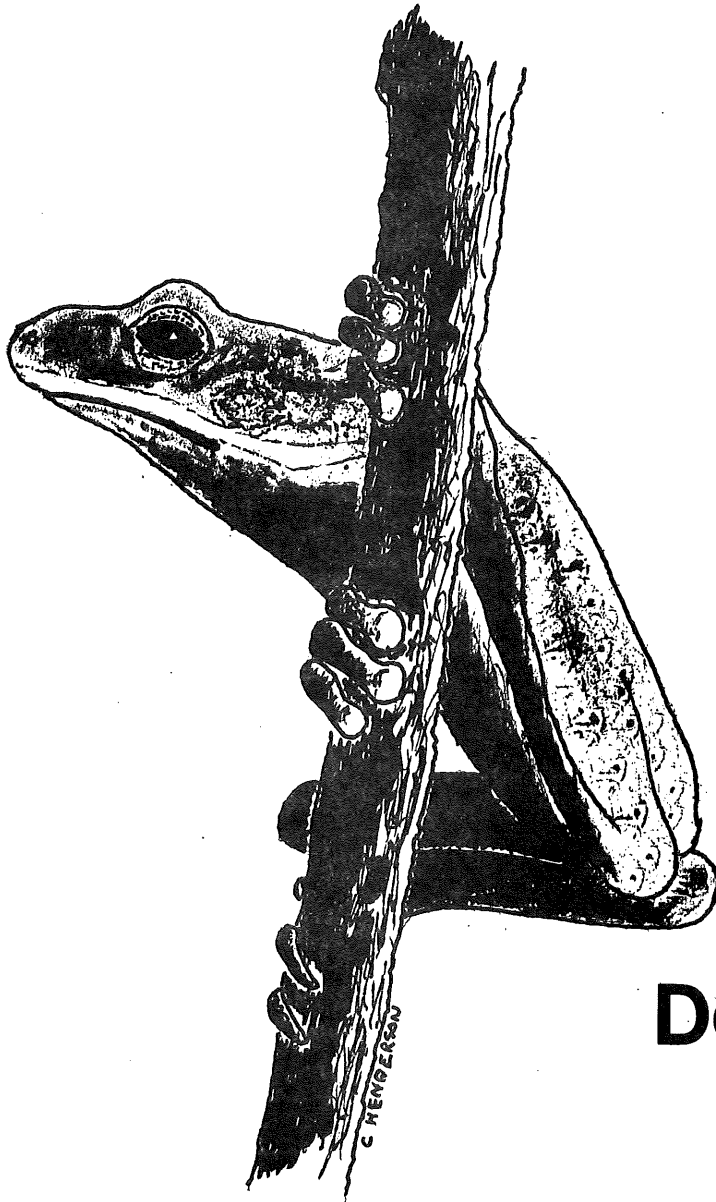


800533

The Occurrence, Distribution, Legal Status, and Utilization of Reptiles and Amphibians in Minnesota

1979



**Minnesota
Department of
Natural
Resources**

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

A Preliminary Review of the Occurrence, Distribution, Legal Status, and Utilization of Reptiles and Amphibians in Minnesota

by Carrol Henderson

Since the publication of the book Reptiles and Amphibians of Minnesota by Walter Breckenridge the field of herpetology in Minnesota has not been widely explored. The number of scientific publications on Minnesota's herpetofauna is limited. Systematic field surveys and collecting efforts have not been adequate to evaluate the multitude of environmental questions raised by proposed environmental alterations and the effects of pollution.

No reptiles or amphibians in Minnesota are listed as threatened or endangered, but for uncommon species there is insufficient data on which to evaluate their current status.

This summary has been prepared to provide a broad perspective on the state's herpetofauna and to encourage renewed interest in that field.

REGIONAL ANALYSIS

For purposes of analysis the State of Minnesota has been subdivided into ten areas comprised of Department of Natural Resources Regions or Subregions. These are portrayed in Figure 1.

TAXONOMY AND IDENTIFICATION

The taxonomy used here is based exclusively on Conant's A Field Guide to Reptiles and Amphibians (1975). Identification features for the species mentioned can be obtained from this field guide or from Reptiles and Amphibians of Minnesota.

SPECIES DIVERSITY

Current information suggests that there are 45 species of reptiles and amphibians in Minnesota, including 8 turtles, 3 lizards, 16 snakes, 5 salamanders, 3 toads, and 10 frogs.

The species diversity varies considerably from one region to another. Region 4-South in the southwest has only 15 species, compared to Region 5 in the southeast which has recorded 37 species. As would be expected, the diversity decreases from south to north and from east to west. This is related to a more cold climate in the north and less annual precipitation in the west.

The species diversity for each region is shown in Figure 2.

SPECIES COMPOSITION

The reptiles and amphibians recorded in Minnesota are listed in Appendix A. This list is a composite of records presented in Reptiles and Amphibians of Minnesota and other records on file with the Department of Natural Resources.

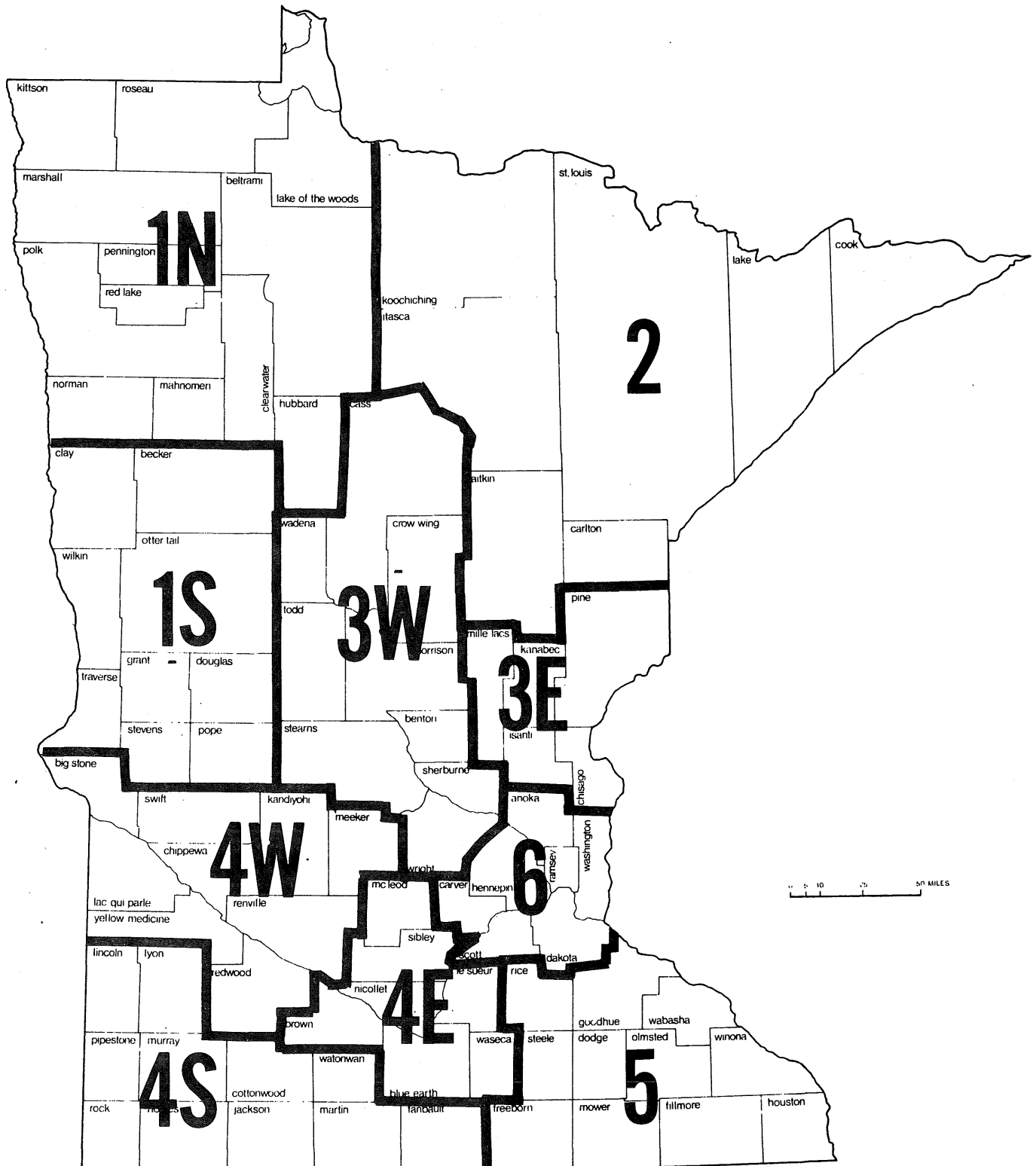


Figure 1. Regional breakdown used for analysis of herpetofauna distribution.

