



# 2018 BOBCAT HUNTER AND TRAPPER HARVEST IN MICHIGAN

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## 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 2018, 10,088 people obtained a bobcat harvest tag for the hunting and trapping seasons (12% increase from 2017). About 36% (3,630) of these tag-holders attempted to hunt or trap bobcats, and 20% of these furtakers (hunters and trappers combined) registered at least one bobcat. An estimated 2,512 people attempted to hunt bobcats, and they spent 15,815 days hunting and registered 362 bobcats. About 1,492 people attempted to trap bobcats and spent 16,876 days trapping and registered 431 bobcats. The number of active furtakers increased significantly by 23% between 2017 and 2018. This increase was primarily by an increased number of trappers (26% increase) and hunters using calls (27%). The estimated effort per registered bobcat in 2018 was not significantly different from 2017 for either hunters or trappers. The amount of effort per bobcat registered was a measure of how difficult it was to capture a bobcat and may be an indirect measure of the abundance of bobcats. Similar estimates among hunters and trappers during the last two years suggested that bobcat numbers were similar in both 2017 and 2018. Other population indices measured by hunters (i.e., proportion of hunters that passed a bobcat) and trappers (i.e., proportion of trappers that released a bobcat and the proportion of trappers that caught an incidental bobcat) also did not change significantly between 2017 and 2018.



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## INTRODUCTION

The Natural Resources Commission (NRC) and the 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 and trapper participation, harvest, and days afield (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 2018, bobcats could be harvested during both hunting and trapping seasons in six management units (Tables 1 and 2). The dates of the hunting and trapping seasons were the same as in 2017. In order to hunt or trap bobcats, resident furtakers were required to obtain a free bobcat harvest tag, in addition to a fur harvester license. Nonresidents were not permitted to harvest bobcat. Bobcat harvest tags were only available from May 1 through November 30 (i.e., before the start of the earliest bobcat season). The total statewide bag limit was 2 bobcats per furtaker regardless of method of take. One bobcat could be taken on any land type (public or private) and in any unit. A second bobcat could be taken only on private lands (excluding Commercial Forest lands) in Unit A (Figure 1). Successful furtakers were required to immediately attach their harvest tag to the bobcat and were required to register bobcats within 10 days of the end of the season in which the bobcat was taken. Furtakers were not allowed to keep bobcats that were beyond the legal limit of bobcats per person or bobcats taken outside the area open for harvest (incidental catches). 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 the information collected from registered bobcats.

In 2018, hunting and trapping was allowed on both public and private lands in all open management units. Trappers could use body-gripping (e.g., conibear) traps, foothold traps, and live-restraining cage traps to capture bobcats in the UP but only foothold traps in the LP.

## METHODS

A questionnaire (Appendix A) was sent to 5,000 randomly selected people who obtained a bobcat harvest tag in 2018 (10,088 tag holders). Furtakers receiving the questionnaire reported whether they attempted to hunt or trap a bobcat, number of days spent afield (i.e., effort), 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 the 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 during the open seasons for taking bobcats. 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. All active furtakers were asked to describe how much weather

conditions affected how often they hunted or trapped bobcat. Possible answers included: to a great extent, somewhat, very little, or not at all. Successful hunters and trappers were asked to indicate how they intended to use the pelt from the animals they kept. Possible answers included: sold to fur buyer, sold at fur auction, sold to taxidermist, sold to a private individual, kept for personal use, or other.

To extrapolate from the tag holders that completed their questionnaire to all people obtaining harvest tags, estimates were calculated using a simple random sampling design (Cochran 1977). The 95% confidence limit (CL) was also calculated for all estimates. 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. The 95% CL for ratio estimates (i.e., mean days of effort required per registered bobcat) were calculated using the Taylor series linearization method (survey package in R, Lumley 2004).

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of the 95% confidence intervals was used to determine whether estimates differed significantly. Non-overlapping 95% confidence intervals was equivalent to stating the difference between the means was larger than would be expected 95 out of 100 times ( $P < 0.05$ ), if the study had been repeated (Payton et al. 2003).

## **RESULTS**

Questionnaires were mailed initially during early April 2019, and nonrespondents were mailed up to two follow-up questionnaires. Although 5,000 people were sent a questionnaire, 77 questionnaires were undeliverable, resulting in an adjusted sample size of 4,923. Questionnaires were returned by 2,482 people, yielding a 50% adjusted response rate.

In previous years, questionnaires were sent to all tag holders (i.e., 9,004 people in 2017); however, only 5,000 tag holders were sent a questionnaire in 2018. Only a subset of tag holders was selected in 2018 because the number of tag holders has increased substantially in recent years (i.e., increased 65% since 2013), and it was cheaper to conduct a smaller survey. However, smaller sample sizes generate wider confidence intervals (i.e., less precise estimates). The width of the confidence interval decreases in proportion to the square root of the sample size. Because questionnaires were only sent to 5,000 people in 2018, rather than 10,088 people, we expected the confidence intervals of estimates to be about 30% greater than if all tag holders had been sent a questionnaire (e.g., a confidence limit equal to 7% would increase to 9% because of the reduced sample size).

