



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

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BOBCAT SURVEY – 2003 – 2004^[1]

by

Thomas M. Cooley, Stephen M. Schmitt, Paul D. Friedrich and David P. Bostick

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, 2002, and 2003).

During the 2003-2004 bobcat hunting and trapping season, licensed fur takers were allowed three 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 577 samples submitted from a registered harvest of 756 from Zone 1. The sex ratio of bobcats examined from Zone 1 (Table 1) was 150:100 (actual 345:230) males to females. This was the twentieth time in twenty-four years of data collection that the ratio favored males. The percentage of young-of-the-year (26.3%) was less than last year (23.2%). Of the bobcats submitted, 73.0% were less than 3 years of age, which is consistent with previous years' data. The 0-1 year old (26.3%), and the 1-2 year old (27.4%) age classes occurred most frequently in the sample.

Zone 2

There were 180 samples collected from a registered harvest of 204 from Zone 2. The sex ratio of Zone 2 bobcats (Table 2) was 175:100 (actual 114:65) males to females. The percentage of young-of-the-year (32.8%) was up from last year (18.4%). Of the bobcats submitted, 76.1% were less than 3 years of age, which is consistent with previous years' data. The 0-1 year old (32.8%), and the 1-2 year old (25.6%) age classes occurred most frequently in the sample.

Zones 1 and 2

The number of bobcats registered during the 2003-2004 season (960) was down from last year (1218). The mandatory submission of bobcat heads or teeth to the DNR for examination resulted in 757 useable samples for a compliance rate of 78.9% (757/960). 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, 2003-2004 season

Age	Number	Male	Female	Unknown	Percent of Total
0-1	152	88	62	2	26.3
1-2	158	79	79		27.4
2-3	111	68	43		19.2
3-4	52	32	20		9.0
4-5	34	28	6		5.9
5-6	21	15	6		3.6
6-7	14	10	4		2.4
7-8	10	6	4		1.7
8-9	8	7	1		1.4
9-10	9	7	2		1.6
10-11	4	2	2		0.7
11-12	2	1	1		0.3
12-13	1	1			0.2
14-15	1	1			0.2
Total	577	345	230	2	100

Table 2. Estimated age and sex ratio of Zone 2 bobcats, 2003-2004 season

Age	Number	Male	Female	Unknown	Percent of Total
0-1	59	34	24	1	32.8
1-2	46	32	14		25.6
2-3	32	23	9		17.8
3-4	16	9	7		8.9
4-5	9	3	6		5.0
5-6	6	4	2		3.3
6-7	5	3	2		2.8
7-8	4	4			2.2
8-9	1	1			0.6
11-12	2	1	1		1.1
Total	180	114	65	1	100

Table 3. Estimated age and sex ratio of Zone 1 and 2 bobcats, 2003-2004 season

Age	Number	Male	Female	Unknown	Percent of Total
0-1	211	122	86	3	27.9
1-2	204	111	93		26.9
2-3	143	91	52		18.9
3-4	68	41	27		9.0
4-5	43	31	12		5.7
5-6	27	19	8		3.6
6-7	19	13	6		2.5
7-8	14	10	4		1.8
8-9	9	8	1		1.2
9-10	9	7	2		1.2
10-11	4	2	2		0.5
11-12	4	2	2		0.5
12-13	1	1			0.1
14-15	1	1			0.1
Total	757	459	295	3	100