



STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE
LANSING, MICHIGAN 48909-7944

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BOBCAT SURVEY – 2002 – 2003^[1]

by

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Introduction

In order to allow the export of bobcat (*Felis rufus*) pelts under the Convention on International Trade in Endangered Species (CITES), the United States Fish and Wildlife Service compiles data on the harvest and status of bobcats. This documentation is necessary to verify the stability of bobcat populations to allow for their continued harvest and the exportation of pelts. This is the twenty-third consecutive year of the bobcat survey in Michigan (Cooley et al. 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1997a, 1997b, 1999, 2000a, 2000b, 2001 and 2002).

During the 2002-2003 bobcat hunting and trapping season, licensed furtakers were allowed 3 bobcats per person. No more than one bobcat could be taken in management Zone 2 by hunting only and only one bobcat could be taken on Drummond Island. As in previous years, the Wildlife Division of the Department of Natural Resources required trappers and hunters to submit bobcat skulls or teeth for examination, and pelts for sealing. The age and sex of harvested bobcats were determined by canine tooth examination. Survey results are summarized by management zones (Zone 1 - Upper Peninsula, Zone 2 - Northern Lower Peninsula) in tables 1-3.

Materials & Methods

A lower canine tooth was extracted after the skull was boiled in water for 1 hour. Maximum root width and thickness of the canine allowed for sex determination (Friedrich et al. 1983). Age was estimated by counting cementum annuli in longitudinal thin sections of the tooth root (Crowe 1975).

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Results and Discussion

Zone 1

There were 697 samples submitted from a registered harvest of 925 from Zone 1. The sex ratio of bobcats examined from Zone 1 (Table 1) was 153:100 (actual 420:275) males to females. This was the nineteenth time in twenty-three years of data collection that the ratio favored males. The percentage of young-of-the-year (23.2%) was less than last year (26.8%). Of the bobcats submitted, 69.3% were less than 3 years of age, which is consistent with previous years' data. The 0-1 year old (23.2%), and the 1-2 year old (27.3%) age classes occurred most frequently in the sample.

Zone 2

There were 255 samples collected from a registered harvest of 293 from Zone 2. The sex ratio of Zone 2 bobcats (Table 2) was 167:100 (actual 159:95) males to females. The percentage of young-of-the-year (18.4%) was down from last year (22.4%). Of the bobcats submitted, 69.4% were less than 3 years of age, which is consistent with previous years' data. The yearling (1-2 years) age class occurred most frequently (30.2%) in the sample.

Zones 1 and 2

The number of bobcats registered during the 2002-2003 season (1218) was up from last year (1191). The mandatory submission of bobcat heads or teeth to the DNR for examination resulted in 952 useable samples (up from last year's 887 samples) for a compliance rate of 78.2% (952/1218). The combined totals of the submitted samples from both zones (Table 3) exhibited a distribution in the age classes and sex ratios consistent with past years.

Management Implications

The collection and examination of bobcat teeth provides baseline information on the status of bobcat populations in Michigan. Using dental measurements for sex determination has allowed for improved data collection. These data, in conjunction with the results from current bobcat research in Michigan will allow the Wildlife Division to develop a population model to help assure that Michigan trappers and hunters will continue to have the opportunity to harvest and export this furbearing species in the future.

Acknowledgments

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Table 1. Estimated age and sex ratio of Zone 1 bobcats, 2002-2003 season

Age	Number	Male	Female	Unknown	Percent of Total
0-1	162	80	82		23.2
1-2	190	109	81		27.3
2-3	131	78	52	1	18.8
3-4	77	52	24	1	11.0
4-5	53	39	14		7.6
5-6	22	15	7		3.2
6-7	16	10	6		2.3
7-8	14	13	1		2.0
8-9	14	11	3		2.0
9-10	8	7	1		1.1
10-11	7	4	3		1.0
11-12	2	1	1		0.3
13-14	1	1			0.1
Total	697	420	275	2	100

Table 2. Estimated age and sex ratio of Zone 2 bobcats, 2002-2003 season

Age	Number	Male	Female	Unknown	Percent of Total
0-1	47	25	22		18.4
1-2	77	50	27		30.2
2-3	53	35	18		20.8
3-4	29	18	11		11.4
4-5	18	10	8		7.1
5-6	9	6	2	1	3.5
6-7	3	2	1		1.2
7-8	7	4	3		2.7
8-9	5	4	1		2.0
9-10	4	3	1		1.6
10-11	1		1		0.4
11-12	1	1			0.4
12-13	1	1			0.4
Total	255	159	95	1	100

Table 3. Estimated age and sex ratio of Zone 1 and 2 bobcats, 2002-2003 season

Age	Number	Male	Female	Unknown	Percent of Total
0-1	209	105	104		22.0
1-2	267	159	108		28.0
2-3	184	113	70	1	19.3
3-4	106	70	35	1	11.1
4-5	71	49	22		7.5
5-6	31	21	9	1	3.3
6-7	19	12	7		2.0
7-8	21	17	4		2.2
8-9	19	15	4		2.0
9-10	12	10	2		1.3
10-11	8	4	4		0.8
11-12	3	2	1		0.3
12-13	1	1			0.1
13-14	1	1			0.1
Total	952	579	370	3	100