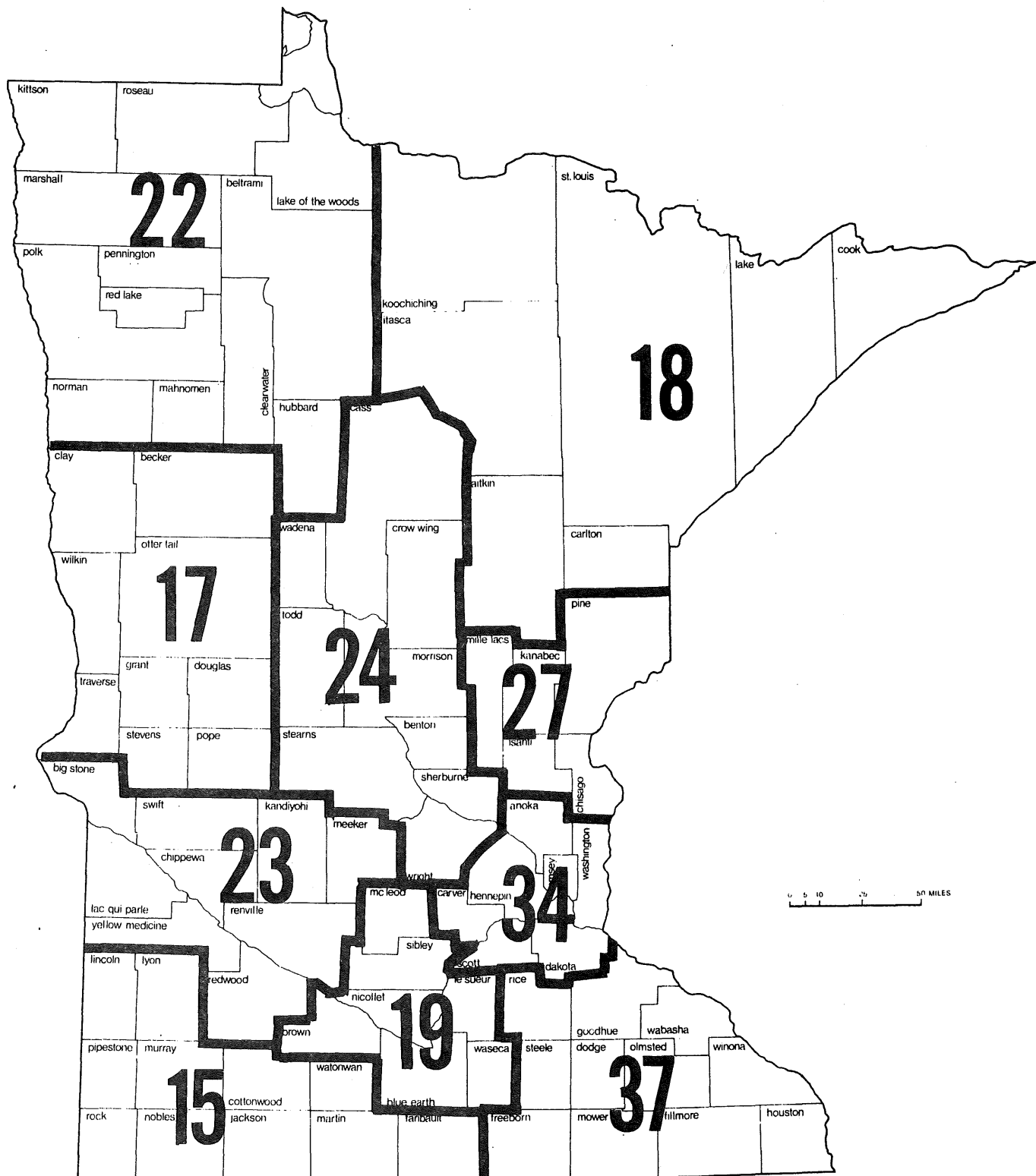


Figure 2. Species diversity of reptiles and amphibians in Minnesota, by region.

EXOTIC SPECIES

No breeding populations of exotic species of reptiles or amphibians have become established in the wild in Minnesota.

EXTINCT SPECIES

No reptiles or amphibians in Minnesota are known to have become extinct in recent times.

EXTIRPATED SPECIES

No Minnesota herptiles are known to have become extirpated in recent times.

ENDEMIC SPECIES

There are no endemic reptiles or amphibians in Minnesota. There is a reproductively isolated population of five-lined (blue-tailed) skinks in Region 4-West which is of special interest, however.

HYPOTHETICAL SPECIES

The four-toed salamander is found in Wisconsin, but has not yet been recorded from adjacent sites in Minnesota. It may occur in Houston County and in Chisago County.

THREATENED AND ENDANGERED SPECIES (Federal)

There are no reptiles or amphibians in Minnesota which are officially considered threatened or endangered under the terms of the federal Endangered Species Act of 1973.

THREATENED AND ENDANGERED SPECIES (State)

There are no reptiles or amphibians which are officially listed as threatened or endangered by the State of Minnesota, in accordance with the terms of M.S. 1976, Section 97.488.

The late Dr. John B. Moyle compiled an unofficial list of Minnesota's threatened and endangered wildlife in 1975. While no species of reptile or amphibian were considered endangered, the five-lined (blue-tailed) skink, massasauga, and Blanchard's cricket frog were all listed as threatened. The known range of each of these species is shown in Appendix B. More needs to be known about these species so their status can be determined.

SPECIES OF SPECIAL INTEREST

Several herptiles occupy a limited range in Minnesota or have unique habitat requirements which make them of special interest. Their status is uncertain and some could become threatened because of environmental changes.

The Blanding's turtle, whose range is shown in Appendix B nests in high numbers in the sand prairie of the Weaver Dunes in Wabasha County. According to Mike Pappas of Rochester, it may be the largest concentration of Blanding's turtles in the world. The nesting area is one of the sites proposed for a power plant. This site is also proposed for acquisition by the United States Fish and Wildlife Service through the Land and Water Conservation Fund. It would then become part of the National Wildlife Refuge system.

The false map turtle and wood turtle are also of special interest. Their ranges are shown in Appendix B.

Other species on which more observations are needed are the central newt, red-backed salamander, six-lined racerunner, ring-necked snake, smooth green snake, and blue racer. The known range of these species is shown in Appendix B.

Some reptiles like the smooth green snake and Blanding's turtle have extensive ranges in the state, but they are restricted to certain habitats which are limited in occurrence.

Many herptiles in Minnesota are "peripheral". That means that they are on the edge of a much larger range, and that they only occur in a small portion of the state.

In addition to the massasauga which was mentioned as an unofficially threatened species, five other reptiles and amphibians are only found in Region 5 in southeastern Minnesota -- the eastern spiny softshell, black rat snake, timber rattlesnake, pickerel frog, and bullfrog. It is important to solicit sightings and habitat data on these species to help monitor their status. The ranges of these species are shown in Appendix B.

Three western amphibians are found on the eastern edge of their range in Minnesota. This includes the gray tiger salamander (a subspecies of tiger salamander), the Canadian toad, and the great plains toad. Their ranges are shown in Appendix B.

LEGAL STATUS

All lizards, snakes, salamanders, and toads are totally unprotected.

Turtles

Any person permitted by law to take fish by angling may take, possess, buy, sell, and transport turtles. Turtles may not be taken by the use of explosives, drugs, poisons, lime or other deleterious substances or by the use of nets, other than landing nets.

The possession limit for snapping turtles is ten, and the dorsal surface of the carapace must be ten inches or more in length.

A \$25 commercial turtle license is necessary to take, transport, purchase, and possess for sale unprocessed turtles within the state.

Minnesota laws pertaining to turtles are found in Chapter 98, Section 98.46 Subdivision 5, Paragraph (7) and Chapter 101, Section 101.45, and in Commissioner's Order 1943.

Frogs

Any person permitted by law to take fish by angling may take or possess frogs for bait purposes only. Frogs may not be taken from April 1 to May 15. Frogs may not be taken for bait if they exceed six inches from the tip of their nose to the tip of their hind legs when the hind legs are fully extended. Legal frogs can be possessed, bought, sold, and transported in any numbers.

No more than 150 frogs over six inches in length may be possessed in or transported through the state if they originate in Minnesota.

The taking, possessing, purchasing, transporting, or selling of frogs for purposes other than as bait within the state is prohibited. Scientific or special permits may be issued to educational and scientific institutions within Minnesota.

Laws pertaining to frogs are contained in Chapter 101, Section 101.44 and Section 101.441, and in Commissioner's Order 1381 and 1912.

UTILIZATION

Turtles

Turtles which can be utilized for meat in Minnesota include the snapping turtle, spiny softshell, and false map turtle. The snapping turtle is the most popular. A biological supply house in Chicago sells live painted turtles. Prices range from \$.95 to \$2.60 apiece, depending on the size. The number of turtles supplied from Minnesota is unknown.

There is a commercial demand for some snakes which are sold by pet dealers. These include the milk snake (\$25 to \$40), fox snake (\$18 to \$20), black rat snake (\$22.00), bullsnake (\$15 to \$30), western hognose snake (\$22.50 to \$25.00), and garter snake (\$2.19).

Mudpuppies and tiger salamanders are also sold for scientific and educational purposes for \$1.50 apiece. American toads are priced at \$.60 apiece.

While bullfrogs are the primary species for which there is a demand for the meat, some of the other members of the genus Rana can also be eaten, like the green frog.

All members of the genus Rana have value as bait for angling. There is also a demand for leopard frogs, green frogs and bullfrogs by biological supply houses. Live leopard frogs cost from \$.31 to \$1.35 apiece, and bullfrogs cost from \$.95 to \$4.50 apiece. It is not presently legal to sell Minnesota frogs to biological supply houses.

