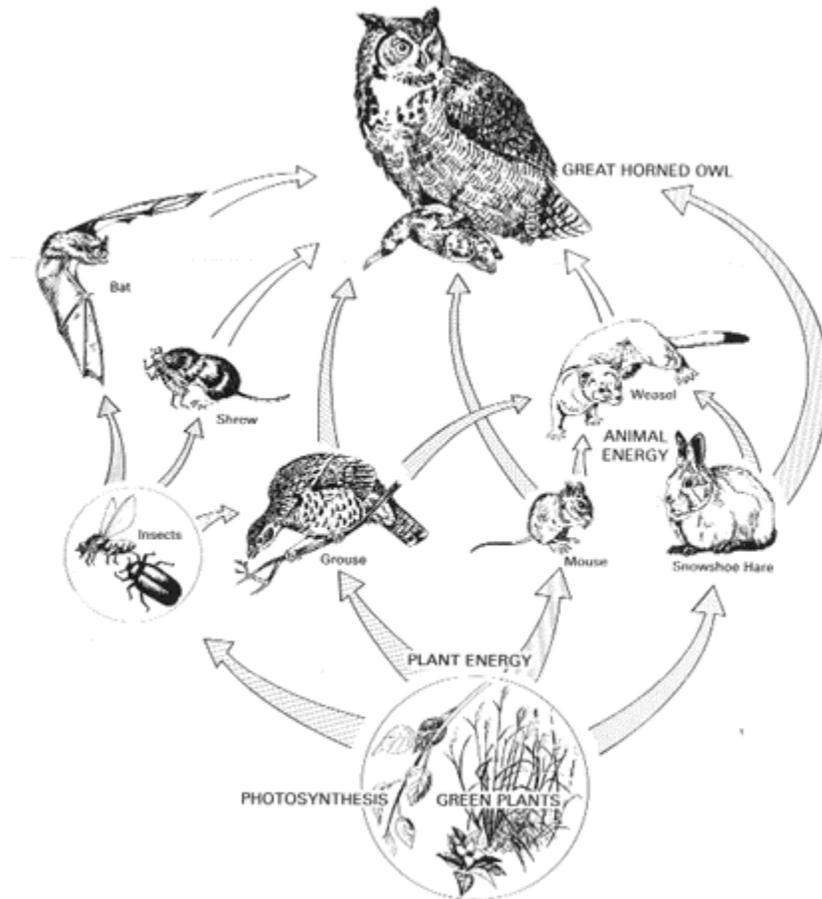
# Alberta's Wild Species



## Owls and the Food Chain

## Perched at the top of the food chain

All owls are predators; they depend on other animals for food. However, very few predators feed on owls (except sometimes other owls). In fact, owls often eat other predators, such as weasels, bats, shrews and insect-eating birds. Therefore, owls hold a position at the top of the food chain. Like many predators, they feed from more than one link on the chain or web.



Because most species hunt at night, owls feed upon a different group of prey species than raptors that hunt by day. Hares, weasels and many species of mice are more active at night and are exposed to predation at that time. Hawks, eagles and falcons may occasionally take these species in the early mornings or late evenings, but spend most of their time hunting squirrels, grouse, songbirds and other diurnal animals.

## Population and food availability

As with most wildlife, owl numbers are largely dependent upon the amount of food available, particularly when young are being raised. Since most owls feed upon a

variety of animals, owl abundance is not limited by the rise and fall in numbers of any one prey species. If a preferred prey species should become scarce, owls will switch to others. However, the snowy owl is dependent upon lemmings for its steady diet when it is raising young on the Arctic tundra in spring and summer. In years when lemmings are scarce, snowy owls will actually reduce the number of eggs laid, or not nest at all.

## Prey population control and health

Like all predators, owls play an important role in nature by removing from prey populations individuals that can be considered surplus. Most wildlife populations produce more offspring than their habitats can support. These surplus individuals eventually die of starvation, disease, or predation. Although starvation and disease may affect individuals throughout the population, predators tend to remove the weaker members of a population that are easiest to catch and least able to cope with the rigors of their environment. In so doing, predators help maintain the health and viability of prey populations.

## Owl pellets and species research

Like all birds, owls have no teeth to chew their food. Their food is usually swallowed whole or in large chunks. In the stomach, the indigestible bones, fur and insect exoskeletons are formed into oval-shaped masses, called pellets. These pellets cannot be passed out the digestive tract, and are instead passed back up through the mouth (regurgitated) as the bird roosts during the day. Hundreds of owl pellets may be found under a perch or nest.

Biologists learn much about an owl's diet by examining its pellets. The kinds of animals eaten can be identified by the skulls, other bones and hair present in the pellets. Such studies provide information about changes in feeding habits that occur from one season to the next, as well as some of the species of small animals that live in an owl's habitat. Fossilized pellets have been used to identify food eaten by the now extinct great barn owl.



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