

## SPECIES PROFILE

# Mink Frog

*Rana septentrionalis*

Federal Listing: Not listed

State Listing: Not listed

Global Rank: G5

State Rank: S3S4

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## ELEMENT 1: DISTRIBUTION AND HABITAT

### 1.1 Habitat Description

The mink frog inhabits the cold waters of lakes, ponds, stream edges, springs, and occasionally peatlands of northern New Hampshire. The mink frog is almost entirely aquatic. It prefers to forage, breed, and hibernate in shallow, permanently open water with abundant emergent vegetation, especially lily pads (*Nymphaea spp.*) and pickerelweed (*Pontedaria cordata*) (DeGraaf and Yamasaki 2001). Adults often feed from lily pads far from shore; adult and larval aquatic invertebrates are common prey (Conant and Collins 1998, Stockwell 1999). Mink frogs lay eggs in a globular jelly mass attached to submerged vegetation, especially the stems of spatterdock (*Nuphar spp.*) or water lily. Egg masses eventually fall from the stems and drop to the bottom where they develop (Stockwell 1999).

### 1.2 Justification

Mink frogs are seldom seen or recorded because of their shy nature and unique habitat preferences. Few data are available for this species in New Hampshire. Its preference for the combination of cold, oxygen rich water and lily pads may restrict the mink frog to few suitable habitats. Lily pads are associated with warmer water and are not common in cold, northern water bodies (A. Schafermeyer, NHFG, personal communication). Water temperature may restrict

mink frogs to northern regions because colder water has higher oxygen levels, which are required for embryo development (Stockwell 1999).

### 1.3 Protection and Regulatory Status

This species has no special protection in New Hampshire.

### 1.4 Population and Habitat Distribution

Mink frogs are restricted to areas north of the 43° N parallel in Maine, northern Ontario, Quebec, and Labrador, and west to Minnesota (Stockwell 1999). Historical locations of mink frogs in New Hampshire are clustered in the northern Connecticut River watershed towns of Coos and Grafton counties. This distribution is an artifact of the biological surveys conducted by Oliver and Bailey in 1938 and 1939 for the NHFG. Reptile and amphibian surveys, incidental to fish distribution surveys, were conducted in the Connecticut River watershed but not in the Androscoggin and Saco watersheds. More recent amphibian surveys have revealed occurrences of mink frog across Coos County to Wentworth's Location and Errol on the Maine border, and south to Livermore and Thornton in Grafton County. Mink frogs can be locally common in New Hampshire's North Country water bodies such as the Magalloway River in Wentworth's Location and marshes at the edge of Lake Umbagog (L. Wunder, Lake Umbagog National Wildlife Refuge, personal communication).

### 1.5 Town Distribution Map

### 1.6 Habitat Map

A habitat map was not completed for this species.

## 1.7 Sources of Information

Status and ranking information was taken from NatureServe (2005). New Hampshire Reptile and Amphibian Reporting Program (RAARP) records, Taylor (1993), and Oliver and Bailey (1939) were the primary sources of locality records. Habitat and life history information was taken from published literature. Michael Marchand, NHFG, provided comments on drafts.

## 1.8 Extent and Quality of Data

The distribution, habitat use, and condition of mink frog populations in New Hampshire are not well understood. This assessment was limited to records in scientific reports, records reported to the New Hampshire RAARP by an expert, and to reports that included a specimen or clear photograph.

## 1.9 Distribution Research

Continued efforts by RAARP volunteers are needed to identify and report mink frog locations, especially in the southern part of its range in Grafton and Carroll counties. In the North Country, Little Diamond Pond in North Stewartstown, and Back Lake and East Inlet, Pittsburg appear to be have suitable habitat for mink frogs and should be surveyed (A. Schafermeyer, NHFG, personal communication). Scotts Bog, Indian Stream, and the Connecticut Lakes in Pittsburg need to be rechecked to update 1985 occurrence records. Mink frogs and other reptile and amphibian species should be incorporated into comprehensive habitat monitoring efforts, particularly in northern New Hampshire where many species reach the edge of their range. North American Amphibian Monitoring Program (NAAMP) routes should be expanded to include more northern routes in New Hampshire. Mink frogs seem to be easily detected by call surveys during night sampling.

## ELEMENT 3: SPECIES THREAT ASSESSMENT

The loss or degradation of cold, shallow water habitats with lily pads and pickerelweed in northern New Hampshire may pose the greatest threat to mink frogs.

## ELEMENT 4: CONSERVATION ACTIONS

See Marsh and Shrub Wetlands, Peatlands, and Aquatic habitats for relevant conservation strategies. Maintaining natural emergent vegetation at the borders of ponds and wetlands, especially lily pads and pickerelweed, will help maintain the viability of mink frogs and other wetland dependent organisms.

## ELEMENT 5: REFERENCES

### 5.1 Literature

- Conant, R., and J.T. Collins. 1998. Reptiles and amphibians: Eastern and central North America (3<sup>rd</sup> edition). Houghton Mifflin, Boston, Massachusetts, USA.
- DeGraaf, R.M., and M. Yamasaki. 2001. New England wildlife: habitat, natural history, and distribution. University Press of New England, Hanover, New Hampshire, USA.
- Oliver, J.A., and J.R. Bailey. 1939. Amphibians and reptiles of New Hampshire exclusive of marine forms: Pages 195-217 *in* Biological Survey of the Connecticut watershed, H.E. Warfel, editor. New Hampshire Fish and Game Department Survey Report 4.
- Stockwell, S.S. 1999. Mink frog. Pages 107-110 *in* Maine Amphibians and Reptiles, Hunter, M. L. Jr., A. J. Calhoun, and M. McCollough, editors. The University of Maine Press, Orono, Maine, USA.
- Taylor, J. 1993. The Amphibians and Reptiles of New Hampshire. Nongame and Endangered Wildlife Program. New Hampshire Fish and Game. Concord, New Hampshire, USA.

### 5.2 Data Sources

- NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.2. NatureServe, Arlington, Virginia. <http://www.natureserve.org/explorer>. (Accessed: March 11, 2005).
- New Hampshire Reptile and Amphibian Reporting Program (RAARP) database. Maintained by the New Hampshire Fish and Game, Nongame and Endangered Species Program, Concord New Hampshire. (Accessed: February 14, 2005).

## Distribution of Mink Frog in New Hampshire

### Distribution

- Known
- Historic



Known = verified observations based on specimens, photos, or expert observation [e.g., NHFG's Reptile & Amphibian Reporting Program (RAARP), museum specimens, etc].  
Historic = observations more than 20 years old.

