



\*Jake Burchell and Kaeden Miller/Frogtown Exotics

## Cane, Giant, or Marine Toad *(Bufo/Rhinella marina)*

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### **Successful, Giant Invaders**

Cane toads are also known as the marine toad or giant toad. The Cane, or marine toad is a large, bulky terrestrial toad species ranging in color from light to dark brown, yellowish, to orangeish with warty skin, and a pair of very large, distinctive paratoid glands behind the eyes. These very large toads have voracious appetites, and can be extremely prolific breeders, breeding in nearly any temporary to permanent wetlands and bodies of water, and consuming nearly any smaller vertebrates and invertebrates they can capture and swallow. When threatened, these toads can secrete a noxious and distasteful, milky substance from their large, kidney shaped paratoid glands behind their eyes which discourages potential predators from eating them.

Both of these characteristics, along with the fact that few, if any native predators have evolved to be able to predate upon these toads without death or ill effects have contributed greatly to the cane toad becoming a successful invader in many areas of the world. Cane toads and some related species are a controlled, regulated, or prohibited species in some states. Always check any applicable federal, state, and local laws and ordinances that may pertain to the specific possession of this species.

### **Taxonomy**

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

**Domain:** Eukaryota

**Kingdom:** Animalia

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

**Class:** Amphibia

**Order:** Anura

**Suborder:** Neobatrachia

**Family:** Bufonidae

**Genus:** Rhinella/Bufo

**Species:** *Rhinella/Bufo marina*\*

*\*Taxonomy subject to change and revision.*

### **Lifespan and Longevity**

If provided the proper care, cane or marine toads can attain longevity of 10 to 15 years or more in captivity.

### **Distribution and Habitat**

The cane, or marine toad is a very large toad species indigenous to the Rio Grande Valley region of Texas in the south central United States, southward through South America in the central Amazonian region, and into southeastern Peru. They have also been widely introduced and established in many other localities around the world including Florida and other portions of the southeastern United States, the Caribbean, the Hawaiian Islands, and the east coast of Australia, from eastern Queensland, through Coastal New South Wales. This species can be found in a variety of terrestrial, tropical to sub-tropical, to semi-arid environments including dry or tropical rainforests, forests or woodlands, agricultural areas, suburban or residential areas, and nearly any other habitat with suitable permanent waterbodies nearby for breeding and reproduction.

### **Origin/History**

*Rhinella marina* (Linnaeus, 1758).

The cane toad has been introduced to many regions of the world, particularly the Pacific for the biological control of agricultural pests. These introductions have generally been well documented, and the cane toad may be one of the most studied of any introduced species. Before the early 1840s, the cane toad had been introduced into Martinique and Barbados, from French Guiana and Guyana. An introduction to Jamaica was made in 1844 in an attempt to reduce the rat population. Despite its failure to control the rodents, the cane toad was introduced to Puerto Rico in the early 20th century in the hope that it would counter a beetle infestation ravaging the sugarcane plantations. The Puerto Rican scheme was successful and halted the economic damage caused by the beetles, prompting scientists in the 1930s to promote it as an ideal solution to agricultural pests. As a result, many countries in the Pacific region emulated the lead of Puerto Rico and introduced the toad in the 1930s.

In the United States, the cane toad would be native to southern Texas, but attempts (both deliberate and accidental) have been made to introduce the species to other parts of the country. These have included introductions to Florida and to the islands of Hawaii, as well as largely unsuccessful introductions to Louisiana. Initial releases into Florida had failed. Attempted introductions before 1936 and 1944, intended to control sugarcane pests, were unsuccessful as the toads failed to proliferate. Later attempts failed in the same way. However, the toad gained a foothold in the state after an accidental release by an importer at Miami International Airport in 1957, and deliberate releases by animal dealers in 1963 and 1964 established the toad in other parts of Florida.

Today, the cane toad is well established in the state, from the Keys to north of Tampa, and they are gradually expanding further northward. In Florida, the toad is regarded as a threat to native species and pets.

