

FINAL REPORT

A SURVEY OF AMPHIBIANS AND REPTILES IN
THE MISSOURI RIVER DRAINAGE OF SOUTHWESTERN MINNESOTA

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The herpetological knowledge of the southwest corner of Minnesota is sketchy. There were several collections of amphibians and reptiles made by Breckenridge and his associates in the early 1940's, with scattered specimens over the following years. The only recent collection has been the discovery of the lines snake (Tropidoclonion lineatum) at Blue Mounds State Park. This lack of documented knowledge is one reason this region was recommended by the Amphibian and Reptile Group of the Endangered Species Advisory Committee (Lang, et al. 1982) for future study. The U.S.D.I. Fish and Wildlife Service has recently requested information for the herpetofauna occurring on Pipestone National Monument, which lies within the Missouri River drainage.

The southwest corner of Minnesota lies within the Missouri River drainage (Figure 1.) This area is approximately 3 million hectares (1870 sq. miles). This part of the state was originally tall grass prairie, with the exception of a maple-basswood forest in Jackson County (Marschner 1930). Over the last 100 years this region has been converted to agricultural uses, principally soybeans, corn, and cattle.

There are only small fragments of prairie and forest left. Many of these remaining areas have been degraded, but a few are close to pre-white man condition. Most of the sites are owned by state and federal agencies with a few sites being owned by private conservation organizations and individuals. The state owns approximately 12,500 hectares on 40 wildlife management areas and 2 state parks within the drainage. The U.S. government owns waterfowl production areas and Pipestone National Monument. Many of the wildlife management and waterfowl production areas are no longer in natural vegetation cover. Most of the holdings of all the organizations are small, less than 250 hectares, though several cover more than a section. The Nature Conservancy is the largest private conservation landowner in the

area with approximately 625 hectares. They are all surrounded by agricultural land.

OBJECTIVES

This study was undertaken to assess the present status of populations of amphibians and reptiles previously found in this region and to search for possible border entrants. These border entrants would include Woodhouse's toad (Bufo woodhousei), plains spadefoot toad (Scaphiopus bombifrons), red milksnake (Lampropeltis triangulum sypila) (Lang, et al. 1982), and any other possible new species.

METHODS

Three field trips (2-3 June, 6-8 July, and 21-23 September 1984) were made to southwestern Minnesota. During these trips a total of 588 person-hours were used in searching for herps by 23 persons (Appendix A). The search time was divided over 27 sites in six counties (Figure 1, Appendix B). Prior to field visits sites were selected by reviewing 7.5' U.S.G.S. topographic maps. The DNR Natural Heritage Program and the Nature Conservancy were consulted for other possible sites.

Each site was divided into various habitats (i.e. grassland, woods, streambanks, and marsh) so that each cover type would be searched. Piles of debris and downed trees were especially targeted, since they tend to be areas of concentration for herps. Areas were searched using the techniques described in Karns (in press).

Trotlines were used in the Rock River and Elk Creek to check for turtles. The trotlines consisted of 20 hooks each and were baited with chicken gizzards. The trotlines were used under DNR Fish and Wildlife Special Permit No, 3958.

Additional sources of records were the staffs of Pipestone National Monument, Blue Mounds State Park, Kilen Woods State Park, and the DNR. Area

