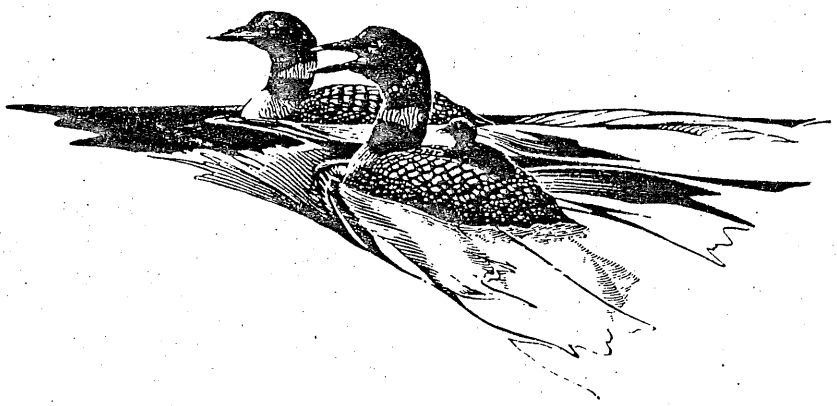
COMMON LOON REPORT



1980

Minnesota

Department of

Natural

Resources

Results of an Observation Card Program for Common Loons in Minnesota - 1980

by Katherine V. Hirsch & Carrol L. Henderson

During 1980, the Nongame Program in the Minnesota Department of Natural Resources conducted a statewide volunteer "project loon watch" to help in determining the current range and breeding status of the species. Observers were solicited through the use of news releases, spots in "The Volunteer" and radio releases. Observation cards were distributed to observers in April and May. During 1980, a total of 276 observers submitted 542 observations of 1870 loons, including 1367 adults and 503 chicks.

Methods

In 1980, the loon observation project was repeated for a second season. About three thousand observation cards, shown in Appendix I, were distributed to state and federal natural resource personnel, resort owners, conservation organizations and interested private volunteers. The loon observation cards were accompanied by a form letter which described the procedures for observing breeding loons, and an informational pamphlet on the common loon.

Information requested on the loon observation cards included date, time, county, township, range, section and lake name. Other questions included the distance and direction from the nearest town, ownership of the nesting area, number of adult loons, number of young, and whether or not the nest was observed. Additional information was requested on the behavior of the loons, general comments, indications of threats to loons, a map sketch of the nesting area or area where loons were seen, and the observers name, address and affiliation.

Results and Discussion

A total of 276 persons submitted 542 observations of 1870 loons, of which 1367 were adults and 503 were young. Combining the data from 1979 and 1980, we found that loons were reported from 40 counties. New counties with loons reported in 1980 included Chisago, Hennepin, Lake of the Woods, Meeker, Mahnomen, Ramsey, Scott, Wadena and Washington counties.

The townships in which common loons have been reported during 1979 and 1980 are represented in Figure 1. The number of loons observed in each county are shown in Figure 2. These data indicate that the greatest concentrations of loons occur in Otter Tail, Cass, Crow Wing, Beltrami, Itasca St. Louis, Lake and Cook counties. A summary of loon observations is shown in Table 1.

During 1980, 333 broods were reported.

177 (53.1%) were 1 chick broods,
142 (42.6%) were 2 chick broods and
14 (4.2%) were 3 chick broods.

