

**SECTION C.1**

**AMPHIBIANS AND REPTILES OF PLUM BROOK STATION**



**Prepared by:**

**Ralph A. Pfungsten**

**For**

**Ohio Department of Natural Resources  
Division of Natural Areas and Preserves**

## **AMPHIBIANS AND REPTILES OF THE PLUM BROOK STATION-2001**

Ralph A. Pfungsten 347 Pineview Cir., Berea, OH 44017

There is no historical information that exists for the amphibians and reptiles that are found in the area, which has become Plum Brook Station. Conant (1938) lists 18 species of reptiles found at Sandusky and one at Kimball. Both localities are within five miles of Plum Brook Station. In addition to the reptiles, Walker (1946) listed two frog species from Sandusky. By studying present day distribution maps, a list of 38 species was compiled (Table 1) that probably inhabited the region before the arrival of European settlers. It was felt that there was a remote chance that as many as 26 of these species might still exist at Plum Brook

The entire station lies within the Lake Plains Physiographic Province and is relatively flat ranging in elevation from about 625' at the exodus of Pipe Creek and Plum Brook to about 680' in the sand hills of the west end. Limestone outcrops in a few roadside ditches at the west end and Ohio Shale outcrops in the center and east end of the property. Concretions, often in excess of the three feet in diameter are found along Plum Brook and flint outcroppings are known along the abandoned B+O right-of-way in the west end. There are some sandy (probably former beach) ridges, which run east west through the west end.

Given the relative flatness of the land, it is not surprising that it was all cleared, ditched and drained for farming long before World War II. Any woodlots that occur on the property are therefore less than 50 years of age and most appear to be younger than that. Most of the original vegetation indicates that this part of the state was a prairie and even now a few interesting herbaceous prairie plant species struggle to survive in scattered localities throughout the station.

Pipe Creek passes through the western end of the station while the southeastern third of the station forms the headwaters of Sawmill creek. The remainder of the property makes up the headwater region of Plum Brook. All of these streams drain into the Sandusky Bay of Lake Erie. Most of the area is very well drained and soils at the surface are usually very dry. Most streams and ditches are dry or non-flowing for most of the summer; the lone exception is Plum Brook, which receives large quantities of water pumped from operations at the Station.

### **METHODS AND MATERIALS**

Beginning in early April funnel traps were placed in many of the vernal ponds on the property. Trapping continued for most of April. Eggs and larva were collected at many of these ponds. Each of these ponds was visited at least once a week until it either dried up (mid-June) or no longer contained any eggs or larva (August). Turtle trapping was carried out in vernal ponds in spring and in the permanent ponds during the summer. Sheets of tin, measuring 2' x 4' were placed at 50 localities (Fig. 22) throughout the Station to provide shelter for snakes.

One of the most effective collecting techniques is to slowly drive roads after dark following or during a shower or thunderstorm in spring and summer. Under these conditions many amphibians and reptiles come out to feed on earthworms, insects and each other. However, most of the records obtained during this study were from the calls of frogs and toads or by simply walking and turning rocks, logs, boards and other debris throughout the station.

Voucher specimens were preserved for the more significant records. For large or unusual species only photographs were taken. Never was more than one adult of any species taken from any one locality. With larva (tadpoles) less than six were taken from each locality. Single crayfish specimens were collected whenever encountered. All specimens and original photographs have been deposited with the Cleveland Museum of Natural History.

The latitude and longitude were recorded for the center point of each locality. These localities were arbitrarily assigned an area with a diameter of approximately 0.1 mile. Each of the 87 sites from 1994 was visited in 2001. In addition 29 new sites were added during 2001. Each site was visited several times during each season but work was curtailed during the hottest and driest parts of the summer when many species were difficult to find.

A line map of the Station was drawn which included township borders, major roads and stream systems. This was used to create distribution maps for each species and these in turn form the bulk of this report. There are also appropriate comments concerning each species.

## **RESULTS**

Amphibians and/or reptiles were recorded from 116 localities in Plum Brook Station. In 2001 there were 15 localities from 1994 where no animals were found but animals were found at 29 new localities. Twenty-one species have been found (Appendix 1) including two salamanders, six frogs, one lizard, five turtles, and seven snakes. Two new native species, the milk snake and blue-tail skink were found this year as well as an introduced species, the red-eared slider. The gray tree frog has been deleted from the list. In addition the area lies within the range of nineteen other species (see potential occurrences) and it is possible that one or more of these may yet be discovered here.

What follows is a brief discussion of each species with reference to the distribution map and a listing of the number of sites for each species compared to 1994. In describing the abundance of each species at Plum Brook Station, I have used the categories defined by Pflingsten and Downs (1989). Abundant: A species that can almost always be found with ease under normal conditions. Common: A species that may be restricted by season or habitat but usually can be found with some effort. Uncommon: A species that seldom is found in any great numbers or at many locales. It usually is found incidental to something else. Rare/threatened/endangered: A species that is represented

by only a few individuals or which occupies a small area and may be in immediate jeopardy.

## **DISCUSSION**

Specimens were only collected at localities that were new since 1994. Photographs were used as vouchers for uncommon species such as fox snakes.

## **AMPHIBIANS**

### **Smallmouth Salamander (*Ambystoma texanum*)**

Common (Figure 2). 1994=22; 2001=16 sites. Adults of this species are rarely encountered outside the early (March-April) breeding season. Adults were trapped at several ponds and eggs and larva were found at many more. Because of the droughty conditions this year, all ponds and ditches dried up before larva of this species were able to transform and consequently this year's age class was again probably lost.

### **Redback Salamander (*Plethodon cinereus*)**

Rare (Figure 3). 1994=2; 2001=2 sites. Only five adults of northeastern North America's most common and widespread salamander were found at the Station. At one locality the animals were found under the same railroad tie that they were found under in 1994. This is a woodland species characteristic of the damp deciduous forest and one would therefore not expect it to be common in an area dominated by prairie species. However it should be common in the woodlots on the property. The explanation for their absence seems to lie in the past land management practice of burning half of the station every other year. This essentially destroys the leaf and mulch layer of the forest floor reducing humidity and consuming any source of cover such as logs and bark. Further, the woodlots are relatively young. Numbers of this species may increase with the passage of time.