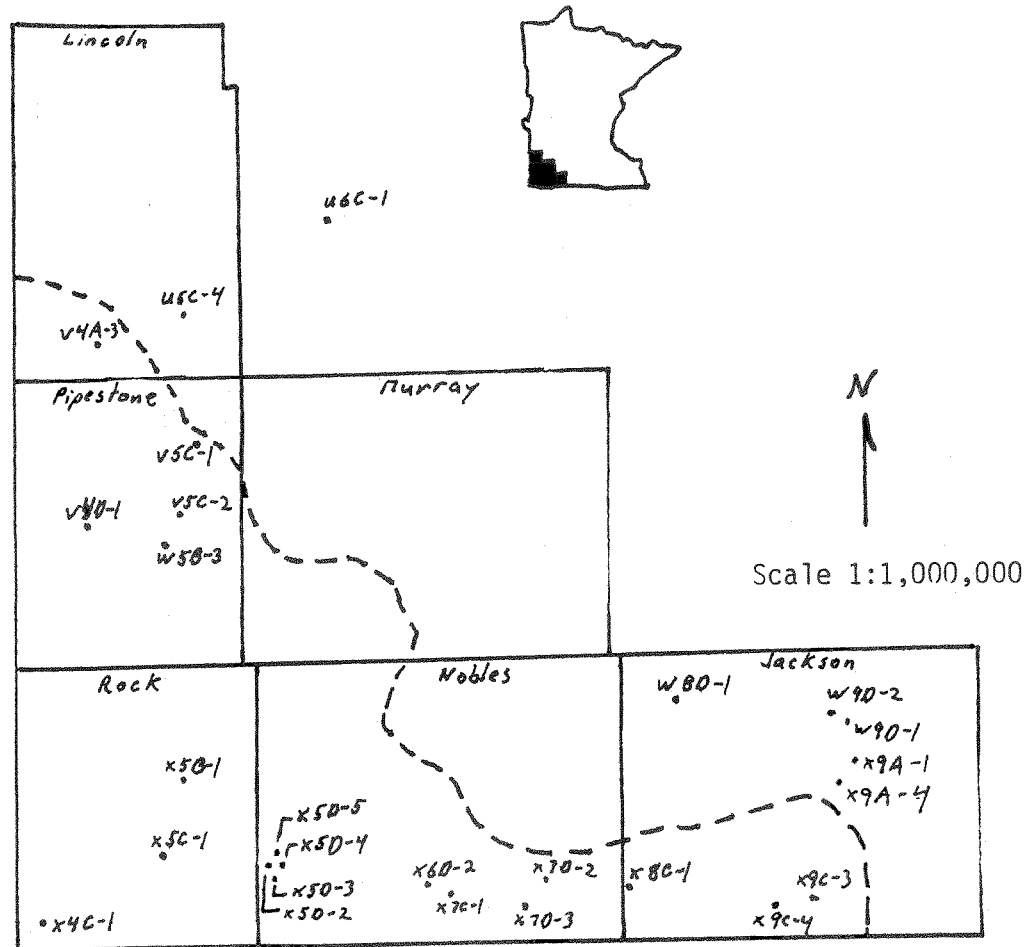


Figure 1. Location of MHS sites in Southwest Minnesota with reference to the Missouri River Drainage

fisherman were asked about the presence of various species.

Specimens collected on these trips have been deposited at the Bell Museum of Natural History under the care of Dr. Philip Regal (Appendix C). Photos of specimens are included in this report (Appendix D) or are in the collection of Robert Chance, Blue Mounds State Park.

RESULTS

A total of 4 amphibian and 8 reptile species were collected (Table 1). No species were collected that were not previously reported from the drainage. Two species, Bufo cognatus, great plains toad, and Acris crepitans, cricket frog, had been collected in the past, but were not found during this study. One species, grey treefrog (Hyla sp.), was reported by L. Wagner at Kilen Woods State Park, but no specimens were located.

Amphibians

Rana pipiens, northern leopard frog, and Bufo americanus, American toad, were the most abundant amphibians in the drainage. They were recorded at over 90% of the sites (Table 1). Reproduction was noted at a number of sites by the presence of tadpoles. Ambystoma tigrinum, tiger salamanders, were not common during the June and July trips, when larvae were found at only one locality. During the September visit Ambystoma tigrinum, were found at almost every site, though not in large numbers. Pseudacris triseriata, chorus frog, were common throughout the region. They were collected at about 30% of the sites.

Rana pipiens had previously been reported from all the counties surveyed (Land 1982). The new counties for Bufo americanus were Lincoln and Pipestone, Pseudacris triseriata had not been previously reported from Lincoln, Nobles, or Pipestone Counties until this survey. Ambystoma tigrinum had been previously reported from the drainage in only Lincoln County. We found it in Jackson, Nobles, and Rock Counties, with reports from Pipestone County (U.S.D.I.

employees, pers. comm.).

REPTILES

Thamnophis radix, plains garter snake, Thamnophis sirtalis, common garter snake, and where it occurred Eumeces septentrionalis, prairie skink, were the most commonly found reptiles. They were collected or seen at over 50% of the sites (Table 1). Eumeces septentrionalis was the most abundant reptile where found, but it was restricted to sandy and gravelly areas, areas with debris, and rock quarries.

Storeria occipitomaculata, red-bellied snake, was found only once during the June and July trips, but was more common in September when it was found at 3 localities. Chrysemys picta, painted turtle, and Chelydra serpentina, snapping turtle, were seen or collected at several sites. They appear to be widespread, but not abundant at any one area, with the exception of Blue Mounds State Park (R. Chance, Pers. Comm.).

