

A Progress Report of a Coyote
Study in the Huron Mountains

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A survey of the coyote (Canis latrans) population in the Huron Mountains began in November of 1973. The purpose of this study was to collect data relating to the home ranges and distribution of the coyote and any other information about the coyote in the Huron Mountains. Because of the time and expense of the methods used in capturing coyotes for radio telemetry tracking, no animals have been captured, to date. However, quantitative data have been collected relating to the distribution and feeding habits. Analysis of scats to determine feeding habits is not yet complete, and I wish to increase my sample size before drawing any conclusions. A winter index of abundance was developed using five transect lines within the Huron Mountain Club and five outside. Coyote tracks crossing these lines were counted to obtain information which would reveal major changes in population or distribution. Records were also kept of winter and summer sightings of coyotes beginning in November of 1973, along with records of frequently observed birds and mammals that represent a potential food source to the coyote.

Winter Studies

An index of abundance was obtained during the winters of 1973-74 and 1974-75 (Table 1). Preliminary results from 1973 suggest that there may be a lower density of coyotes outside the club property (Table 2). For the following winter of 1974-75 methods were identical except that the study period was later in the winter due to the small amount of snowfall received in Decem-

ber and January. No data was collected from the area outside of the Huron Mountains. Although there was a fifty percent decrease in tracks observed in 1974-75, small sample sizes do not permit the drawing of conclusions. The population probably changed little in density and distribution.

Table four lists bird and mammal species that represent a potential food source to the coyote. Sample line number two was the only line in which snowshoe hares were present. Also eight out of the nine recorded coyote track observations occurred on line number two. It is possible that the snowshoe hare is vital to winter feeding of the coyote. Scat analysis will help determine the extent to which this is true.

Table five summarizes winter coyote sightings by various people. Twenty-two coyotes were seen from November 1973 to May 1974 (Figure 1). Data from the winter of 1974-75 has not yet been compiled, but the total appears to be considerably lower. This could indicate that fewer people spent less time in areas where coyotes might be observed or that there is an actual decrease in coyote numbers.

Summer Field Work

During the summer of 1974, field work consisted of a scat survey on the foot trails and roads, keeping records of sightings, and attempts to capture coyotes.

No coyotes were captured during the study period. On two occasions, however, after sighting a coyote, I attempted calling them with a rabbit distress call and got a vocal response of yipping from the coyote.

From the period of June 1974 to September 1974 a total of twenty-five coyote sightings were recorded in the Huron Mountains (Table 6). The distribution of these sightings (Figure 1) seems to indicate that the unmanaged forest of virgin hemlock (Tsuga canadensis) is utilized less than the managed area. A possible explanation would be that there is less understory vegetation available for utilization by small mammals in the reserved area.

Thirty-one scats were located during study period. (Table 7). Most of the scats were collected for analysis. During the summer study period, over one hundred and twenty miles of the club's foot trails and roads were surveyed for scats. All areas were sampled about equally and the greatest occurrence of scats was found in the Rush Lake and Salmon Trout areas (Figure 2). This again shows with less biased data, that there is probably a greater density of coyotes in the sub-climax managed forest type. I have not yet completed the analysis of the scats collected during the summer study, and collection of several more would help insure a representative sample of the feeding habits of this predator.

Proposed Research

This brief report has stated generally what has been done during the study period. Analysis of some of the data collected has not yet been completed, and will probably be finished by next fall. Further research will include finishing the coyote scat collection,

keeping records of sightings, analysis of scats, and determining distribution in relation to cover type.

The coyote is an important predator in the Huron Mountains and it is desirable to learn more about its habits and habitat. This study will help to provide an insight into the coyote's niche in the Huron Mountains, and establish a basis for further research.

Table I. Winter Indices of Abundance. Nov. 1973 to Feb. 1974
and Feb. 1975 to April 1975.*

<u>Sample line</u>	<u>1973-74</u>	<u>tracks</u>	<u>1974-75</u>	<u>tracks</u>	<u>Total</u>
1	11/10/73	0	02/03/75	0	1
	02/25/74	0	02/23/75	1	
	02/24/75	0	03/19/75	0	
2	11/10/73	3	02/23/75	1	8
	02/01/74	0	03/19/75	1	
	02/25/74	3	04/02/75	0	
3	12/06/73	0	02/03/75	0	0
	01/18/74	0	02/28/75	0	
	02/06/74	0	04/08/75	0	
4	12/06/73	0	02/19/75	0	0
	01/12/74	0	02/28/75	0	
	02/06/74	0	03/04/75	0	
5	12/27/73	0	02/19/75	0	0
	01/12/74	0	03/04/75	0	
	02/25/74	0	04/08/75	0	

	<u>1973-74</u>	<u>1974-75</u>
Total miles sampled	15	15
Total tracks present	6	3
Index of abundance	.4 tracks/mi.	.2 tracks/mi.

