

Fluvarium Fact Sheets

Eastern American toad

Anaxyrus americanus (formerly *Bufo americanus*)



Eastern American toads are found throughout southern Labrador and eastern North America. In Newfoundland they are mainly found around Corner Brook where they were originally introduced in 1960.

Description

American toads range in colour from grey-brown to red-brown with a complex pattern of black striping on the limbs. A characteristic shared by all individuals are black spots on their back with only one or two warts in it. The underside is usually spotted, and mainly on the forward half.

Like all toads, they have poison sacs called **parotid glands**, which look like enlarged bumps located on the back, just behind the eye. These toads have two cranial crests or thin protrusions on the head surrounding the eye.

Males and females are similar in appearance, except during the breeding season where the throat on the males turns a dark, almost black colour.

Size

Females are slightly larger than males. Throughout most of their range:

- Female frogs range from 5.6-11.0 cm.
- Male frogs range from 5.1-8.5 cm.

Measurements are from head to tail and do not include the legs.

Lifespan

Females usually live up to 5 years and males usually live up to 4 years.

Habitat

American toads are found in almost any terrain where there is water and shelter. This includes open, rocky areas, prairie, dense

forest, open forest, forest edges and wetlands. They can even live in **brackish waters**.

These toads are mainly nocturnal and take shelter under stones, moss, fallen logs and woodpiles during the day.

Range

This species is naturally found throughout eastern North America from southern Labrador in Canada down to Georgia and Louisiana in the United States. They range as far west as Manitoba, North Dakota, South Dakota, Iowa, Kansas, Oklahoma and northern Texas.

An **exotic species** in Newfoundland, they mainly are found around Corner Brook where they were originally introduced. Natural and human aided expansions have led to their patchy distribution around the island. American toads can be found in Corner Brook, Gros Morne National Park, the Codroy Valley and in St. John's.

This species establishes home ranges of around 0.16 acres and will repeatedly use particular known hiding places. In Newfoundland they are estimated to expand their distribution by 1 km per year.

Box 1: Definitions

Amplexus - the mating clasp of male frogs or toads where they cling to the back or sides of the female and fertilize the eggs as she releases them.

Brackish water - water with a low salt level.

Exotic species - a non-native species introduced to an area through human activity.

Parotid glands - poison sacs found in all toads (Family Bufonidae). Located just behind the eye, these sacs release toxic secretions when broken. The toxins cause a burning sensation when in contact with mucous membranes in the eyes and mouth of a predator and induce vomiting.

Diet

- Adult toads are carnivorous and mainly eat terrestrial invertebrates including crickets, worms, beetles, insect larvae, ants, moths, spiders and slugs.

- Toad tadpoles are omnivorous and feed on organic debris and other suspended matter in the water including algae, phytoplankton, and aquatic plants. They will also consume dead fish and tadpoles.

Reproduction and development

Males move into breeding sites and begin to call almost immediately after emerging from hibernation. In Newfoundland, this occurs as early as mid-May and continues into the summer.

They breed in grassy, shallow, slow moving to still waters in ponds lakes, streams and ditches. They generally choose sites with no tadpole predators such as fish or other species of tadpoles.

Male toads make a high-pitched, rapidly pulsed musical trill. Females choose their mate based on the effort put into the call or the rapid succession of the call.

After a female chooses their mate, the male climbs on her back and grasps her in an embrace called **amplexus**. She then successively lays two string of eggs as the male fertilizes them. A female lays between 2000-20 000 eggs depending on the females age and body size. Their toxic secretions are also deposited on their eggs to protect them from predators.

The transparent 1-2 mm eggs hatch after about 3-12 days. The tadpoles start to metamorphose into toads after about 50-60 days. A whole brood of tadpoles will transform into toads within 6 days.

They first start to acquire their back legs as their respiratory system changes from gills to lungs. Their digestive system also goes through changes as the young toad switches from herbivory to carnivory. Their front legs develop as their tail starts to shrink and get absorbed for nutrients. After getting their front legs, the toads leave the water and completely absorbed their tail within 2 days.

Males reach sexual maturity in their second summer after metamorphosis and breed the following spring. Females mature at around 3-4 years of age.

Predation

- Tadpoles and eggs are preyed upon by diving beetles, giant water bugs and dragonfly larvae.
- Adult American toads are eaten occasionally by birds such as ducks, crows

and owls. In other parts of its distribution it is mainly eaten by snakes and small mammals.

Relation to humans

In Newfoundland they are listed as an **exotic species**.

Interesting facts

- This species was introduced to Corner Brook from 1960-1963 using newly metamorphosed toads from Toronto, ON.
- Crows avoid breaking the poison sacs by turning the frog on its back and eating its belly.
- American toads overwinter underground, just below the frost line.
- An easy way to tell frogs and toads apart is that toads have warts. However, a person cannot get warts by handling a toad.
- “Project Frog” in the early 1980’s was a collaboration between The Natural History Section of the Newfoundland Museum (St. John’s) and forty junior high schools throughout Newfoundland and Labrador. They documented the occurrence and distribution of frogs and toads in the province.

At The Suncor Energy Fluvarium

- See eastern American toads in our terrariums on our fluvarium level.
- Listen to the male’s mating call.

Additional resources

Tynning, T.F. 1990. A guide to amphibians and reptiles. Stokes Nature guide. Little, Brown and Company: Boston. pp. 400.

Maunder, J.E. 1983. Amphibians of the province of Newfoundland. Canadian Field Naturalist, 97: 33-46.

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