RECOMMENDATIONS FOR DATA COLLECTION

Because of the lack of recent data on the distribution and status of Minnesota's herptiles, persons with an interest in herpetology should examine the range maps of this review to see what uncommon species can be expected in their respective areas and check the Peterson field guide to familiarize themselves with definitive identification characteristics.

The species which are of interest are:

Four-toed salamander	Ring-necked snake
Five-lined (blue-tailed) skink	Smooth green snake
Massasauga	Blue racer
Blanchard's cricket frog	Eastern spiny softshell
Blanding's turtle	Black rat snake
False map turtle	Timber rattlesnake
Wood turtle	Pickereel frog
Central newt	Bullfrog
Red-backed salamander	Gray tiger salamander
Six-lined racerunner	Canadian toad
	Great plains toad

When one of these species is observed, the following data should be recorded:

County, township, range, section number, date, type of habitat, name and address of observer, and list the characteristics of the specimen which will confirm its proper identification. If the specimen is collected and preserved, tell what collection it will be kept in.

Send these reports to the Nongame Supervisor, Section of Wildlife, Centennial Office Building, Box 7, 658 Cedar Street, Department of Natural Resources, St. Paul, Minnesota 55155.

Appendix A

Reptiles and Amphibians of Minnesota

TURTLES

- Common Snapping Turtle
(Chelydra serpentina)
 - Wood Turtle
(Clemmys insculpta)
 - False Map Turtle
(Graptemys pseudogeographica)
 - Map Turtle
(Graptemys geographica)
 - Western Painted Turtle
(Chrysemys picta belli)
 - Blanding's Turtle
(Emydoidea blandingi)
 - Smooth Softshell
(Trionyx muticus)
 - Western Spiny Softshell
(Trionyx spinifer hartwegi)
 - Eastern Spiny Softshell
(Trionyx spiniferus spiniferus)
- } s.s.

LIZARDS

- Northern Prairie Skink
(Eumeces septentrionalis septentrionalis)
- Blue-tailed or Five-lined Skink
(Eumeces fasciatus)
- Six-lined Racerunner
(Cnemidophorus sexlineatus)

SNAKES

- Red-bellied Snake
(Storeria occipitomaculata)
 - DeKay's or Texas Brown Snake
(Storeria dekayi dekayi)
 - Northern Water Snake
(Natrix sipedon sipedon)
 - Western Plains Garter Snake
(Thamnophis radix haydeni)
 - Eastern Plains Garter Snake
(Thamnophis radix radix)
 - Red-sided Garter Snake
(Thamnophis sirtalis parietalis)
 - Eastern Garter Snake
(Thamnophis sirtalis sirtalis)
- } s.s.

Reptiles and Amphibians of Minnesota

SNAKES - Continued

Plains Hognose Snake
(Heterodon nasicus nasicus)
Eastern Hognose Snake
(Heterodon platyrhinos)
Northern Ringneck Snake
(Diadophis punctatus edwardsi) } s.s.
Prairie Ringneck Snake
(Diadophis punctatus arnyi) }
Blue Racer
(Coluber constructor foxi)
Western Smooth Green Snake
(Opheodrys vernalis blanchardi) } s.s.
Eastern Smooth Green Snake
(Opheodrys vernalis vernalis) }
Bullsnake
(Pituophis melanoleucus sayi)
Western fox snake
(Elaphe vulpina vulpina)
Black rat snake
(Elaphe obsoleta obsoleta)
Eastern milk snake
(Lampropeltis triangulum triangulum)
Eastern massasauga
(Sistrurus catenatus catenatus)
Timber rattlesnake
(Crotalus horridus horridus)

SALAMANDERS

Mudpuppy
(Necturus maculosus)
Central Newt
(Notophthalmus viridescens louisiansensis)
Blue-spotted salamander
(Ambystoma laterale)
Gray Tiger Salamander
(Ambystoma tigrinum diaboli) } s.s.
Eastern Tiger Salamander
(Ambystoma tigrinum tigrinum) }
Red-backed Salamander
(Plethodon cinereus cinereus)
Four-toed Salamander
(Hemidactylium scutatum)

TOADS

Canadian toad
(Bufo hemiophrys)
American Toad
(Bufo americanus)
Great Plains Toad
(Bufo cognatus)

Reptiles and Amphibians of Minnesota

FROGS

Northern spring peeper
(Hyla crucifer)
Gray treefrog
(Hyla versicolor)
Blanchard's cricket frog
(Acris crepitans blanchardi)
Boreal chorus frog or Swamp tree frog
(Pseudacris triseriata maculata)
Western chorus frog or Swamp tree frog
(Pseudacris triseriata triseriata) } s.s.
Pickereel frog
(Rana palustris)
Mink frog
(Rana septentrionalis)
Northern leopard frog
(Rana pipiens pipiens)
Green frog
(Rana clamitans melanota)
Wood frog
(Rana sylvatica)
Bullfrog
(Rana catesbeiana)

Appendix B. Known ranges of uncommon reptiles and amphibians in Minnesota.

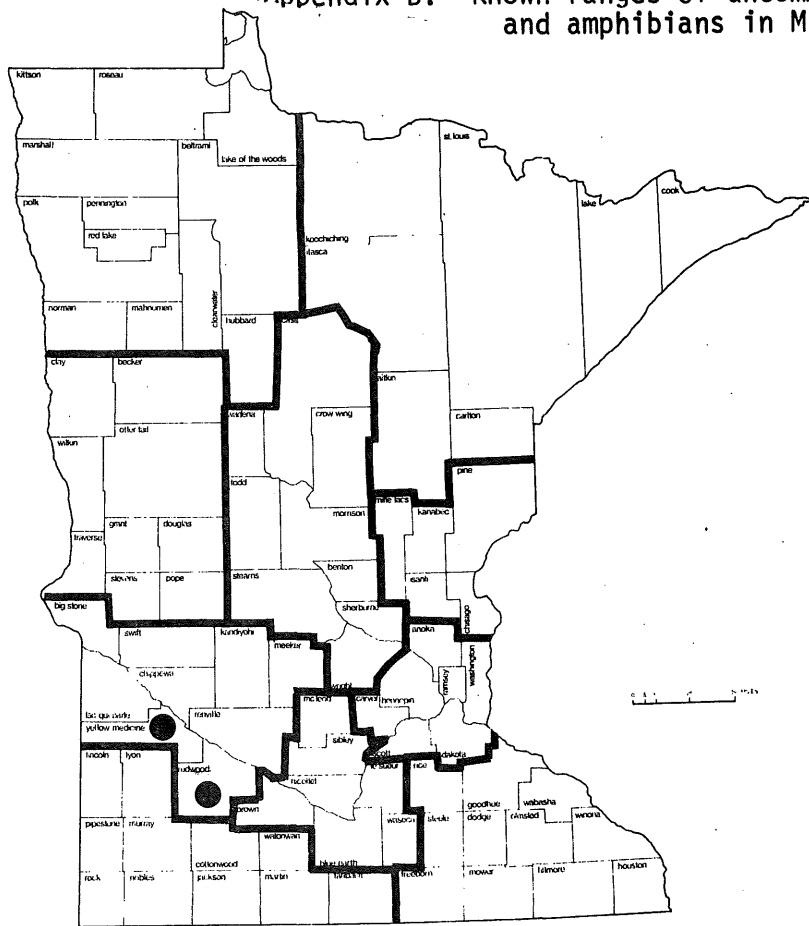


Figure 1. Reported distribution of the Blue-tailed, or Five-lined, Skink (Eumeces fasciatus) in Minnesota.

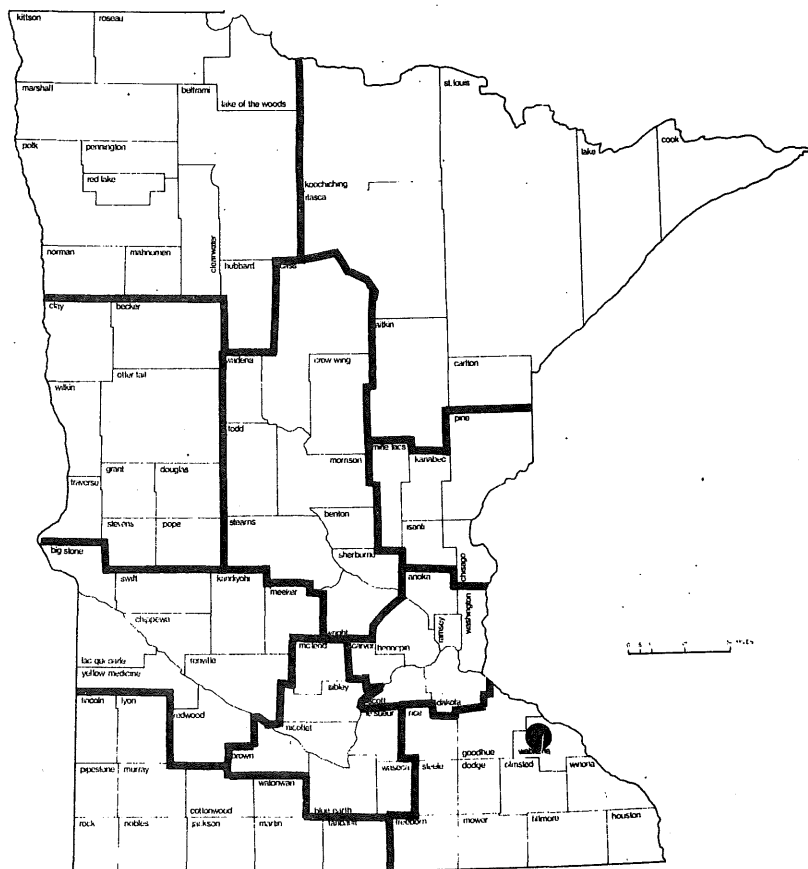


Figure 2. Reported distribution of the massasauga (Sistrurus catenatus catenatus) in Minnesota.