### **American Toad (*Bufo americanus*)**

Abundant (Figure 4). 1994=29; 2001=80 sites. The great increase in the number of sites this year is due to the earlier start of the project.

### **Grey Tree Frog (*Hyla versicolor*)**

Absent. There was one photograph by John Gilligan and two vocal records by Tom Bartlett in 1994. In 2001 Bartlett again reported the calls of this frog. I visited the locality on several occasions, under ideal conditions and did not hear the calls. Bartlett later identified it as an unusual call of an uncommon species of bird. The photograph from 1994 is not particularly clear and myself and Tim Matson (Vertebrate Curator, Cleveland Museum of Natural History) spent considerable time trying to decide whether the photograph was that of a spring peeper or a tree frog. This summer I spent several evenings under ideal conditions listening for the call of this frog and am now convinced that this species is not part of the fauna of the Station.

### **Spring Peeper (*Pseudacris crucifer*)**

Abundant (Figure 5). 1994=10; 2001= 54 sites. The increase in the number of sites is a direct result of the earlier start (April) of the project in 2001.

**Western Chorus Frog (*Pseudacris triseriata*)**

Abundant (Figure 6). 1994=6; 2001=94 sites. Another species that benefited by the earlier start of the project. This now becomes the most common species at the Station but is rarely seen or heard after the spring breeding season.

**Bullfrog (*Rana catesbeiana*)**

Common (Figure7). 1994=5; 2001=8. Populations of the bullfrog remain stable. It is established in all of the permanent ponds at the Station.

**Green Frog (*Rana clamitans*)**

Abundant (Figure 8). 1994=25; 2001=30 sites. The green frog was found in virtually every pond and stream and in many ditches.

**Northern Leopard Frog (*Rana pipiens*)**

Uncommon (Figure 9). 1994=3; 2001=10; Several new records were discovered this year during the calling season in early April. But a few new sites were discovered later in the year. This is a colonizing species and it may be increasing in numbers and populations at the Station. This will be something to look for in future surveys.

## **REPTILES**

**Snapping Turtle (*Chelydra serpentina*)**

Common (Figure 10). 1994=5; 2001=9 sites. The snapping turtle is well established in most of the larger streams and ponds. Each locality represents multiple sighting or captures and two nests were found. The species was not found south of the Space Power Facility in Oxford Tp.

**Painted Turtle (*Chrysemys picta*)**

Common (Figure 11). 1994=9; 2001=12. This aquatic species was found in just about every permanent body of water at the Station. It was, as expected, the most common turtle species. As many as twenty individuals were seen basking on numerous occasions at the Snake Road Pond and at the "red ponds" at the west end.

**Blanding's Turtle (*Emys blandingii*)**

Rare (Figure 12). 1994=1; 2001=0. It was disappointing to not see or trap any individuals of this species this year. As this is a state listed species of special concern, a considerable amount of time was spent at the Snake Road pond looking for individuals. But none were seen by myself or by anyone else.

**Box Turtle (*Terrapene carolina*)**

Rare (Figure 13). 1994=2; 2001=3. This is a common species in southeastern Ohio but individuals are only rarely encountered in the north.

**Red-eared Slider (*Trachemys scripta elegans*)**

Rare (Figure 14). A single individual of this species was seen many times in the pond at Columbus and North Magazine Roads. It would bask on the same log on a regular basis. This is the common "pet shop" turtle and was probably released here sometime in the past. It is a southern species not native to Ohio and in this pond the species seems to be represented by a single individual.

**Five-lined Skink (*Eumeces fasciatus*)**

Rare (Figure 15). This species is one of several that was expected in the first survey but not found. It was assumed that it was not present and indeed it may not have been. Several species were probably extirpated due to land clearing by the original settlers of the area or during construction of the Station in the 40's. Because the Station is surrounded by extensive areas of cultivated land, it is difficult for species to recolonize the Station. The lone exception is the riparian corridor of Pipe Creek at the west end. It was in this area that a single individual was seen basking on an old bridge abutment of Pipe Creek near the western perimeter of the property. It is possible that this species is beginning to colonize the Station.

**Fox Snake (*Elaphe gloydi*)**

Common (Figure 16). 1994=7; 2001=3. Despite reports from NASA employees about his species only three individuals were seen this year. As it is a state listed species of special concern, it should be monitored closely in future surveys.

**Eastern Milk Snake (*Lampropeltis t. triangulum*)**

Rare (Figure 17). A single individual was found under a sheet of tin at the west end. This species is reported for the first time at the Station and reported only the second time in the township since 1921. Glen Barnhardt reported seeing another individual several years ago near the center of the Station.

**Northern Water Snake (*Nerodia sipedon*)**

Rare (Figure 18). 1994=1; 2001=1. The most common snake in all of North America was seen only once at the Station. The 1994 record was at the east end of the property while this year a single individual was seen several times at the "red ponds".

**Smooth Green Snake (*Ophedrys vernalis*)**

Rare (Figure 19). 1994=1; 2001=1. A single specimen was seen by USDA personnel in May. Maintenance workers reported that in years past, young of the year were often seen during early October on Columbus Road near the Engineering Building. It seems that although rare at the Station, the species is established.

**Brown Snake (*Storeria dekayi*)**

Common (Figure 20). 1994=8; 2001=13. The most common species at the Station. It was generally found several times at each locality.

**Butler's Garter Snake (*Thamnophis butleri*)**

Uncommon (Figure 21). 1994=1; 2001=4. A prairie species that has been greatly reduced in numbers in the extensive agriculture area of western Ohio.

**Common Garter Snake (*Thamnophis sirtalis*)**

Common (Figure 22). 1994=10; 2001=8. Neither garter snake is a common as expected at the Station, perhaps just too hot and dry during the summers to support the expected population sizes.

**RECOMMENDATIONS**

At present, it appears that land management practices are based on economic constraints rather than ecological considerations. It is clear that land burning has been discontinued for some time. This is a benefit for most of the woodlots as it will increase the leaf litter and cover on the forest floor. However in many of the open (field) area the scrub dogwood is rapidly overtaking everything and periodic selective burning would be of considerable benefit.

