

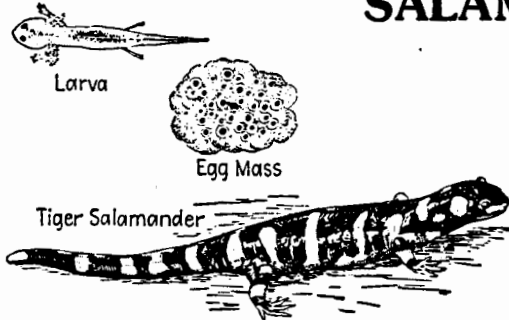
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Natural History Notes

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SALAMANDERS



Have you ever turned over a log or rock and seen a small lizard-shaped creature hiding in this cool, damp, dark place? This small sluggish animal is a distant relative of the lizard but is more closely related to frogs. The familiar frogs and less familiar salamanders are reptiles along with lizards and snakes. They are all cold-blooded. But the frogs and salamanders belong to a smaller group of animals called amphibians. As the word amphibian suggests, they spend at least part of their lives in water. They have a glandular-like skin that lacks scales, feathers, or fur. Salamanders belong to an even smaller group of animals called caudata, meaning amphibians with tails, while frogs and toads, as adults, never have tails. Salamanders have no vocal cords and are completely voiceless, unlike their noisy frog relatives. They resemble the lizard in body form but salamanders lack claws on their toes, scales, and external ear openings.

Salamanders can be terrestrial, aquatic, or both and some species live in trees while others burrow underground. Some species spend most of their lives along the edges of springs or in small spring-fed streams. Most of our Wisconsin adult salamanders live on land except during the breeding season when they seek out quiet waters for mating and egg laying. During the cold months they hibernate beneath logs or burrow in moist soils to escape the freezing temperatures. These reclusive creatures are nocturnal, meaning they are only active at night, and they avoid bright light. Salamanders' skin must always be kept moist, so during exceptional dry periods they will burrow into the soil or seek out swampy wet areas awaiting rain showers.

Courtship and reproductive patterns of salamanders are somewhat unique when compared to other groups of animals. In spring after the ice and snow has melted the males migrate to breeding ponds shortly before the females. Sometimes large numbers of salamanders will congregate in small ponds where they swim and dive, frequently coming up to gulp air. They rub and nose and push each other around, often causing the water to boil. Sometimes up to 100 individuals may be involved. This activity apparently stimulates them in preparation for mating activities which follow. There is no internal fertilization of eggs by the male. Instead, he deposits a series of spermatophores which are small stump-shaped jelly-like structures containing sperm. The female picks up the spermatophore with her genital opening. The sperm is then stored by the female for fertilization of her eggs.

The eggs are about 1/8 inch in diameter and are fertilized as they are laid. Eggs are usually laid in a jelly-like mass and attached to plants or debris in quiet water and hatch in three to four weeks, depending on the temperature. The newly hatched salamander larvae are about 1/2 inch long. They are similar in appearance to tadpoles, having gills and tails. Slowly the larvae grow and develop legs as they transform into adults. When they grow to about four inches in length they will be ready for life on land, returning to the water to reproduce the next spring.

There are several species of salamanders here in Wisconsin, the more common being the tiger salamander, spotted salamander, and the red-backed salamander. They eat a variety of insects and worms which they encounter while burrowing. Some salamanders also feed on slugs, snails, small frogs, and plant materials. Each species has different habits and habitat needs. Because of their reclusive nature and need for moist dark places they are not often seen. Large rotting logs and stumps in our forests provide important habitat for salamanders. Fallen trees and logs are not just trash in the forests but homes for many creatures. This is another example of the intricately woven web of life.