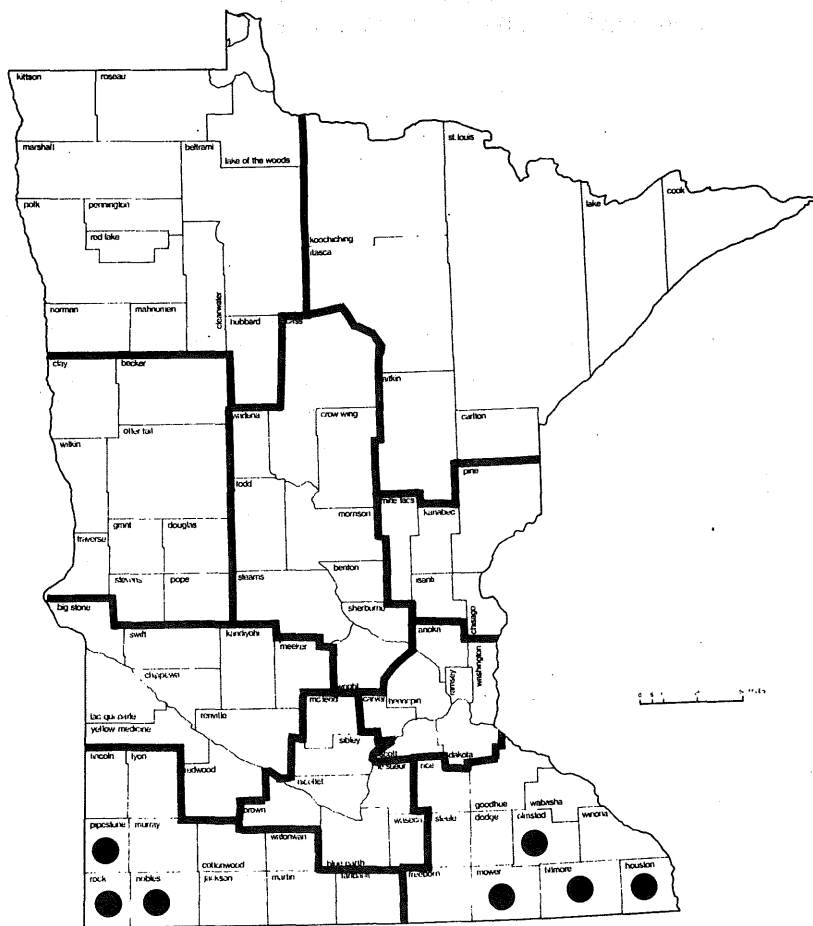


Figure 3. Reported distribution of Blanchard's cricket frog (*Acris crepitans blanchardi*) in Minnesota.

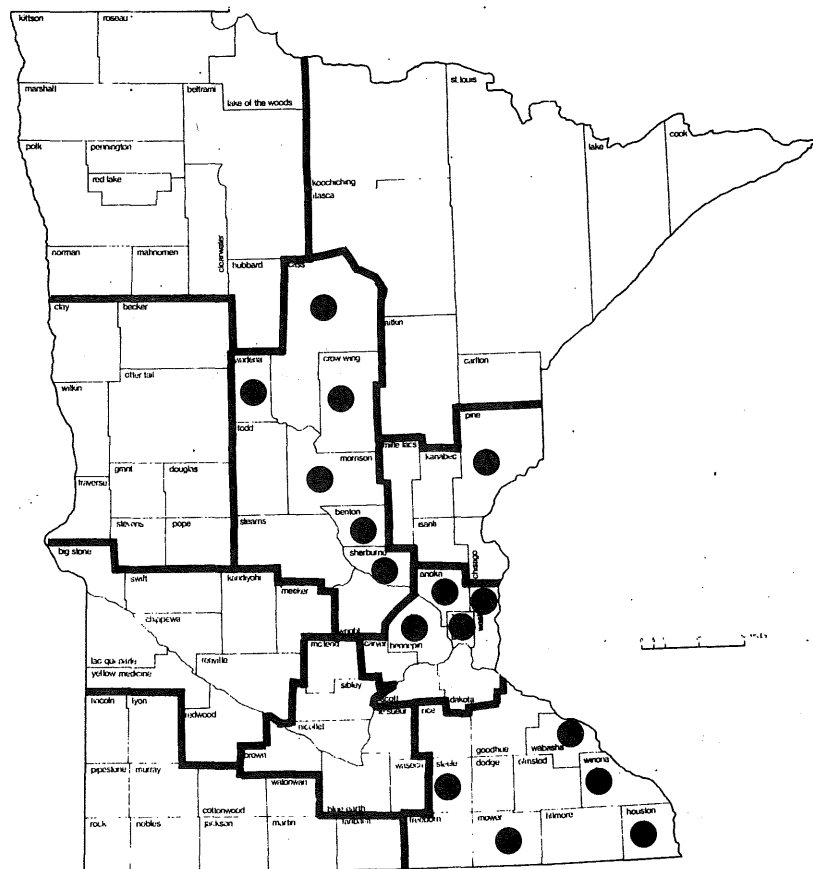


Figure 4. Reported distribution of the Blanding's turtle (*Emydoidea blandingi*) in Minnesota.

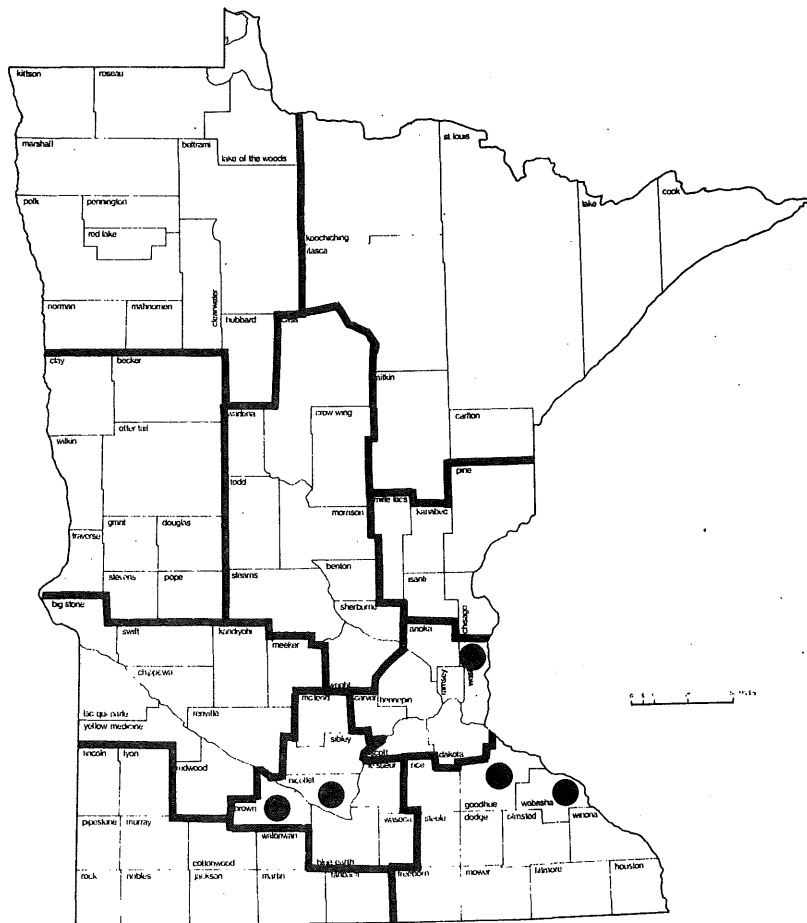


Figure 5. Reported distribution of the False Map Turtle (Graptemys pseudogeographica) in Minnesota.

