

intended to turn away predators biting the toad. Handling toads will not cause warts in people. Some people say toads have the most "character" of all the amphibians, when kept as short-term pets.

TREEFROGS

The Northern Spring Peeper

Who can ignore a deafening chorus of Spring Peepers on a warm spring night? These thumb-nail-sized frogs leave their woodland hibernation sites as early as March in southwestern Nova Scotia. Perched on grasses and sedges at the edge of ponds or roadside ditches, the males call mates with a shrill "peep peep peep". Their brown or gray colour, always with a dark stripe on the sides of the head and dark markings on the back provide excellent camouflage against the dead spring grasses. If the night is cold, peepers retreat under leaves and stems. You'll likely hear hundreds before you ever see one.

About 1000 eggs are laid singly on twigs and leaf litter at the pond bottom. Then it's back to the woods, where the males may continue to call from trees, clinging there with adhesive toe pads. Small spiders are a frequent food item.

TYPICAL FROGS

Bullfrogs are our largest frog, found in quiet coves of lakes with lots of vegetation, especially water lilies. Most are green or yellow-green, but rarely a blue Bullfrog (lacking yellow pigment) turns up. Bullfrogs are the last to emerge in spring. Their booming bass call is heard from mid-June to July, although last year's tadpoles may emerge a month or two earlier. Their season is short. By early September most are hibernating in muddy pond bottoms. The Bullfrog menu includes birds, frogs and fish as well as the usual insect fare. *NOTE: When held by the hind legs, Bullfrogs may let out a scream or squeal.*

Green Frogs look something like small Bullfrogs, but their colour varies from yellow to green or bronze, sometimes with brown spots on the back. Look for a ridge above the eye that

extends part way down the back: this will distinguish Green Frogs from young Bullfrogs. Breeding is in June and July, in lakes, ponds and streams, large or small. The male's call has been compared to the sound of a loose banjo string.

Mink Frogs are generally green to brown, often spotted or mottled. Their preferred habitat is quiet waters with lots of plants like lily pads and pickerel weed. The male calls day and night with a "cut...cut cut" sound, something like the sound of shingles being nailed to a roof far away. Mink Frogs are very timid. Some careful sneaking is required to get close to one. When handled they emit a smell like mink (or like rotting onions, if you can't quite recall the odour of mink).

Northern Leopard Frogs, also called meadow or grass frogs, are bright grass-green with oval black spots. Their breeding call is a long rattling noise followed by several rapid grunts. About 3000 eggs are laid in a loose oval mass in shallow water in late April or May. The tadpoles hatch and transform quickly.

Pickerel Frogs are also spotted, but with irregular rectangular brown spots in rows. The basic colour is yellow-brown with orange on the groin and the underside of the back legs. Pickerel frogs are especially common along lake shores near inlets and outlets. Their call is a short low-pitched snore which does not carry far. In May they produce a globular mass of about 1000 eggs attached to plants below the surface.

Wood Frogs are brown or tan-coloured. A dark brown mask on the sides of the head has earned them the nickname "robber frog", although the mask is not obvious in breeding males. Some females in red sandstone areas may become red coloured. Wood Frogs are among the first amphibians to emerge in spring, calling with a sound like ducks quacking. Breeding is over by May in most regions, resulting in fist-sized masses of about 1000 eggs. Except for breeding, Wood Frogs live in damp deciduous or mixed woods. They are about twice the size of Spring Peepers, and tend to be found with them in the ponds in spring.

info

Frogs

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In spring the naturalist's fancy turns to frogs. Eight kinds of frogs live in Nova Scotia. The sight and sound of them is part of most peoples' childhood experience, although a few misconceptions have given some frogs a bit of a bad name.

Like their tailed cousins the salamanders, frogs and toads are amphibians. Their skin is generally smooth and moist; some part of the life cycle takes place in water. The frog face features a wide mouth, 2 large exposed eardrums, protruding eyes with transparent lids and some sort of inflatable vocal sac. The vocal sac, usually located near the throat or along each side, amplifies male frogs' sounds into the loud mating calls we hear.

During spring and early summer, frogs gather in wet habitats to spawn. The males arrive first and begin calling to attract a mate. Each species has its own call, and most are easy to recognize. Once a female locates and joins a male, the male climbs "piggyback" onto the female (a position called amplexus). Spawning usually takes place shortly after, and the eggs hatch quickly into tailed tadpoles. Transformation into adult frogs may take 2 months to 2 years, depending on species and conditions. Since most frogs are less secretive than salamanders, they are more vul-

nerable to predators. Large beetles, turtles, birds, snakes, fish and mammals eat frogs and their tadpoles. Also, cars kill many frogs as they cross roads on rainy nights.