Although the deer herd appears to be smaller than it was in 1994 it is still too large and a browse line is evident almost everywhere on the property. This problem will only be exacerbated by the lack of a hunting season in 2001. Hopefully a return to normalcy in the future will result in the resumption of hunting to control the deer population.

**LITERATURE CITED**

Conant, Roger. 1951. The Reptiles of Ohio. 2<sup>nd</sup> Ed. University of Notre Dame. Notre Dame, Indiana. 284p.

King, Richard B., Michael J. Oldham, Wayne F. Weller and Douglas Wynn. 1995. Historic and current amphibian and reptile distributions in the island region of Lake Erie (in press).

Pfingsten, Ralph A. and Floyd L. Down, Eds. 1989. Salamanders of Ohio. Ohio Biol. Surv. Bull. New Series Vol. 7 No. 2 xx + 315p. +29 Pls.

**TABLE 1.** Probable amphibian and reptile species found in the Plum Brook Area prior to the arrival of European Settlers (extrapolated from present day distribution maps).

SALAMANDERS

1. Newt
2. Smallmouth
3. Spotted
4. Marbled
5. Tiger
6. Redback

FROGS AND TOADS

1. American toad
2. Fowler's toad
3. Cricket frog
4. Chorus frog
5. Spring peeper
6. Treefrog
7. Bullfrog
8. Green frog
9. Leopard frog

LIZARD

1. Blue-tailed skink

TURTLES

1. Musk
2. Snapping
3. Spotted
4. Blanding's
5. Box
6. Map
7. Painted

SNAKES

1. Ring neck

2. Hognose
3. Smooth green
4. Racer
5. Pilot black
6. Fox
7. Milk
8. Kirtland's
9. Queen
10. Water
11. Brown
12. Butler's
13. Ribbon
14. Garter
15. Massasauga

## **APPENDIX A.** Amphibians and reptiles found at Plum Brook Station.

### Salamanders

1. Smallmouth Salamander (*Ambystoma texanum*)
2. Redback Salamander (*Plethodon cinereus*)

### Frogs and Toads

1. American Toad (*Bufo americanus*)
2. Western Chorus Frog (*Pseudacris triseriata*)
3. Spring Peeper (*Pseudacris crucifer*)
4. Bullfrog (*Rana catesbeiana*)
5. Green Frog (*Rana clamitans*)
6. Leopard Frog (*Rana pipiens*)

### Turtles

1. Snapping Turtle (*Chelydra serpentina*)
2. Blanding's Turtle (*Emys blandingii*)
3. Box Turtle (*Terrapene carolina*)
4. Red-eared Slider (*Trachemys scripta elegans*)
5. Painted Turtle (*Chrysemys picta*)

### Lizards

1. Five-lined Skink (*Eumeces fasciatus*)

### Snakes

1. Smooth Green Snake (*Opheodrys vernalis*)
2. Fox Snake (*Elaphe vulpina*)
3. Eastern Milk Snake (*Lampropeltis t. triangulum*)
4. Northern Water Snake (*Nerodia sipedon*)
5. Brown Snake (*Storeria dekayi*)
6. Butler's Garter Snake (*Thamnophis butleri*)
7. Common GarterSnake (*Thamnophis sirtalis*)

## **Appendix B.** Potential Occurrences

Plum Brook Station lies within the range of many species (Table 1) which for one reason or another were not found during this study. There is a remote possibility that some of these species may yet be discovered. The following is a list of species which appear to have the best chance of future discovery.

Cricket frog, tiger salamander, hognose snake, blue racer, ribbon snake, musk turtle.

**Appendix C.** List of localities for amphibian and reptile records.  
(**Bold print=2001 records**)

1. Perkins Tp., Northeast corner of jct. Pentolite and Ransom Roads. (Sandusky) 41° 23' 08"N, 82° 41' 42"W. 5/5 smallmouth salamander. **4/5 smallmouth salamander. 4/6 spring peeper. 4/23 toad.**
2. Perkins Tp., 0.1 mile Northeast of reactor. (Sandusky) 41° 23' 27"N, 82° 40' 59"W. 5/5 green frog, smallmouth salamander.
3. Perkins Tp., 0.4 mile Northwest of reactor. (Sandusky) 41° 23' 27"N, 82° 41' 15"W. 5/5 green frog, smallmouth salamander, 6/10 snapping turtle. 6/16 crayfish. **4/5 smallmouth salamander, painted turtle, snapping turtle, chorus frog, spring peeper. 4/6 green frog. 4/17 brown snake. 4/23 toad. 5/29 garter snake.**
4. Perkins Tp., 0.1 mile West of reactor. (Sandusky) 41° 23' 12"N, 82° 41' 14"W. 5/5 smallmouth salamander, 6/20 toad. **4/23 garter snake. 5/24 smallmouth salamander. 6/10 toad.**
5. Perkins Tp., 0.3 mile Southwest of jct. Campbell Street and North Patrol Road. (Sandusky) 41° 22' 36"N, 82° 42' 39"W. 5/31 smallmouth salamander. 7/5 painted turtle. **4/10 smallmouth salamander. 4/23 toad.**
6. Oxford Tp., Scheid Road at North leg of wye. (Kimball) 41° 21' 32"N, 82° 41' 10"W. 5/5 snapping turtle, chorus frog. 5/12 peeper. 6/20 toad. **4/5 chorus frog, spring peeper. 4/12 toad. 4/29 smallmouth salamander. 6/10 snapping turtle.**
7. Oxford Tp., firing range near South Patrol Road. (Kimball) 41° 21' 10"N, 82° 40' 45"W. 5/5 chorus frog. **6/15 toad.**
8. Oxford Tp., South Magazine Road., near Taft Road. (Kimball) 41° 21' 12"N, 82° 40' 17"W. 5/5 chorus frog. 5/24 smallmouth salamander, toad. 6/10 garter snake. 10/19 peeper. **4/5 chorus frog. 4/6 spring peeper, leopard frog.**
9. Oxford Tp., Taft Road at South Patrol Road. (Kimball) 41° 20' 47"N, 82° 39' 54"W. 5/5 toad. **6/15 toad. 6/25 garter snake.**
10. Oxford Tp., South Magazine Road, near Igloo 9157. (Kimball) 41° 21' 04"N, 82° 39' 20"W. 5/5 smallmouth salamander. **4/6 chorus frog, spring peeper, smallmouth salamander.**
11. Perkins Tp., North Magazine Road at Columbus Road. (Kimball) 41° 22' 08"N, 82° 39' 21"W. 5/5 painted turtle. 6/24 green frog. 7/27 leopard frog. **4/5 chorus frog, spring peeper. 4/23 toad. 5/8 painted turtle. 6/13 bull frog. 6/21 toad.**
12. Perkins Tp., Lane 3, Igloo 9142. (Kimball) 41° 22' 05"N, 82° 39' 28"W. 5/5 green frog. 6/24 toad. **4/23 spring peeper, toad. 4/29 green frog. 5/8 painted turtle, snapping turtle. 6/13 bull frog. 6/21 toad.**

