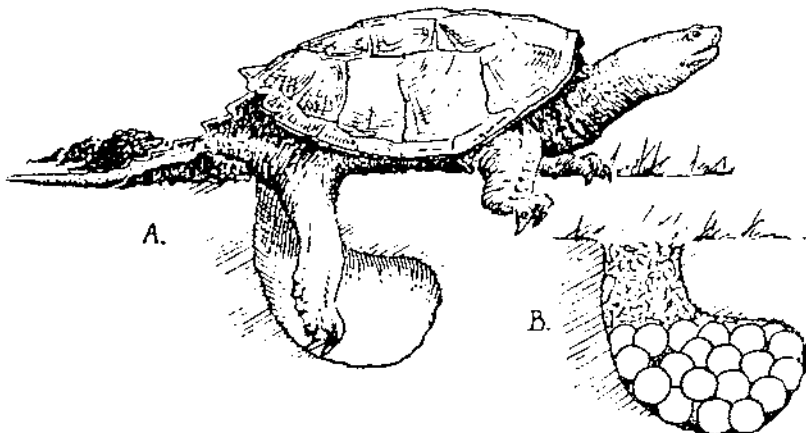
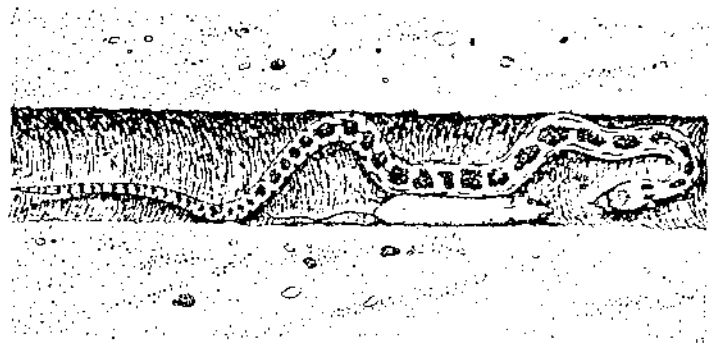
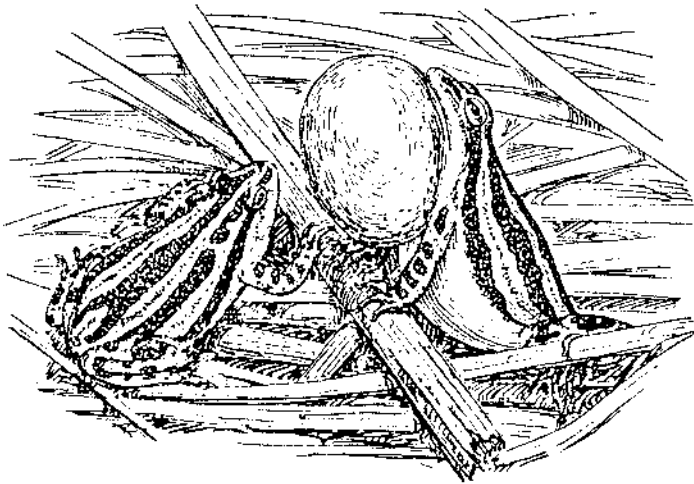
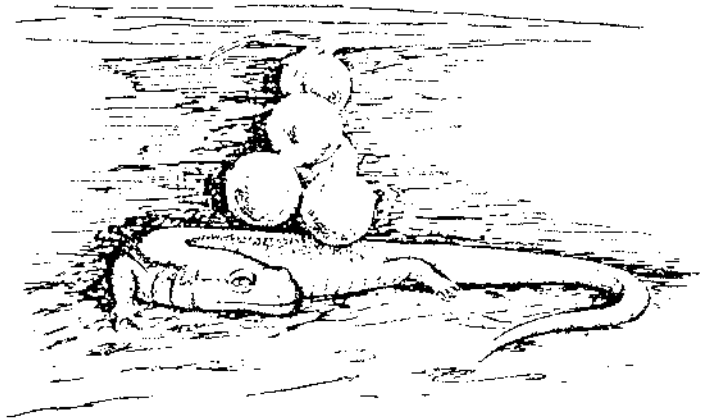
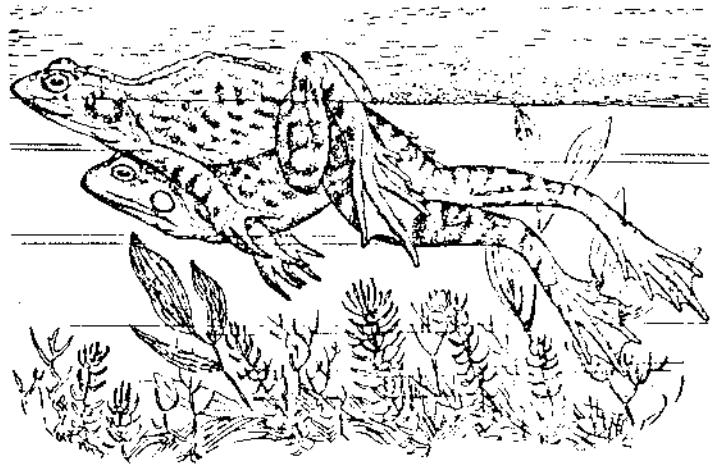


# THE REPTILES & AMPHIBIANS OF MINNESOTA :

Distribution Maps,  
Habitat Preferences,  
Selected References

1983

Jeffrey W. Lang



AMPHIBIANS AND REPTILES OF MINNESOTA: a checklist with status determinations

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Reptiles (29)

TURTLES (9)

- SC Snapping Turtle (Chelydra serpentina)  
Painted Turtle (Chrysemys picta)  
TH Wood Turtle (Glennys insculpta)  
TH Blanding's Turtle (Emydoidea blandingi)  
Map Turtle (Graptemys geographica)  
Ouachita Map Turtle (Graptemys ouachitensis)  
False Map Turtle (Graptemys pseudogeographica)  
Smooth Softshell (Trionyx muticus)  
Spiny Softshell (Trionyx spiniferus)

LIZARDS (3)

- Six-lined Racerunner (Cnemidophorus sexlineatus)  
EN Five-lined Skink (Eumeces fasciatus)  
Prairie Skink (Eumeces septentrionalis)

SNAKES (17)

- SC Racer (Coluber constrictor)  
SC Timber Rattlesnake (Crotalus horridus)  
Ringneck Snake (Diadophis punctatus)  
SC Rat Snake (Elaphe obsoleta)  
SC Fox Snake (Elaphe vulpina)  
SC Western Hognose Snake (Heterodon nasicus)  
SC Eastern Hognose Snake (Heterodon platyrhinos)  
SC Milk Snake (Lampropeltis triangulum)  
Northern Water Snake (Nerodia sipedon)  
Smooth Green Snake (Opheodrys vernalis)  
SC Gopher Snake (Pituophis melanoleucus)  
SC Massasauga (Sistrurus catenatus)  
Brown Snake (Storeria dekayi)  
Redbelly Snake (Storeria occipitomaculata)  
Plains Garter Snake (Thamnophis radix)  
Common Garter Snake (Thamnophis sirtalis)  
SC Lined Snake (Tropidoclonion lineatum)

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EN = Endangered  
TH = Threatened  
SC = Special Concern

Amphibians (19)

SALAMANDERS (5)

- Blue-spotted Salamander (Ambystoma laterale)  
Tiger Salamander (Ambystoma tigrinum)  
Mudpuppy (Necturus maculosus)  
Eastern Newt (Notophthalmus viridescens)  
Redback Salamander (Plethodon cinereus)

TOADS & FROGS (14)

- SC Northern Cricket Frog (Acris crepitans)  
American Toad (Bufo americanus)  
Great Plains Toad (Bufo cognatus)  
Canadian Toad (Bufo hemiophrys)  
Cope's Gray Treefrog (Hyla chrysoscelis)  
Spring Peeper (Hyla crucifer)  
Gray Treefrog (Hyla versicolor)  
Striped Chorus Frog (Pseudacris triseriata)  
SC Bullfrog (Rana catesbeiana)  
Green Frog (Rana clamitans)  
SC Pickerel Frog (Rana palustris)  
Northern Leopard Frog (Rana pipiens)  
Mink Frog (Rana septentrionalis)  
Wood Frog (Rana sylvatica)

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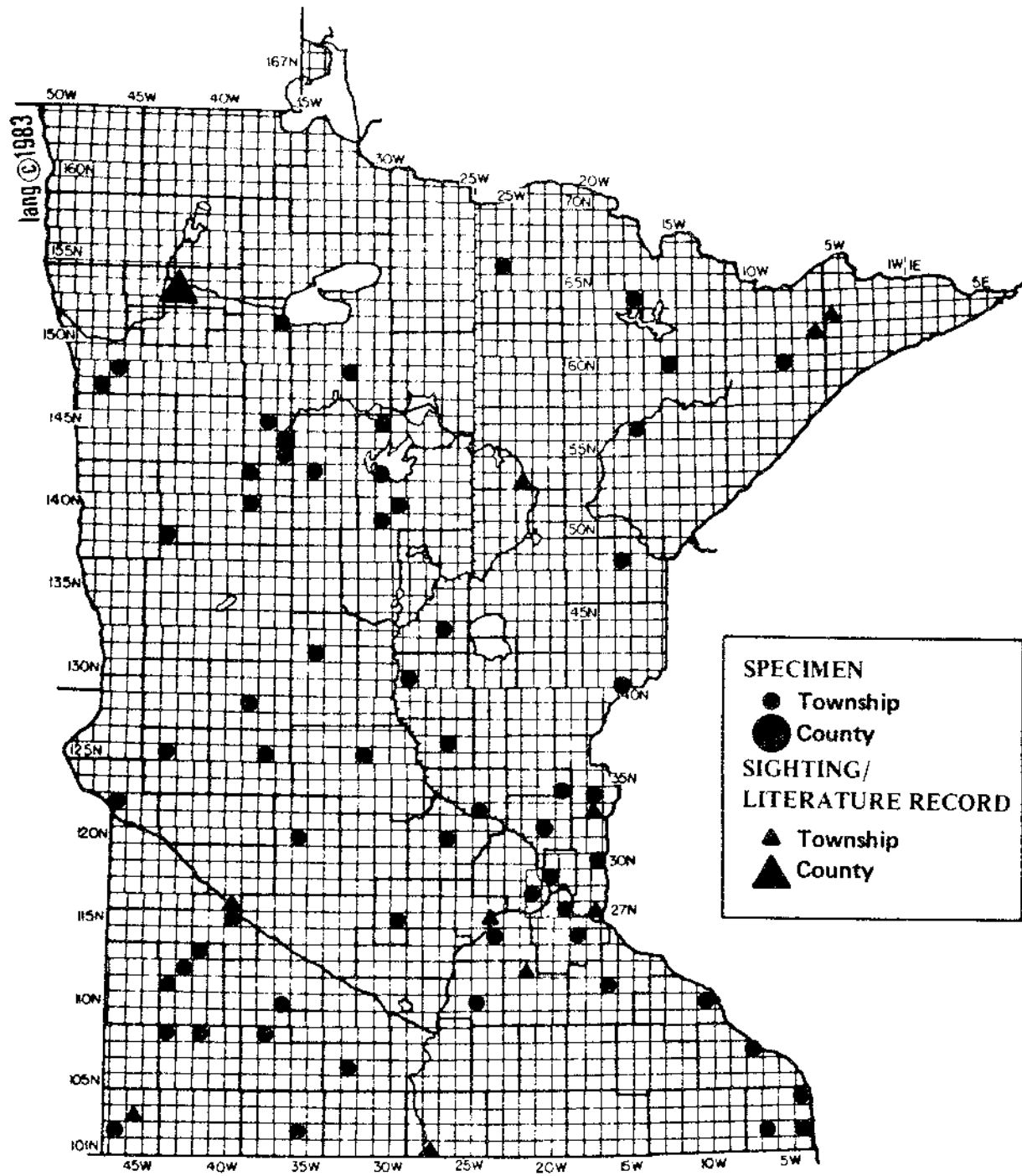
POSSIBLE BORDER ENTRANTS

- Slender Glass Lizard (Ophisaurus attenuatus)  
Spotted Salamander (Ambystoma maculatum)  
Tremblay's Salamander (Ambystoma tremblayi)  
Woodhouse's Toad (Bufo woodhousei)  
Four-toed Salamander (Heridactylum scutatum)  
Plains Spadefoot (Scaphiopus bombifrons)
- 

Amphibian and Reptile Group,  
Endangered Species Technical Advisory Committee  
to the Commissioner, Minnesota DNR

Jeffrey W. Lang, Chairman

1983



Snapping Turtle

*Chelydra serpentina*

## SNAPPING TURTLE

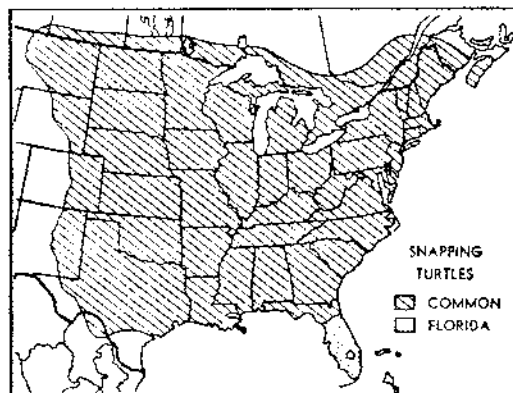
## SPECIAL CONCERN

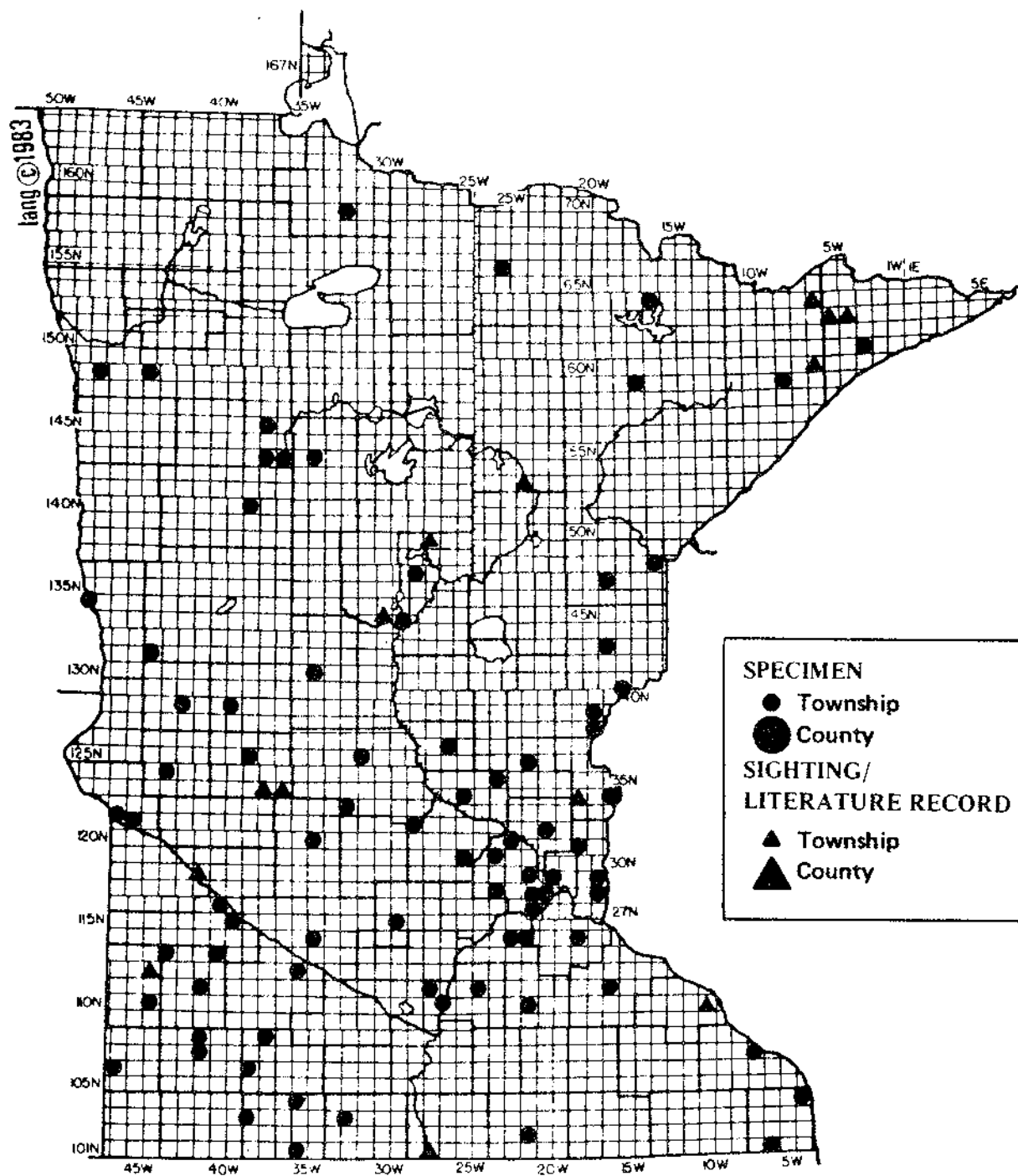
### CHELYDRA SERPENTINA

**DISTRIBUTION:** The species has widespread distribution in diverse habitats throughout the prairie and woodland regions in Minnesota. Snapping turtles may benefit from an increase in the number of farm ponds.

**PREFERRED HABITAT:** Snapping turtles occur in virtually all aquatic habitats throughout the state. The species prefers slow-moving, quiet water with muddy bottoms and dense vegetation; it is common and often abundant in lakes, rivers, and marshes.

**SELECTED REFERENCES:** Hammer (1969), Obbard and Brooks (1980, 1981), Petokas and Alexander (1980)





Painted Turtle

*Chrysemys picta*

# PAINTED TURTLE

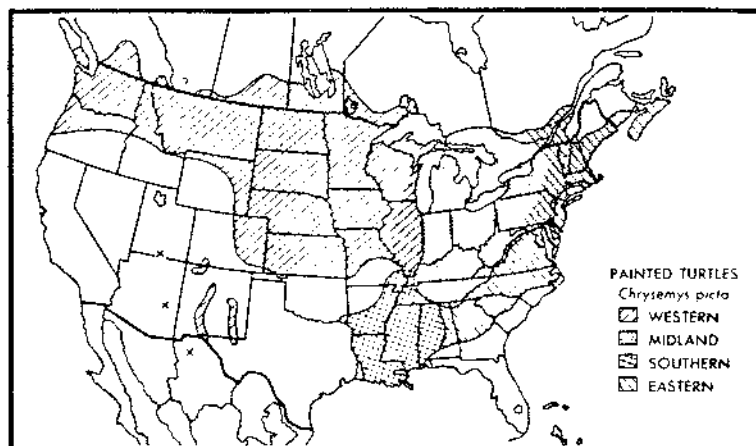
## CHRYSEMYD PICTA

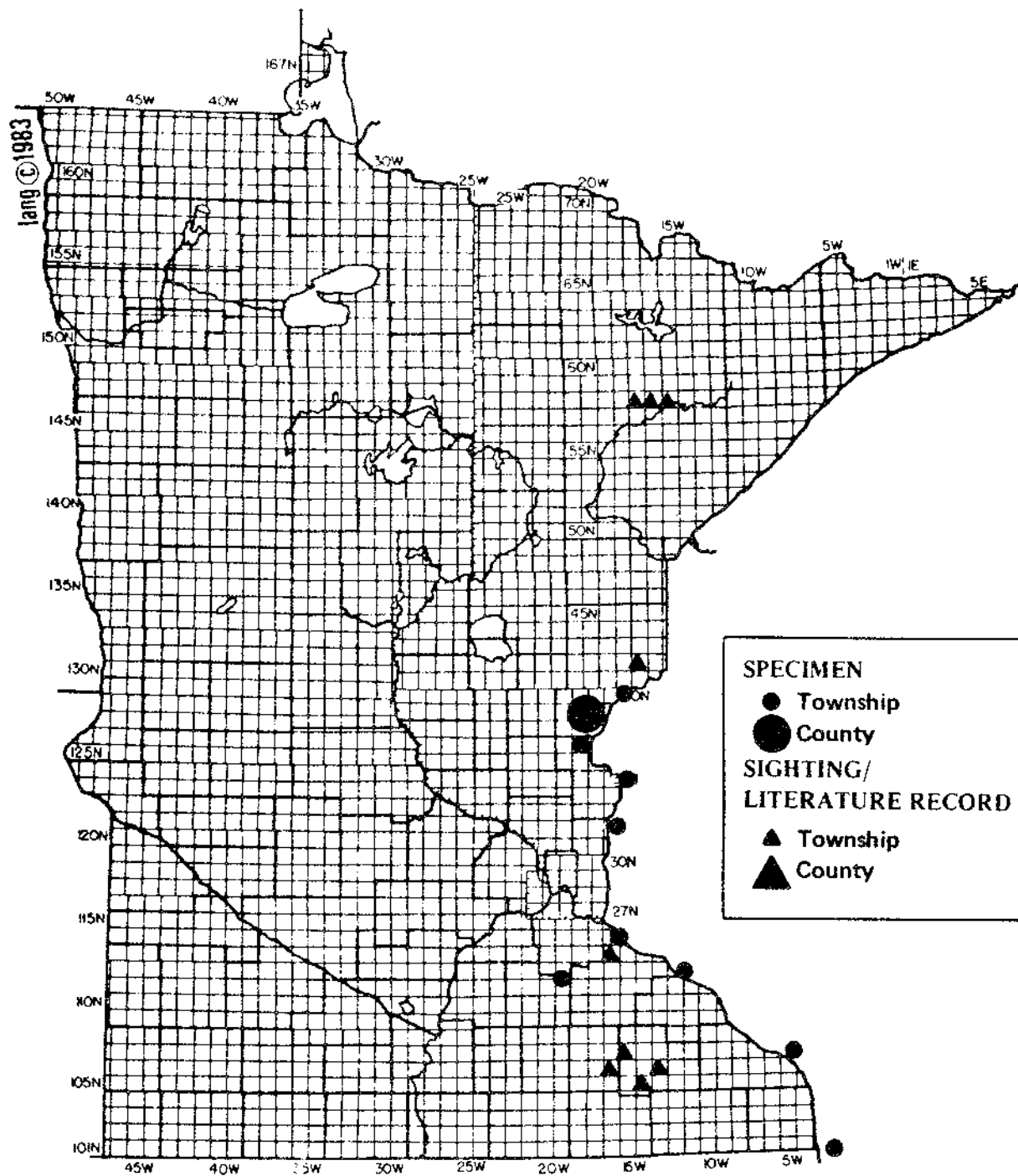
**DISTRIBUTION:** Statewide; painted turtles probably occur in every county despite a lack of adequate records from counties in the southeast, west-central, and northwest. The species is distributed throughout Wisconsin, Iowa, South and North Dakota, and north to Lake Winnipeg in Manitoba.

**PREFERRED HABITAT:** Painted turtles typically reside in slow-moving permanent bodies of water, including rivers, streams, bogs and marshes, and are commonly seen in abundance in shallow ponds and lakes throughout the region. In Wisconsin, the species also occurs in fast-moving streams and rivers, and is able to tolerate polluted waters (Vogt, 1981).

**REMARKS:** The probable statewide distribution of this species should be documented with additional specimens and/or sightings, particularly in the southeast, west-central, and north-central regions.

**SELECTED REFERENCES:** Ernst and Barbour (1972), Moll (1973), Ream (1967) Gibbons (1968), Ernst (1971)





Wood Turtle

*Clemmys insculpta*

## WOOD TURTLE

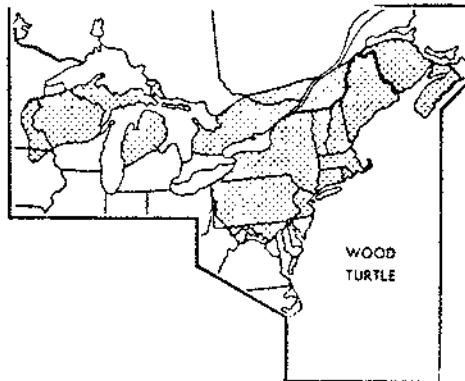
THREATENED

### CLEMMYS INSCULPTA

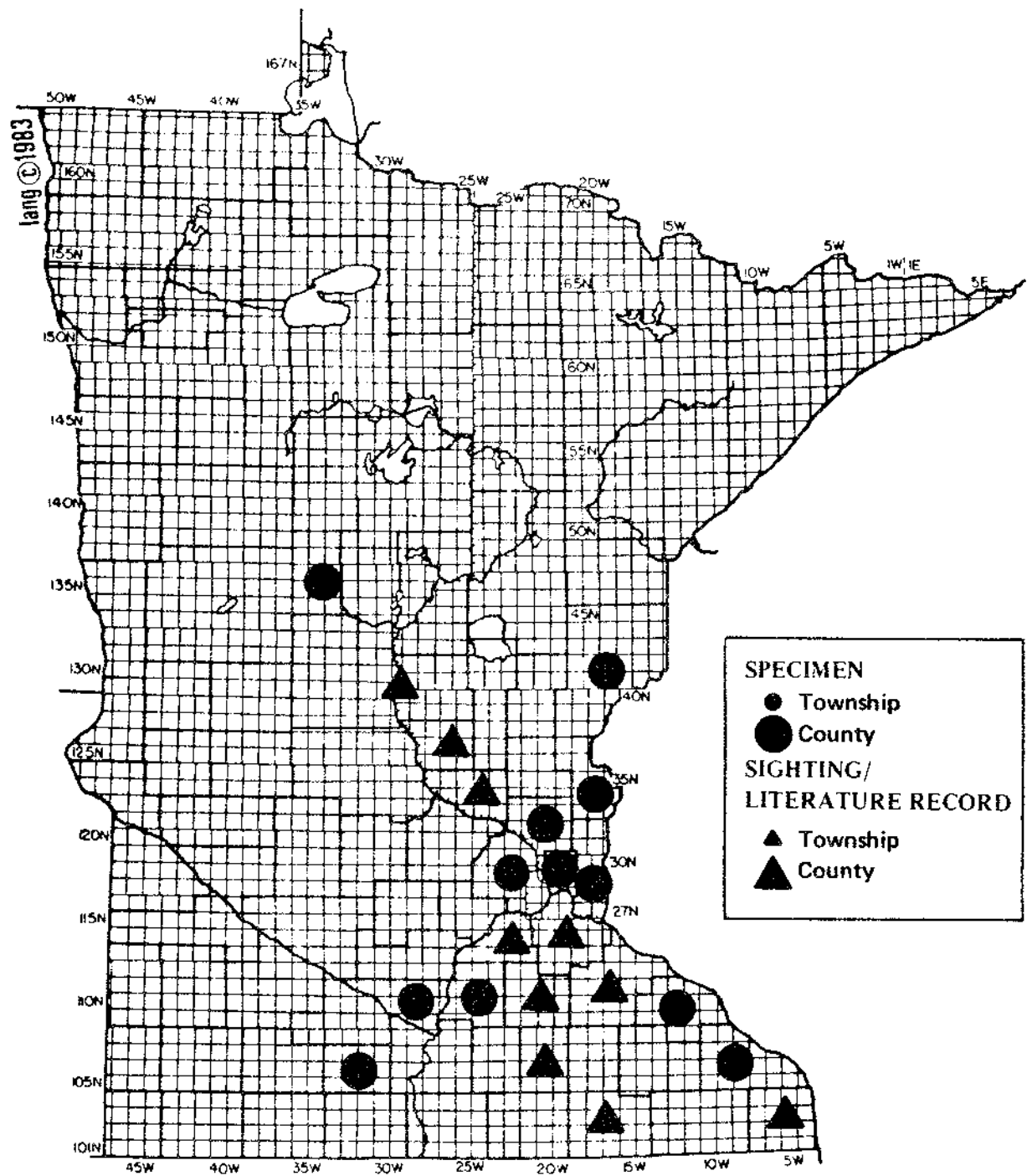
**DISTRIBUTION:** Minnesota represents the western periphery of the species' range. The species occurs along streams draining into the St. Croix River, on the St. Louis River, and along streams entering the Mississippi River in the southeast.

**PREFERRED HABITAT:** The wood turtle is semi-terrestrial; it prefers small, fast-moving streams in relatively undisturbed areas in deciduous and coniferous forests. The species prefers clear water streams, grassy meadows along side streams, and elevated sand bars for nesting. The Minnesota form is distinguishable from eastern forms on the basis of coloration.

**SELECTED REFERENCES:** Bury and Ernst (1977), Harding and Bloomer (1979)  
Carroll and Ehrenfeld (1978)







Blanding's Turtle

*Emydoidea blandingi*

## BLANDING'S TURTLE

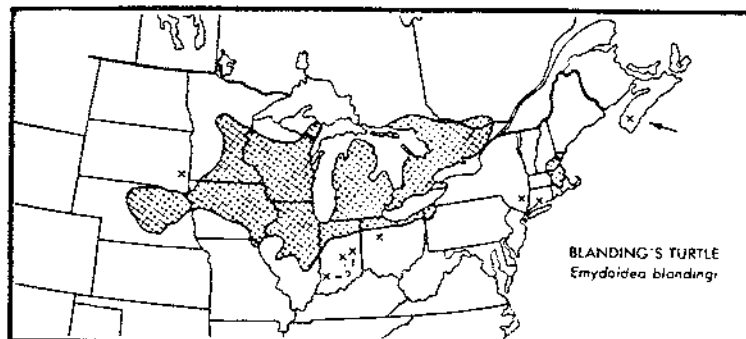
THREATENED

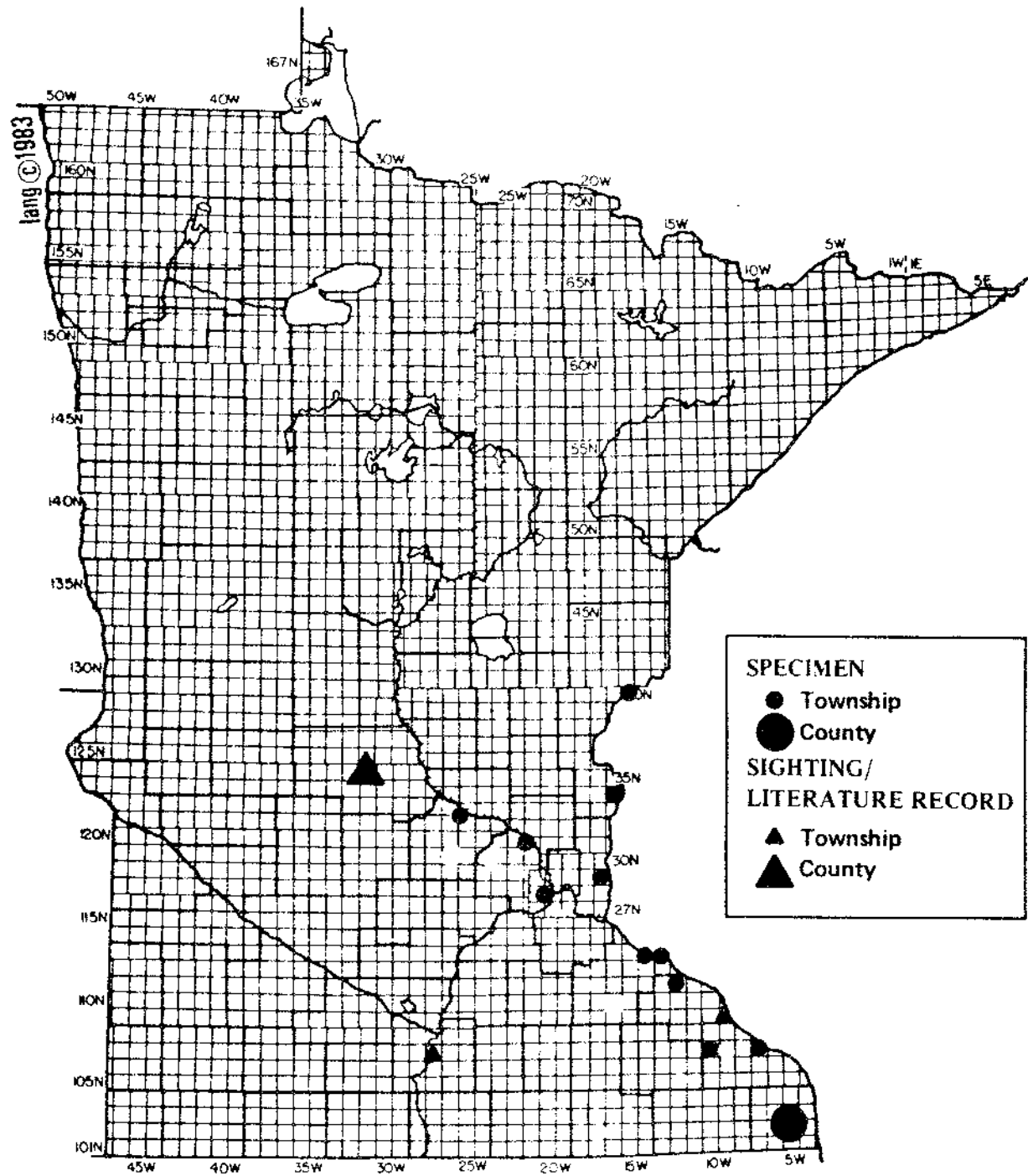
### EMYDOIDEA BLANDINGI

**DISTRIBUTION:** Spotty distribution is characteristic for this species within the deciduous, coniferous, and prairie regions of Minnesota, following the Mississippi and St. Croix Rivers northward, and the Minnesota River westward. Blanding's turtles are found in open grassy meadows, mesic prairies, backwater sloughs and prairie potholes.

**PREFERRED HABITAT:** The Blanding's turtle is a marsh inhabitant requiring large expanses of marsh and floating sedges with adjacent and elevated sand dunes for nesting. The habitat requirements for this species includes calm shallow water, rich aquatic vegetation, and sandy uplands for nesting (M.A. Ewert, unpublished observations).

**SELECTED REFERENCES:** McCoy (1973)





Map Turtle

*Graptemys geographica*

## MAP TURTLE

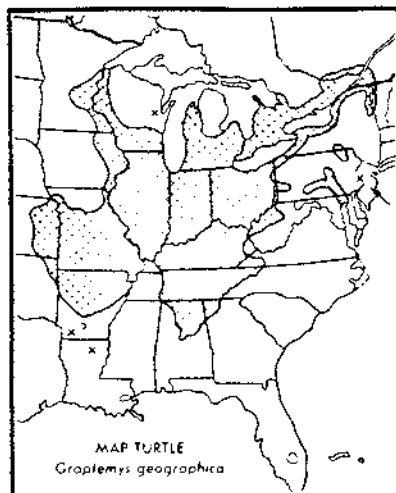
### GRAPTEMYS GEOGRAPHICA

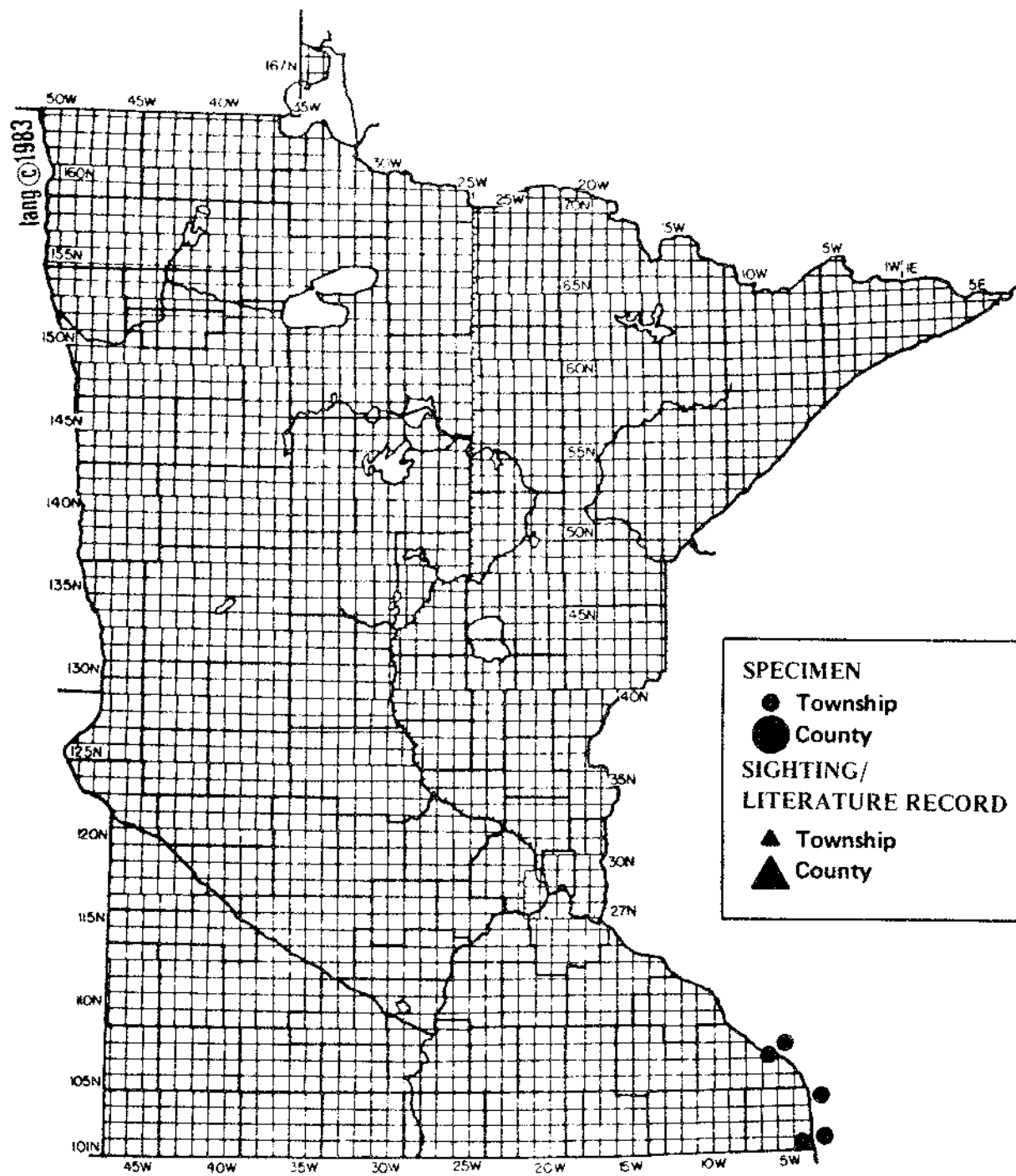
**DISTRIBUTION:** In Minnesota, map turtles are found in the Mississippi and St. Croix Rivers and associated waters north to Wright-Sherburne and Pine Counties. It is abundant along some sections of the St. Croix, and is commonly seen in the backwaters of the Mississippi and Lake Pepin south of the Twin Cities. The species also inhabits the Whitewater River in Winona County and likely occurs in other stream and river tributaries of the Mississippi River in the southeast corner of the state.

**PREFERRED HABITAT:** Large lakes and rivers with moderate current, soft bottom, and aquatic vegetation (Vogt, 1981). The backwater sloughs and oxbow lakes along the Mississippi bottoms south of the Twin Cities contain abundant populations of map turtles. In Iowa, less common than false map turtles; inland populations along border streams of the Mississippi unknown; the species is likely sensitive to pollution (R.W. Howe, unpublished observations).

**REMARKS:** Map turtles may be distinguished from false maps and oachita maps by a wide head, low keel on the carapace, and immaculate yellow plastron (Vogt, 1981). Verifications are desirable for documenting occurrences of this species along the Mississippi River north of the Twin Cities and south of Winona. There are records from the western edge of Wisconsin south along the St. Croix and Mississippi Rivers (Vogt, 1981). The recent sighting in Blue Earth County in the Minnesota River drainage should be verified with additional sightings (and preferably photographs) and/or specimens.