Elaphe vulpina, fox snake, and Tropidoclonion lineatum, lined snake, were found only at Blue Mounds State Park. Elaphe vulpina is common in this area. There are reports of the species from other areas, but we did not locate any specimens. Tropidoclonion lineatum has only been reported rarely from Blue Mounds, though there is one incomplete record on a captive specimen from Rock Country, which apparently came from Blue Mounds (J. Dietrich, Pers. Comm.). Searches of other similar habitat did not turn up any specimens. Previous records of the reptile species are scattered over the drainage (Lang 1982), but only the garter snakes (Thamnophis spp.) are well represented with Pipestone being the only new county record from Thamnophis radix. Storeria occipitomaculata had not been collected in Jackson or Rock Counties until this study. Chrysemys picta collections were new records for Nobles and Rock Counties. The Eumeces septentrionalis sighting was a new record for Lincoln County.

Table 1. Species found during the Southwest Minnesota Amphibian and Reptile Survey, 1984, by County and Site.

<u>County</u>	<u>Site</u> ¹	<u>Species</u>
Jackson	MHS-W8D-1	Ambystoma tigrinum ^{2,3} Bufo americanus Rana pipiens Thamnophis radix
	MHS-W9D-1	Bufo americanus Rana pipiens Storeria occipitomaculata ^{2,3}
	MHS-W9D-2	Bufo americanus Rana pipiens Thamnophis radix ²
	MHS-X8C-1	Ambystoma tigrinum Rana pipiens
	MHS-X9A-1	Ambystoma tigrinum ^{2,3} Bufo americanus Hyla sp. (L. Wagner pers. comm.) Rana pipiens ² Storeria occipitomaculata ^{2,3}
	MHS-X9A-4	Ambystoma tigrinum ² Bufo americanus Pseudacris triseriata ² Rana pipiens ⁴
	MHS-X9C-3	Bufo americanus ² Pseudacris triseriata Rana pipiens Thamnophis sp.
	MHS-X9C-4	Bufo americanus Pseudacris triseriata Rana pipiens
	Road Stops	Thamnophis radix ² Chelydra serpentina
Lincoln	MHS-U5C-4	Bufo americanus ^{2,3} Pseudacris triseriata ^{2,3} Rana pipiens ² Thamnophis sp.
	MHS-V4A-3	Ambystoma tigrinum ⁴ Bufo americanus ^{2,3} Rana pipiens ² Chrysemys picta ⁴ Eumeces septentrionalis ³ Thamnophis sp. ⁴

Table 1. continued

<u>County</u>	<u>Site</u>	<u>Species</u>
Lyon	MHS-U6C-1	<i>Eumeces septentrionalis</i> ^{2,3}
		<i>Storeria occipitomaculata</i> ²
		<i>Thamnophis sirtalis</i> ²
Nobles	MHS-X5D-2	<i>Bufo americanus</i> ²
		<i>Rana pipiens</i> ⁵
		<i>Eumeces septentrionalis</i>
	MHS-X5D-3	<i>Bufo americanus</i>
		<i>Rana pipiens</i> ⁵
		<i>Chelydra serpentina</i>
	MHS-X5D-4	-----
	MHS-X5D-5	<i>Chrysemys picta</i> ^{3,5}
	MHS-X6D-2	<i>Ambystoma tigrinum</i> ^{2,3}
		<i>Bufo americanus</i> ²
		<i>Rana pipiens</i> ²
		<i>Eumeces septentrionalis</i> ²
		<i>Thamnophis radix</i> ²
	MHS-X7C-1	<i>Bufo americanus</i> ²
	MHS-X7D-2	<i>Ambystoma tigrinum</i> ²
		<i>Bufo americanus</i> ²
		<i>Rana pipiens</i>
		<i>Chrysemys picta</i>
		<i>Thamnophis radix</i>
	MHS-X7D-3	<i>Ambystoma tigrinum</i>
		<i>Bufo americanus</i>
		<i>Pseudacris triseriata</i> ^{2,3}
		<i>Rana pipiens</i>
	Road Stops	<i>Ambystoma tigrinum</i> ²
		<i>Chelydra serpentina</i> ^{2,3}
		<i>Thamnophis radix</i> ²
Pipestone	MHS-V4D-1	<i>Bufo americanus</i> ^{2,3}
		<i>Rana pipiens</i> ^{2,5}
		<i>Chrysemys picta</i>
		<i>Chelydra serpentina</i> ^{2,3}
		<i>Eumeces septentrionalis</i> ⁵
		<i>Thamnophis radix</i> ^{2,3,5}
	MHS-V5C-1	<i>Bufo americanus</i> ²
		<i>Rana pipiens</i> ²
	MHS-V5C-2	<i>Bufo americanus</i> ⁵
		<i>Rana pipiens</i> ²
		<i>Thamnophis</i> sp.
	MHS-V5C-3	<i>Bufo americanus</i> ²
		<i>Pseudacris triseriata</i> ^{2,3}
		<i>Rana pipiens</i> ²

