

Unpalatability of northern leopard frog *Lithobates pipiens* Schreber, 1782 tadpoles

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Anurans breeding in ponds with fish tend to be unpalatable to these fish (Gunzburger and Travis, 2005). Unpalatability to fish has been reported in *Bufo* and a few *Lithobates* such as *L. arvalis*, *L. catesbeiana*, and *L. clamitans* (Gunzburger and Travis, 2005). In North America, *L. pipiens* usually breeds in semi-permanent, fishless ponds. They also breed in marshes along lakes, streams, and rivers where tadpoles may be subject to variable intensities of fish predation. Juveniles move to permanent ponds that contain predatory fish like Brown Bullhead (*Ameiurus nebulosus*), Bluegill (*Lepomis macrochirus*), Pumpkinseed (*Lepomis gibbosus*), Black Crappie (*Pomoxis nigromaculatus*), and Yellow Perch (*Perca flavescens*) (Germaine and Hays, 2009). To the best of our knowledge, unpalatability has not been documented for *L. pipiens* tadpoles. In fact, a thorough literature review by Gunzburger and Travis (2005) of 603 predator-prey trials documented a single instance where *L. pipiens* was unpalatable to Bluegill.

We collected *L. pipiens* egg masses from a semi-permanent pond in Chelsea, Québec (lat: 45.50, long:-75.79, WGS84) and thus obtained tadpoles. This pond contains no fish and dries up completely by the end of the summer. As part of another study, we tried to feed these tadpoles to fish. We selected fish that were large enough to consume the tadpoles easily. We used 2-15 fish from each species that we captured in the same general area. Fish readily accepted pellet feed, but tadpoles were rejected by 4 fish species, namely Bluegill, Black Crappie, Pumpkinseed, and Yellow Perch. Juvenile fish often consumed a tadpole once, but then rejected tadpoles offered subsequently. Adult fish mouthed the tadpoles and then released them immediately. Such behaviour has been associated with distasteful prey

items (Light, 1969). On the other hand, Brown Bullhead did not exhibit this behaviour and fed on the tadpoles regularly. Thus, *L. pipiens* tadpoles seem unpalatable to most, but not all sympatric predatory fish.

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References

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