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GOVERNOR

STATE OF MICHIGAN

DEPARTMENT OF NATURAL RESOURCES

LANSING



REBECCA A. HUMPHRIES
DIRECTOR

November 14, 2007

The Honorable Michelle McManus, Chair
Senate Appropriations Subcommittee on
Natural Resources
S-2 Capitol Building
P.O. Box 30036
Lansing, Michigan 48909-7536

The Honorable Michael Lahti, Chair
House Appropriations Subcommittee on
Natural Resources
S-1489 House Office Building
P.O. Box 30014
Lansing, Michigan 48909-7514

Dear Senator McManus and Representative Lahti:

Pursuant to section 503 of PA 344 of 2006, the Department of Natural Resources (Department) is required to report on the results of a bobcat study. The Department has historically monitored the bobcat harvest and population level in both the upper and lower peninsulas. The Department's annual report on the hunter and trapper harvest of bobcats in 2006 is attached.

If you have any questions, please feel free to contact me.

Sincerely,

Sharon M. Schafer, Chief
Budget and Support Services
517-335-3276

Attachment

cc: Senate Appropriations Subcommittee Members
House Appropriations Subcommittee Members
Ms. Jessica Runnels, Senate Fiscal Agency
Dr. Kirk Lindquist, House Fiscal Agency
Mr. Robert Emerson, State Budget Director, Department of
Management and Budget (DMB)
Mr. Jacques McNeely, DMB
Ms. Jennifer Harrison, DMB
Director Rebecca Humphries, DNR
Mr. Dennis Fedewa, Chief Deputy, DNR
Ms. Mindy Koch, Resource Management Deputy, DNR
Mr. Dennis Fox, Chief of Staff, DNR
Mr. Dan Eichinger, Acting Legislative Liaison, DNR
Mr. Douglas Reeves, DNR
Ms. Jane Schultz, DNR

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2006 BOBCAT HUNTER AND TRAPPER HARVEST IN MICHIGAN

Brian J. Frawley and Dwayne Etter

ABSTRACT

A survey was completed to determine the number of people hunting and trapping bobcats in Michigan, the number of days spent afield (effort), and the number of bobcats registered. In 2006, 4,357 people obtained a bobcat harvest tag valid for the hunting and trapping seasons. About 64% (2,772) of these tag-holders attempted to hunt or trap bobcats, and 28% of these furtakers registered at least one bobcat. An estimated 1,903 people attempted to hunt bobcats and spent 19,188 days hunting and registered 386 bobcats. Nearly 1,103 people attempted to trap bobcats and spent nearly 32,285 days trapping and registered 560 bobcats.

INTRODUCTION

The Natural Resources Commission and Michigan Department of Natural Resources (DNR) have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest surveys are one of the management tools used to accomplish this statutory responsibility. Estimating hunter participation, harvest, and hunting effort are the primary objectives of these surveys. Estimates derived from harvest surveys, as well as information from mandatory registration reports, field surveys, and population modeling are used to monitor bobcat (*Lynx rufus*) populations and establish harvest regulations.

During 2006, bobcats could be harvested during both hunting and trapping seasons (Tables 1 and 2). In order to hunt or trap bobcats, furtakers were required to obtain a free bobcat harvest tag, in addition to a fur harvester license. In the Upper Peninsula (UP), except Drummond Island, furtakers could legally take and register two bobcats in the hunting and trapping seasons combined. Only one bobcat could be taken from Drummond Island (Unit B), and only one bobcat could be legally taken and registered in units C or D combined (Lower Peninsula [UP]) (Figure 1). Successful furtakers were required to immediately attach the harvest tag to the bobcat and were required to register bobcats within 10 days of the end of the



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season for the unit in which the bobcat was taken. Furtakers were not allowed to keep bobcats that were beyond the legal limit of bobcats per person (incidental captures). Furtakers were required to bring incidental catches to a registration station if they could not be released alive. Although all furtakers harvesting a bobcat were required to present their animals at a DNR office for registration, this survey does not present information collected from registered bobcats.

Prior to 2004, only hunters were allowed to harvest a bobcat in the LP, as bobcat trapping was restricted to the UP (Tables 1 and 2). During 2004 and 2005, an 11-day bobcat trapping season (December 10-20) was held on private lands in portions of the LP. In 2006, trapping was again prohibited in the LP.

In 2006, trappers could use foothold and body-gripping traps (i.e., conibears) to capture bobcats in the UP. Live traps were also legal in the UP if set within 150 yards of a residence or farm building. Bobcat trapping was permitted on both public and private lands in units A and B. Most hunters traditionally used dogs or calls to take bobcats (Frawley et al. 2006).

METHODS

A questionnaire (Appendix A) was sent to everyone who obtained a bobcat harvest tag valid for the 2006 hunting and trapping seasons (4,357 tag holders). Tag-holders receiving the questionnaire were asked to report if they attempted to hunt or trap a bobcat, number of days spent afield, and number of bobcats they registered. Hunters were also asked to report their hunting method (e.g., dogs, calls) and the number of bobcats that were within range to take but they chose not to harvest. Hunters that used dogs were asked to report who owned the dogs, number of occasions their dogs chased a bobcat, and whether they hired a guide. Trappers were asked to report the number of bobcats caught in traps and the number of bobcats released alive. Trappers also were asked to report the types of traps used, their preferred trap type, and whether they caught any bobcats in a trap set for another animal. All furtakers were asked the ownership of lands where they pursued bobcats and their opinion of the status of the bobcat population in the county where they preferred to hunt or trap.

Questionnaires were mailed initially during mid-March 2007, and nonrespondents were mailed up to two follow-up questionnaires. Although 4,357 people were sent the questionnaire, 83 surveys were undeliverable, resulting in an adjusted sample size of 4,274. Questionnaires were returned by 2,857 people, yielding a 67% adjusted response rate.

Estimates were extrapolated from the sample (2,857 returned questionnaires) to all tag holders (4,357) using a simple random sampling design (Cochran 1977) and were presented along with their 95% confidence limit (CL). This CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies the true value would be within this interval 95 times out of 100. Estimates were not adjusted for possible response or nonresponse bias.

Statistical tests are used routinely to determine the likelihood the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals was

equivalent to stating the difference between the means was larger than would be expected 995 out of 1,000 times ($P < 0.005$), if the study had been repeated (Payton et al. 2003).

RESULTS

Hunting and Trapping Combined

In 2006, 4,357 people obtained a bobcat harvest tag valid for the bobcat hunting and trapping seasons. About $64 \pm 1\%$ (2,772) of these tag holders attempted to hunt or trap bobcats (Table 3). Furthermore, about $5 \pm 1\%$ (233 \pm 21) of the tag holders attempted both hunting and trapping bobcats.

Furtakers spent 51,473 days afield ($\bar{x} = 18.6 \pm 0.7$ days/furtaker) and registered 946 bobcats ($\bar{x} = 0.34 \pm 0.02$ bobcats/furtaker). Furtakers spent about 40,065 days afield pursuing bobcats in the UP and 10,963 days in the LP (Table 3). About 28% of the furtakers registered at least one bobcat (Table 4). Nearly $21 \pm 1\%$ of the furtakers registered only one bobcat and $6 \pm 1\%$ registered two bobcats. About 33% of the furtakers in the UP registered at least one bobcat (Table 4). Nearly $22 \pm 1\%$ of the UP furtakers registered only one bobcat and $11 \pm 1\%$ registered two bobcats. An estimated 20% of furtakers in the LP registered a bobcat.

The number of furtakers and their effort expended pursuing bobcats in 2006 was greater in the UP but less in the LP, compared to 2005 (Table 3). Both the number of bobcats registered and the proportion of furtakers that registered a bobcat increased statewide between 2005 and 2006, although these increases were not significant (Table 4, Figure 2).

Counties with 150 or more furtakers that pursued bobcats included Delta, Iron, Menominee, Chippewa, and Marquette (Table 5). Counties with 70 or more registered bobcats originating from that county included Iron, Delta, Menominee, Ontonagon, and Gogebic.

About $33 \pm 1\%$ of bobcat tag-holders reported the bobcat population was stable in the county they preferred to hunt or trap bobcats, which was similar to the 2005 estimate (Figure 3 and 4). About $12 \pm 1\%$ reported bobcat numbers were improving and $13 \pm 1\%$ reported fewer bobcats. Nearly $34 \pm 1\%$ of the tag-holders were uncertain of the status of bobcats.

Hunting

About $44 \pm 1\%$ (1,903 hunters) of the tag-holders attempted to hunt bobcats during the 2006 seasons (Table 6). About 756 furtakers hunted in the UP and 1,191 hunted in the LP. These hunters had hunted bobcats an average of seven years (± 1 year). Bobcat hunters most frequently hunted on public land ($71 \pm 1\%$). About $42 \pm 2\%$ of the hunters hunted on private land not owned by themselves or their family, while $34 \pm 2\%$ hunted bobcats on their own land or land owned by their family. Nearly $31 \pm 2\%$ of the hunters hunted on public land only, $29 \pm 1\%$ hunted on private land only, and $39 \pm 2\%$ hunted on both public and private lands.

Hunters spent about 19,188 days afield hunting bobcats ($\bar{x} = 10.1 \pm 0.4$ days/hunter) and registered an estimated 386 bobcats ($\bar{x} = 0.20 \pm 0.01$ bobcats/hunter, Table 7). Hunters spent about 7,939 days afield hunting bobcats in the UP and 10,963 days hunting bobcats in the LP. The estimated number of days of effort per bobcat registered by hunters statewide

was 49.7 days in 2006 and was significantly fewer days (-17%) than estimated in 2005 (Table 8, Figure 5).

Hunters registered about 40% of the bobcats registered by furtakers (Figure 6). About 20% of bobcat hunters harvested at least one bobcat (Table 7). Nearly $19 \pm 1\%$ of hunters registered only one bobcat and $1 \pm 0.3\%$ registered two bobcats. An estimated 18% of the hunters in the UP registered at least one bobcat; $16 \pm 2\%$ of UP hunters registered one bobcat and $2 \pm 1\%$ registered two bobcats. An estimated 20% of hunters in the LP registered a bobcat.