The Eastern American Toad, Spring Peeper, Green Frog, Wood Frog, Leopard Frog and Pickerel Frog are all widespread in Nova Scotia. However, Mink Frogs are only known from scattered localities, and Bullfrogs have not been reported from Cape Breton Island.

Now let's meet the frogs of Nova Scotia.

TOADS

The Eastern American Toad

Some people call these common creatures "hop toads", and they do indeed move about in short hops rather than long leaps. Most toads are brown, but their colour can range from grey-brown to red-brown. Breeding males have a black throat and are smaller than females. Toads emerge from hibernation and fill the night air with long, trilling calls in May and June. Strings of 6 to 12 thousand eggs are laid in warm shallows; the small tadpoles transform into miniature toads by September. Toads are among the last amphibians to hibernate each fall, and may be seen into late November.

Toads have a dry, "warty" skin. The "warts" are glands that contain a white sticky substance

Frogs

Finding Frogs

Wet highways, roadside ditches and ponds on warm spring nights are your best places for seeing (and hearing) Spring Peepers and Wood Frogs. After breeding, they return to woodland habitats, eventually hibernating there, and are rarely noticed. Leopard Frogs prefer grassy places in summer, while Toads use many terrestrial habitats including lawns and gardens.

Most frogs make good temporary pets. Put Peepers, Wood Frogs, Leopard Frogs and Toads in mossy terrariums; the other frogs need shallow water in an aquarium. Live earth worms and insects make suitable food items. Remember that big frogs often eat smaller frogs!

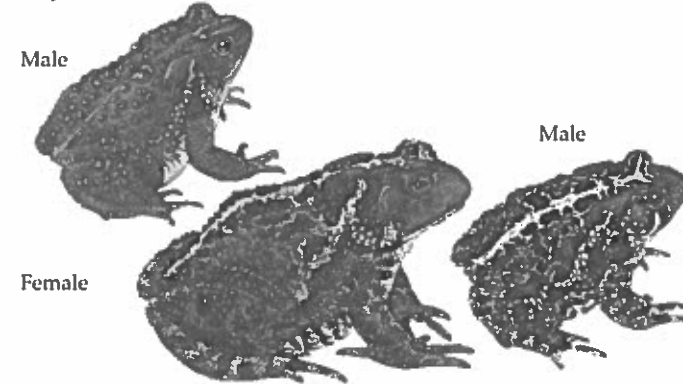
Frogs' eggs placed in pond water will usually hatch indoors. Feed the tadpoles pond algae, strained spinach baby food or tropical fish food. Avoiding direct sunlight (too hot) and aerating the water makes successful rearing more likely. Toads, Peepers and Wood, Leopard and Pickerel Frogs mature in one season; Bullfrog, Green Frog and Mink Frog tadpoles overwinter before transforming completely.

Return your temporary amphibian pets to a suitable habitat for them . . . preferably the one in which you found them.