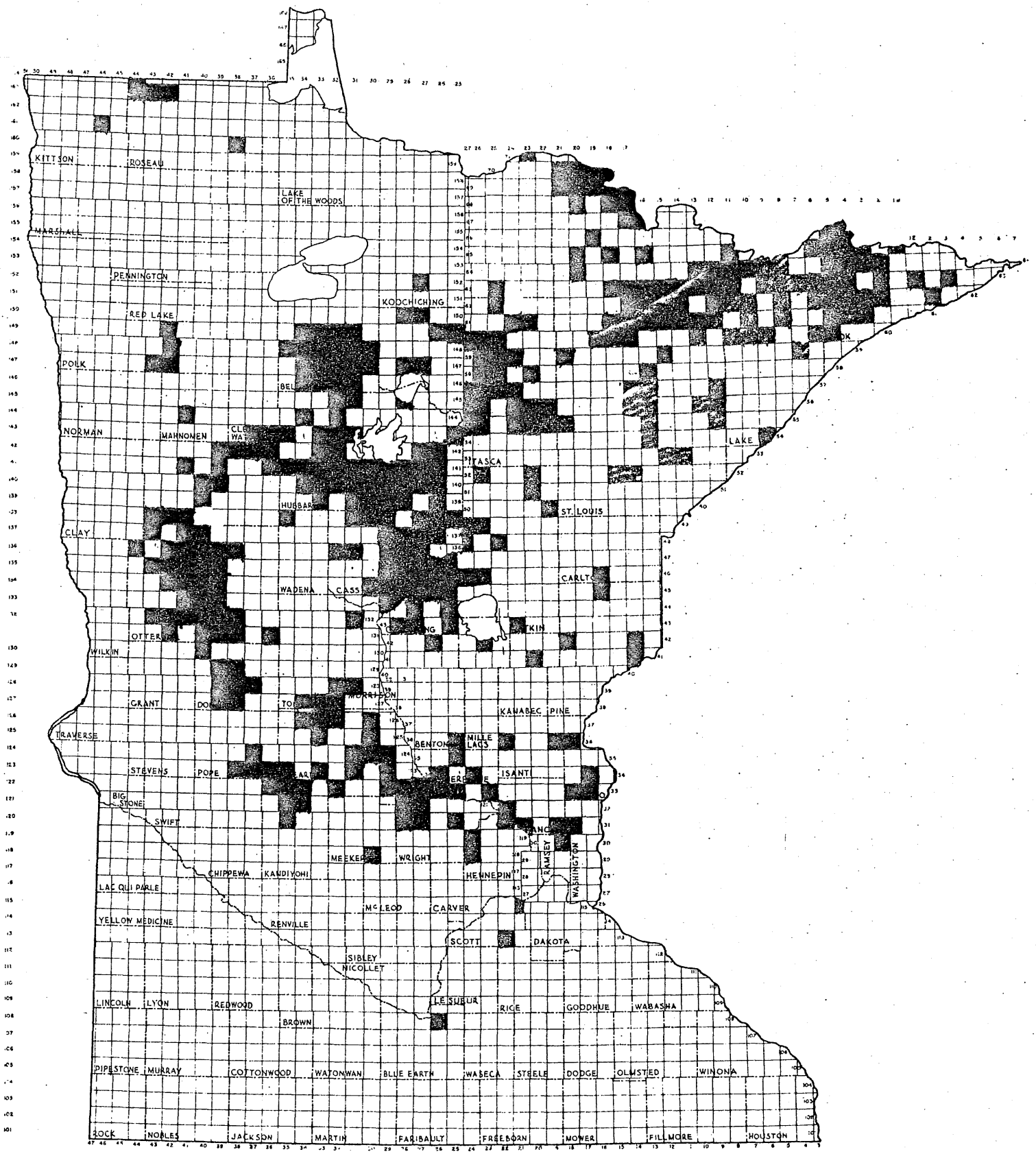


Figure 1. Distribution of Common Loons Reported in Minnesota

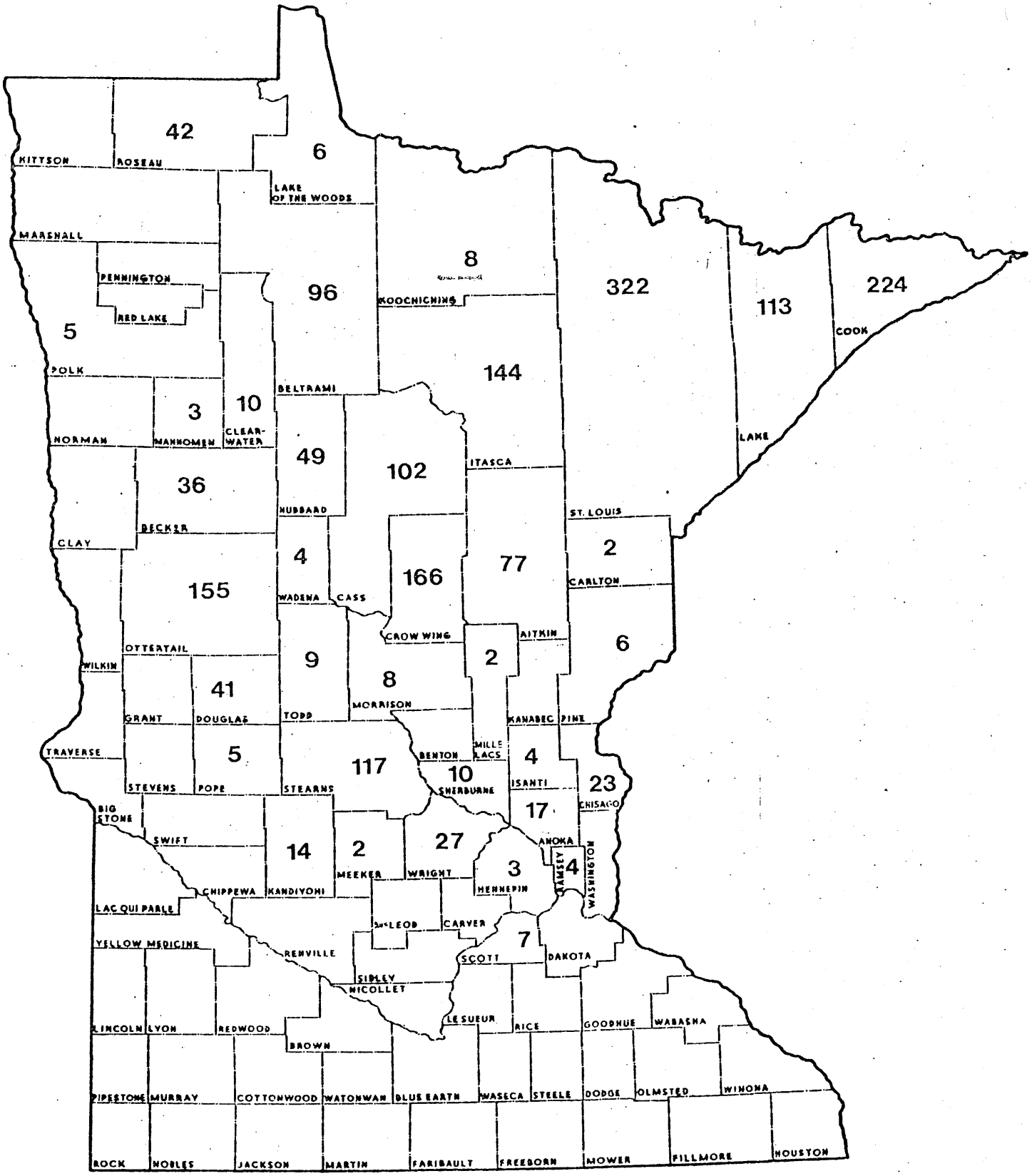


Figure 2. Number of loons reported by county, 1980.

Table 1. Summary of Loons Counted by County during 1979 and 1980.

