

Chapter 4

Biota of the Lehigh Gap Wildlife Refuge – Reptiles and Amphibians

LGWR Biota – Reptiles and Amphibians

Reptiles and amphibians are particularly sensitive to their environment and thus, are important indicators of the quality of their habitat and any changes in the environment. To date, only visual surveys have been conducted with a

total of 29 species having been identified. Sean Bankos, one of the Naturalist Club members, did weekly surveys in spring and summer of 2009 in an attempt to do a more thorough analysis of which species exist on the property.

Reptiles and Amphibians of the Lehigh Gap Wildlife Refuge

Snapping Turtle

(*Chelydra serpentina*)

Eastern Painted Turtle

(*Chrysemys picta*)

Spotted Turtle

(*Clemmys guttata*)

Wood Turtle

(*Clemmys insculpta*)

Eastern Box Turtle

(*Terrapene carolina*)

Common Musk Turtle

(*Sternotherus odoratus*)

Five-lined Skink

(*Eumeces fasciatus*)

Northern Racer

(*Coluber constrictor*)

Eastern Rat Snake

(*Pantherophis alleghaniensis*)

Eastern Hognose Snake

(*Heterodon platirhinos*)

Northern Water Snake

(*Nerodia sipedon*)

Eastern Garter Snake

(*Thamnophis sirtalis*)

Northern Copperhead

(*Agkistrodon contortix*)

Timber Rattlesnake

(*Crotalus horridus*)

American Toad

(*Anaxyrus americanus*)

Gray Treefrog

(*Hyla versicolor*)

Bullfrog

(*Lithobates catesbeianus*)

Green Frog

(*Lithobates clamitans*)

Pickerel Frog

(*Lithobates palustris*)

Wood Frog

(*Lithobates sylvaticus*)

Northern Spring Peeper

(*Pseudacris crucifer*)

Northern Dusky Salamander

(*Desmognathus fuscus*)

Mountain Dusky Salamander

(*Desmognathus ochrophaeus*)

Northern Two-lined Salamander

(*Eurycea bislineata*)

Long-tailed Salamander

(*Eurycea longicauda*)

Four-toed Salamander

(*Hemidactylium scutatum*)

Northern Red-backed Salamander

(*Plethodon cinereus*)

Northern Red Salamander

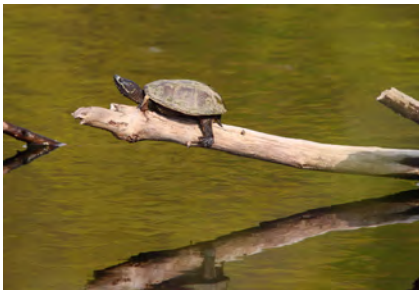
(*Pseudotriton ruber*)

Eastern (Red-spotted) Newt

(*Notophthalmus viridescens*)

In reviewing the Pennsylvania Herpetological Society Species Lists¹ for salamanders of Carbon and Lehigh Counties, 7 of 11 of the Lehigh County species and 6 of the 11 Carbon County species have been observed at the LGWR. Marbled (Lehigh only), Spotted, Jefferson's, Spring and Northern Slimy Salamanders exist in this region, but have not been seen at the Refuge. Of frogs and toads, 7 of 10 and 7 of 11 species from the Carbon and Lehigh Counties lists, respectively, have been observed at the LGWR. Fowlers Toad, Western Chorus Frog (Lehigh only), Upland Chorus Frog, Northern Leopard Frog (Lehigh only) and Eastern Spadefoot (Carbon only) are confirmed in the region but have not been observed at the Refuge.

All turtle species recorded in the counties, except the Bog Turtle, have been spotted at the LGWR; but it should be noted that this rare species has not been reported anywhere in Carbon County. Interestingly, the Common Musk Turtle, which is frequently seen at the ponds on the west side of the Refuge, is not on the list of a confirmed turtle species for Carbon County on the PA Herpetological Society site.



Common Musk Turtle

¹ See www.paherps.com and <http://www.paherp.org/app/>.

For snakes, 7 of 10 Lehigh County species and 6 of 11 Carbon County species have been observed at the LGWR. The Northern Ringneck, Eastern Milk, DeKay's Brown (Lehigh only), Red-bellied (Carbon only) and Smooth Green (Carbon only) snakes have not been observed at the Refuge. The only lizard on either county list, the Five-lined Skink, has been seen at the LGWR.

The pond to the immediate south of the Osprey House has been an important habitat for amphibians. Over the years, the lining of the pond and changes in water flow to the pond have led to decreasing water levels, especially in the summer. In fall 2010, major restoration work on the pond was completed. During the process, most of the non-native parrot's feather (*Myriophyllum aquaticum*) was removed. However, in the process of the restoration, some species may have been lost, despite attempts to relocate as many animals into a temporary holding pond as possible. The impact of this work will have to be monitored in 2011 and beyond.



Bullfrog

The skinks and snakes have often been observed amongst the rocks of the habitat gardens and that form a wall along the upper drive by the Osprey House. In order to prevent

damaging water flow into the Osprey House, major roadwork and a new rock support wall was build in 2010. Hopefully, the new stone wall will provide good habitat for these species.



Eastern (Red-spotted) Newt

Reptiles and amphibians have also been found along temporary puddles that form from the seeps along the edge of the LNE rail bed, in the area of the ponds on the west end of the Refuge property, and along the riparian zone of the Lehigh River.