TOADS / *Bufo*idae

Eastern American Toad

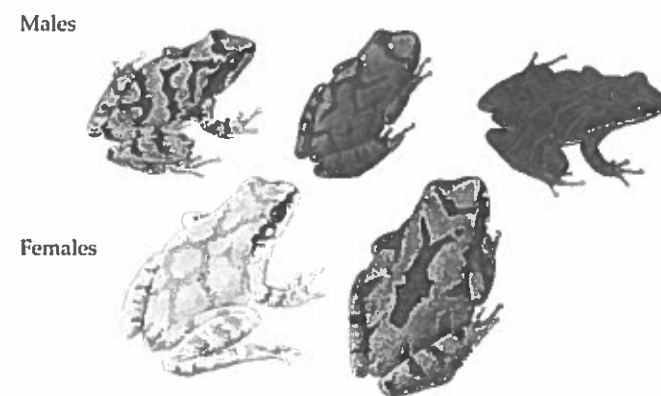
Bufo a. americanus



TREE FROGS / *Hylidae*

Northern Spring Peeper

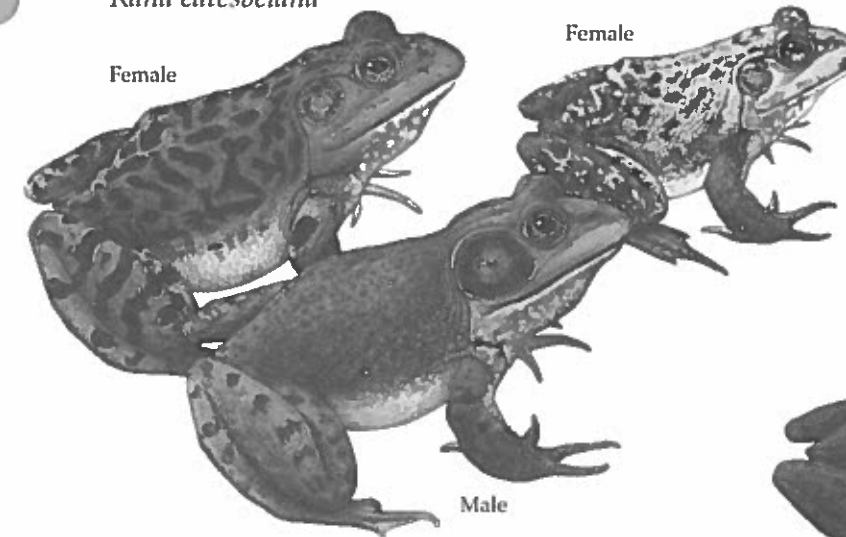
Hyla c. crucifer



TYPICAL FROGS / *Ranidae*

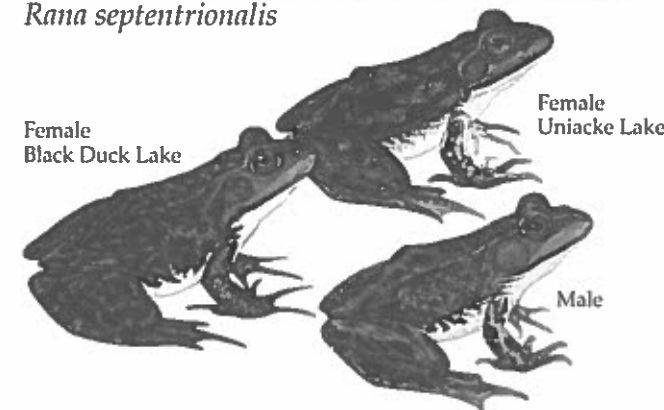
Bullfrog

Rana catesbeiana



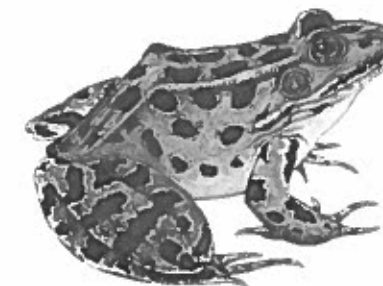
Mink Frog

Rana septentrionalis



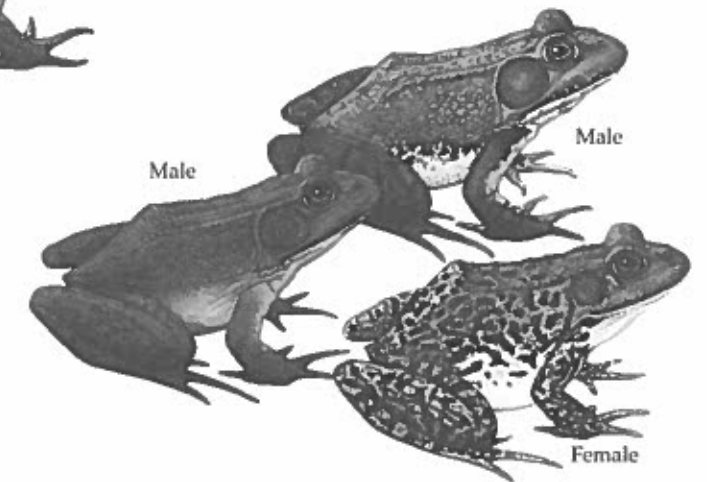
Northern Leopard Frog

Rana pipiens



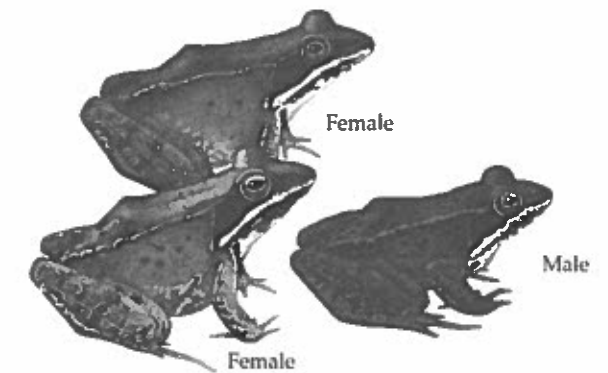
Green Frog

Rana clamitans melanota



Wood Frog

Rana sylvatica



Pickerel Frog

Rana palustris