<u>County</u>	<u>Site</u>	<u>Species</u>
Pipestone	MHS-W5B-3	-----
Rock	MHS-X5B-1	Bufo americanus ² Pseudacris triseriata ² Rana pipiens ^{2,5} Chelydra serpentina ⁶ Chrysemys picta ^{3,6} Elaphe vulpina ² Eumeces septentrionalis ² Storeria occipitomaculata ^{2,3} Thamnophis radix ² Thamnophis sirtalis ² Tropidoclonion lineatum ²
	MHS-X5C-1	Bufo americanus ² Rana pipiens
	MHS-X4C-1	Ambystoma tigrinum ³ Bufo americanus Rana pipiens Thamnophis radix ² Onychomys leucogaster ^{3,7} (grasshopper mouse)
	Road Stops	Ambystoma tigrinum ^{2,3} Chrysemys picta ^{2,3} Elaphe vulpina

¹ Site name, locality and date of visit are in Appendix B.

² Specimen was collected and deposited at the Bell Museum of Natural History

³ Specimen represents a county record.

⁴ Unpublished data from R. Dana.

⁵ Specimen was photographed, see Appendix D.

⁶ Specimen was photographed by R. Chance, Blue Mounds State Park.

⁷ Specimen was taken as a captive animal by S. Argue.

Diversity

The general herpetofauna diversity is low with only 2 to 5 species per site (Table 1). Blue Mounds State Park had the highest diversity with 11 species recorded. Ambystoma tigrinum was the only species not seen in the park, but was collected within 1 km of the boundary.

The two species, Acris crepitans and Bufo cognatus, that were not located during this survey, were reported in old records. Acris crepitans has not been recorded since the 1930's and then only from 3 localities (Appendix E). Bufo cognatus had been reported from 5 counties in the drainage during the 1930's and 1940's (Appendix E).

Discussion and Recommendations

The herpetofaunal communities in Southwestern Minnesota tend to be of a low diversity. The average site had 4 species, though the actual diversity should be around 6 species. This is because on many sites no reptiles were found but were probably represented. The low diversity may be a natural part of the region or it may be caused by the small size of most sites and the distance between them. I feel that the fragmentation has helped lower the diversity by increasing mortality of many species when they try to move between habitat islands. This can be shown in the distribution of Elaphe vulpina and Tropidoclonion lineatum. These two species are restricted to the area around Blue Mounds State Park, which covers almost 5000 hectares. The wildlife management areas within the region have had some degree of disturbance and were probably tilled at one period. This type of disturbance is very hard on a snake population. The presence of rock outcrops is restricted to Blue Mounds State Park and Pipestone National Monument. This may be the present limiting factor for these two species, though Elaphe vulpina is normally

associated with mesic to wet forests. An intensive survey of Pipestone N.M. should be undertaken to determine the occurrence of Tropidoclonion lineatum.

The high diversity of amphibians and reptiles at Blue Mounds S.P. makes this a unique site for the region. It should be officially recognized for its diversity and any high quality sites adjacent to the park should be targeted for acquisition.

The lack of Acris crepitans records could be caused by consecutive years of below normal winter temperature, as occurred in the 1970's, since southwest Minnesota localities were the northern tip of its range. A more intensive survey during the spring breeding season would be needed for the southwestern Minnesota and northern Iowa area to establish the present northern limit of this species.

Bufo cognatus is still found north and south of the study area. Most of the habitat searched was similar to what Ewert (1969) described for northwestern Minnesota for this species. Ewert (1969) found that Bufo americanus and Bufo cognatus tend to displace each other, but Bufo americanus tends to be limited to wooded habitats. Breckenridge (1944) reported long periods of estivation of Bufo cognatus in southwestern Minnesota during dry periods. The spring of 1984 was one of the wettest springs in recent years, but no individuals were seen. If this species still inhabits this region, its numbers must be very low.