* Last snowfall before sampling ranged from one to four days.

Table 2. Comparison Index of Abundance. Southeast of
the Huron Mountains. Nov. 1973 to Feb. 1974.

Sample line	Date	Tracks present (sets)
6	01/12/74	0
	01/25/74	0
7	01/11/74	0
	01/27/74	0
8	11/10/73	0
	01/25/74	1
9	11/10/73	0
	01/27/74	0
10	12/06/73	0
	01/27/74	1

Total miles sampled 10

Total tracks present 2

Relative index of abundance = $2/10 = .2$ tracks/mi.

Table 3. Comparison of Indices

Winter	Huron Mountains	Southeast of Huron Mtns.
1973 - 74	.4 tracks/mi.	.2 tracks/mi.
1974-75	.2 tracks/mi.	no data

Table 4. Other birds and mammals frequently found in study area

Line no.	Whitetail Deer	Snowshoe Hare	Red Squirrel	Deer Mouse	Ruffed Grouse	Ermine
1	X	O	X	X	O	X
2	X	X	X	X	O	O
3	X	O	X	X	O	O
4	X	O	X	X	O	O
5	X	O	X	X	X	O

X = present

O = not observed

Table 5 Winter Coyote sightings 1973 to 1974

<u>No. sighted</u>	<u>Date</u>	<u>Location</u>
1	11/11/73	Ives Lake Rd.
1	11/11/73	Ives Lake (south gate rd.)
1	11/11/73	Ives Lake (south gate rd.)
1	11/16/73	Conway Lake
2	12/01/73	Ives Lake (south gate rd.)
1	01/17/74	West side of Pine Lake
1	01/28/74	Club rd. , north of Pine L.
1	02/02/74	Ives Lake rd.
1	02/07/74	Ives Lake rd.
1	02/20/74	West end of Rush Lake
1	02/26/74	Middle of Rush Lake
3	03/01/74	On Lake Superior, north of Rush L.
1	03/03/74	Mountain Lake rd. , near the stream
2	03/07/74	Mountain Lake, northwest corner
1	03/10/74	West end rd. , north of Rush Lake
1	03/20/74	Near Salmon Trout bridge
1	04/21/74	Southwest of Ives Lake
1	05/11/74	West end of Howe Lake

Total winter sightings = 22 , from Nov. 73 to May 74.

Table 6. Summer Coyote sightings 1974

No. sighted	Date	Location
1	06/03	Club rd. , south of Conway L.
1	06/07	Club rd. , south of Cranberry Bog
1	06/05	Ives Lake , east side
1	06/17	Club area
1	06/21	Pine Lake rd.
1	06/29	Mountain L. rd. , near Mtn. stream
1	07/02	Club rd. , south of Cranberry Bog
1	07/08	West end rd. , north of Rush creek
1	07/13	Ives Lake field
1	07/15	Club rd. , south of Conway L.
1	07/17	Salmon Trout River , Christy pool
1	07/22	Club rd. , south of Conway L.
1	07/25	Ives Lake field
1	07/29	Ives Lake field
1	08/06	West of Cranberry Bog , Burma rd.
2	08/17	East of Burnt Mtn. (adult and pup)
1	08/17	Cedar creek trail, south of Mountain L.
1	08/23	Ives Lake field
1	08/20	Loop rd. gravel pit
1	08/25	Loop rd. , south of Trout Lake
1	08/24	Club rd. , main gate
1	08/30	West end rd. , north of Rush L.
1	09/01	Ives Lake rd. , east of Lilly pond
1	09/22	Ives Lake rd. , east of Lilly pond

Total sightings = 25 , June to September 1974




Table 7. Summer scat locations 1974.

