

Lester and Monique Anderson Lands  
Small Mammal and Herps  
Survey  
April - June 1998  
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During the late spring and early summer of 1998 an inventory and survey of the small mammals and herps was conducted on the lands owned by Lester and Monique Anderson, in Lincoln, VT. The Guthrie - Bancroft Farm, Fred Pierce Farm and Wells Farm provided the location for the field studies. The goal of the survey was to provide a general species list, of the small mammals and herps found on the above lands. Also included in this goal was to provide information that will aid in developing further, long-term inventories and distribution lists of the small mammal and herp populations on the farms.

#### Methods

Herp records were found by active searching, listening for calls, and the use of minnow traps. Active searching consists of actively looking for species in locations where they would most likely be found. This method is extremely affective in finding a large number of species when sufficient habitats are searched. Lots of area can be covered, and productive areas can be targeted to produce the most number of species. For this survey, active searching was the most productive method for finding herps. Rocks in walls were turned to produce snakes; rocks in rivers and the forest produced many different salamanders. Walking through the forest and wet areas produced frogs. Ponds were also searched for adult newts and frogs, and for egg masses. The egg masses are an affective tool for identifying herp species, and many were found. On some of the rainy nights the farms were inventoried by listing for frog calls. Many frogs have distinctive calls, and those were used to identify species that would otherwise go unnoticed. Minnow traps are affective in capturing some of the larger, more elusive forest dwelling salamanders while they are in ponds to breed. Traps were set up in all the bodies of water found on the farms.

Mammal records were found by the use of Sherman small mammal traps, baited with peanut butter and rolled oats. These traps were set different habitats in order to cover as much area as possible. The traps are limited to only catching mammals that are attracted to the foods in them. Some of the insectivores (Shrews) would not be caught in such traps. The traps were opened in the evenings and checked again the next morning. They were set in locations for 2-3 nights and then moved. This is a time consuming task, and not all of the areas could be surveyed. Due to the limited number of traps available (about 100), and the traditional low return the traps provide, a general overview of the species present was found, but in order to look at more specific habitat distributions, long term monitoring would be necessary. For this reason it is important to look at the small mammal data on a large scale, except where noted. There were a few records where more specific locations are important.

There were some mammals that were recorded by observation. These included the larger species such as squirrels and chipmunks. An otter skull was also found, and recorded. Bats were seen a few nights, but the attempts of mistnetting them fell short. Typically bats are mistnetted over water where they come to feed and drink. The bodies of water on the farms did not produce many visitors, and were in the open, so the nets were easily avoided. No roosting areas were found during active searches of the lands, but bats were seen on the properties.

#### Fred Pierce Farm

##### Herp Records

Minnow traps were set on April 20, 1998 in the three ponds on the farm. The first pond, (upper pond) was adjacent to the garage. It is a small pond, fed by a spring creek from the north. The second pond (lower pond) was located across Isham Hollow Road, a few hundred yards south of the building site, at the end of a path. This pond is deeper, more isolated from people, and is fed by a spring. Spotted salamander egg masses were observed in both of these ponds prior to setting the traps. Six traps caught twenty Spotted

salamanders and six Eastern newts in the upper pond. Six traps set in the lower pond caught sixty Spotted salamanders and seventeen Eastern newts. Due to the time of year, no other forest dwelling salamanders were found in the pond. Species that breed earlier like Blue-spotted salamanders and Jefferson salamanders may be found in these ponds earlier in the year. The third pond is the beaver pond located to the north of the property, on the northern boarder. Old, dead Spotted salamander eggs were observed in this pond, but the traps yielded no individuals. Eastern newts were observed and 4 were trapped. Green frogs were also caught in all the ponds by hand.