**SELECTED REFERENCES:** Vogt (1981)





**Ouachita Map Turtle**

*Graptemys ouachitensis*

## OACHITA MAP TURTLE

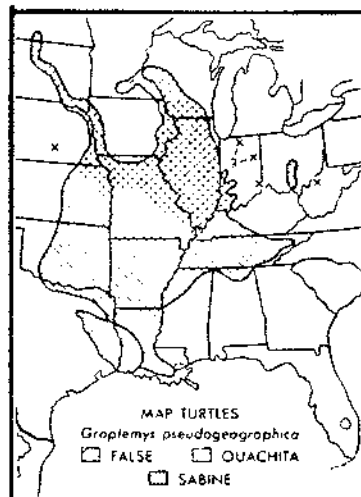
### GRAPTEMYS OACHITENSIS

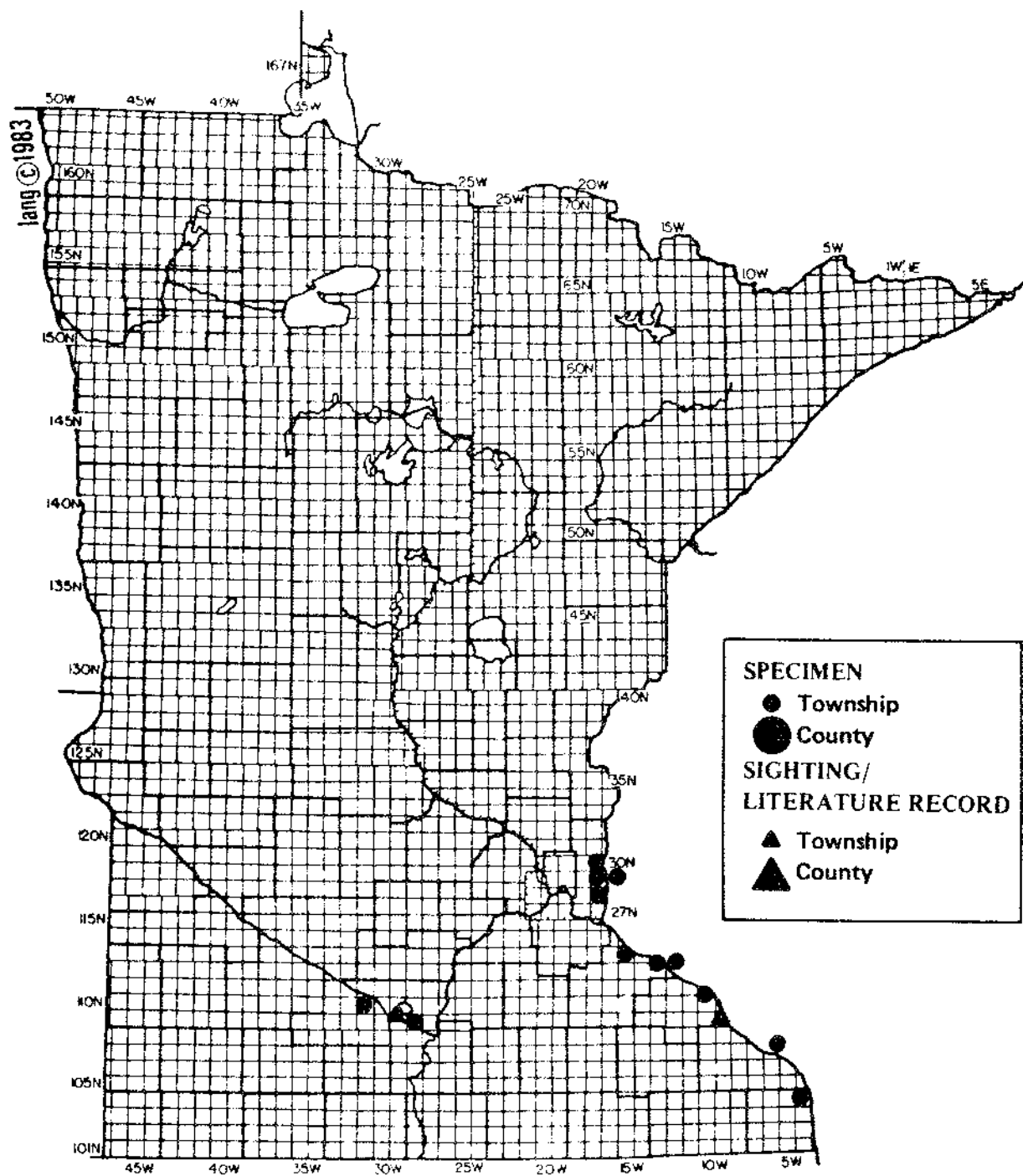
**DISTRIBUTION:** Oachita map turtles occur in the southeast corner of Minnesota, along the Mississippi River from Winona south through Houston County. These populations are likely at the northern limit of the species' distribution; comparable records from the Mississippi bottomlands in Wisconsin do not extend north of Winona (Vogt, 1981).

**PREFERRED HABITAT:** The species prefers faster-moving sections of large rivers with submerged aquatic vegetation. Although Oachita map turtles are strictly river turtles relative to the other two species of map turtles in the region, all three species occur together on stretches of the Mississippi River. Nesting occurs on banks, bars, and islands in the river bottomlands.

**REMARKS:** The similarity of these three species of map turtles in the southeast corner of Minnesota necessitates close examination of specimens for positive identification. Additional specimens and/or diagnostic photographs with accompanying locality data are desirable for all Minnesota Graptemys.

**SELECTED REFERENCES:** Vogt (1981, 1982)





False Map Turtle

*Graptemys pseudogeographica*

# FALSE MAP TURTLE

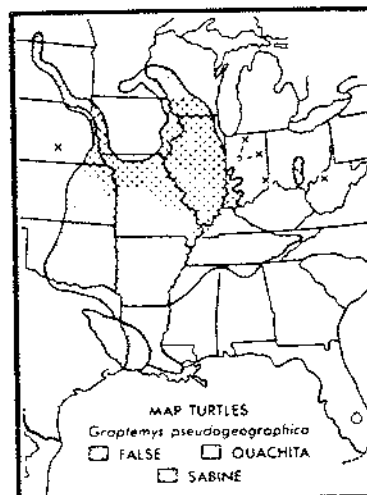
## GRAPTEMYS PSEUDOGEOGRAPHICA

**DISTRIBUTION:** False map turtles are known to inhabit the lower St. Croix River in Washington County and the Minnesota River in the Brown-Nicollet-Blue Earth Counties area. The species is commonly seen along the Mississippi River and adjacent sloughs and backwaters from the Twin Cities south. Large numbers of false map turtles occur in Lake Pepin and adjacent waters.

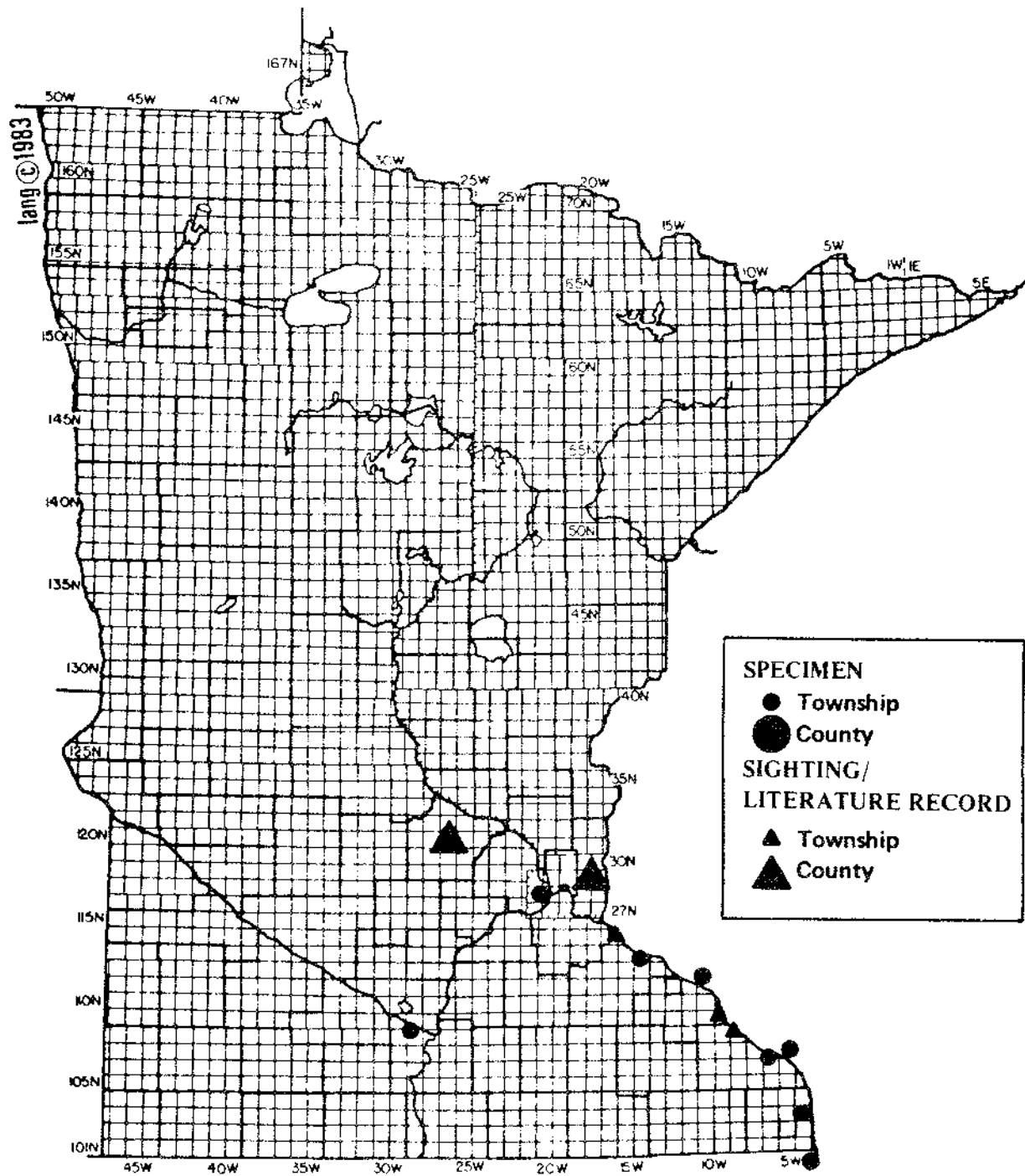
**PREFERRED HABITAT:** Open areas along slow-moving sections of large rivers, preferably in areas of dense aquatic vegetation. This species is wary, timid, and readily retreats to water when disturbed. Basking sites in the water are preferred (Vogt, 1981). Bar and islands along river channels provide nesting sites.

**REMARKS:** Additional records from the Minnesota drainage are desirable to delineate the species' distribution in southern Minnesota. The Washington County records probably represent the northernmost populations in Minnesota-Wisconsin. The distribution of the species along the Minnesota and Mississippi Rivers in the Twin Cities area is not documented adequately. Specimens in the BMNH collection require re-examination to verify species identity for specimens from the southeast locations; some of these may be oachitensis.

**SELECTED REFERENCES:** Vogt (1981, 1982)







Smooth Softshell

*Trionyx muticus*

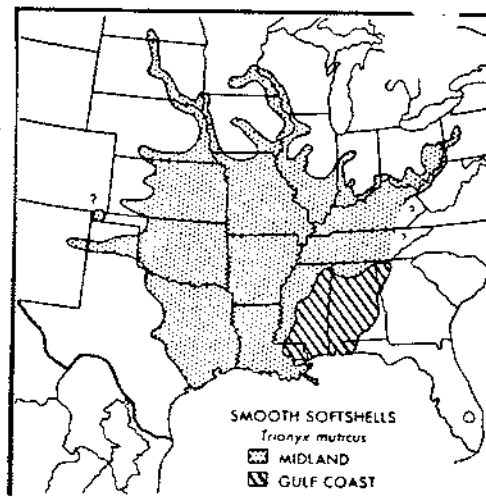
## SMOOTH SOFTSHELL

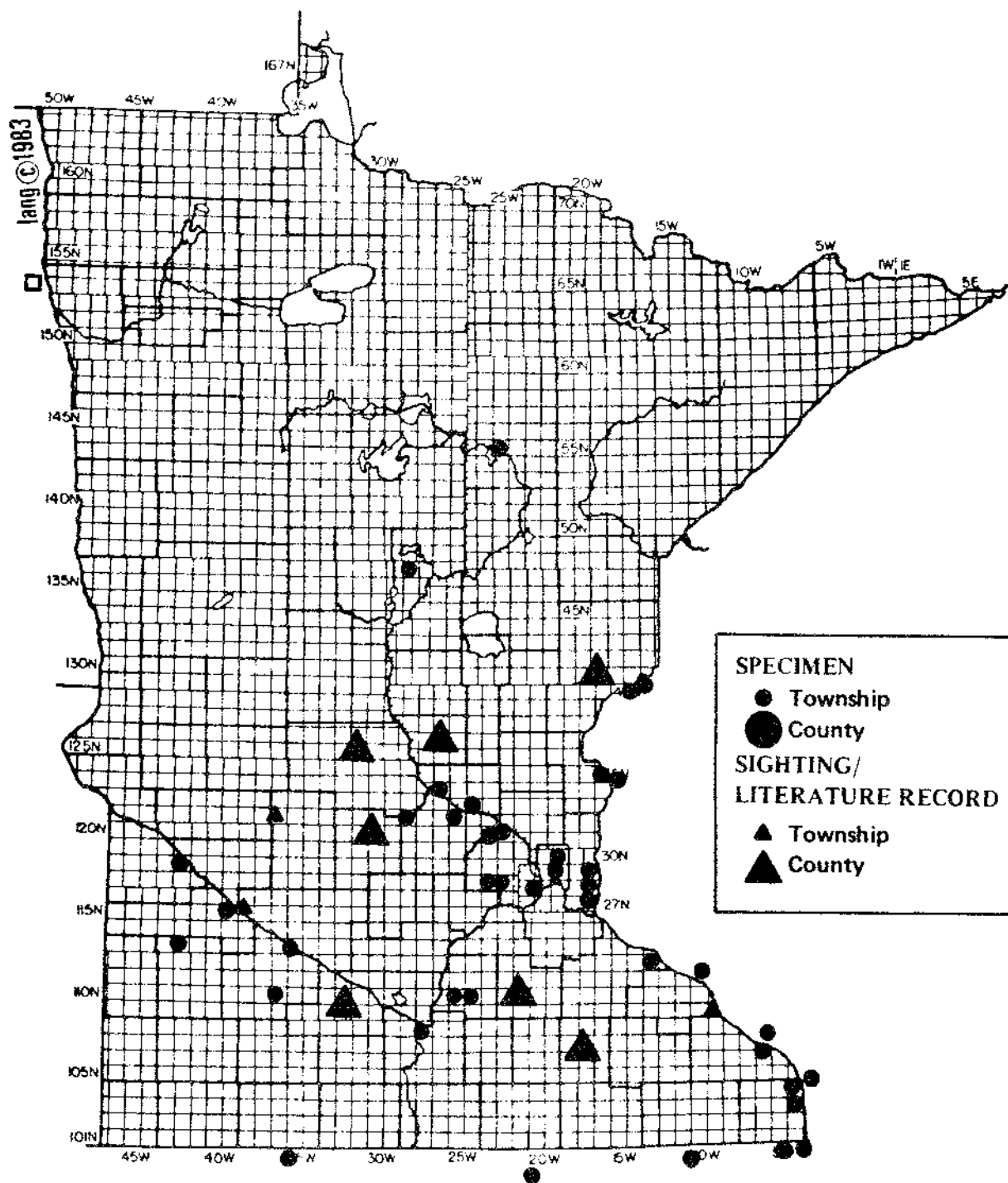
### TRIONYX MUTICUS

**DISTRIBUTION:** Minnesota records restricted to Mississippi drainage along southeastern border of the state; occurs in adjacent counties along the Mississippi River in Wisconsin (Vogt, 1981). Absent across northern Iowa, but present along the Mississippi in the northeast corner (Williams and Christiansen, 1981).

**PREFERRED HABITAT:** In Iowa, in larger sections of major rivers, associated with unobstructed sand-bottomed rivers, basks on mud banks or sandy beaches, feeds primarily on invertebrates in the water column, and avoids temporary ponds and streams (Williams and Christiansen, 1981). In Wisconsin, exclusively a river turtle (Mississippi only), found in areas of moving water especially in sandy regions (Vogt, 1981). In Minnesota, probably similar habitats but details unknown.

**SELECTED REFERENCES:** Plummer (1977), Williams and Christiansen (1981) Webb (1973)





Spiny Softshell

*Trionyx spiniferus*

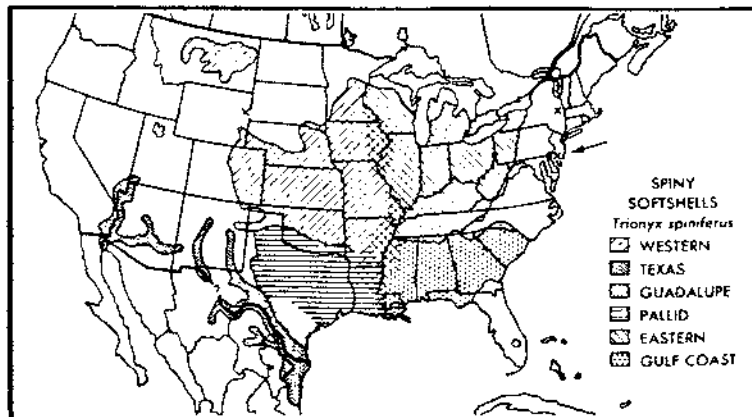
## SPINY SOFTSHELL

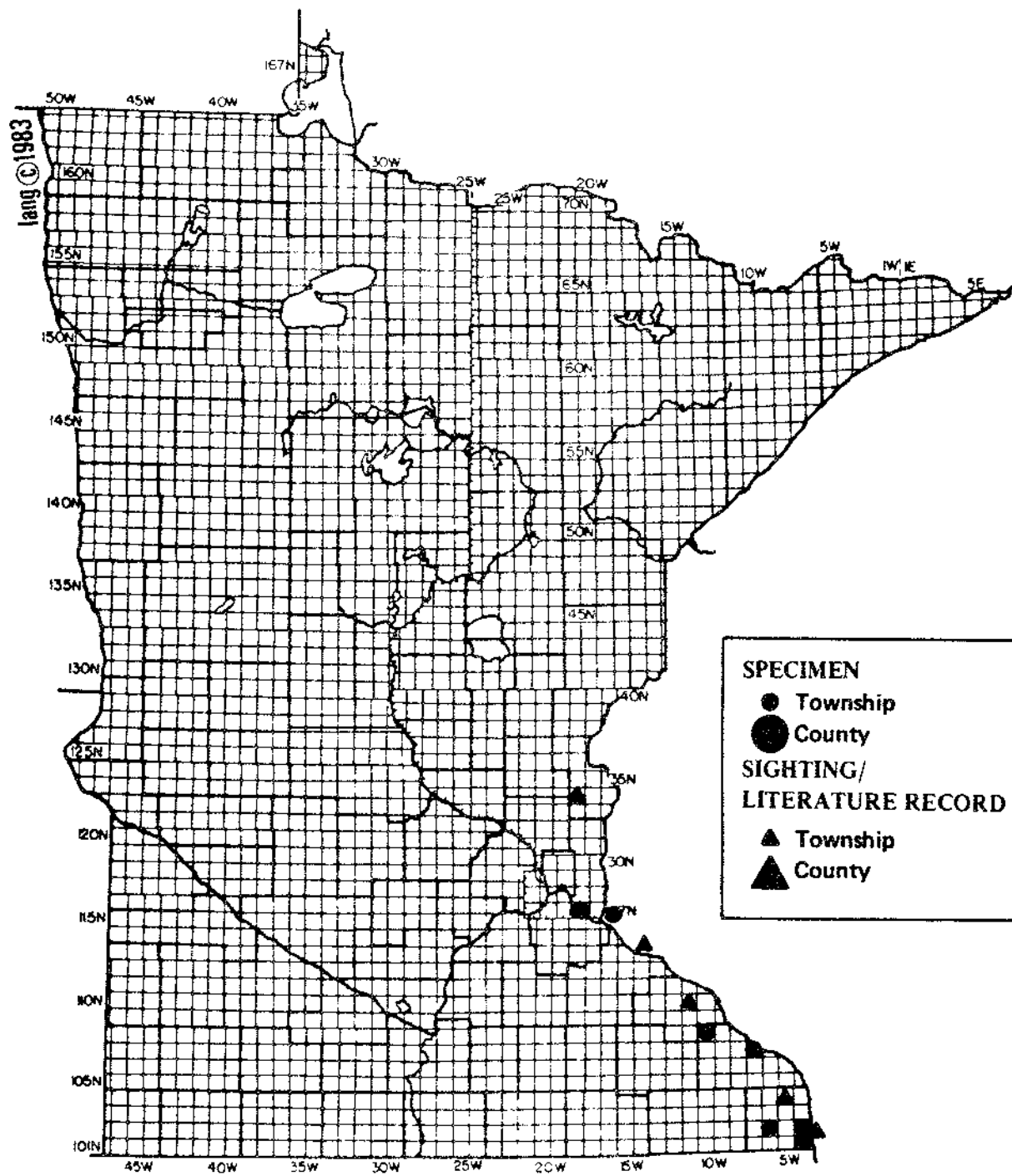
### TRIONYX SPINIFER

**DISTRIBUTION:** The spiny softshell turtle occurs across the southern half of the state, particularly in the drainages of the Minnesota, Mississippi, and St. Croix Rivers. There are also records in the region from lakes and streams at some distance from the major rivers.

**PREFERRED HABITAT:** In Minnesota, the species is found primarily along river courses, but also occurs in permanent lakes and ponds with stream connections. Spiny softshells prefer sandy and/or muddy bottoms without dense aquatic vegetation (Vogt, 1981). In Iowa, the species occurs in major and minor streams throughout the state and a variety of still or slow-moving aquatic habitats (Williams and Christiansen, 1981).

**SELECTED REFERENCES:** Webb (1973), Vose (1964)





Six-lined Racerunner

*Cnemidophorus sexlineatus*

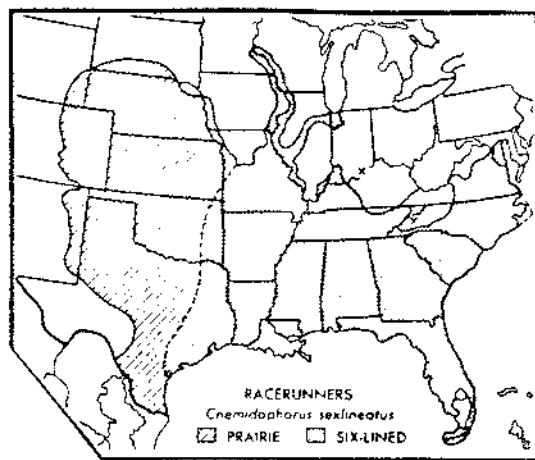
## SIX-LINED RACERUNNER

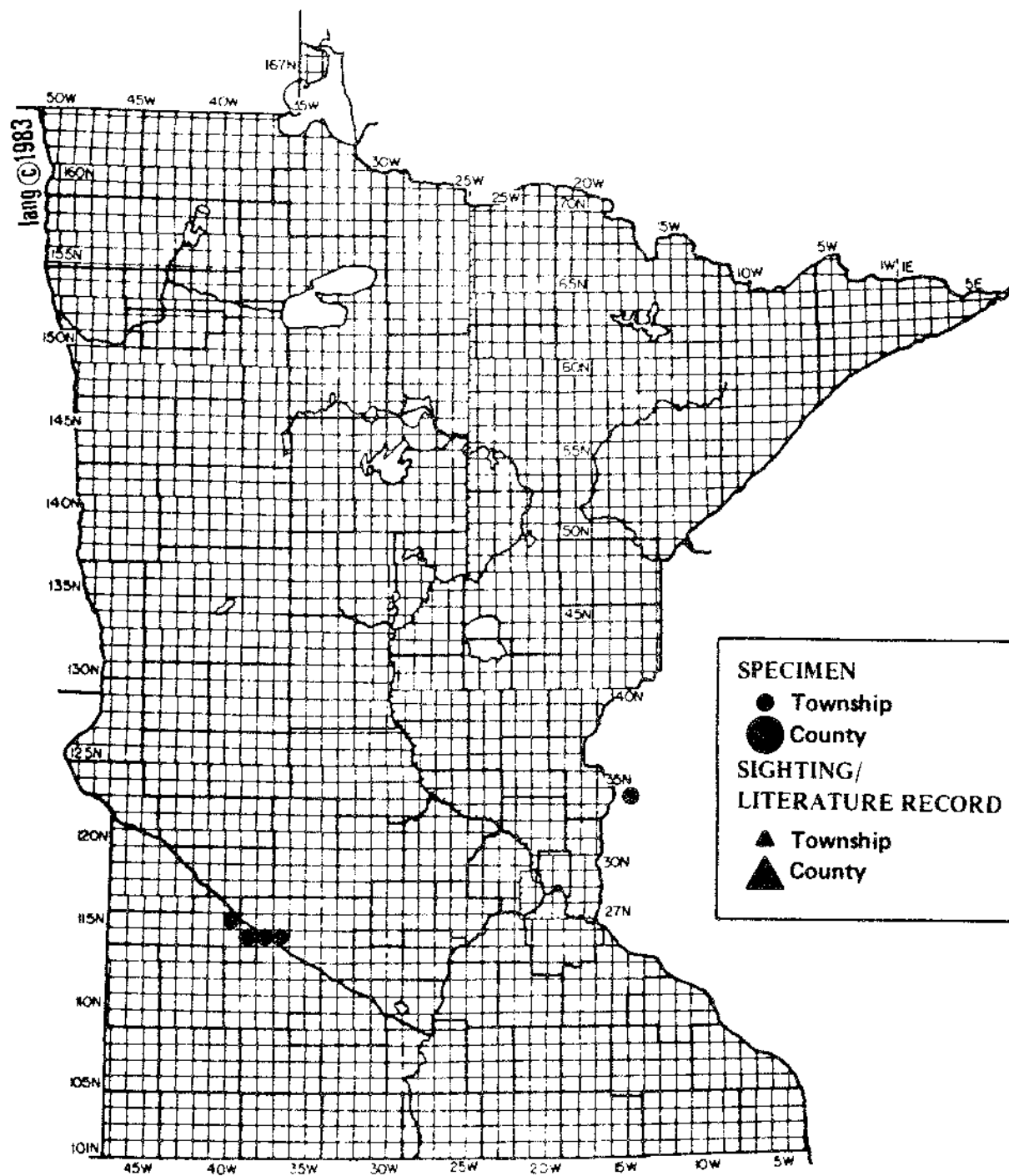
### CNEMIDOPHORUS SEXLINEATUS

**DISTRIBUTION:** Six-lined racerunners occur along the southeastern margin of the state from Chisago County south to Houston County. Specimens are available from Washington, Winona, and Houston Counties; in addition, sightings have been reported from southwestern Chisago County, the Bay City area (Wisconsin), and south of Wabasha in Wabasha County. Although often abundant where they occur, racerunners are spotty in distribution. In Wisconsin, the northern record is adjacent to southern Washington County; to the south, the species occurs in the valleys of the Mississippi, Chippewa, and Wisconsin Rivers (Vogt, 1981). In Iowa, the species occurs along the east and west margins of the state in the Mississippi and Missouri River valleys.

**PREFERRED HABITAT:** Racerunners inhabit dry open grassy areas, typically with sandy soil and low vegetation on river floodplains and on the sides and faces of adjacent bluffs. Throughout the species' range, activity is decidedly temperature-dependent and warm microclimates are likely an important requisite for these northern populations. In Wisconsin, grazed and/or cultivated areas are occupied as well as dunes and openings on wooded hillsides (Vogt, 1981). In Iowa, the species inhabits only sandy situations (Christiansen, 1981).

**SELECTED REFERENCES:** Burt (1931), Pope (1944), Fitch 1958





**Five-lined Skink**

*Eumeces fasciatus*

## FIVE-LINED SKINK

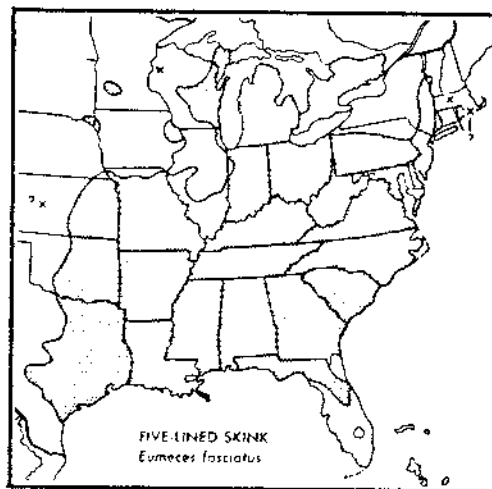
ENDANGERED

### EUMECES FASCIATUS

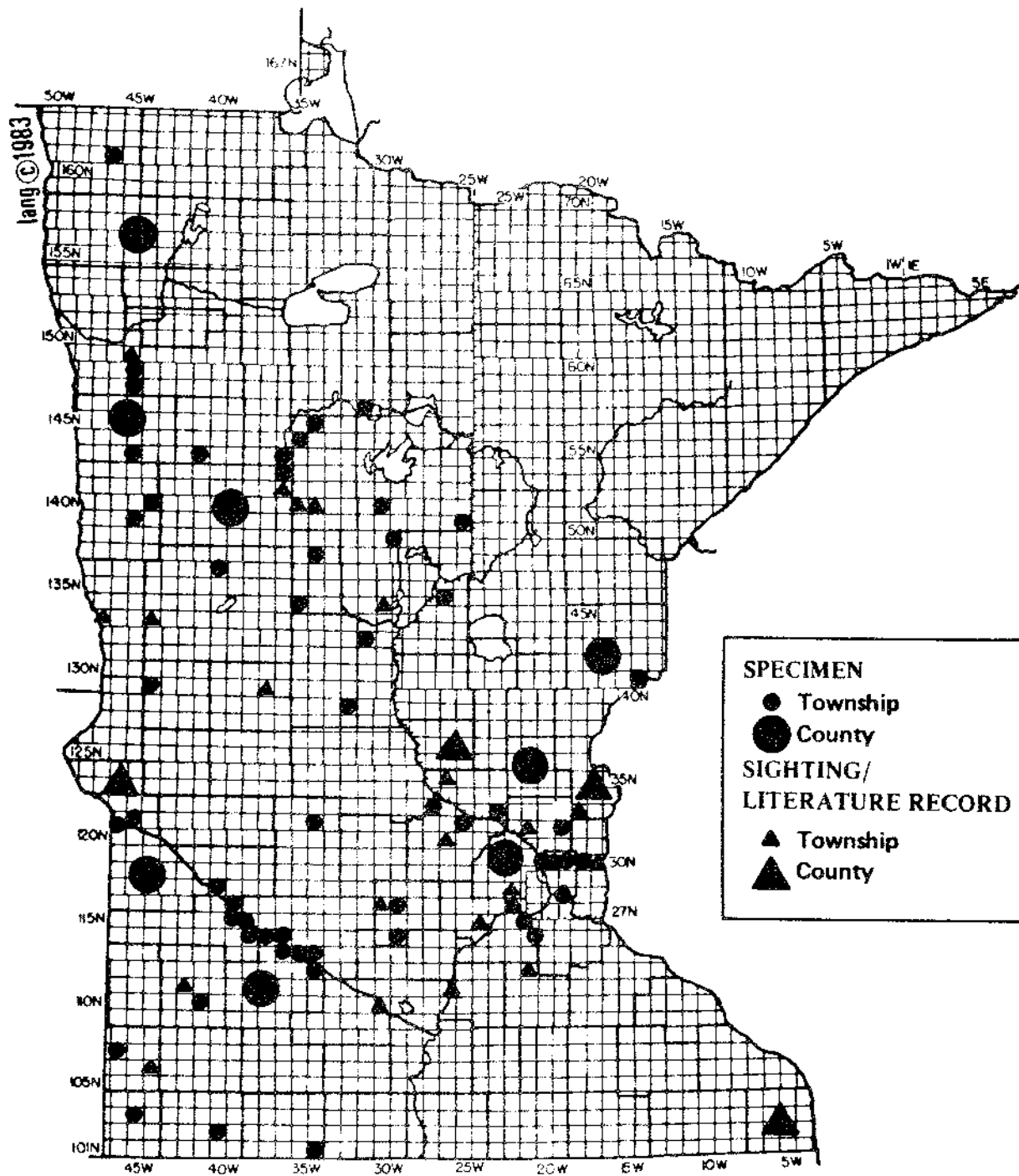
**DISTRIBUTION:** In Minnesota, five-lined skinks are known from four specific localities associated with granite outcrops along the Minnesota River in Yellow Medicine, Redwood, and Renville Counties. These populations vary in size and areal extent and appear to be isolated from one another; skinks have not been found in adjacent areas or in intervening outcrop or riparian habitats (Lang, 1982). These populations are disjunct from the main range of the species; similar disjunctions occur in northwestern and northeastern Iowa and southeastern South Dakota. One specimen is known from western Wisconsin near Interstate Park, Polk County, collected in 1938 by W.J. Breckenridge. The status and distribution of the species in western Wisconsin is unknown.

**PREFERRED HABITAT:** Deciduous forest/woodland, usually moist or damp with abundant debris broadly characterizes the species' preferred habitat. In Minnesota, five-lined skinks are only found on or near bedrock outcrops which may provide essential sites for overwintering. In addition, skinks are found near permanent water in open or grassy areas, often with southern exposures, in association with abundant cover, either natural or man-made (Lang, 1982).

**SELECTED REFERENCES:** Fitch (1954), Fitch and Von Achen (1977), Lang (1982)







Prairie Skink

*Eumeces septentrionalis*

# PRAIRIE SKINK

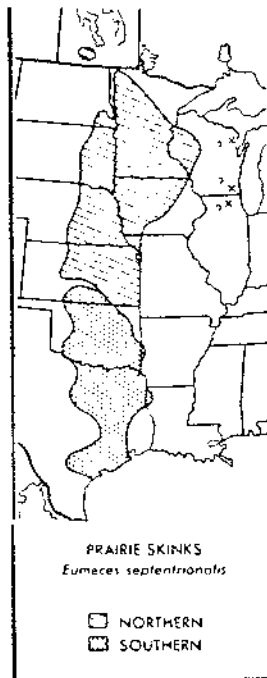
## EUMECES SEPTENTRIONALIS

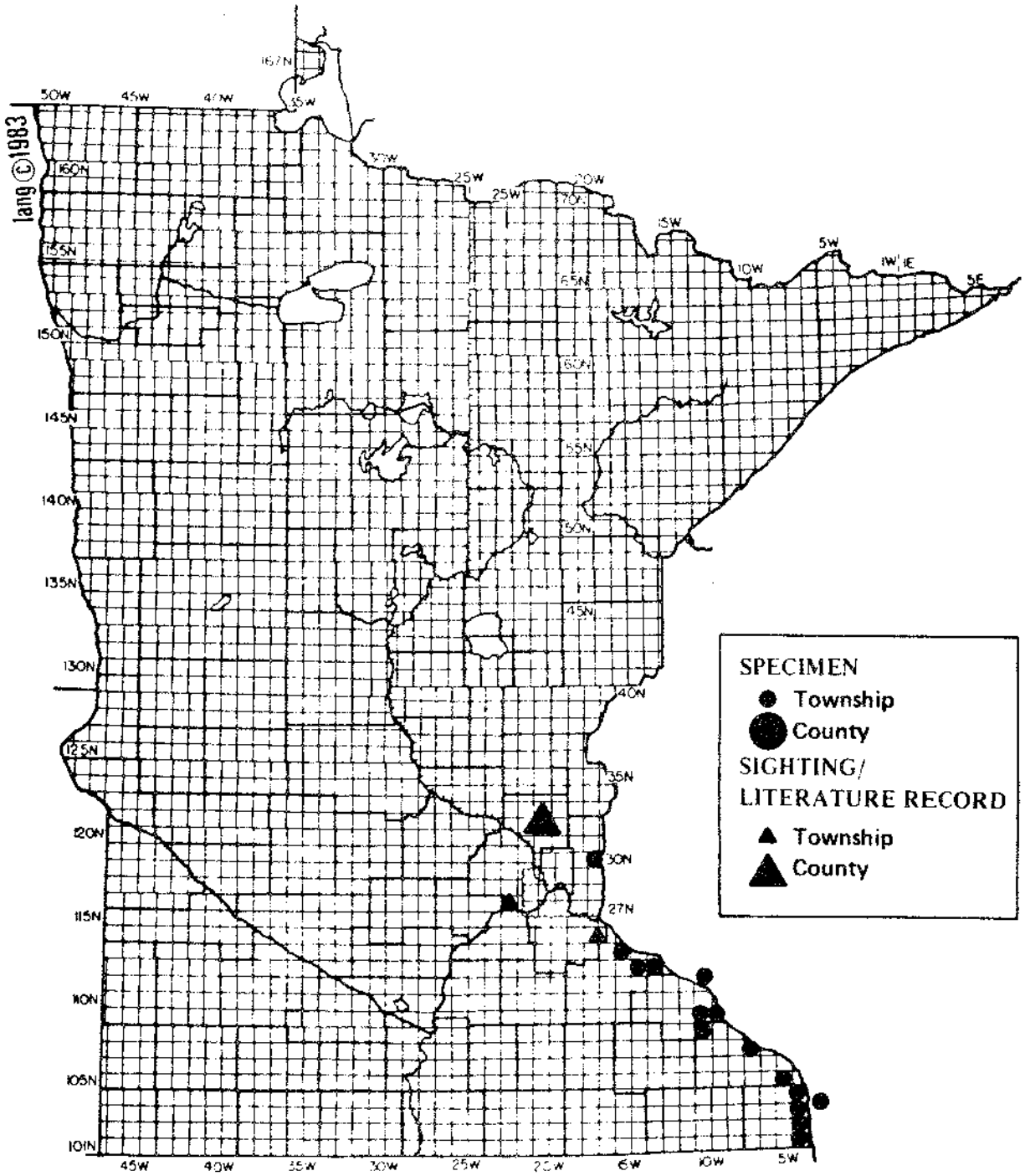
**DISTRIBUTION:** Prairie skinks occur throughout central, northwest, and southwest Minnesota. In Wisconsin, prairie skinks occur only in the northwest corner of the state; a disjunct population occurs along the Chippewa River in central Wisconsin (Vogt, 1981). In Iowa, the species is patchily distributed, though widespread and locally common, in the western and northern regions (R.H. Howe, unpublished observations). The species inhabits eastern South Dakota (Over, 1923) and southeastern North Dakota (Wheeler and Wheeler, 1966). A disjunct population occurs in southern Manitoba (Bredin, 1981; Preston, 1983).

The absence of records from the northeastern and southeastern regions of Minnesota suggest that the species may be absent or rare in these areas. An intensive short-term study of skinks in the Upper Minnesota River valley indicated that this species is distributed widely in the area despite the relative lack of records from the region. Where observations have been frequent, e.g., the Metro area or Itasca State Park and environs, sightings and/or specimens indicate that the species is common though secretive and often overlooked.

**PREFERRED HABITAT:** Prairie skinks prefer dry, open, exposed areas with grass, sand, or gravel substrates. Exposed hillsides or sand dunes with some cover are also favored. Prairie skinks are prolific and efficient burrowers and individuals will excavate tunnels and cavities beneath cover or vegetation. These skinks are wary, elusive, and secretive in movements overland and spend a good deal of time beneath the ground. Consequently, they are often overlooked unless actively sought after by looking under stones, branches, debris as well as man-made materials which serve as cover.

