

Tiger Salamander

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Natural History

The tiger salamander (*Ambystoma tigrinum*) is the largest terrestrial salamander in North America, and often considered the largest terrestrial salamander in the world. They have a large range, covering much of the US, Mexico, and southern Canada. Their population is considered “least concern” by the IUCN. Barred tiger salamanders (*A. mavortium*), California tiger salamanders (*A. californiense*), and plateau tiger salamanders (*A. velasci*) were all once considered subspecies of the tiger salamander but are now recognized as distinct subspecies. Like other salamanders, juveniles (larvae) are completely aquatic with external gills. As they mature, they metamorphose into their completely terrestrial adult form and will only return to water for breeding. Tiger salamanders are nocturnal burrowers, and spend a large amount of their time up to 2 feet underground near seasonal freshwater pools, ponds, or slow moving streams.

Characteristics and Behavior

While fairly elusive in the wild, captive tiger salamanders often make great pets for amphibian enthusiasts. They are considered hardy and interactive compared to other salamander species. Keepers report that these salamanders tend to be fairly easy to tame, and will often accept hand feeding. It may not be legal to keep native species or subspecies, so ensure the animal you are looking at acquiring is legal in your area prior to purchase.

When handling amphibians, vinyl gloves should be worn as the saltiness of our skin can be harmful to amphibians. Latex should be avoided due to adverse effects in amphibians. In general, salamanders are hands-off pets. Excessive handling can cause stress and overheating. Additionally, tiger salamanders produce toxic substances in their skin that are poisonous if ingested. Tiger salamanders are not considered dangerous to humans, but their toxicity should be considered when deciding on a tiger salamander as a pet. Cats and dogs may also be at risk of ingesting toxins if the salamander escapes. For this reason, tiger salamanders are considered intermediate level amphibians, and are not good pets for children.

Lifespan

12-15 years.

Adult Size

9-10 inches with 13+ reported.

Housing

Larval tiger salamanders are completely aquatic and have completely different housing requirements than adults. This guide will only cover housing for adult salamanders. Adult tiger salamanders need at least a 30 gallon enclosure with a tight fitting lid to prevent escape. Glass terrariums are acceptable, but if maintaining humidity becomes difficult, PVC enclosures or plastic bins may be a better option. Being burrowing animals, tiger salamanders need substrate as deep as can be provided. In the wild, these animals have been found 2 feet underground. In captivity, they need a minimum of 4 inches of substrate, but more is better. Coco fiber (coir) or reptile safe top soil such as ReptiSoil are both acceptable options for tiger salamanders. It is also recommended to provide a layer of leaf litter, as this offers more cover and enrichment. Bark, fir, and large particles should be avoided because tiger salamanders lunge for their food and can ingest these. Peat moss should also be avoided because it is too acidic. Cheap soil pH test kits can be purchased from many hardware or garden stores. It is a good idea to check the pH of your substrate prior to adding the animal to ensure it is not too acidic (numbers lower than 7.0 are considered acidic). Plants (live or fake), caves, logs (corkwood is a great option), and rocks should all be added to provide more cover and enrichment.

Lighting

It is unclear if tiger salamanders benefit from UVB lighting. Other amphibians and reptiles require UVB to synthesize vitamin D3 in their skin. Vitamin D3 is needed for calcium absorption and prevention of metabolic bone disease. Tiger salamanders are nocturnal and spend much of their time underground. Therefore, most keepers don't recommend UVB light for tiger salamanders. However, there is evidence that other amphibians suffer from poor calcium absorption and metabolic bone disease from a lack of UVB light. It may be beneficial to provide low levels of UVB light, as long as there are options for the animal to escape from the light. The Arcadia T5 7% ShadeDweller or Arcadia T8 6% Forest can be used to provide a maximum UVI of 1-2. If UVB is being provided, it is important to turn this light off at night and ensure that there are plenty of plants and other hides available for the salamander to choose to get away from the light. The lamp should cover approximately $\frac{1}{3}$ of the animal's enclosure. It is good practice to mimic the natural photoperiod that is occurring, either manually or with timers.

Heat

Temperatures of 60-70F are ideal for tiger salamanders, which generally means that they don't require any supplemental heat. This species can tolerate temperatures from 50-75F, but any temperature over 78F can be life threatening. A digital thermometer should be present in the cage to ensure temperatures are within the optimal range. Analog thermometers should be avoided as these are often inaccurate.

Humidity

Substrate should be kept damp but not soggy. Humidity should be maintained at 60-70% and measured with a digital hygrometer. Part of the tank can be slightly elevated to create a humidity gradient in the soil. Mixing water into deep substrate, heavy misting, and providing a water bowl are all methods appropriate for maintaining humidity. All water should be dechlorinated before being added to a salamander's enclosure.

Feeding

Tiger salamanders are carnivores and require a variety of animal protein sources. Dietary variety is important for providing enrichment and preventing nutritional deficiencies. Earthworms and nightcrawlers make excellent staple foods for salamanders, along with crickets and dubia roaches. Silkworms, hornworms, mealworms, and phoenix worms can be rotated into feeding as well. Waxworms and pinkie mice make great occasional treats for tiger salamanders, but should not be overfed as these items are very high in fat. If possible, worms should be fed on tongs to prevent burrowing.

Insects like crickets and dubia roaches are naturally deficient in calcium and low in nutritional value. In order to make them nutritious for reptiles and amphibians, all insects should be gutloaded (fed a highly nutritious meal 24-48 hours before feeding) and dusted with calcium. Repashy BugBurger or Arcadia InsectFuel are good choices for feeding feeder insects. Calcium powders should be calcium carbonate based and should not have any phosphorus. Calcium powders should also contain D3. Arcadia, Repashy, and ZooMed all have good products. Follow your brand's recommendations to avoid overdosing.

Tiger salamanders will be more active and have faster metabolisms at temperatures above 65F. Adults kept over 65F should be fed 2-3x per week, whereas adults below 65F only need to be fed 1-2x per week. Freshly metamorphosed salamanders should be fed every other day. If hand feeding, tiger salamanders should be fed as much as

they can eat in a 10 minute period. Many tiger salamanders can be trained to emerge from their burrows by tapping on the glass before offering food. If food is being left in the enclosure, tiger salamanders can be offered as much as they can eat overnight. Uneaten food, particularly crickets, should be removed as these can snack on your salamander. Food can be dusted with a multivitamin including vitamin A 1x/week.

Water

A shallow bowl of dechlorinated water can be provided. It is a good idea to have a source of water in case the substrate becomes too dry. Ensure the water bowl is kept clean and that the salamander can climb out of it easily.

Sexing

Tiger salamanders reach maturity by 1 year of age. Males have rounder tails and cloacal bulges. Females are rounder and have smaller cloacas.

Zoonosis

Like reptiles, salamanders may carry *Salmonella*. Additionally, tiger salamanders secrete toxins from their skin that can be irritating to humans and animals. Tiger salamanders are not considered dangerous to humans, as long as their toxin is not ingested. If handling is required, vinyl gloves should be worn.

Health

Salamanders are prone to nutritional-secondary hyperparathyroidism (metabolic bone disease), substrate impaction, and fungal disease. Chytridiomycosis is a fungal disease of high concern, as it is responsible for the death of amphibian species worldwide. Signs of chytrid include red or discolored skin, abnormal or excessive shedding, and behavior changes. All new amphibians should be quarantined with careful biosecurity to prevent disease transmission to other animals. Amphibians are typically voracious eaters so a loss of appetite should be considered a red flag.

Sources and Further Reading:

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