13. Perkins Tp., Southwest of jct. Fox Road and Lane 6. (Kimball) 41° 22' 45"N, 82° 39' 55"W, 5/5 chorus frog. 6/24 green frog. **4/12 chorus frog, spring peeper. 6/15 toad.**
14. Perkins Tp., West end barn. (Sandusky) 41° 22' 39", 82° 42' 44"W. 5/6 garter snake. 6/2 brown snake.
15. Perkins Tp., Northwest corner of West End. (Sandusky). 41° 22' 41"N, 82° 42' 59"W. 5/6 smallmouth salamander. 8/23 garter snake. **4/5 chorus frog. 6/10 painted turtle.**
16. Perkins Tp., 0.3 mile North of jct Taylor and South Patrol Roads. (Kimball). 41° 21' 57"N, 82° 42' 08"W. 5/9 green frog. 6/10 box turtle. 6/29 garter snake, brown snake, toad. 9/15 crayfish. **7/16 milk snake.**
17. Oxford Tp., East end of rifle range. (Kimball) 41° 21' 15"N, 81° 40' 06"W. 5/9 smallmouth salamander, 5/12 brown snake. **4/23 spring peeper. 5/14 brown snake. 7/3 garter snake.**
18. Oxford Tp., South of Space Power Facility. (Kimball). 41° 20' 41"N, 82° 39' 55"W. 5/6 toad. 5/12 bullfrog, peeper. 5/26 green frog. 7/1 leopard frog. **4/23 chorus frog, spring peeper. 4/23 green frog, toad, painted turtle. 4/26 bull frog. 6/15 toad, leopard frog.**
19. Oxford Tp., Olemacher Ditch at East Patrol Road. (Kimball) 41° 20' 40"N, 82° 38' 09"W. 5/6 smallmouth salamander. **4/26 smallmouth salamander.**
20. Perkins Tp., Columbus Avenue at Scheid Ditch. (Kimball). 41° 21' 34"N, 82° 38' 51"W. 5/6 green frog. **4/23 chorus frog, spring peeper, toad. 4/29 green frog.**
21. Perkins Tp., Box Factory Road Pond. (Kimball) 41° 22' 39"N, 81° 40' 55"W. 5/6 painted turtle. **4/5 painted turtle. 4/23 toad. 5/24 green frog, chorus frog. 6/13 bull frog.**
22. Perkins Tp., Scheid Road at Lane 8. (Kimball) 41° 23' 34"N, 82° 39' 52"W. 5/6 smallmouth salamander. **4/9 chorus frog. 6/21 toad.**
23. Perkins Tp., jct of Taylor and Ransom Roads. (Kimball) 41° 21' 54"N, 82° 41' 40"W. 5/9 smallmouth salamander. **4/5 chorus frog. 4/6 spring peeper.**
24. Perkins Tp., Taylor Road, West of Ransom Road. (Kimball) 41° 21' 48"N, 82° 41' 55"W. 5/9 smallmouth salamander. 6/20 toad. 7/8 green frog. **4/5 chorus frog.**
25. Oxford Tp., East end of rifle range. (Kimball) 41° 21' 15"N, 82° 40' 22"W. 5/16 garter snake.
26. Perkins Tp., Patrol Road at West end of Scheid Road. (Kimball) 41° 21' 36"N, 82° 41' 37"W. 5/9 toad. 7/8 green frog. **6/25 green frog.**
27. Perkins Tp., Fox Road, 0.25 mile East of Ransom Road. (Kimball) 41° 22' 23"N, 82° 41' 28"W. 5/9 smallmouth salamander. 6/11 fox snake. **4/5 chorus frog. 4/10 leopard frog. 4/13 spring peeper.**