Counties with 110 or more hunters pursuing bobcats included Roscommon, Alcona, Delta, and Crawford (Table 9). Counties with more than 20 hunter-registered bobcats originating from that county included Menominee, Presque Isle, Cheboygan, and Delta.

The number of hunters and their hunting effort was similar between 2005 and 2006, except in Unit D where the number of bobcat hunters increased significantly (Table 6). The number of bobcats passed by hunters was similar between 2005 and 2006. The number of bobcats registered and the proportion of hunters that registered a bobcat increased significantly in the LP (Table 7). In contrast, the number of bobcats registered in UP and hunter success was similar between 2005 and 2006.

Hunters most frequently used calls ($58 \pm 2\%$) or dogs ($41 \pm 2\%$) to hunt bobcats (Table 10). The estimated number of people hunting bobcats with dogs was similar between 2005 and 2006 (Table 11). In addition, hunting effort among hunters using dogs was generally similar between 2005 and 2006, except in the UP where hunting effort declined 24%. The number of bobcats registered by hunters using dogs in the LP increased significantly between 2005 and 2006, but the number of registered bobcats declined significantly in the UP. In addition, hunting success among hunters using dogs was significantly higher in the LP in 2006 than 2005 (Table 12). The estimated number of people hunting bobcats with calls was similar between 2005 and 2006 (Table 13). Among hunters using calls, hunting effort, the number of bobcats registered, and the proportion of hunters registering a bobcat was unchanged between 2005 and 2006 (Table 14).

Bobcat hunters using dogs participated in an estimated $4,499 \pm 359$ chases of bobcats, which was similar to the number of chases estimated in 2005 (Figure 7). About $29 \pm 1\%$ of the bobcat hunters had an opportunity to harvest a bobcat but chose not to harvest the bobcat. Thus, an estimated 544 ± 31 hunters chose not to harvest bobcats on $1,746 \pm 160$ occasions (Figure 7). Among those hunters that passed up an opportunity to take a bobcat, $36 \pm 3\%$ passed one bobcat, $25 \pm 3\%$ passed two bobcats, $13 \pm 2\%$ passed three bobcats, $6 \pm 1\%$ passed four bobcats, and $19 \pm 2\%$ passed five or more bobcats. The estimate of the number of bobcats passed by hunters should be viewed cautiously because hunting partners may have reported passing the same bobcat; thus, the estimate will be inflated by an unknown amount. Few bobcat hunters ($8 \pm 1\%$) that hunted with dogs hired a guide service to assist with their hunting (63 ± 11 hunters).

About $34 \pm 2\%$ of bobcat hunters reported the bobcat population was stable in the county they preferred to hunt bobcats, which was greater than the 2005 estimate (Figures 3 and 4). About

11 ± 1% reported bobcat numbers were improving and 17 ± 1% reported fewer bobcats. Nearly 31 ± 2% of bobcat hunters were uncertain of the status of bobcats.

Trapping

An estimated 25 ± 1% (1,103 trappers) of the tag-holders trapped bobcats during the 2006 season (Table 15), and these trappers had trapped bobcats an average of nine years (±1 year). Roughly equal proportions of trappers trapped bobcats on private land owned by themselves or their family (48 ± 2%), private lands not owned by themselves or their family (34 ± 2%), and public land (48 ± 2%). About 51 ± 2% trapped on private land only, 16 ± 2% of the trappers trapped on public land only, and 31 ± 2% trapped on both public and private lands.

Trappers spent about 32,285 days afield trapping bobcats (\bar{x} = 29.3 ± 1.3 days/trapper), caught 671 bobcats, registered 560 bobcats (\bar{x} = 0.51 ± 0.03 bobcats/trapper), and released 111 bobcats from their traps during the 2006 season (Table 16, Figure 8).

Although trapping was discontinued in the LP in 2006, the number of bobcat trappers statewide did not change significantly between 2005 and 2006 (Table 15, Figure 2). Moreover, trapping effort increased 20% statewide, despite the elimination of trapping in the LP. The number of bobcats captured by trappers declined 16% statewide, although the number of bobcats captured in the UP was similar between 2005 and 2006 (Table 16). The number of bobcats released alive by trappers statewide decreased 59% (Figure 8), although the decline in the UP was not statistically significant. The number of bobcats registered by trappers statewide was similar between 2005 and 2006; however, the number of bobcats registered from the UP increased 23%. The proportion of trappers that captured a bobcat statewide was similar between 2005 and 2006 (Table 17). The proportion of trappers that registered a bobcat statewide was similar between 2005 and 2006. The estimated number of days of effort per bobcat registered by trappers statewide was 57.7 days in 2006 and was not statistically significant from 2005 (Table 18, Figure 5).

Trappers registered about 60% of the bobcats registered by furtakers (Figure 6). About 40% of bobcat trappers captured at least one bobcat and 37% registered at least one bobcat (Table 17). Nearly 24 ± 2% of the trappers registered only one bobcat and 13 ± 1% registered two bobcats. Nearly 7 ± 1% of the bobcat trappers caught bobcats that they released. They released 111 bobcats from their traps. About 7 ± 1% of the bobcat trappers caught a bobcat in a trap set for another furbearer (Figure 8).

Counties with 90 or more trappers pursuing bobcats included Iron, Delta, Chippewa, Ontonagon, and Menominee (Table 19). Counties with more than 40 registered bobcats originating from that county included Iron, Ontonagon, Delta, Gogebic, and Menominee.

Most trappers used foothold traps (76%), while 51% of the trappers used body gripping traps (i.e., conibears) (Table 20). Most trappers preferred to use foothold traps (46%), while 31% preferred to use conibears (Table 21). An estimated 20% of trappers did not have a preferred trap type.

About $46 \pm 2\%$ of bobcat trappers reported the bobcat population was stable in the county they preferred to trap bobcats (Figures 3 and 4). About $15 \pm 2\%$ reported bobcat numbers were improving and $13 \pm 1\%$ reported fewer bobcats. Nearly $23 \pm 2\%$ of bobcat trappers were uncertain of the status of bobcats.

DISCUSSION

Many factors influence bobcat harvest trends including furtaker numbers, bobcat numbers, harvest regulations, habitat conditions, weather, and fur prices; thus, any interpretations of trends should be viewed cautiously. Moreover, estimates of events that occur infrequently (e.g., harvesting a bobcat) are difficult to estimate precisely using common sampling designs (Cochran 1977). Relatively few furtakers harvest bobcat; thus, estimates from the statewide fur harvesters survey from previous years often have been imprecise (Frawley 2001). Beginning with the 2004-2005 bobcat season, however, all licensed furtakers attempting to harvest a bobcat in Michigan were required to obtain a free bobcat harvest tag from the DNR. Beginning with the 2004 season, the DNR has used these lists of tag holders to design surveys that result in more precise estimates.

About 28% of bobcat hunters and trappers combined registered at least one bobcat in Michigan during the 2006 seasons, while 25-30% of bobcat hunters and trappers harvested at least one bobcat in Michigan during 2003-2005 (Frawley et al. 2004, 2005, 2006). Success rates in Michigan during recent years have been similar to success rates of hunters and trappers in Wisconsin (26-45% during 2002-2005, Kitchell and Olson 2003, 2005, 2006) and in Pennsylvania (22-40% during 2000-2005, Lovallo 2005, 2006) during recent years.

Slightly more furtakers (hunters and trappers combined) pursued bobcats in the UP than the LP; however, furtakers expended over three times as much effort in the UP as the LP (Table 3). The proportion of furtakers registering a bobcat also was higher in the UP than the LP (33% versus 20%). These differences between regions partly reflect differences in regulations as furtakers could legally harvest only one bobcat from the LP, while two bobcats could be taken from the UP. Moreover, seasons were longer in the UP than in the LP, and trapping was allowed in the UP but not in the LP (Tables 1 and 2).

Nearly 60% more people attempted to hunt bobcats in the LP than in the UP in 2006 (Table 6), although the season is shorter in the LP (Tables 1 and 2). Hunters in the LP spent nearly 40% more days hunting bobcats than their counterparts in the UP. Hunters in the LP had more occasions where they chose not to harvest a bobcat than hunters in the UP; however, the proportion of hunters registering at least one bobcat was similar between the LP and UP.

Although there were nearly 70% more bobcat hunters than trappers in Michigan during the 2006 seasons, trappers registered nearly 1.5 times as many bobcats as hunters. Bobcat hunters devoted an average of 50 days of effort per bobcat registered, while trappers spent about 58 days of effort per bobcat registered.

Hunters that used dogs were more successful than hunters using calls (27% of hunters using dogs registered a cat versus 12% of hunters using calls). Lovallo (2005) reported a mean success rate of 35% for hunters using dogs in Pennsylvania during 2000-2004, while the mean success rate for hunters using calls in Pennsylvania was 12%. Kitchell and Olson (2005,

2006) reported 42-59% of hunters using dogs registered a bobcat in Wisconsin during 2004 and 2005, while 18-19% of hunters not using dogs registered a bobcat.

About 7% of the bobcat trappers in Michigan released a bobcat from their traps set during the 2006 season, which was lower than reported among trappers during 2003 through 2005 (Frawley et al. 2004, 2005, 2006). However, trapping of bobcat was not permitted in the LP in 2006, and thus, fewer trappers had an opportunity to release a bobcat. In comparison, 3-4% of Wisconsin bobcat trappers released a bobcat from their traps during 2002-2005 in Wisconsin (Kitchell and Olson 2003, 2005, 2006). Differences between states likely reflect differences in regulations. In Wisconsin, a limited number of bobcat harvest tags are distributed by lottery, and licensees can only take one bobcat (Dhuey and Olson 2005).

ACKNOWLEDGEMENTS

We thank all the hunters and trappers that provided information. Theresa Riebow and Becky Walker completed data entry. Marshall Strong prepared the figure of bobcat management units. Mike Bailey, Pat Lederle, Cheryl Nelson-Flierman, and Doug Reeves reviewed a draft version of this report.