Active searches yielded the remaining species found on the Fred Pierce Farm. Two-lined and Dusky salamanders were found in Isham brook from the beaver pond through to the Hemlock forest on the southern boundary. The tributary spring creek that feeds into Isham brook also produced both species in large numbers (greater than 15 Dusky and 10 Northern on both creeks in a few hours). A Spring salamander was also found in the spring creek. This is the largest salamander in the area, and lives a solitary life under large, flat rocks. The creek was checked from outlet to the marsh at its head, and only one Spring salamander was found. Along the creek more Green frogs were seen, and a few young Wood frogs were caught. During late May and early June, Spring Peepers were heard calling in the evenings. The only snakes found were near the barn. Common Garter Snakes were seen around the barn and the house. The large rock piles in the field across the street were searched for snakes on many warm days, but none were seen. Snake traps at these sites may be useful, as the snakes could be buried within the rock piles.

#### Mammal Records

Sherman Small Mammal Traps were used in a variety of locations on this Farm. The Southern portion of the farm was trapped more intensively due to the Hemlock ravine forest. This forest had good potential for some less common species such as the Northern Flying Squirrel. The northern section had traps mainly in the fields above the house, and the forest boarders.

The southern traps were very productive. One Northern Flying Squirrel was caught in the upper section of the Hemlock forest, near the path. This species is primarily nocturnal, and is difficult to locate in some areas. Also trapped in this forest were Southern Red-backed Voles, White-footed/Deer Mice, Woodland Jumping Mice, and one Northern Short-tailed Shrew. Red and Grey Squirrels were also observed in this area.

The northern section of the farm was a mix of fields, old plantations and an old beaver pond. Traps were set in these areas, mainly on the east side of Coby Hill road. No new species were found, as only White-footed/Deer Mice and Red-backed Voles were caught. An old Otter skull was found in the meadow below the beaver pond, and many Grey Squirrels and Chipmunks were seen. The field did not produce any Meadow Jumping Mice, but it is expected that this species is present.

#### Guthrie – Bancroft Farm

##### Herp Records

Minnow traps were set in the two ponds located on the Farm on April 20, 1998. Six traps were set in the field pond near the gate on the eastern boarder, and six in the beaver pond/meadow. Sixty-four Spotted salamanders and forty-one Eastern newts were trapped in the field pond. Spotted salamander egg masses could also be seen in this spring-fed pond. Green frogs were heard and seen using the pond. Spring Peepers were heard on multiple evenings, in many locations, including the area around the pond. They were also heard near the beaver pond, located off the path heading west. This wet area is an old beaver pond, which is more of a sedge meadow than a pond. Near its outlet, standing water was present in mid-May, and a large mass of Wood Frog eggs were observed in the water. Over the course of the summer, the wet area decreased in size, but the area was utilized as a breeding habitat for the frogs. The traps were set in this wet area, which was just deep enough to cover the traps. No Spotted salamanders were caught in the minnow traps at this location, and only a few Eastern newts were observed. Wood frogs and Green frogs were caught in the wet area around the outlet stream. Beginning in June, Grey treefrogs could be heard calling in the evenings. It was hard to tell exactly where the calls were coming from, but they seemed to be

originating in the forests surrounding the fields, and near the field pond. None were seen, but the calls were loud and numerous on several evenings

The many small spring creeks flowing down the northern slope towards Baldwin Creek provided ample habitat for Dusky and Two-lined salamanders. Records were found wherever rocks were kept wet by running water. Dusky salamanders were even found on the edge Todd's Road, where the gate is across the entrance to the northern meadow. All streams indicated on the Forest Stand Map were investigated, and they all contained these two species. Wood frogs, Green frogs and American toads were also found in some of the wetter areas of the Farm. A small wet, seepage area north of the meadow with the hay barn provided habitat for both frog species. Wood frogs were also found in scattered areas near the beaver pond/meadow. Unlike the spring creek on the Pierce Farm, no Spring salamanders were found. A critical piece of habitat for Spring salamanders is the presence of large, flat rocks in the streambeds. These seemed to be less evident in the streams on the Guthrie-Bancroft properties.

In the field near the first entrance gate there is an old foundation. Rocks in this foundation were turned on the sunny days, and many Garter snakes and Milk snakes were found under the rocks. Some snakes were observed sunning themselves, while others were within the walls. One Garter snake was also found under a rock in the forest just to the north of the foundation.