28. Perkins Tp., North Magazine Road at Snake Road. (Kimball) 41° 22' 09"N, 82° 40' 15"W. 5/9 snapping turtle, chorus frog. 7/5 toad. **4/13 chorus frog. 4/23 spring peeper, toad, leopard frog. 4/26 green frog.**
29. Perkins Tp., Snake Road ponds. (Kimball) 41° 21' 52"N, 82° 40' 12"W. 5/9 painted turtle. 6/9 tree frog. 7/1 green frog. 7/5 Blanding's turtle. 7/14 snapping turtle, 7/29 leopard frog. 10/19 peeper. **4/5 painted turtle, chorus frog. 4/23 spring peeper. 4/29 snapping turtle. 6/10 toad, green frog. 6/18 garter snake. 6/20 box turtle. 10/10 brown snake.**
30. Oxford Tp., South Magazine Road 0.2 mile East of Taft Road. (Kimball). 41° 21' 14"N, 82° 39' 49"W. 5/12 chorus frog, Smallmouth salamander. **4/6 chorus frog, spring peeper, leopard frog. 4/12 green frog. 5/11 garter snake.**
31. Perkins Tp., Scheid Road at Lane 5. (Kimball). 41° 21' 38"N, 82° 39' 35"W. 5/16 smallmouth salamander. 6/14 box turtle. 6/24 toad. **4/5 chorus frog. 6/5 spring peeper, green frog. 6/21 toad.**
32. Perkins Tp., Center Magazine Road at Columbus Road. (Kimball). 41° 21' 47"N, 82° 38' 58"W. 5/16 green frog. **4/6 chorus frog, spring peeper, leopard frog. 6/21 toad.**
33. Perkins Tp., South end Reactor-Maintenance Road. (Sandusky). 41° 22' 46"N, 82° 41' 05"W. 6/20 toad. **6/5 toad.**
34. Perkins Tp., Northeast corner of South Patrol and Scheid Roads. (Kimball). 41° 21' 44"N, 82° 41' 38"W. 5/17 smallmouth salamander. **4/5 chorus frog. 4/29 smallmouth salamander. 6/11 green frog. 10/14 spring peeper.**
35. Perkins Tp., North Magazine Road at Lane 6. (Kimball) 41° 22' 08"N, 82° 39' 53"W. 5/17 garter snake. 6/12 treefrog. **4/5 chorus frog. 4/23 spring peeper. 5/24 toad. 6/21 toad, bull frog. 8/20 brown snake.**
36. Perkins Tp., North Patrol Road ditch on northernmost perimeter. (Sandusky) 41° 23' 42"N, 82° 41' 12"W. 5/31 toad. **4/5 chorus frog. 4/6 spring peeper. 5/1 toad.**
37. Perkins Tp., North end of center road North of reactor. (Sandusky) 41° 23' 28"N, 82° 41' 07"W. 5/19 smallmouth salamander, green frog.
38. Perkins Tp., West end of Pentolite Road. (Sandusky) 41° 23' 01"N, 82° 41' 52"W. 5/19 garter snake. 5/31 toad, brown snake. **4/5 chorus frog. 5/11 smallmouth salamander.**
39. Perkins Tp., jct Fox and Snake Roads, North side ditch. (Kimball) 41° 22' 20"N, 82° 40' 15"W. 5/19 toad. 7/5 green frog. **6/15 toad. 6/22 leopard frog, spring peeper, green frog.**
40. Perkins Tp., Scheid Road 0.1 mile West of Taft Road. (Kimball) 41° 21' 35"N, 82° 40' 11"W. 5/19 smallmouth salamander. **4/6 chorus frog, spring peeper.**

41. Perkins Tp., Southeast corner of Fox Road. and Lane 6. (Kimball). 41° 22' 20"N, 82° 39' 55"W. 5/24 garter snake. **6/15 toad. 6/18 box turtle. 6/21 toad. 6/22 green frog.**
42. Perkins Tp., Maintenance Road at Plum Brook. (Sandusky) 41° 22' 41"N, 82° 40' 32"W. 5/24 green frog. **5/29 green frog. 6/5 brown snake.**
43. Perkins Tp., Ransom ditch at rail yard. (Sandusky) 41° 22' 54"N, 82° 41' 27"W. 5/24 smallmouth salamander. **4/6 chorus frog. 6/11 green frog.**
44. Perkins Tp., Lane 6, Igloo 9179. (Kimball) 41° 21' 54"N, 82° 39' 45"W. 5/24 brown snake. 6/30 green snake. 10/19 peeper. **6/5 chorus frog. 6/20 box turtle. 8/20 toad,**
45. Oxford Tp., Lane 6, Igloo 9172. (Kimball) 41° 21' 21"N, 82° 39' 31"W. 5/24 garter snake, fox snake. **4/5 chorus frog.**
46. Oxford Tp., South Magazine Road at Kuebelar Ditch. (Kimball). 41° 21' 02"N, 82° 38' 43"W. 5/26 green frog. 7/1 snapping turtle. **6/29 green frog. 9/17 fox snake. 9/21 spring peeper.**
47. Oxford Tp., South Patrol Road at Scheid-Olemacher Ditch. (Kimball) 41° 20' 30"N, 82° 39' 16"W. 5/26 garter snake. 7/5 painted turtle. **6/15 toad.**
48. Perkins Tp., ditch at entrance to West End TNT Ponds. (Kimball) 41° 22' 28"N, 82° 42' 37"W. 5/26 smallmouth salamander. **5/29 smallmouth salamander. 6/15 Butler's garter snake.**
49. Perkins Tp., West End TNT Ponds. (Kimball) 41° 22' 27"N, 82° 42' 44"W. 5/26 crayfish. 5/31 painted turtle, green frog. 7/29 bullfrog. **4/23 chorus frog, spring peeper, toad, painted turtle, snapping turtle. 5/11 green frog. 5/14 garter snake, smallmouth salamander. 6/15 toad, bull frog. 7/2 water snake.**
50. Perkins Tp., Maintenance Area, building 5131. (Sandusky) 41° 22' 31"N, 82° 41' 00"W. 5/31 fox snake. **4/6 chorus frog.**
51. Perkins Tp., ditch at K-site. (Sandusky) 41° 22' 40"N, 82° 41' 44" W. 5/31 chorus frog.
52. Perkins Tp., Ransom Road 0.2 mile North of Pentolite Road. (Sandusky) 41° 23' 44"N, 82° 41' 45"W. 5/31 toad.
53. Perkins Tp., North Patrol Road East of Ransom Road. (Sandusky) 41° 23' 05"N, 82° 41' 40"W. 5/31 toad.
54. Perkins Tp., Northeast corner of North End. (Sandusky) 41° 22' 42"N, 82° 40' 45"W. 5/31 toad. 6/15 garter snake. **4/6 chorus frog.**
55. Perkins Tp., 0.2 mile North of Engineering Building. (Sandusky). 41° 22' 52"N, 82° 39' 53"W. 5/31 toad, green frog. **4/5 chorus frog. 4/12 spring peeper. 6/7 brown snake. 6/15 toad, green frog.**