**SELECTED REFERENCES:** Nelson (1963), Breckenridge (1943)





Blue Racer

*Coluber constrictor*

## BLUE RACER

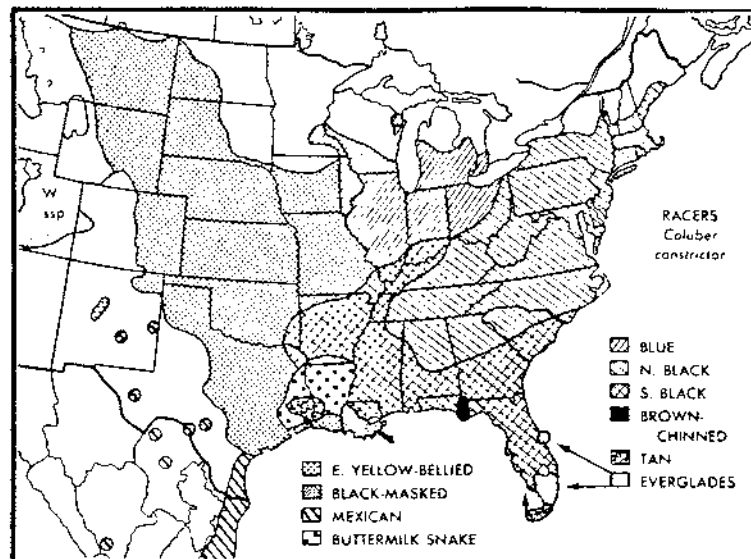
## SPECIAL CONCERN

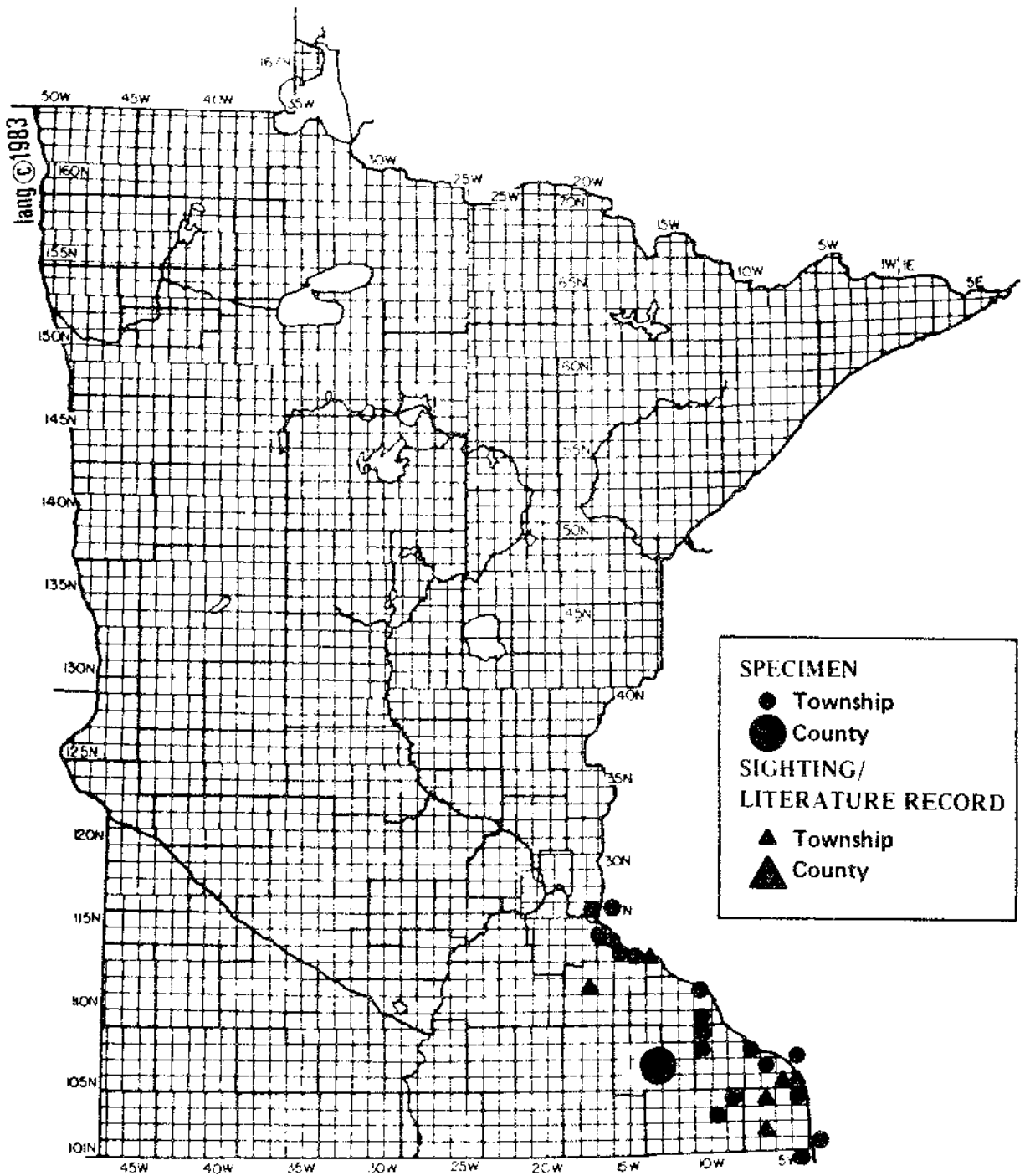
### COLUBER CONSTRICTOR

**DISTRIBUTION:** The species is widely distributed in the central U.S., reaching the northern periphery of its range in southeast Minnesota. Sightings and specimens have been recorded as far north as Anoka County and the lower Minnesota River valley, but the available records are primarily from counties along the Mississippi River valley south of the Twin Cities. The species may extend somewhat further north along the St. Croix and west along the Minnesota River than present records indicate. The major river valleys and associated woodlands and grasslands are clearly important habitat for this species in Minnesota.

**PREFERRED HABITAT:** The racer occupies a variety of habitats in the deciduous forests, including forested hillsides, bluff prairies, grasslands, and open woods. The availability of clearings in which to bask, i.e., warm microclimates, may be an important determinant of suitable habitat for racers at the northern limit of the range. Woodland margins and field edges are the preferred summer habitats.

**SELECTED REFERENCES:** Cagle (1942), Pope (1944), Fitch (1963), Minton (1972) Wilson (1978)





Timber Rattlesnake

*Crotalus horridus*

## TIMBER RATTLESNAKE

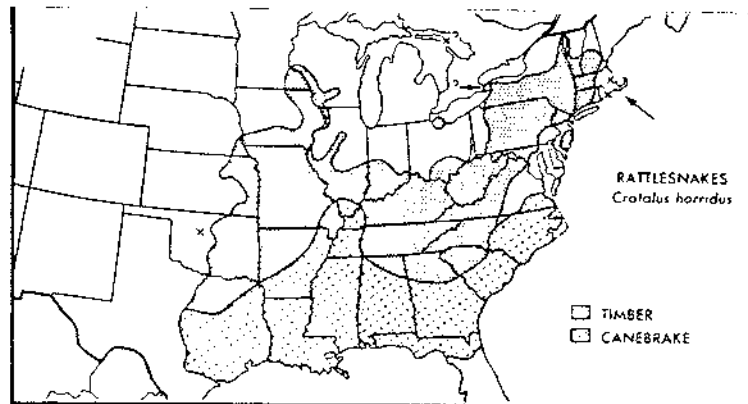
## SPECIAL CONCERN

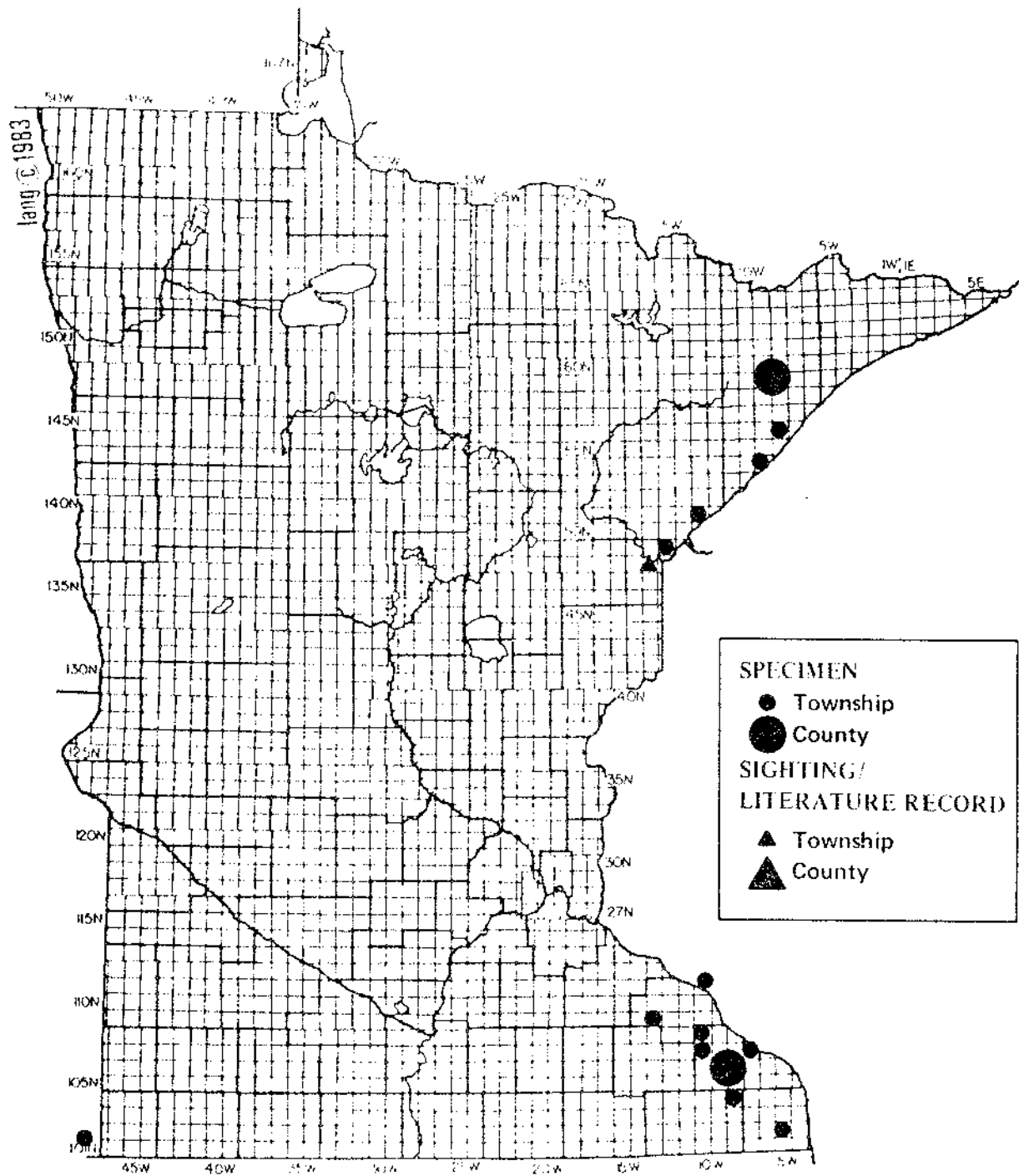
### CROTALUS HORRIDUS

**DISTRIBUTION:** The species occurs in southeastern Minnesota, along the Mississippi River valley north to southern Washington County near the junction of the St. Croix and Mississippi Rivers. Records from western Wisconsin do not extend north along the St. Croix River, but sightings and specimens are numerous from counties southeast of the Twin Cities. Timber rattlesnakes appear to be common and abundant at some localities, but populations in certain areas continue to be susceptible to human depredation.

**PREFERRED HABITAT:** During the summer months, the species inhabits deciduous forests, croplands, and bottomlands along the river valleys. In the spring and fall, timber rattlesnakes frequent steep, rugged bluffs and rock ledges and outcrops near overwintering dens (Breckenridge, 1944; Vogt, 1981).

**SELECTED REFERENCES:** Brown (1982), Brown et al. (1982), Collins and Knight (1980), Keenlyne (1972)





Ringneck Snake

*Diadophis punctatus*

# RINGNECK SNAKE

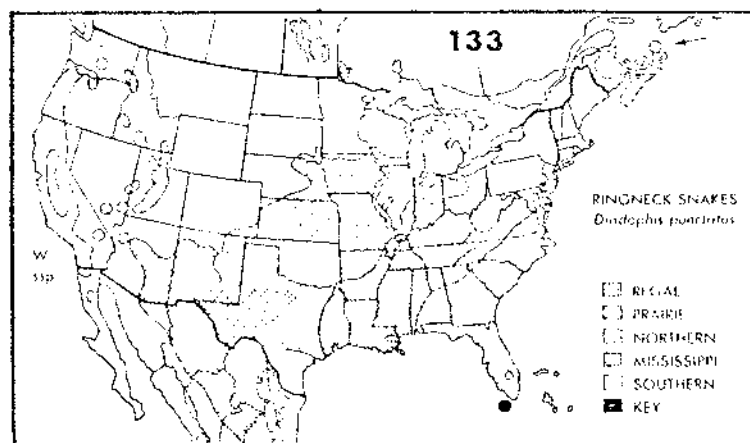
## DIADOPHIS PUNCTATUS

**DISTRIBUTION:** Ringneck snakes occur along the north shore of Lake Superior in the northeast and in the Mississippi valley region of the southeast. There is no evidence, at present, of intervening populations in east-central Minnesota or west-central Wisconsin. The northern population (attributable to the subspecies edwardsi) is distributed across northern Wisconsin. The southern population is common in the Mississippi Valley in the southeast corner of Minnesota (attributable to the subspecies arnyi). This subspecies occurs across most of Iowa and southwestern Wisconsin and extends south in the Mississippi Valley and west to the Missouri River valley in Nebraska and extreme southeastern South Dakota.

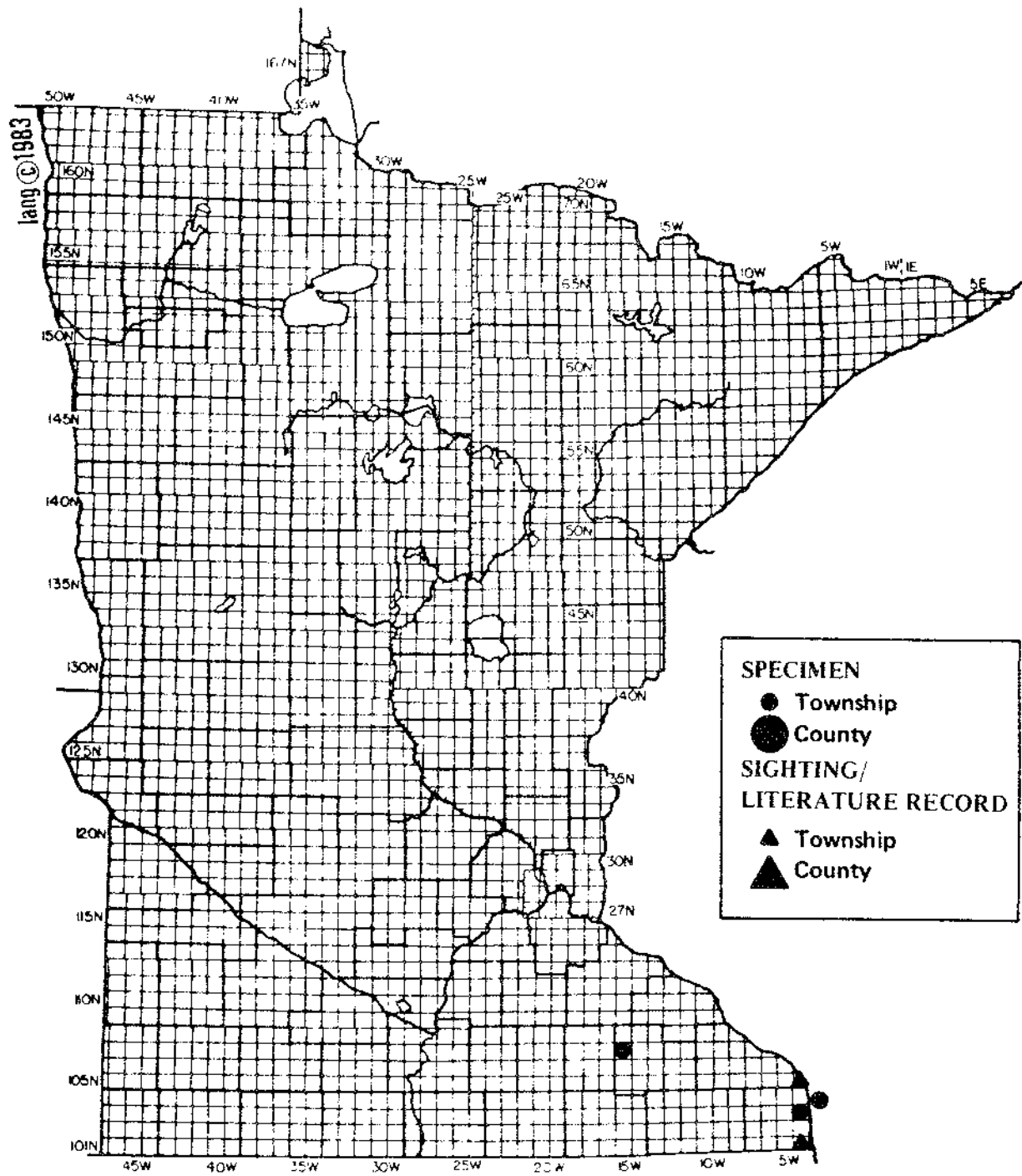
**PREFERRED HABITAT:** Ringneck snakes live in moist woodlands and adjacent open areas and are typically found under cover such as rocks, logs, or under bark or other debris. In Wisconsin, the northern subspecies is usually found in cool moist deciduous forest across the northern part of the state, and the southern subspecies is locally abundant on certain bluffs and hillsides along the Wisconsin and Mississippi River valleys (Vogt, 1981).

**REMARKS:** The distribution of the northern population should be delineated further; in particular, specimens and/or sightings from Carlton and Pine Counties to the south and Cook County to the north would be of interest. The northern population may be disjunct. Additional records for the prairie subspecies would be of interest in determining the northern limit of its range (? Goodhue County) and the southern and western extent of its range in the state. Specimens of the prairie subspecies have been collected in recent times east of Sioux Falls near the Minnesota state line. The prairie ringneck snake may occur in the extreme southwestern corner of the state.

**SELECTED REFERENCES:** Blanchard (1942), Fitch (1958), Dundee (1967)  
Fitch (1975)







**Black Rat Snake**

*Elaphe obsoleta*

# BLACK RAT SNAKE

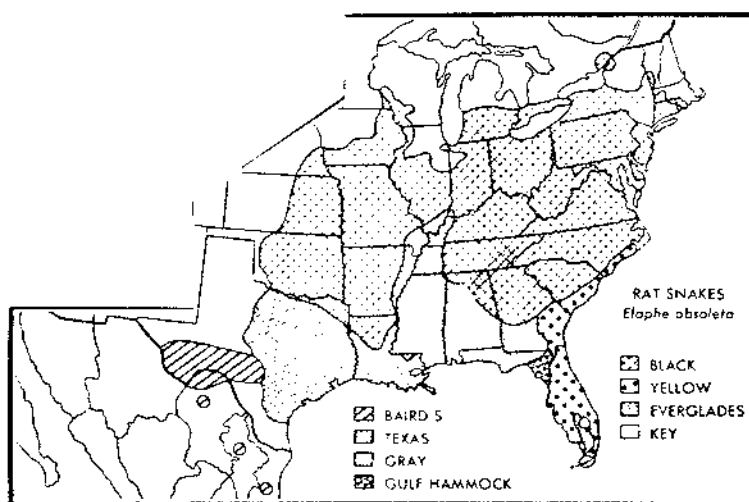
## SPECIAL CONCERN

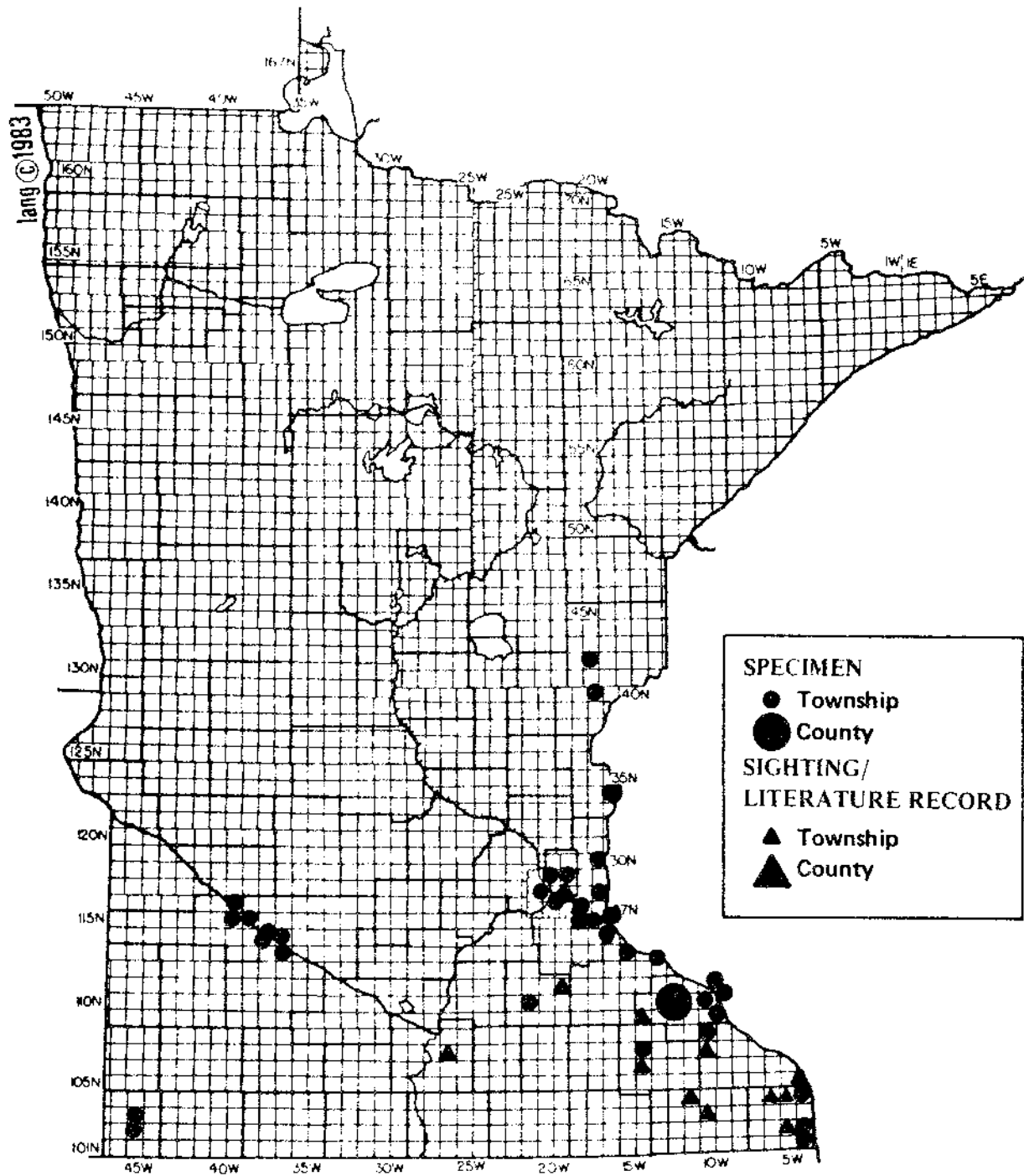
### ELAPHE OBSOLETA

**DISTRIBUTION:** The species is widespread in the central and eastern U.S., reaching its northern limit in the midwest in Minnesota. In Wisconsin, the species is restricted to bluff regions along the Mississippi River to LaCrosse and along the Wisconsin River (Vogt, 1981). In Minnesota, black rat snakes are known from Houston and Winona Counties. In addition to a few specimens collected by Breckenridge in 1942, there are three verified sightings and two live captures (by Bill Stark in Winona County in 1976; and by Mike Pappas in Houston County in 1982). The scarcity of records suggests that the species persists but is very rare in the extreme southeast corner of the state. An additional specimen is on record from western Olmstead County, collected by Moyle, Schmid, and Underhill in 1968. This occurrence should be verified.

**PREFERRED HABITAT:** Black rat snakes are woodland snakes that frequent moist forests and forest edges in the summer months and move to rocky outcrops or bluffs where they are found in the fall and spring. In Wisconsin, they inhabit the north and east slopes of wooded river bluffland (Vogt, 1981). In Minnesota, the few records/sightings have been on the tops and backsides of wooded bluffs. Black rat snakes are arboreal, and often found high up in trees where they retreat to tree cavities (M. Pappas, unpublished observations).

**SELECTED REFERENCES:** Fitch (1963), Stickel et al. (1980)





Fox Snake

*Elaphe vulpina*

# FOX SNAKE

## SPECIAL CONCERN

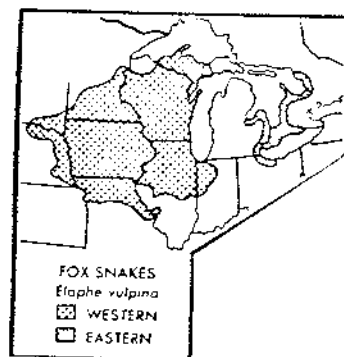
### ELAPHE VULPINA

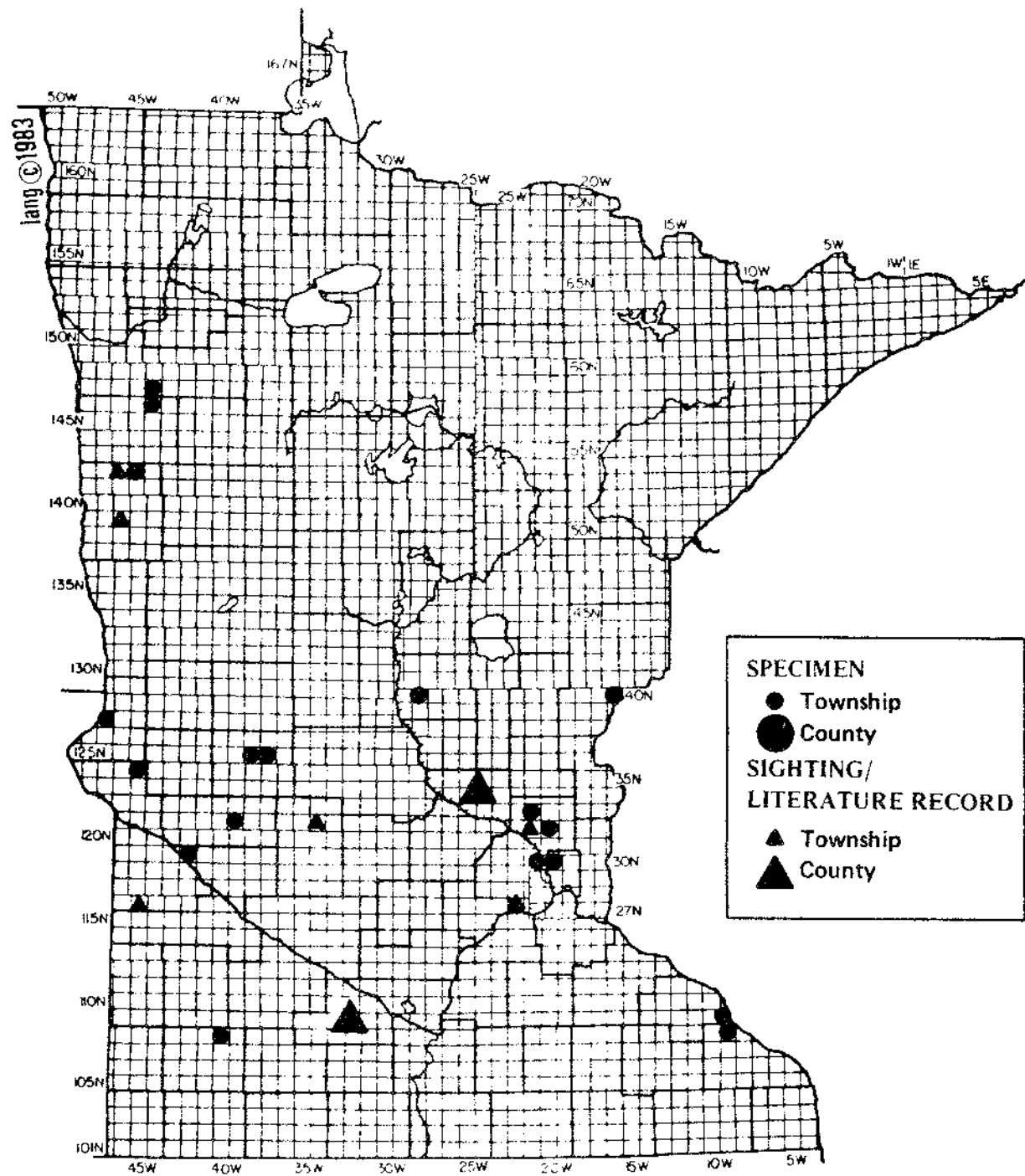
**DISTRIBUTION:** The species is limited to the north-central U.S. with a significant part of the species' range in Minnesota. It is widespread in southeastern Minnesota, but elsewhere in the state appears to be confined to the wooded valleys of the Minnesota, Mississippi, and St. Croix Rivers and associated tributaries. Fox snakes were considered by Breckenridge (1944) to be "the most abundant of the larger snakes in southern Minnesota."

**PREFERRED HABITAT:** Fox snakes are common in dry and mesic forests and edges, frequenting forest clearings and woodlots in Wisconsin (Vogt, 1981). In Minnesota, the fox snake is associated with woody rock bluffs along larger streams and the adjacent moist woodlands in the valleys. The species is locally common in areas with intact woodland and is abundant on or near rock outcrops in the spring in the upper Minnesota River valley (Lang, unpublished observations).

**REMARKS:** Fox snakes may be more common, particularly in the Minnesota River valley, than present records indicate. The species is often found on the bluffs at Blue Mounds State Park in Rock County; it likely occurs at Pipestone and in nearby rocky habitats and may be more widespread in southwestern Minnesota. Additional records from the region south of the Minnesota River and on the west side of the state are desirable.

**SELECTED REFERENCES:** Gillingham (1974), Vogt (1981)





Western Hognose Snake

*Heterodon nasicus*

## WESTERN HOGNOSE SNAKE

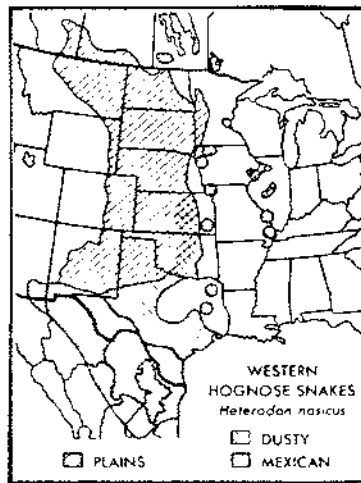
SPECIAL CONCERN

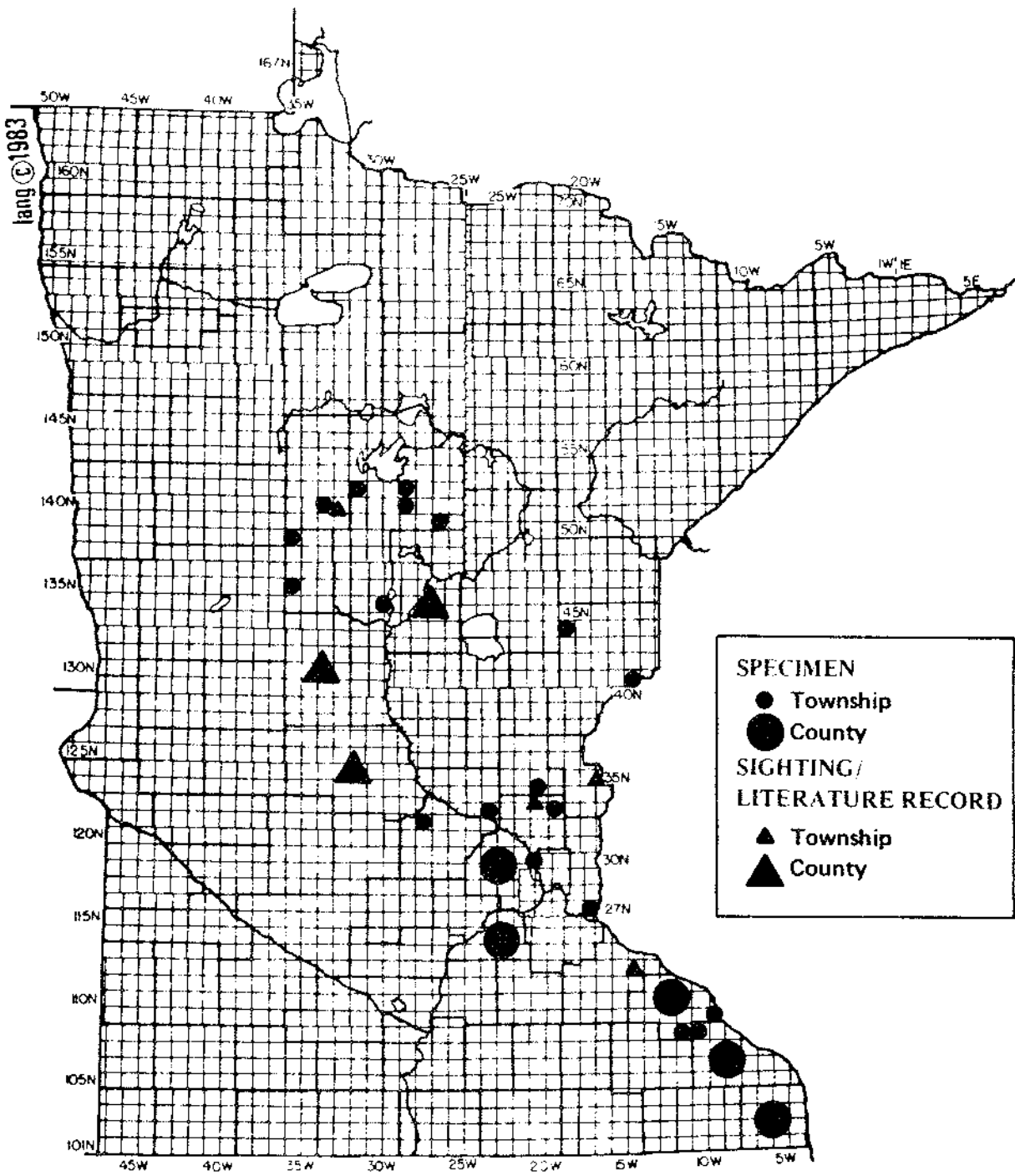
### HETERODON NASICUS

**DISTRIBUTION:** The western hognose snake is peripheral in Minnesota. On the periphery of its entire range, the species is rare, but locally common in semi-isolated populations (Platt, 1969). In western Minnesota, all records are local or restricted in distribution, but widely scattered. In eastern Minnesota, relict (disjunct) colonies occur along the Mississippi River in Anoka, Sherburne, Ramsey, and Wabasha-Winona Counties.

**PREFERRED HABITAT:** In western Minnesota, the species occurs in sandy and gravelly areas of fluvial or glacial origins. In eastern Minnesota, it occurs in sparse scrub oak and sandy areas. The species occupies grassland, prairie and mixed forest-prairie habitats throughout its range.

**SELECTED REFERENCES:** Platt (1969, 1983), Edgren (1955), Kroll (1976)





Eastern Hognose Snake

*Heterodon platyrhinos*

## EASTERN HOGNOSE SNAKE

## SPECIAL CONCERN

### HETERODON PLATYRHINOS

**DISTRIBUTION:** The eastern hognose snake is at the periphery of its range in Minnesota. At the periphery of its range, the species is rare or locally common in semi-isolated populations (Platt, 1969). In Minnesota, its occurrence is limited to the central and eastern sections of the state, along the Mississippi, St. Croix, and lower Minnesota Rivers. The species is local in distribution and does not occur extensively. It is sympatric with Heterodon nasicus, the western hognose snake, at a number of localities, including Anoka and Wabasha Counties. In Wisconsin, eastern hognose snakes are most common in the central prairies, but occur in river valleys along the western margin of the state (Vogt, 1981). In Iowa, the species occurs in the northeast and northwest corners but appears to be absent from the north-central region (Christiansen, 1981; R.H. Howe, unpublished observations).

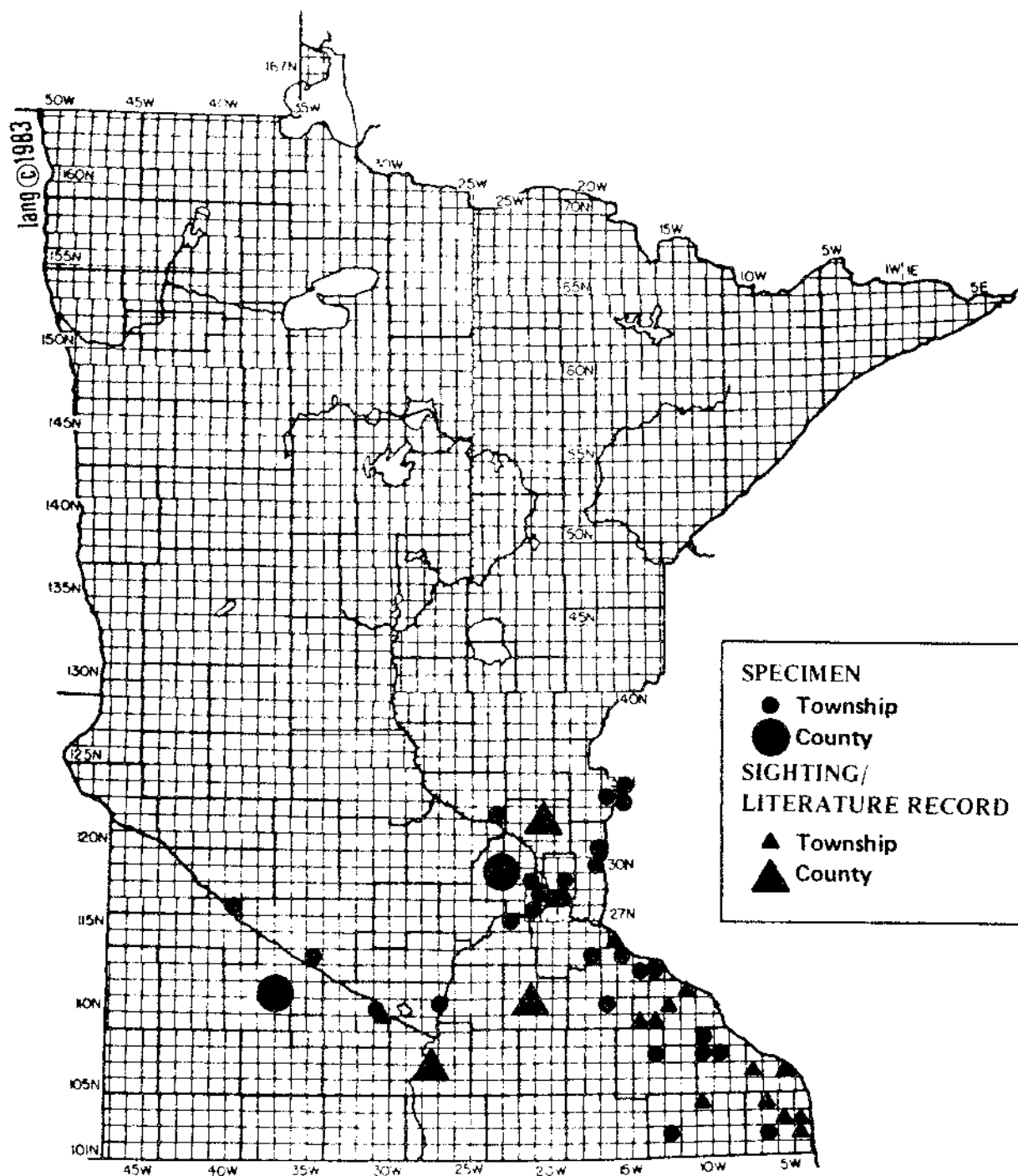
**PREFERRED HABITAT:** Throughout its range, the eastern hognose snake occurs in deciduous forest, mixed deciduous-coniferous forest, and sandy regions and in river valleys (Platt, 1969). In Minnesota, it is restricted to "fluvial sands and sand dune areas" along the Mississippi and St. Croix Rivers; there are a number of northern records from Hubbard and Cass Counties, including a recent sighting. These appear to be from the prairie-sand plain portions of the counties. In Wisconsin, eastern hognose snakes occur on mesic grassland, oak savanna and mesic prairie, near river courses and especially in "sand counties" (Vogt, 1981).