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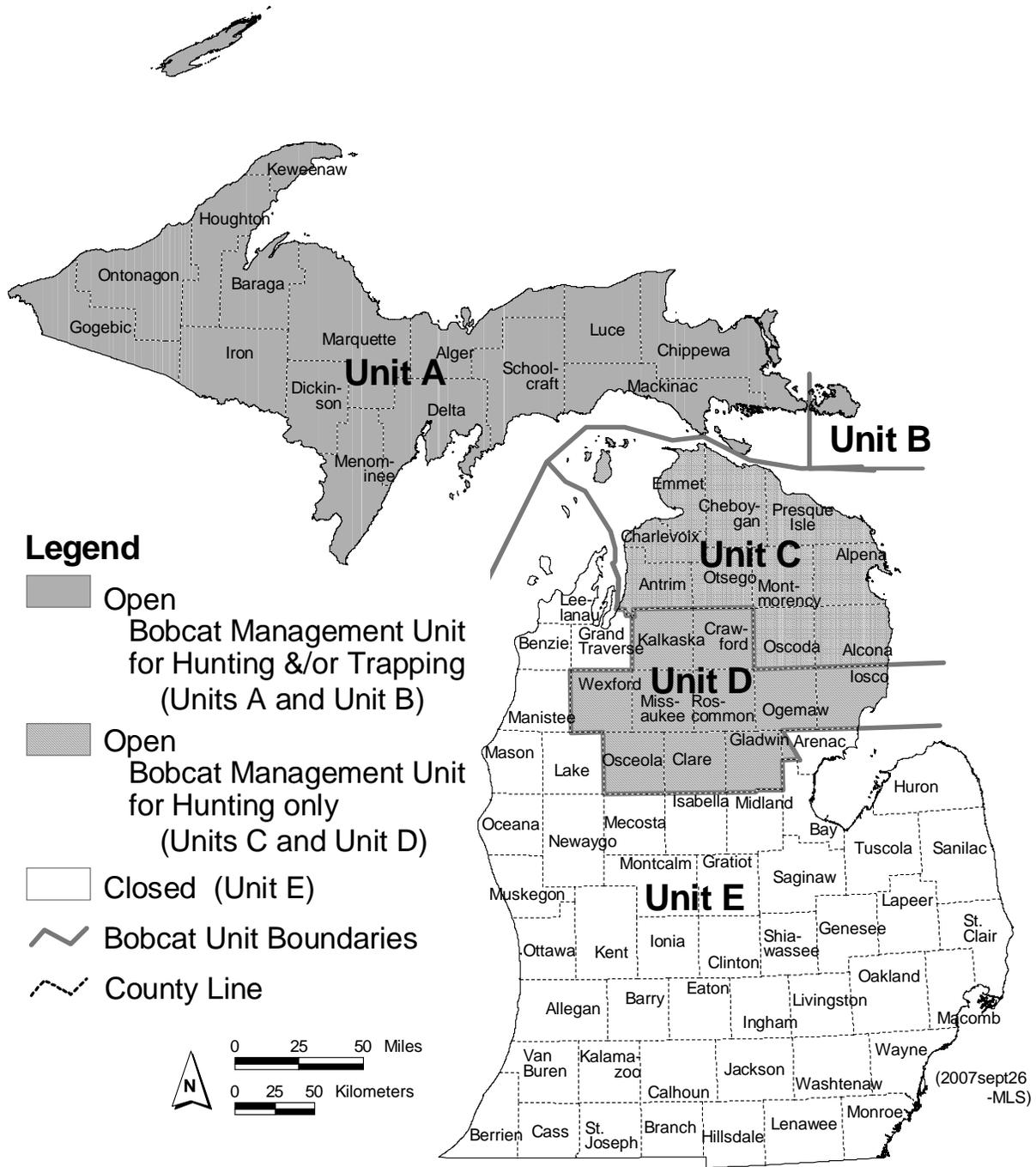
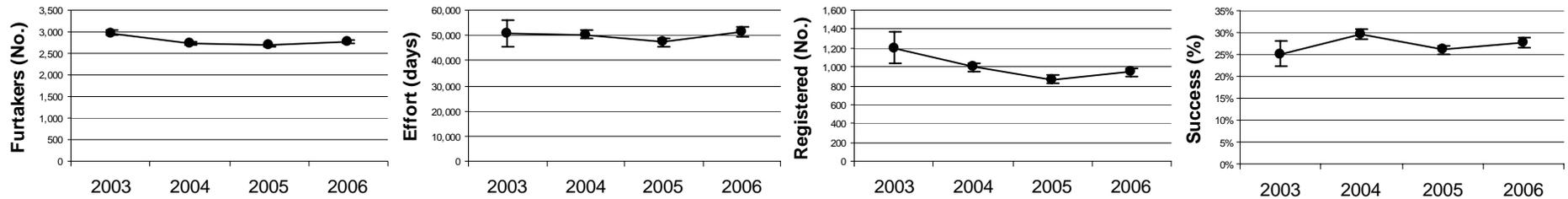
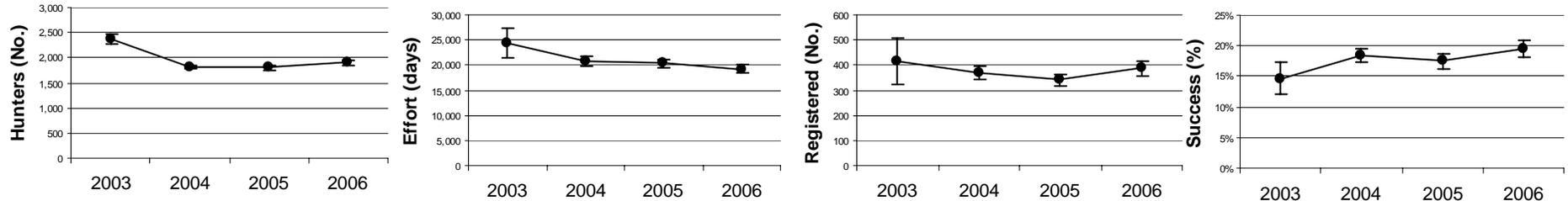


Figure 1. Bobcat Management Units in Michigan for the 2006 hunting and trapping seasons.

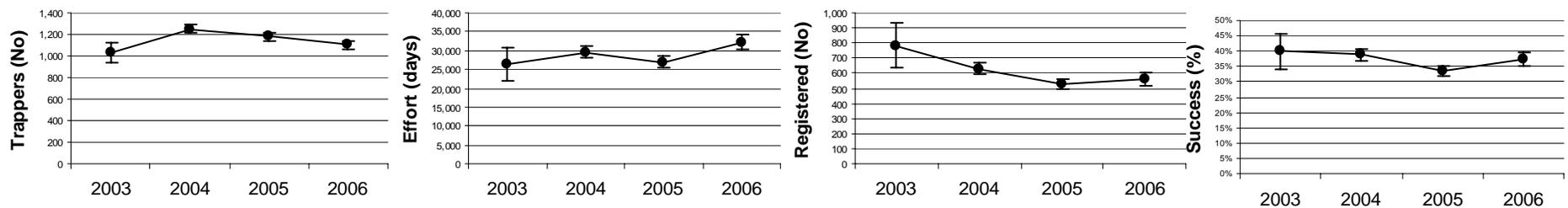
Hunting and trapping combined



Hunting



Trapping



Year

Figure 2. Number of furtakers pursuing bobcats, number of days of effort, number of bobcats registered, and proportion of furtakers registering a bobcat in Michigan during 2003-2006, summarized by method of take. Number of hunters and trappers does not add up to statewide total of hunters and trappers combined because a person could both hunt and trap bobcats.

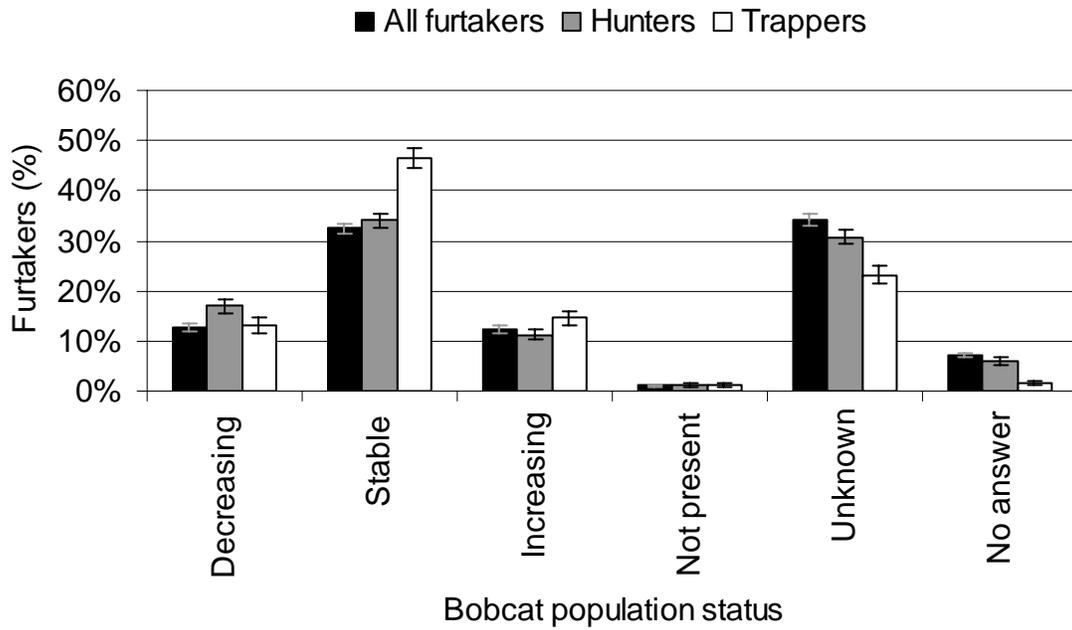


Figure 3. Status of bobcats in Michigan during 2006 as described by bobcat hunters and trappers. Vertical bars represent the 95% CL.

