



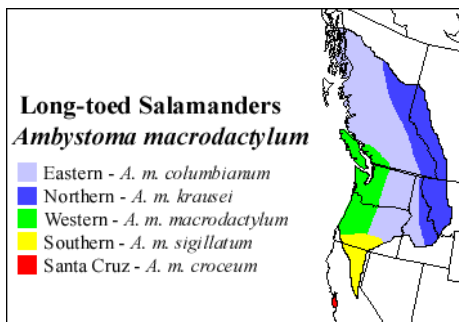
Klamath Network Featured Creature

September 2013

Long-toed Salamander (*Ambystoma macrodactylum*)

General Description: *Ambystoma macrodactylum*, is a medium sized salamander belonging to the mole salamander family, Ambystomatidae. There are five subspecies of the long-toed salamander; the eastern (*columbianum*), Santa Cruz (*croceum*), Northern (*krausei*), Western (*macrodactylum*) and Southern (*sigillatum*) long-toed salamander. The common name comes from the unusually long fourth toe on the hind limbs. Bodies are grey-brown to black with yellow to olive green dorsal stripe. The dorsal stripe is irregular and often broken into spots. These salamanders have a broad head and rounded snout. Their sides have blue to white speckles and distinct costal grooves. Tails are laterally compressed.

Distribution: Populations of long-toed salamanders occur from southeastern Alaska across British Columbia, southward through Washington, Oregon, and the Sierra Nevada of California; across the Rocky Mountains into eastern Alberta, western Montana and central Idaho. The five subspecies of *Ambystoma macrodactylum* vary in geographic location.



map:
<http://www.npwrc.usgs.gov/resource/herps/amphibid/species/ambymac.htm>

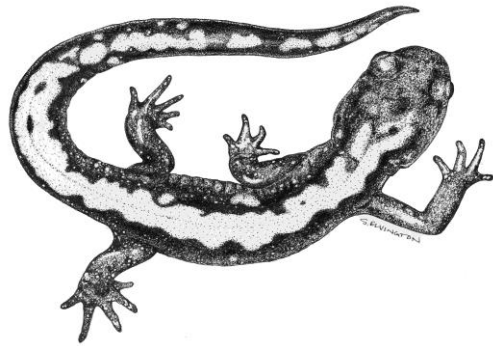


Illustration: Sarah Elvington

Ecology: Long-toed salamanders are found in a variety of habitats, including urban and disturbed areas. Habitats include Coniferous forests, Western hardwood forests, sagebrush grasslands, mountain grasslands, mountain meadows, wet grasslands, and alpine meadows. Eggs and larva are found in wetlands, ponds, lakes, slow-flowing streams, and a variety of seasonal pools. Long-toed salamanders are generally absent from water bodies where fish are present. Adult salamanders spend most of their lives underground, except when migrating to and from breeding sites, because of this behavior; these salamanders are rarely seen outside of breeding season. Long-toed salamanders depend on the spaces in between rocks, roots, rotting wood, or abandoned animal burrows for shelter. While active on the surface in the spring, they depend on decaying logs, loose bark, logs, and other structures that retain moisture, for cover. Long-toed salamanders are vulnerable to Ranavirus, as was seen in LAVO in 2009 (http://science.nature.nps.gov/im/units/klmn/Monitoring/vs/Lakes/Documents/Resource%20Briefs/Lakes_RB_Ranavirus_2009.pdf), however surveys of LAVO lakes in 2013 saw no indication of current ranavirus infections.

Life Cycle: Long-toed salamanders breed earlier in the season than any other amphibian. Breeding and egg laying occur underwater. Males arrive first to breeding site competing with other males and awaiting the arrival of females. Breeding time varies depending on elevation and site conditions, higher elevation breeding taking place later. Eggs are deposited in shallow pools, singly or in clusters, and may be attached to vegetation; the underside of logs or even bare sediment. Eggs hatch in 2-3 weeks; timing may depend on water temperature. Hatchlings are 8-12mm and have rod like structures on each side of the head, called balancers. Larvae have large gills and a high tail fin. Larval period length depends on site conditions such as food resources and temperature. Metamorphosis usually takes place in the summer or fall of the first year, although at high elevation sites larvae may overwinter and transform the following year.



photo: Klamath Network staff

Resources and Further Reading:
www1.dnr.wa.gov/nhp/refdesk/herp/html/4a_mma.html

http://www.amphibiaweb.org/cgi-bin/amphib_query?where-genus=Ambystoma&where-species=macrodactylum