

Northern Leopard Frog

Lithobates pipiens (formerly *Rana pipiens*)



Identification

The northern leopard frog is found throughout much of Canada and the United States outside of the Southeast. Populations are fairly secure in the north and east but spotty or declining in the west and southwestern US. Adults are 3-4.5 in/7.6-13 cm long (females are slightly larger than males). Northern leopard frogs are either brown or green with brown spots (giving them the leopard frog name), have two yellow-gold ridges from the eyes to legs, and a white belly. Northern leopard frogs can be distinguished from plains leopard frogs by the solid ridges: plains leopard frogs have a broken ridge. However, in areas where their ranges overlap crossbreeding results in hybrids. Female northern leopard frogs lay an egg mass with hundreds to thousands of eggs in still, shallow water from April to late July, depending on latitude and elevation. Tadpoles become young frogs by late summer. Tadpoles are dark brown, green or gray with flecks of gold and black, 2-4 in/5.5-10 cm long. Tadpoles can be distinguished from American bullfrog tadpoles by their size (bullfrog tadpoles are larger, up to 4.5 in/11.5 cm) and the absence of gold flecks. Adults eat a variety of insects, spiders, crustaceans, and anything else they can catch.



Photo credit: [Gary Eslinger/USFWS/Flickr](#)

Observation Tips

Northern leopard frogs are active day and night, and they are often heard before being seen, especially during breeding. Listen for a variety of chuckles, snores, and grunts. When inactive, northern leopard frogs will take cover underwater or in caves. They spend winter (October/November to March/April) underwater below the freeze line. They are often found in wet meadows and grasslands in the summer. Individuals may wander from water sources during rain but typically return to their home water source.

Interesting Fact

Northern leopard frogs get their name from the leopard-like spots on their backs and limbs. Each spot is dark brown with a lighter “halo” around it. There are two color variations. One, called the burnsi phase, has a solid, spotless back and spots or bars on the legs. The other, called the kandiyohi phase, is mottled across the back and side.

Ideal Habitat

Northern leopard frogs require a variety of habitat types throughout their lifecycle. Adults can inhabit any permanent water body with rooted vegetation, including springs, slow streams, marshes, bogs, ponds, lakes, reservoirs, and wet meadows and fields. During summer months, leopard frogs spend a lot of time on land in low (<12 in/30 cm) and dense (60-90% herbaceous cover) vegetation where humidity and soil moisture is high. This over-summer habitat is often found within 33-65 ft/10-20 m of pond margins. Eggs and tadpoles require still, permanent water sources (within 300 ft /100 m) with rooted vegetation, often in direct sunlight. Some northern leopard frogs utilize man-made ponds, including earthen tanks for livestock.



Range map provided by International Union for Conservation of Nature

Management Activities that Benefit Species – Best Management Practices (BMPs)

Northern leopard frogs are threatened by habitat loss, commercial overexploitation, and introduced species in some areas. Restrict unlimited livestock access and trampling of vegetation near breeding ponds and streams with fencing or provide stock tanks outside of these fenced areas. If vegetation is overgrown around breeding ponds, consider flash grazing or controlled burns in the nongrowing season to encourage new vegetation growth, which attracts insects the frogs eat. Controlled burns can also reduce the severity of future fires, resulting in sediment and debris that damages riparian habitats and impacts frogs.

Management Activities to Avoid

Avoid pesticides and fertilizers near leopard frog habitat or in areas that drain to their habitat. Avoid introducing nonnative species such as fish, crayfish, or American bullfrogs to water sources with known northern leopard frog populations. Avoid developing land near and within northern leopard frog habitat.

Other Species that Benefit from Similar Habitat Management

Many species depend on and benefit from northern leopard frogs for prey at different life stages. Some of these species include great blue herons, pied-billed grebe, burrowing owls, snakes, fish, tiger salamanders, and some mammals. Other frogs, native fish, and wetland species also benefit from management practices. Humans benefit from a healthy frog population, as frogs eat a variety of pest insects.

Other Resources

International Union for Conservation of Nature (IUCN). 2004. The IUCN Red List of Threatened Species. Version 2021-1.

[Northern leopard frog.](#)

Montana Fish, Wildlife, and Parks. 2021. Montana Field Guide. [Northern leopard frog.](#)

NatureServe. 2021. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. [Northern leopard frog.](#)

United States National Park Service (NPS). 2015. [Northern leopard frog.](#)