

THE AMERICAN BIOLOGY TEACHER



About Our Cover

The American Toad (*Bufo [Anaxyrus] americanus*) is a master of stealth and disguise. It relies on coloration (capable of changing to match its background) and warty-textured skin as well as behavior (remaining motionless when eating and when threatened with being eaten; being primarily nocturnal) to blend in with its background while it pursues prey and avoids predators. If those strategies fail with respect to predators, it releases poisonous subcutaneous secretions when being eaten. It uses several feeding behaviors to capture its diet of insects, slugs, and a range of other invertebrates. If its prey is within 2 inches, the toad will quickly release its long, sticky tongue. When farther away, it uses a "leap-sit-leap-sit" strategy. These behaviors make toads (at least relatively) cooperative photographic subjects.

The typical adult American toad is 2–4 inches in size, the females being larger than the males. Most die within the first year of birth, but they can live up to 5–7 years in the wild. They become sexually mature in 2–3 years. When mating, the male grabs hold of the female and they remain motionless to avoid predators or interruption by mate-seeking males. The female will lay as many as 8000 eggs in gelatinous strands up to 8 m long. The eggs are countershaded (light above and dark below) to minimize predation. They typically hatch within a week to 10 days and morph from tadpole to toad in 6–8 weeks (depending on the temperature).

Some additional interesting facts about American toads: contrary to popular belief, they do not produce warts when handled by humans (however, they may release poisonous secretions and should be handled with care); they are less sensitive to habitat fragmentation than their fellow amphibians; and one American Toad was observed eating over 1000 insects in a single day.

The photograph was taken in Scotts Run Nature Preserve, McLean, Virginia, by Bob Ford from Frederick Community College, Frederick, Maryland, using a tripod-mounted Nikon D750 with a 55 macro-lens.

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