### **Experience Level Required**

Intermediate/Moderate.

### **Size**

Adult cane toads can reach 3 ½ to 6 inches in males, and larger females reaching up to 9 inches, or sometimes larger and weighting as much as nearly 6 lbs.

### **Housing and Enclosure**

***Enclosure System: Primarily Moist-Terrestrial to Semi-Fossorial.*** Housing must be sealed and escape proof with a secured top or aquarium hood. A single adult cane toad can be housed in a 20 to 40 gallon terrarium, enclosure, or appropriately sized plastic container with a secured lid or top. Cane toads can be cannibalistic, and should therefore not be housed together, particularly

with smaller toads. These toads require higher levels of humidity, and substrates that can help establish and maintain the necessary humidity levels that can be used include coconut husk fibers, cypress mulch, live/sphagnum moss, and pesticide/fertilizer free potting soil. Paper towels can also be used for a less attractive, yet utilitarian substrate for these toads. Cane toads will also benefit from daily misting as well. Other furnishings to provide can include live or artificial plants for added aesthetics, and hiding opportunities such as upturned plastic or ceramic plant pots, log or rock hides, or similar hides. Also provide a large, shallow water dish in the enclosure and change at least 2 to 3 times weekly. Spot clean daily and clean the enclosure at minimum every 2 to 4 weeks.

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

Cane toads have simple and undemanding heating and lighting requirements in captivity, and 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. For any supplemental heating that may be needed, use a low wattage incandescent or UVA/UVB bulb, radiant or ceramic heat emitter, or UTH (under tank heating element). Maintain cane toads at higher humidity at around 70 to 80%, and be sure to mist the enclosure at least once daily. These toads can be maintained at or around 70 to 85 degrees F. Provide a 12 to 14 hour light cycle if overhead lights are used. 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.

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

*Insectivorous to Carnivorous*; Cane, or Marine giant toads can be voracious predators in the wild, and will feed on a variety of insects, arachnids, worms, and other invertebrates. They may also occasionally catch and consume smaller vertebrates as well, and will often even scavenge leftover dog or cat food if left outdoors. These large toads in captivity should be fed 2 to 3 times weekly. They are very sight oriented feeders, and will eat feeder crickets, roaches, earthworms, redworms, bloodworms, or mealworms as well as feeder fish and occasionally pre-killed rodents of appropriate size, although these prey items should be given only sparingly. They can also be given many commercially available pelleted diets, or freeze dried foods, but these must be animated. Do not overfeed cane toads, or obesity and other health issues can become concerns. Feeder insects should be gut loaded by provided them a quality diet containing vitamins and minerals. Gutloading and dusting insects with vitamin D3 and calcium supplements 1 to 2 times weekly for added nutritional value will greatly benefit the health and well-being of these toads. Feed them using tongs, forceps, or otherwise in the enclosure or in a dish and not by hand, as they can become acclimated enough to mistake a moving hand or finger as food during feeding. 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**

Cane toads are large, hardy amphibians when it comes to handling. Many of the more terrestrial species of toads in the genera Bufo and Rhinella are more tolerant of drier or varied conditions associated with common handling practices, but over handling even these species should be avoided, and care should still be taken to prevent them from drying out or becoming susceptible to any lotions or chemicals worn on the skin. Cane toads, and some other related species do possess medically significant bufotoxins that can be excreted as a white, milky substance from their large paratoid glands when the toad is physically attacked or otherwise threatened sufficiently. While largely common sense and no known human deaths have been attributed to these toads, never allow ingestion or facial contact with these toads, or allow contact with very young children, or other pets or animals. A cane toad's bufotoxins can be fatal for many species

that try to ingest these toads, including other pets. Cane toads and related species are also listed as a controlled or prohibited species in some states and localities; know any and all applicable laws, legislation, and ordinances that may pertain to possession of these species.

**\*\*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**

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact:

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