### **Hunting and Trapping Combined**

In 2018, 10,088 people obtained a bobcat harvest tag for the bobcat hunting and trapping seasons, which was 12% greater than in 2017 (9,004 people obtained a tag in 2017). About  $36 \pm 2\%$  (3,630) of these tag holders attempted to hunt or trap bobcats (Table 3). Furthermore, about  $4 \pm 1\%$  ( $374 \pm 65$ ) of the tag holders attempted both hunting and trapping bobcats.

Among the 3,630 tag holders that attempted to take a bobcat, 59% only hunted, 31% only trapped, and 10% both hunted and trapped (Figure 2).

Furtakers spent 32,690 days afield ( $\bar{x} = 9.0 \pm 0.6$  days/furtaker) and registered 793 bobcats ( $\bar{x} = 0.22 \pm 0.03$  bobcats/furtaker). Furtakers spent about 13,218 days afield pursuing bobcats in the UP and 19,221 days in the LP (Table 3). About 20% of the furtakers registered at least one bobcat (Table 4). Nearly  $19 \pm 2\%$  of the furtakers registered only one bobcat and about 1% registered two bobcats. About 23% of the furtakers in the UP registered at least one bobcat (Table 4). Nearly  $17 \pm 4\%$  of the UP furtakers registered only one bobcat and  $6 \pm 3\%$  registered two bobcats. An estimated 19% of furtakers in the LP registered a bobcat.

The number of furtakers seeking bobcats statewide increased significantly by 23%; however, the number of days devoted to taking a bobcat was similar in both 2017 and 2018 (Table 3, Figure 3). Regionally, furtaker numbers increased significantly in the LP but were unchanged in the UP. The number of bobcats registered statewide increased significantly by 50% between 2017 and 2018 (Table 4). The proportion of furtakers registering a bobcat was not significantly different statewide and in both the UP or the LP.

Counties with 100 or more furtakers that pursued bobcats included Alcona, Montmorency, Osceola, Oceana, Mecosta, and Roscommon (Table 5). Counties with 30 or more registered bobcats taken within that county included Alcona, Osceola, Mecosta, Delta, Oceana, and Clare.

About  $42 \pm 3\%$  of active furtakers reported the bobcat population was stable in the county where they preferred to hunt or trap bobcats, which was similar to the 2017 estimate (Figures 4-6). About  $24 \pm 2\%$  of the furtakers reported bobcat numbers were improving but  $7 \pm 1\%$  reported fewer bobcats. Nearly  $23 \pm 2\%$  of the furtakers were uncertain of the status of bobcats.

Successful furtakers indicated that most (74%) bobcat pelts would be kept for personal use (e.g., pelt tanned or used for taxidermy mount) (Table 6). Only about 23% of the pelts would be sold. In addition, the fate of about 4% of the pelts was unknown.

## Hunting

About  $25 \pm 1\%$  (2,512 hunters) of the tag-holders attempted to hunt bobcats during the 2018 seasons (Table 7). About 406 people hunted in the UP and 2,101 hunted in the LP. About  $50 \pm 3\%$  of bobcat hunters hunted bobcats on their own land or land owned by their family, while  $37 \pm 3\%$  of the hunters hunted on private land not owned by themselves or their family. About  $49 \pm 3\%$  of bobcat hunters hunted on public land. Nearly  $23 \pm 3\%$  of the hunters hunted on public land only,  $51 \pm 3\%$  hunted on private land only, and  $27 \pm 3\%$  hunted on both public and private lands.

Hunters spent about 15,815 days afield hunting bobcats ( $\bar{x} = 6.3 \pm 0.5$  days/hunter) and registered an estimated 362 bobcats ( $\bar{x} = 0.14 \pm 0.02$  bobcats/hunter, Table 8). Hunters spent about 3,443 days afield hunting bobcats in the UP and 12,145 days hunting bobcats in the LP. The estimated number of days of effort per bobcat registered by hunters statewide was 43.7 days in 2018 (Table 9).

Hunters registered about 55% of the bobcats registered by furtakers (Figure 7). About 14% of the bobcat hunters statewide harvested at least one bobcat (Table 8), and none of the hunters registered two bobcats. An estimated 13% of the hunters in the UP registered one bobcat and 14% of hunters in the LP registered a bobcat.

Counties with 110 or more hunters pursuing bobcats included Alcona, Montmorency, Osceola, Ogemaw, Alpena, Mecosta, and Roscommon (Table 10). Counties with at least 20 hunter-registered bobcats originating from that county included Alcona, Ogemaw, Osceola, and Presque Isle.

The number of hunters statewide increased significantly by 22% between 2017 and 2018 (Table 7). Despite this increase in hunter numbers, hunting effort, the number of times hunters passed up an opportunity to take a bobcat, the number of bobcats registered, and hunter success did not change significantly statewide between 2017 and 2018 (Table 8).

The number of days of effort per bobcat registered by hunters statewide (43.7) was not statistically different from the estimate for 2017 (54.5). In addition, hunting effort per bobcat was not significantly different in any of the management units except Unit F between 2017 and 2018 (Table 9, Figure 8).