	Total adults		Total young		Total loons		# Nests observed	
	1979	1980	1979	1980	1979	1980	1979	1980
Aitkin	9	50	0	27	9	77	0	4
Anoka	3	9	0	8	3	17	0	0
Becker	33	30	5	6	38	36	0	0
Beltrami	10	71	6	25	16	96	0	4
Benton	2	0	0	0	2	0	0	0
Blue Earth	1	0	0	0	1	0	0	0
Carlton	0	2	0	0	0	2	0	0
Cass	145	81	31	21	176	102	7	6
Chisago	0	19	0	4	0	23	0	0
Cook	38	193	13	31	51	224	2	3
Clearwater	64	6	0	4	64	10	0	0
Crow Wing	127	112	34	54	161	166	7	9
Douglas	6	30	3	11	9	41	0	0
Hennepin	0	3	0	0	0	3	0	0
Hubbard	12	36	3	13	15	49	0	4
Isanti	2	2	3	2	5	4	0	0
Itasca	73	101	26	43	99	144	6	9
Kanabec	1	0	0	0	1	0	1	0
Kandiyohi	10	11	4	3	14	14	0	0
Kittson	2	0	0	0	2	0	0	0
Koochiching	1	4	2	4	3	8	0	0
Lake	46	79	7	34	53	113	0	3
Lake of the Woods	0	6	0	0	0	6	0	0
Mahnomen	0	2	0	1	0	3	0	0
Meeker	0	2	0	0	0	2	0	0
Mille Lacs	1	2	0	0	1	2	0	0
Morrison	19	6	3	2	22	8	1	0
Ottertail	59	110	28	45	87	155	2	5
Pine	8	5	0	1	8	6	0	1
Polk	3	3	1	2	4	5	0	0
Pope	4	5	0	0	4	5	0	0
Ramsey	0	2	0	2	0	4	0	0
Roseau	11	19	11	23	22	42	0	0
St. Louis	217	243	48	79	266	322	5	5
Scott	0	4	0	3	0	7	0	0
Sherburne	14	9	2	1	16	10	0	0
Stearns	19	77	15	40	34	117	1	0
Todd	8	6	5	3	13	9	1	1
Wadena	0	2	0	2	0	4	0	0
Washington	0	6	0	1	0	7	0	0
Wright	14	19	9	8	25	27	2	1
Total	962	1,367	259	503	1,221	1,870	35	55

Three chick broods have been thought to be nonexistant (McIntyre, pers. comm.). Although some of the sightings may be of "adopted" chicks, several have been verified as 3 chick broods. The average brood size was 1.51, which agrees favorably with other studies (McIntyre, 1975).

A total of 67 nests were observed during 1980. Loons in Minnesota nest on both islands and on lakeshore.

The loons were present on 437 wetlands during 1980. The composite from 1979-1980 indicates that loons were present on 657 wetlands. It is difficult to estimate the total number of lakes in the range of the loons. However, if only lakes over 25 acres in size are considered in the range which was determined in 1979 and 1980, the total number of available wetlands is 5730. The total sample of lakes on which loon observations were made in 1979 and 1980 was therefore 11.5% of the wetlands. Unfortunately, most respondants did not indicate lakes which they surveyed which did not have resident loons, so it is difficult to make accurate population projections. However, if the number of loons are extrapolated to the remaining lakes in the loon's range, the loon estimate for Minnesota would be 16,300.

Taking into account overestimation due to selectivity by loons, if we make a 10% downward adjustment in our figures, the projection of the summer loon population in Minnesota is as follows; 10,700 adults, and 4,000 young may be present on Minnesota lakes during the summer months. The actual percentage of non-breeders in the population is unknown, however we can say confidently that 5,000 breeding pairs is a larger population than that in any other state. Other states have every breeding pair monitored. New Hampshire accurately follows the breeding success of every one of its 87 pairs.

The acreage of lakes used by loons was determined for 437 lakes in 1980. A frequency distribution is shown in figure 3. The median lake size used by loons was 406 acres. The minimum lake size was 1 acre and the maximum lake size was 1344462 acres.

During 1980, human threats to loon survival were perceived on 83 of the 437 wetlands. This indicates that 19.0% of the wetlands are subject to disturbance. The lakes in which disturbance was noted are indicated in Table 2. Counties with greater than 30% of the lake basins "disturbed" were Crow Wing, Chisago, Douglas, Meeker, Morrison, Pine and Todd.

