



HCTF Education Habitats at Home

Learn how to create habitats that bring nature into your own backyard!

How to.. Attract Backyard Beneficials



Purpose

Every animal in nature needs to eat and to avoid being eaten. Without predators to keep their numbers in check, prey animals will often multiply in great numbers with great appetites. In our backyards, we consider them pests because they feed on our gardens, our crops, and (in the case of mosquitoes) even on us! There's no better way to combat a pest invasion than to attract the beneficial predators that have evolved to eat them. Learn how to make your yard a haven to beneficials with these tips.

Food

As many of the adult stages of beneficial insects feed on pollen and nectar, they will be attracted to an ongoing supply of flowering plants. Once these insects begin to feed in your garden, they will stay and lay their eggs, establishing an ongoing cycle of beneficials. Early season and late season blooming plants are especially important as they provide food when sources are scarce. Learn about what native plants bloom in your area as they will be hardy and adapted to your climate. Region-specific native plant lists can be found in the Regional Naturescape Guides available for download [here](#).



Water

Keeping water available during dry spells is an important way to keep what you have attracted around. This is especially true of gardens found in more arid climates. Beneficial creatures will seek out moisture and will stay where it is available. It's important to change the water in containers, such as bird baths, frequently, in order to prevent conditions where mosquitos may breed and to keep the water clean and healthy.



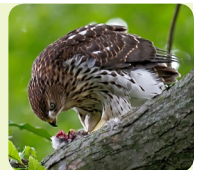
Habitat

Make beneficials feel at home by offering shelter made just for them. Consider installing a **bat box** or a **bird nesting box** to attract these insect eaters. **Toad homes** offer cool damp spaces for amphibians, while a **rock pile** in a sunny spot will provide a basking area for reptiles. **Mulching** your plants with leaf litter will maintain steady moisture and temperature for your plants while sheltering beneficial insects and other invertebrates. Learn more about building wildlife shelters in the Naturescape BC Provincial Guide, available for download [here](#).



Insecticides and poisons

Insecticides can kill pest insects and beneficial predators alike, so they aren't recommended. If you do plan on using an insecticide, use one which targets specific types of insects, leaving others unaffected. Insecticidal soaps are a better choice for large-scale infestations as direct contact with the pest is required, and will not leave a long-term poison to harm other insects. The use of **poisons** to control rodents can have serious consequences, killing beneficial predators such as hawks and owls when they eat poisoned pests. Keep wildlife safe by using other methods, such as snap traps and by eliminating pest access points and food attractants.



Beneficials for sale

Biological control or *biocontrol* is a way to manage pests by introducing their natural predators. A variety of beneficials, including predatory mites, parasitic wasps, nematodes, and ladybugs can be purchased online and from garden centres. They can be released in the garden to establish a predator population. Each type of predator has a different diet, so first identify which pests are doing the damage before selecting a beneficial.



Companion planting

In a nutshell, it's a gardening strategy that increases crop productivity by planting mutually beneficial plants next to each other for a number of different reasons, including pest control, pollination, and providing habitat for beneficial insects. For example, some plants help repel unwanted pests while others produce a surplus of nectar and pollen that can increase the population of beneficial insects. West Coast Seed Company has a helpful list of companion plant pairings [here](#).



Backyard Beneficials

Insects

From beetles to butterflies, insects come in many shapes and sizes. While they may look very different, they have some basic features in common. All insects have an exoskeleton and a segmented body with three main parts: the head, thorax, and abdomen. Adult insects have six legs. Here are some beneficial insects:

1. **Ladybugs** are a family of beetles called *Coccinellidae*. They are well known for their round shape, yellow, orange, or red colouring with small black spots on their wing covers. Their larval (immature) form is elongated and covered in small spike running down the body (1a). They consume vast quantities of aphids, as well as mealybugs, scale, and thrips.
2. **Dragonfly** is an insect belonging to the order *Odonata*, which also includes the similarly shaped damselfly. Adults are characterized by large eyes, two pairs of strong, transparent wings, and an elongated body. These predators feed on flying pests such as flies, gnats, and mosquitoes, attacking swiftly on the wing.
3. **Lacewings** belong to the order *Neuroptera*. Adults have four wings, usually similar in size and shape, with a pattern of veins. A nocturnal bug, it has a voracious appetite for aphids and other slow-moving pests, hunting under the cover of darkness. As larvae they have strong jaws adapted for piercing and sucking.

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1a



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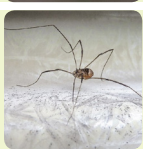


Spiders and other Arachnids

Arachnids are similar to insects in that they also lack internal skeletons and have segmented bodies. Unlike insects, arachnids have only two body parts- the cephalothorax and abdomen- and they have eight legs.

1. **Harvesters**, also known as “daddy longlegs”, have exceptionally long legs relative to their body size. Unlike spiders, they have no venom. They make a fast meal out of aphids, caterpillars, flies, mites, ticks, slugs, and snails.
2. **Jumping spiders** are members of the family *Salticidae*. They are small, active day-time hunters with strong legs and large eyes set in rectangular faces. They have exceptional vision and are skilled hunters of pests including fruit flies, fungus gnats, and whiteflies as well as some larger insects.

1



2



Reptiles and Amphibians

Reptiles (snakes, lizards, etc) have scales and lay their eggs on land. Many prefer drier environments. Amphibians (frog, toads, newts, etc) have moist skin. They breed and live the first part of their lives in water. On land, they require moist environments.

1. **Western terrestrial garter snake** (*Thamnophis elegans*) has a yellow, light orange, or white back stripe, flanked by two stripes of the same color, on a dark body. Diet includes slugs, leeches, and small rodents. They are harmless to humans, but can emit a foul-smelling liquid if handled.
2. **Western toad** (*Anaxyrus boreas*) is a large toad with a cream-coloured stripe and dark blotches on its dusky gray-green back. Diet includes sow bugs, grasshoppers, ants, beetles, and slugs.

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2



Bats

All bats in Canada are insectivores, meaning that their diet consists of insects and other arthropods. A single bat eats thousands of insects a night, including mosquitoes. There are 16 species of bats in BC and half of them are considered vulnerable or threatened. Consider creating bat roosting habitat by building a bat-house in your yard. Information can be found at bcbats.ca.

1. **Big brown bat** (*Eptesicus fuscus*) is found across BC.
2. Example of a bat house

1



2



Birds

1. Garden pest insects are usually at their peak in late spring and early summer. At the same time, many birds are hunting nutritious insects for their newly hatched young. Consider installing nest boxes sized for insect-eating birds, such as this House Wren (*Troglodytes aedon*), to attract them to your yard.
2. Birds of prey also need to feed themselves and their families. Destructive rodents are a popular prey. Owls such as this Barred owl (*Strix varia*) hunt at night when rats and mice are most active. Owls do not build their own nests and often nest in tree holes or nest boxes.

1



2



Identify your backyard finds and more at bugguide.net an online community of naturalists who enjoy learning about and sharing observations of insects, spiders, and their kin.