Hunters most frequently used calls ( $68 \pm 3\%$ ) or dogs ( $26 \pm 3\%$ ) to hunt bobcats (Table 11). Hunters using calls were responsible for 57% of the days spent hunting bobcats, and hunters using dogs were responsible for 30% of the hunting effort (Figure 9). The estimated number of people hunting bobcats with dogs statewide in 2018 and their hunting effort was not significantly different from 2017 (Table 12). In addition, hunter success, the number of bobcats passed, and the number of bobcats registered by hunters using dogs statewide did not change significantly between 2017 and 2018 (Tables 12 and 13). The estimated number of people hunting bobcats with calls statewide in 2018 increased significantly by 27% from 2017 (Table 14). In contrast, their hunting effort, the number of bobcats passed and the proportion of hunters that registered a bobcat were not significantly different between 2017 and 2018 (Tables 14 and 15). The number of bobcats registered by hunters using calls also did not change significantly (144 bobcats in 2017 versus 224 bobcats in 2018). Among hunters using calls, less than 1% used a guide service ( $12 \pm 12$  hunters).

Bobcat hunters using dogs participated in an estimated  $1,947 \pm 408$  chases of bobcats statewide in 2018, which was not significantly different from 2017 (Figure 10). About  $24 \pm 3\%$  of the bobcat hunters had an opportunity to harvest a bobcat but chose not to harvest the bobcat, which also was not significantly different from 2017. An estimated  $602 \pm 82$  hunters chose not to harvest bobcats on  $1,378 \pm 248$  occasions in 2018 (Figure 10). Among those hunters that passed up an opportunity to take a bobcat,  $46 \pm 7\%$  passed one bobcat,  $24 \pm 6\%$  passed two bobcats,  $12 \pm 5\%$  passed three bobcats,  $11 \pm 4\%$  passed four bobcats, and  $7 \pm 4\%$  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. An estimated  $12 \pm 4\%$  bobcat hunters that hunted with dogs hired a guide service to assist with their hunting ( $77 \pm 30$  hunters).

About  $42 \pm 3\%$  of bobcat hunters reported the bobcat population was stable in the county where they preferred to hunt, which was similar to the 2017 estimate (Figures 4-6). About  $21 \pm 3\%$  of hunters reported bobcat numbers were increasing but  $8 \pm 2\%$  reported fewer bobcats. Nearly  $24 \pm 3\%$  of bobcat hunters were uncertain of the status of bobcats.

About 27% of hunters indicated that the weather during the season greatly affected how often they hunted, and 35% of hunters indicated that the weather somewhat affected how often they hunted (Table 16). In contrast, about 20% of hunters felt that the weather had little effect on their hunting activity, and 18% thought that the weather had no effect on their hunting activity.

The mean value of bobcat pelts was positively correlated with the number of hunters and their days of effort during 1997-2018 in the UP but not in the LP (Table 17). In addition, pelt prices were significantly correlated with days of effort per registered bobcat in the LP but not in the UP.

Successful hunters indicated that most (84%) bobcat pelts would be kept for personal use (e.g., pelt tanned or used for a taxidermy mount) (Table 6). Only about 8% of the pelts would be sold. In addition, the fate of about 8% of the pelts was unknown.

## Trapping

An estimated  $15 \pm 1\%$  (1,492 trappers) of the tag-holders trapped bobcats during the 2018 season (Table 18). Most trappers trapped bobcats on private land owned by themselves or their family ( $63 \pm 4\%$ ). About  $32 \pm 4\%$  of trappers trapped on private lands not owned by themselves or their family and about  $32 \pm 4\%$  trapped on public land. About  $68 \pm 4\%$  trapped on private land only,  $14 \pm 3\%$  of the trappers trapped on public land only, and  $17 \pm 3\%$  trapped on both public and private lands.

Trappers spent about 16,876 days afield trapping bobcats ( $\bar{x} = 11.3 \pm 1.1$  days/trapper), caught 780 bobcats, registered 431 bobcats ( $\bar{x} = 0.29 \pm 0.05$  bobcats/trapper), and released 350 bobcats from their traps during the 2018 bobcat season (Tables 18 and 19, Figure 11).

The number of trappers statewide increased significantly by 26% between 2017 and 2018 (1,185 in 2017 versus 1,492 in 2018, Table 18). Additionally, trapping effort (28%), the number of bobcats captured (87%), and the number of bobcats registered (88%) by trappers increased significantly in 2018 (Tables 18 and 19). The proportion of trappers registering a bobcat also increased significantly between 2017 and 2018 (17% in 2017 versus 26% in 2018, Table 20). The estimated number of days of effort per bobcat registered by trappers statewide in 2018 did not change significantly from 2017 (57.5 days in 2017 versus 39.2 days in 2018; Table 21 and Figure 8). Regionally, trapper numbers and their effort increased significantly in the LP but was unchanged in the UP. The number of bobcats captured by trappers also increased significantly in the LP but not in the UP. The estimated number of days of effort per bobcat registered by trappers in 2018 did not change significantly from 2017 in most regions, except Unit D.

