

DEPARTMENT OF NATURAL RESOURCES

# RESEARCH

## REPORT

95

JULY, 1977

STATUS OF SHARP-TAILED  
GROUSE IN WISCONSIN, 1975

By

P. V. Vanderschaegen  
North Central District

James L. McNelly

Dept. of Natural Resources  
Research Sta., Box 39  
Delafield, Wis. 53108

Res.

### ABSTRACT

A study of the geographic distribution of sharp-tailed grouse (*Pedioecetes phasianellus*) in Wisconsin was conducted in 1975. Past distribution maps are presented along with a 1975 map prepared from information supplied by DNR Wildlife Managers.

Sharp-tailed grouse range has declined since the last published range map (1957-58). Many areas contain remnant sharptail populations which will disappear. Some farm fringe areas and publicly owned sharptail management areas hold the only hope for future sharptailed grouse populations.

### CONTENTS

Introduction . . . . .	1
Methods . . . . .	2
Distribution and Abundance . . . . .	2
Historical . . . . .	2
Present . . . . .	2
Future Outlook . . . . .	3
Literature Cited . . . . .	3
Acknowledgments . . . . .	3

### INTRODUCTION

The sharp-tailed grouse (*Pedioecetes phasianellus*) is one of four species of grouse (family *Tetraonidae*) found in Wisconsin. Others are the ruffed grouse (*Bonasa umbellus*), the spruce grouse (*Canachites canadensis*), and the pinnated grouse or prairie chicken (*Tympanuchus cupido*).

The ruffed grouse is widely distributed and abundant, while the prairie chicken is restricted to two or three relatively small areas in central Wisconsin. Spruce grouse and sharptails both occur over a large geographic area but only in favorable habitat.

The status of sharptails in Wisconsin has been precarious. Kumlien and Hollister (1951:48) commented on sharptails, "At the present time (1903) it is found in any numbers only in isolated sections of the central and northwestern part, and is probably doomed to speedy extinction in the state." Grange (1948: 235-236) also noted the precarious status of the sharptail. "The sharptail in Wisconsin is similarly doomed as a hunted species but is apt to persist longer as a rare species. It may continue to survive another five decades, but again in the absence of adequate management techniques or of widespread fire, it inevitably will go on the rare or non-hunted bird list." Hamerstrom et al. (1952) called for action to prevent the disappearance of sharptails "into the shadows." Since the time of these earlier surveys, Wisconsin has continued to lose sharptails because of habitat changes as has adjacent Upper Michigan (Ammann 1963).

This study was undertaken to update the status of the sharp-tailed grouse in Wisconsin and to focus attention on needed management that will help preserve this species as a part of our fauna.

#### METHODS

A 1975 distribution of sharp-tailed grouse in Wisconsin was determined using information provided by DNR wildlife managers. Managers were requested to submit county maps showing the distribution of sharptails and to make comments on the relative abundance of these birds in the areas marked on the maps. More detailed information was requested on management areas having significant sharptail populations, including: (1) legal description, (2) estimated sharptail population, (3) long-term population trend, (4) habitat description, (5) habitat stability, (6) management practices, and (7) ownership.

#### DISTRIBUTION AND ABUNDANCE

##### Historical

Schorger (1944:25) stated that the sharp-tailed grouse "was to be found actually or potentially in all parts of the state." There was confusion between sharp-tailed grouse and prairie chickens in the early records which Schorger reviewed. However, he felt sure that sharptails occurred on the southern prairies of Wisconsin in the early 1800's. By 1852 they had become rare in southeastern Wisconsin and were gone by 1856 (Schorger 1944). Some sharptails apparently persisted in the south central parts of the state into the 1900's.

Sharp-tailed grouse apparently reached a peak of abundance in Wisconsin during the 1930's and 40's. This was the time of maximum "open land" areas over the north. In earlier times, sharptails were more common in southern Wisconsin. More intensive farming practices apparently drove the sharptails from southern Wisconsin by 1869 (Kumlien and Hollister 1951).

The earliest published range map for Wisconsin sharptail shows the 1929 range (Fig.1). Leopold (1931:163) and Gross (1930:26) both show the 1930 distribution of prairie chickens and sharp-tailed grouse.