**REMARKS:** Given the local distribution of this species within the state, additional sightings/specimens are needed to delineate the Minnesota range and characterize the habitat. A number of the specimens in the BMNH collection were collected in the late 1930s and early 1940s; recent records are desirable to verify extant populations in some areas.

**SELECTED REFERENCES:** Blem (1981), Edgren (1955), Platt (1969)







Milk Snake

*Lampropeltis triangulum*

# MILK SNAKE

## SPECIAL CONCERN

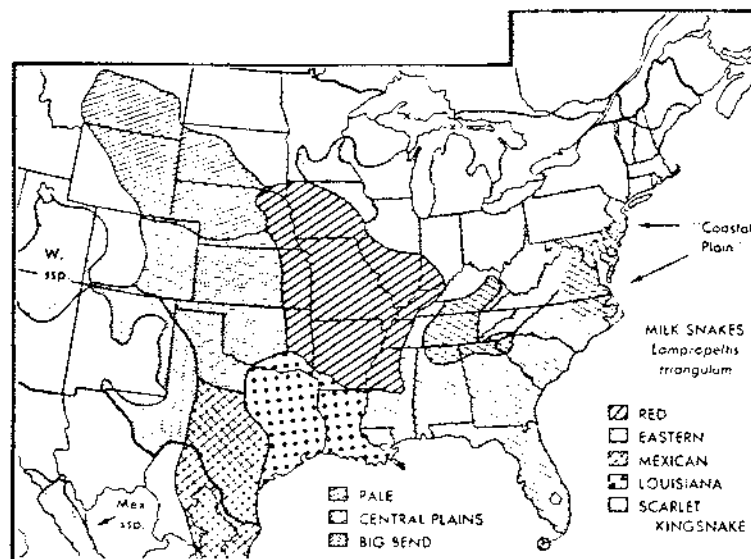
### LAMPROPELTIS TRIANGULUM

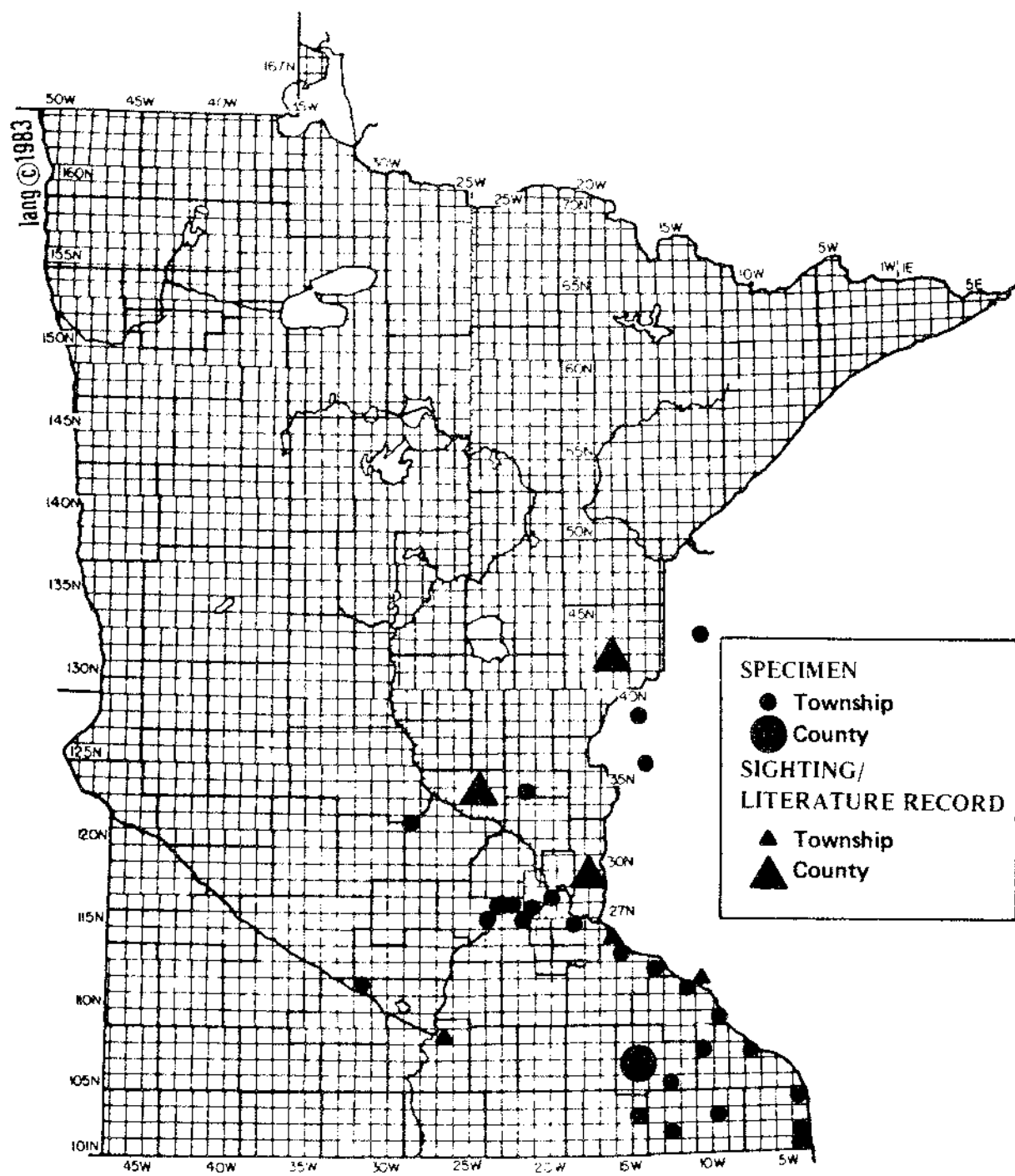
**DISTRIBUTION:** The species is widespread in the north-central and northeastern U.S. In Minnesota, milk snakes have been recorded in the southeastern corner of the state and northward along the major river valleys. The species is spotty in distribution, but locally abundant in Wabasha, Winona, and Houston Counties.

**PREFERRED HABITAT:** In Wisconsin, milk snakes are abundant in old woodlots and pastures adjacent to small streams and marshes (Vogt, 1981). In Minnesota, the species appears to prefer woodlands to open country where they occur in rocky areas and associated forests. Milk snakes may be nocturnal during the summer months when they frequent moist bottomlands but are found in uplands, hills and bluffs in the spring and fall. Communal basking apparently is common near hibernacula (Vogt, 1981).

**REMARKS:** Additional records on the northern and western edges of the Minnesota range are desirable, particularly from rock outcrops and the bottomlands of the Minnesota River. Milk snakes appear to be absent from the southwest corner of the state, but this contention requires verification by collecting in the Pipestone-Rock Counties region where there are outcrops. In Iowa, the species occurs in the northeast (Christiansen, 1981).

**SELECTED REFERENCES:** Minton (1972), Smith (1961), Pope (1944)





Northern Water Snake

*Nerodia sipedon*

# NORTHERN WATER SNAKE

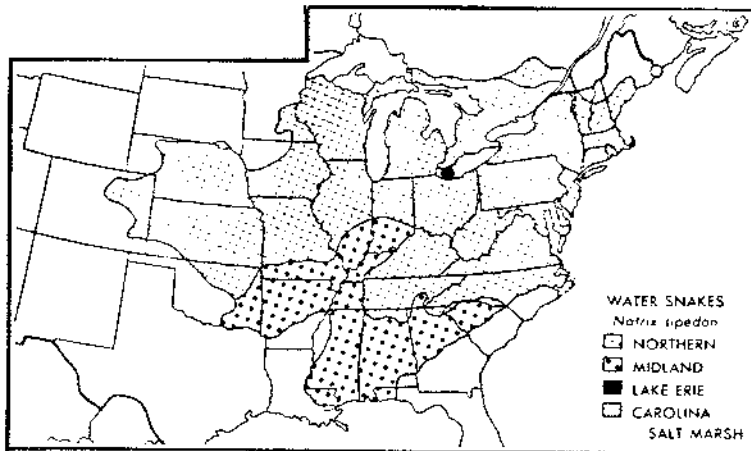
## NERODIA SIPEDON

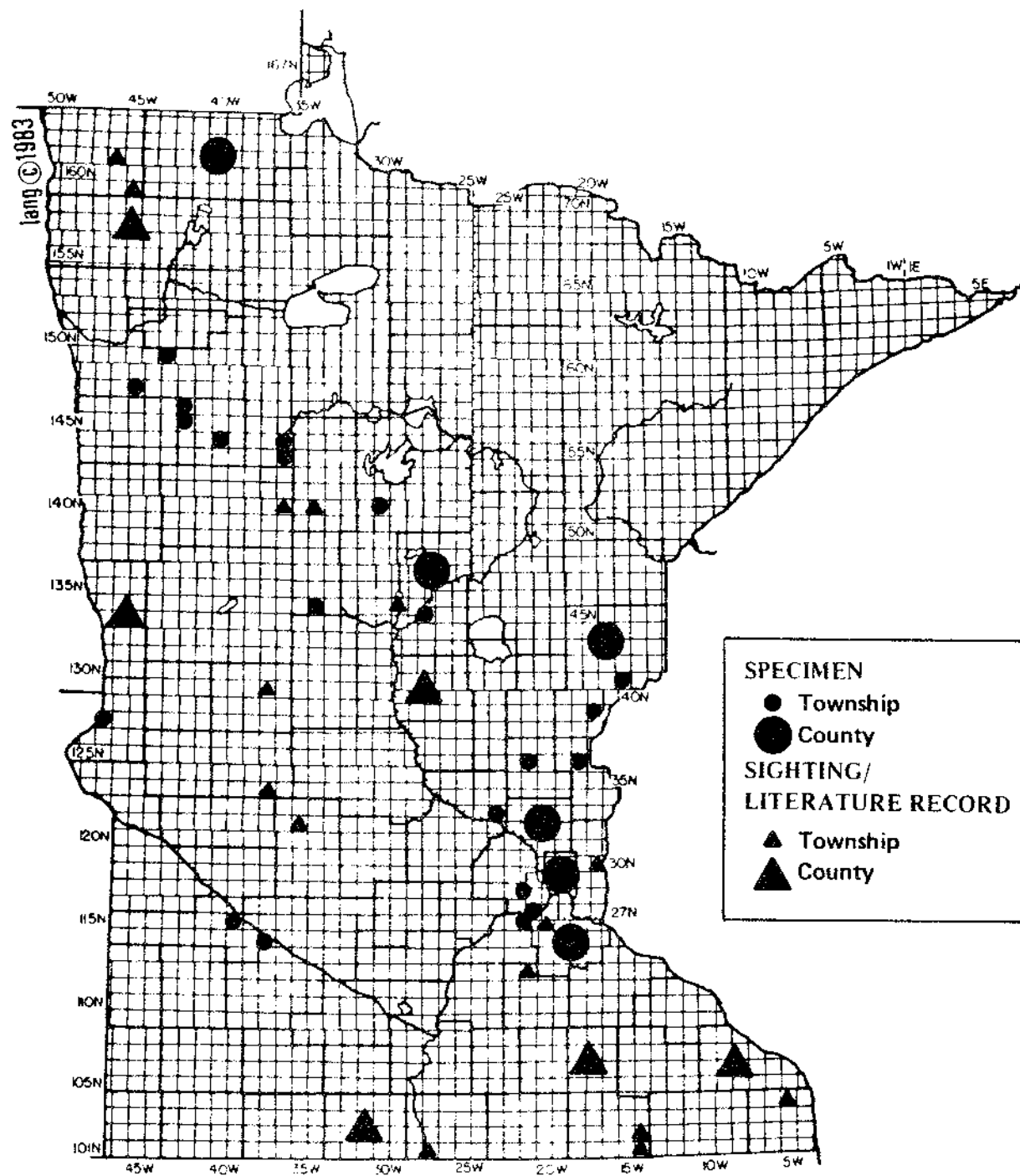
**DISTRIBUTION:** Southeastern, east-central, and south-central regions of Minnesota. Most of the records for the latter two areas are concentrated in the major river valleys. On the basis of available evidence, water snakes occur in the Minnesota River valley to New Ulm, north along the Mississippi River to south of St. Cloud, and possibly along the St. Croix River to Pine County. The species occurs along the western edge of Wisconsin south into northeastern Iowa (Vogt, 1981; Christiansen, 1981).

**PREFERRED HABITAT:** Watersnakes are found in or near water where openings provide sunny spots in which to bask. They inhabit backwater sloughs, marshes, ponds, lakes, streams, and creeks as well as slow-moving sections of larger rivers. Watersnakes may be encountered swimming across open water and find refuge at the water's edge under debris.

**REMARKS:** Additional evidence of watersnakes in the St. Croix valley is needed as well as further records in the upper and lower reaches of the Minnesota River and its streams and tributaries.

**SELECTED REFERENCES:** Pope (1944), Minton (1972), Lagler and Salyer (1947), Raney and Roecker 1947)





Smooth Green Snake

*Opheodrys vernalis*

## SMOOTH GREEN SNAKE

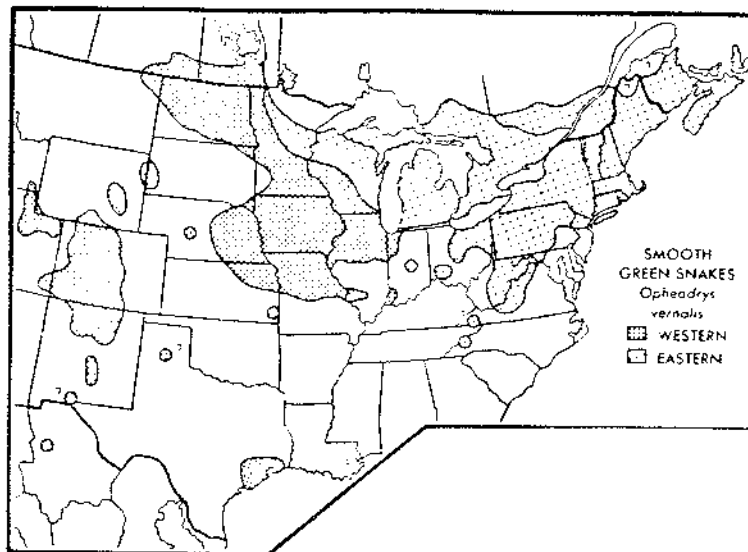
### OPHEODRYS VERNALIS

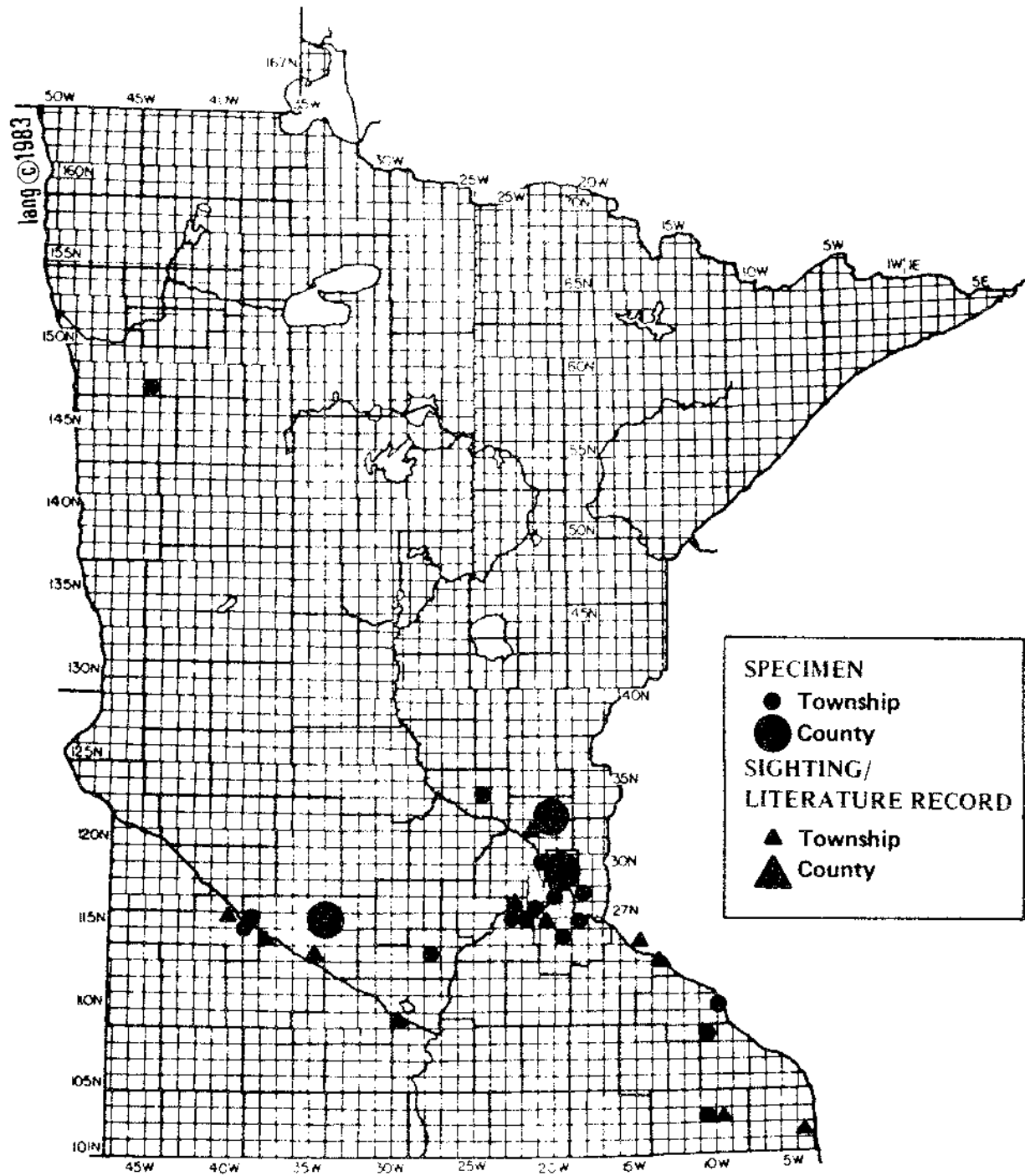
**DISTRIBUTION:** Northwestern, central, south-central, and southeastern regions ; apparently absent in the north-central, northeast, and southwest. Recent sightings verify its presence south of the Minnesota River and throughout the central and northwestern area. Green snakes occur across Wisconsin and Iowa, the southeastern corner of South Dakota, most of North Dakota, and south-central and southwestern Manitoba.

**PREFERRED HABITAT:** Hardwood and mixed hardwood-pine forests and grasslands. On dry hillsides as well as in wet meadows; typically on the margins of forests in open, grassy areas. Although green snakes retreat under cover, they are much less likely to be found under such items than are other common snakes, such as garter snakes and red-bellied snakes. This tendency and the species' cryptic coloration have perhaps led workers to underestimate the abundance of this relatively common Minnesota species. The species is known to overwinter in abandoned anthills in northern Minnesota and southern Manitoba together with garter snakes and redbelly snakes (Griddle, 1937; Lang, 1971).

**REMARKS:** Green snakes come in two colors in Minnesota: the usual brilliant green or a comparatively dull buff coloration. In either case, the venter is white/yellow and the tongue is red. Additional records of this species from the western and southwestern corner of the state are desirable; its presence in the southeast should be delineated with additional records and documented with photographs/specimens.

**SELECTED REFERENCES:** Stille (1954), Dymond and Fry (1932), Minton (1972), Grobman (1941), Pope (1944)





Bull Snake

*Pituophis melanoleucus*

## BULL SNAKE

## SPECIAL CONCERN

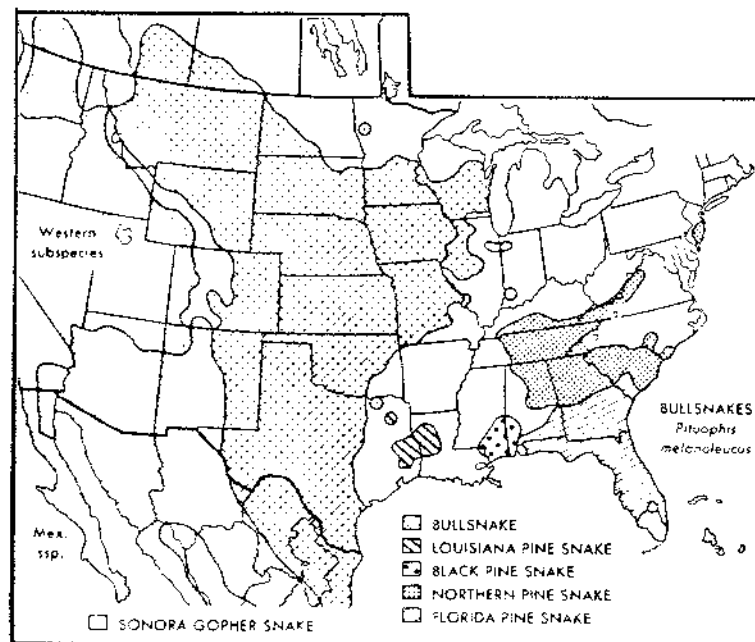
### PITUOPHIS MELANOLEUCUS

**DISTRIBUTION:** The species is distributed widely throughout the Great Plains from Mexico to Alberta. In Minnesota, the species occurs in the southern half of the state; most of the records are from counties along the Minnesota, Mississippi, and St. Croix Rivers. A single specimen from Polk County may represent a disjunct colony, but further evidence of the species has not been found despite extensive fieldwork in the area (Lang, unpublished observations).

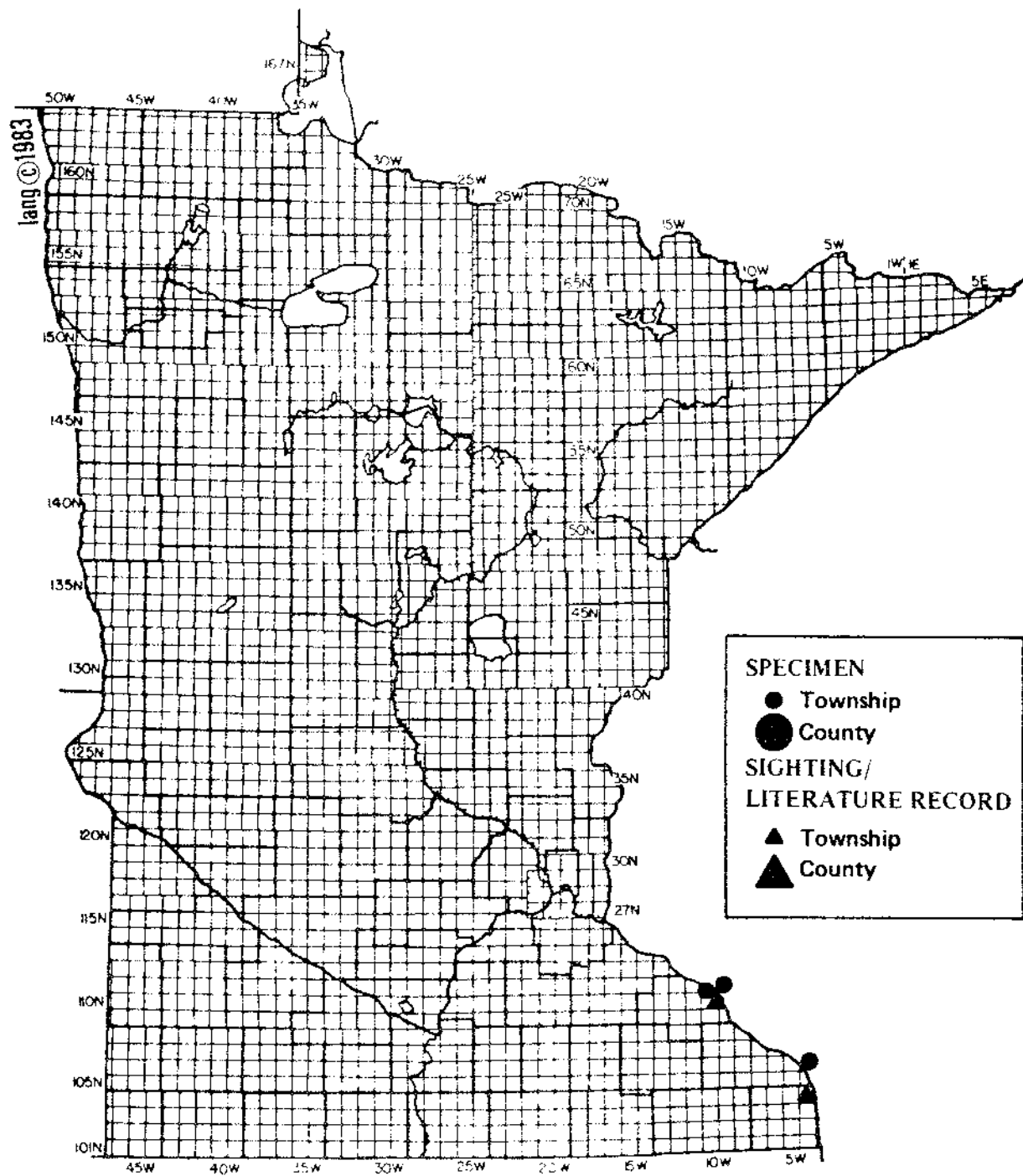
**PREFERRED HABITAT:** In Wisconsin, the species is most common on sandy soil and frequents dry-mesic prairies, oak savannas, and grasslands. It is also found on bluffs along the Mississippi River (Vogt, 1981). In Minnesota, bull snakes show a decided preference for open country rather than woodlands; most of the records are from rocky, sandy, or gravelly habitats. Hibernacula include rock fissures in bluffs and outcrops and mammal burrows. Bull snakes aggregate, often with other species, at overwintering sites in the fall and spring.

**REMARKS:** Additional records are desired for the southern part of the state, particularly south and west of the Minnesota River. The species occurs throughout South Dakota, and therefore is likely along the western margin of Minnesota in the southern half of the state.

**SELECTED REFERENCES:** Guthrie (1926), Hisaw and Gloyd (1926), Imler (1945)







Massasauga

*Sistrurus catenatus*

## MASSASAUGA

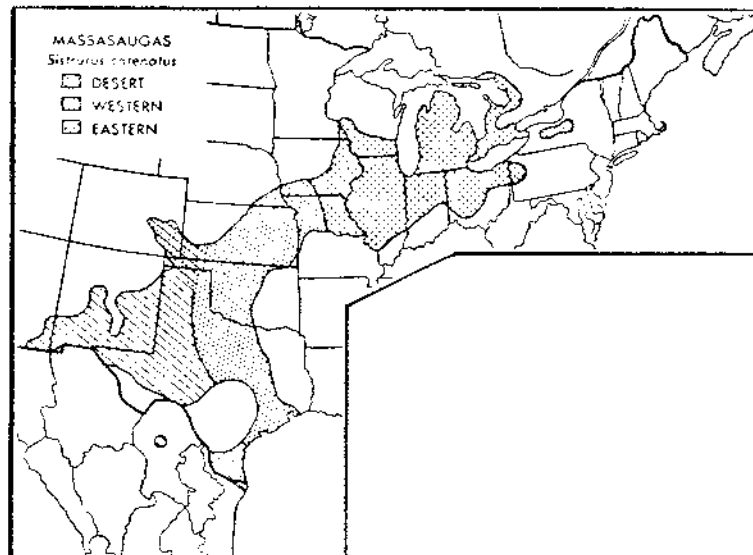
## SPECIAL CONCERN

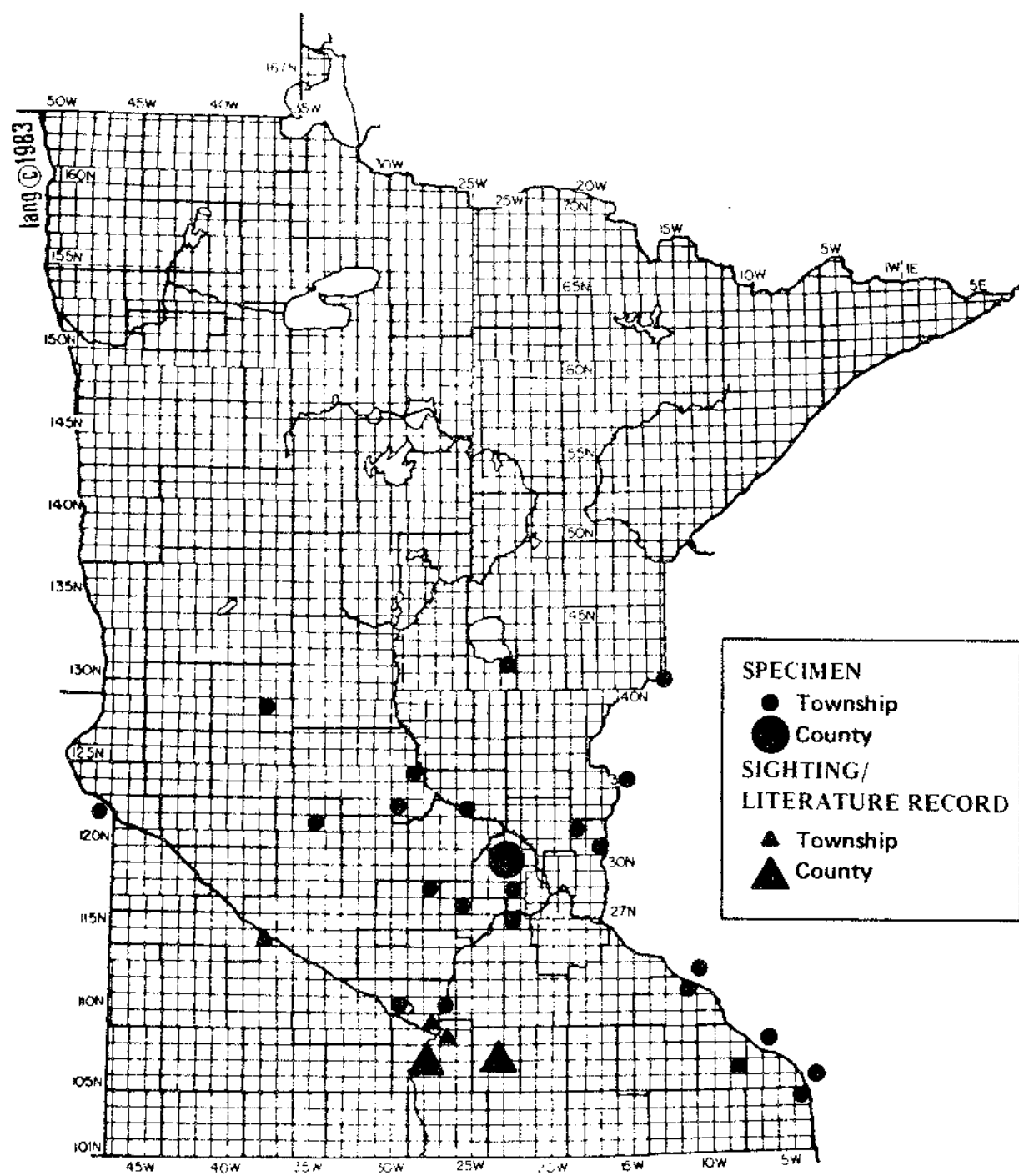
### SISTRURUS CANTENATUS

**DISTRIBUTION:** The range of the species in southeastern Minnesota is peripheral, based on two records prior to 1940 from Wabasha County and two specimens from the Zumbro River drainage south of Wabasha in 1969 (Stark, unpublished observations). The present occurrence and distribution of this species in Minnesota is unknown. Knowledgeable workers in the area of these records are of the opinion that these occurrences represent individuals which have crossed the Mississippi bottomlands from Wisconsin during floods; consequently, at present, there is no evidence of established breeding populations on the Minnesota side of the river. Established populations do exist on the Wisconsin side of the river in the vicinity of the sightings/specimens (Vogt, 1981).

**PREFERRED HABITAT:** The species occurs in mesic prairies and lowland areas along rivers, marshes, and lakes. In Minnesota, it is known only from river bottomlands. Massasaugas overwinter individually in crayfish burrows in Wisconsin bottomlands; the lack of suitable overwintering sites may be a factor limiting habitable areas (Vogt, 1981).

**SELECTED REFERENCES:** Keenlyne and Beer (1973), Maple (1968), Reinert (1974), Reinert and Kodrich (1982), Schorger (1967-68), Wright (1941).





**Brown Snake**

*Storeria dekayi*

## BROWN SNAKE

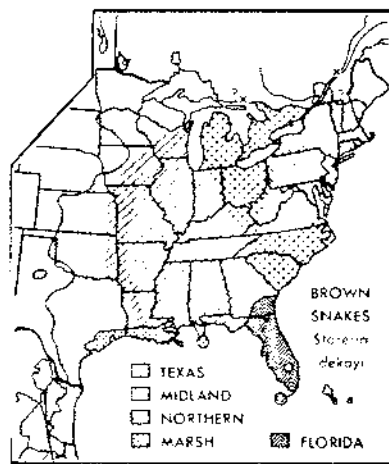
### STORERIA DEKAYI

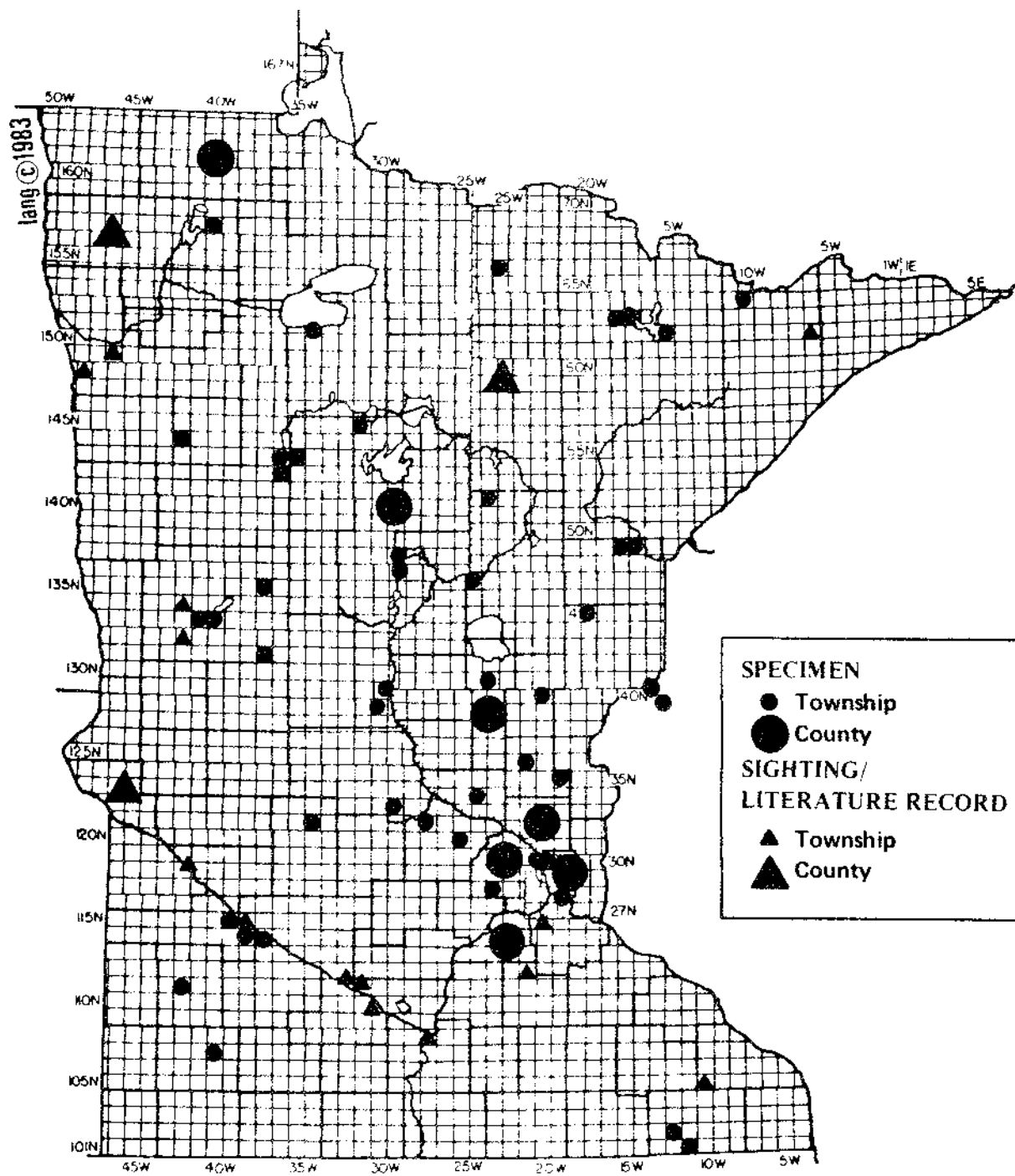
**DISTRIBUTION:** Based on available records, Dekay's snakes occur in the Mississippi Valley in southeast and east-central Minnesota north to Mille Lacs and west to Alexandria. The species inhabits the St. Croix Valley in adjacent Wisconsin, but comparable Minnesota records are lacking. The species is recorded from the Minnesota River valley north to Yellow Medicine County, but there are few sightings/specimens south of the Minnesota River in the south-central and none in the southwest. A single specimen found on the west shore of Big Stone Lake in South Dakota (Over, 1923) suggests that the species may be inhabiting areas in the western section of the state, but not yet documented. To the east, the Dekay's snake is common in the southern half of Wisconsin (Vogt, 1981) and occurs in northeastern Iowa (Christiansen, 1981).

**PREFERRED HABITAT:** These small, secretive snakes inhabit deciduous woodlands where they are sometimes found under cover at the edges of clearings and openings. The species tolerates some degree of disturbance as evidenced by the occupation of farmyards, old building sites, and even vacant lots in towns and cities (Vogt, 1981).

**REMARKS:** Dekay's snakes are readily distinguished from redbelly snakes by 1) a series of black spots on either side of the mid dorsal light line, and 2) a pale white or pink belly with rows of fine dots on either side of the ventral scales. Additional records of this species would be of interest, particularly along the northern and southern edges of its known range in Minnesota. Documentation by photograph or with specimens is desirable in light of the similarity between this species and the redbelly snake. Identification of outlying records from Mille Lacs Lake (FMNH 039234) and Douglas County (UCZ 948) should be verified.