56. Perkins Tp., 0.2 mile Southwest of Engineering Building. (Sandusky)  
41° 23' 37"N, 82° 39' 42"W. 5/31 toad. **6/15 toad.**
57. Oxford Tp., Lane 8, Igloo 9196. (Kimball) 41° 21' 23"N, 82° 39' 45"W.  
5/31 toad. **5/24 smallmouth salamander. 6/5 chorus frog, spring peeper.**  
**6/21 toad.**
58. Oxford Tp., Lane 8, Igloo 9194. (Kimball) 41° 21' 13"N, 82° 39' 41"W.  
5/31 toad. **4/5 chorus frog.**
59. Oxford Tp., jct South Magazine and Taft Roads. (Kimball) 41° 21' 18"N,  
82° 40' 06"W. 5/31. 10/19 peeper. **4/6 chorus frog, spring peeper.**
60. Perkins Tp., jct Box Factory and North Magazine Roads. (Kimball)  
41° 21' 58"N, 82° 41' 15"W. 5/31 toad. 10/20 garter snake. **4/5 chorus frog.**
61. Perkins Tp., 0.5 mile Southwest of Engineering Building. (Kimball)  
41° 22' 29"N, 82° 40' 00"W. 6/7 toad, green frog. 7/5 brown snake. 8/26 tree frog.  
**5/11 toad, chorus frog, spring peeper.**
62. Perkins Tp., B-2 retention pond. (Kimball) 41° 21' 58"N, 82° 40' 48"W.  
6/10 fox snake, bullfrog, painted turtle. **4/5 chorus frog. 6/11 painted turtle.**  
**6/20 bull frog. 7/9 snapping turtle.**
63. Perkins Tp., North Magazine Road at Plum Brook. (Kimball) 41° 21' 57"N,  
82° 40' 37"W. 6/10 green frog, crayfish. 9/15 fox snake. 10/19 brown snake.  
**4/5 chorus frog. 6/11 snapping turtle. 7/25 Butler's garter snake. 10/14 spring**  
**peeper.**
64. Perkins Tp., Lane 2 between Igloo 9124 and 9125. (Kimball) 41° 31' 47"N,  
82° 39' 17"W. 6/10 brown snake.
65. Perkins Tp., Lane 5 at North Magazine Road. (Kimball) 41° 22' 06"N,  
82° 39' 44"W. 6/12 smallmouth salamander, crayfish. 7/1 painted turtle, green  
frog, bullfrog. **4/10 green frog. 4/23 chorus frog, spring peeper.**  
**6/11 smallmouth salamander. 7/25 toad.**
66. Perkins Tp., Maintenance Road ditch just west of K-Site. (Sandusky).  
41° 22' 42"N, 82° 41' 55"W. 6/12 green frog. 7/8 toad. 8/20 leopard frog.  
**5/11 green frog. 5/16 painted turtle.**
67. Perkins Tp., Scheid Road at Plum Brook. (Kimball) 41° 21' 34"N,  
82° 30' 38"W. 6/15 toad.
68. Perkins Tp., Plum Brook at Pentolite Road. (Sandusky) 41° 23' 03"N,  
82° 40' 15"W. 6/16 painted turtle. 6/20 bullfrog, green frog. 6/11 fox snake.  
**6/15 green frog. 8/20 painted turtle.**
69. Perkins Tp., Pentolite Road 0.3 mile Southwest of reactor. (Sandusky)  
41° 23' 07"N, 82° 41' 22"W. 6/16 redback salamander. **4/5 chorus frog.**  
**5/18 redback salamander.**
70. Perkins Tp., Columbus Road 0.25 mile North Fox Road. (Kimball) 41° 22' 27"N,  
82° 39' 33"W. 6/20 toad. 10/19 peeper.

71. Perkins Tp., Ransom Road. at top of hill. (Kimball) 41° 22' 04"N, 82° 41' 42"W. 6/20 toad.
72. Perkins Tp., Maintenance Road. at Ransom Ditch. (Sandusky) 41° 22' 43"N, 82° 41' 28"W. 6/20 toad. 9/26 green frog, garter snake. **4/6 chorus frog, spring peeper.**
73. Perkins Tp., Reservoir North of jct Maintenance and Taylor Roads. (Sandusky). 41° 22' 50"N, 82° 40' 05"W. 6/21 painted turtle. **6/25 snapping turtle. 7/12 fox snake.**
74. Perkins Tp., Scheid Road at west branch of Plum Brook. (Kimball) 41° 21' 35"N, 82° 40' 58"W. 6/24 toad, green frog. **4/6 chorus frog. 6/5 spring peeper.**
75. Perkins Tp., Fox Road at Pipe Creek, (Kimball) 42° 22' 21"N, 82° 42' 58"W, 6/24 snapping turtle. **6/13 blue-tailed skink.**
76. Oxford Tp., Space Power Facility at South Magazine Road. (Kimball) 41° 21' 10"N, 82° 39' 04"W. 6/24 green frog.
77. Perkins Tp., North of North Magazine Road at Lane 4. (Kimball) 41° 22' 12"N, 82° 39' 40"W. 6/24 chorus frog.
78. Oxford Tp., Igloo 9106 and 9119. (Kimball) 41° 21' 22"N, 82° 39' 06"W. 6/24 peeper, toad.
79. Oxford Tp., Igloo 9103. (Kimball) 41° 21' 11"N, 82° 38' 55"W. 6/24 toad.
80. Perkins Tp., jct Fox and Taylor Roads. (Kimball) 41° 22' 20"N, 82° 41' 05"W. 6/24 peeper, chorus frog. **6/15 toad.**
81. Perkins Tp., Water Intake Reservoir. (Sandusky) 41° 22' 34"N, 82° 42' 07"W. 6/28 bullfrog, painted turtle. **4/23 toad, painted turtle, green frog. 6/29 bull frog.**
82. Perkins Tp., Campbell St. near Fox Road. in red barn (Kimball) 41° 22' 22"N, 82° 42' 40"W. 6/30 fox snake. **6/15 green frog.**
83. Perkins Tp., Pentolite Road at Reactor Reservoir outlet. (Sandusky) 41° 23' 03"N, 82° 40' 52"W. 7/1 green frog. **6/13 green frog.**
84. Perkins Tp., Patrol Road, 0.5 mile East of main gate. (Sandusky) 41° 23' 03"N, 82° 40' 52"W. 7/1 water snake. **4/5 chorus frog. 6/21 toad. 8/30 green frog.**
85. Perkins Tp., 0.5 mile northwest of jct. Taylor and South Patrol Roads. (Kimball) 41° 22' 00"N, 82° 42' 25"W. 6/28 brown snake, garter snake, toad. **4/12 spring peeper, toad.**
86. Perkins Tp., North Magazine Road, near. Plum Brook. (Kimball) 41° 21' 51"N, 82° 40' 28"W. 7/5 Butler's garter snake. **6/20 Butler's garter snake.**
87. Perkins Tp., ditch on east side of Maintenance Area. (Sandusky) 41° 22' 42"N, 82° 40' 32"W. 9/26 green frog. **6/5 green frog.**