Water level fluctuations were only a problem in Itasca County. Boating was mentioned as a problem 28.9% of the time. Disturbances in this category included one observation of a chick which was killed by a motor boat propeller on Fish Lake in Chisago Co. Other boating problems mentioned included traffic, curious observers, fisherman and water skiers. Shoreline development was mentioned as a problem for loons 20.4% of the time. Development included shoreline changes, loss of shoreline habitat and lakeshore home construction. Problems were not specified in 50% of the disturbance observations.

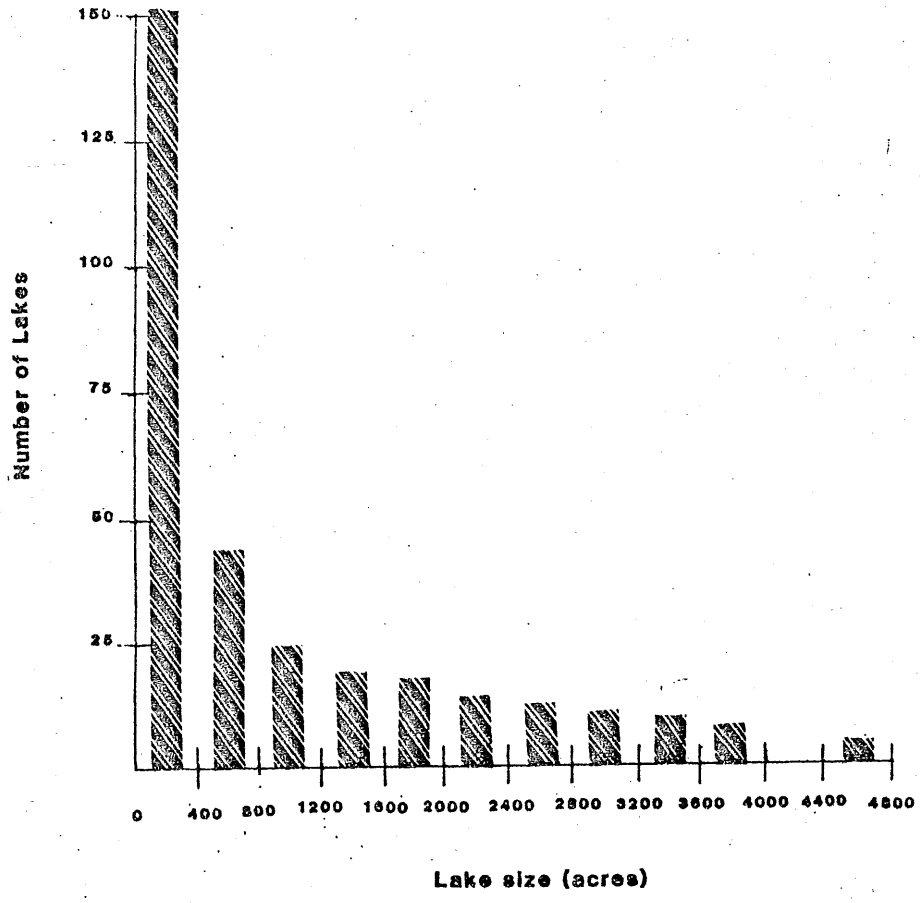


Figure 3. Number of lakes used in various size categories by loons.

Table 2. Lakes where problame were mentioned for loons.

COUNTY	LAKE	DISTURBANCE TYPE			
		Water level fluctuation	Boating	Shoreline Development	Unknown
Aitkin	Waukenabo				X
Aitkin	Big Pine				X
Aitkin	Cedar Lake			X	
Becker	Cormorant Lake				X
Becker	Bad Medicine			X	
Beltrami	Grace			X	
Beltrami	Buzzle				X
Cass	Woman Lake		X		
Cass	Variety				X
Cass	Washburn			X	
Cass	Lawrence			X	
Cass	Gull		X		
Crow Wing	Cedar				X
Crow Wing	Gull				
Crow Wing	West Twin			X	
Crow Wing	West Fox		X		
Crow Wing	Trout		X		
Crow Wing	Markee		X		
Crow Wing	Round		X		
Crow Wing	Lake Edward		X		
Crow Wing	Lake Hubert				X
Crow Wing	Bass		X		
Crow Wing	Pelican		X		
Crow Wing	Crooked				X
Crow Wing	E. Wood			X	
Cook	Seagull		X		
Cook	Bearskin				X
Chisago	Pioneer				X
Chisago	Fish		X		
Douglas	Blackwell				X
Douglas	Lake Stony				X
Douglas	Lake Cowdry			X	
Douglas	Le Homme Dieu				X
Douglas	Brophy			X	
Douglas	Lobster			X	
Douglas	Andrew				X
Douglas	Geneva				X
Douglas	Victoria				X
Douglas	Latoka		X	X	