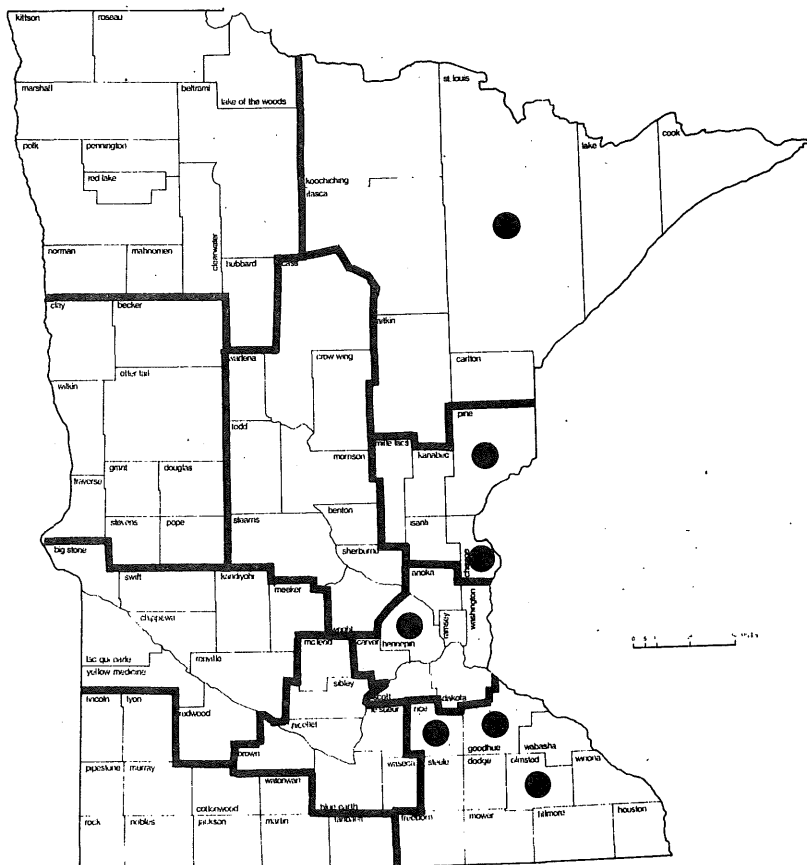


Figure 6. Reported distribution of the wood turtle (Clemmys insculpta) in Minnesota.

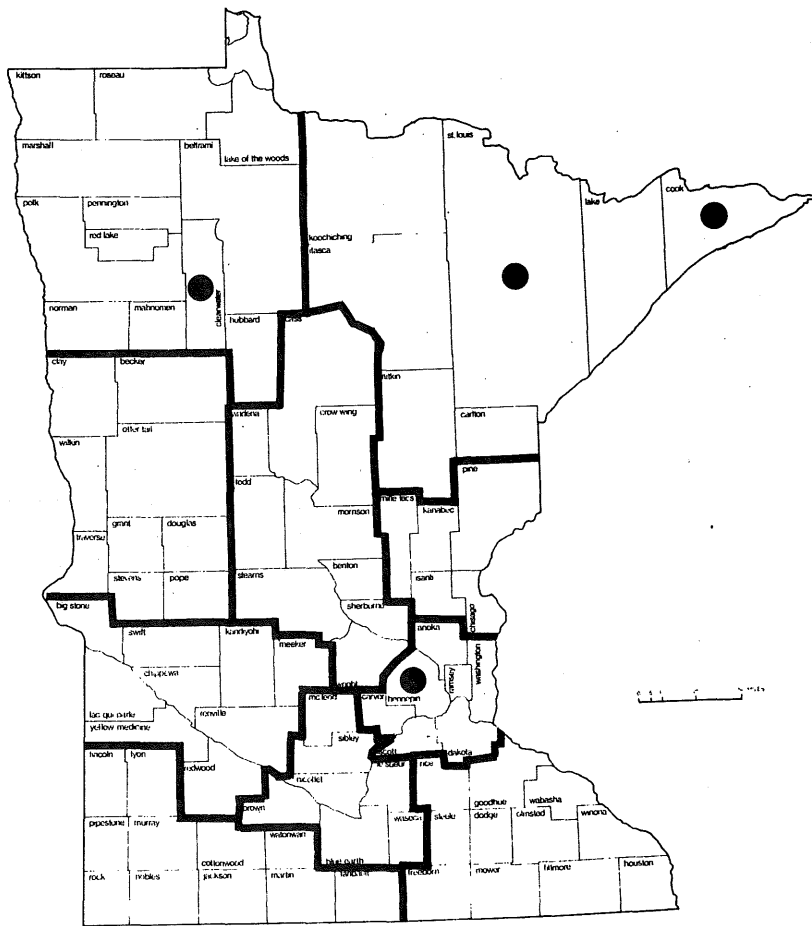


Figure 7. Distribution of the Common, or Central, Newt (*Diemictylus viridescens louisianensis*) in Minnesota.

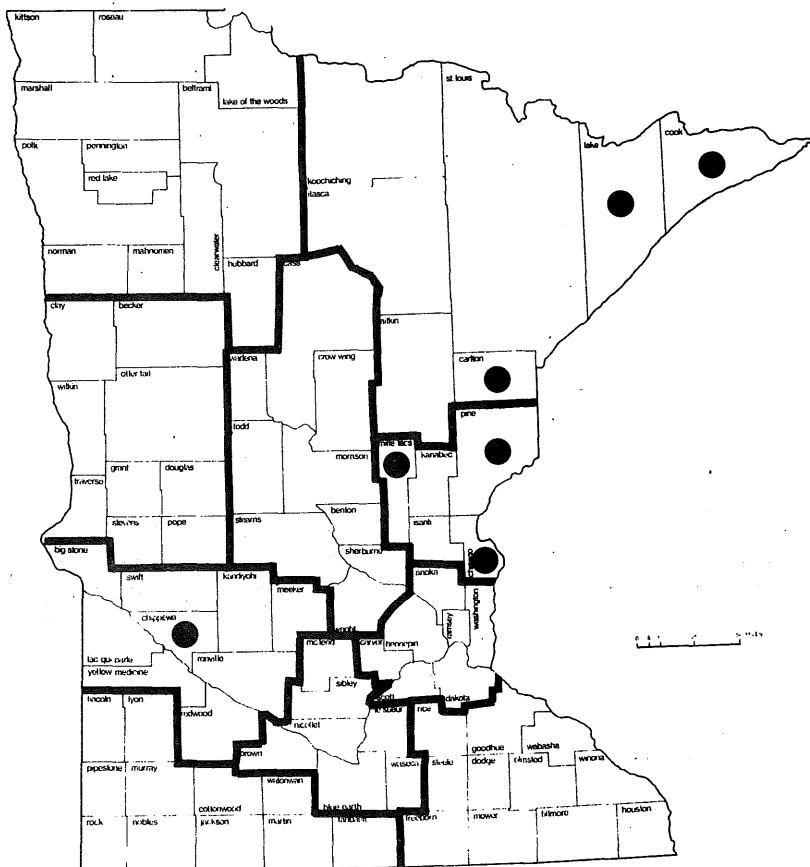


Figure 8. Reported distribution of the red-backed salamander (*Plethodon cinereus cinereus*) in Minnesota.

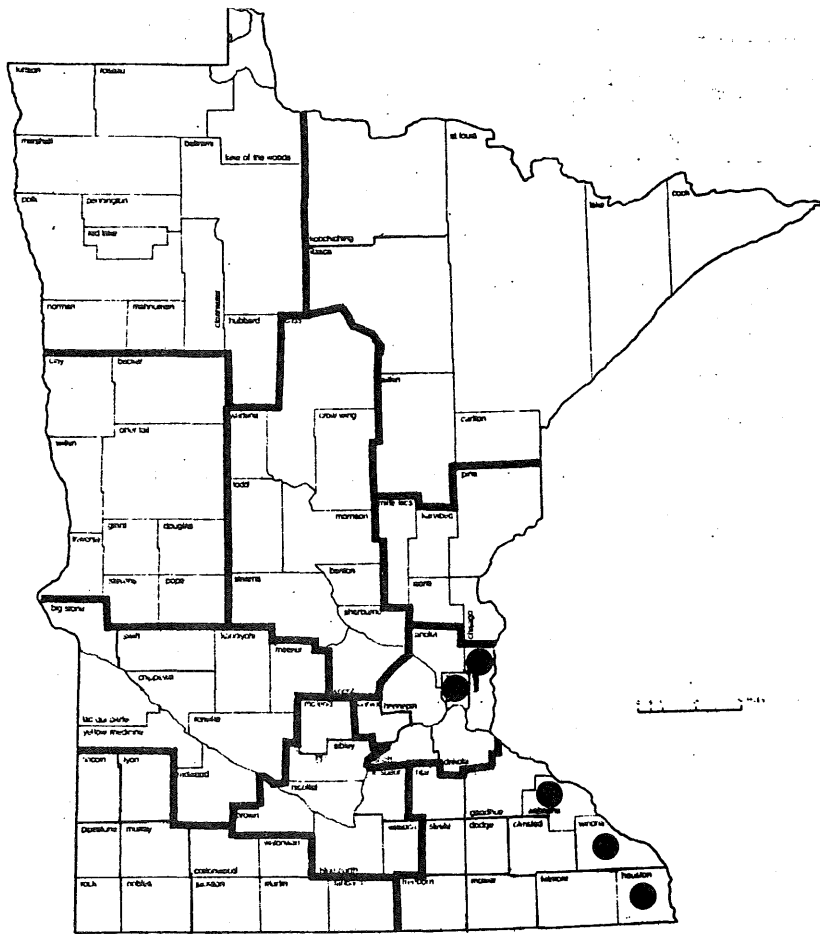


Figure 9. Reported distribution of the Six-lined racerunner (Cnemidophorus sexlineatus) in Minnesota.