**SELECTED REFERENCES:** Pope (1944), Trapido (1944), Clausen (1936), Minton (1972)





Redbelly Snake

*Storeria occipitomaculata*

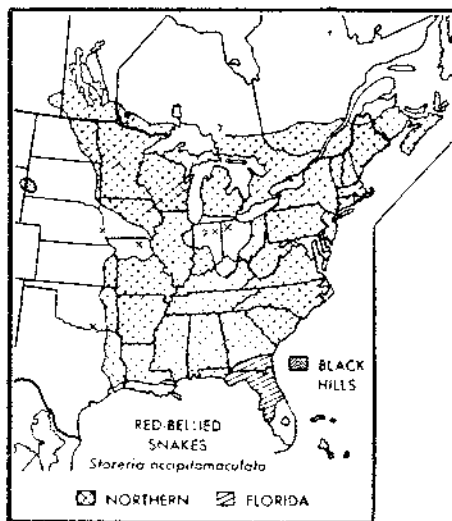
## REDBELLY SNAKE

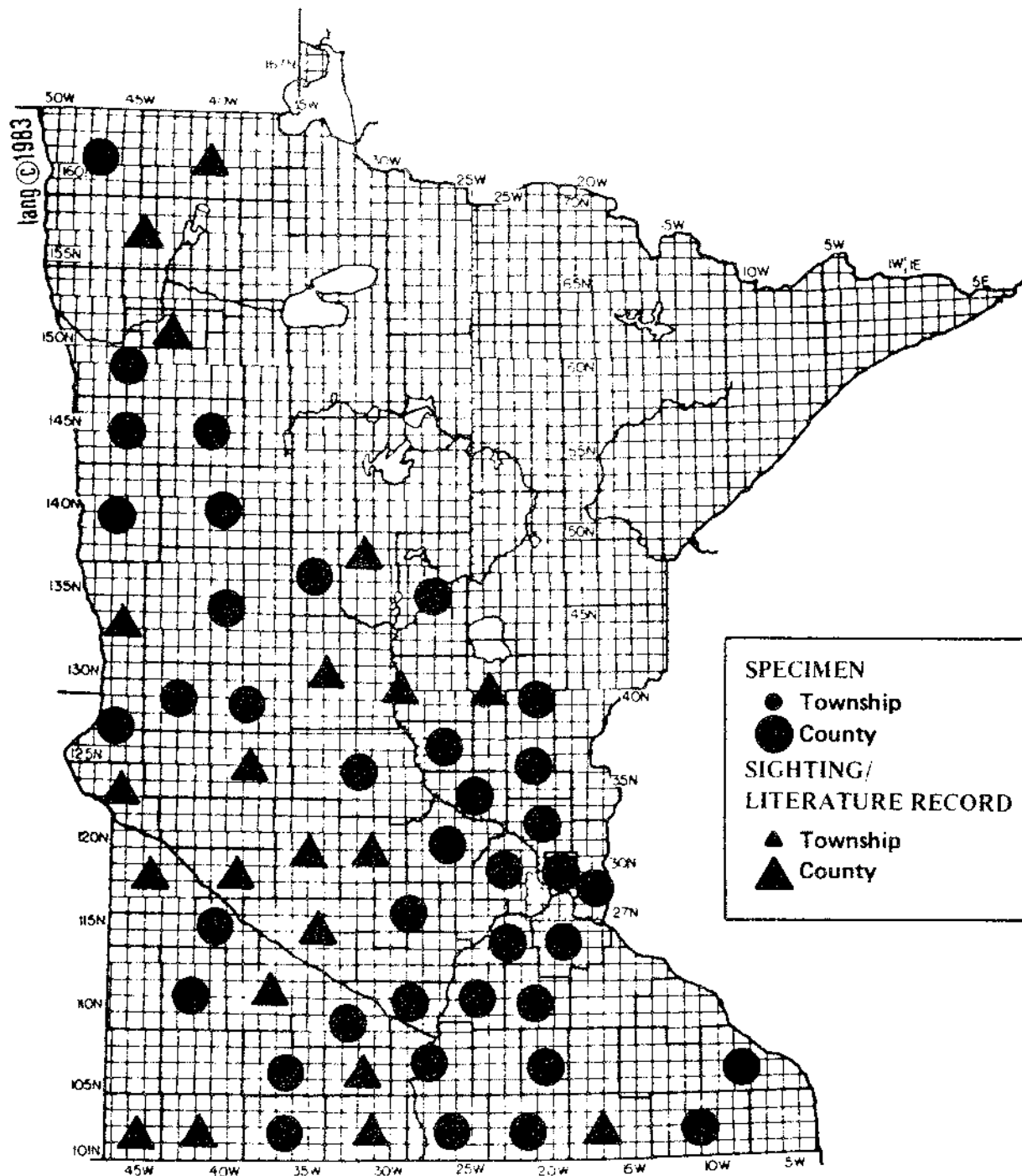
### STORERIA OCCIPITOMACULATA

**DISTRIBUTION:** Statewide in grassland, hardwood and pine forests, and bogs and swamps. This species appears to be common, based on available records, in the northern two-thirds of the state. A number of recorded occurrences are located in the major river valleys, especially in the south-central region. Redbelly snakes have not yet been recorded from the Mississippi River valley in the southeast; comparable records in adjacent areas of western Wisconsin are lacking except in the northwest corner (Vogt, 1981). Redbelly snakes occur in northern Iowa, eastern South Dakota, eastern North Dakota, and southern Manitoba and Ontario (Christiansen, 1981; Fishbeck and Underhill, 1959; Wheeler and Wheeler, 1966; Preston, 1983).

**PREFERRED HABITAT:** Redbelly snakes are found in or near woodlands and are frequently encountered moving across roads and trails or lying underneath cover. The species has a preference for clearings on the margins of woodland or openings in forested areas. Warm, but moist microclimates are probably important for these snakes; they are most easily discovered by lifting cover on sunny days following rains. In northern Minnesota, these small, secretive snakes overwinter in the tunnels of ant mounds. Long-term studies of this species indicated that it is abundant in northern Minnesota (Lang, 1971).

**SELECTED REFERENCES:** Blanchard (1937), Trapido (1944), Lang (1971)





Plains Garter Snake

*Thamnophis radix*

## PLAINS GARTER SNAKE

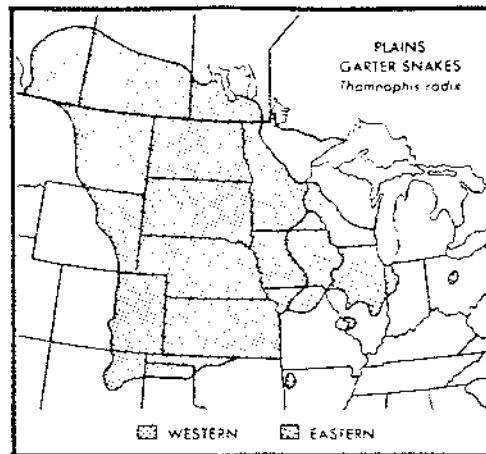
### THAMNOPHIS RADIX

**DISTRIBUTION:** Absent in the northeast, but plains garter snakes occur elsewhere in the state. Lack of recorded occurrences in Goodhue, Wabasha, Dodge, Olmstead, and Houston Counties in the southeast may be indicative of absence or rarity. The species is not known from adjacent counties in western Wisconsin (Vogt, 1981). Plains garter snakes occur throughout southwestern Minnesota but adequate documentation is lacking. With no records from some counties, the known distribution indicates that the species inhabits the grasslands and mixed grassland-woodland areas in the state

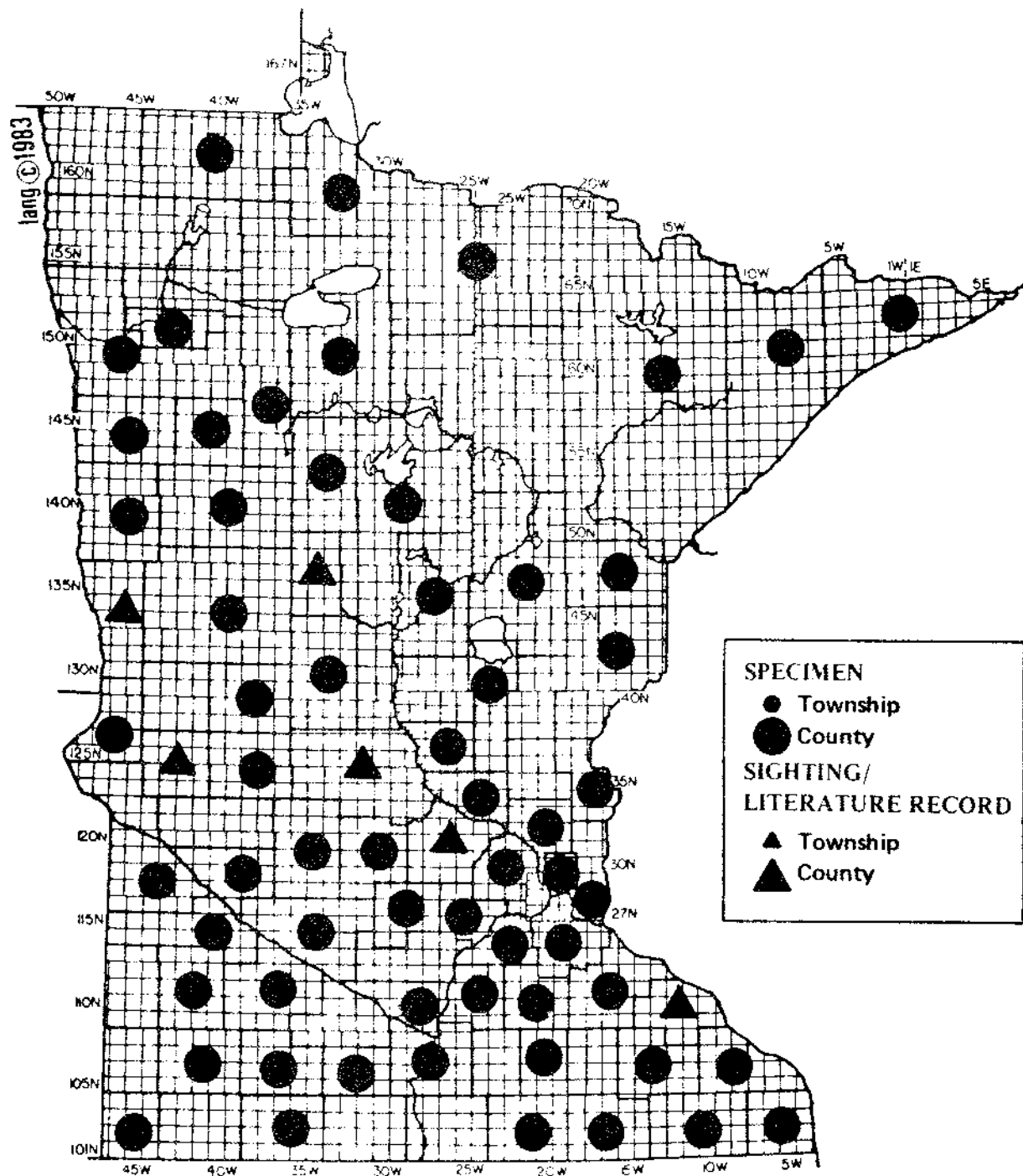
**PREFERRED HABITAT:** Grasslands, usually near water in dry-mesic prairie and oak savanna. Plains garter snakes also inhabit river valleys where openings and clearings near water are preferred.

**REMARKS:** Verification of specimens from Winona and Fillmore Counties and additional material from south of the Minnesota River and along the eastern border of its range within the state are desirable.

**SELECTED REFERENCES:** Aleksiuk (1976), Pope (1944), Minton (1972), Ruthven (1908), Hart (1981)







Common Garter Snake

*Thamnophis sirtalis*

## COMMON GARTER SNAKE

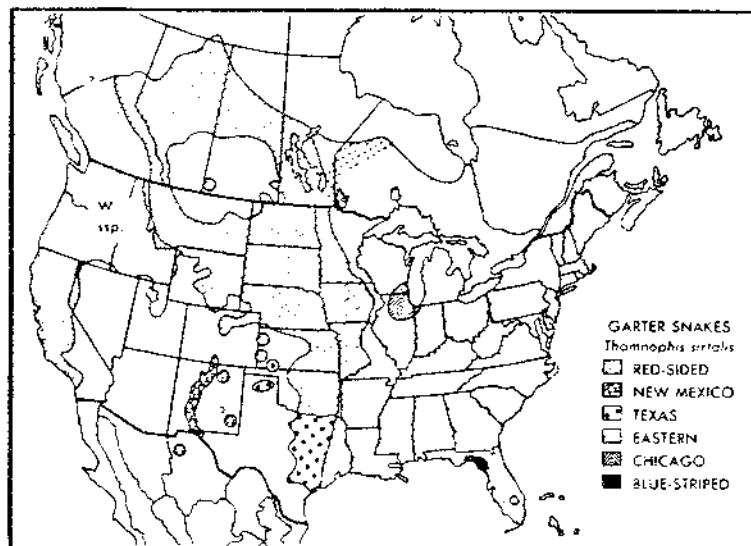
### THAMNOPHIS SIRTALIS

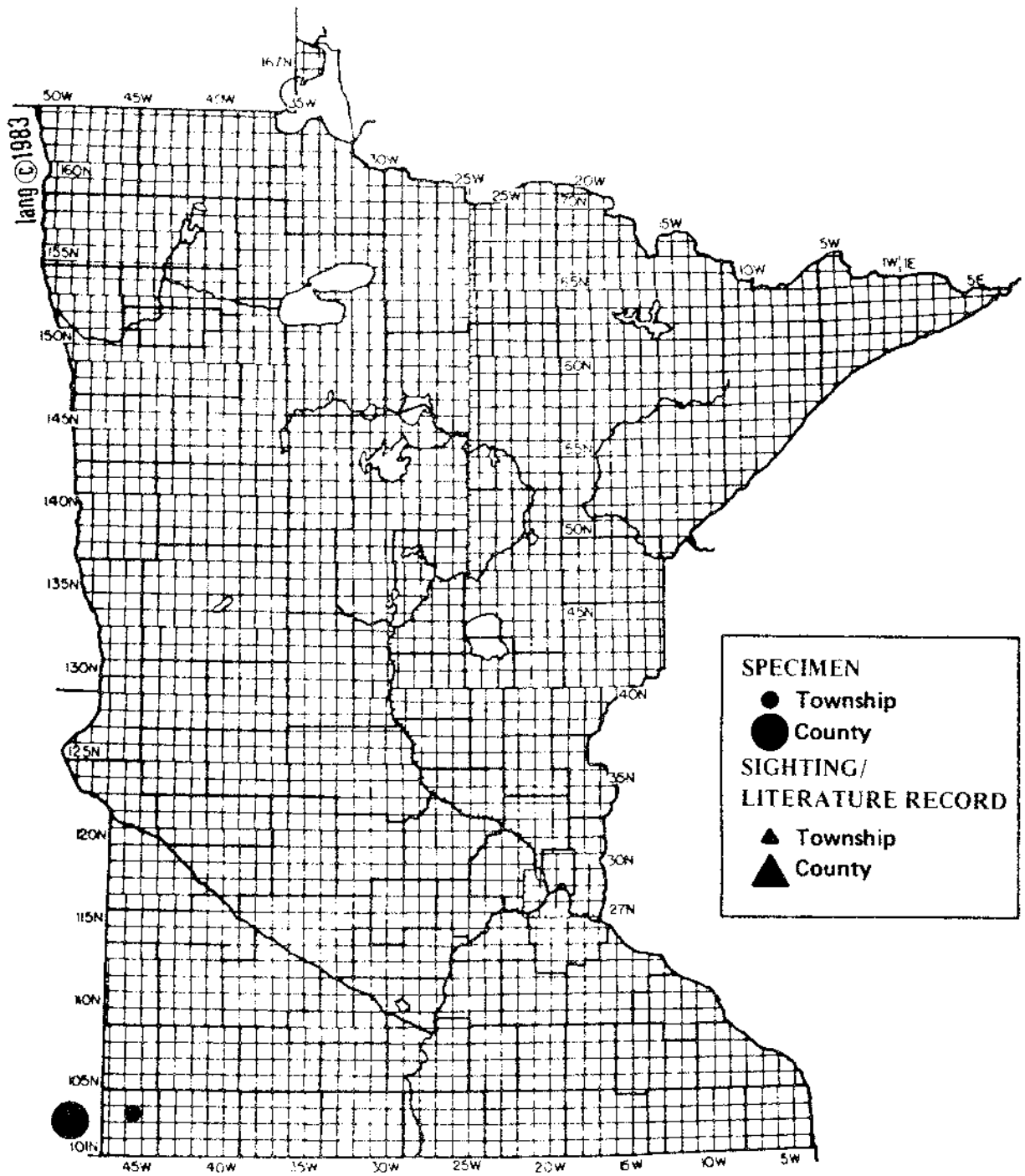
**DISTRIBUTION:** Statewide; lack of recorded occurrences in Itasca, Isanti, Kanabec, Grant, Faribault, Brown, Pipestone, Sibley, Big Stone, Lincoln, Pennington, Marshall, and Kittson Counties. It is likely that the species occurs in these counties. According to Breckenridge (1944), the red-sided form, parietalis, inhabits the prairie (western third of the state) while the eastern subspecies sirtalis lives in the woodlands (eastern two-thirds of the state). There is considerable variation in the dorsal patterns and coloration of common garter snakes from any single locale. The species occurs throughout the midwest and is sympatric with the plains garter snake in transition zones between grassland and woodland and in parkland and river valleys.

**PREFERRED HABITAT:** Moist grassy areas associated with woodlands, but occurs in a wide variety of habitats including farmyards, vacant lots, parks, as well as borders of marshes, ponds, lakes, streams, and rivers.

**REMARKS:** Evaluation of the subspecific distinctions and distributions within Minnesota, particularly in the contact regions of mixed grassland-woodland. Specimens on record, particularly in regional and personal collections, should be reexamined and the species identifications verified.

**SELECTED REFERENCES:** Carpenter (1952), Fitch (1965; 1980), Gregory (1977) Hart (1981)





Lined Snake

*Tropidoclonion lineatum*

# LINED SNAKE

## SPECIAL CONCERN

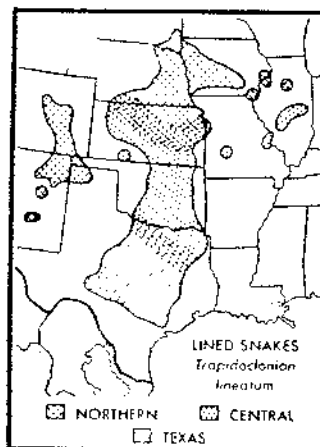
### TROPIDOCOLONIUM LINEATUM

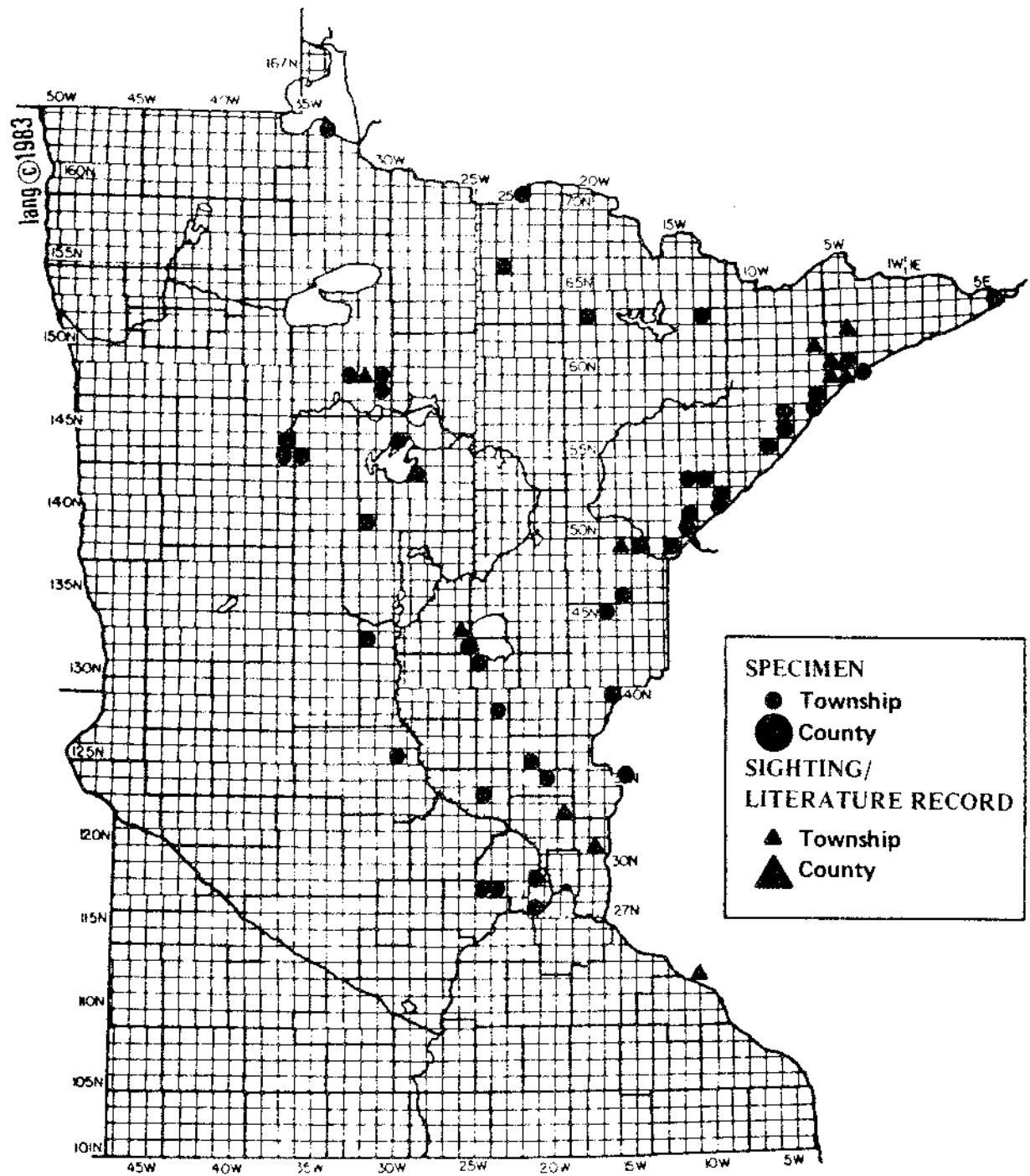
**DISTRIBUTION:** The species occurs in the southern Great Plains, from Texas north to Nebraska, South Dakota, and Iowa. Disjunct colonies are widely scattered in the southwest and central U.S. In Illinois and Missouri, the scattered colonies are mostly populations in vacant lots within cities. In Iowa, populations are declining with the loss of woodlands and edges (Christiansen, 1981). Recent (after 1960) records from Iowa are restricted to localities 200 miles south and east of the Minnesota records and are located in south-central Iowa (R.H. Howe, unpublished observations). In Minnesota, the species is known only from a few specimens at a single locality in Blue Mounds State Park, Rock County. If a population exists at this locality, it is likely disjunct from the main range of the species. Lined snakes have been collected in Minnehaha and Union Counties in South Dakota (Fishbeck and Underhill, 1959).

**PREFERRED HABITAT:** A secretive, fossorial species with a tendency for hiding under stones, logs, boards, debris or in crevices. Sometimes it is found under piles of leaves and vegetation at the bases of shrubs and hedges in gardens and yards; suburban populations occur near several large midwest cities. Lined snakes also occur in open prairies, woodland edges, and sparsely timbered areas. In Kansas and Nebraska, they occupy grassland habitats. In Minnesota, several specimens have been found in and near the Interpretive Center, Blue Mound State Park, located on an isolated grassy rock outcrop amidst agricultural land and close to the Rock River.

**REMARKS:** Additional fieldwork in the southwest corner of the state would serve to elucidate the distribution of this species within the state and provide information on its specific habitat requisites in Minnesota.

**SELECTED REFERENCES:** Anderson (1965), Hudson (1958), Over (1923), Smith (1956), Smith (1961).





**Blue-spotted Salamander**

*Ambystoma laterale*

## BLUE-SPOTTED SALAMANDER

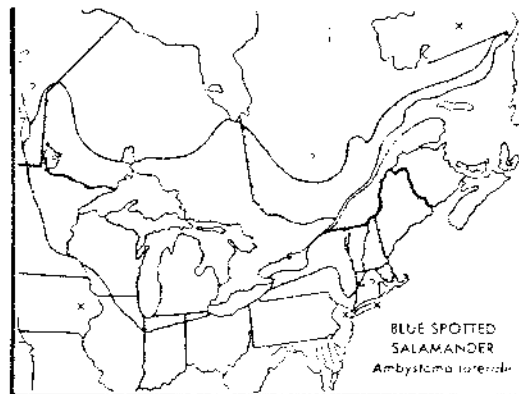
### AMBYSTOMA LATERALE

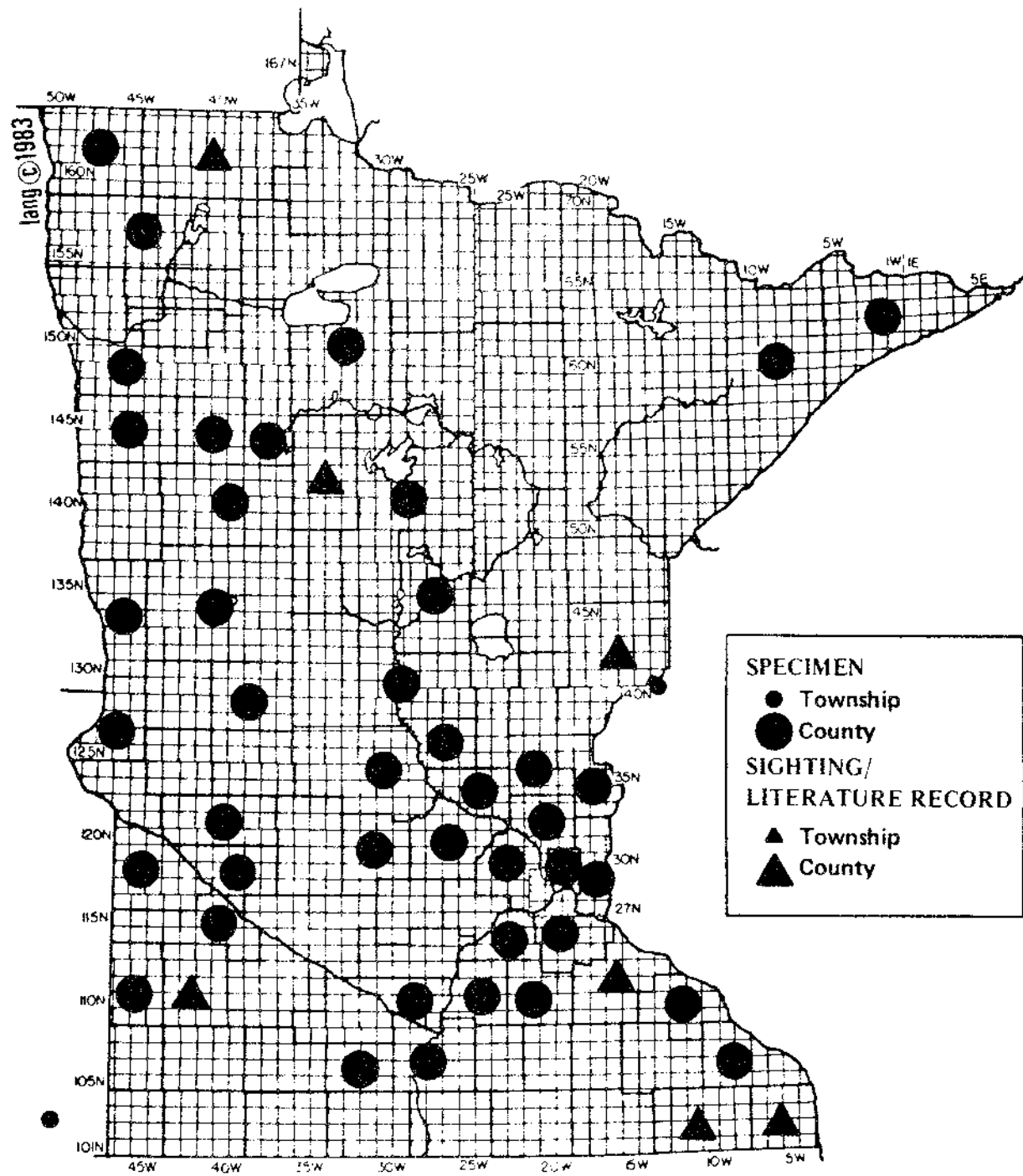
**DISTRIBUTION:** Blue-spotted salamanders occur in east-central, north-central, and northeast Minnesota in forested habitat. The species inhabits hardwood, mixed hardwood-pine, and pine forests as well as uplands associated with bogs and swamps. The species may not be found in the forested regions of the southeast (south of the Minnesota River) based on available data, but is known to occur throughout Wisconsin including localities along the western edge of the state (Vogt, 1981). Blue-spotted salamanders are known from two localities in northern Iowa (Christiansen, 1981). In Manitoba, the species occurs in the eastern woodlands northwest to the Interlake region (Preston, 1983).

**PREFERRED HABITAT:** Blue-spotted salamanders live in mesic woodlands and may be found near the surface under logs and in leaf litter, especially during and following rains. Semi-permanent ponds and potholes which retain water through the summer are utilized for breeding; these salamanders apparently overwinter on land in protected situations.

**REMARKS:** The closely-allied all female species Ambystoma tremblayi, found in association with blue-spotted salamanders to the east, has not been collected in Minnesota, but has been identified in populations of both species inhabiting Interstate Park near St. Croix Falls in western Wisconsin (Lang, 1972).

**SELECTED REFERENCES:** Kramer (1973), Uzzell (1964, 1967), Pope (1944)





**Tiger Salamander**

*Ambystoma tigrinum*

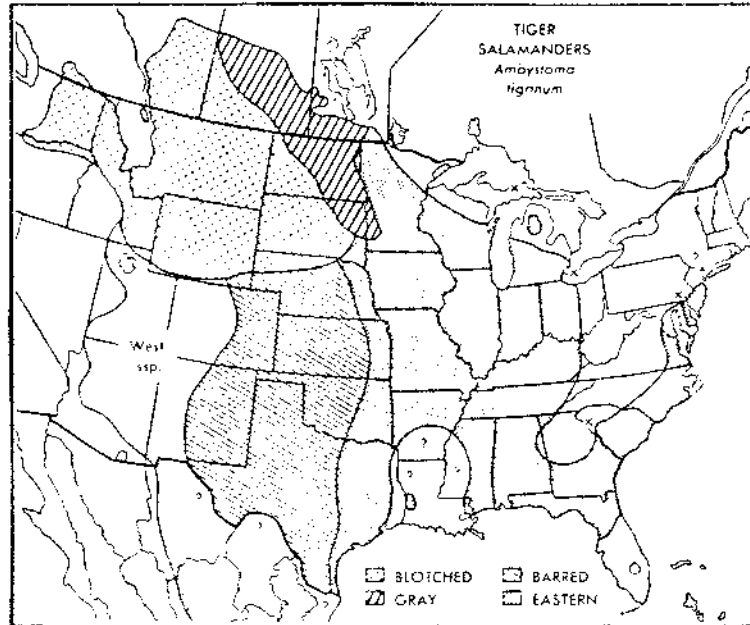
# TIGER SALAMANDER

## AMBYSTOMA TIGRINUM

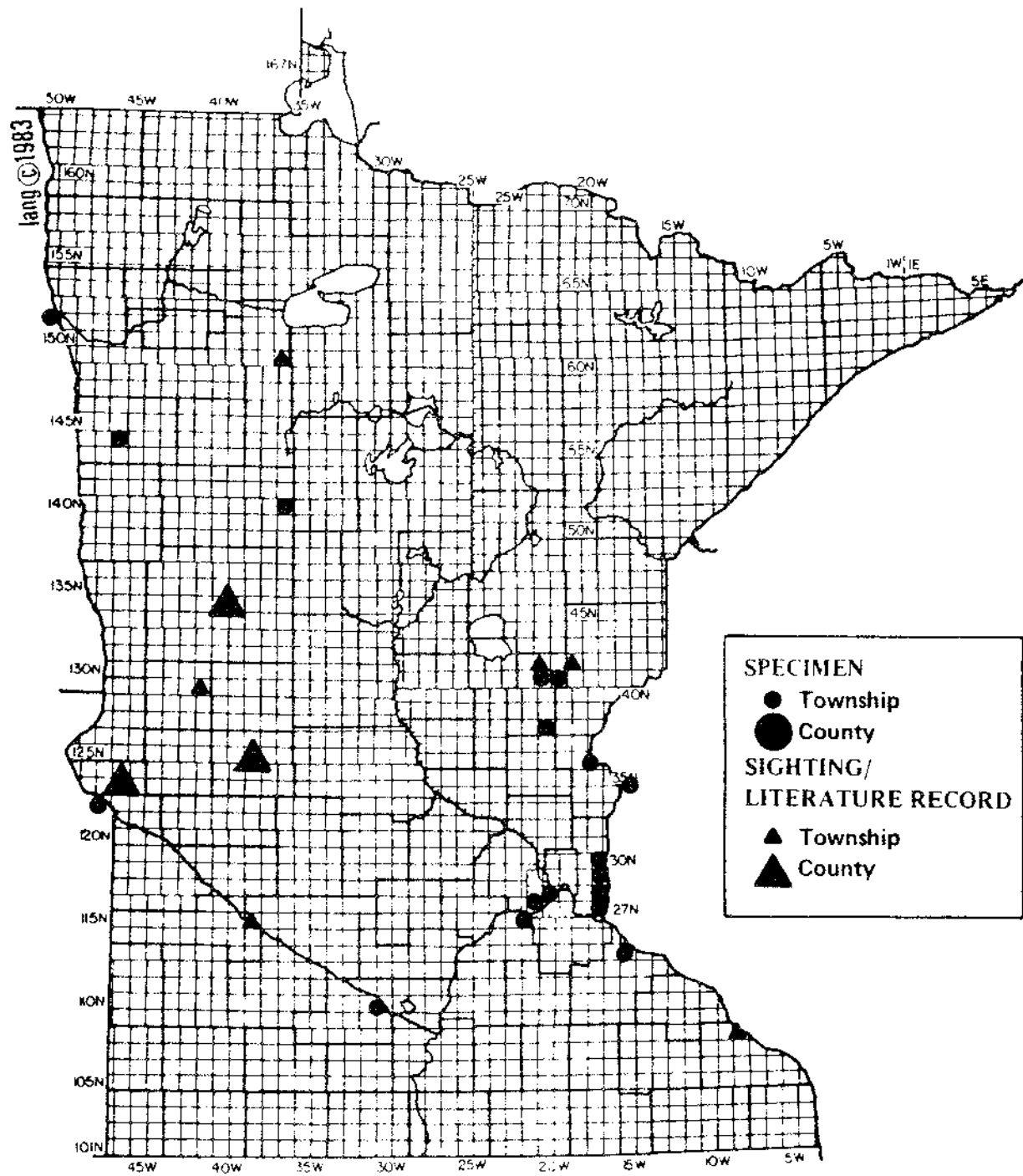
**DISTRIBUTION:** Widespread in south, central, and northwest regions, but limited in northeast to Lake and Cook Counties. Its occurrence along the North Shore may represent a disjunct population. Not present in Ontario; but the species occurs in west-central Wisconsin (Vogt, 1981). Common in Iowa (Christiansen, 1981) and likely distributed throughout southern Minnesota despite the lack of adequate documentation for the southern tier of counties. The species occurs throughout North and South Dakota (Wheeler and Wheeler, 1966; Over, 1923).

**PREFERRED HABITAT:** Tiger salamanders are adaptable, occupying a wide range of habitats in grasslands and woodlands. The species survives and apparently thrives in areas under intense cultivation where it breeds in semi-permanent water.

**SELECTED REFERENCES:** Gehlbach (1967), Pope (1944)







Mudpuppy

*Necturus maculosus*

## MUDPUPPY

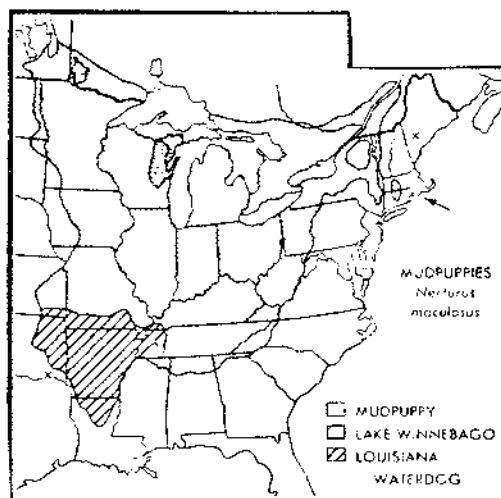
### NECTURUS MACULOSUS

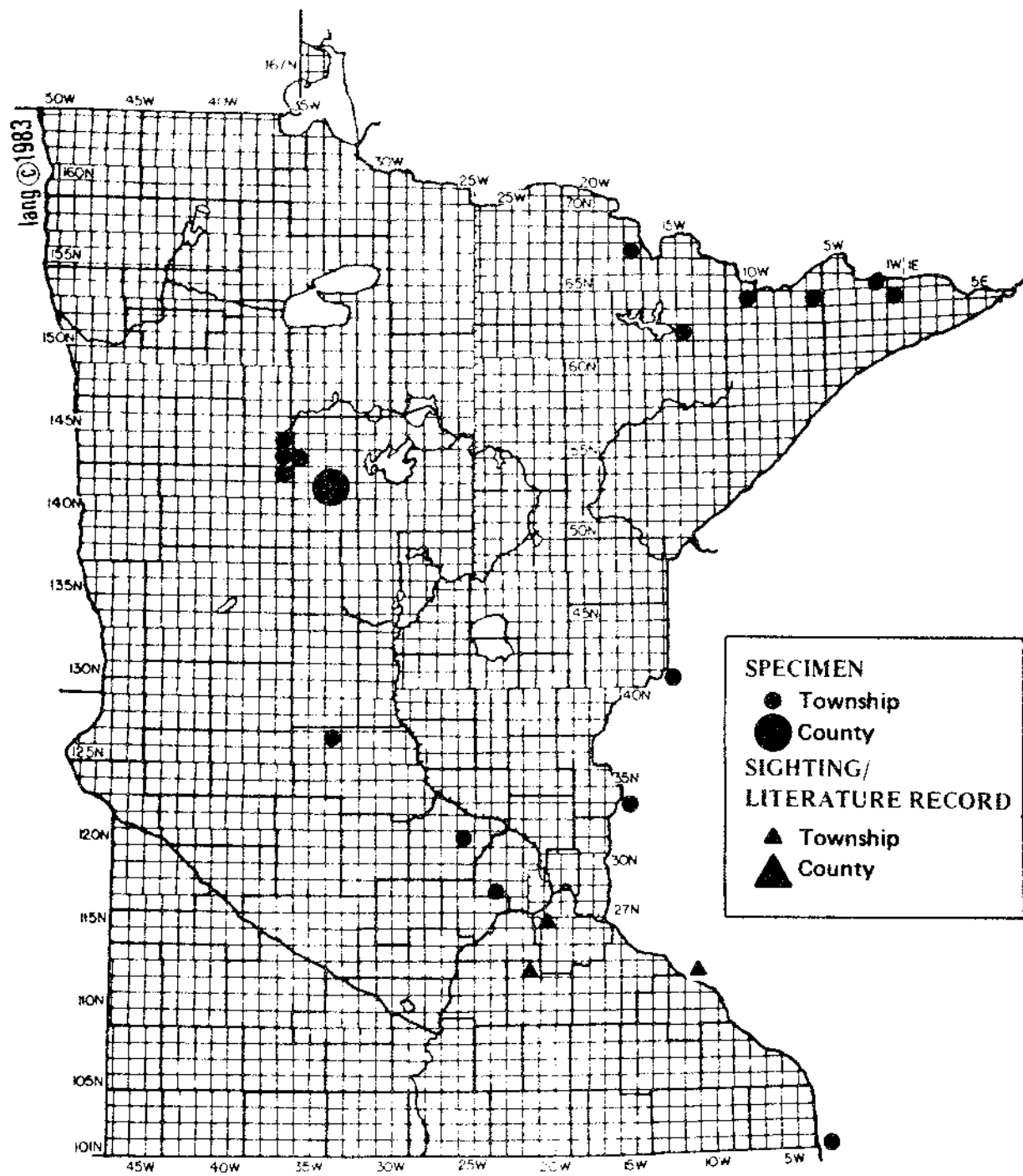
**DISTRIBUTION:** Widespread distribution in Minnesota in lakes, streams, and rivers. Available records indicate its presence in the Red River, Minnesota, and Mississippi drainages. There are no records of specimens/sightings from the Missouri drainage in the southwest corner of the state. Breckenridge (1944) maps a Lake Superior record offshore from Cook County, suggesting its occurrence in the Lake Superior drainage along the North Shore; documentation for this record has not been found. However, the species does occur in southeastern Manitoba (Preston, 1983) and southwestern Ontario, throughout Wisconsin (Vogt, 1981) and eastern Iowa where its numbers may be declining (Christiansen, 1981). The species is known in the Dakotas on the basis of single specimens from Big Stone Lake in South Dakota and from the Red River near Grand Forks in North Dakota (Wheeler and Wheeler, 1966; Over, 1923). Recent records (mostly DNR greenslips) have been primarily submitted by fisheries personnel who have incidentally encountered mudpuppies in the course of fisheries investigations. Fisherman also are aware of this species because it is occasionally taken on baited lines.