Trappers captured about 55% of the bobcats registered by furtakers (Figure 7). About 33% of bobcat trappers captured at least one bobcat and 26% registered at least one bobcat (Table 20). Nearly  $22 \pm 4\%$  of the trappers registered one bobcat and  $3 \pm 2\%$  registered two bobcats. Nearly  $13 \pm 3\%$  of the bobcat trappers released a bobcat that they caught. They

released 350 bobcats from their traps, which was not significantly different from the number released in 2017. About  $13 \pm 3\%$  of bobcat trappers caught a bobcat in a trap set for another furbearer during the open bobcat seasons (Figure 11).

Counties with 75 or more trappers pursuing bobcats included Delta, Oceana, Clare, and Menominee (Table 22). Delta, Clare, Menominee, Mecosta, and Ontonagon were the only counties with more than 20 registered bobcats originating from that county.

Most trappers used foothold traps (88%), while 24% of the trappers used body gripping traps (e.g., conibears) (Table 23). Most trappers preferred to use foothold traps (67%), while 14% preferred to use conibears (Table 24). An estimated 14% of trappers did not have a preferred trap type.

About  $40 \pm 4\%$  of bobcat trappers reported the bobcat population was stable in the county where they preferred to trap (Figures 4-6). About  $31 \pm 4\%$  reported bobcat numbers were increasing but  $6 \pm 2\%$  reported fewer bobcats. Nearly  $22 \pm 4\%$  of bobcat trappers were uncertain of the status of bobcats.

About 23% of trappers indicated that the weather during the season greatly affected how often they trapped, and 31% of trappers indicated that the weather somewhat affected how often they trapped (Table 16). In contrast, about 20% of trappers felt that the weather had little effect on their trapping activity, and 25% thought that the weather had no effect on their trapping activity.

The mean value of bobcat pelts was positively correlated with the number of trappers and their days spent afield during 1997-2018 in the UP, but not in the LP (Table 25). In contrast, the mean value of bobcat pelts was not significantly correlated with the number of bobcats registered and effort per bobcat registered in either region.

Successful trappers indicated that most (65%) bobcat pelts would be kept for personal use (e.g., pelt tanned or used for a taxidermy mount) (Table 6). About 35% of the pelts would be sold.

## **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.

Using indices to monitor wildlife populations is a standard practice in wildlife management, and most states use a variety of indices for evaluating furbearer populations. The DNR considers

the logistics of data collection, data reliability, ability of the index to detect population change, and cost when selecting an index. Historical, long-term data sets are also valuable for evaluating changes in harvest regulations over time. The DNR uses several indices to monitor the bobcat populations and to recommend changes in bobcat harvest regulations to the NRC. Each of these indices measures an attribute of the bobcat population and independently can be used to monitor changes in population status. Use of multiple indices strengthens the assessment of population status.

Bobcat hunting seasons in the UP were shortened by 31 days (34% reduction) and trapping seasons in the UP were shortened by 65 days (51% reduction) in 2009 (Tables 1 and 2); thus, hunting and trapping effort also declined in 2009 statewide (Figure 3). Since 2009, the number of furtakers participating in bobcat hunting and trapping seasons has generally increased; however, the number of days afield has not changed. During the last two year, the number of furtakers also increased significantly, and this increase was primarily driven by an increased number of hunters.

In 2018, the estimated number of bobcats registered by both hunters and trappers combined increased significantly by 50% from 2017. Despite this increase, the number of bobcats registered in 2018 was near the average (748) taken annually during 2003-2018 (Figure 3).

The estimated effort per registered bobcat in 2018 declined from 2017 estimates for both hunters and trappers; however, the declines were not significant (Figure 8). The amount of effort per bobcat registered was a measure of how difficult it was to capture a bobcat and may be an indirect measure of the abundance of bobcats. Similar estimates among hunters and trappers during the last two years suggested that bobcat numbers were similar in both 2017 and 2018. Other population indices measured by hunters (i.e., proportion of hunters that passed a bobcat) and trappers (i.e., proportion of trappers that released a bobcat and the proportion of trappers that caught an incidental bobcat) also did not change significantly between 2017 and 2018.

The number of furtakers pursuing bobcats in the LP was about 3.4 times the number in the UP. In contrast, the number of days afield pursuing bobcats in the LP was only 45% greater than effort in the UP (Table 3).

About 5.2 times more people hunted bobcats in the LP than in the UP in 2018 (Table 7), although the season was shorter in most of the LP (Table 1). Hunters in the LP spent 3.5 times as many days hunting bobcats than their counterparts in the UP. Hunters in the LP also had more occasions where they chose not to harvest a bobcat than hunters in the UP (Table 8); however, the proportion of hunters registering at least one bobcat was about the same (13% and 14%) in the both the UP and LP.

About twice as many people attempted to trap bobcats in the LP than in the UP in 2018 (Table 18); however, trappers in the UP spent 1.4 times more days trapping bobcats than their counterparts in the LP. Trappers in the UP spent more days trapping bobcats than in the LP because the UP season was longer (Table 2).