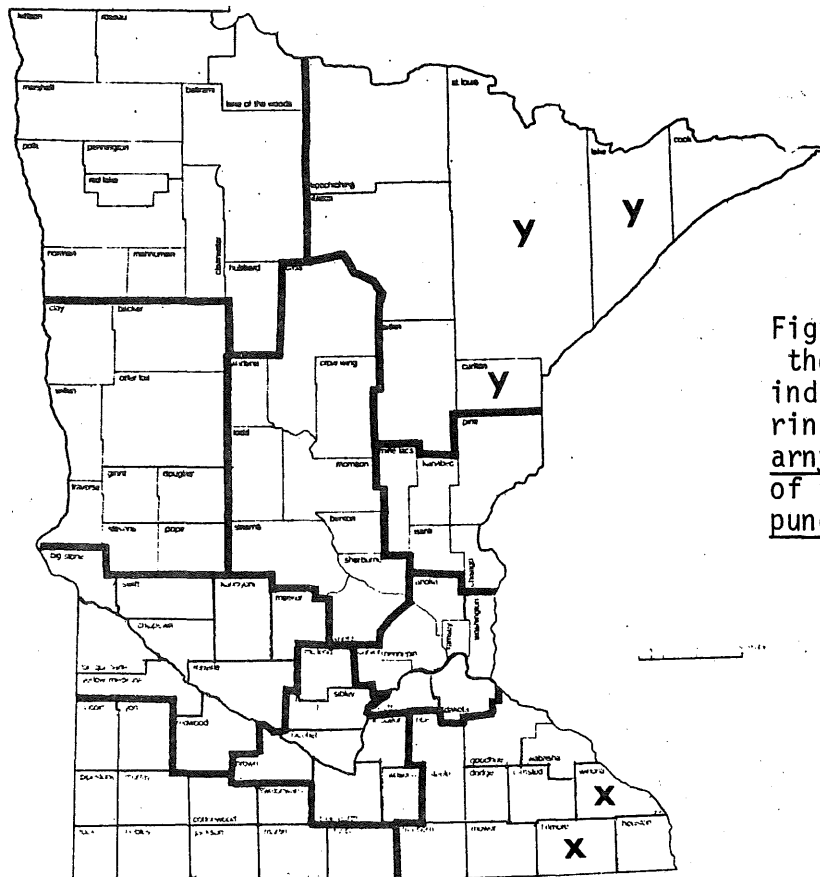


Figure 10. Reported Distribution of the Ringneck Snake in Minnesota. "X" indicates occurrences of the prairie ringneck snake (Diadophis punctatus arnyi) and "Y" indicates occurrences of the northern ringneck snake (Diadophis punctatus edwardsi)

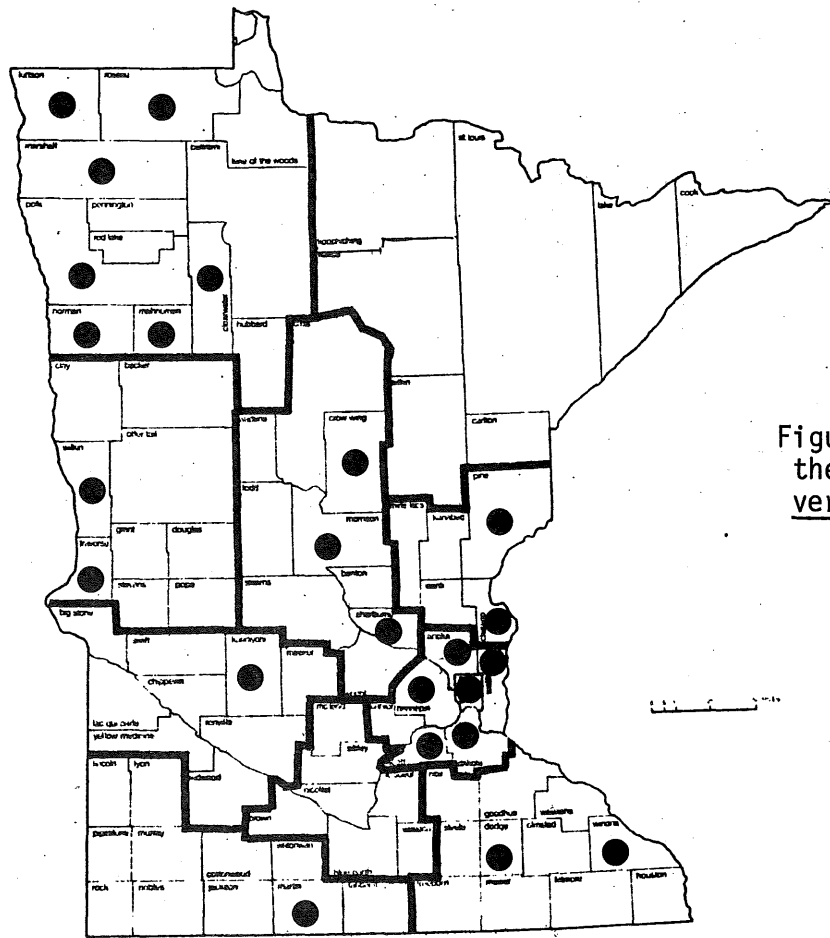


Figure 11. Reported distribution of the smooth green snake (*Opheodrys vernalis*) in Minnesota.

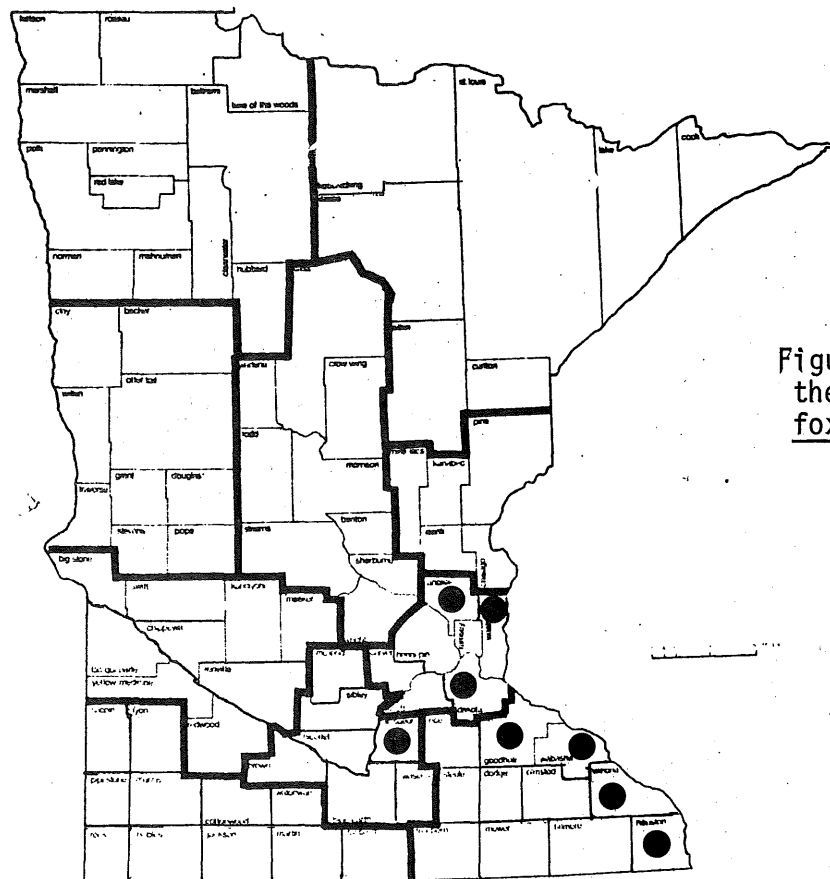


Figure 12. Reported distribution of the blue racer (*Coluber constrictor foxi*) in Minnesota.

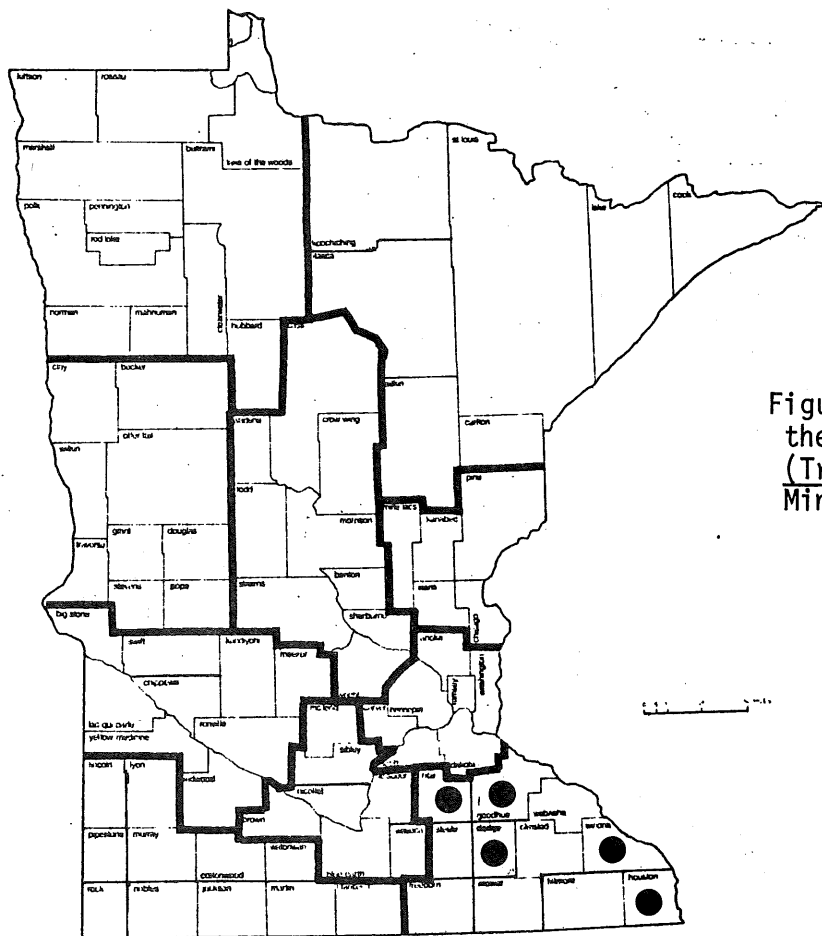


Figure 13. Reported distribution of the eastern spiny softshell turtle (Trionyx spiniferus spiniferus) in Minnesota.