Scott (1947) published the next map of sharptail range showing the 1938 distribution. Sharptails in 1929 and 1938 were restricted to the northern and central areas where they are still found. The 1938 population level was probably near a low in the population "cycle" of prairie grouse abundance in Wisconsin (Grange 1948:91).

The next published map of sharptail distribution shows the 1941 range. Although distribution was mapped during a population high (Grange 1948:91), it shows a decrease in range since the 1938 "cyclical low" distribution.

The maps for 1938 and 1941 undoubtedly indicate only the outer extent of sharptail distribution. Grange (1948:146) said about his map: "It cannot be stated that all habitat suited to sharptails and lying within the boundaries shown is now occupied, but it can be stated definitely that habitats lying outside the boundaries shown are not occupied." He also noted (p. 150) that the northern range is composed of many small, noncontiguous habitat units.

The next published sharptail range maps show the distribution for the years 1948 to 1953 and for the years 1957-58. Little change is apparent between these range maps, although a reduction occurred in areas with abundant populations.

##### Present

In the 1975 range map, shaded areas are those areas where sharptails were reliably documented. Lines were drawn around the locations of observed birds to make this map comparable to the other maps. Sharptails are not found throughout the shaded areas, especially the larger ones.

The shaded area in Douglas and Bayfield Counties is the largest contiguous block of sharptail range in the state, but abundance of birds within this area varies greatly. In some areas sharptails occur throughout entire townships (Gordon and Solon Springs areas) while in other localities they are found in only a few spots or scattered thinly (D. Bublitz pers. comm.).

The second largest area of currently occupied sharptail range in Wisconsin is contained in the Rusk and Sawyer County range and consists of remnant flocks inhabiting localized areas of suitable habitat (F. Vaneciek pers. comm.). Sharptails in western Taylor County are concentrated on the Pershing Wildlife Area where an increasing sharptail population is reported (C. Wiita pers. comm.).

The third largest block of sharptail range occurs in central Wisconsin in Wood, Portage and Marathon Counties. This area is similar to the Rusk-Sawyer range in that it supports scattered flocks on areas of suitable habitat. This same situation applies to the range in Jackson County (E. Kohlmeyer pers. comm.).

The remaining sharptail areas shown consist of isolated pockets of suitable habitat holding remnant flocks. Northeast and north central sharptail range is exclusively of this pattern -- nowhere in this region are there large contiguous areas holding secure populations. Comments by questionnaire respondents consistently reflected pessimism about the security of these isolated populations. "I believe that the long-range trend in all areas is downward. Within the past decade I have seen at least four residual populations disappear entirely . . ." (L. Lintereur pers. comm.) "Sharp-tailed grouse habitat on private lands continues to deteriorate" (pers. comm. H. Libby). "Except for the few sharptails that have existed for several years on the Dewey Area, Portage County cannot be considered as having a thriving population" (pers. comm., R. Anderson).

Distribution of sharptails in the north changed little between 1938 and 1958. The central forest range was smaller in 1941 but was similar in 1938, 1948-53, and 1957-58. The 1975 distribution shows a decrease in range in both the northern and central forest area, and this decline in total area is larger than any recorded in earlier surveys.

Coupled with the decrease in area within the "range" line of the 1975 map is a reported decline in sharptail density within the occupied range. This is the most disturbing aspect of the 1975 distribution. Most of the former statewide range now has only scattered, insecure flocks.

#### FUTURE OUTLOOK

Land use practices on private land will contribute to greater decreases in years to come. Many sharptail populations on private land will disappear and populations on public lands will decrease and be more restricted as supporting habitat on private lands deteriorates.

Sharptails are presently restricted to six habitat types in Wisconsin. Five of these types were listed by Hamerstrom et al. (1952). These include: (1) old burns, (2) abandoned farms, (3) frost pockets, (4) off-site aspen, and (5) open bogs. To this list I have added large clearcuts. Clearcuts located adjacent to the other five habitat types can furnish additional temporary range. In recent years the importance of frost pockets to sharptails has decreased greatly because most of these have either been planted with pines or reduced in size by natural tree and shrub invasion.