#### Mammal Records

Sherman Small Mammal Traps again were used to get a general picture of the small mammal species present on the Farm. Traps were set in three general locations; the meadows encompassing the central area, the northern hardwood forest on the north end of the area, and the mixed conifer/hardwood forest on the southern portion of the area. Traps were also set in the area around the beaver pond.

The meadow traps produced Southern Red-backed Voles, Meadow Jumping Mice, White-footed/Deer Mice, and Northern Short-tailed Shrews. Other shrews may be present in the field, but will not be caught in the Sherman Traps. Pitfall traps would be useful in catching other shrews. The trouble with pitfall traps is they almost always kill the shrews that are trapped in them. On one occasion and Muskrat was observed in the beaver pond/meadow.

The northern forest traps had similar results as the meadow traps. The only difference was Woodland Jumping Mice were trapped, and no Meadow Jumping mice were caught. Chipmunks, Red, and Grey Squirrels were observed on numerous occasions. The steep Hemlock slope leading to Baldwin Creek was a potential flying squirrel site, but none were captured. The possibility of these elusive squirrels being present in this area still exists, and further trapping may reveal some individuals.

The southern forest traps only caught White-footed/Deer mice. These traps were less productive than the northern forest traps, but more trapping nights might be needed. In general, the southern forest had less activity in terms of Chipmunks and Squirrels.

#### Wells Farm

##### Herp Records

The Wells Farm had no large bodies of water where minnow traps could be set. The forest systems on the west side of Mt. Pleasant were searched actively, and only American Toads were found during these searches. The ledge area near the ridge was searched multiple times for snakes during warm weather, but none were seen. This portion of the Farm is not habitat where many of the other herp species would be found.

There is a wetland area on the southern boundary that was productive. Spring peepers were heard calling on warm, wet evenings, and some Green frogs could be heard as well. The wet area adjacent to Quaker St. also produced Spring Peeper calls. Active searching revealed the rest of the species. The ditch running behind the buildings contains a shallow, cold stream, with a rocky streambed. This was searched for salamanders, and both Dusky and Two-lined salamanders were found under rocks in the ditch bottom. The

wet area at the margin between the upper field and the beginning of the forest contained Wood frogs and Green frogs. These wet areas might not persist for the entire summer, but frogs were seen using the areas. Wood frogs could be scattered throughout the Farm, but the lack of good breeding habitat suggests they would be difficult to locate in large numbers.

The buildings and rock walls were prime habitat for Garter and Milk snakes. Many were seen on multiple days sunning themselves on the larger rocks in the northern field near the house. Snake were also seen around the building edges, and under the barn. The open area, ample warm surfaces and ample cover provided ideal locations for snakes.

In general the Wells Farm was not as productive as the other areas. The lack of wet areas and running water will limit the amount of frogs and salamanders present. No breeding areas were found, which make finding species easier. The lands were used by some species, but the numbers most likely won't be as high as on the other farms.

#### Mammals

Traps on the Wells farm were set in the field above the house, and in the upper and lower portions of the path up Mt. Pleasant. No new species were present during this trapping, and only a few traps were set on two nights. White-footed/Deer Mice, Red-backed Voles, and Meadow Jumping Mice were trapped. Grey Squirrels and Chipmunks were observed in the forests. The Wells Farm should have a similar species composition to the other Farms, but Northern Flying Squirrels are less likely to be present.

#### Summary

In general, the Anderson Lands were a good source of Herp and Mammal records. The species expected to be found in the streams, forests and ponds were present in reasonable numbers. Earlier trapping may bring out more of the forest salamanders, as the ponds proved to be excellent breeding grounds for Spotted salamanders, Eastern Newts and Green frogs. The tributary to Isham Brook, or spring creek, provided the appropriate habitat for Spring salamanders, and one was found. These are an elusive species, and habitats that support them are rare. The mammal record of note was the Northern Flying squirrel found in the Hemlock forest in the ravine. These two records help to underline the conservation value of this area of the Fred Pierce Farm. The other mammal records were expected, and no species seemed to be absent that would be trapped in the Sherman Traps. No turtles were seen, but more aggressive trapping may produce some species.