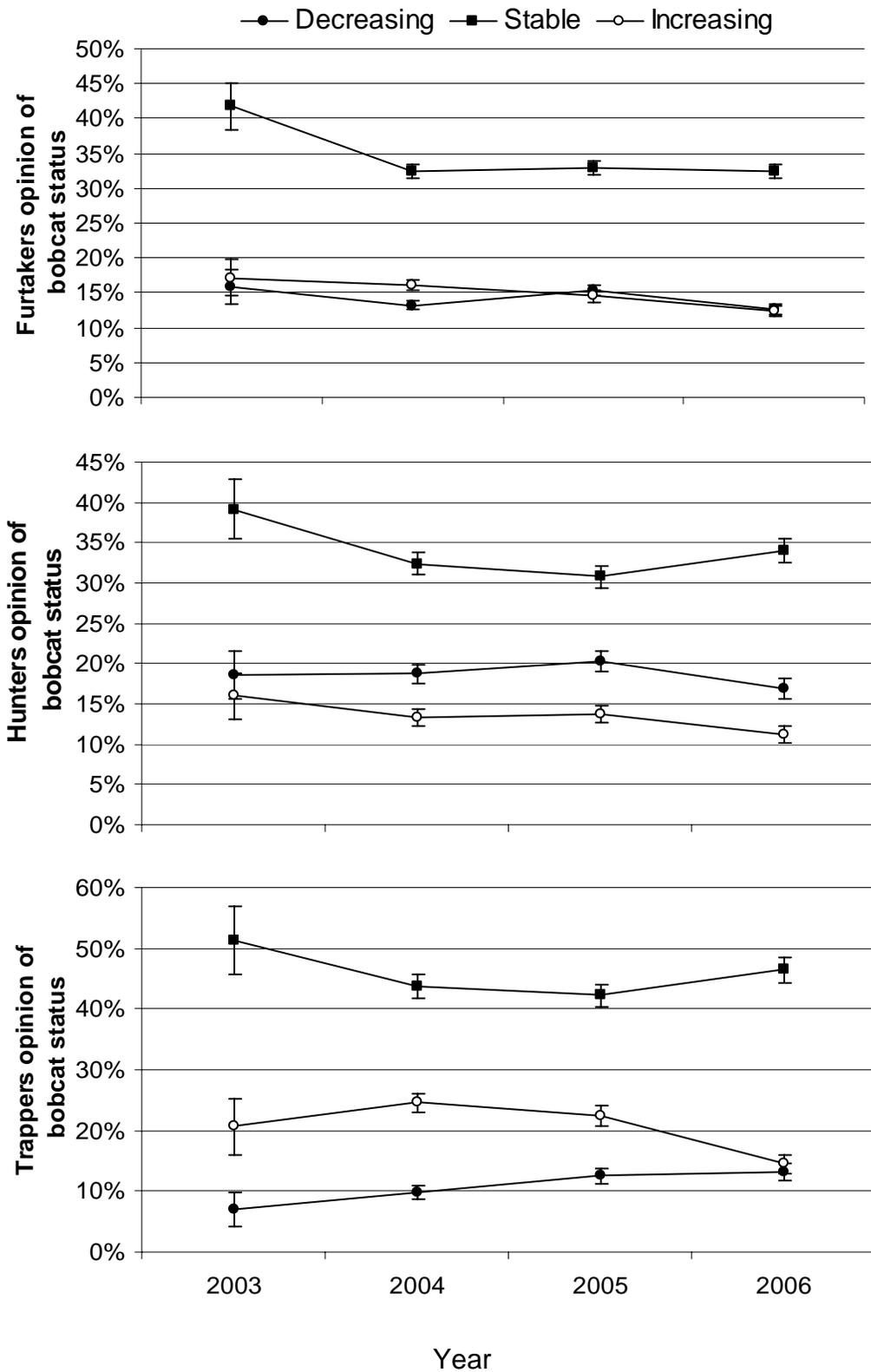


Figure 4. Status of bobcat population in Michigan as described by bobcat hunters and trappers, 2003-2006.

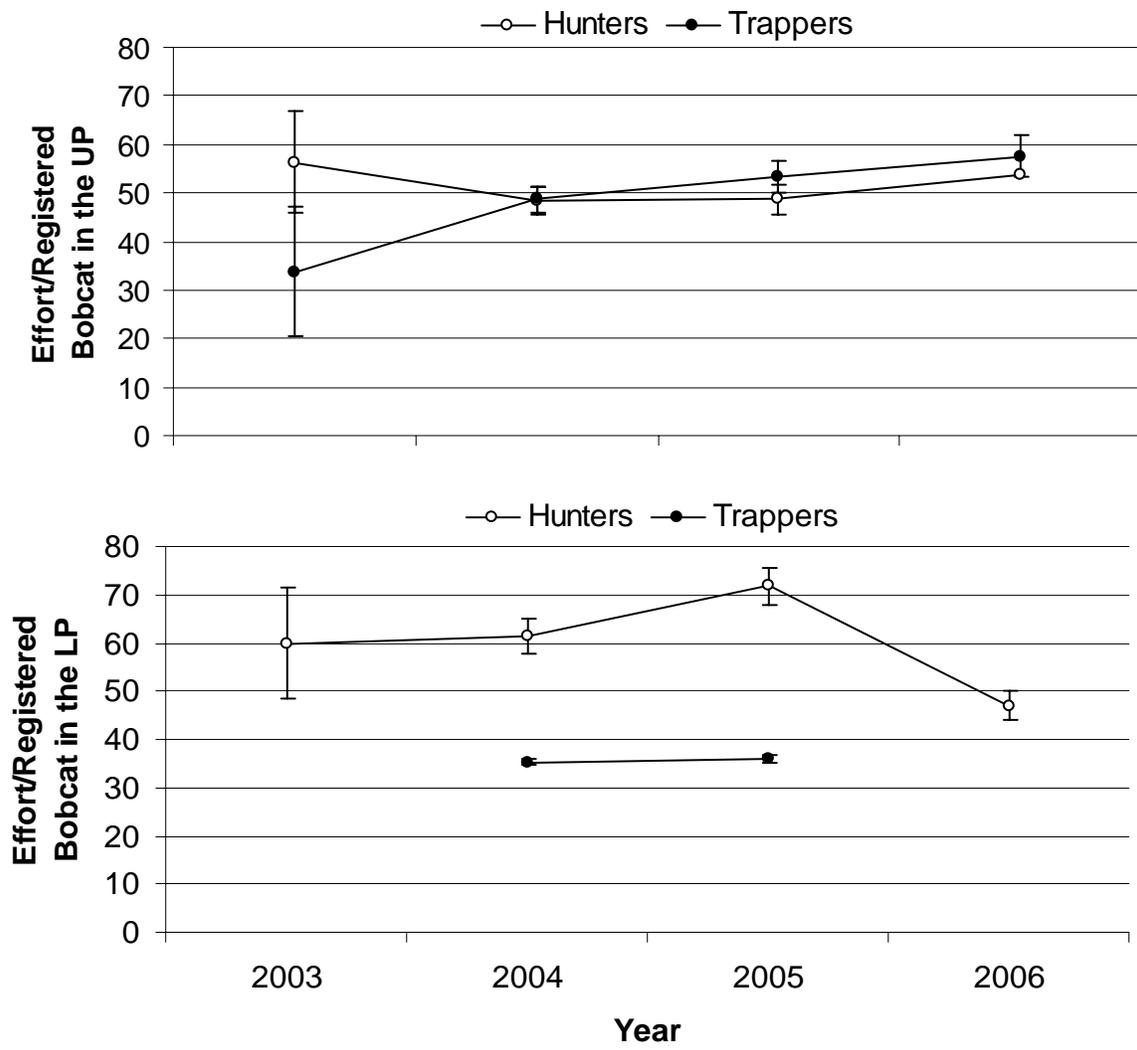


Figure 5. Estimated number of days of effort per bobcat registered in Michigan by hunters and trappers for the 2003-2006 seasons, summarized by region. Vertical error bars represent the 95% CL. Bobcat could be harvested by trappers in portions of the LP during 2004 and 2005 only.

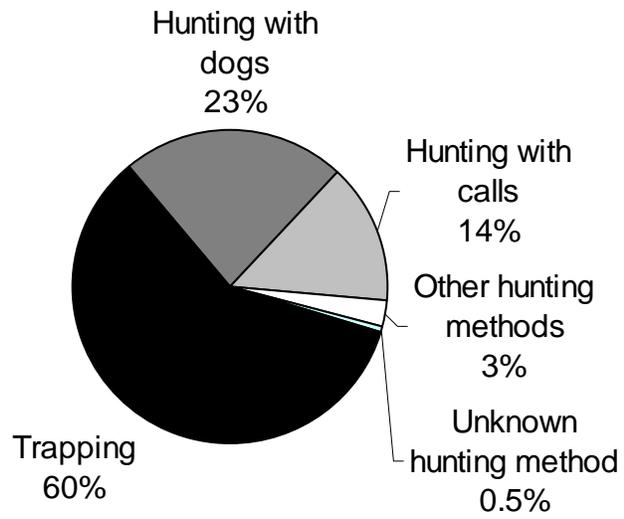


Figure 6. Proportion of bobcats registered in Michigan during 2006, summarized by method of take.