I believe that open bog habitat will lose its value as sharptail habitat in the future. These open bogs are closing in with black spruce, tamarack, and willow due to the absence of fire. Open upland areas surrounding these open bogs are also closing in; these adjacent areas formerly furnished important components of sharptail bog habitat.

The future home for sharp-tailed grouse in Wisconsin lies in areas of farm or farm fringe that occur within the area of occupied range or in isolated large managed wildlife areas that are publicly owned. The farm or farm fringe areas which hold significant sharptail populations are in Taylor, Rusk and Douglas Counties. Although there are 16 wildlife areas with sharp-tailed grouse populations present (Fig. 2 and Table 1), the outlook for sharptails on many of them is not good. These areas will support ever smaller populations as surrounding habitat deteriorates, and management as presently conceived will not be able to offset the habitat loss on the areas themselves. Examples of areas that have a bleak outlook for sharptails include Thunder Marsh and Powell Marsh. The large wildfire in the fall of 1976 may have "saved" Dewey Marsh as sharptail habitat.

Five state-managed wildlife areas have a future for good sharptail populations: Douglas County Wildlife Area, Douglas County; Mead, Marathon County; Pershing, Taylor County; Namekagon Barrens, Burnett County; and Dike 17, Jackson County.

#### LITERATURE CITED

- Ammann, G. A.  
1963. Status and management of sharp-tailed grouse in Michigan. *J. Wildl. Manage.* 27(4):802-809.
- Grange, W. B.  
1948. Wisconsin Grouse Problems. Wisconsin Conservation Dept. Madison. 318 pp.
- Gross, A. O.  
1930. Distribution and numbers of prairie chickens and sharp-tailed grouse. Progress Report of the Wisconsin Prairie Chicken Investigation. Wis. Conserv. Comm., Madison.
- Hamerstrom, F., Jr.  
1960. Prairie grouse studies. Research in Wisconsin, 1958-59. Wisconsin Conservation Dept. Madison (pp. 92-96).
- Hamerstrom, F., F. Hamerstrom and O. E. Mattson.  
1952. Sharptails into the shadows? *Wisconsin Wildl.* No. 1. Wisconsin Conservation Dept. Madison. 35 pp.
- Kumlien, L. and N. Hollister.  
1951. The birds of Wisconsin. Wisconsin Society for Ornithology. Madison. 122 pp.

Leopold, A.

1929. Report on a game survey of Wisconsin. Sporting Arms and Ammunition Mfg. Inst.

1931. Report on a game survey of the North Central States. Sporting Arms and Ammunition Mfg. Inst. Madison, Wis.

Schorger, A. W.

1944. The prairie chicken and sharp-tailed grouse in early Wisconsin. Trans. Wisconsin Acad. Sci., Arts and Letters. 35:1-59.

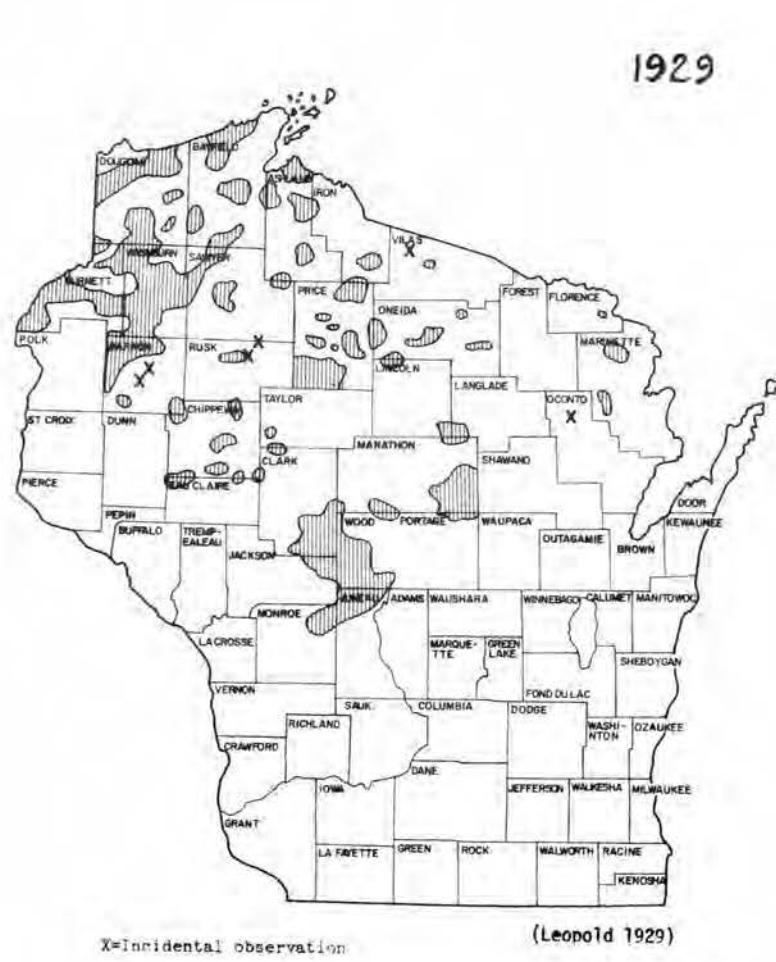
Scott, W. E.