The Anderson Lands are rich with a variety of Herp and Mammal species. The forests, fields and building sites all help to support a diverse inventory of species, and highlight the conservation importance of these Vermont woodlands. This preliminary survey suggests that long term monitoring for mammals and herps is a viable undertaking for these lands. These findings help to show that the forests and open lands are supporting a variety of species, and would be capable of supporting longer term studies of the mammal and herp populations.

## Total Species Found

### Amphibians

Latin Name	Common Name
<i>Ambystoma maculatum</i>	Spotted Salamander
<i>Desmognathus fuscus</i>	Dusky Salamander
<i>Eurycea bislineata</i>	Two-lined Salamander
<i>Gyrinophilus porphyriticus</i>	Spring Salamander
<i>Plethodon cinereus</i>	Redbacked Salamander
<i>Notophthalmus viridescens</i>	Eastern Newt
<i>Bufo americanus</i>	American Toad
<i>Hyla versicolor</i>	Grey Treefrog
<i>Hyla crucifer</i>	Spring Peeper
<i>Rana clamitans</i>	Green Frog
<i>Rana sylvatica</i>	Wood Frog

### Reptiles

Latin Name	Common Name
<i>Thamnophis sirtalis</i>	Common Garter Snake
<i>Lampropeltis triangulum</i>	Milk Snake

### Mammals

Latin Name	Common Name
<i>Blarina brevicauda</i>	Northern Short-tailed Shrew
<i>Tamias striatus</i>	Eastern Chipmunk
<i>Sciurus carolinensis</i>	Eastern Gray Squirrel
<i>Tamiasciurus hudsonicus</i>	Red Squirrel
<i>Glaucomys sabrinus</i>	Northern Flying Squirrel
<i>Peromyscus sp.</i>	Deer and White-footed Mouse
<i>Clethrionomys gapperi</i>	Southern Red-backed Vole
<i>Zapus hudsonicus</i>	Meadow Jumping Mouse
<i>Napeozapus insignis</i>	Woodland Jumping Mouse
<i>Procyon lotor</i>	Raccoon
<i>Ondatra zibethicus</i>	Muskrat
<i>Lutra canadensis</i>	River Otter

## Guthrie-Bancroft Farm

MAMMALS			
Species	Record Type	General Location	Numbers Trapped
Southern Red-backed Vole	Trapped	Northern Forest	6
		Meadows	1
White-footed/Deer Mouse	Trapped	Northern Forest	11
		Meadows	2
		Southern Forest	4
Northern Short-tailed Shrew	Trapped	Northern Forest	1
		Meadow	1
Woodland Jumping Mouse	Trapped	Northern Forest	3
Meadow Jumping Mouse	Trapped	Meadows	4
Eastern Chipmunk	Trapped, Observed	Northern Forest	1 trapped
	Observed	Southern Forest	
Eastern Grey Squirrel	Observed	All areas	All areas
Red Squirrel	Observed	Northern Forest	Northern Forest
Muskrat	Observed	Beaver Pond	Beaver Pond

## Wells Farm

HERPS			
Species	Record Type	General Location	Habitat Type
Spring Peeper	Calls	Heard in area surrounding buildings, and from road	Fields, marshy/wet area near field
	Caught	Upper field, behind house	Wet area above stream
Wood Frog	Caught	Upper field, behind house	Wet area above stream, edge of forest, field
American Toad	Caught	Upper field, behind house, and in woodlots on hill side	Wet area above stream, open field, and in forests
Green Frog	Caught	Edge of field	Alder, swamp wet field,
Two-lined Salamander	Caught	Ditch/stream behind house	Small, spring creek, cold water, lots of rocks/detritus
Dusky Salamander	Caught	Ditch/stream behind house	Small, spring creek, cold water, lots of rocks/detritus
Garter Snake	Caught	Buildings/rock walls	Under rocks in walls, and edge of buildings, rocks in field
Milk Snake	Caught	Buildings/rock walls	Under rocks in walls, edge of buildings,