Since 2003, the number of bobcats registered by trappers has usually been greater than or equal to the number of bobcats registered by hunters (Figure 3). In 2018, the number of



bobcats registered by hunters and trappers was not significantly different (362 bobcats registered by hunters versus 431 registered by trappers). Bobcat hunters devoted an average of 43.7 days of effort per bobcat registered, which was not significantly different from the 39.2 days of effort per bobcat registered by trappers.

Hunting success in 2018 was not significantly different among hunters that used dogs and hunters that used calls (17% of hunters using dogs registered a bobcat versus 13% of hunters using calls, Table 11). Hunters using dogs have normally experienced significantly higher success than hunters using calls in Michigan (Frawley 2017). Lovallo (2011) reported a mean success rate of 39% for hunters using dogs in Pennsylvania during 2000-2008, while the mean success rate for hunters using calls in Pennsylvania was 14%. Kitchell and Olson (2005, 2006, 2007) and Dhuey and Olson (2008, 2009) reported 42-79% ( $\bar{x} = 59\%$ ) of hunters using dogs registered a bobcat in Wisconsin during 2004-2008, while 18-48% ( $\bar{x} = 28\%$ ) of hunters not using dogs registered a bobcat.

About 12.8% of the bobcat trappers in Michigan released a bobcat from their traps set during the 2018 season, which was not significantly different from 2017 (8.4% in 2017, Frawley 2017). In comparison, 6-27% ( $\bar{x} = 11\%$ ) of Wisconsin bobcat trappers released a bobcat from their traps during 2006-2018 in Wisconsin (e.g., Lohr et al. 2016).

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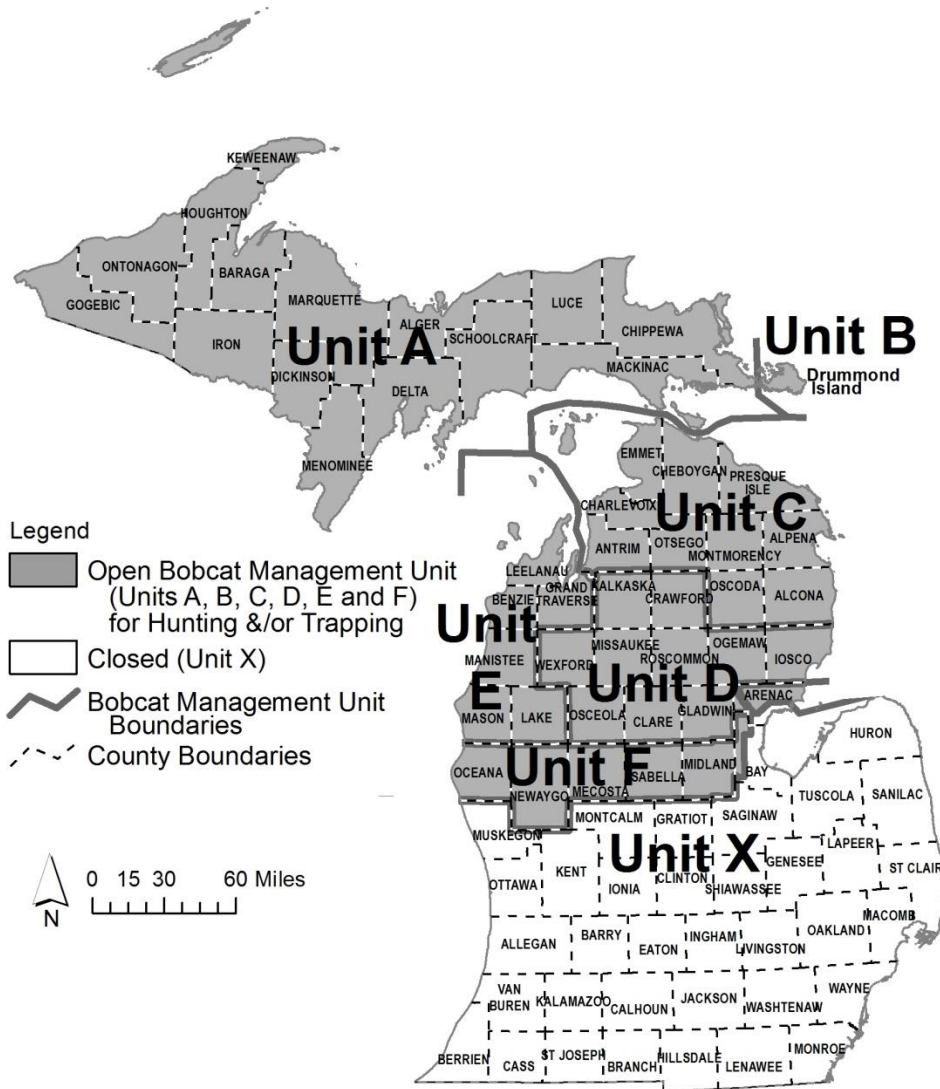


Figure 1. Bobcat Management Units in Michigan for the 2018 hunting and trapping seasons.