1947. The greater prairie chicken. Wisconsin Conservation Bull. XIL(1):23-27.

#### ACKNOWLEDGMENTS

The following people contributed information for this report: Ray Anderson, John Berkhahn, Donald G. Bublitz, John Dunn, J. O. Evrard, Bruce E. Gruthoff, Tom Hansen, Chet Botwinski, Eugene M. Kohlmeyer, Ray Kyro, Harry Libby, Leroy Lintereur, Carl J. McIlquaham, Steve Miller, Rolland Nesbit, Ray Vallem, and Cliff Wiita. W. A. Creed critically reviewed the manuscript. Without the assistance of these people, this report would not have been possible.

Edited by Ruth L. Hine.



X=Incidental observation

(Leopold 1929)



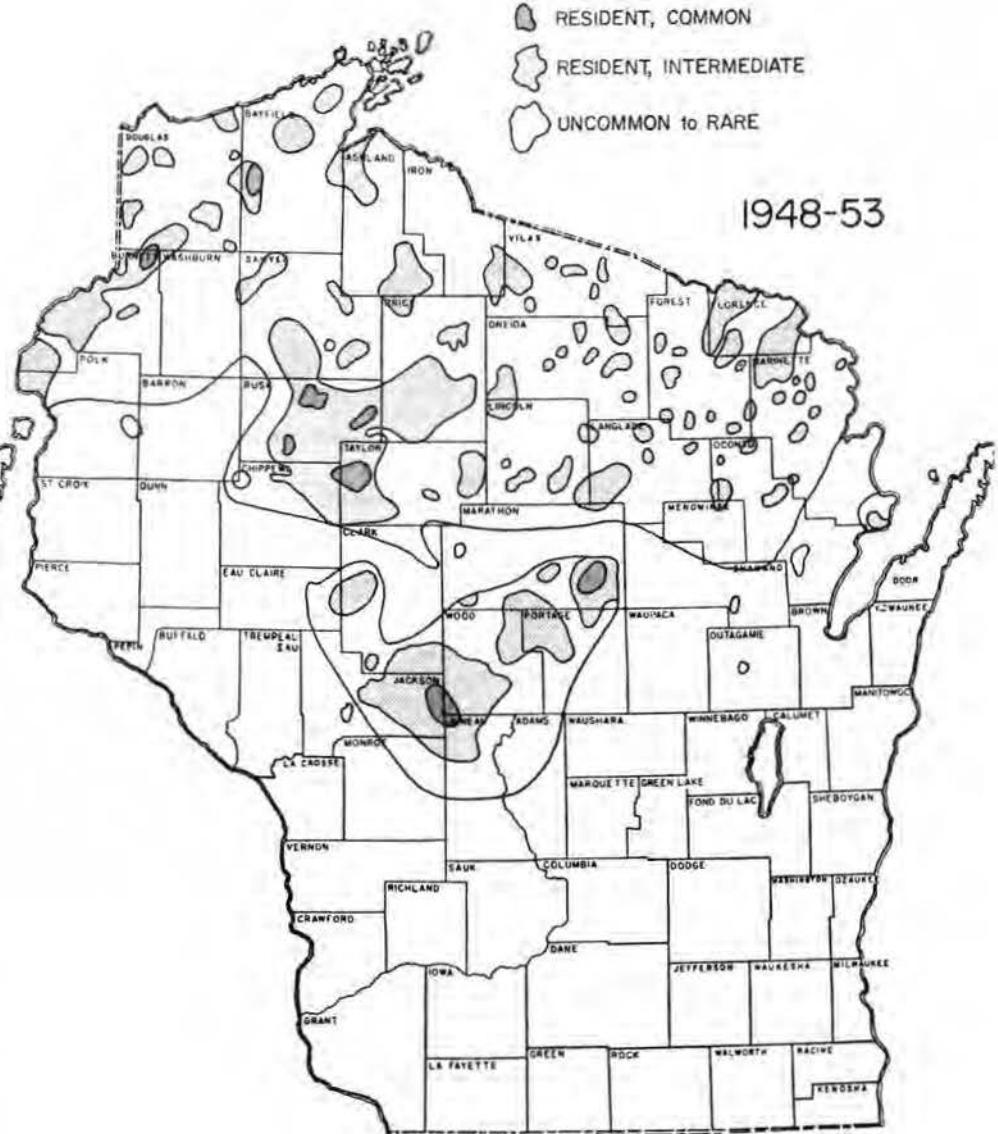
(Scott 1947)