Scats	Date	Location
2	04/28	East side of Pine Lake
1	05/27	South of Loop Rd.
1	06/09	North side of Howe Lake
2	06/30	Burnt dam on Salmon Trout River
3	07/02	Mount Benison
1	07/02	South side of Huron Mountain
3	07/06	Rush Lake trail
1	07/09	Middle falls on Salmon Trout River
5	07/11	Rush Lake trail
1	07/15	Middle falls on Salmon Trout River
1	07/16	Sullivan Creek Rd.
1	07/20	Salmon Trout River, foot bridge
1	07/23	Salmon Trout Rd. south
1	08/08	Rush Lake trail
1	08/22	South of Mountain Lake
2	08/25	Salmon Trout River, foot bridge
4	09/08	Salmon Trout Rd.

Total scats located = 31

COYOTE SIGHTINGS and SAMPLE LINES

LEGEND:

- SAMPLE LINES 
- WINTER SIGHTINGS 
- SUMMER SIGHTINGS 

SAMPLE LINES NUMBERED FROM WEST TO EAST (1-5)

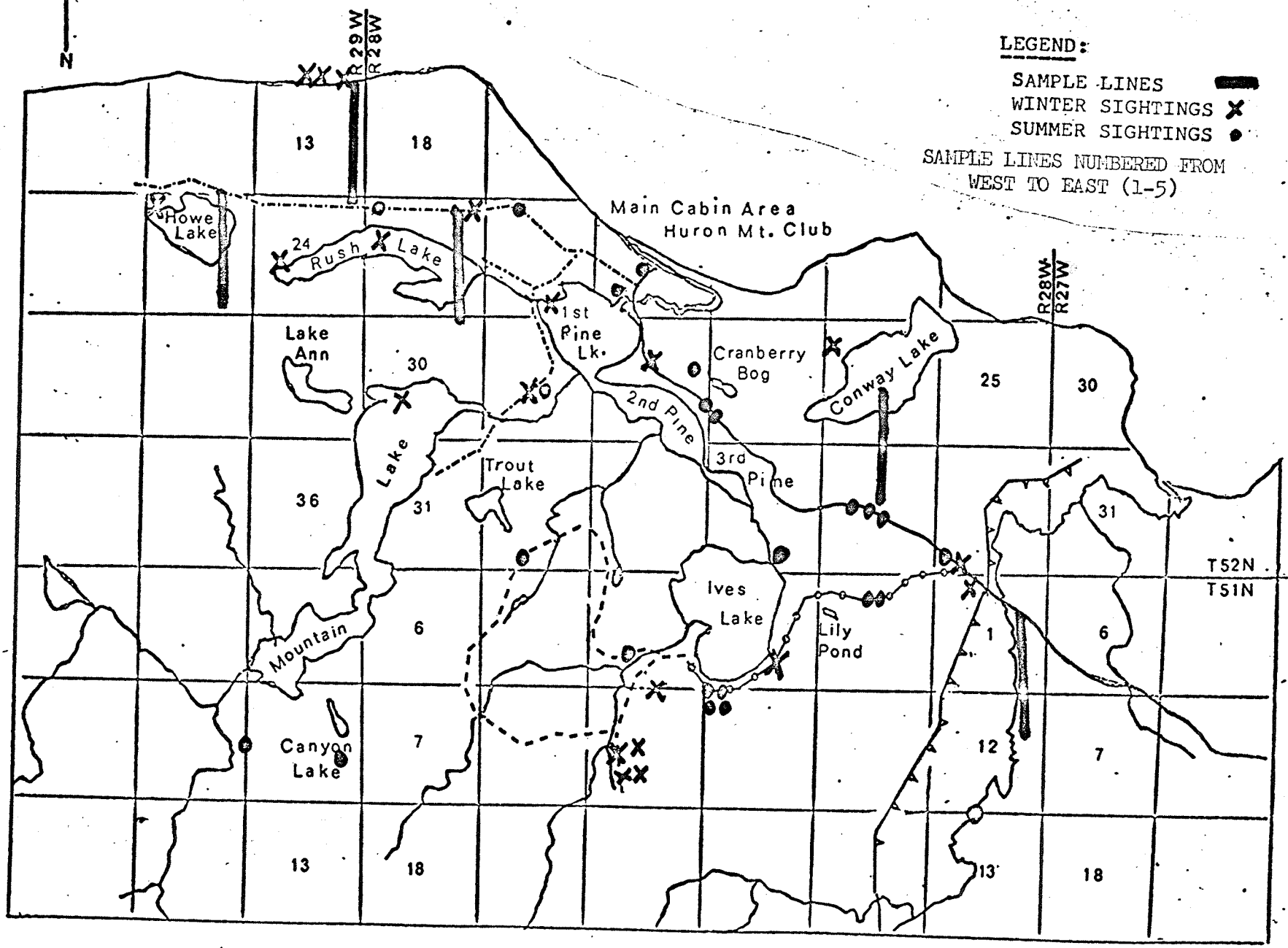


FIGURE 1
Huron Mountain Area of Michigan

SCAT LOCATIONS
SUMMER 1974

LEGEND:

