



*Eric Roscoe

North American Toads *(Bufo/Anaxyrus spp.)*

Widespread and Adaptable “Grumpy Old Men” of the Amphibians

North American toads are relatively small to medium sized anurans that vary greatly in size, color, and pattern depending on the exact species, but in general, these species have dry, warty skin, and can vary in colors from blackish, grayish, olive, green or greenish, light to dark brown, tan, reddish or reddish brown, yellowish, to pinkish. Most also have fairly short hind limbs for short hops rather than leaping, and most also have a pair of kidney shaped paratoid glands behind each eye on the back of their heads which they use to secrete foul and distasteful toxins in response to any potential predators that attempt to ingest these toads. Many species of North American toads are familiar and adaptable and widely ranging amphibians over much of their range, being found in nearly any habitat with suitable temporary to semi-permanent wetlands or bodies of water nearby. Many species can be found in and around, and will reproduce even in roadside ditches and farm ponds if they are available. A few other species, however, are more uncommon to imperiled due to their more specialized habitat requirements, as well as habitat loss and fragmentation, as well as other human induced factors. Regardless of the species, these charismatic and well-known amphibians can be hardy and easily kept, often reminding many of little grumpy old men!

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: Anaxyrus/Bufo

Species: *Anaxyrus/Bufo spp.**

**Taxonomy subject to change and revision.*

Lifespan and Longevity

If provided the proper care, most species of North American toads can attain longevity of 5 to 10 years, or more in captivity.

Species

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Species include the American Toad (*A. americanus*), Wyoming Toad (*A. baxteri*), Western Toad (*A. boreas*), Great Plains Toad (*A. cognatus*), Green Toad (*A. debilis*), Fowler's Toad (*A. fowleri*), Canadian Toad (*A. hemiophrys*), Red Spotted Toad (*A. punctatus*), Southern Toad (*A. terrestris*), Oak Toad (*A. quercicus*), Sonoran Green Toad (*A. retiformis*), Woodhouse's Toad (*A. woodhousii*), and Texas Toad (*A. speciosus*).

Distribution and Habitat

The North American genus *Anaxyrus* is a very widely distributed group of North American terrestrial toad species found over much of southern to southeastern Canada, the United States, and Mexico. Specific range and distribution also varies among the species. North American toads as a whole are habitat generalists, and can be found nearly anywhere in a wide variety of habitats as long as adequate, temporary ponds and wetlands are present nearby for their breeding and reproduction. They may exist in forests, savannahs, marshes, swamps, ponds, prairies, and even agricultural and suburban areas such as parks, gardens, and backyards.

Conservation Status

Conservation status dependent upon the species. Some species are IUCN Least Concern (LC). Some are IUCN Near Threatened (NT), Conservation Dependent (CD), Vulnerable (VU), Endangered (EN), to Critically Endangered (CE). Some Not Evaluated for the IUCN Red List (NE) or otherwise Data Deficient (DD). A small number of species are Extinct in the Wild (EW).

Legal and Regulatory Status (*Subject to Change)

Anaxyrus canorus and *Anaxyrus californicus* Endangered Species Act of 1974 listed species (CA). *Bufo hemiophrys baxteri* Endangered Species Act of 1974 listed species (WY). *Bufo houstonensis* Endangered Species Act of 1974 listed species (TX). Also consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

Experience Level Required

Novice/Beginner to Intermediate/Moderate (depending on species).

Size

North American toads vary in their adult size depending on the species, with the oak toad being the smallest species at about $\frac{3}{4}$ to $1\frac{1}{2}$ inches in size. In general, they can range in size from $\frac{3}{4}$ of an inch up to $4\frac{1}{2}$ inches in the largest species.

Housing and Enclosure

Housing must be sealed and escape proof with a secured top or aquarium hood. A single adult toad can be comfortably housed in a 10 to 15 gallon terrarium, enclosure, or appropriately sized plastic container with a securely fitted lid or top. These toads are also very seldom cannibalistic under most circumstances, and they can be housed communally in accordingly larger enclosures or setups. Most species of North American toads are also semi-fossorial, and will burrow as well. Provide several inches of a nontoxic particulate substrate that can help establish and maintain the necessary humidity levels and burrowing opportunities that can be used include coconut husk fibers, Eco earth, cypress mulch, live/sphagnum moss, play sand, and pesticide/fertilizer free potting soil or mixtures of any of these substrates. Paper towels can also be used for a less attractive, yet utilitarian substrate for these toads. These toads will also benefit from daily misting as well. Other furnishings to provide can include live or artificial plants for added aesthetics, and hides 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.

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Temperature, Lighting, and Humidity

Most species of North American 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 most species of North American toads at moderate humidity from around 40 to 70%, and be sure to mist the enclosure at least once daily. Maintain these species of toads at around 70 to 85 degrees F and 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; In the wild, most North American toad species are insectivorous, and will eat insects, arachnids, and other invertebrates they can catch. They will occasionally catch and consume other smaller vertebrates as well. Some of these species of toads will even scavenge leftover dog or cat food if left outdoors. In captivity, feed most species of North American toads a variety of appropriately sized feeder insects such as crickets, roaches, mealworms, superworms, and waxworms. They can also be fed microfauna such as isopods, springtails, and fruit fly cultures as well if small enough. Feeder insects should be gut-loaded in order to increase their optimal nutritional value. These toads also require additional calcium and vitamin D3 supplementation 1 to 2 times weekly or as otherwise directed for optimal health and development. This is in order to prevent Metabolic Bone Disease (MBD) and other growth and nutritional deficiencies. They can also sometimes be large enough to be given small, pre-killed rodents, but sparingly, if at all. Their feeding frequency will depend on the age, size, and overall health of your animal. Use care as to not overfeed them, as obesity and other health related issues can become an issue. 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

Most North American toads are relatively hardy amphibians when it comes to handling. Many of the more terrestrial species of toads in the genera are more tolerant of drier or varied conditions associated with common handling practices, but over handling even these species should be avoided. These toads, and some other related species do still possess potentially irritating 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, never allow ingestion or facial contact with these toads, or allow contact with very young children, or other pets or animals. These toad's bufotoxins can be toxic or irritating for many species that try to ingest these toads.

****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 the Madison Area Herpetological Society at info@madisonherps.org

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