The possibility of locating Scaphiopus bombifrons, Bufo woodhousei, or Lampropeltis triangulum sypila in Minnesota is very slim. The land use in Rock County, which is the most likely area of the state where they would be found, is very unsuitable for these species. The few areas that are possible would be along the flood plain of the Rock River and Kanaranzi Creek.

A more intensive survey of Rock County should be undertaken to assess the status of Tropidoclonion lineatum, Acris crepitans, Bufo cognatus, and

the possible border entrants. Collecting sites should be established at historical localities and in areas of suitable habitat. Sampling methods should follow Karns (in press) and should include drift fences and chorus counts.

ACKNOWLEDGEMENTS

I would like to thank all the members of the Minnesota Herpetological Society who supported and participated in the survey. I would like to thank J. Gerholdt, D. Jones, J.W. Moriarty, and B. Oldfield for continued constructive advice and for reviewing an earlier draft of this report. I would also like to thank L. Pfannmuller of the nongame program for all her help during the course of this survey.

LITERATURE CITED

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Appendix A. Participants in the Southwest Minnesota Amphibian and Reptile Survey.

<u>Name</u>	<u>2-3 June</u>	<u>6-8 July</u>	<u>21-23 September</u>
Steve Argue			X
Bruce Cutler	X		
Matt Cutler	X		X
Bob Duerr	X		
Peter Duerr	X		
Ben Gerholdt	X	X	
Gabe Gerholdt	X		
Jim Gerholdt	X		X
Matt Gerholdt	X	X	X
Pam Gerholdt	X	X	
Del Jones	X	X	X
Denise Meltzer		X	
John Meltzer	X	X	
Jo Anne Moriarty	X		X
John Moriarty	X	X	X
Barney Oldfield	X		X
Casey Oldfield	X		X
Ann Porwoll		X	
Siah St. Clair		X	
Jim Schave	X		X
Ted Schave			X
Paul Spencer	X	X	X
Wes Thomas			X

Appendix B. Names and locality of sites visited during the Southwest Minnesota Amphibian and Reptile Survey, June, July, and September 1984.

Jackson County

- MHS-W9D-1³
DesMoines River Landing
T104N R35W Sec19 SW $\frac{1}{4}$
- MHS-W8D-1³
Heron Lake WMA
T104N R37W Sec24 SW $\frac{1}{4}$
- MHS-w9D-2³
Delafield WMA
T104n R35W Sec25 NW $\frac{1}{4}$
- MHS-X8C-1³
Round Lake WMA
T101N R38W Sec7 NW $\frac{1}{4}$
- MHS-X9A-1³
Kilen Woods State Park
T103N R35W Sec17 E $\frac{1}{2}$
- MHS-X9A-4³
Boot Lake WMA
T103N R35W Sec31 NE $\frac{1}{4}$
- MHS-X9C-3³
National Waterfowl Production Area
T101N R36W Sec14 E $\frac{1}{2}$
- MHS-X9C-4³
Sangl WMA
T101N R36W Sec21 NW $\frac{1}{4}$

Lincoln County

- MHS-U5C-4²
Dicors WMA
T109N R44W Sec5 E $\frac{1}{2}$
- MHS-V4A-3²
Hole-in-the-Mountain Prairie
T109N R45W Sec19 SE $\frac{1}{4}$ 20 SW $\frac{1}{4}$

Lyon County

- MHS-U6C-1²
Camden State Park
T110N R42W Sec5

Appendix B continued

Nobles County

- MHS-X5D-2¹
Ash Pit WMA
T102N R43W Sec32 NE $\frac{1}{4}$
- MHS-X5D-3¹
Sherwood WMA
T102N R43W Sec32 SE $\frac{1}{4}$
- MHS-X5D-4¹
Westside gravel pits
T102N R43W Sec28 SW $\frac{1}{4}$
- MHS-X5D-5¹
Kanananzi Creek Crossing
T102N R43W Sec 29NE $\frac{1}{4}$ 28 NW $\frac{1}{4}$
- MHS-X6D-2^{1,3}
Ransom gravel pits
T010N R41W Sec4 NE $\frac{1}{4}$
- MHS-X7C-1¹
Compass Prairie
T101N R41W Sec3 SW $\frac{1}{4}$
- MHS-X7D-2³
Lake Ocheda Game Refuge
T101N R39W Sec6
- MHS-X7D-3³
John Erickson WMA
T101N R40W Sec14 SW $\frac{1}{4}$ 15 SE $\frac{1}{4}$