Table 2. Continued

COUNTY	LAKE	DISTURBANCE			
		Water level fluctuation	Boating	Shoreline Development	Unknown
Hubbard	Long Lake		X		
Hubbard	Eagle		X		
Itasca	Long Lake	X			
Itasca	Lake of the Isles				X
Itasca	Sand		X		
Itasca	Coon		X		
Itasca	Loon				X
Itasca	Island				X
Itasca	Kennedy			X	
Itasca	Swan			X	
Itasca	North Star			X	
Kandiyohi	Green				X
Lake	Malberg				X
Lake	Kawishiwi				X
Lake	Elbow		X		
Lake of the Woods	Lake of the Woods		X		
Meeker	Manuella				X
Morrison	FishTrap		X		
Ottertail	Rose				X
Ottertail	Lida				X
Ottertail	Pickerel			X	
Ottertail	Ottertail				X
Ottertail	W. Silent				X
Ottertail	Tamarack		X		
Ottertail	Long				X
Ottertail	Belmont				X
Pine	Grindstone				X
St. Louis	Lake Vermillion		X		
St. Louis	Aerie Lake				X
St. Louis	Clear		X		
St. Louis	Little Long		X		
St. Louis	Black Duck				X
St. Louis	Leander			X	
St. Louis	Arrowhead				X
Stearns	Grand		X		
Stearns	Long				X
Stearns	Big Watab		X		
Stearns	Kriegle		X		
Stearns	Long				X
Stearns	Up Spunk				X

Table 2. Continued.

COUNTY	LAKE	DISTURBANCE TYPE			
		Water level fluctuation	Boating	Shoreline Development	Unknown
Stearns	Pleasant				X
Todd	Big Swan				X
Wright	Twin			X	

Conclusions

This year's volunteer observation card program was a successful technique for gathering data over the broad range of the Common Loon. Although there are drawbacks in terms of the quality of data, there are decided advantages in the extensive coverage which can be obtained in a volunteer program. This survey has served as an initial step in gathering data on the Common Loon which can be used in planning management strategies and protective measures for the loon where the need exists.

Data obtained from the Nongame Program's loon survey can also be compared with "Project Loon Watch" run by Dr. Judith McIntyre, to identify population trends and changes in the range of the Common Loon, in the past 20 years. This project is an excellent example of how conservation efforts can benefit through citizen participation. Participants are listed in Table 3.

Minnesotan's have been eager to participate, and their participation will be solicited in the future in order to continue monitoring on Key lakes. The monitoring program will be computerized in order to more effectively store and retrieve information on particular lakes. As money becomes available in 1981 from Minnesota's nongame income tax provision, intensified research and management can be directed towards the Common Loon. This is a special priviledge and responsibility, because not only is the Common Loon Minnesotas' state bird, but Minnesota has more loons than any other state in the continental U.S. We cannot take this abundance for granted.

Table 3. Participants in the 1980 project loon watch.