**PREFERRED HABITAT:** Rivers, larger lakes, and streams of the state. The species is aquatic throughout its life cycle, retaining a pair of external gills and a larval appearance as adults.

**REMARKS:** Additional documentation of occurrence of mudpuppies throughout the state is desirable, particularly south of the Minnesota River and on the western and northern edges of the state. The absence of records from the Mississippi River north of the Twin Cities is curious. Available recent records are from fisheries personnel and scuba divers; these workers may provide further records and sightings if requested.

**SELECTED REFERENCES:** Hamilton (1932), Pope (1944), Bishop (1941)





Eastern Newt

*Notophthalmus viridescens*

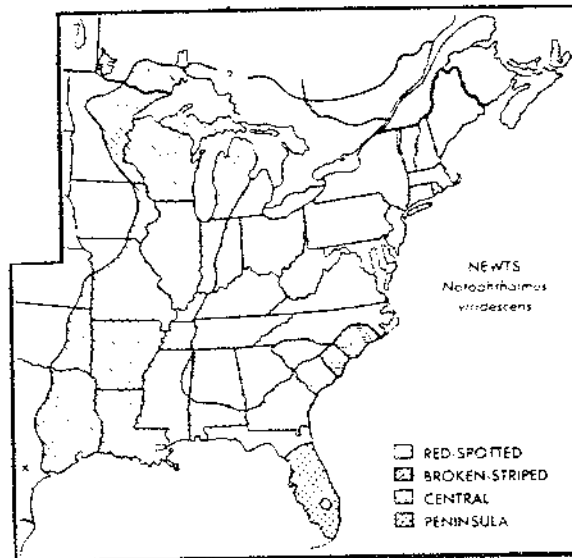
## EASTERN NEWT

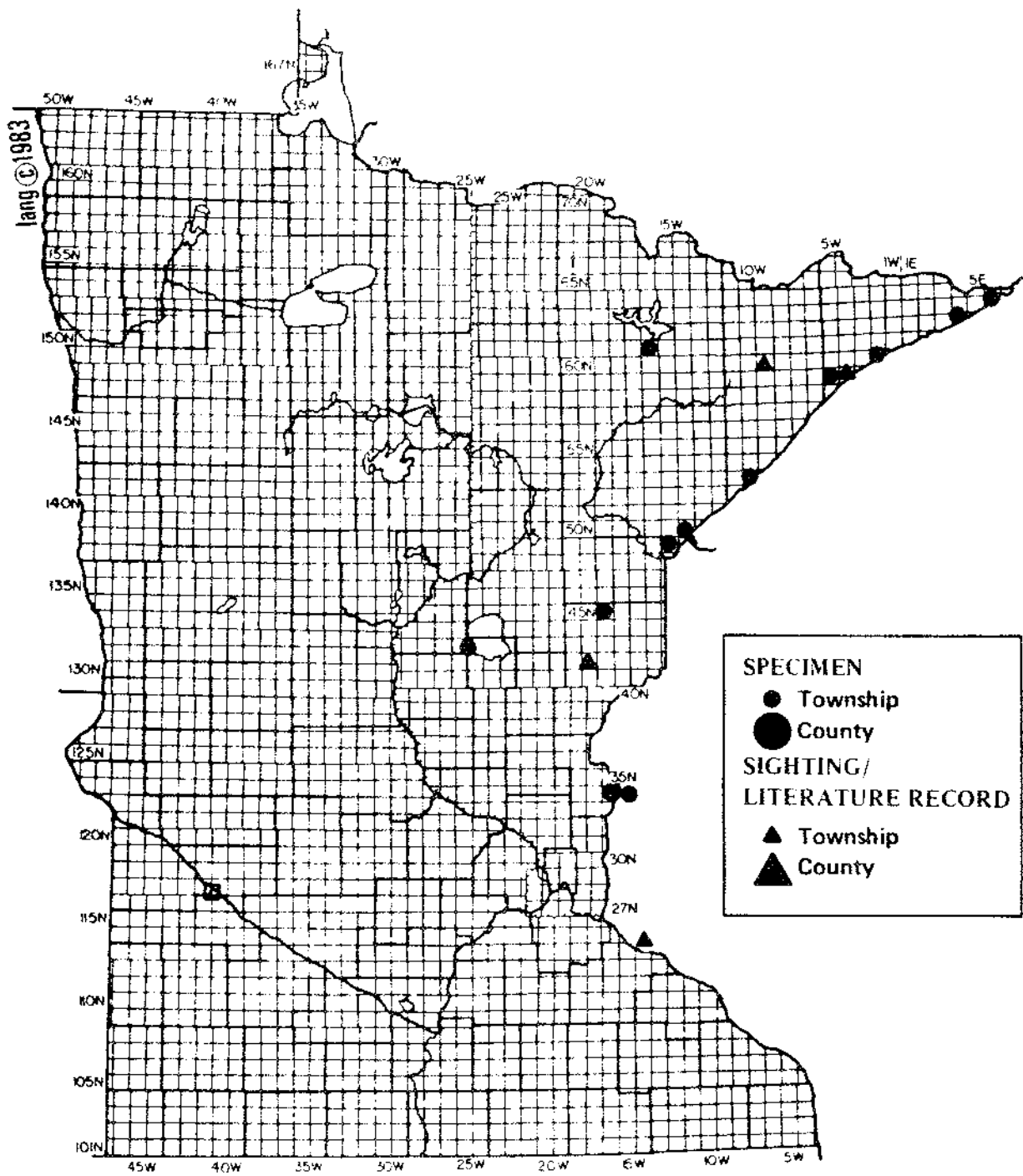
### NOTOPHTHALMUS VIRIDESCENS

**DISTRIBUTION:** Widely distributed, but records are scattered and spotty. Available records indicate the species inhabits the mesic hardwood and pine forests in the east-central, north-central, and northeast regions of the state. Records in Wisconsin along the St. Croix valley and in the Mississippi valley suggest it may be present in adjacent parts of eastern and southeastern Minnesota. Newts are widely distributed across Wisconsin, eastern Iowa, and southwestern Ontario, but do not extend westward. In Minnesota, the records are clustered in areas where collecting and observations have been made over a long period (e.g., Itasca State Park); in these areas, newts are encountered infrequently and never in large numbers. The species may be more common in the coniferous forests and rocky lake country of the northeast than elsewhere in Minnesota.

**PREFERRED HABITAT:** A woodland species closely associated with aquatic habitats such as permanent ponds, lakes, and marshes. Found in the water and on land, sometimes under logs and in leaf litter. The species may overwinter on land; specimens have been taken from anthills in the spring and fall which are used as hibernacula by small snakes, frogs, and blue-spotted salamanders.

**SELECTED REFERENCES:** Mecham (1967), Healy (1975)





Redback Salamander

*Plethodon cinereus*

## REDBACK SALAMANDER

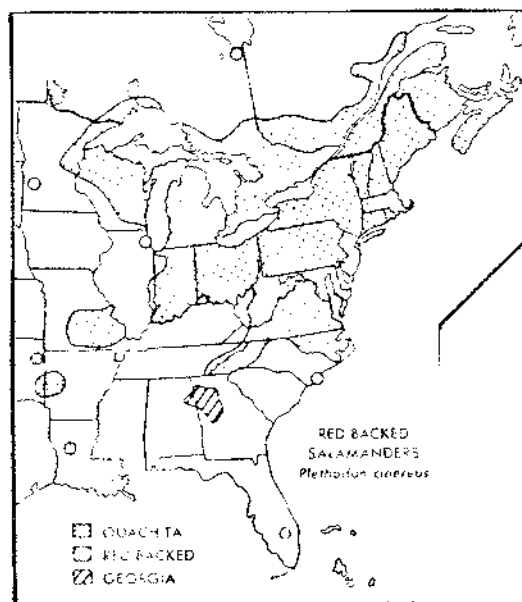
### PLETHODON CINEREUS

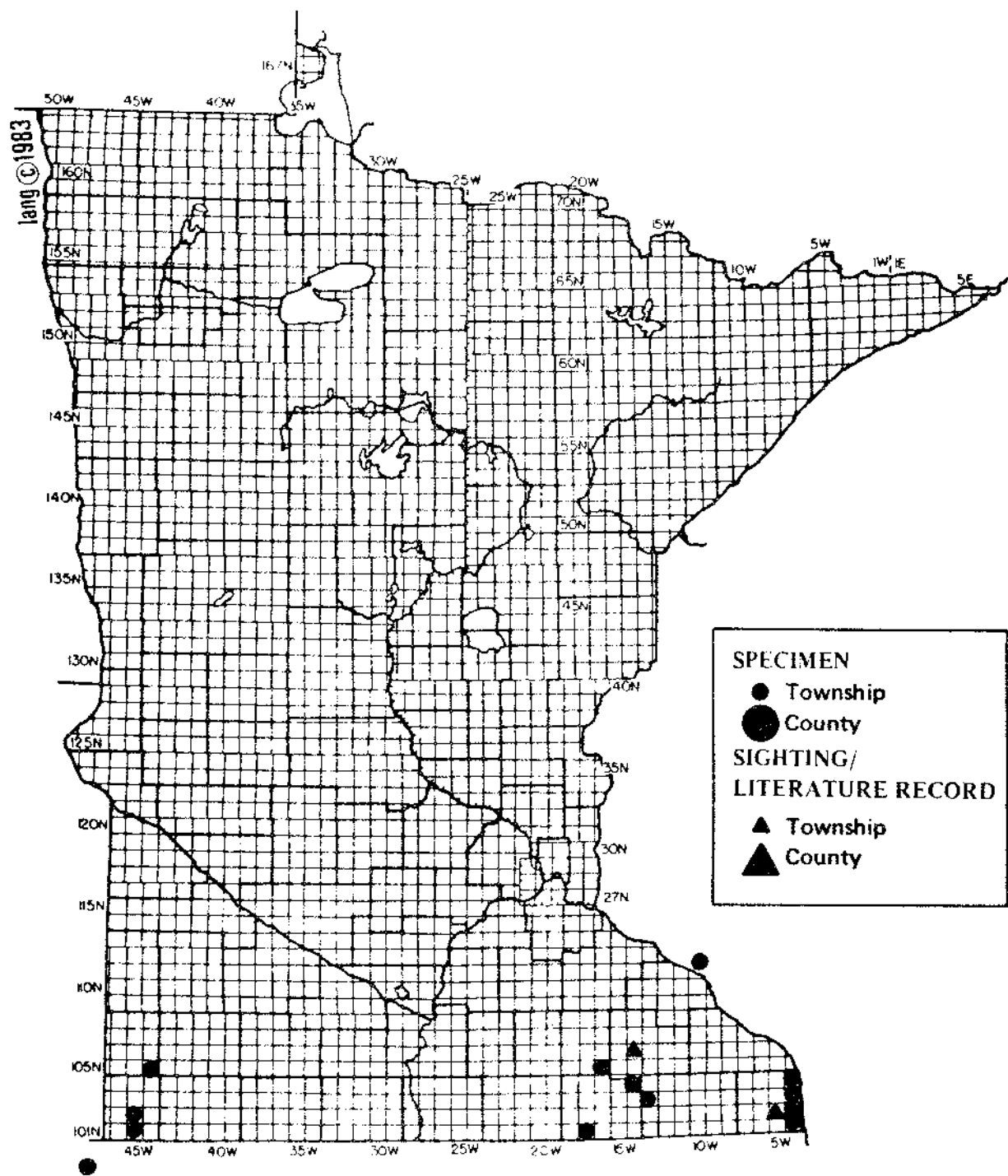
**DISTRIBUTION:** Redback salamanders have been reported from deciduous and mixed deciduous-coniferous woodlands in east-central and northeast Minnesota, and likely occur along the eastern edge of the state south of the Twin Cities in suitable habitat. Records from Montevideo and Mille Lacs (Isle) have not been substantiated with additional specimens in recent years. Redback salamanders were not found in suitable habitat in the Upper Minnesota river valley during intensive collecting in 1982; and the species does not appear to occur in the north-central or northwest regions of the state (e.g., not in Becker-Clearwater-Hubbard Counties nor in Koochiching County). The species occurs across northern Wisconsin, including the western borders of the Mississippi and St. Croix Rivers, and inhabits the southwestern woodlands in Ontario.

**PREFERRED HABITAT:** Moist deciduous or mixed deciduous-coniferous forests with available water nearby. Redback salamanders hide under logs, debris, and in leaf litter on the forest floor. Shaded hillsides with abundant cover near streams or lakes are favored sites.

**REMARKS:** Additional records from the eastern half of the state are desirable. The specimens from Montevideo and Mille Lacs should be re-examined and the identifications verified. Additional sightings/specimens should be sought from these and surrounding localities. The species may be present in the southeastern counties along the Mississippi River valley based on records from the Wisconsin border (Bay City and the Chippewa River bottoms).

**SELECTED REFERENCES:** Smith (1963), Pope (1944), Bishop (1941)





Northern Cricket Frog

*Acris crepitans*

## NORTHERN CRICKET FROG

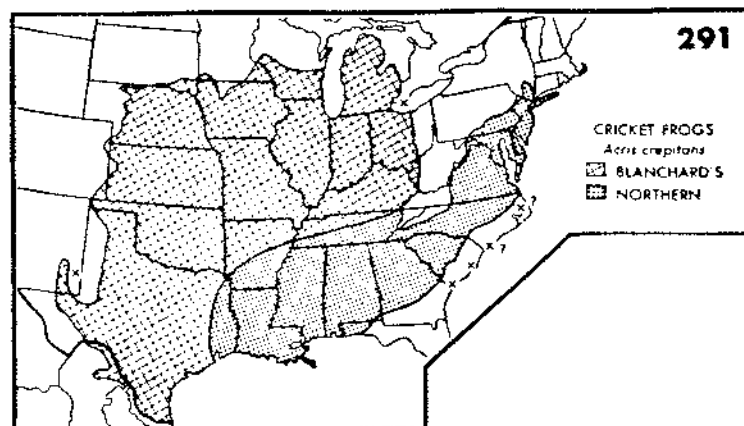
SPECIAL CONCERN

### ACRIS CREPITANS

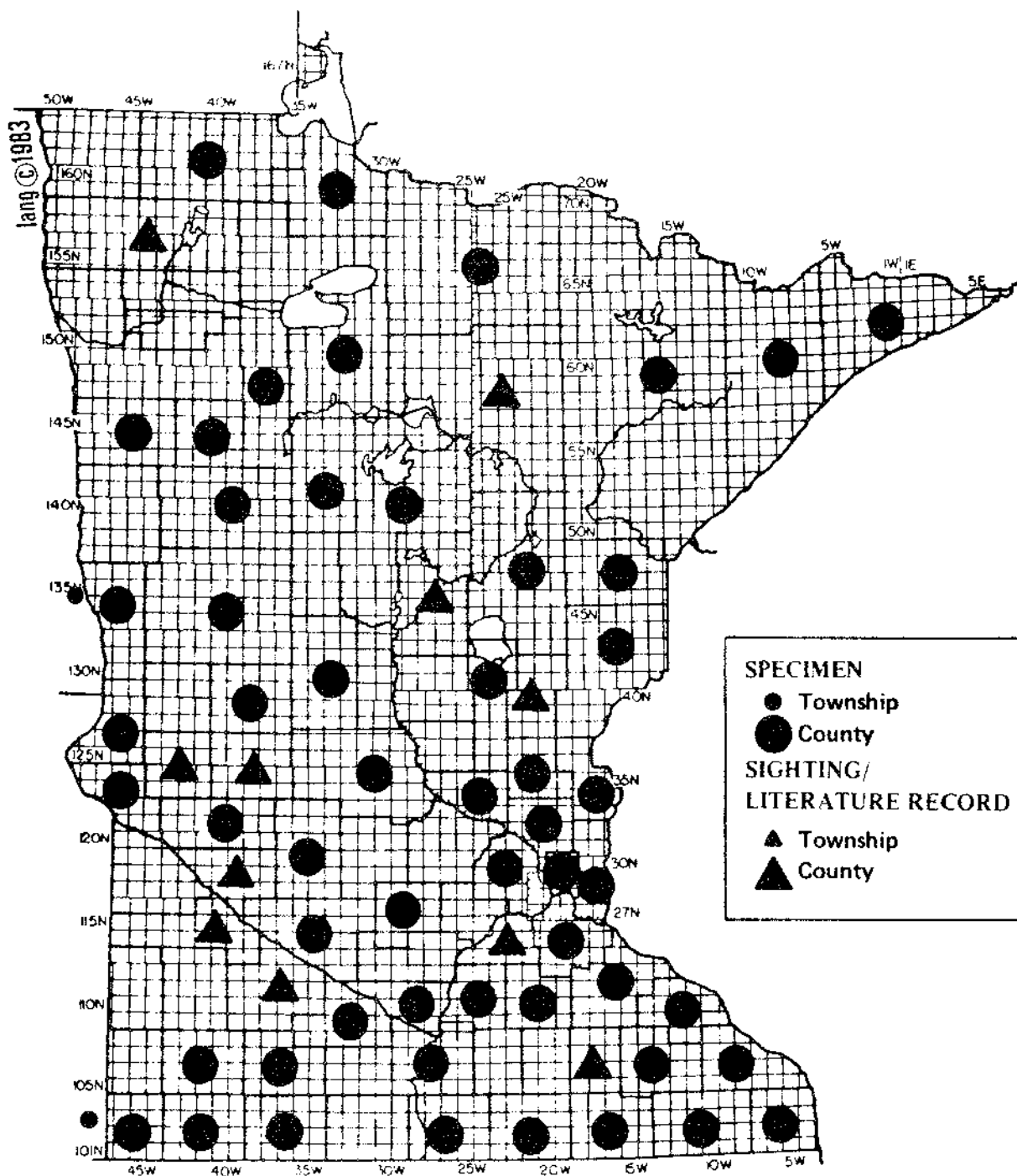
**DISTRIBUTION:** The species is widespread in the midwest U.S., reaching its northern limit in Michigan, Wisconsin, and Minnesota. In Minnesota, populations of cricket frogs have been reported only from the extreme southwest and southeast corners of the state. Recent specimens from Pipestone, Rock, and Nobles Counties are lacking, and this population may be extirpated on the basis of recent fieldwork (M. Nehl, unpublished observations). However, specimens have been collected less than ten miles from the southwest corner of the state at Canton, South Dakota (Dunlap, 1967). Cricket frogs were heard calling in Houston County in 1981 (M. Nehl unpublished observations).

**PREFERRED HABITAT:** This frog is most often an inhabitant of small, pebbly streams flowing through grasslands, but may also be found near permanent marshes and ponds. Sufficient aquatic vegetation is a prerequisite in both habitats. In Wisconsin, the species prefers open mud flats and banks of streams where there is abundant emergent vegetation (Vogt, 1981).

**SELECTED REFERENCES:** Johnson and Christiansen (1976), Whitaker (1971), Minton (1972)







American Toad

*Bufo americanus*

## AMERICAN TOAD

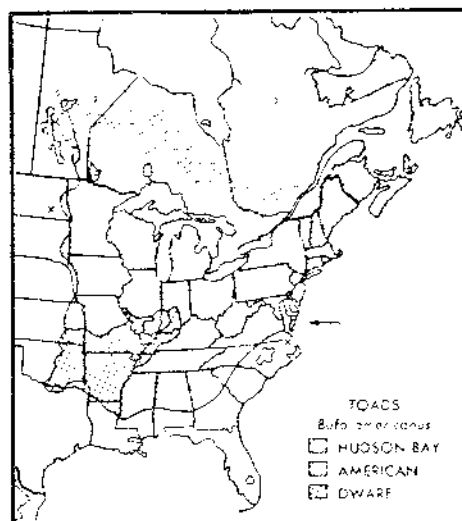
### BUFO AMERICANUS

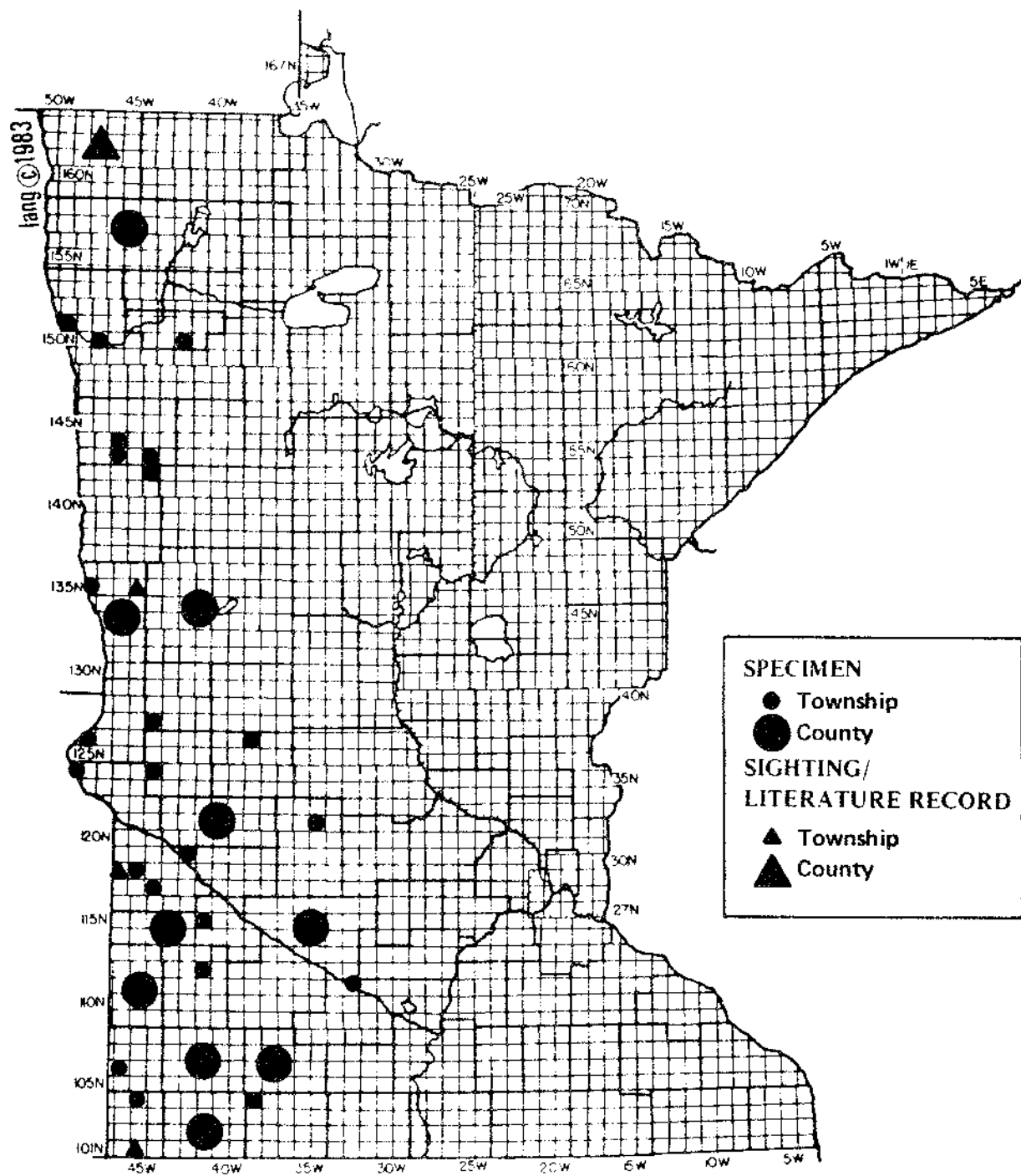
**DISTRIBUTION:** Statewide; lack of recorded occurrences in the following counties: Benton, Morrison, Wright, Meeker, Waseca, Steele, Watonwan, Martin, Lincoln, Lyon, Lac Qui Parle, Grant, Clay, Polk, Pennington, Red Lake, and Kittson. Although the species may be locally absent in some prairie areas, it inhabits woodlands associated with rivers and streams. Although it is likely that American toads occur statewide, the western limit of the species' range is close to the state border in the southeastern corner of North Dakota (Wheeler and Wheeler, 1966) and the extreme southeastern corner of South Dakota (Underhill, 1958). Typical americanus occur in southeastern Manitoba (Preston, 1983) and southern Ontario. Cook (1978) in an analysis of American toads in Manitoba concluded that hemiphrys (the Dakota or Canadian toad) is a subspecies of americanus rather than a distinct species and Preston (1983) follows this revision.

**PREFERRED HABITAT:** Although this species occupies a wide range of habitats, it is primarily a forest toad which frequents openings and clearings in woodland and forest edges. It breeds in temporary and/or permanent water and overwinters on land by burrowing beneath the litter into the soil in protected sites.

**REMARKS:** Further information on the distribution of this species along the western edge of the state would be useful as well as observations on its relationships to the other species of Bufo in the state.

**SELECTED REFERENCES:** Hamilton (1934), Aronson (1944), Cook (1978), Ewert (1969)





Great Plains Toad

*Bufo cognatus*

# GREAT PLAINS TOAD

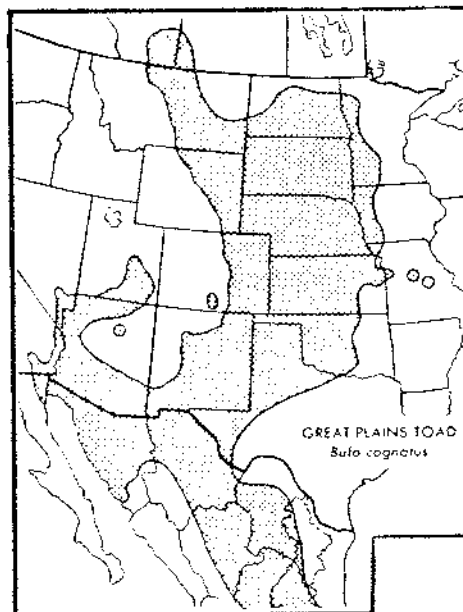
## BUFO COGNATUS

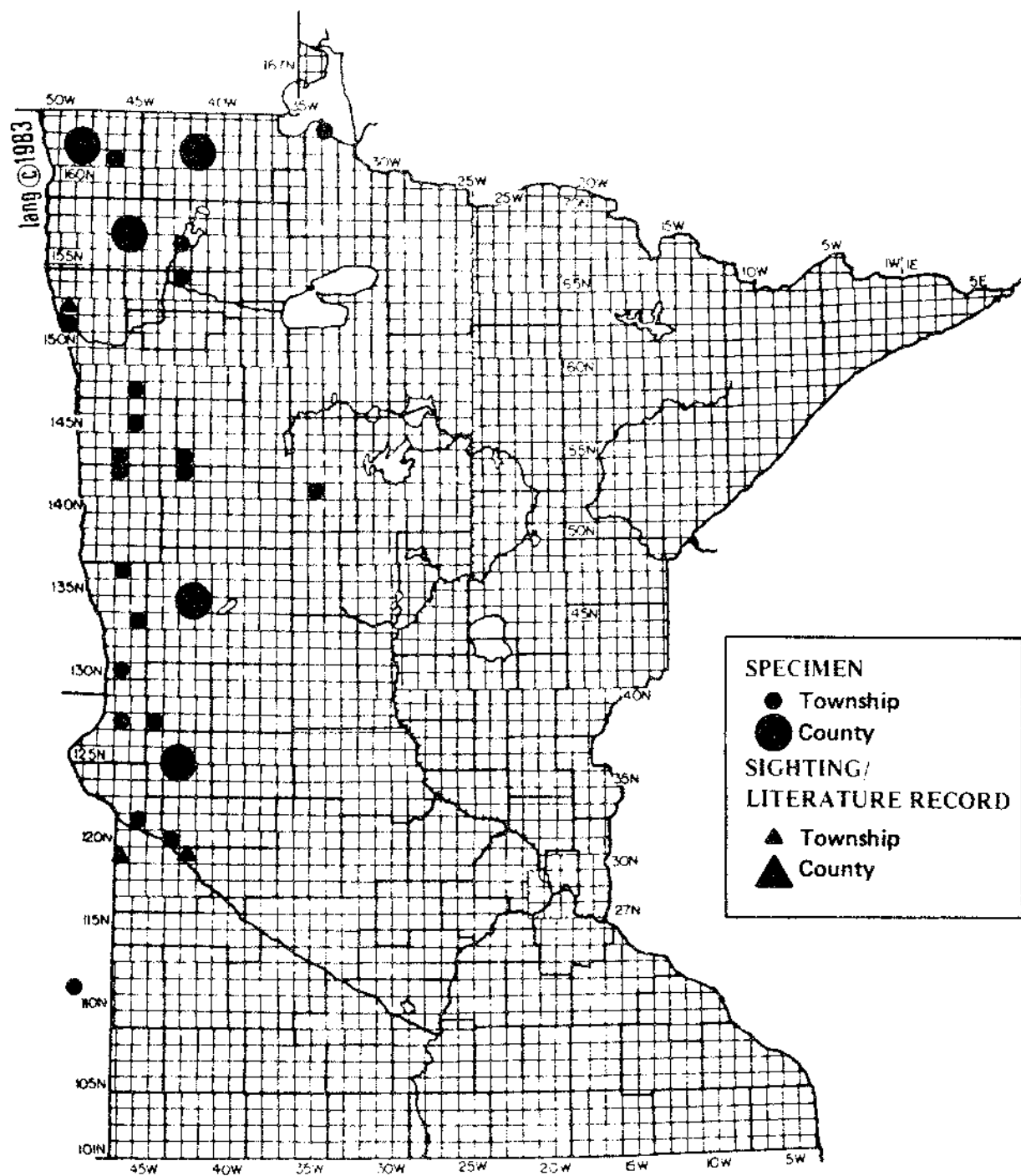
**DISTRIBUTION:** The Great Plains toad occurs along the entire western margin of the state from Rock County in the south to Kittson County in the north. Although the species apparently does not range into Manitoba (Preston, 1983), it is distributed across the Dakotas and south into western Iowa.

**PREFERRED HABITAT:** This species lives in prairie grasslands and breeds in shallow, temporary pools. Individuals forage in vegetation through the summer and overwinter singly by burrowing deep below the surface to avoid freezing temperatures.

**REMARKS:** Further delineation of the eastern boundaries of the species' range in the western part of the state is of interest; in particular, its distribution on the prairie grasslands in southwest Minnesota should be documented with additional sightings and/or specimens.

**SELECTED REFERENCES:** Ewert (1969), Bragg (1936, 1940)





Canadian Toad

*Bufo hemiophrys*

## CANADIAN TOAD

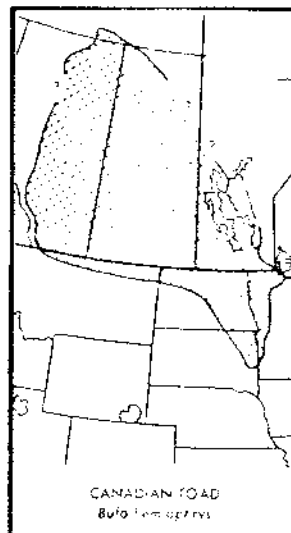
### BUFO HEMIOPHRYS

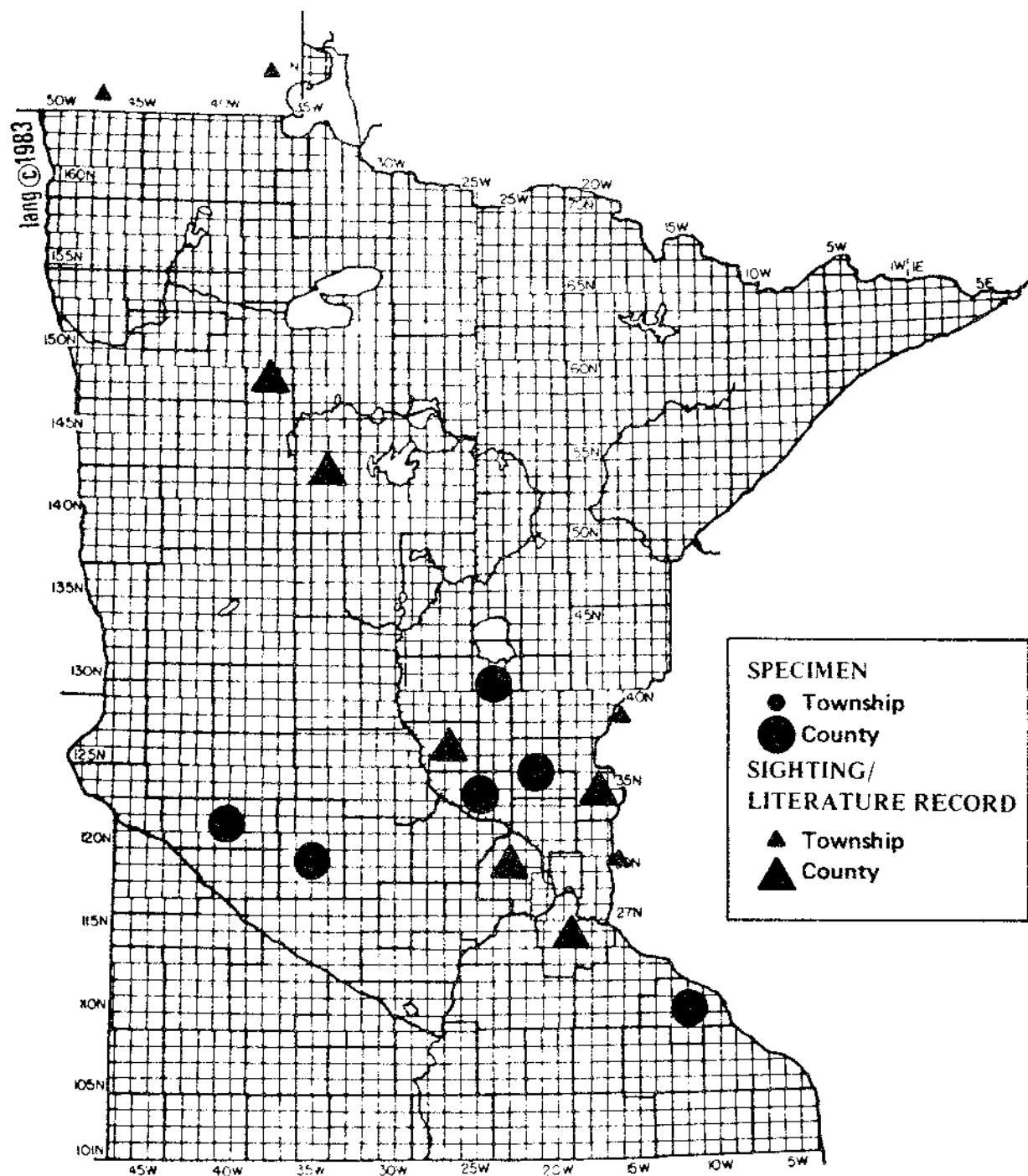
**DISTRIBUTION:** The Dakota or Canadian Toad inhabits the grasslands on the western edge of Minnesota from the Minnesota River north to Kittson County. The species has been reported to the south in Brookings County, South Dakota and ranges throughout eastern and northern North Dakota across southwestern Manitoba. Preston (1983), following Cook (1978), considers hemiohryys to be a grassland subspecies of the americanus group; however, this taxonomic revision has not yet received widespread acceptance.

**PREFERRED HABITAT:** Grasslands of the Red River valley where this toad is typically found living near prairie marshes, potholes, and streams. Breckenridge (1944) indicates that the species is difficult to distinguish from americanus, particularly as juveniles, in morphology and habits. Breeding occurs in temporary pools or the shallow margins of permanent ponds. In northwestern Minnesota, this species typically overwinters in large aggregations in raised earthen mounds on the prairie.

**REMARKS:** Additional information on the range of the species in southwestern Minnesota is desirable. Outlying records for Hubbard and Lake of the Woods Counties should be verified.

**SELECTED REFERENCES:** Breckenridge and Tester (1961)





Cope's Gray Treefrog

*Hyla chrysoscelis*

## COPE'S GRAY TREEFROG

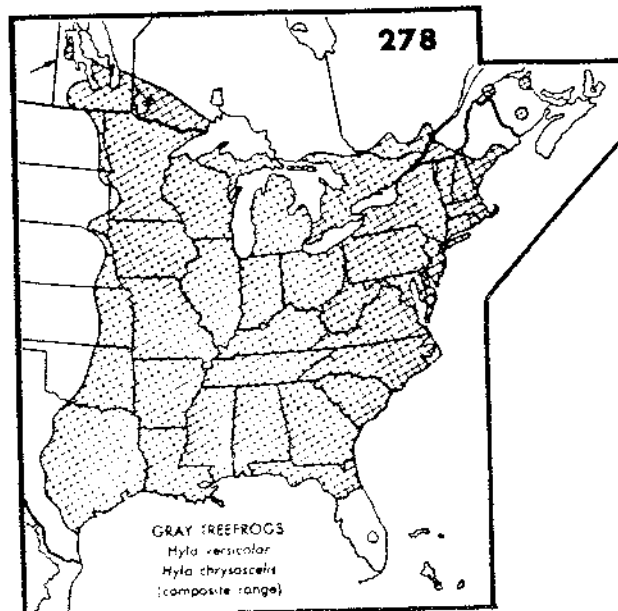
### HYLA CHRYSOSCELIS

**DISTRIBUTION:** On the basis of limited observations/records, this species is distributed from the northwest corner of the state south through the Twin Cities area to Wabasha County. There are two records from the west-central north of the Minnesota River. On a preliminary basis, the distributions of these two closely related species, chrysoscelis and versicolor, appear to be broadly sympatric; however, many more observations are necessary from throughout Minnesota. In Wisconsin (Jaslow and Vogt, 1977) and Michigan (Bogart and Jaslow, 1979), chrysoscelis occurs sympatrically with versicolor which is widely distributed across these states.