FIGURE 1. Distribution of the sharp-tailed grouse in Wisconsin



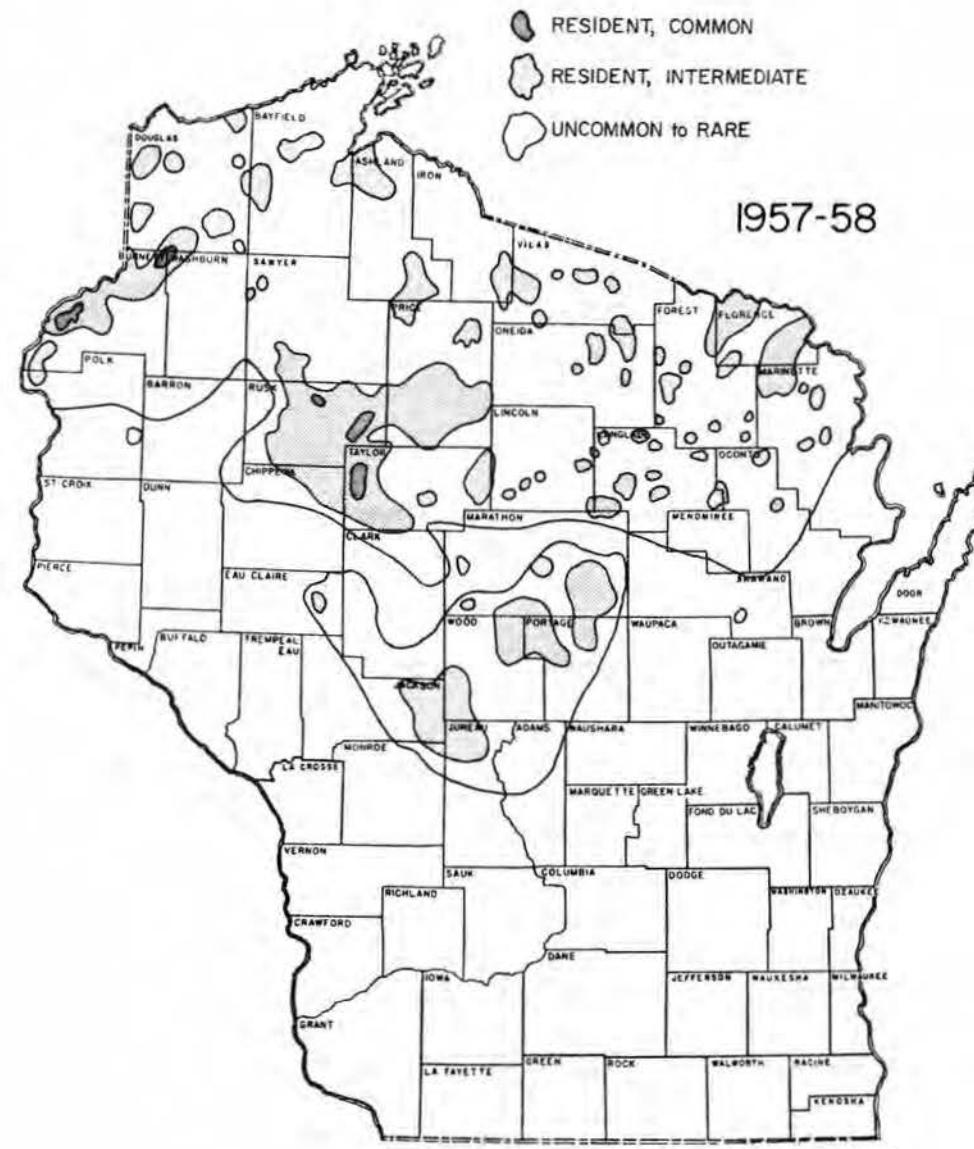


(Grange 1948)



(Hamerstrom 1960)





(Hamerstrom 1960)





TABLE 1. Sharp-tailed grouse management areas in Wisconsin.

Name of Area	County	Owner	Habitat Type	Habitat Stability	Management	Estimated Population	Long Term Pop. Trend
1. Riley Lake	Price	U.S. Forest Service	Upland & Lowland	Stable	Burning	200	Stable
2. Kimberly-Clark Wildlife Area	Price	U.S. Forest Service	Upland & Lowland	Stable	Clearing & Burning		Unknown
3. Pershing Wildlife Area	Taylor	State	Upland Grass	Improving	Clearing & Burning	200+	Increasing
4. Douglas County Wildlife Area	Douglas	County-Leased to State	Upland grass & Oak Jack Pine Savannah	Improving	Clearing & Burning		Decreasing
5. Namekagon Barrens Wildlife Area	Burnett	County-Leased to State	Upland	Stable	Clearing & Burning		Increasing
6. Crex Meadows Wildlife Area	Burnett	State	Upland	Stable	Clearing, Burning Food Plots		