Ainsworth, Susan
Alborn, Mr.
Alton, Howard
Amlaw, B. L.
Anderson, Chel
Anderson, Arlin C.
Anderson, Bob
Anderson, David L.
Anderson, Marty
Anderson, Steve
Anvid, J. J.
Arola, Daryl
Ash, Dean
Baker, Tom
Barrieau, Gertrude
Barron, Evelyn
Bauer, Rich
Bauman, Paul
Bell, Tom
Bengston, R. G.
Berg, M.
Bergh, Alton E.
Berlin, Nancy
Bernstein, Judy
Biebighauser, T. R.
Bjerken, Brad
Bohmker, Dr. F.
Book, Joni
Borchardt, R. H.
Borden, Gladys
Brastrup, Tim
Bremicker, Tim
Breyen, Jim
Briestrup, Tim
Browing, Mr.
Brown, D.
Buck, R. V.
Buck, Randolph
Budke, Mr.
Bunnel John
Calligae, Julie
Campbell, W. A.
Carlson, Vernon
Cich, Marion
Cole, Glen
Cole, John
Collins, T. Scott
Contos, Allison
Cosgrove, David
Cosgrove, Joanne
Crea, Patty
Curphy, Jack
Dalager, J.
Davis, Willard
Deede, Lowell
Dinndorf, Don
Dornfeld, Rick
Doty, Harold
Drotts, Gary
Duerr, Clarence
Dufresne, Wilmer
Dyrland, Byron
Eberhardt, R. T.
Ebersviller, Judd
Eikeland, Peter
Emerson, Marilyn
Engel, Tom
Erickson, Ron
Evers, Lyle
Faddis, E.
Ferdon, J.
Ferris, G. Steven
Fierstine, Harlan
Fierstine, Jeane
Fisher, Herbert
Fisher, J.
Fitzloff, Candy
Fitzpatrick, Dennis
Fitzpatrick, Katy
Fjerstad, James A.
Fleming, Phil
Forsberg, Steve
Freidhof, M.
Fuller, Todd
Gehm, Nancy
Giberson, Lief
Giefer, janet
Gilbertson, Bruce
Gillette, Larry
Goblirsch, Gerry
Goblirsch, Sally
Goddard, Joan
Goemor, Jeanne
Grebe, Robert
Green, Jan
Grunewald, Tim
Guertin, Dave
Haasch, S.
Hage, Steve
Haines, Betty

Table 3. Continued.

Hallet, Ethel M.
Hammer, Fred
Hansen, Norley L.
Hanson, Dennis
Hanson, Robert E.
Hareind, Alice
Harris, Keith
Hawkins, Art
Hawkins, Ellen
Heather, Jack
Heine, Mary
Henry, Mark
Heywood, Mark
Higgins, Jim
Hilard, Bob
Hilard, Ruth
Hinz, Jim
Hodgkin, Thomas D.
Hodgson, Lenny
Hodgson, Leonard
Hogan, Frank
Hogan, Patrick
Huddle, Roy
Hudson, Bob
Hudson, Robert
Hunger, Bob
Hunt, F.
Igae, Mary
Igae, Peter
Jackson, Bob
Jacobson, Joan
Jacobson, Robert
Jessen, Robert
Johns, Evrett
Johnson, Alice
Johnson, Arlyne
Johnson, David H.
Kahl, Dan
Kanz, Dave
Karulezak, Robert A.
Kindschi, G.
Klatt, Jim
Klitzka, Stuart
Knowles, Bunter
Koehn, Ray
Kohlmeyer, A. C.
Kramer, K.
Kresbach, Mary
Kruger, Terry
Lacey, Elizabeth
Lantto, Jerry
Lappi, Oiva
Legueri, Dorothy
Lejcher, Terry
Lemester, Ann
Leonard, L. L.
Leverton, Alta
Lewis, Rosa
Lightfoot, Jeff
Lofboom, Rick
Loftness, James
Long, Sylvia
Loss, Mike
Lovold, S. H.
Lykken, Harriet
Madsen, Carl
Magnuson, Carl
Magnuson, Mrs. C.
Major, Joe
Malmborg, Lloyd
Marine, Jeff
McCarty, C.
McGinnis, Allison
McGuire, Mr.
McGuire, Brian
McKenzie, Mr.
Miller, Dick
Miller, Eleanor I.
Miller, Jeff
Monno, J. P.
Nabben, Leroy
Naplin, Rob
Neaville, Jim
Nelles, Richard D.
Nelson, Larry
Nesp, Richard
Ness, H. O.
Ness, Richard
Newcomb, Joyce
Nordsletten, Orville
Oie, Steve
Oleary, Pat
Olson, Alan
Olson, Alice
Olson, Earl
Olson, Marie J.
Oster, Curtis
Osufsen, Kris
Overbaugh, Ben. T.
Patrick, Michael

Table 3. Continued.