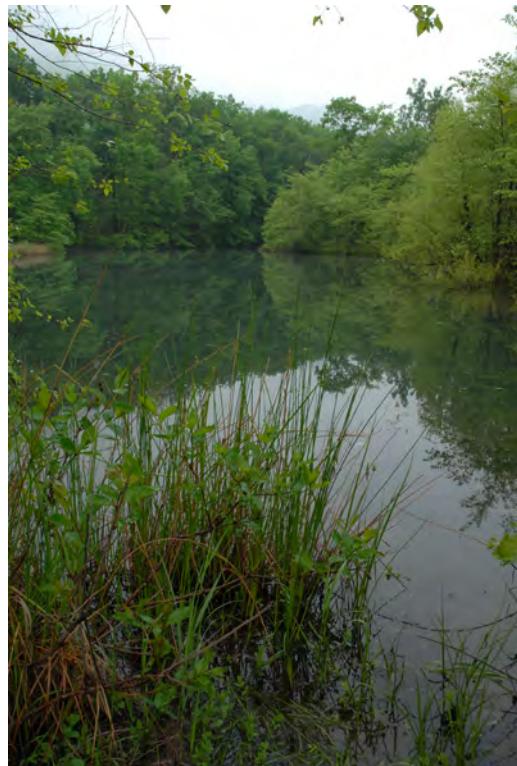


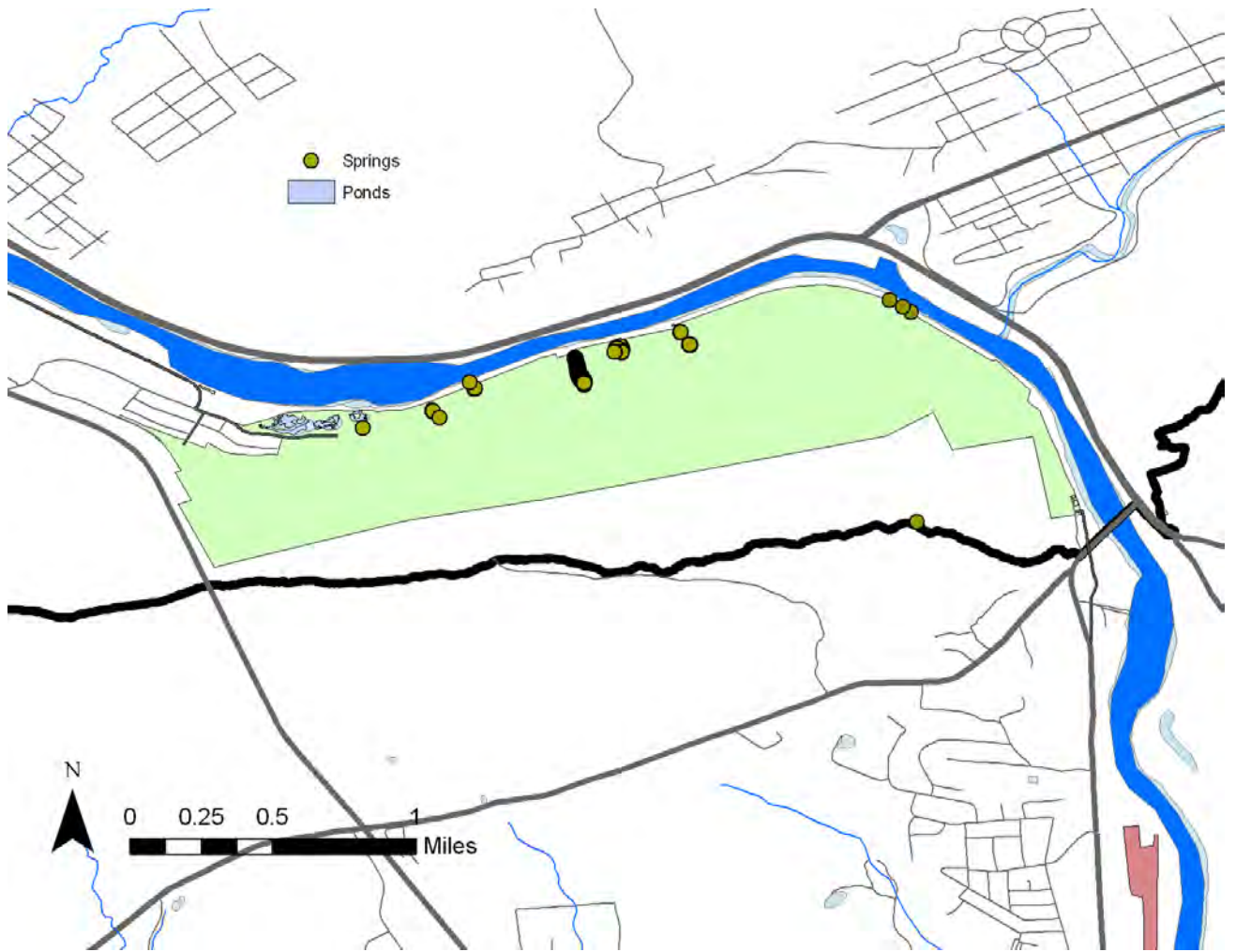
Pickerel Frog

A map of the key water features (springs and ponds) of the Refuge is shown on the following page. In the LGWR Ecological Assessment – Part I, there is a map of the LGWR wetland areas (page 15); all of these are in the

vicinity of the ponds on the west end of the property.

Ideally, in the near future, more systematic surveys for salamanders can be conducted in the spring especially in the area of the vernal pools. Amphibians are likely to be more susceptible to harm from metals contamination and acid deposition than other vertebrates, so monitoring them could be useful in understanding the continuing impact, if any, of such environmental pollutants at the Refuge. Additionally, with predictions of a warming climate, reptiles and amphibians might become important bio-indicators of changing conditions on the Refuge property.





Water Features Located Within the LGWR



A Seep along the D&L Trail