7. Moquah Barrens	Bayfield	U.S. Forest Service	Upland	Improving	Clearing & Burning	50	Decreasing
8. Dunbar Sharptail Mgmt. Unit	Florence	County	Upland-Forest Prairie	Stable	Herbicides, Food Plots		Decreasing
9. Spread Eagle Sharptail Mgmt. Unit	Florence	County	Upland-Forest Prairie	Stable	Herbicides, Food Plots		Decreasing (slowly)
10. Dike 17 (Black R. State Forest)	Jackson	State	Upland	Stable	Burning, Clearing, Mowing, Food Plots	90-100	Increasing
11. Powell Marsh Wildlife Area	Vilas	State	Upland & Bogs	Stable	Burning	25	Decreasing
12. Thunder Marsh Wildlife Area	Oneida	State	Bog	Deteriorating	None	50	Decreasing
13. Dewey Marsh Wildlife Area	Portage	State	Lowland grass & dry marsh	Deteriorating	Mowing & Burning		Decreasing
14. Wood County PHG	Wood	State	Lowland	Stable	Burning & Mowing		Decreasing
15. Mead Wildlife Area	Marathon & Wood	State	Upland & Lowland	Stable	Clearing, Burning, Herbicides	200	Stable
16. Ackley Wildlife Area	Langlade	County-Leased to State	Lowland grass & Willow Aspen	Stable	Burning, Food Plots	75-100	Stable