Pauly, David C.	Simonson, Betty
Pearson, Bob	Simonson, Kenneth
Pederson, Ted	Sinclair, John
Persons, Steve	Stanty, Don
Piekarski, Shirley	Steffen, Willard
Pinkerton, Hannah	Stenlund, Milt
Pinkerton, Tad	Stensvad, Duane D.
Putrah, Burt	Stetton, W. C.
Putrah, Doris	Ste art, Mary
Putske, Earl	Stohl, Mildred
Radtke, Al	Strandemo, Gary
Ranz, Beth	Strauch, Kathy
Rauche, Edward	Stromme, Noel
Ready, Mr.	Swanum, P. C.
Reaney, Billie	Swenson, Maurice
Remus, Tom	Synstad, Les
Riba, Gary	Thorson, Howard C.
Robinson, Gary	Towne, R.
Rondeau, Tony	Tufte, Ricki
Roweder, J.	Tuszynski, Dick
Scheider, John	Van Epps, Stanley
Schiefert, Lonnie	Van Hoven, M. J.
Schimpf, Ann	Vogtman, Donald B.
Schleuter, Kenneth	Vukovich, Chuck
Schlong, Vern	Wahlstrom, Harold
Schlueter, Herb	Weiland, Ed
Schmidt, Don	Welke, Kay
Schmidt, K.	Wenell, R. S.
Schneeweis, Jim	Westland, Roland
Scholtes, Pete	White, Elton
Schultz, Herb	Whitney, Kathryn
Shaw, Marcia	Williams, Grant
Shelden, Duane	Winter, Todd
Shook, F. A. Mrs.	Wolfe, Terry
Sigafoos, William	Ziske, Jim

Appendix I

COMMON LOON OBSERVATION CARD (See Other Side)

DATE: _____ TIME: _____

COUNTY: _____ TOWNSHIP _____ RANGE _____ SECTION _____

LAKE OR WETLAND NAME: _____

DISTANCE AND DIRECTION FROM NEAREST TOWN _____

OWNERSHIP OF AREA (STATE, FEDERAL, ETC.): _____

NUMBER OF ADULT AND YOUNG LOONS, EGGS, AND NESTS:

ADULTS _____ WAS THE NEST OBSERVED? _____

YOUNG _____ (Do not disturb adults on nests)

BEHAVIOR OF LOONS SEEN _____

_____

OBSERVER'S NAME AND ADDRESS: _____

OBSERVER'S AFFILIATION: _____

IMPORTANT: Do you feel that the amount of boating or shoreline development on this area poses a threat to the nesting loons? Yes _____ No _____

COMMENTS: _____

(Turn over)

COMMON LOON SURVEY

Minnesota has more loons than any other state in the contiguous 48 states, and the common loon has the distinction of being the Minnesota state bird. This nongame survey is being sponsored by the Department of Natural Resources to help assess the current status and distribution of loons.

The emphasis of this breeding season survey is for people to report the presence of PAIRED LOONS, LOON NEST SITES, AND ADULTS WITH YOUNG. Large groups of unpaired adults and migratory flocks may also be reported.

The data collected by survey volunteers will be valuable for helping design future management plans for loons. Send completed cards to:

Nongame Supervisor
Section of Wildlife
Minnesota DNR
Box 7, Centennial Bldg.
658 Cedar Street
St. Paul, Minnesota 55155

Diagram of Area
Where Loons Were Observed.
Indicate Landmarks