



\*Photo Credit: Twin Cities Reptiles

## Mandarin and Emperor Newts *(Tylototriton spp.)*

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### A Striking Emperor of Newts

The Mandarin, or Emperor Newt (*Tylototriton shanjing*) is a large, stocky bodied semi-terrestrial newt native to southern China. There are also approximately 38 species of what are also sometimes known as the "Crocodile Newts" in the genus *Tylotriton* found throughout southern and southeastern to eastern Asia as well, depending on the exact species.

These slow-moving, semi-terrestrial newts have highly granular skin, with large yellow to orange "warts" or "glands" along their bodies which secrete a highly distasteful substance or toxins to any animals which attempt to eat these newts. In addition, as with many genera of toads, these newts possess an additional pair of bulbous paratoid glands on the backs of their heads behind their eyes which are also capable of secreting toxins.

The Mandarin or Emperor Newts are occasionally kept in the pet industry, where they are colorful and unique species to maintain. Learn more about these newts in the latest care guide! The Emperor Newt (*Tylototriton shanjing*) and Himalayan Crocodile Newt (*Tylototriton verrucosus*) are perhaps the most commonly seen and kept in the pet trade.

### Taxonomy

**Life:** All living, physical, and animate entities

**Domain:** Eukaryota

**Kingdom:** Animalia

**Phylum/Sub Phylum:** Chordata/Vertebrata

**Class:** Amphibia

**Order:** Caudata/Urodela

**Suborder:** Salamandroidea

**Family:** Salamandridae

**Genus:** *Tylototriton*

**Species:** *Tylototriton* spp.\*

\*Taxonomy subject to change and revision.

### Lifespan and Longevity

If provided the correct care in captivity, Mandarin and emperor newts can reach up to 15 to 20 years.

## **Distribution and Habitat**

The Mandarin, emperor, and crocodile newts as a genus range from northeastern India and Nepal, through Myanmar, to northern Laos, Vietnam, Thailand, and southern China. The emperor newt subspecies occurs in the Yunnan province of China, although some records may be disputed as to the species which occur in each of these areas. Within these ranges, crocodile and emperor newts can occur in a variety of habitats along and amongst mountain foothills, mountain forests, and cultivated rice fields and other agricultural areas. These newts are also reported to occupy a wide variety of bodies of water for breeding and reproduction, including slow moving or stagnant ponds, pools, ditches, slow rivers and streams, marshes, and bays of larger lakes, as well as other seasonally flooded wetlands.

## **Origin/History**

*Tylotriton* spp. Andersson, 1871. Specific species of *Tylotriton* would have other authors first describing them during other years.

The genus *Tylotriton* currently contains eight species of mostly robust salamanders native to China and to a lesser extent a few neighboring countries. Out of the eight species, *T. shanjing* is available with some degree of regularity in the United States, mostly as wild-caught imports. *Tylotriton verrucosus* is rarely imported; however, captive-bred stock can be found with some patience and searching (Dawn Ossellmann 2011).

In 2016, the U.S. Fish and Wildlife Service would amend its regulations under the Lacey Act to create an interim rule adding all species of salamanders from 20 genera, of which there are 201 species, to the list of injurious amphibians. This was due to efforts to prevent the introduction, establishment, and spread of the chytrid fungus *Batrachochytrium salamandrivorans* (or Bsal) into ecosystems of the United States.

With this interim rule, both importation into the United States and interstate transportation between States, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States of any live or dead specimen, including parts, of these 20 genera of salamanders would be prohibited, except by permit for zoological, educational, medical, or scientific purposes. This rule would most certainly impact the U.S. herpetoculture industry and pet trade when it came to its reliance on importing this, and many other of its caudate (salamander and newt) species into the U.S.

## **Experience Level Required**

Intermediate/Moderate.

## **Size**

Mandarin and emperor newts are large species of newts which average between 4.0 and 8.0 inches in total snout-to-tail length, depending on the species. Likewise, snout-to-vent length varies depending on the described species and on the sex, but can range from 2.1 to 3.8 inches snout-to-vent length (SVL).

## **Housing and Enclosure**

***Enclosure System: Aquatic to Moist-Terrestrial.*** Mandarin newts are a primarily terrestrial species of newt through most of the year, although they will return to their vernal breeding ponds during the spring and summer breeding season. They may be maintained in a 10 to 20 gallon moisten terrestrial or semi aquatic terrarium or setup. Ensure that any enclosure that is used is secure and escape proof, and adequately ventilated. Substrates that can be used to house these species can include 3 to 4 inches of moistened, but not overly wet sphagnum or peat moss,

vermiculite, chemical and pesticide free top soil or potting soil, coconut fibers, or combinations of these substrates. Adequate hiding opportunities should also be provided, and can include rock, bark, or cork bark hides, slabs, or other furnishings in the enclosure. They are not strong climbers, and thus will not need an overly abundant supply of arboreal furnishings. Either a large, shallow water dish or semi aquatic setup with adequate filtration to maintain cleanliness and access to a moist, terrestrial area of the enclosure can also be provided.

### **Temperature, Lighting, and Humidity**

These newts prefer and require seasonally cool temperatures relatively. They can be maintained from 58 to 62 degrees F during the spring, and about 70 to 78 degrees during the summer, with access to day/night and seasonal photoperiods. As with most amphibians, caution should also be used in not drastically exceeding these temperatures, which can overheat amphibians especially. These newts do not require additional UVA/UVB lighting, although providing it in moderated amounts can be greatly beneficial for their health, immune system, and overall wellness. They can, however, be susceptible to health and husbandry related issues if water temperatures are too cold or too warm for these unusual amphibians. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well. Maintain these newts at relatively high humidity of at least 70 to 80%.

### **Feeding, Diet, and Nutrition**

***Insectivorous to Carnivorous;*** In the wild, Mandarin newts will consume a variety of terrestrial and aquatic foods. Worms, arachnids, isopods, insects, and other invertebrates are all readily eaten. In captivity, these robust newts are easily fed, and can readily be given chopped nightcrawlers, worms, isopods, feeder crickets, roaches, waxworms, and mealworms at least two to three times weekly, with this being their recommended feeding frequency. Any feeder insects should also be gut loaded and dusted with additional calcium and vitamin D3 supplements as well prior to feeding to ensure optimal nutrition and health. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Handling**

As with most amphibians, Mandarin newts can be fragile and delicate animals. Handling should be limited or kept to a minimum whenever possible. These large newts can be handled, but in doing so, hands should be wet or moistened, or with gloves, and avoid using any hand lotions or chemicals. Although these newts can secrete a fairly potent toxin from their prominent glands if they are roughly handled or ingested, these newts generally should not be considered dangerous to humans in the typical pet care and handling context, but should still be handled carefully and with common sense.

All amphibians breathe and respire through their skin, as well as absorb water through this means. It is therefore important to avoid wearing any chemicals or lotions on your hands, which can be potentially harmful or even fatal to amphibians. It is also important to wash or rinse hands thoroughly, and ensure they are adequately moistened before and after handling any amphibians in order to prevent them from drying out.

**\*\*Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens\*\***

### **Contact**

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