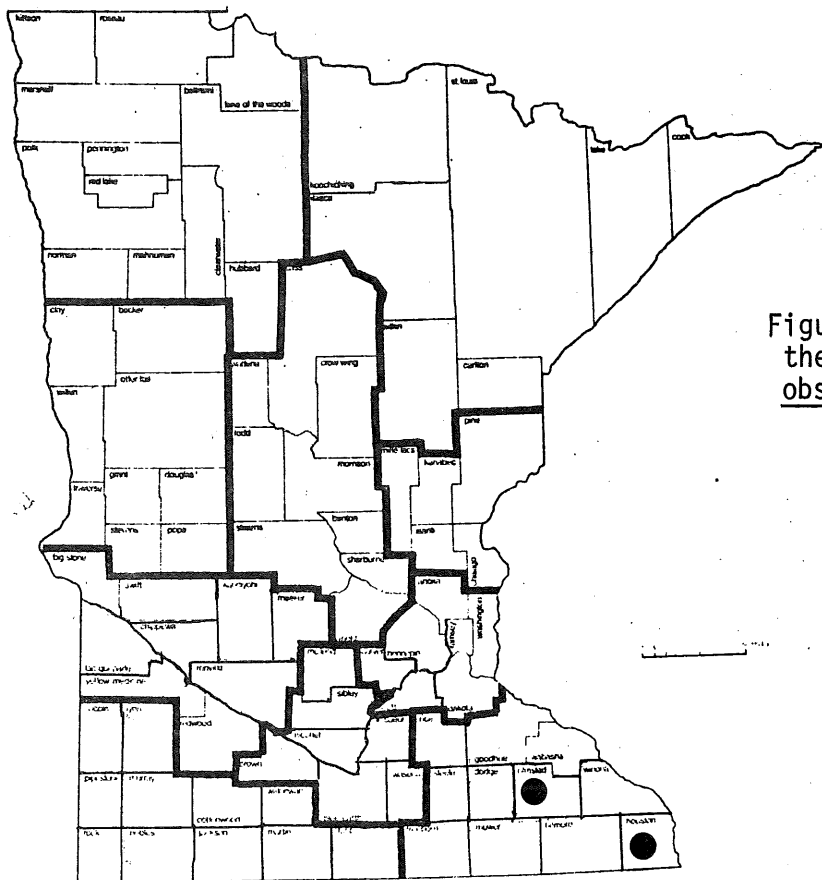


Figure 14. Reported distribution of the black rat snake (Elaphe obsoleta obsoleta) in Minnesota.

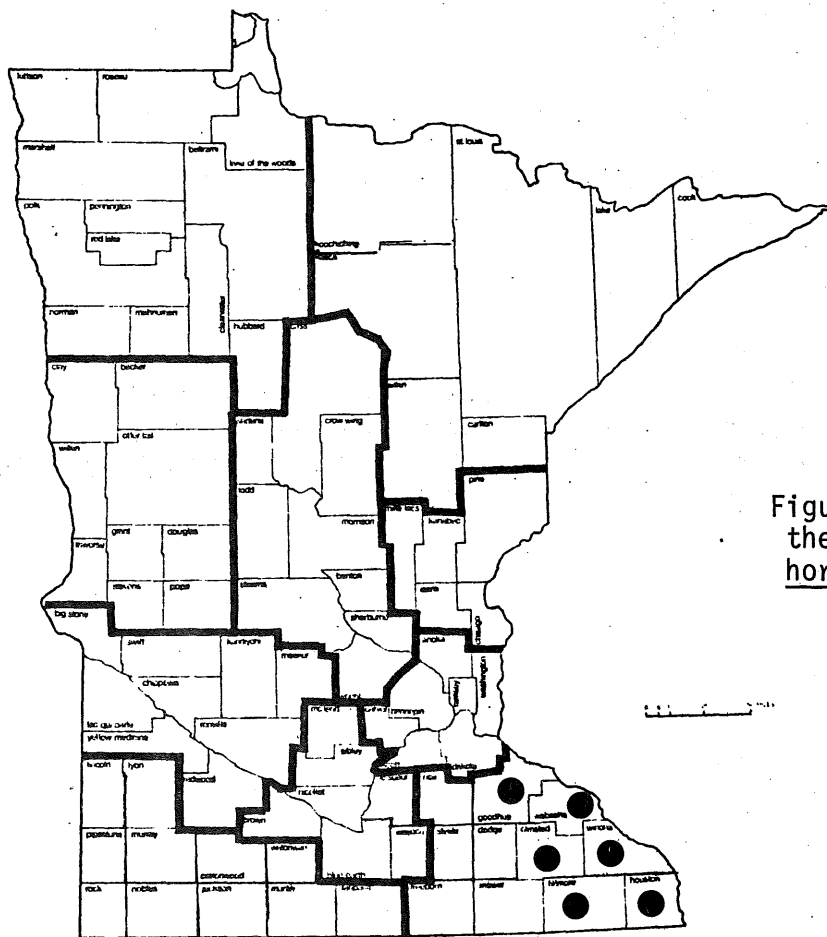


Figure 15. Reported distribution of the timber rattlesnake (Crotalus horridus horridus) in Minnesota.

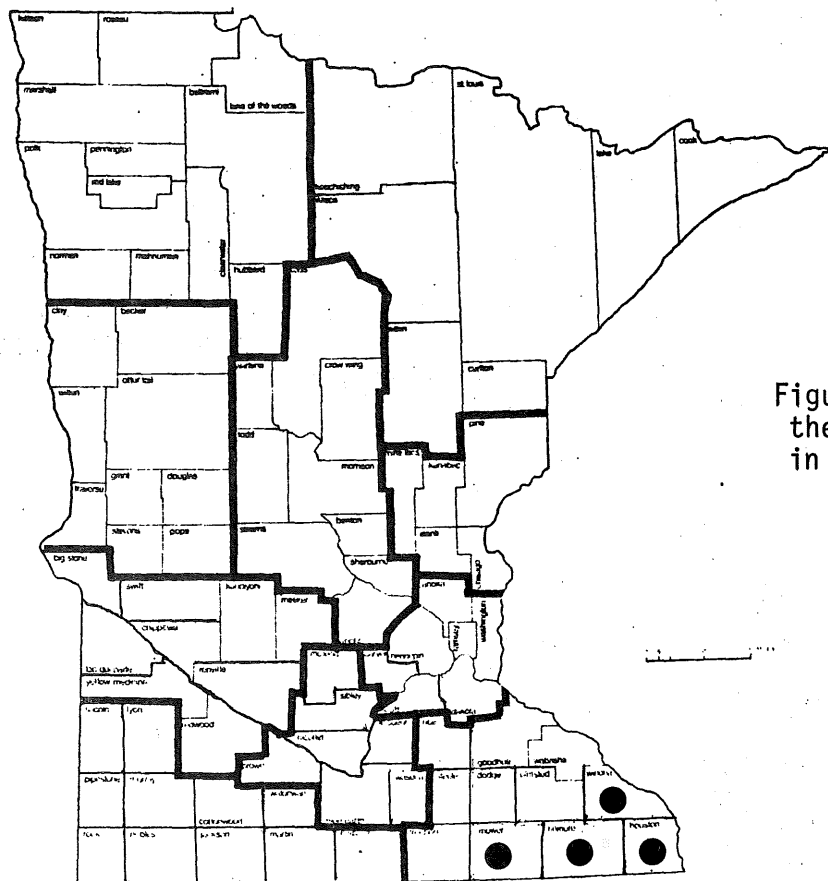


Figure 16. Reported distribution of the pickerel frog (Rana palustris) in Minnesota.