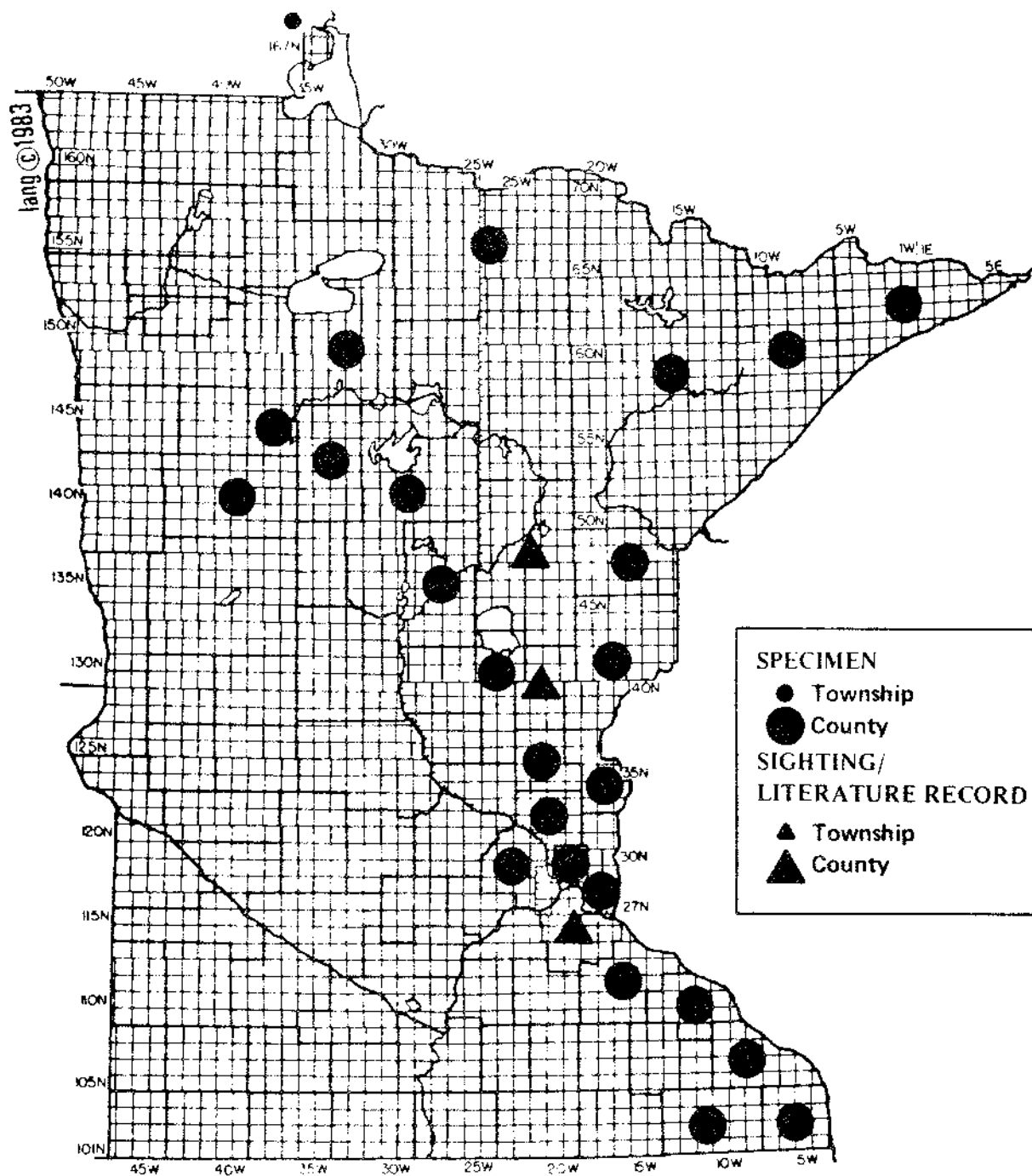
**PREFERRED HABITAT:** According to Vogt (1981), Cope's gray treefrogs occupy the prairie and grassland areas where versicolor may be absent but does not inhabit heavily forested regions of Wisconsin where versicolor does live. Determination of habitat preferences in Minnesota awaits further observations on the distributions of these two species.

**REMARKS:** In Wisconsin, Cope's gray treefrog has a low, harsh, nasal trill with a pulse rate from 41.4 to 71.4/second at 18-26°C; eastern gray treefrogs have a slower musical laughing trill of 14.8-29.0 pulses/second at 18 -26°C (Jaslow and Vogt, 1977). Vogt (1981) describes these two species and presents sonagrams of their calls. The two species are most easily distinguished by the pulse rate of the call.

**SELECTED REFERENCES:** Jaslow and Vogt (1977), Vogt (1981)







Spring Peeper

*Hyla crucifer*

## SPRING PEEPER

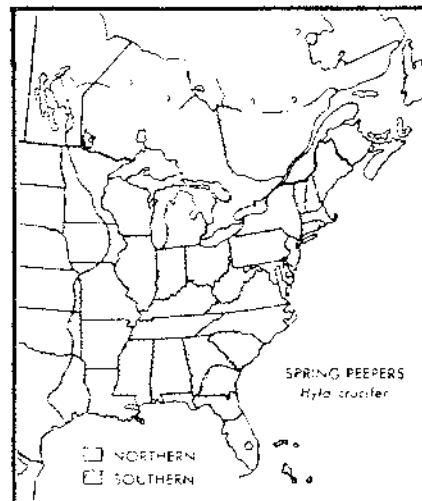
### HYLA CRUCIFER

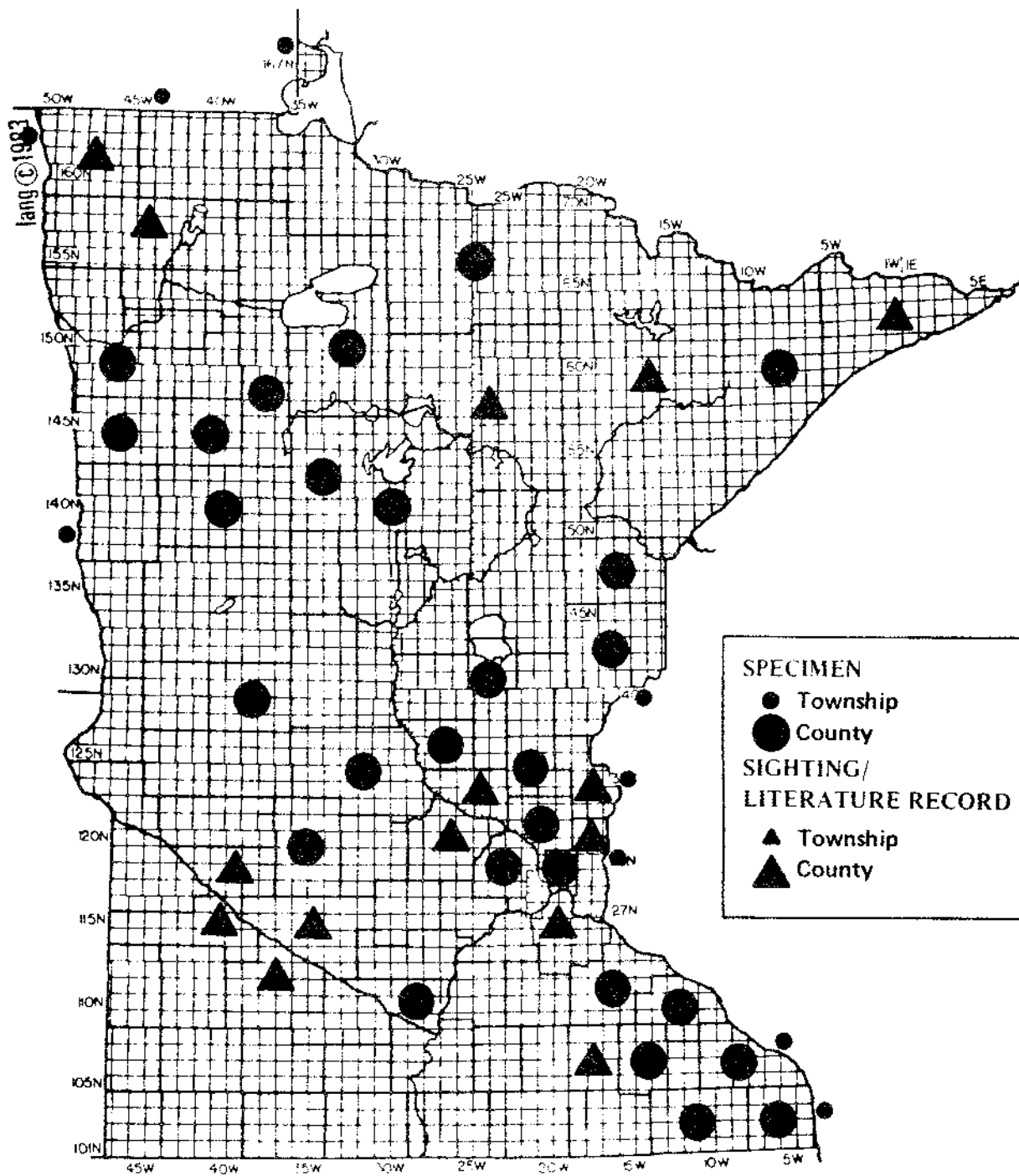
**DISTRIBUTION:** Spring peepers are distributed in the southeast, east-central, and northeast regions of Minnesota; this species appears to be confined to the hardwood and/or pine forests in the state. Records are absent from the Mississippi Valley and west in the east-central area, and the records are scattered in the north-central region. Spring peepers are found throughout Wisconsin (Vogt, 1981) and eastern Iowa (Christiansen, 1981) to the south; and to the north, the species is found along the eastern edge of Manitoba eastward across southern Ontario (Preston, 1983).

**PREFERRED HABITAT:** These small frogs live in woodland undergrowth where they may be encountered in the litter, on the ground, or hopping about from leaf to leaf. They breed in shallow temporary or permanent ponds, sometimes in open areas, but thrive in moist forest habitat; peepers probably overwinter on land in leaf litter in protected situations, and begin calling early in the spring.

**REMARKS:** This species may be present in the remaining woodlands along the Mississippi River north of the Twin Cities, and probably occurs throughout the northern forested sections of the state. Additional information on the distribution of spring peepers along the western limit of their range throughout the state would be of interest.

**SELECTED REFERENCES:** Oplinger (1967), Rosen and Lemon (1974), McAlister (1963), Pope (1944)





Gray Treefrog  
Cope's Gray Treefrog

*Hyla versicolor*  
*Hyla chrysoscelis*

## GRAY TREEFROG

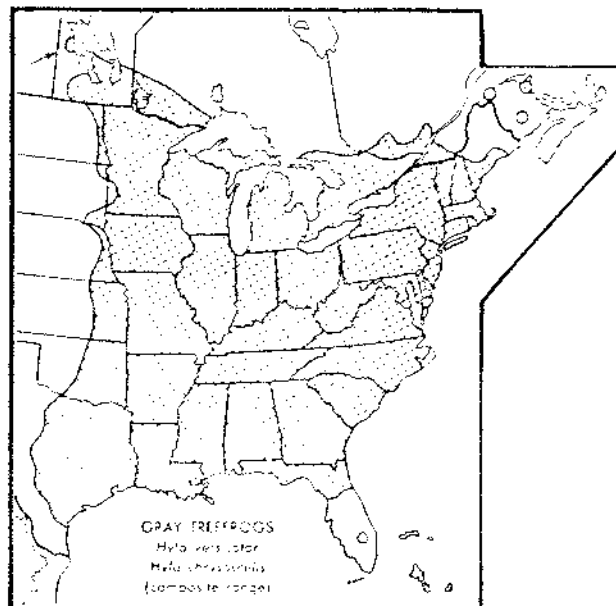
### HYLA VERSICOLOR

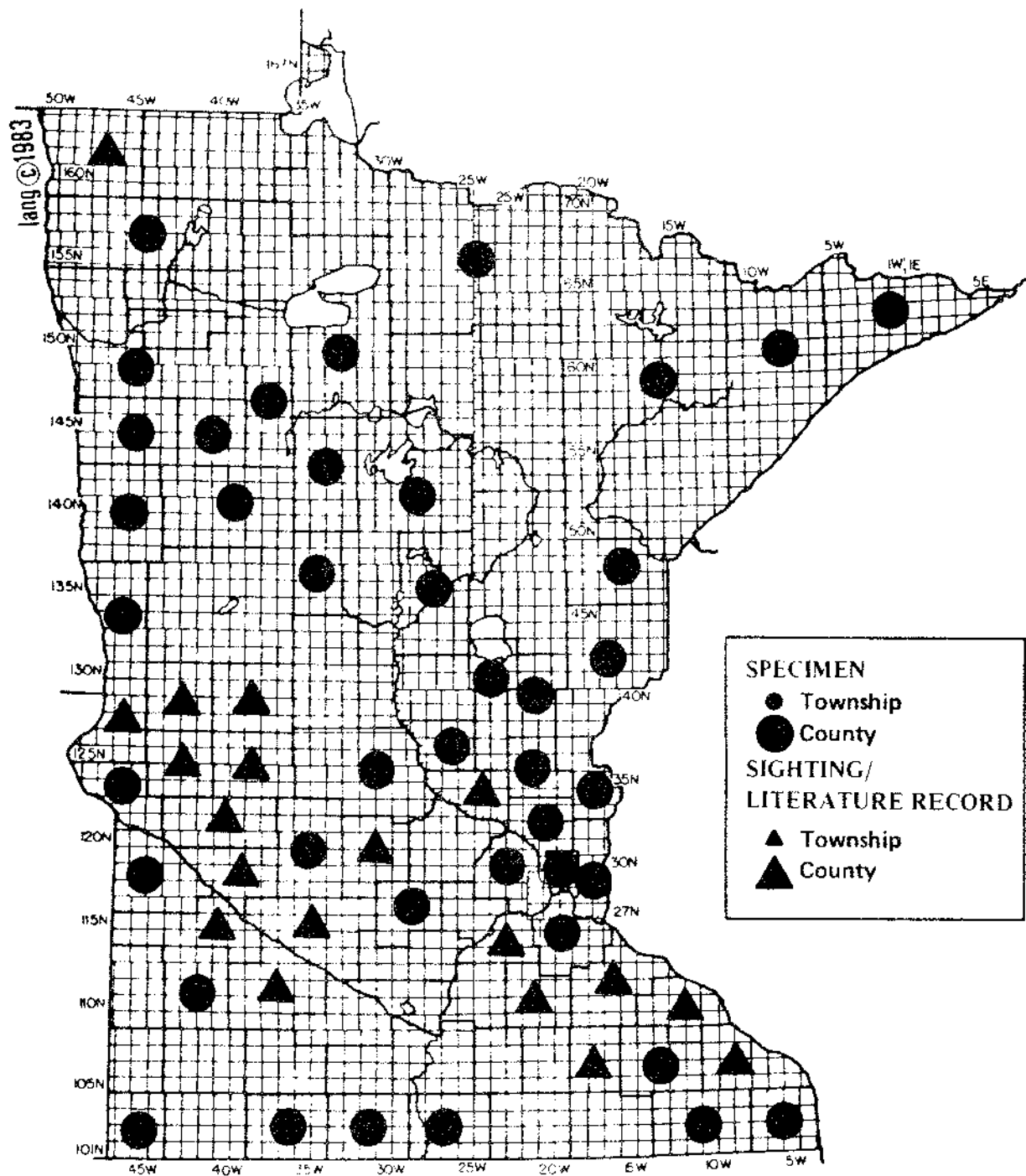
**DISTRIBUTION:** The composite range of versicolor and chrysoscelis indicates that these species are distributed across the northern two-thirds of the state, but confined in the south to the Minnesota River valley and the forested southeast. These species are found throughout Wisconsin and Iowa, but in South Dakota are confined to the floodplain of the Missouri River in the extreme southeast corner of the state (Vogt, 1981; Christiansen, 1981; Dunlap, 1967). There are a few records along the eastern edge of North Dakota (Wheeler and Wheeler, 1966) and the species occur in southeastern Manitoba (Preston, 1983) and southern Ontario.

**PREFERRED HABITAT:** Treefrogs are common throughout northern Minnesota where they are found in association with leafy vegetation near marshes, ponds, and lakes in forested areas. They occur in the grasslands of the northwest, in parkland and along wooded river and stream courses.

**REMARKS:** These species or either one may be considerably more widespread along the western margin of the state from the Minnesota River northward; current records in this area are scattered. Treefrogs probably occur throughout northern Minnesota despite the lack of recorded instances for some counties. Its distribution along the Minnesota River and in the southeast should be delineated with additional sightings/specimens.

**SELECTED REFERENCES:** Pope (1944), Jaslow and Vogt (1977), Minton (1972), Ralin (1968), Johnson (1966), Bogart and Wasserman (1972), Bogart and Jaslow (1979)





Striped Chorus Frog

*Pseudacris triseriata*

## STRIPED CHORUS FROG

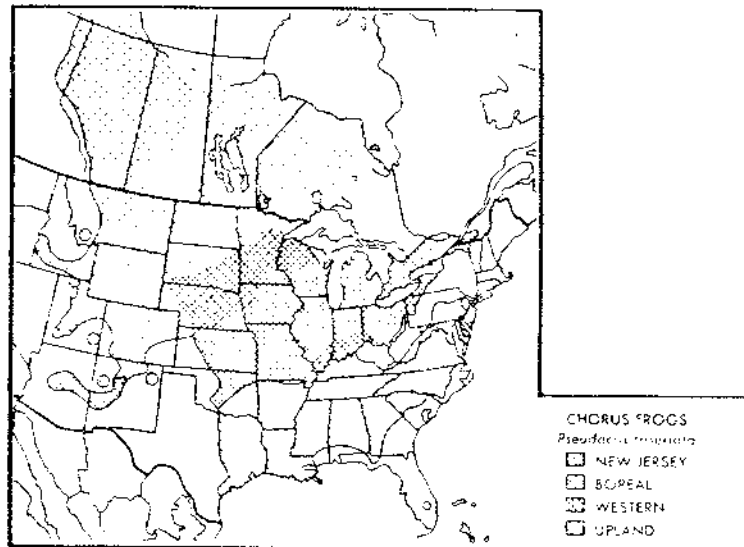
### PSEUDACRIS TRISERIATA

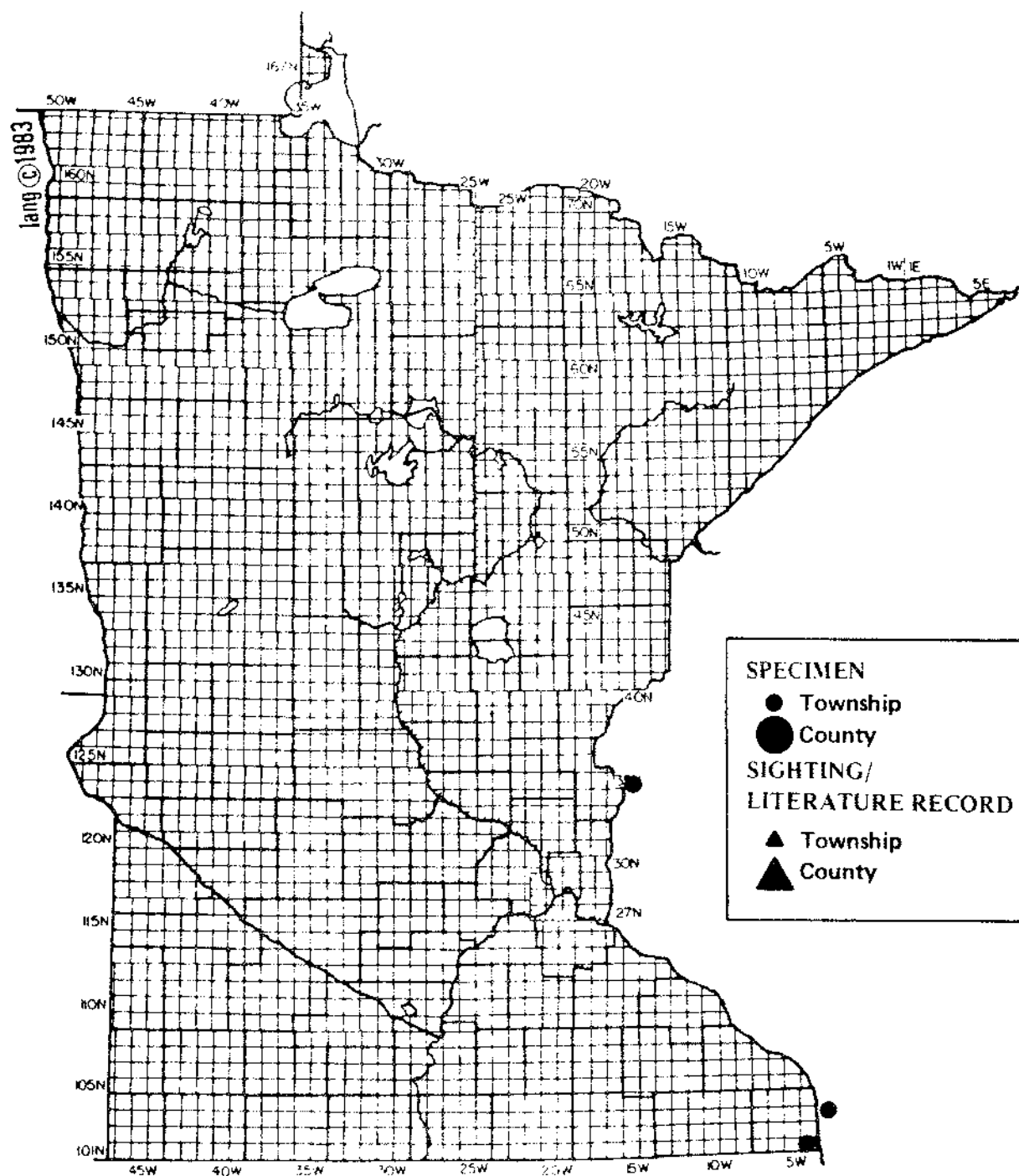
**DISTRIBUTION:** Statewide; occurrence of chorus frogs not documented in scattered counties. The species is common throughout Minnesota and is distributed across the upper midwest.

**PREFERRED HABITAT:** Chorus frogs are ubiquitous in the state; but because they are small and elusive, they are difficult to collect despite a loud, click-like breeding call which resembles the sound produced by running a finger along a comb. They may travel from water, but remain in moist grasslands and woodlands through the summer. This species overwinters by burrowing into leaf litter and "supercooling" to tolerate below zero temperatures.

**REMARKS:** Despite the fact that this frog is common and abundant throughout the state, better documentation of its occurrence is needed as well as further observations on its habitat and habits.

**SELECTED REFERENCES:** Tordoff et al. (1976), Hunka (1974), Pope (1944)





**Bullfrog**

*Rana catesbeiana*

## BULLFROG

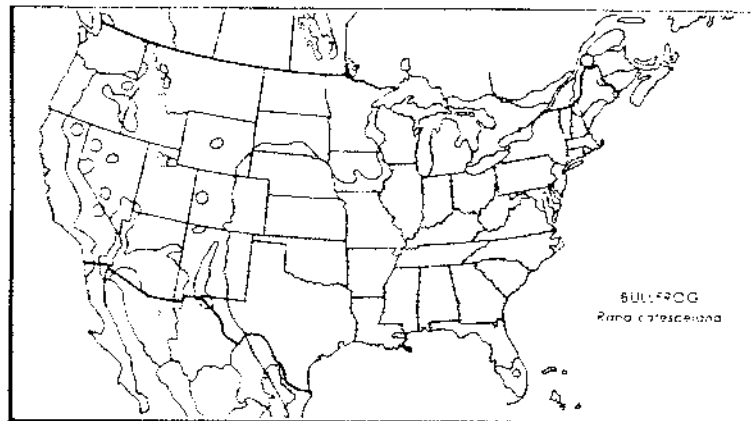
## SPECIAL CONCERN

### RANA CATESBEIANA

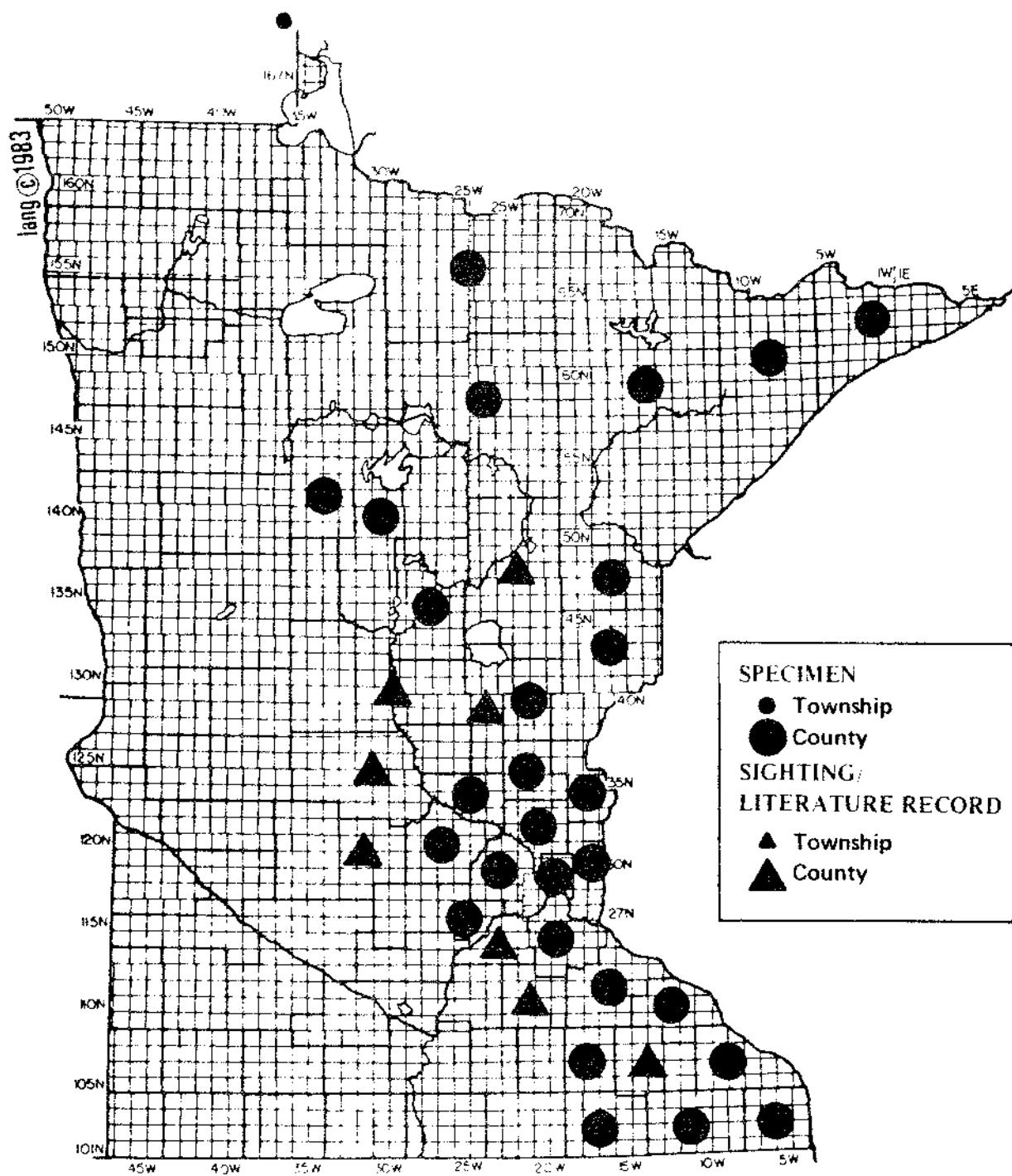
**DISTRIBUTION:** The species is widespread in the eastern and central U.S. It has been introduced into extensive areas in the western U.S. Minnesota is on the northern periphery of its range in the midwest. Bullfrogs have been collected in a number of southeast and metro counties, but viable populations are known only from southern Houston County. Bullfrogs range throughout Wisconsin, but records along the western margin of the state are scattered; the species has been found in Polk County along the St. Croix River and in Overton along the Mississippi near Houston County, Minnesota (Vogt, 1981). The species is widespread and abundant throughout Iowa (Christiansen, 1981). Bullfrogs occur in the floodplain of the Missouri River in extreme southeastern South Dakota but do not occur further north (Dunlap, 1967).

**PREFERRED HABITAT:** The bullfrog requires permanent water in which to breed; its tadpoles metamorphose at the end of their third summer. In Wisconsin, the species is found along permanent bodies of water (Vogt, 1981). In Minnesota, the local populations are restricted to sloughs and backwaters along the Mississippi River bottoms. Slow-moving water with abundant aquatic vegetation is preferred.

**SELECTED REFERENCES:** Korschgen and Baskett (1963), Pope (1944), Emlen (1968) Wiewandt (1969)







Green Frog

*Rana clamitans*

# GREEN FROG

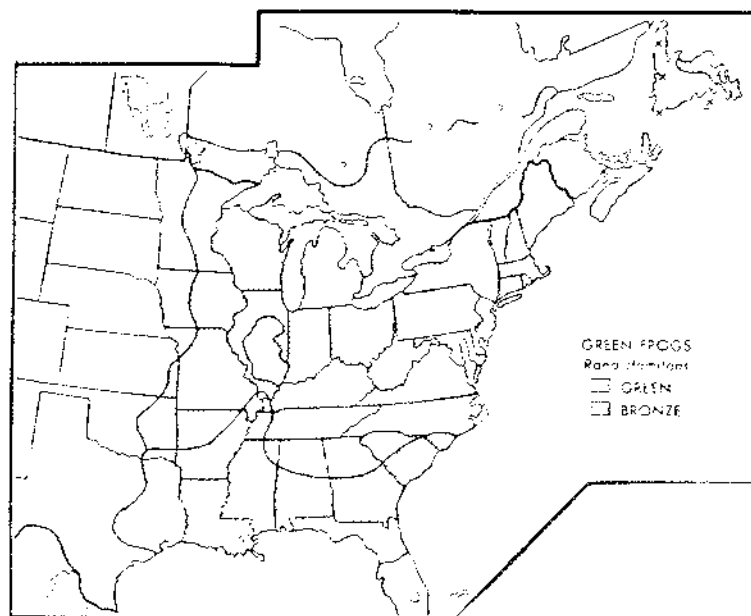
## RANA CLAMITANS

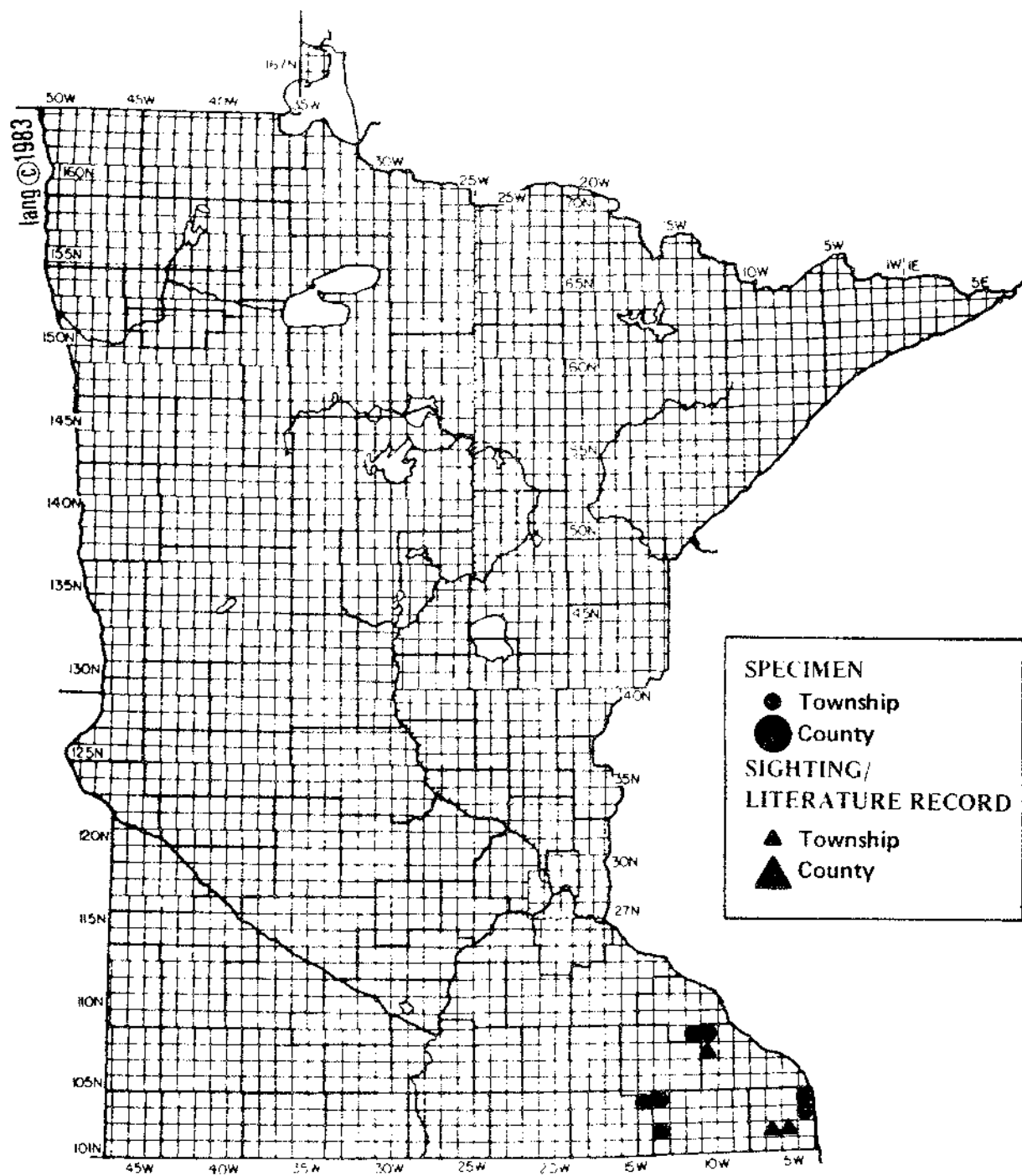
**DISTRIBUTION:** Northeast, east-central, and southeast Minnesota. Green frogs reach their western range limit in the state, but do not extend across the forests to the grasslands in the northern part of Minnesota as do mink frogs. However, like mink frogs, green frogs are also absent from the extensive bogs and peatlands of the north-central region (Karns, unpublished observations). To the south, green frogs occur throughout Wisconsin and eastern Iowa (Vogt, 1981; Christiansen, 1981). To the north, they inhabit the extreme southeastern corner of Manitoba and range across southern Ontario.

**PREFERRED HABITAT:** Green frogs live in or near any body of permanent water. Throughout the state, they inhabit marshes, ponds, lakes, streams, and rivers and adjacent woodlands. Adults spend the winter months in the water; some tadpoles may overwinter before metamorphosing.

**REMARKS:** Reexamination of some specimens to verify identifications is necessary. Further information on the distribution of green frogs in the north-central and southeast regions is desirable, as well as additional data from counties along the western edge of its range. Green frogs may be confused with mink frogs which 1) have more black dorsal markings (spots) margined with yellow, 2) green labial areas (lips) not mottled with brown, 3) no cross-bands on the legs, 4) variable dorso-lateral folds or ridges which may be weak or absent.

**SELECTED REFERENCES:** Pope (1944), Wells (1977, 1978), Martof (1953, 1956).





Pickerel Frog

*Rana palustris*

## PICKEREL FROG

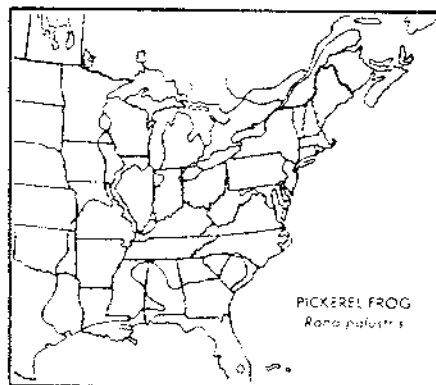
## SPECIAL CONCERN

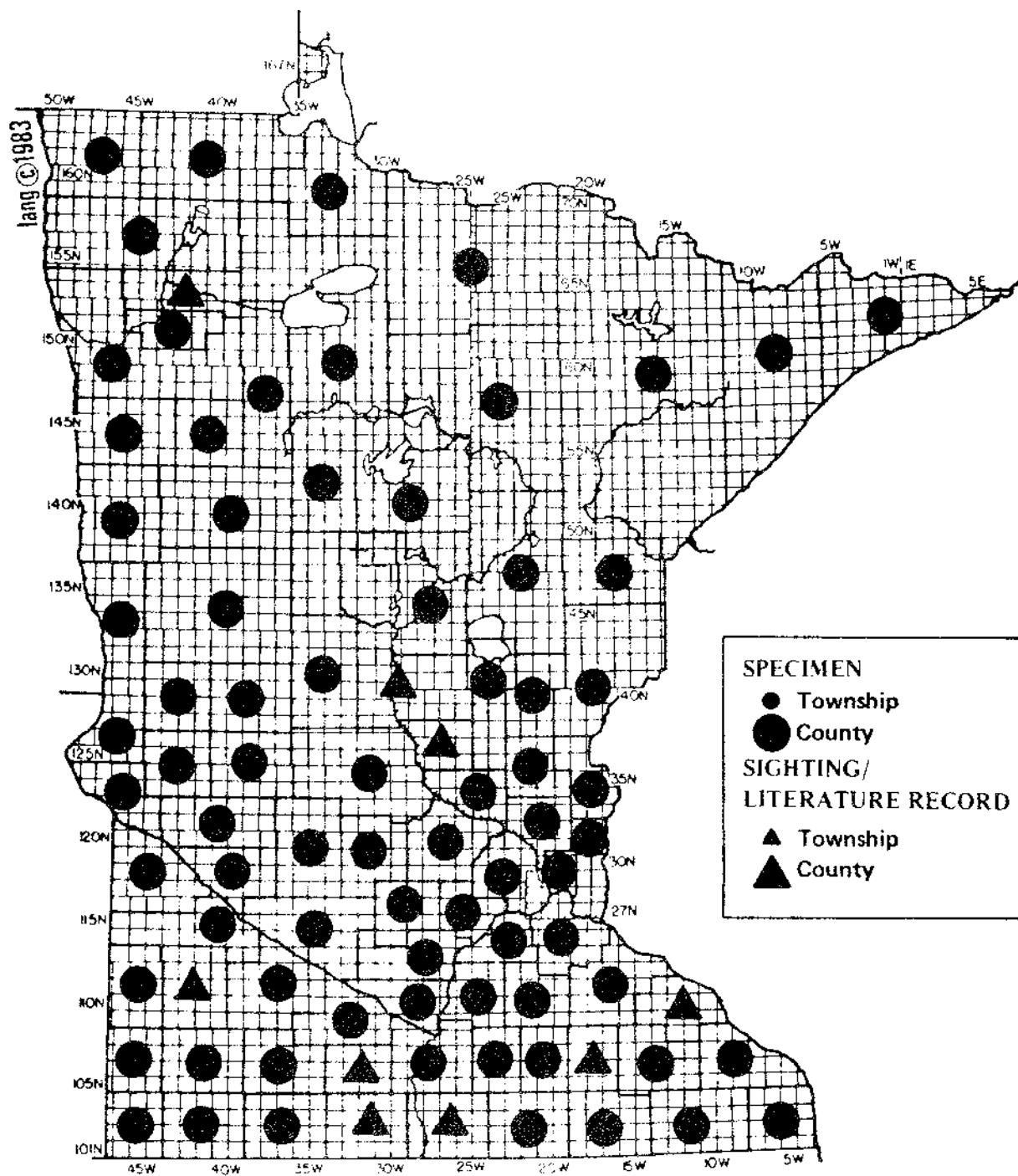
### RANA PALUSTRIS

**DISTRIBUTION:** The species is widespread in northeastern and central U.S. In Wisconsin, the species is rare, occurring only in isolated colonies (Vogt, 1981). In Minnesota, pickerel frogs reach the western periphery of its northern range; the species is known only from the extreme southeastern counties. Pickerel frogs are locally common in some localities, e.g. central Houston County (M. Nehl, unpublished observations).

**PREFERRED HABITAT:** In Minnesota, the pickerel frog prefers clear, cool waters of springs and spring-fed streams. After breeding, frogs remain near water in areas where sufficient vegetation affords protective covering, usually densely canopied forests. Vogt (1981) describes similar habitat preferences in Wisconsin.