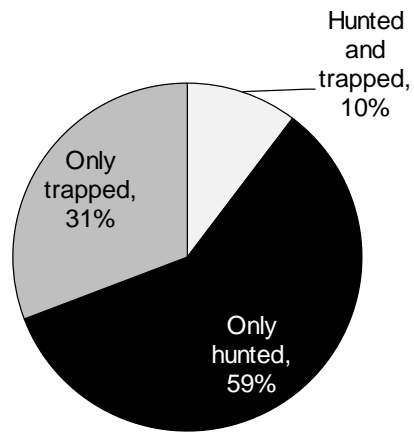
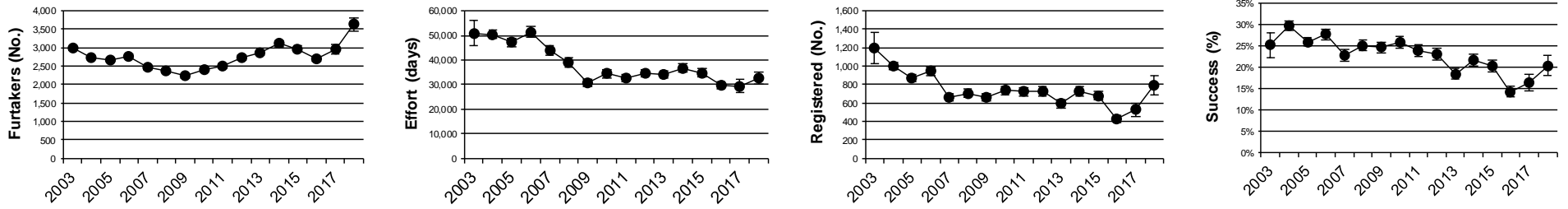
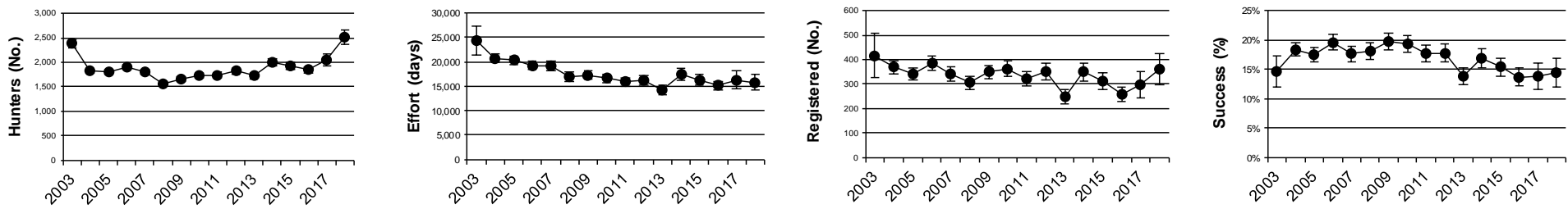


Figure 2. Proportion of active furtakers that attempted to take a bobcat via hunting or trapping methods in Michigan during 2018.

### Hunting and trapping combined



### Hunting



### Trapping

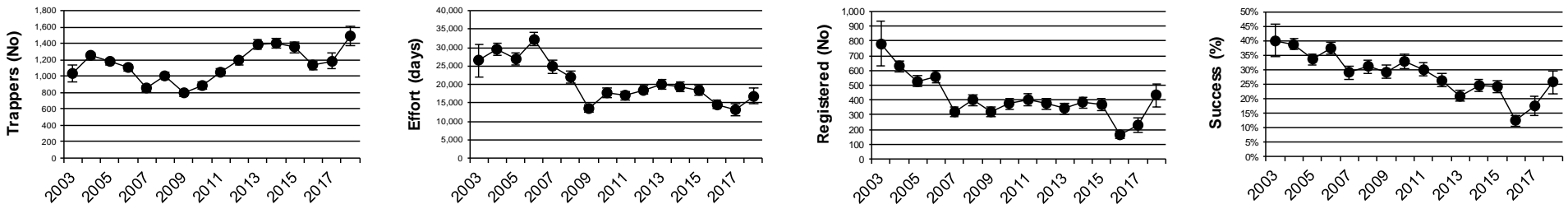


Figure 3. Number of furtakers pursuing bobcats, number of days of effort, number of bobcats registered, and proportion of furtakers registering a bobcat in Michigan during 2003-2018, summarized by method of take. Number of hunters and trappers does not add up to statewide total of hunters and trappers combined because a person could both hunt and trap bobcats. Vertical bars represent the 95% CL.