Pipestone County

- MHS-V4D-1^{1,2,3}
Pipestone National Monument
T106N R46W Sec1
- MHS-V5C-1²
Holland WMA
T107N R44W Sec5 SW $\frac{1}{4}$
- MHS-V5C-2²
Pheasant Terrace WMA
T107N R44W Sec31
- MHS-V5C-3²
Pit WMA
T107N R45W Sec27 NW $\frac{1}{4}$
- MHS-W5B-3²
Casey-Jones WMA
T106N R45W Sec11, 12 S $\frac{1}{2}$

Appendix B continued.

Rock County

MHS-X5B-1^{1,2,3}Blue Mounds State Park
T103N R45W Sec 24, 25MHS-X5C-1¹Luverne Airport gravel pits
T102N R45W Sec23 SW $\frac{1}{4}$ MHS-X4C-1³Martin Railroad tracks
T101N R47W Sec35 NW $\frac{1}{4}$

¹Visited during the 2-3 June 1984 trip.²Visited during the 6-8 July 1984 trip.³Visited during the 21-23 September 1984 trip.

Appendix C. Catalog entries for specimens collected during the Southwest
Minnesota Amphibian and Reptile Survey, 1984.

0012551	<i>Bufo cognatus</i>	Found at Rabbit River trib. to Mokelumne River, Butte Co., Minn. T-100 R-46 S-12	Oliver Porter	Underhill Collection	1945 1945	Zool. 75-08
0012552	"	Found at Rabbit River, Minn. T-100 R-46 S-12	"	"	"	"
0012553	"	"	"	"	"	"
0012554	"	"	"	"	"	"
0012555	"	"	"	"	"	"
0012556	"	Found at Rabbit River trib. to Mokelumne River, Butte Co., Minn. T-100 R-46 S-12	"	"	1945	Zool. 75-08
0012557	"	"	"	"	"	"
0012558	"	"	"	"	"	"
0012559	"	"	"	"	"	"
0012560	"	"	"	"	"	"
0012561	"	unnamed ditch trib. to Buffalo River, Wilkin Co., Minn. T-100 R-46 S-12	"	"	"	"
0012562	<i>Rana pipiens</i>	Blue Mounds S.P., Rock Co., MN. T-101N R-41W Sec 3 SW 1/4	"	"	"	"
0012563	<i>Bufo Americanus</i>	Compass Prairie, Nobles Co., MN. T-101N R-41W Sec 3 SW 1/4	"	"	"	"
0012564	"	Asht. P. M.A.A., Nobles Co., MN. T-102N R-43W Sec 32 NW 1/4 NE 1/4	"	"	"	"
0012565	"	Louise Airport Gravel Pits, Rock Co., MN. T-102N R-43W Sec 23 SW 1/4	"	"	"	"
0012566	"	Gravel Pits, Nobles Co., MN. T-101N R-41W Sec 4 NE 1/4	"	"	"	"
0012567	"	Gravel Pits, Nobles Co., MN. T-101N R-41W Sec 4 NE 1/4	"	"	"	"
0012568	<i>Rana pipiens</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012569	<i>Pseudacris triseriata</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012570	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012571	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012572	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012573	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012574	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012575	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012576	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012577	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012578	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012579	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"
0012580	<i>Bufo Americanus</i>	Blue Mound S.P., Rock Co., MN. T-103N R-45W Sec 13, 24, 25, 26	"	"	"	"

Thamnophis radix - 2
Chelydra serpentina

MN, Pipestone Co., Pipestone National Mon.

MHS-V4D-1

T 106N R 46W sec 1 1/4 SW

23 September 1984

MN. Herp Society

Elophe vulpina - DOR

MN, Rock Co., Blue Mounds S.P. - entrance road

MHS-X5B-1

T 103N R 45W sec 23

22 September 1984

MN Herp Society

①

Thamnophis radix

MN, Jackson Co., 1/4 mile west of Co 17 on Co 82

DOR

T 104N R 36W sec 13 1/2 E

22 Sept 1984

MN. Herp Society

③

Ambystoma tigrinum - DOR

MN, Riches Co., 2 miles west of Round Lake

T 101N R 39W sec 15

22 September

MN Herp Society

④

Storeria occipitomaculata - 2 DDR

(5)