**SELECTED REFERENCES:** Pope (1944), Minton (1972), Smith (1961)





Northern Leopard Frog

*Rana pipiens*

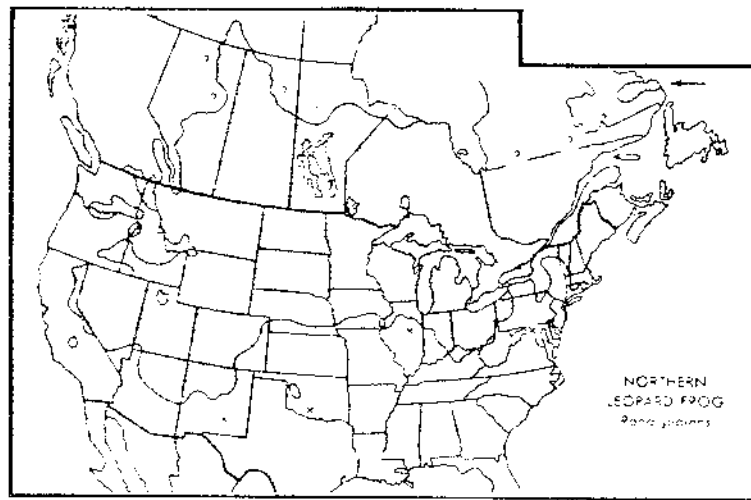
# NORTHERN LEOPARD FROG

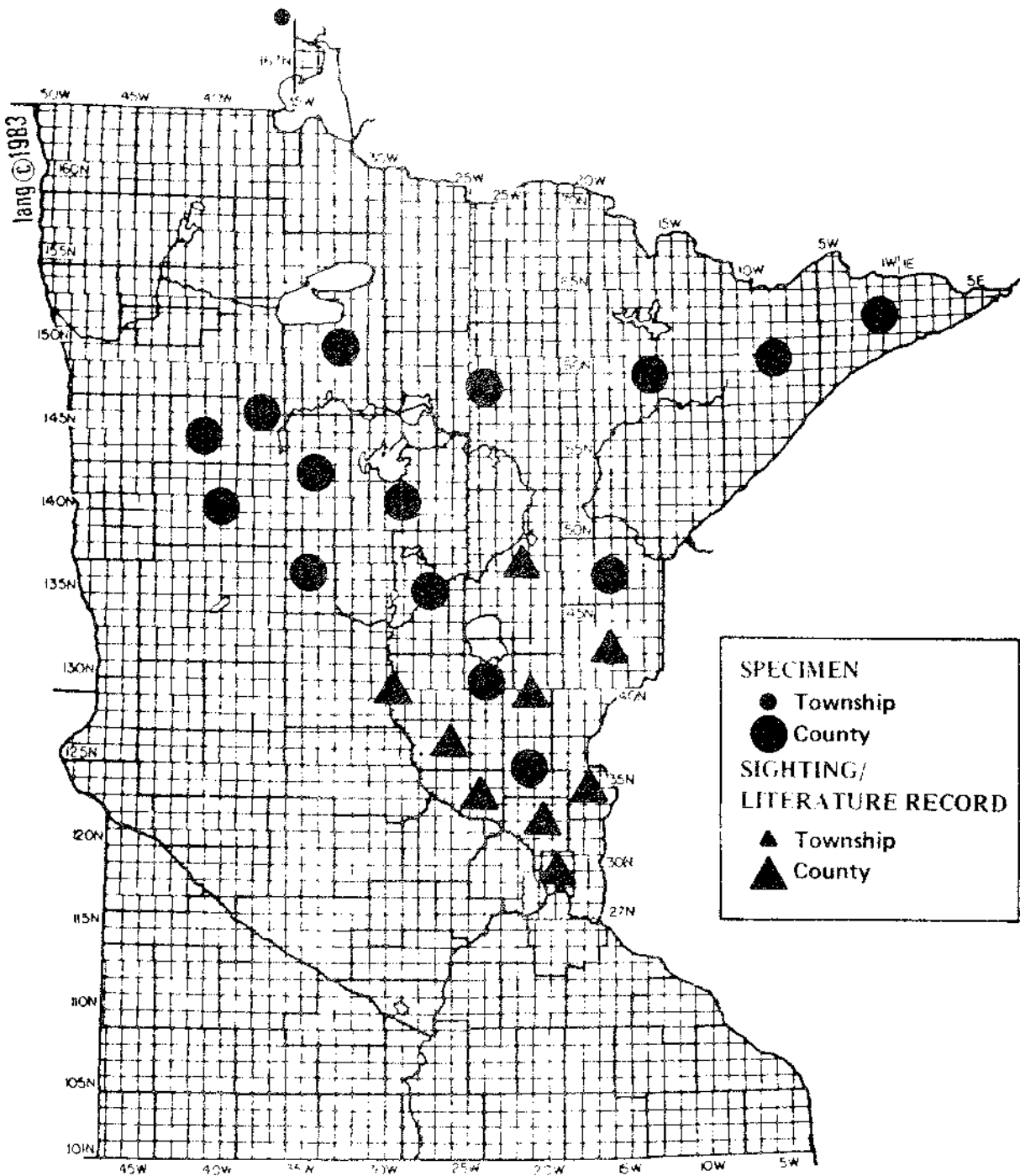
## RANA PIPIENS

**DISTRIBUTION:** Statewide; the presence of leopard frogs is documented in every county in the state except Wadena County where the species undoubtedly occurs. Leopard frogs are distributed throughout the north-central states and provinces bordering Minnesota.

**PREFERRED HABITAT:** Moist meadows and grasslands, but lives in a variety of habitats. The species is terrestrial to a considerable extent and ventures some distance from water. Leopard frogs were encountered in and among the granitic outcrops of the upper Minnesota River valley. They live at the water's edge around the many Minnesota ponds, lakes, and streams in the grasslands and forests of the state.

**SELECTED REFERENCES:** Eddy (1976), Dole (1965), Dunlap and Kruse (1976), Merrell (1977), Pace (1974)





Mink Frog

*Rana septentrionalis*

## MINK FROG

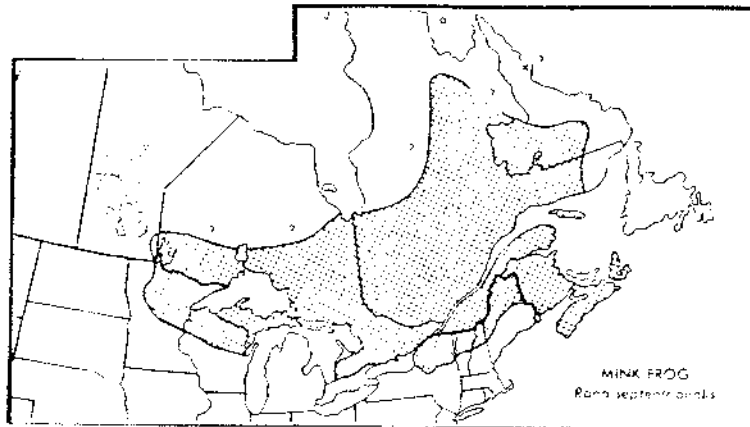
### RANA SEPTENTRIONALIS

**DISTRIBUTION:** Confined to the east-central, north-central, and northeast areas of Minnesota, a range coinciding with pine forests and/or mixed deciduous-coniferous woodlands. Within these forests, mink frogs inhabit the larger and permanent marshes, lakes, and ponds. Mink frogs are not found in the extensive tracts of bog and peatland across northern Minnesota (Karns, unpublished observations), but the species does occur in the lake country of the Arrowhead region. Mink frogs occur across the northern third of Wisconsin, and eastward from southeastern Manitoba through southern Ontario.

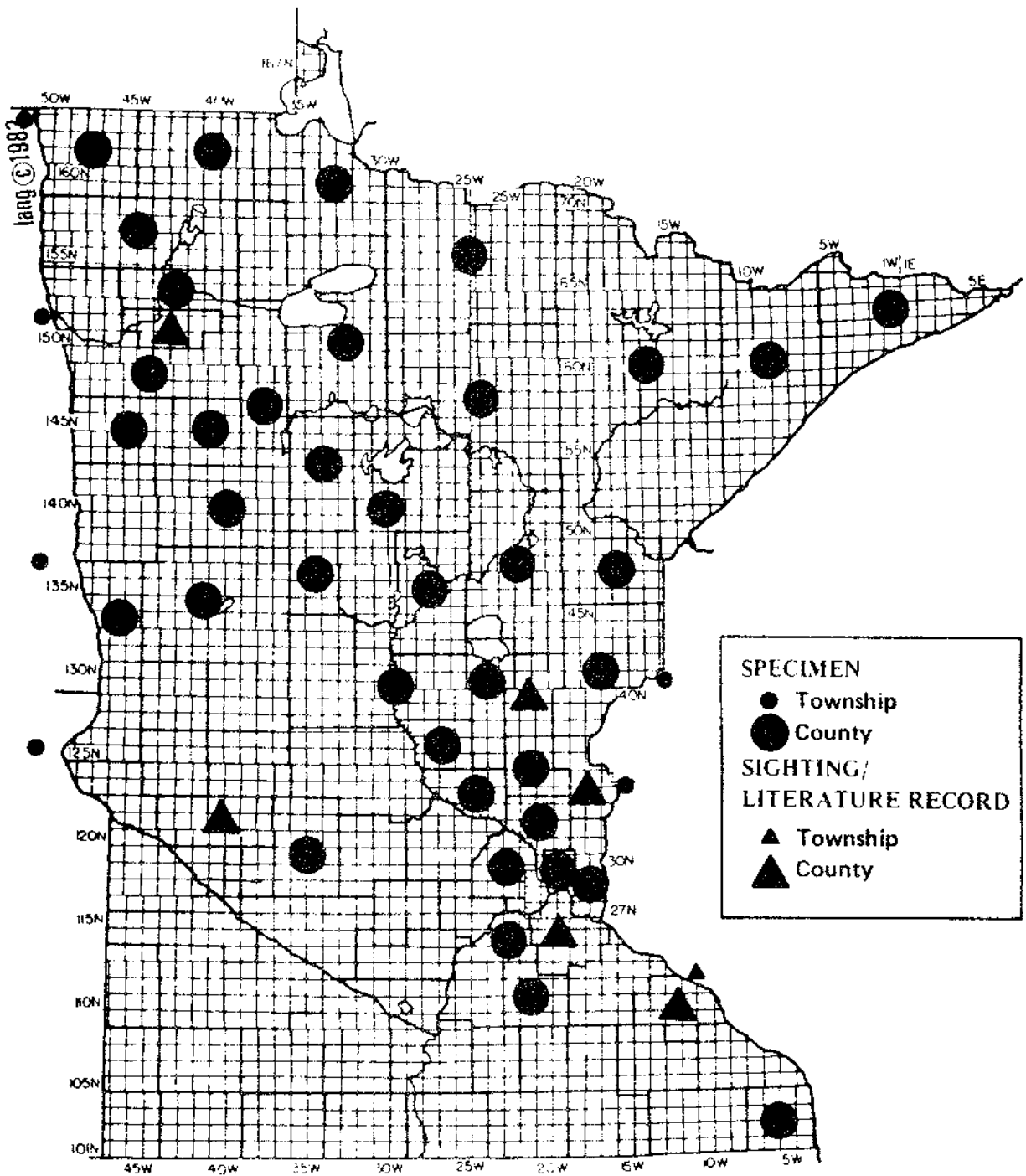
**PREFERRED HABITAT:** Mink frogs are decidedly aquatic and rarely venture overland except when moving between ponds on warm humid nights or during rains. Submergent and emergent aquatic vegetation and relatively deep permanent water are important features of suitable mink frog habitat. Individuals may overwinter as tadpoles and adults have been observed to move considerably under the ice during the winter months.

**REMARKS:** A marked decline in mink frog populations has been documented recently by Tenneson (1983). Additional observations and records of mink frogs, particularly from the margins of its known range in Minnesota are desirable. In particular, its distribution to the south and in the northwest are of interest.

**SELECTED REFERENCES:** Hedeon (1971, 1972a, 1972b), Tenneson (1983)  
Hedeon (1977)







Wood Frog

*Rana sylvatica*

## WOOD FROG

### RANA SYLVATICA

**DISTRIBUTION:** Widely distributed across the north, east-central, and southeast regions of the state. In the north, the species is abundant in the moist woods in the hardwood and pine forests and along the wooded sections of streams and rivers in the grassland. In the southeast, localities inhabited by wood frogs are scattered and confined to the cool, moist and shaded hillsides and ravines in dissected blufflands (W. Stark, unpublished observations). Relatively few records are available for the southwest quarter of the state; there are no recorded occurrences south of the Minnesota River west of Scott-Rice Counties.

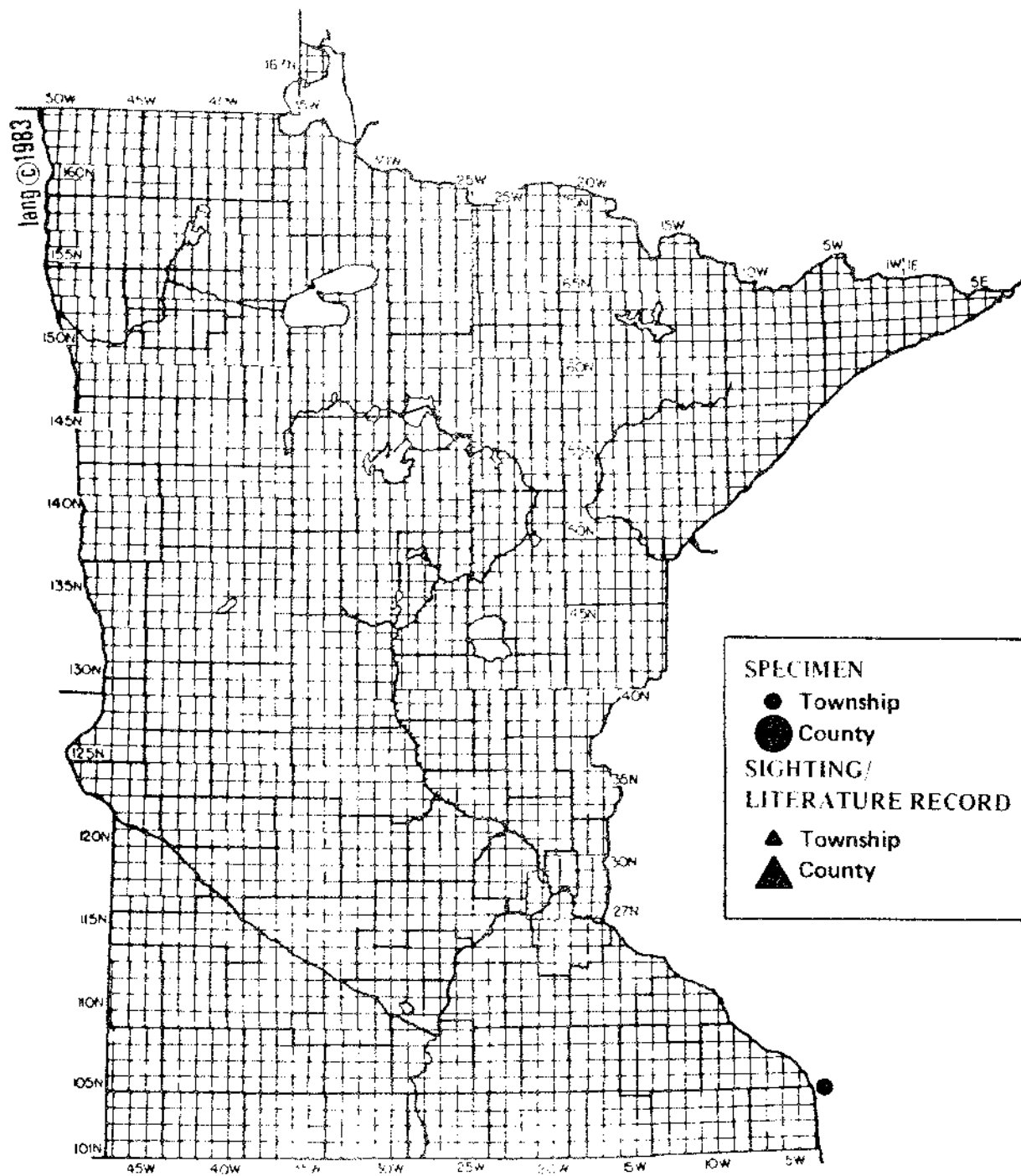
The distribution of this species is likely more extensive north of the Minnesota River than is indicated by present records for the west-central region. Old records indicate its presence on the eastern edge of South Dakota in Roberts County, adjacent to Big Stone and Traverse Counties. Wood frogs inhabited (at least historically) shaded, wooded coulees containing springs which served as the headwaters of the Minnesota River. The species' range extends north through eastern North Dakota and ranges through Manitoba and Ontario to Hudson Bay.

**PREFERRED HABITAT:** Moist forest habitats, typically with dense understory and cover; wood frogs are terrestrial and commonly inhabit uplands to a much greater extent than its congeners.

**REMARKS:** Additional information on the distribution of wood frogs in the southern and west-central regions of Minnesota would be of interest. Also, more detailed observations are needed on the distribution of wood frogs in the southeast corner of the state.

**SELECTED REFERENCES:** Martof (1970), Bellis (1962, 1965), Fishbeck and Underhill (1971), Schueler and Cook (1980), Heatwole (1961).



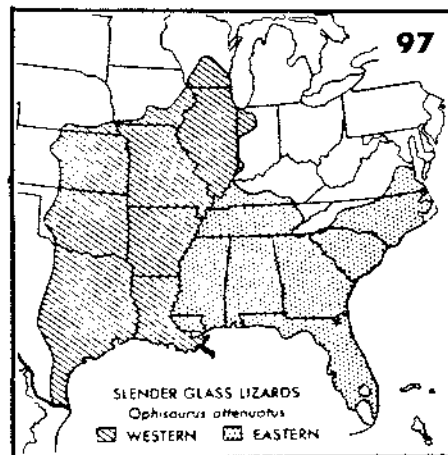


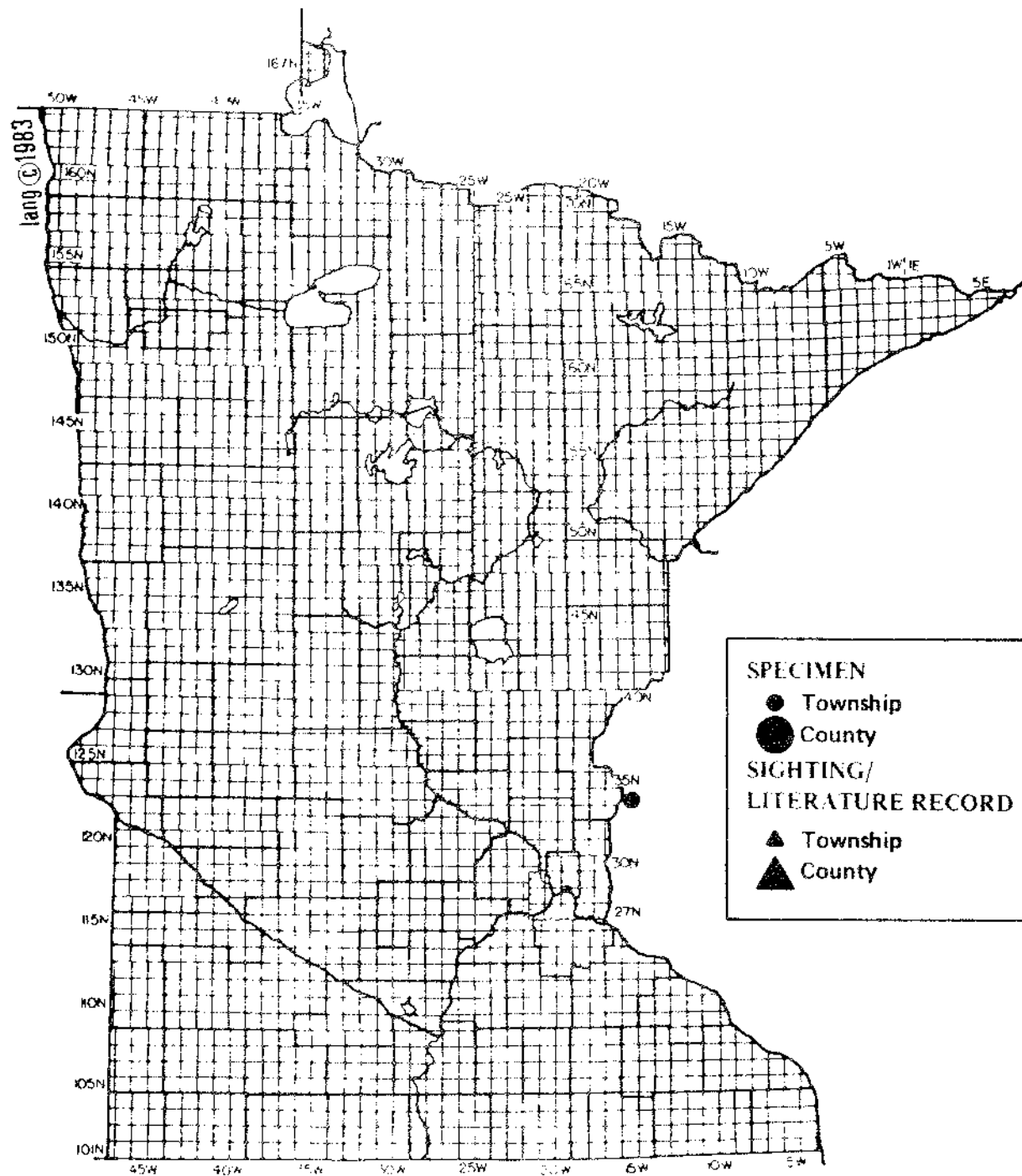
Slender Glass Lizard

*Ophisaurus attenuatus*

SLENDER GLASS LIZARD  
OPHISAURUS ATTENUATUS

POSSIBLE BORDER ENTRANT



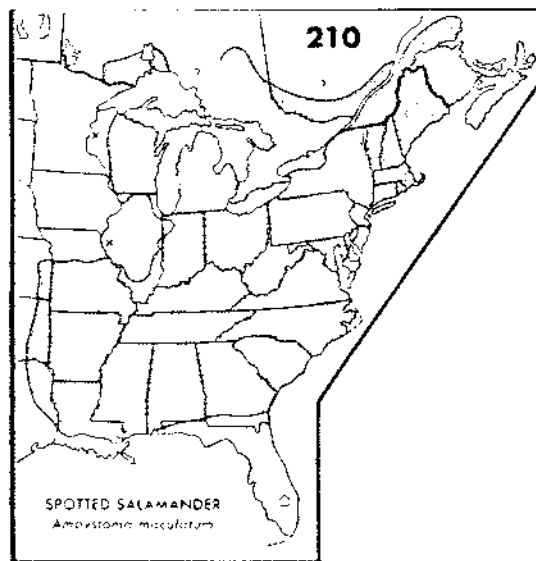


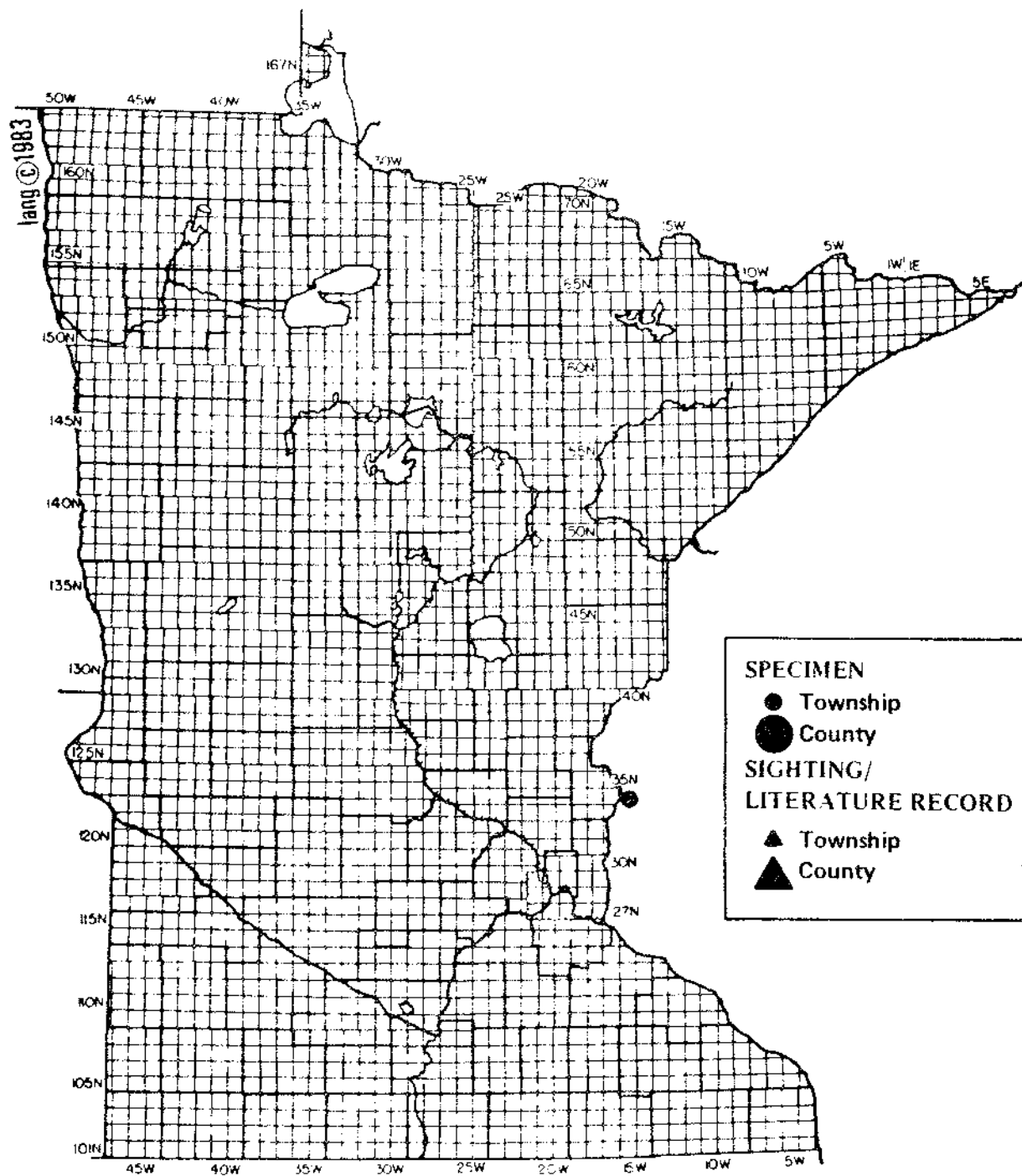
Spotted Salamander

*Ambystoma maculatum*

SPOTTED SALAMANDER  
AMBYSTOMA MACULATUM

POSSIBLE BORDER ENTRANT





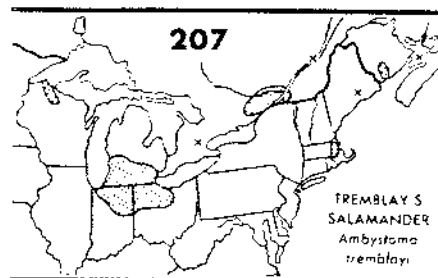
Tremblay's Salamander

*Ambystoma tremblayi*

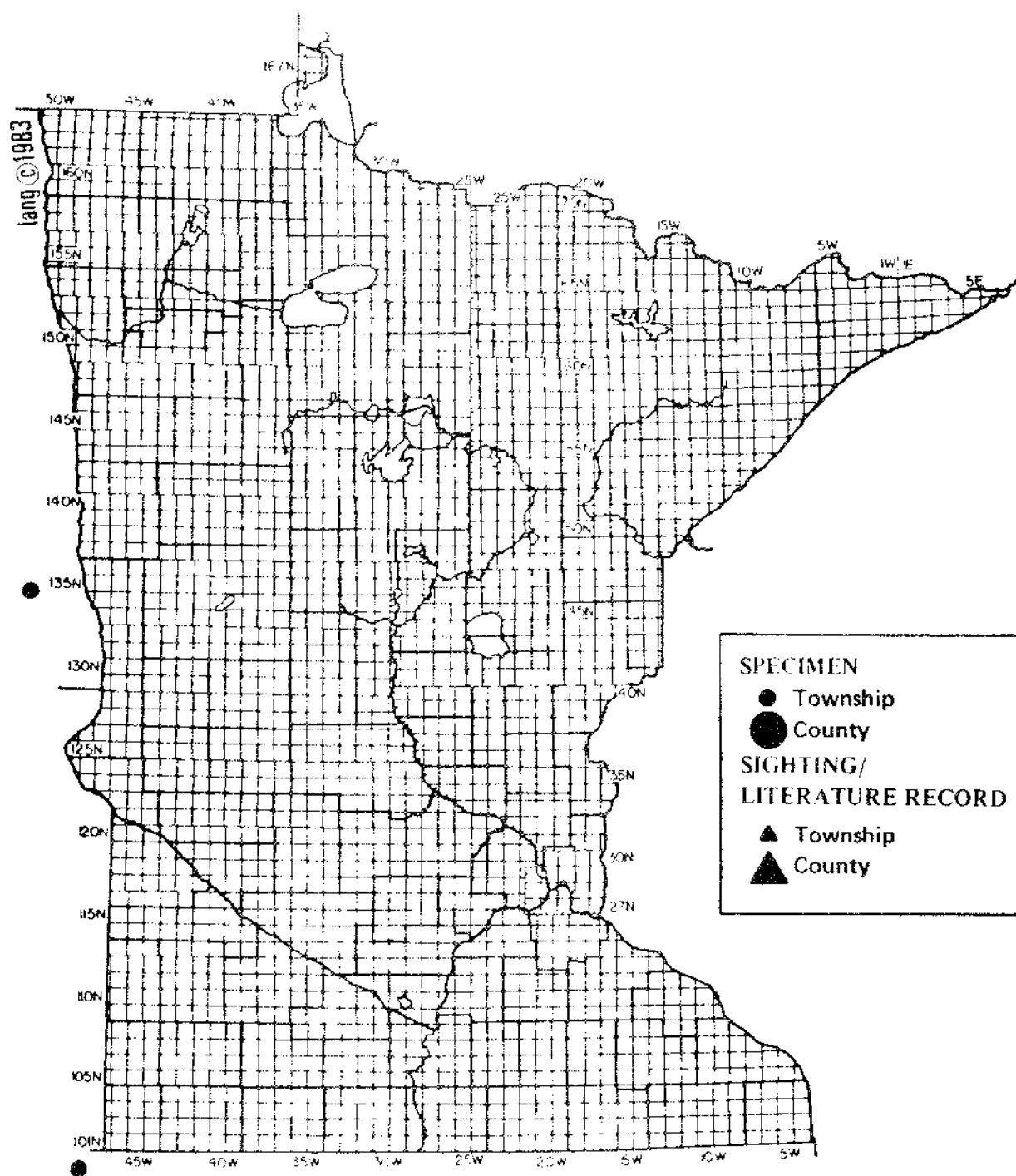
TREMBLAY'S SALAMANDER

AMBYSTOMA TREMBLAYI

POSSIBLE BORDER ENTRANT







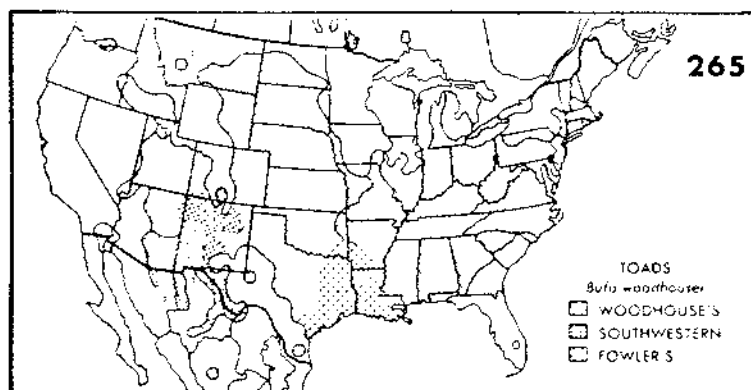
Woodhouse's Toad

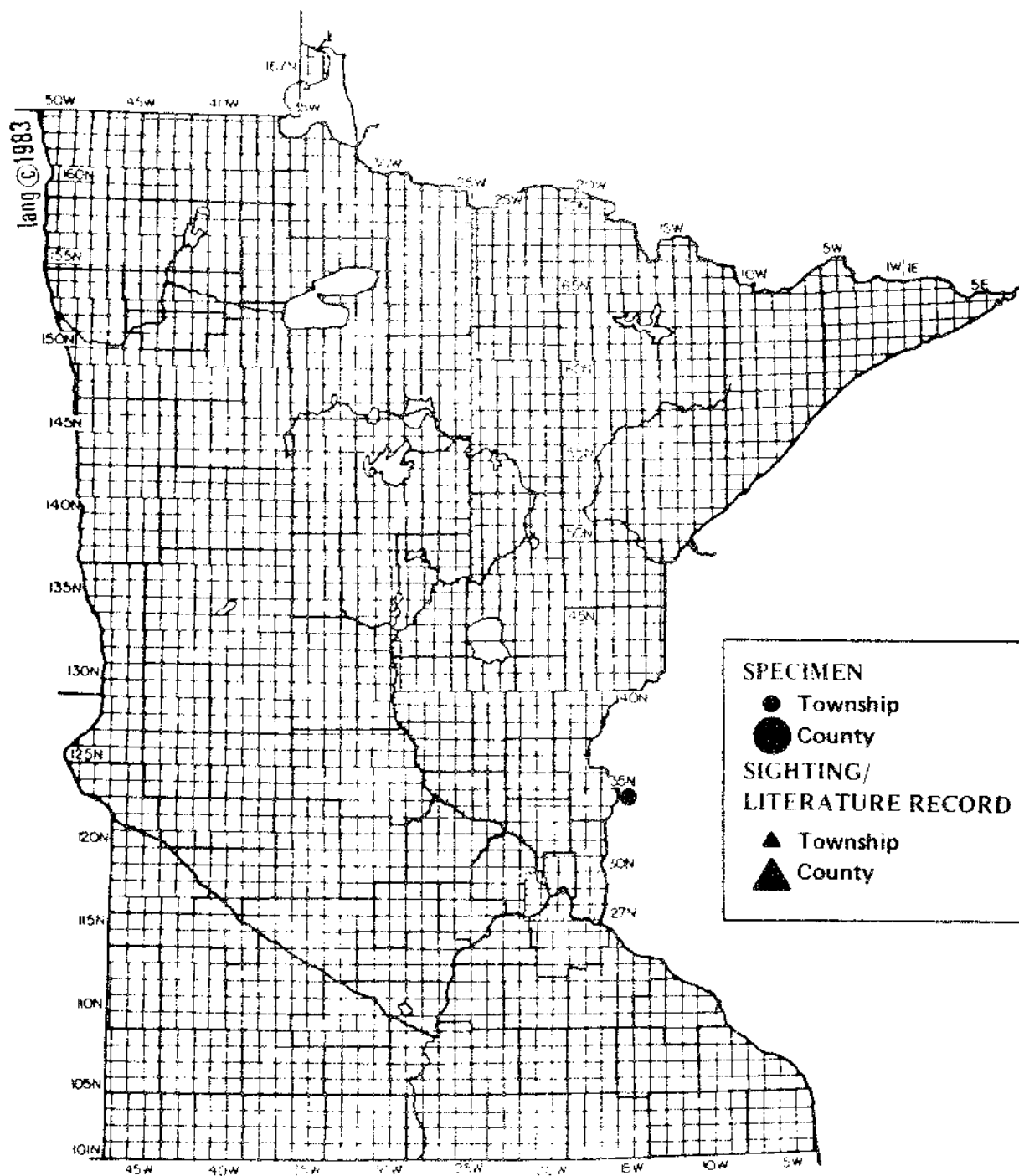
*Bufo woodhousei*

# WOODHOUSE'S TOAD

BUFO WOODHOUSEI

POSSIBLE BORDER ENTRANT





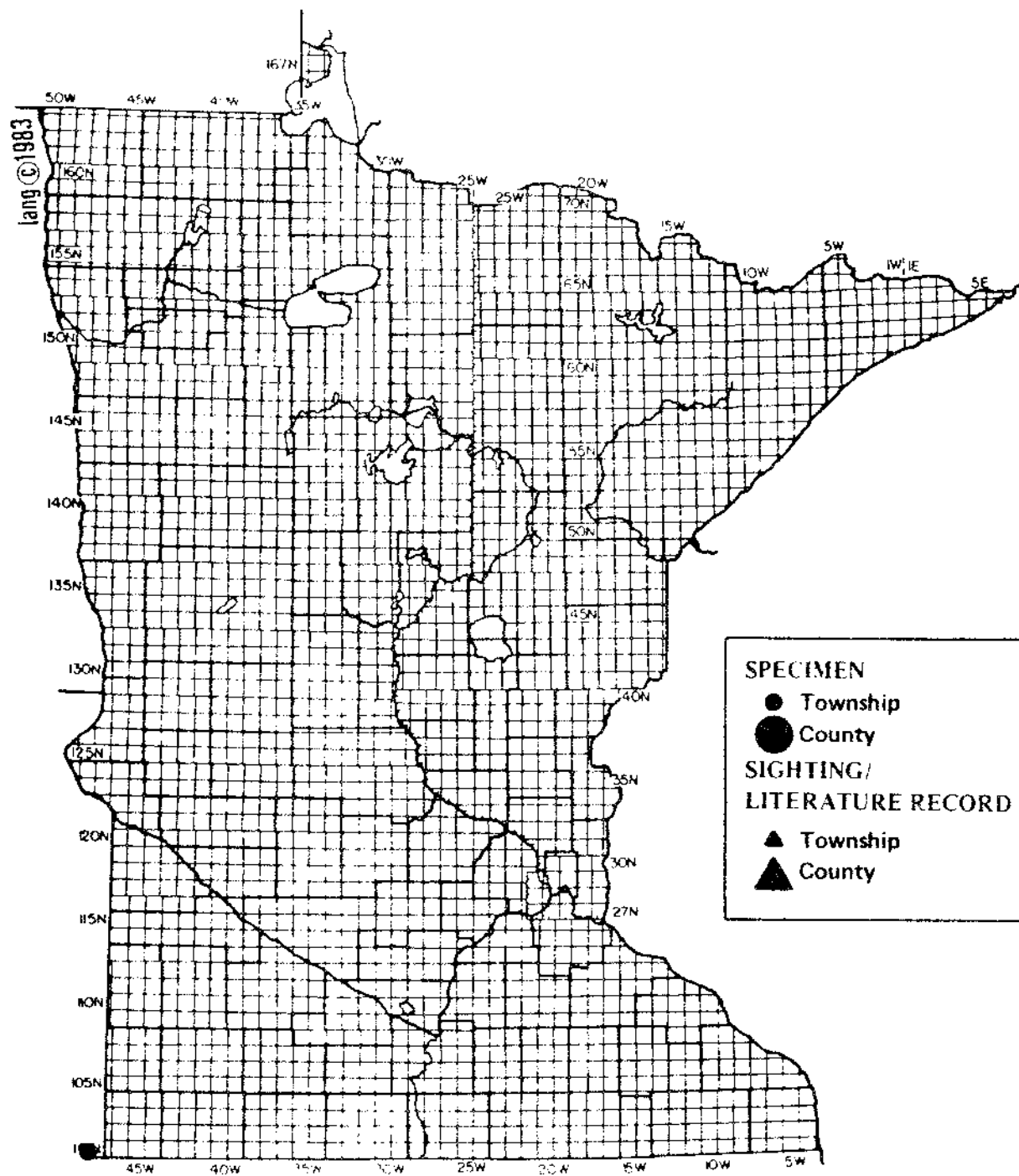
Four-toed Salamander

*Hemidactylium scutatum*

FOUR-TOED SALAMANDER  
HEMIDACTYLUM SCUTATUM

POSSIBLE BORDER ENTRANT





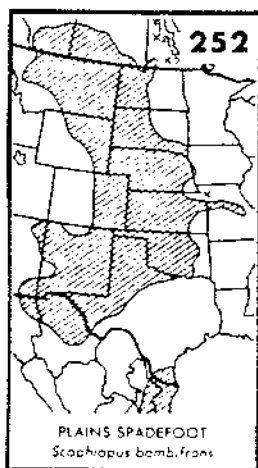
Plains Spadefoot

*Scaphiopus bombifrons*

PLAINS SPADEFOOT

SCAPHIOPUS BOMBIFRONS

POSSIBLE BORDER ENTRANT



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