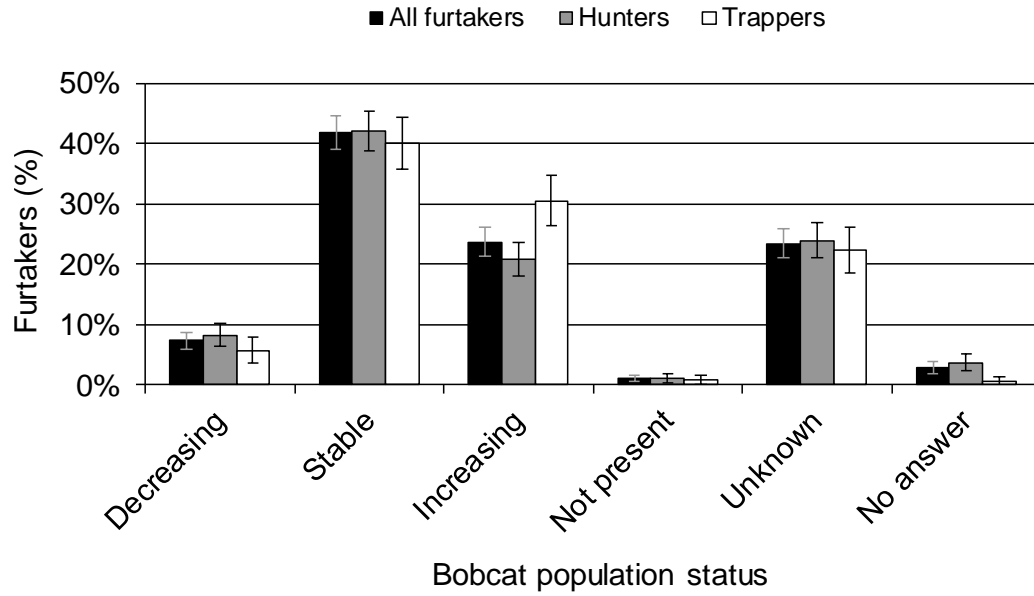


Figure 4. Status of bobcats in Michigan during 2018 as described by active bobcat hunters and trappers. Vertical bars represent the 95% CL.

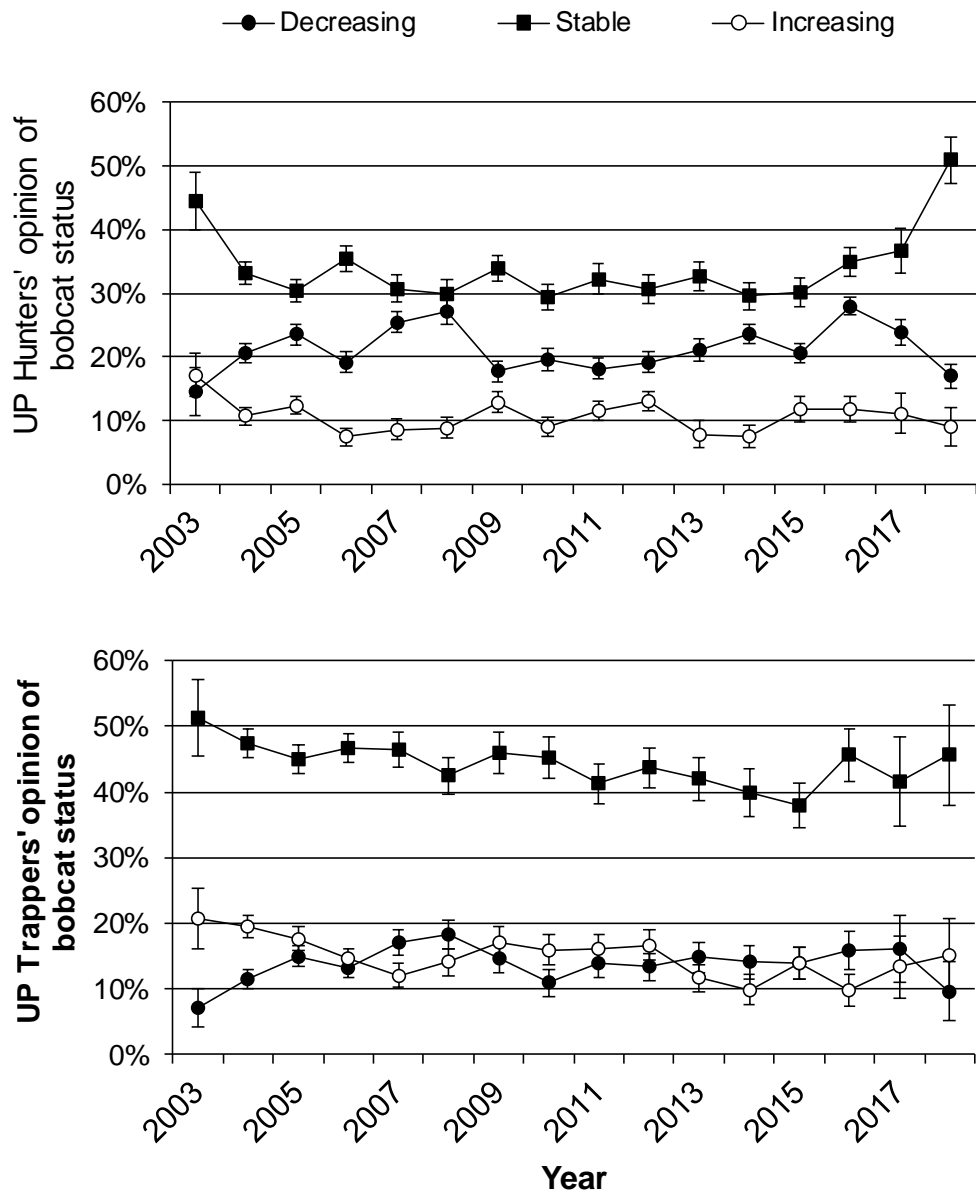


Figure 5. Status of bobcat population in Michigan as described by bobcat hunters and trappers in the Upper Peninsula, 2003-2018. Vertical bars represent the 95% CL.