MN, Rock Co., Blue Mounds S.P. - Into Beach

MHS-X5B-1

T 103N R 45W sec 23

22 Sept 1984

MN Herp Society

Storeria occipitomaculata

(6)

MN, Jackson Co., Des Moines River at Co. 30

T 104N R 35W sec 19 1/4SW

22 Sept 1984

MN Herp Society

MHS-W9D-1

Thamnophis raxilis

(7)

MN, Jackson Co., Delta Field 1/2 mile south of Co. 82
on Co. 18

T 104N R 36W sec 23

22 Sept 1984 MHS-W9D-2

MN Herp Society

Ambystoma tigrinum - 2

(8)

MN, Jackson Co., Lake Huron
US 60 at Co. 24

T 104N R 37W sec 21 1/4NW

22 September 1984

MN Herp Society

Pseudacris triseriata - 2

MN, Nobles Co., John Erickson WMA

MHS-X7D-3

T 102N R 40W Sec 14+15

22 Sept 1984

MN Herp Society

(9)

Bufo americanus

Ambystoma tigrinum

MN, Nobles Co., Lake Ocheadag Game Refuge.

MHS-X7D-2

T 102N R 39W Sec 6

22 September 1984

MN Herp Society

Thamnophis s. r. l.

MN, Rock Co., extreme southwest corner of state

T 101N R 47W Sec 35 1/4 NW

23 September 1984

MN Herp Society

(11)

Bufo americana - 2

Ambystoma tigrinum - 2

Rana pipiens - 2

Storeria occipitomaculata

MN, Jackson Co., Kilen Woods State Park

MHS-X9A-1

T 103N R 35W Sec 17 1/2 E

22 September 1984

MN Herp Society

(12)

Blainvillia

(13)

MN, Rock Co., Blue Mounds S.P. - Quarries below
interpretive center

MHS-X5B-1

T103N R43W Sec 25

22 sept 1984

MN Herp society

Ambystoma tigrinum

(15)

MN, Rock Co., Co. 8 - 1 mile east of Blue Mounds.

T103N R44W Sec 30 1/2 W

22 September

MN Herp Society

Rana pipiens

(14)

MN, Pipestone Co., Pipestone Nat'l Mon.
along pipestone creek

MHS-V4D-1

T106N R46W Sec 1 1/4 SW

23 September 1984

MN Herp society

Rana pipiens

(16)

Pseudacris triseriata

Ambystoma tigrinum

Bufo americana

MN, Jackson Co., Boot Lake WMA

MHS-X9A-4

T103N R35W Sec 35 NE

22 sept 1984

MN Herp Society

Rana pipiens

Bufo americanus

MN, Jackson Co., National WTA at Rush Lake

MHS-X9C-3

T 101N R 36W sec 14 1/2 E

22 Sept 1984

MN Herp Society

(17)

Pseudacris triseriata

MN, Jackson Co, Sangl WTA

MHS-X9C-4

T 101N R 36W sec 21 1/4 NW

22 Sept 1984

MN Herp Society

(18)

Thamnophis radix - DOR

MN, Jackson Co., Co. 4 - 1/2 mile west of Co. 86

T 101N R 36W sec 29 1/4 NW

22 September 1984

MN Herp Society.

(19)

Thamnophis radix - DOR

MN, Nobles Co., Co. 4 - 1 mile east of Co. 5
near Round Lake.

22 September 1984

MN Herp Society

(20)

Appendix D. Photographs from the Southwest Minnesota Amphibian and Reptile
Survey, 1984.

Appendix E. Museum records for Acris crepitans and Bufo cognatus
from Southwest Minnesota.

<u>Species</u>	<u>County</u>	<u>Museum Number</u>	<u>Date</u>
<u>Acris crepitans</u>	Pipestone	BMNH 1112-1114	June 1939
	Rock, Luverne	BMNH 127-142	Sept, 1936
	Rock, Adrian	BMNH 155-167	Sept. 1936
	Rock	BMNH 1115-1119	June 1939
<u>Bufo cognatus</u>	Cottonwood	BMNH 1613	July 1944
	Jackson	BMNH 1101	June 1939
	Lincoln	BMNH 447,449	1937
		BMNH 956	1938
	Nobles	BMHN 381-382	1930's
	Pipestone	BMNH 309, 371	1937
	Rock	BMHN 1102-1105	June 1939