## Guthrie – Bancroft Farm

HERPS			
Species	Record Type	General Location	Habitat Type
Spring Peeper	Calls	Field pond, Beaver pond, meadows, and throughout area	Open fields, ponds, and forest edges, marshy areas.
Grey Treefrog	Calls	Field pond, beaver pond, meadows, and in forests	Variable, mainly in the forests near water
Green Frog	Calls, Caught	Field pond, beaver pond and various streams within many different areas of farm.	All types of wet habitat including ponds, wet-lands, streams distributed over farm
Wood Frog	Eggs	Large egg masses in beaver pond, and in deeper puddles near beaver pond	Old beaver pond, in deeper standing water. Water depth decreased during summer.
	Adults caught	Beaver pond	Outlet of pond, in marshy grassy area
American Toad	Caught	Many sightings throughout farm	Seen in most of the forest types found on the Guthrie Farm. Distributed throughout Farm.
Spotted Salamander (64)	Trapped	Field pond	Open field pond
Eastern Newt (41)	Trapped, Observed	Field pond and Beaver Pond	Open field pond, and pond surrounded by forests.
Dusky Salamander	Caught	Found in all streams and rocky wet areas within forest. From moist gravel areas near the road, to larger streams in the forest	All habitats which had rocky, moist or running water produced records
Two-lined Salamander	Caught	Same as above	Same as above
Redbacked Salamander	Caught	Forests on the Northern portion of Farm,	Under rocks in moist soils of the forest
Garter Snake	Caught	Field, forest island in middle of fields	Under rocks of old foundation, under rocks in Hardwood forest
Milk Snake	Caught	Field	Under rocks of old foundation

# Fred Pierce Farm

HERPS			
Species	Record Type	General Location	Habitat Type
Green Frog	Caught	Beaver pond, Upper and Lower ponds	Edge of pond in grassy meadow, near stream outlet
	Caught	Upper portion spring creek	Wet grassy area, edge of Alder/early successional forest.
Wood Frog	Caught	Upper portion spring creek	Wet grassy area, edge of Alder/early successional forest
Eastern Newt	Trapped, Observed	Beaver pond, Upper and Lower ponds	Pond
Spotted Salamander	20 Trapped, Egg masses obs.	Upper pond, N. of Isham Hollow Rd.	Upper pond, shallow, stream fed, edge of Pine/Spruce plantation,
	60 Trapped, Egg masses obs.	Lower pond across Rd, down path SW.	Lower pond, deep, edge of mixed Hrd Wood/field, spring fed, dammed
	Dead egg masses	Beaver pond E. of Colby Hill Rd.	Old beaver pond, open meadow, shallow, stream fed,
Two-lined Salamander	Caught	Stream – E. edge of meadow below lower beaver pond, above broken dam	Rocky spring creek, cold water, runs through field, outlet from adj. Field and expired beaver ponds
	Caught	Main branch Isham Brook	Hemlock/Hardwood forest, gorge,
	Caught	Spring creek which enters Isham Brook	
Redback Salamander	Caught	Forest areas, near Isham brook, found in a variety of locations	Hemlock/Hardwood forest, gorge,
Dusky Salamander	Caught	Main branch Isham Brook,	Hemlock/Hardwood forest, in the gorge,
	Caught	Spring creek which enters Isham Brook	
Spring Salamander	Caught	Spring creek, half way up, from Isham Brook	Hemlock/Hardwood forest, shallow, cold creek, under large, flat rock, one found
Common Garter Snake	Caught	Buildings	Under barn, near garden, edge of grass,

Fred Pierce Farm

MAMMALS			
Species	Record Type	General Location	Numbers Trapped
Southern Red-backed Vole	Trapped	Northern Forest	3
		Southern Forest	6
White-footed/Deer Mouse	Trapped	Northern Forest	5
		Southern Forest	4
Northern Flying Squirrel	Trapped	Southern Forest	1
Woodland Jumping Mouse	Trapped	Southern Forest	2
Northern Short-tailed Shrew	Trapped	Southern Forest	1
Eastern Chipmunk	Observed	All areas	
Eastern Grey Squirrel	Observed	All areas	
Red Squirrel	Observed	Southern Forest	
River Otter	Skull	Beaver Pond	