SCAT LOCATIONS ●

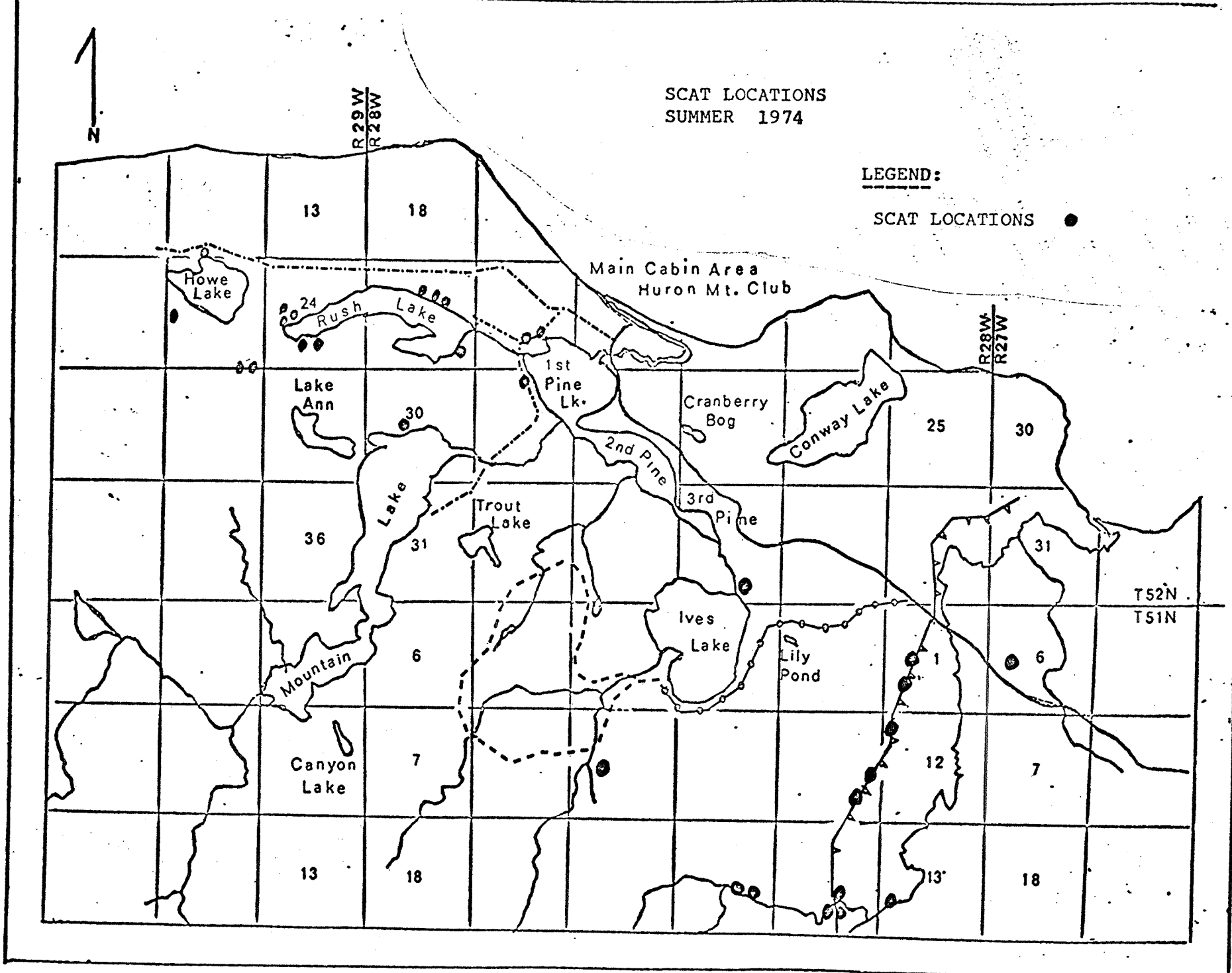


Figure 2
Huron Mountain Area of Michigan