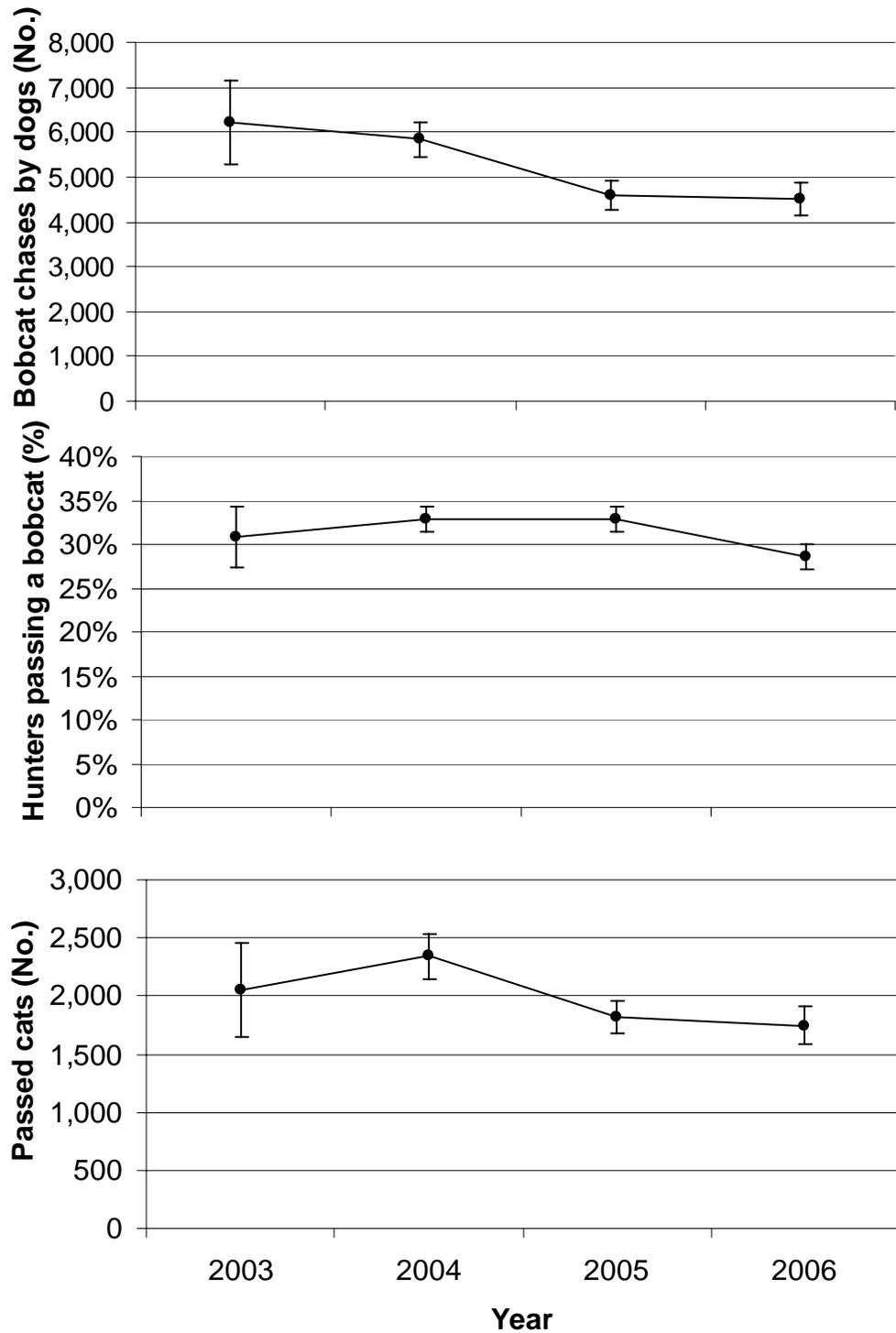


Figure 7. Number of bobcat chases by dogs, proportion of hunters passing a bobcat (bobcats within range or treed but not harvested), and number of bobcats passed by hunters (all types of hunting) in Michigan, 2003-2006.

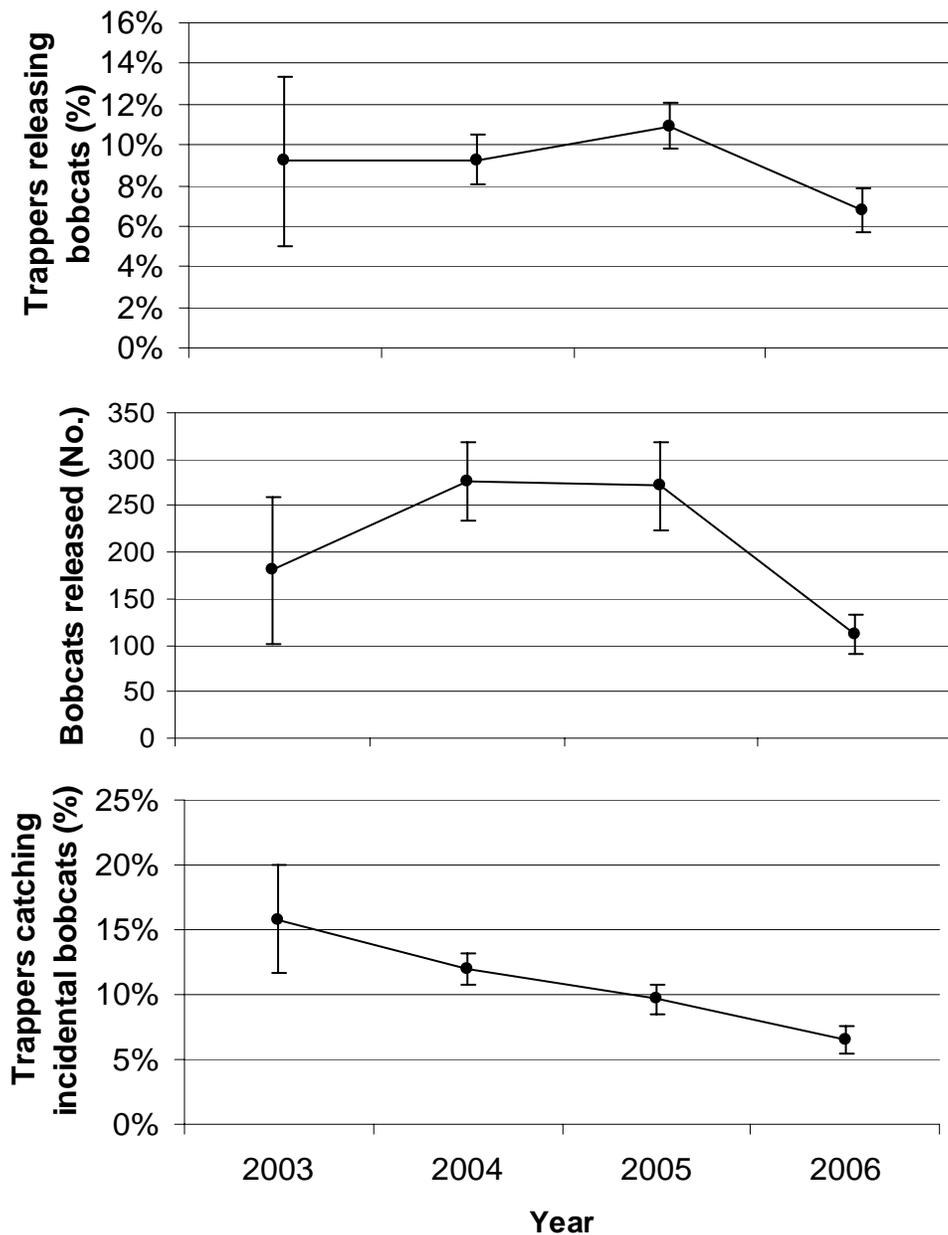


Figure 8. Number of trappers releasing bobcats from their traps, number of bobcats released from traps, and proportion of trappers that caught a bobcat in a trap set for another species in Michigan, 2003-2006. Trapping of bobcat in the LP was permitted in 2004 and 2005 but not permitted in 2003 and 2006.

Table 1. Resident bobcat hunting season dates and seasonal bag limits in Michigan, 1985-2006.

Year	State-wide bag limit ^a	Hunting season zone						
		Upper Peninsula ^b		Drummond Island		Lower Peninsula		
		Season dates	Bag limit ^a	Season dates	Bag limit ^a	North ^c	South ^d	Bag limit ^a
1985	None	10/25-3/1	None	Closed	0	1/1-3/1	NA	None
1986	None	10/25-3/1	None	Closed	0	1/1-3/1	NA	None
1987	None	10/25-3/1	None	Closed	0	1/1-3/1	NA	None
1988	None	10/25-3/1	None	Closed	0	1/1-3/1	NA	None
1989	1	10/25-3/1	1	Closed	0	1/1-3/1	1/1-2/1	1
1990	1	10/25-3/1	1	Closed	0	1/1-3/1	1/1-2/1	1
1991	1	10/25-3/1	1	Closed	0	1/1-3/1	1/15-2/16	1
1992	1	10/25-3/1	1	Closed	0	1/1-3/1	1/15-2/16	1
1993	1	10/25-3/1	1	Closed	0	1/1-3/1	1/15-2/16	1
1994	2	10/25-3/1	2	Closed	0	1/1-3/1	1/15-2/16	1
1995	2	10/25-3/1	2	10/25-3/1	1	1/1-3/1	1/15-2/16	1
1996	3	10/25-3/1	3	10/25-3/1	1	1/1-3/1	1/15-2/16	1
1997	3	10/25-3/1	3	10/25-3/1	1	1/1-3/1	1/15-2/16	1
1998	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	1
1999	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	1
2000	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	1
2001	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	1
2002	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	1
2003	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	1
2004	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	1
2005	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	1
2006	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	1

^aThe statewide bag limit was the maximum number of bobcats that could be taken per person from all zones (hunting and trapping combined), and the bag limit for each zone was the maximum number that could be taken within a zone (hunting and trapping combined).

^bExcluded Bois Blanc Island during 1985-1988 and Drummond Island in the Upper Peninsula.

^cDuring 1985-1988, the North Zone included Alcona, Alpena, Antrim, Charlevoix, Cheboygan, Clare, Emmet, Montmorency, Oscoda, Otsego, and Presque Isle counties. Roscommon county was added during 1985-1986, and Arenac, Crawford, Gladwin, Iosco, Kalkaska, Missaukee, Ogemaw, Osceola, and Roscommon counties were added in 1988. During 1989-2006, the North Zone included Alpena, Antrim, Charlevoix, Cheboygan, Emmet, Montmorency, Otsego, and Presque Isle. Alcona and Oscoda counties were added during 1991-2006.

^dThe South Zone did not exist before 1989. During 1989-2006, the South Zone included Clare, Crawford, Gladwin, Iosco, Kalkaska, Missaukee, Ogemaw, Osceola, Roscommon, and Wexford counties, and Arenac County west of Highway I-75 and north of Highway M-61. The South Zone also included Alcona and Oscoda counties during 1989-1990.

Table 2. Resident bobcat trapping season dates and seasonal bag limits in Michigan, 1985-2006.

