Salamander Survey Summary 2011

Fully terrestrial (woodland) salamanders live their entire lives in the moist soil of the forest floor. These salamanders spend much of their time underground in burrows or channeled soil. They also can be found hiding under rocks, logs, leaf litter, and artificial structures that provide a cool and moist environment. They only come to the surface to feed or reproduce, which must coincide with cool, wet, and calm weather conditions.

Woodland salamanders in Ohio include the red-backed salamander and the slimy salamander. Semi-terrestrial salamanders include the dusky salamander, mountain dusky salamander, and the eastern newt. All of these species are known to occur consistently under artificial cover boards and were the target species for our survey.

Liberty Park, rich in salamander diversity, is the target for our long-term monitoring project. Transects are established at the north and south ledges and are monitored in the spring and fall this year. Transects consisted of approximately twenty 12" x 12" plywood cover boards. Cover boards were checked weekly in April and May and also in October.

Table 1 illustrates the species found in each transect in Liberty Park, 2007-2011. Red backed and long tailed salamanders were recorded at the south ledges during the survey period. Red salamanders were noted at the south ledges in previous years. While they aren't a fully or semi-terrestrial species, they breed in spring fed streams near the transects and adults are found under the cover boards at times. None were recorded for 2010.

Two-lined and long-tail salamanders were noted at the north ledges this year. Redback, northern dusky and red salamanders have been recorded in small numbers at the north ledges in the past.

Numerous redback salamanders were documented at the south ledges in 2011. One dusky salamander and a handful of long-tail salamanders were recorded for there as well. Red salamanders have been documented under coverboards on the south ledges transect in past years.

Table 2 illustrates the average snout-vent length and total length of species captured since 2007. Sample size is also included in the table. Two volunteer teams monitor each transect. One group captures and measure the salamanders and the other group does not. Therefore, the sample size only represents a portion of the salamanders documented during survey efforts, 2007 to present.

Table 1. Species Recorded for North and South Ledges Transects, 2007 -2011.

	2007		2008		2009		2010		2011	
Species	Northern Ledges	Southern Ledges	Northern Ledges	Southern Ledges	Northern Ledges	Southern Ledges	Northern Ledges	Southern Ledges	Northern Ledges	Southern Ledges
DESFUS	1									1
EURBIS	6		8		9		11		4	
EURLON	5	7	5	18	7	24	6	5	3	8
PLECIN	1	31	4	30		27		32		37
PSERUB			2	1		2				
Grand Total	13	38	19	49	16	53	19	38	7	46

Table 2. Average SVL and Total Length from species captured during surveys, 2007-2011.

SPECIES	AVERAGE SVL (mm)	AVERAGE TOTAL LENGTH (mm)	SAMPLE SIZE
EURBIS	33.09	70.27	20
EURLON	30.37	71.94	45
PLECIN	32.77	69.1	93
PSERUB	55.65	106.95	2
DESFUS	40.40	86.50	1

A new trail was constructed at the north ledges in the summer of 2009. It opened to the public in October 2011. Parts of this new trail run right next to the existing salamander transect. The transects were placed in Liberty Park specifically to monitor the impacts of development in the park. Over time, these impacts may be demonstrated through this program.

Conclusions

This long-term monitoring project was put into place to measure impacts of foot traffic at the ledges in Liberty Park. The salamander transects will continue to be monitored in 2012.