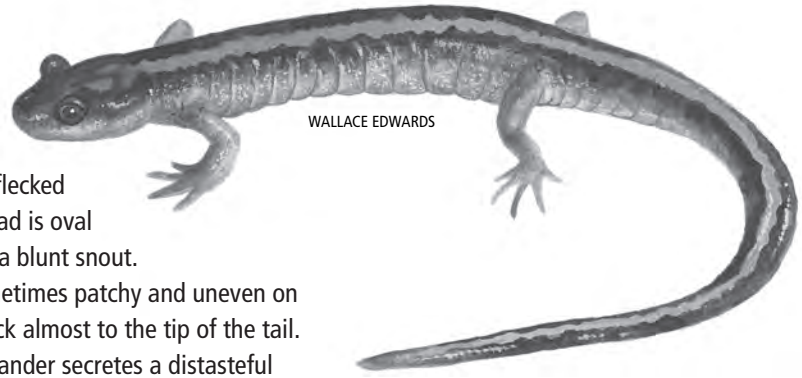
bc salamander watch

factsheet

4 Long-toed Salamander

Ambystoma macrodactylum

LENGTH: 8 TO 12CM



WALLACE EDWARDS

YELLOW-LISTED SPECIES MANAGED THROUGH ECOSYSTEM MANAGEMENT ARE SPECIES THAT ARE SECURE, WELL DISTRIBUTED IN APPROPRIATE HABITAT AND WILL SURVIVE IN HABITATS THAT ARE MANAGED FOR REPRESENTAT-IVENESS AND CONNECTIVITY.

At a Glance

The Long-toed Salamander is a slender salamander, about 8.5 centimetres long, with dark grey to black skin flecked with golden speckles. The head is oval with large bulbous eyes and a blunt snout. A yellow to green stripe, sometimes patchy and uneven on the edges, runs down the back almost to the tip of the tail. When threatened, this salamander secretes a distasteful poison from granular glands on its back and tail. The little scars often found on the tail prove that this defence works well against small predators — after a little nibble most predators will find a tastier snack! Sometimes, a salamander may lose its tail in defence.

This amphibian is named for the long fourth toe on each hind foot. The underside often has a pinkish tone, and the belly, legs and sides are flecked with white. Twelve *costal grooves* (vertical furrows that look like ribs) mark each side of the body. The smooth skin appears wet — most salamanders produce a mucous-like secretion that keeps them from drying out on land, and acts as a "wetsuit" underwater to control the amount of water soaking through the skin.

Larvae are translucent grey or light brown with dark flecks and a silvery belly. They have large heads, usually one-third the length of the body, and eyes that look out to the sides. Large feathery gills stick outwards on both sides of the head.

Present range of the Long-toed Salamander in British Columbia

Home Sweet Home

The Long-toed Salamander makes its home in all kinds of habitat ranging from wet rainforests and cold mountain meadows to dry sagebrush prairie. In the breeding season, large, shallow lakes and ponds with boggy edges and no predatory fish are best. On land, valley bottoms and moist forests not far from water are preferred. This secretive salamander spends most of its time holed up underground. Since it is not a very skilled digger, it relies on abandoned rodent burrows or natural nooks and hollows in the forest floor.

This is the Life

Long-toed Salamanders gather at breeding ponds before the ice has completely disappeared. Swimming ahead of the female, the male deposits a little packet of sperm for her to pick up with her cloaca. Shortly after breeding, up to 400 eggs are laid underwater close to shore. Eggs are laid one by one or in small clumps of up to 30, on the bottom of the pond or attached to plants. Each egg is brown on top and cream-coloured below, and has a double membrane and a thick coat of jelly. Hatching usually takes place two to three weeks later, although this depends on water temperature and can take longer at higher elevations.

Larvae grow quickly, developing front, then back, legs. When they reach about 7 cm, the larvae transform into terrestrial juveniles. These salamanders have lungs and have absorbed their fins and gills. They are now ready for life on land, and reach sexual maturity two to five years later.

In extreme environments, such as at high elevations or far north where water is colder and development slower, the larvae may over-winter in breeding ponds and transform into terrestrial juveniles the following summer or even the year after that. Adults over-winter underground, below the frost line. Long-toed Salamanders may live for six to ten years.

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no kidding!

One of the neatest things about the salamanders is that they can regenerate body parts — this means that if a leg or tail becomes lunch for another critter, the salamander can simply grow it back!

What's long, wet and dark that is both a lunchbox and a weapon? A Long-toed Salamander's tail! The amazing tail of this colourful amphibian serves two purposes; the granular glands in the tail can store fat for the salamander to use as food during hard times, as well as serve up a sticky poison to any predator that tries to take a bite!

Many species of the Mole Salamander family have sticky poison secretions. In some species, this gluey substance can be as strong or stronger than rubber cement often sticking predators to themselves or to the ground for up to 40 minutes while the salamander makes a clean getaway.

What's on the Menu?

Long-toed Salamanders enjoy the typical salamander diet of insects, tadpoles, worms, beetles and small fish. Unlike tadpoles, salamander larvae are carnivores and like to munch on insects, zooplankton, and other amphibian larvae. In turn, adults and larvae are on the menu for a variety of aquatic insects, birds, fish, bullfrogs and garter snakes.

Where and When

Long-toed Salamanders are found in western North America in a wide variety of habitats and elevations. They range from the Alaskan panhandle throughout B.C. and down the eastern slopes of the Rocky Mountains in Alberta. They also range south through Washington and Oregon to northern California, and can be found as far east as central Idaho and the eastern slope of the Rockies in Montana.

Although mostly nocturnal (night-time) hunters, these elusive salamanders can be found under rotting logs or leaves on rainy days. Throughout the year, adults hole up underground, but can be spotted in April and May hiding under rocks and logs at the edges of breeding ponds. Juveniles can be seen as they leave the pond for burrowing sites in late summer or fall.

How They're Doing

Long-toed Salamanders are widely distributed in B.C. and appear to be doing well. They are on the provincial Yellow List of species which are not considered to be at risk and are managed at an ecosystem level. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has designated this species as Not At Risk. The ability to use seasonal, newly formed or recently disturbed breeding ponds and a wide variety of habitats may make this species more adaptable to disturbance than many amphibians. Main limiting factors seem to be the introduction of predatory fish to breeding ponds, and road-building separating breeding and terrestrial habitat. Forestry and mining practices and water pollution can also affect Long-toed Salamanders.

Along with all of B.C.'s native amphibians, the Long-toed Salamander is protected under British Columbia's *Wildlife Act*.

How You Can Help

You can help out by learning more about this colourful amphibian, and by sharing your knowledge with others. Find out how you can help conserve wetland habitat for all of B.C.'s amphibians by contacting your local naturalist group or organisations such as Naturescape, Wetlandkeepers and Wild BC. Keep track of any sightings of salamanders and other amphibians and submit your findings to BC Frogwatch. Your sightings help biologists map important amphibian habitat so changes in populations, and the environment, can be monitored over time.

You can find out more about BC Frogwatch, the Ecosystem Branch and the Conservation Data Centre at	**http://www.env.gov.bc.ca/wld**

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