Year	State-wide bag limit ^a	Trapping season zone						
		Upper Peninsula ^b		Drummond Island		Lower Peninsula		
		Season dates	Bag limit ^a	Season dates	Bag limit ^a	North ^c	South ^d	Bag limit ^a
1985	None	10/25-3/1	None	Closed	0	Closed	Closed	0
1986	None	10/25-3/1	None	Closed	0	Closed	Closed	0
1987	None	10/25-3/1	None	Closed	0	Closed	Closed	0
1988	None	10/25-3/1	None	Closed	0	Closed	Closed	0
1989	1	10/25-3/1	1	Closed	0	Closed	Closed	0
1990	1	10/25-3/1	1	Closed	0	Closed	Closed	0
1991	1	10/25-3/1	1	Closed	0	Closed	Closed	0
1992	1	10/25-3/1	1	Closed	0	Closed	Closed	0
1993	1	10/25-3/1	1	Closed	0	Closed	Closed	0
1994	2	10/25-3/1	2	Closed	0	Closed	Closed	0
1995	2	10/25-3/1	2	10/25-3/1	1	Closed	Closed	0
1996	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
1997	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
1998	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
1999	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
2000	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
2001	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
2002	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
2003	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	0
2004	2	10/25-3/1	2	10/25-3/1	1	12/10-20	12/10-20	1
2005	2	10/25-3/1	2	10/25-3/1	1	12/10-20	12/10-20	1
2006	2	10/25-3/1	2	10/25-3/1	1	Closed	Closed	0

^aThe statewide bag limit was the maximum number of bobcats that could be taken per person from all zones (hunting and trapping combined), and the bag limit for each zone was the maximum number that could be taken within a zone (hunting and trapping combined).

^bExcluded Bois Blanc Island during 1985-1988 and Drummond Island in the Upper Peninsula.

^cDuring 1985-1988, the North Zone included Alcona, Alpena, Antrim, Charlevoix, Cheboygan, Clare, Emmet, Montmorency, Oscoda, Otsego, and Presque Isle counties. Roscommon county was added during 1985-1986, and Arenac, Crawford, Gladwin, Iosco, Kalkaska, Missaukee, Ogemaw, Osceola, and Roscommon counties were added in 1988. During 1989-2006, the North Zone included Alpena, Antrim, Charlevoix, Cheboygan, Emmet, Montmorency, Otsego, and Presque Isle. Alcona and Oscoda counties were added during 1991-2006.

^dThe South Zone did not exist before 1989. During 1989-2006, the South Zone included Clare, Crawford, Gladwin, Iosco, Kalkaska, Missaukee, Ogemaw, Osceola, Roscommon, and Wexford counties, and Arenac County west of Highway I-75 and north of Highway M-61. The South Zone also included Alcona and Oscoda counties during 1989-1990.

Table 3. Estimated number of furtakers (hunters and trappers combined) pursuing bobcat and their hunting and trapping effort (days combined) in Michigan for 2005 and 2006, summarized by area.

Area	Furtakers ^a					Hunting and trapping effort				
	Year		Change (%)	Year		Change (%)				
	2005	2006		2005	2006					
No.	95% CL	No.	95% CL	Days	95% CL	Days	95% CL			
Upper Peninsula	1,379	38	1,600	45	16%*	32,930	1,662	40,065	2,013	22*
Lower Peninsula	1,331	38	1,191	42	-11%*	13,843	670	10,963	668	-21*
Unit C	757	32	656	34	-13%*	8,507	583	6,623	569	-22*
Unit D	671	30	625	33	-7%	5,336	345	4,340	330	-19*
Unspecified	137	15	108	15	-21%	486	117	444	149	
Statewide	2,677	34	2,772	45	4%*	47,259	1,681	51,473	2,033	9*

^aNumber of furtakers does not add up to statewide total because furtakers could hunt in more than one area.

*P<0.005.

Table 4. Estimated number of bobcats registered by furtakers (hunters and trappers combined) and proportion of furtakers registering at least one bobcat in Michigan during 2005 and 2006, summarized by area.

Area	Bobcats registered ^{a,b}					Furtakers registering a bobcat				
	Year		Change (%)	Year		Difference (%)				
	2005	2006		2005	2006					
No.	95% CL	No.	95% CL	%	95% CL	%	95% CL			
Upper Peninsula	633	38	706	44	11	34	2	33	2	-1
Lower Peninsula	228	19	233	21	2	17	1	20	2	2
Unit C	121	14	122	15	1	16	2	19	2	3
Unit D	107	13	111	15	4	16	2	18	2	2
Unspecified	7	3	6	4	-15	5	3	6	3	
Statewide	868	41	946	47	9	26	1	28	1	2

^aAlthough all furtakers harvesting a bobcat were required to present their animals at a DNR office for registration, this survey does not present information collected from registered bobcats.

^bAn estimated 3 ± 2 bobcats were registered by trappers not pursuing bobcats or by trappers taking bobcats in areas not open to harvest of bobcats (incidental catches); these incidental catches were not included in statewide estimate of bobcats registered.

*P<0.005.

Table 5. Estimated number of furtakers (hunters and trappers combined) attempting to capture a bobcat, days spent afield (effort), bobcats registered, and proportion of furtakers that registered a bobcat during 2006 in Michigan, summarized by county.

County	Furtakers ^a		Hunting and trapping effort (days)		Bobcats registered		Furtakers that registered a bobcat	
	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL
Alcona	125	16	817	134	9	4	7	3
Alger	82	13	1,327	315	15	6	17	6
Alpena	105	14	743	142	15	6	14	5
Antrim	40	9	268	78	6	4	15	8
Arenac	11	5	29	14	0	0	0	0
Baraga	92	13	1,540	356	41	11	33	7
Charlevoix	31	8	319	118	8	4	25	11
Cheboygan	90	13	895	181	23	7	25	7
Chippewa	168	18	2,711	451	31	8	17	4
Clare	64	11	294	66	9	4	14	6
Crawford	111	15	680	130	8	4	7	3
Delta	229	21	5,319	719	82	15	28	4
Dickinson	128	16	3,601	652	49	13	26	6
Emmet	41	9	531	149	5	3	11	7
Gladwin	55	10	253	74	8	4	14	7
Gogebic	110	15	2,625	517	70	15	47	7
Houghton	87	13	1,949	475	27	9	23	6
Iosco	47	10	319	90	5	3	10	6
Iron	172	18	4,186	668	98	18	39	5
Kalkaska	50	10	329	91	8	4	15	7
Keweenaw	21	7	467	206	11	6	36	15
Luce	90	13	1,263	288	15	7	14	5
Mackinac	145	17	2,042	378	40	10	24	5
Marquette	153	17	3,099	537	37	10	21	5
Menominee	172	18	4,959	753	75	15	34	5
Missaukee	84	13	425	83	15	6	18	6
Montmorency	108	15	755	156	15	6	14	5
Ogemaw	84	13	531	121	11	5	13	5
Ontonagon	120	15	2,942	508	75	15	46	6
Osceola	50	10	313	78	18	6	36	10
Oscoda	99	14	587	132	14	5	14	5
Otsego	53	10	508	153	0	0	0	0
Presque Isle	104	14	1,200	236	27	7	26	6
Roscommon	130	16	657	108	18	6	14	4
Schoolcraft	119	15	2,036	386	41	10	31	6
Wexford	85	13	509	101	12	5	14	5
Unspecified	108	15	444	149	6	4	6	3

^aNumber of furtakers does not add up to statewide total because furtakers could hunt and trap in more than one county.

Table 6. Estimated number of bobcat hunters and hunting effort (days) in Michigan for 2005 and 2006, summarized by area.

Area	Hunters ^a					Hunting effort				
	Year		Change (%)	Year		Change (%)				
	2005	2006		2005	2006					
No.	95% CL	No.	95% CL	Days	95% CL	Days	95% CL			
Upper Peninsula	724	31	756	36	4	8,641	655	7,939	613	-8
Lower Peninsula	1,135	36	1,191	42	5	11,305	628	10,963	668	-3
Unit C	671	30	656	34	-2	7,334	550	6,623	569	-10
Unit D	560	28	625	33	12*	3,971	296	4,340	330	9
Unspecified	69	11	66	11		428	112	285	78	
Statewide	1,802	39	1,903	47	6	20,374	879	19,188	881	-6

^aNumber of hunters does not add up to statewide total because hunters could hunt in more than one area.

*P<0.005.

Table 7. Estimated number of bobcats passed, bobcats registered by hunters, and proportion of hunters that registered at least one bobcat in Michigan for 2005 and 2006, summarized by area.

Area	Bobcats passed ^a					Bobcats registered					Hunters that registered a bobcat				
	Year		Change (%)	Year		Change (%)	Year		Change (%)	Year		Difference (%)			
	2005	2006		2005	2006		2005	2006		2005	2006				
No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL	%	95% CL		
Upper Peninsula	721	97	679	118	-6	177	19	148	18	-17	21	2	18	2	-3
Lower Peninsula	1,016	95	1,035	107	2	157	16	233	21	48*	14	1	20	2	6*
Unit C	551	68	528	84	-4	91	12	122	15	34*	14	2	19	2	5*
Unit D	464	61	508	62	9	66	11	111	15	68*	12	2	18	2	6*
Unspecified	78	40	32	17		6	3	5	3		8	4	7	5	
Statewide	1,815	143	1,746	160	-4	340	25	386	28	13	17	1	20	1	2

^aAn estimated 9 ± 5 bobcats were passed by hunters using calls in areas not open for hunting during 2006; these passed bobcats were not included in statewide estimate.

*P<0.005.

Table 8. Estimated number of days of effort per bobcat registered by hunters in Michigan during 2003-2006, summarized by year and area.

Area	Year						Change between 2005 and 2006 (%)
	2004		2005		2006		
	Effort per registered bobcat	95% CL	Effort per registered bobcat	95% CL	Effort per registered bobcat	95% CL	
Upper Peninsula	48.5	2.9	48.7	3.1	53.7	2.8	10
Lower Peninsula	61.3	3.6	71.9	3.8	47.0	3.1	-35*
Unit C	57.7	2.7	80.7	3.3	54.3	2.5	-33*
Unit D	66.7	2.5	59.8	2.0	39.0	1.7	-35*
Unspecified	96.0	0.8	74.3	0.8	62.3	0.6	
Statewide	56.3	4.7	59.8	4.9	49.7	4.2	-17*

*P<0.005. Comparison between 2005 and 2006.

Table 9. Estimated number of hunters, hunting effort (days), bobcats passed, bobcats registered, and proportion of hunters that registered a bobcat in Michigan during 2006, summarized by county.