88. Perkins Tp., 0.3 miles North Northeast of reactor. (Sandusky)  
41° 23' 23.3"N, 82° 40' 51.1"W. 4/5 chorus frog, spring peeper.  
5/11 smallmouth salamander.
89. Perkins Tp., 0.1 mile East of Engineering Building. (Sandusky) 41° 22' 45.8"N,  
82° 39' 25.2"W. 4/5 chorus frog. 6/15 toad.
90. Perkins Tp. 0.5 mile East of Main Gate. (Sandusky) 41° 23' 02"N,  
82° 39' 45.2"W. 4/26 toad, chorus frog. 6/15 brown snake. 6/21 toad.
91. Perkins Tp., 0.5 mile Northwest of main gate. (Sandusky) 41° 23' 17.4"N,  
82° 40' 20.8"W. 4/5 chorus frog. 4/6 spring peeper. 6/15 brown snake, garter  
snake.
92. Perkins Tp., West end of Maintenance Area. (Sandusky). 41°22' 33.5"N,  
82° 41' 15.2"W. 4/6 chorus frog, spring peeper. 5/14 garter snake.  
5/29 smallmouth salamander. 6/21 brown snake.
93. Oxford Tp., South Patrol Road 0.1 mile West of Plum Brook. (Kimball).  
41° 21' 18.9"N, 82° 41' 04.5W. 6/15 toad. 7/25 green frog.
94. Perkins Tp., Campbell and South Patrol Road. (Kimball). 41° 21' 55.6N,  
82° 42' 52.4W. 6/15 toad.
95. Perkins Tp., Near Erie County Sportsman's Club Pond. (Sandusky)  
41° 22' 37"N, 82° 39' 01.9W. 4/5 chorus frog, spring peeper. 4/23 toad.  
6/10 green frog. 6/15 bull frog.
96. Perkins Tp., East Patrol Road East of Center Magazine Road. (Kimball)  
41°21' 48.9"N, 82°38' 45.1"W. 5/1 toad.
97. Perkins Tp., South Patrol Road 0.2 mile East of Taylor Road. (Kimball)  
41° 21' 44.1"N, 82° 41' 51.1"W. 4/10 toad.
98. Perkins Tp., Water tower at Taylor and South Patrol Roads. (Kimball)  
41° 21' 45.8"N, 82° 42' 07.6"W. 4/5 chorus frog. 4/12 spring peeper.
99. Perkins Tp., 0.4 miles North of reactor. (Sandusky) 41° 23' 35"N,  
82° 41' 00"W. 4/19 smallmouth salamander. 9/21 spring peeper, toad.
100. Perkins Tp., 0.2 miles Northwest of reactor. (Sandusky) 41° 23' 20.7"N,  
82° 41' 13.1"W. 4/19 smallmouth salamander.
101. Perkins Tp., 0.4 miles West of reactor along railroad track. (Sandusky)  
41° 23' 13"N, 82° 41' 30"W. 4/19 chorus frog. 10/1 redback salamander.
102. Perkins Tp., 0.2 miles North of Scheid Road, 0.3 miles East of Ransom Road.  
(Kimball) 41° 22' 36.7"N, 82° 41' 14.7"W. 4/19 chorus frog.
103. Perkins Tp., 0.2 miles North Scheid, 0.5 miles East of Ransom Road. (Kimball)  
41° 21' 41.7"N, 82° 40' 59.7"W. 4/19 chorus frog.

104. Perkins Tp., Fox Road, 1 mile East of West perimeter. (Kimball)  
41° 22' 20.5"N, 82° 42' 02.1"W. 4/5 chorus frog. 4/12 spring peeper, green frog, toad. 4/13 leopard frog.
105. Perkins Tp., 0.1 mile North of Scheid Road, 0.2 mile West of Plum Brook (Kimball) 41° 23' 43"N, 82° 40' 50.2"W. 5/3 chorus frog, spring peeper.
106. Oxford Tp., East Patrol Road, 0.5 mile South of Scheid Road. (Kimball)  
41° 20' 34.7"N, 82° 38' 38.2"W. 4/19 smallmouth salamander.
107. Oxford Tp., ONG area, 0.35 mile North of Mason Road. (Kimball)  
41° 20' 42.1"N, 82° 38' 41.6"W. 5/1 toad.
108. Perkins Tp., Scheid Ditch at East Patrol Road. (Kimball).41° 21' 39.5"N,  
82° 38' 41.8"W. 5/1 toad.
109. Perkins Tp., Northeast perimeter at Hemming Ditch (Sandusky)  
41° 23' 25.5"N, 82° 40' 27.2"W. 5/3 chorus frog, spring peeper, toad.  
5/29 green frog, smallmouth salamander. 6/21 toad. 10/14 spring peeper.
110. Perkins Tp., Short Cut Road near East end. (Sandusky) 41° 22' 37.8"N,  
82° 40' 13.1"W. 6/5 chorus frog.
111. Perkins Tp., Center Magazine Road at eastern most bunker road. (Kimball)  
41° 21' 43.4"N, 82° 39' 08.2"W. 4/6 spring peeper. 5/11 toad. 6/11 chorus frog. 6/21 toad.
112. Perkins Tp., Short Cut Road 0.2 mile North of Fox Road. (Kimball)  
41° 22' 27.7"N, 82° 40' 30.3"W. 6/5 green snake.
113. Perkins Tp., Building 2621 on Taylor Road. (Kimball). 41° 22' 05.3"N,  
82° 41' 27.6"W. 6/25 brown snake, garter snake.
114. Perkins Tp., Northwest perimeter road, 0.1 mile southwest of point where high tension line turns south (Sandusky) 41° 23' 18"N, 82° 41' 52"W. 8/26 leopard frog.
115. Perkins Tp.,0.1 mile North of Maintenance Road on west perimeter road. (Sandusky) 41° 22' 48"N, 82° 42' 00"W. 8/26 leopard frog.
116. Oxford Tp., East Patrol Road, 0.25 mile North of South Magazine Road. (Kimball) 41° 21' 11"N, 82° 38' 39"W. 8/28 Butler's garter snake.