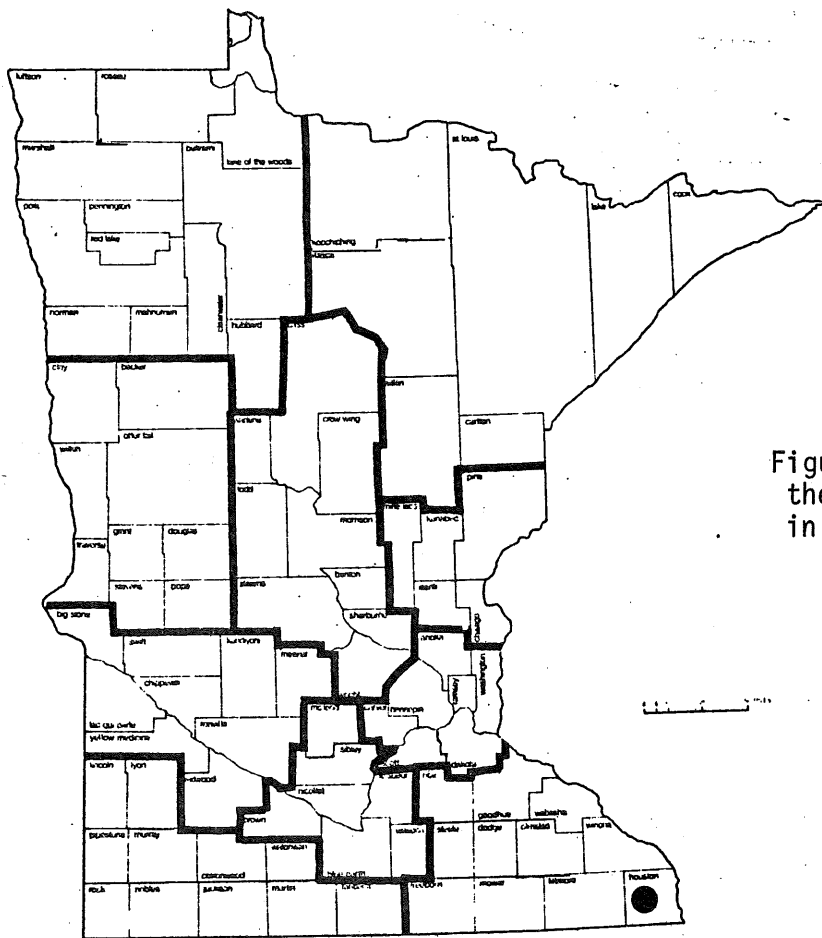


Figure 17. Reported distribution of the bullfrog (Rana catesbeiana) in Minnesota.

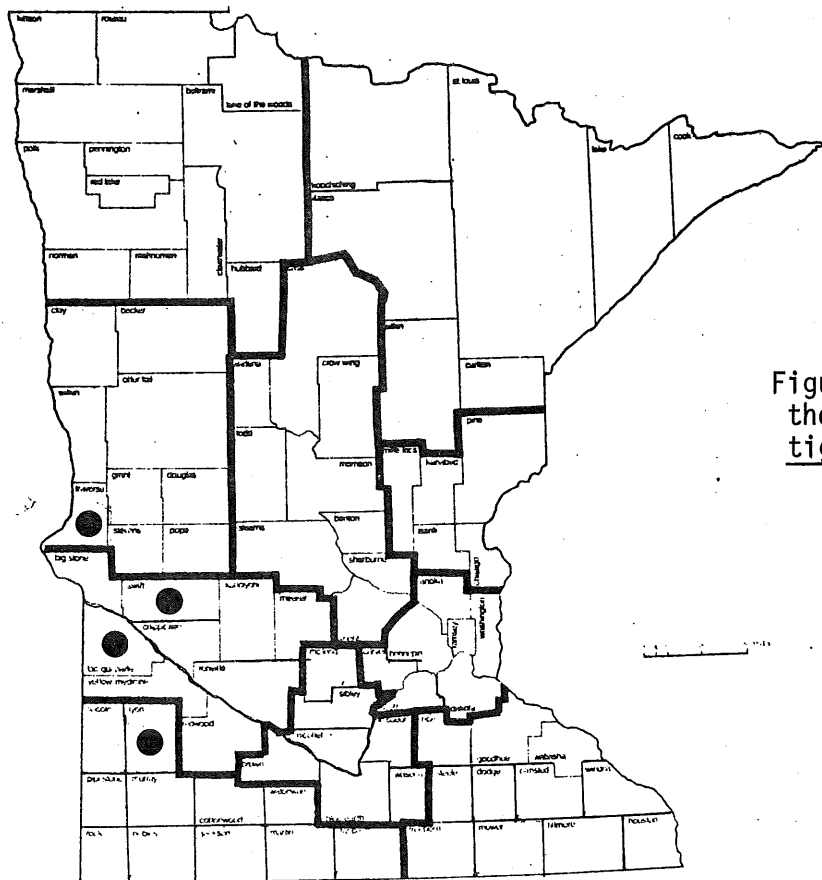


Figure 18. Reported distribution of the gray tiger salamander (Ambystoma tigrinum diaboli) in Minnesota.

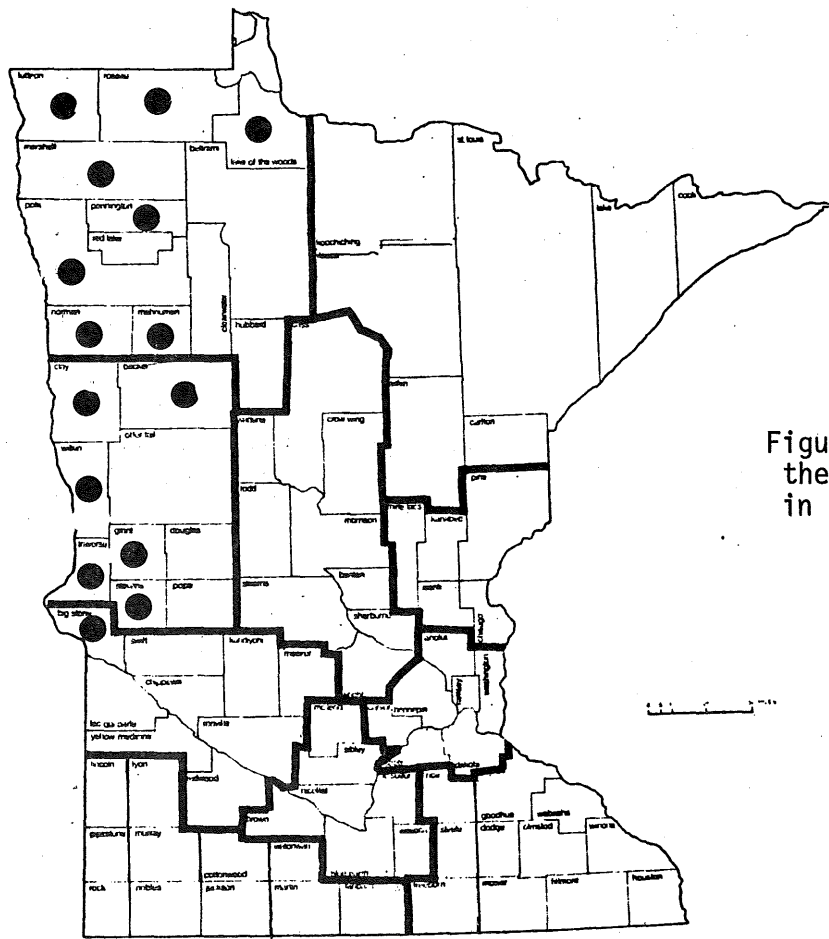


Figure 19. Reported distribution of the Canadian toad (*Bufo hemiophrys*) in Minnesota.

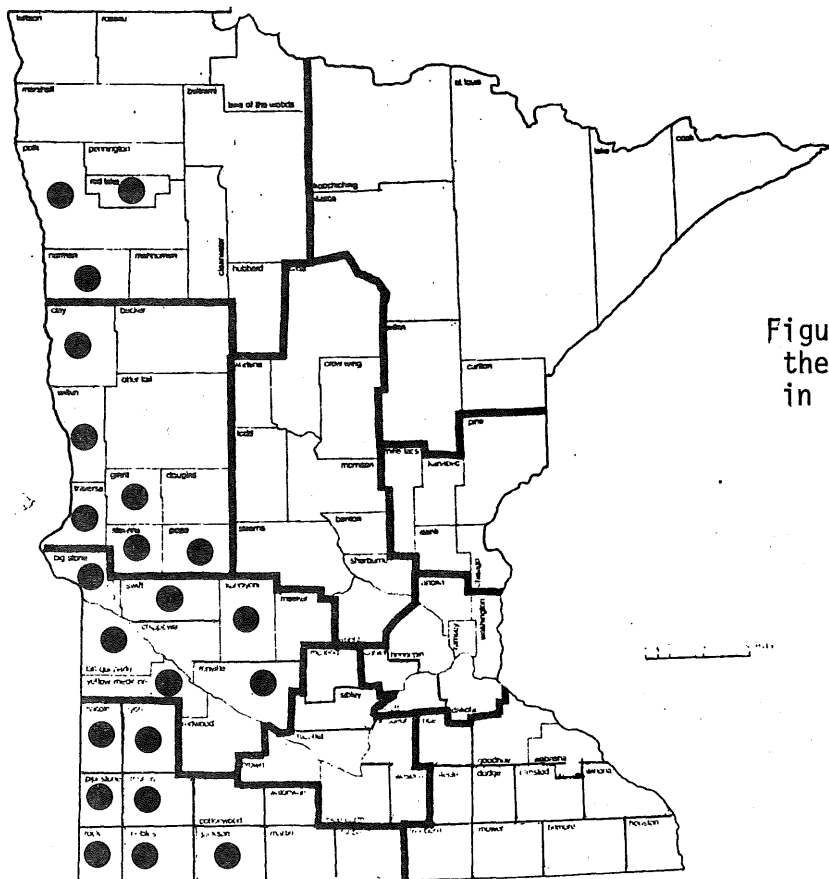


Figure 20. Reported distribution of the great plains toad (*Bufo cognatus*) in Minnesota.