County	Hunters ^a		Hunting effort (days)		Bobcats passed by hunters ^b		Bobcats registered by hunters		Hunters that registered at least one bobcat	
	No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL
Alcona	125	16	817	134	76	25	9	4	7	3
Alger	52	10	480	128	85	38	2	2	3	3
Alpena	105	14	743	142	43	16	15	6	14	5
Antrim	40	9	268	78	3	2	6	4	15	8
Arenac	11	5	29	14	8	6	0	0	0	0
Baraga	37	9	197	62	3	2	6	4	17	9
Charlevoix	31	8	319	118	9	6	8	4	25	11
Cheboygan	90	13	895	181	81	33	23	7	25	7
Chippewa	78	12	709	181	120	70	11	5	14	6
Clare	64	11	294	66	27	12	9	4	14	6
Crawford	111	15	680	130	61	17	8	4	7	3
Delta	125	16	1,142	196	116	37	21	7	16	5
Dickinson	69	12	624	137	56	18	14	6	16	6
Emmet	41	9	531	149	32	12	5	3	11	7
Gladwin	55	10	253	74	20	8	8	4	14	7
Gogebic	40	9	348	105	41	21	15	7	31	11
Houghton	27	7	175	54	6	6	3	2	11	9
Iosco	47	10	319	90	34	12	5	3	10	6
Iron	63	11	488	126	29	16	8	5	10	5

^aNumber of hunters does not add up to statewide total because hunters could hunt in more than one area.

^bBobcats that hunter could have harvested but chose not to take.

Table 9. (Continued) Estimated number of hunters, hunting effort (days), bobcats passed, bobcats registered, and proportion of hunters that registered a bobcat in Michigan during 2006, summarized by county.

County	Hunters ^a		Hunting effort (days)		Bobcats passed by hunters ^b		Bobcats registered by hunters		Hunters that registered at least one bobcat	
	No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL
Kalkaska	50	10	329	91	18	8	8	4	15	7
Keweenaw	9	4	35	19	0	0	2	2	17	19
Luce	44	9	207	54	12	9	3	2	7	6
Mackinac	87	13	743	217	63	22	14	5	16	6
Marquette	93	14	910	198	24	12	6	4	7	4
Menominee	105	14	1,243	250	53	24	27	8	25	6
Missaukee	84	13	425	83	59	24	15	6	18	6
Montmorency	108	15	755	156	79	29	15	6	14	5
Ogemaw	84	13	531	121	84	22	11	5	13	5
Ontonagon	29	8	279	110	14	8	2	2	5	6
Osceola	50	10	313	78	55	18	18	6	36	10
Oscoda	99	14	587	132	58	18	14	5	14	5
Otsego	53	10	508	153	20	11	0	0	0	0
Presque Isle	104	14	1,200	236	127	35	27	7	26	6
Roscommon	130	16	657	108	110	30	18	6	14	4
Schoolcraft	59	11	358	89	55	18	15	6	23	8
Wexford	85	13	509	101	32	14	12	5	14	5
Unspecified	66	11	285	78	32	17	5	3	7	5

^aNumber of hunters does not add up to statewide total because hunters could hunt in more than one area.

^bBobcats that hunter could have harvested but chose not to harvest.

Table 10. Estimated number of hunters, hunting effort (days), bobcats passed, bobcats registered, and proportion of hunters that registered a bobcat in Michigan during 2006, summarized by hunting method and area.

Variable and area	Hunting method							
	Dogs		Calls		Other		Unknown	
	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL	Estimate	95% CL
Hunters (No.)^a								
UP	265	22	462	29	78	12	12	5
LP	557	31	641	33	40	9	11	5
Unit C	316	24	345	25	18	6	5	3
Unit D	296	24	323	25	23	7	6	4
Unspecified	34	8	29	8	8	4	0	0
Statewide	779	36	1,109	41	122	15	23	7
Hunting effort (Days)								
UP	3,084	412	4,154	408	631	158	70	37
LP	6,086	572	4,592	357	236	68	49	24
Unit C	3,848	491	2,649	280	99	46	27	20
Unit D	2,239	254	1,943	210	137	51	21	13
Unspecified	140	47	119	45	26	22	0	0
Statewide	9,310	713	8,865	528	894	174	119	44
Bobcats passed by hunters (No.)								
UP	458	100	188	45	27	15	6	7
LP	721	96	290	41	23	11	2	2
Unit C	378	77	131	26	18	11	0	0
Unit D	343	54	159	32	5	3	2	2
Unspecified	0	0	15	12	0	0	0	0
Statewide ^b	1,196	141	493	61	50	19	8	7
Bobcats registered by hunters (No.)								
UP	76	14	55	11	15	6	2	2
LP	139	16	79	13	12	5	3	2
Unit C	78	12	38	9	5	3	2	2
Unit D	61	11	41	9	8	4	2	2
Unspecified	3	2	2	2	0	0	0	0
Statewide	218	21	136	16	27	8	5	3
Hunters that registered at least one bobcat (%)								
UP	25	4	12	2	18	6	13	14
LP	25	3	12	2	31	11	29	21
Unit C	25	3	11	2	25	15	33	38
Unit D	21	3	13	3	33	14	25	29
Unspecified	9	7	5	6	0	0	0	0
Statewide	27	2	12	1	21	5	20	12

^aNumber of hunters does not add up to statewide total because hunters could hunt in more than one area.

Table 11. Estimated number of bobcat hunters using dogs and their hunting effort (days) in Michigan for 2005 and 2006, summarized by area.

Area	Hunters using dogs ^a					Hunting effort				
	Year		Change (%)	Year		Change (%)				
	2005	2006		2005	2006					
No.	95% CL	No.	95% CL	Days	95% CL	Days	95% CL			
Upper Peninsula	287	21	265	22	-8	4,054	517	3,084	412	-24*
Lower Peninsula	540	28	557	31	3	6,263	525	6,086	572	-3
Unit C	333	23	316	24	-5	4,305	460	3,848	491	-11
Unit D	260	20	296	24	14	1,959	220	2,239	254	14
Unspecified	45	9	34	8		273	92	140	47	
Statewide	785	32	779	36	-1	10,590	743	9,310	713	-12

^aNumber of hunters does not add up to statewide total because hunters could hunt in more than one area.

*P<0.005.

Table 12. Estimated number of bobcats passed, bobcats registered by hunters using dogs, and proportion of these hunters that registered at least one bobcat in Michigan for 2005 and 2006, summarized by area.

Area	Bobcats passed					Bobcats registered					Hunters that registered a bobcat				
	Year		Change (%)	Year		Change (%)	Year		Difference (%)						
	2005	2006		2005	2006		2005	2006							
No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL	%	95% CL				
Upper Peninsula	463	86	458	100	-1	107	15	76	14	-29*	31	4	25	4	-5
Lower Peninsula	646	82	721	96	12	66	11	139	16	109*	12	2	25	3	13*
Unit C	384	63	378	77	-1	48	9	78	12	63*	14	3	25	3	10*
Unit D	263	46	343	54	31	19	6	61	11	225*	7	2	21	3	13*
Unspecified	65	39	17	11		4	3	3	2		10	6	9	7	
Statewide	1,174	129	1,196	141	2	177	19	218	21	23*	20	2	27	2	7

*P<0.005.

Table 13. Estimated number of bobcat hunters using calls and their hunting effort (days) in Michigan for 2005 and 2006, summarized by area.

Area	Hunters using calls ^a					Hunting effort				
	Year		Change (%)	Year		Change (%)				
	2005	2006		2005	2006					
No.	95% CL	No.	95% CL	Days	95% CL	Days	95% CL			
Upper Peninsula	410	25	462	29	13	3,748	370	4,154	408	11
Lower Peninsula	635	30	641	33	1	4,476	319	4,592	357	3
Unit C	352	23	345	25	-2	2,628	252	2,649	280	1
Unit D	319	22	323	25	1	1,848	186	1,943	210	5
Unspecified	23	6	29	8	26	117	41	119	45	2
Statewide	1,037	35	1,109	41	7	8,341	480	8,865	528	6

^aNumber of hunters does not add up to statewide total because hunters could hunt in more than one area.

*P<0.005.

Table 14. Estimated number of bobcats passed, bobcats registered by hunters using calls, and proportion of these hunters that registered at least one bobcat in Michigan for 2005 and 2006, summarized by area.

Area	Bobcats passed ^a					Bobcats registered					Hunters that registered a bobcat				
	Year		Change (%)	Year		Change (%)	Year		Change (%)	Year		Difference (%)			
	2005	2006		2005	2006		2005	2006		2005	2006				
No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL	%	95% CL				
Upper Peninsula	190	35	188	45	-1	50	10	55	11	9	12	2	12	2	0
Lower Peninsula	335	44	290	41	-13	78	11	79	13	2	12	2	12	2	0
Unit C	146	23	131	26	-10	36	8	38	9	6	10	2	11	2	1
Unit D	189	37	159	32	-16	42	8	41	9	-2	13	2	13	3	0
Unspecified	13	6	15	12	17	1	2	2	2	6	6	7	5	6	-1
Statewide	538	56	493	61	-8	130	15	136	16	5	12	1	12	1	0

^aAn estimated 9 ± 5 bobcats were passed by hunters using calls in areas not open for hunting during 2006; these passed bobcats were not included in statewide estimate.

*P<0.005.

Table 15. Estimated number of bobcat trappers and their trapping effort (days) in Michigan for 2005 and 2006, summarized by area.

Area	Trappers ^a					Trapping effort				
	2005		2006		Change (%)	2005		2006		Change (%)
	No.	95% CL	No.	95% CL		Days	95% CL	Days	95% CL	
Upper Peninsula	829	36	1,103	41	33*	24,289	1,509	32,285	1,896	33*
Lower Peninsula	312	22	NA ^b			2,537	211	NA		
Unit C	154	16	NA			1,173	147	NA		
Unit D	157	16	NA			1,365	157	NA		
Unspecified	69	11	NA			58	28	NA		
Statewide	1,177	37	1,103	41	-6	26,884	1,506	32,285	1,896	20*

^aNumber of trappers does not add up to statewide total because trappers could trap in more than one area in 2005.

^bNot applicable because trapping was legal only in the UP in 2006.

*P<0.005.

Table 16. Estimated number of bobcats captured, bobcats released alive, and bobcats registered by trappers in Michigan for 2005 and 2006, summarized by area.