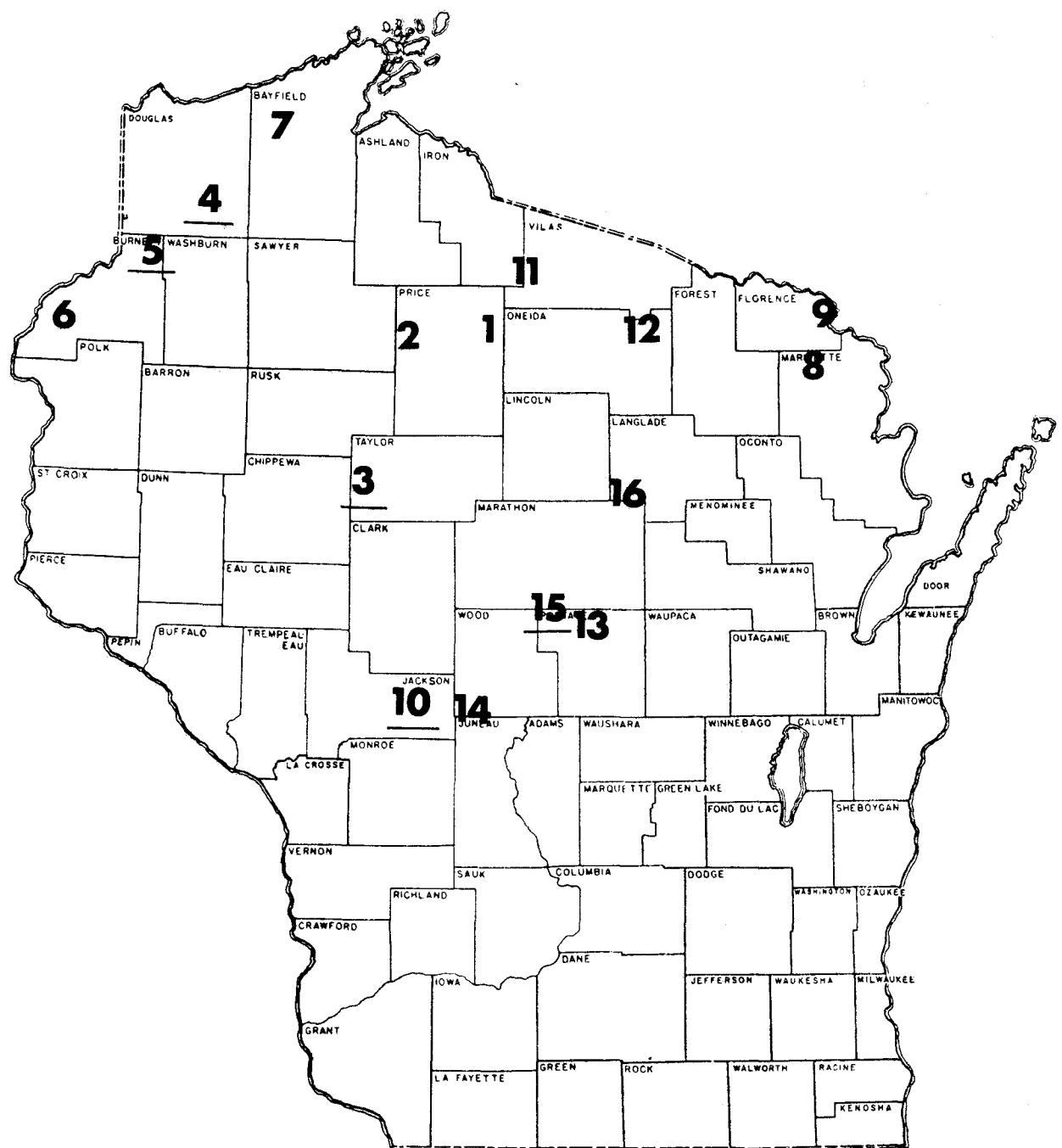


FIGURE 2. Locations of management areas in Wisconsin having sharp-tailed grouse populations.

NATURAL RESOURCES BOARD

THOMAS P. FOX  
Washburn, Chairman

CLIFFORD F. MESSINGER  
New Berlin, Vice-Chairman

MRS. G. L. McCORMICK  
Waukesha, Secretary

JOHN BROGAN  
Green Bay

LAWRENCE DAHL  
Tigerton

DANIEL T. FLAHERTY  
La Crosse

JOHN A. LAWTON  
Madison

DEPARTMENT OF NATURAL RESOURCES

ANTHONY S. EARL  
Secretary

ANDREW C. DAMON  
Deputy Secretary

LINDA REIVITZ  
Executive Assistant

