



American Bullfrog, *Rana catesbeiana*

Taking a Closer Look at Bullfrog!

By Merrill Tawse

The sound, “jug-o-rum”, has been coming from the pond for the past couple of weeks. This is the sound of *Rana catesbeiana*, the largest amphibian that makes its’ home both in the building and on the Nature Center grounds. Known as the bullfrog (whether a girl or a boy), we have a good population of them at our large pond and we try to keep one inside on display as well.

These greenish brown frogs are the largest of the frogs found in Ohio. (Ours does not have the olive green color it first had and this is probably due to fact that it is not exposed to sunlight.) They are found throughout the state in permanent bodies of water. When full sized they are easily identifiable and can reach a body length of six inches (not counting those long legs). The only frog that could be confused with a young bullfrog would be the Green Frog, *Rana clamitans*. The Green Frog however has two ridges or folds (dorsolateral ridges) that run from their eyes down to their hips.

Male Bullfrogs can be distinguished from females a couple of ways. During breeding season, which is most of the summer, the male develops a yellow throat. The males, who do the calling, have larger ear tympanums. The male is typically twice the diameter of their eye, whereas the female’s is about the same diameter as their eye. The call of the male is not “Just an Old Fashioned Love Song” but more of a territorial call to communicate to other males to STAY OUT! Another characteristic that is true in distinguishing males from females is that females grow larger than the males.

Both continue to grow throughout their life so the bigger ones will be the older ones. Maturity is reached at about five to six years of age. Males have a shorter life span in part because they are more active. Much of their activity is associated with territorial skirmishes between other males. The males will establish a territory a few feet out from the shore and give their “jug-o-rum” call from May through the summer. As other males approach they lunge at them, if the intruding male stands it’s ground the defending male will butt at it, bite it and even grab it. Frequently it will drive it under water and keep it

there for several minutes. Most times the intruder retreats and the defender returns to its “sentry post”.

Receptive females are approached much differently; beginning with a nose to nose inspection he will swim around and climb on back. Swimming out to an opening in the emergent plant area of the pond, she will begin to deposit here eggs into a floating mat on the surface. The male fertilizes them as they are expelled. A large female can lay from 6,000 to occasionally up to 80,000 eggs. There are times when she will lay another batch in two weeks but when she does, so it is a much smaller quantity.

Bullfrog tadpoles in our region do not transform until the third summer, further south it may only take two summers to metamorphise. As tadpole, they graze on the surface of aquatic plants eating algae, bacteria and detritus. They are the largest of our pond’s “pollywogs” growing up to five inches long. Winter finds them settled on the pond bottom, dormant. As the spring sun pierces the cold pond waters, they will migrate to the shallows to bask and increase their body heat. This behavior they will continue through the summer months as well. The higher their body temperature means their metabolic rate will be higher and therefor they will grow faster.

Poolside dining for Bullfrogs includes, a variety of things that stimulate their palates. Included in these are smaller frogs (bullfrogs at times), large insects, crayfish, small birds, turtles and mice. We feed ours mice, both live and dead. The frog grabs the mouse by lunging forward and takes it under water to drown it. Swallowed whole the indigestible parts, bones and fur pass through and appear as a pellet when floating in the aquarium. Predators after the bullfrogs include snakes, raccoons, turtles, herons and fish among others.

If you examine ours on display, one you will see the large and muscular hind legs that they use to leap away from predators or towards prey. These legs are what they are used as food by people. Before you go “gigging” in our aquarium you must have a valid Ohio Fishing License, it has to be in season and you have to have my permission!