Area	Bobcats captured					Bobcats released alive					Bobcats registered				
	2005		2006		Change (%)	2005		2006		Change (%)	2005		2006		Change (%)
	No.	95% CL	No.	95% CL		No.	95% CL	No.	95% CL		No.	95% CL	No.	95% CL	
Upper Peninsula	606	56	671	48	11	150	39	111	21	-26	456	34	560	40	23*
Lower Peninsula	192	29	NA ^a			121	25	NA			71	11	NA		
Unit C	72	16	NA			42	13	NA			30	7	NA		
Unit D	120	24	NA			79	21	NA			40	8	NA		
Unspecified	1	2	NA			0	0	NA			1	2	NA		
Statewide ^{b,c}	799	64	671	48	-16*	271	48	111	21	-59*	528	35	560	40	6

^aNot applicable because trapping was legal only in the UP in 2006.

^bIncluded incidental catches that were not returned to the furtaker.

^cIn 2006, an estimated 43 ± 17 bobcats were caught by trappers not pursuing bobcats or in areas not open for trapping (incidental catches), 40 ± 16 bobcats were released alive, and 3 ± 2 bobcats were registered ; these incidental catches were not included in statewide estimates.

*P<0.005.

Table 17. Estimated proportion of bobcat trappers that captured at least one bobcat and proportion that registered at least one bobcat in Michigan for 2005 and 2006, summarized by area.

Area	Trappers that captured a bobcat					Trappers that registered a bobcat				
	Year		Year		Difference (%)	Year		Year		Difference (%)
	2005	2006	2005	2006		2005	2006	2005	2006	
%	95% CL	%	95% CL		%	95% CL	%	95% CL		
Upper Peninsula	43	2	40	2	-3	40	2	37	2	-2
Lower Peninsula	36	4	NA ^a			23	3	NA		
Unit C	32	5	NA			20	4	NA		
Unit D	39	5	NA			26	5	NA		
Unspecified	2	2	NA			2	2	NA		
Statewide	39	2	40	2	1	33	2	37	2	4*

^aNot applicable because trapping was legal only in the UP in 2006.

*P<0.005.

Table 18. Estimated number of days of effort per bobcat registered in Michigan by trappers for the 2004-2006, summarized by year and area.^a

Area	Year						Change between 2005 and 2006 (%)
	2004		2005		2006		
	Effort per registered bobcat	95% CL	Effort per registered bobcat	95% CL	Effort per registered bobcat	95% CL	
Upper Peninsula	48.6	2.7	53.3	3.4	57.7	4.3	8%
Lower Peninsula	35.3	0.6	35.9	0.8	NA ^a		
Unit C	42.7	0.5	38.7	0.6	NA		
Unit D	31.4	0.5	33.8	0.5	NA		
Unspecified		0.0	40.0	0.1	NA		
Statewide	46.9	2.8	50.9	3.5	57.7	4.3	13%

^aNot applicable because trapping was legal only in the UP in 2006.

*P<0.005. Comparison between 2005 and 2006.

Table 19. Estimated number of trappers, trapping effort (days), bobcats captured, bobcats released, bobcats registered, and proportion of trappers that captured and registered a bobcat in Michigan during 2006, summarized by county.

County	Trappers ^a		Trapping effort (days)		Bobcats captured by trappers		Bobcats released alive by trappers		Bobcats registered by trappers		Trappers that captured at least one bobcat		Trappers that registered at least one bobcat	
	No.	95%	No.	95%	No.	95%	No.	95%	No.	95%	%	95%	%	95%
		CL		CL		CL		CL		CL		CL		CL
Alger	46	10	846	248	17	7	3	2	14	6	30	10	27	9
Baraga	70	12	1,344	330	44	13	9	6	35	10	43	8	39	8
Chippewa	105	14	2,002	406	24	8	5	4	20	7	19	5	17	5
Delta	122	15	4,177	687	72	16	11	8	61	13	41	6	39	6
Dickinson	79	13	2,977	610	41	12	6	4	35	11	35	8	31	7
Gogebic	76	12	2,277	502	66	15	11	6	55	13	58	8	52	8
Houghton	64	11	1,774	468	32	11	8	5	24	9	33	8	29	8
Iron	130	16	3,698	630	99	18	9	5	90	17	51	6	48	6
Keweenaw	17	6	432	203	9	5	0	0	9	5	45	18	45	18
Luce	56	11	1,055	273	15	7	3	2	12	6	22	8	16	7
Mackinac	69	12	1,299	301	41	16	15	11	26	8	33	8	31	8
Marquette	84	13	2,188	473	34	10	3	2	31	9	33	7	31	7
Menominee	96	14	3,716	656	52	13	5	3	47	12	37	7	35	7
Ontonagon	104	14	2,663	480	82	17	9	6	73	15	51	7	51	7
Schoolcraft	73	12	1,678	368	37	12	11	6	26	8	33	8	31	8
Unspecified	49	10	159	98	6	5	5	4	2	2	6	5	3	4

^aNumber of trappers does not add up to statewide total because trappers could trap in more than one county.

Table 20. Trap type used by bobcat trappers in Michigan during 2006.

Trap type	Trappers (%)	95% CL	Trappers (No.)	95% CL
Foothold traps	76	2	836	37
Conibears	51	2	564	31
Other ^a	1	<1	15	6

^aIncluded snares and live traps, although snares were not legal to use to capture bobcats..

Table 21. Preferred trap type of bobcat trappers in Michigan during 2006.

Trap type	Trappers (%)	95% CL	Trappers (No.)	95% CL
Foothold traps	46	2	505	30
Conibears	31	2	345	25
No preference	20	2	221	21
Other ^a	1	<1	6	4
No answer	2	1	26	7

^aSnares were not legal to use to capture bobcats.

Appendix A. The questionnaire sent to people that obtained a bobcat harvest tag in Michigan for the 2006 bobcat hunting and trapping seasons.



BOBCAT HUNTER AND TRAPPER SURVEY

This information is requested under authority of Part 435, 1994 PA 451, M.C.L. 324.43539.



- It is important that you complete and return this questionnaire even if you did not harvest a bobcat during the 2006-07 hunting and trapping seasons (October 25, 2006, through March 1, 2007).
- Only the person this questionnaire was addressed to should answer these questions.

PART A: Hunting Questions

1. Did you hunt bobcats during the 2006-07 season?

- 1 Yes 2 No (*Skip to Question #9*)

2. About how many years have you hunted bobcats? _____ Years

3. If you hunted bobcats during the 2006-07 season, please complete the following table.

HUNTING METHOD (Select hunting method used.)	COUNTY HUNTED (For each hunting method used, list the county that you hunted on separate lines.)	NUMBER OF DAYS HUNTED (Count all days hunted even if you did not have an opportunity to take a bobcat)	NUMBER OF BOBCAT REGISTERED (Count only bobcat where a seal was attached to the pelt, and the animal was returned to you.)	NUMBER OF BOBCATS NOT TAKEN (Count the number of bobcats you called within range or treed but choose <u>not</u> to harvest.)
1 <input type="checkbox"/> Dogs 2 <input type="checkbox"/> Calls 3 <input type="checkbox"/> Other				
1 <input type="checkbox"/> Dogs 2 <input type="checkbox"/> Calls 3 <input type="checkbox"/> Other				
1 <input type="checkbox"/> Dogs 2 <input type="checkbox"/> Calls 3 <input type="checkbox"/> Other				
1 <input type="checkbox"/> Dogs 2 <input type="checkbox"/> Calls 3 <input type="checkbox"/> Other				

4. On what lands did you hunt bobcats during the 2006-07 season? (*You may check more than one.*)

- 1 Property owned by me or my family 2 Private land, with permission
 3 Private land open to public hunting (For example, Commercial Forests, Hunter Access Program) 4 Public land (State Game Area, State or National Forest, etc.)

5. Did you hunt bobcats with dogs during the 2006-07 season?

- 1 Yes 2 No (*Skip to Question #9*)

6. Who owned the dogs that you used to hunt bobcats during the 2006-07 season. (Check one)

- 1 Normally use dogs that I own. 2 Normally use dogs owned by someone else.
 3 Normally use a combination of my dogs and dogs owned by someone else.

7. Report the number of bobcat chases with dogs you participated in during the 2006-07 season? _____ Chases
8. Did you hire a guide to assist with hunting bobcats at any time during the 2006-07 season? ¹ Yes ² No

PART B: Trapping Questions

9. Did you attempt to harvest a bobcat while trapping in the 2006-07 season? ¹ Yes ² No (*Skip to Question #16*)
10. About how many years have you trapped bobcats? _____ Years
11. If you trapped bobcats during the 2006-07 season, please complete the following table.

COUNTY TRAPPED (List each county that you trapped for bobcat.)	NUMBER OF DAYS TRAPPED	NUMBER OF BOBCAT CAUGHT AND RELEASED (Count only bobcats you released alive from your traps.)	NUMBER OF BOBCAT REGISTERED (Count all bobcat that were registered including incidental catches that were not returned to you.)

12. On what lands did you trap bobcats during the 2006-07 season? (*You may check more than one.*)
- ¹ Property owned by me or my family ² Private land, with permission
- ³ Private land open to public hunting (For example, Commercial Forests, Hunter Access Program) ⁴ Public land (State Game Area, State or National Forest, etc.)
13. Which capture method did you use when you attempted to harvest bobcats in the 2006-07 season? (*Check all that apply.*)
- ¹ Foothold traps ² Conibears ³ Other (please specify _____)
14. Which capture method do you prefer to catch bobcats? (*Check one.*)
- ¹ Foothold traps ² Conibears ³ No preference ⁴ Other (please specify _____)
15. Did you catch any bobcats in traps that were set for another species in the 2006-07 season?
- ¹ Yes ² No

PART C: General Questions

16. Compared to the previous three years, what is the status of bobcats in the county that you prefer to hunt or trap bobcats in the 2006-07 season?
- ¹ Increasing ² Decreasing ³ Stable ⁴ Not present ⁵ Unknown

17. Do you have any comments or suggestions about bobcat management in Michigan?

*Please return questionnaire in the enclosed postage-paid envelope.
Thank you for your help.*