**Bunker Numbers:**

9102. 6/21 toad. 8/30 brown snake.
9104. 4/5 chorus frog. 4/6 spring peeper.
9105. 4/5 chorus frog. 4/6 spring peeper. 6/21 toad.
9106. 4/5 chorus frog. 4/6 spring peeper. 6/21 toad.
9107. 4/5 chorus frog. 4/6 spring peeper. 6/21 toad, green frog.

9108. 4/5 chorus frog. 6/21 toad.
9109. 4/6 chorus frog.
9110. 4/5 chorus frog. 6/21 toad.
9112. 6/21 toad.
9117. 6/21 toad. green frog.
9118. 4/5 chorus frog.
9120. 6/21 toad.
9121. 4/5 chorus frog.
9122. 4/5 chorus frog. 6/21 toad.
9123. 4/5 spring peeper.
9125. 6/21 toad.
9126. 5/3 green frog. 6/21 toad.
9127. 6/21 toad.
9128. 6/21 toad.
9130. 6/21 toad.
9133. 4/5 chorus frog.
9135. 4/5 chorus frog, spring peeper. 6/21 toad.
9136. 4/5 chorus frog.
9140. 4/5 chorus frog. 6/21 toad, green frog.
9141. 4/5 chorus frog. 6/21 toad.
9142. 6/21 green frog.
9143. 4/5 chorus frog.
9144. 6/21 toad.
9145. 4/5 chorus frog.
9147. 6/21 toad.
9148. 4/5 chorus frog.
9150. 4/5 chorus frog.

9151. 4/5 chorus frog.
9152. 6/21 toad.
9153. 6/21 toad.
9154. 4/5 chorus frog. 4/12 spring peeper. 6/21 toad.
9155. 6/21 toad, green frog.
9156. 4/5 chorus frog. 6/21 toad.
9157. 4/5 chorus frog.
9160. 4/5 chorus frog. spring peeper.
9161. 6/21 toad.
9162. 7/25 toad.
9165. 4/5 chorus frog. 6/21 toad.
9166. 4/5 chorus frog.
9167. 6/21 toad.
9170. 4/5 chorus frog. 4/12 spring peeper. 6/21 green frog. 8/30 brown snake.
9171. 4/12 spring peeper.
9173. 4/5 chorus frog. 4/12 spring peeper.
9174. 4/5 chorus frog. 4/12 spring peeper.
9175. 4/5 chorus frog.
9176. 6/21 toad.
9180. 4/12 spring peeper.
9181. 4/12 spring peeper.
9182. 6/21 green frog.
9185. 4/5 chorus frog.
9188. 4/5 chorus frog.
9189. 6/5 leopard frog.
9193. 6/21 toad.
9195. 4/5 chorus frog, spring peeper.
9197. 4/5 chorus frog. 7/25 toad. 8/30 brown snake, garter snake.

**SECTION C.2**  
**AMPHIBIANS AND REPTILES OF LEWIS FIELD**



**Prepared by:**

**Ralph A. Pfingsten**

**For**

**Ohio Department of Natural Resources  
Division of Natural Areas and Preserves**

## **AMPHIBIANS AND REPTILES OF THE GLEN RESEARCH CENTER-2001**

The first amphibian specimens known from the area that was to become The Glenn Research Center were obtained in 1931. In October of that year, Roger Conant, reptile curator at the Toledo Zoo, and two colleagues made a trip to northeastern Ohio to collect amphibians and reptiles and one of their localities was the Abram Creek Gorge.

The significance of the 1931 trip was the discovery of a population of dusky salamanders and erythristic redback salamanders. The dusky salamander (a clean water species) population has long since disappeared and the all red form of the redback remained undescribed until I saw the specimen in 1974. This form loses all red color in preservative and looks like an albino. In 1991 I captured another red morph in the gorge. The all red form can still be found on the slopes of the gorge

Abram Creek Gorge is the chief physiographic feature of the Lewis Property and with a few exceptions is the only place where suitable habitat exists for amphibians and reptiles. Most of the property is flat and level with an elevation of 750'-760'. The steep walled gorge cuts through the Cleveland Shale and drops to the Rocky River at an elevation of 640'. Most of the side ravines are filled with varying amounts of construction material, debris and trash. The main ravine is a heavily wooded mixed mesophytic forest with a few large specimen trees of several genera. The stream itself is highly contaminated with runoff from Cleveland International Airport and appears to contain only a few of the most tolerant fish species. In general the property is so disturbed and artificial that only the most common amphibian and reptile species were encountered.

The property was visited several times during the summer and early fall of 2001. When possible voucher specimens of each species were collected and deposited at the Cleveland Museum of Natural History. Because of the limited amount of habitat it is impossible to come to any conclusions other than to say that no threatened or endangered species were found on the property.

Abram Creek drains into Rocky River at the north end of the property. Rocky River flows through a narrow park of the same name, which is part of the Cleveland Metroparks System. It is possible that a more diverse fish fauna could become reestablished in the stream if it could be cleaned up. With the current airport expansion it remains to be seen if their runoff problems will be corrected. Therefore the only recommendation, which I could make, is that the situation not be made any worse.

Dusky Salamander; 1931 "Abram Gorge".

Redback Salamander; 1931 "Abram Gorge". 1991 gorge between NASA and Rocky River. 1995, 2001 Firing range.

Ringneck Snake; 1985 gorge between NASA and Rocky River.

Eastern Garter Snake; 1995 "Scout camp" just south of NASA.

American Toad; 1995, 2001 Lower South Road pond

Green Frog; 1995, 2001 found throughout gorge and in Guerin Road Pond.

Snapping Turtle; 1995, 2001 numerous sightings in Guerin Road Pond.

Bullfrog; 2001 cement lined retention ponds at Walcott and Marvin Roads.

Ralph A. Pfingsten  
347 Pineview Cir.  
Berea, OH 44017-1463