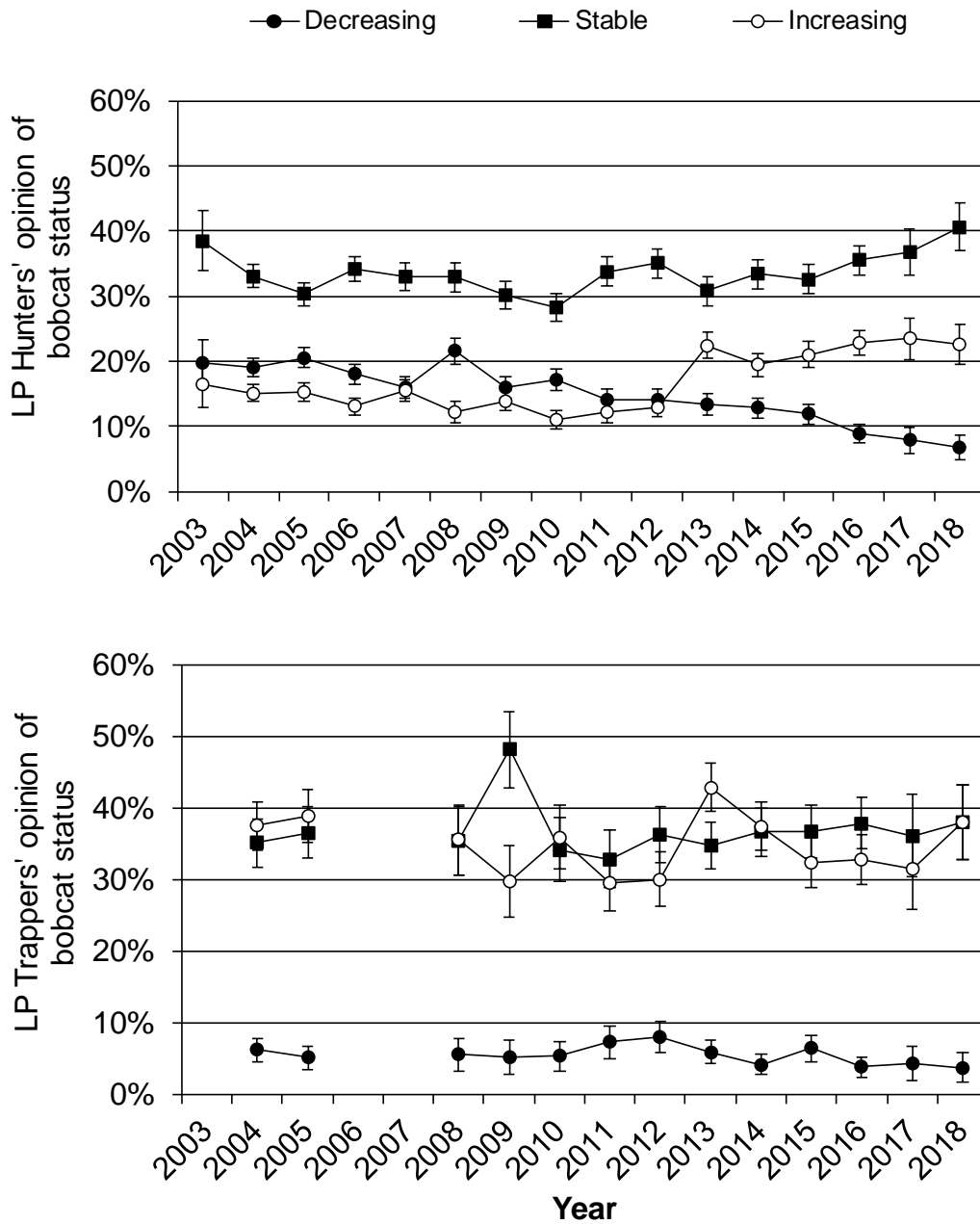


Figure 6. Status of bobcat population in Michigan as described by bobcat hunters and trappers in the Lower Peninsula, 2003-2018. Vertical bars represent the 95% CL. Bobcat could be harvested by trappers in portions of the LP during 2004-2005 and 2008-2018 only.



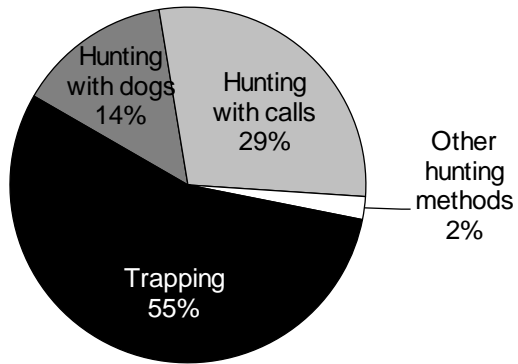


Figure 7. Proportion of bobcats registered in Michigan during 2018, summarized by method of take.

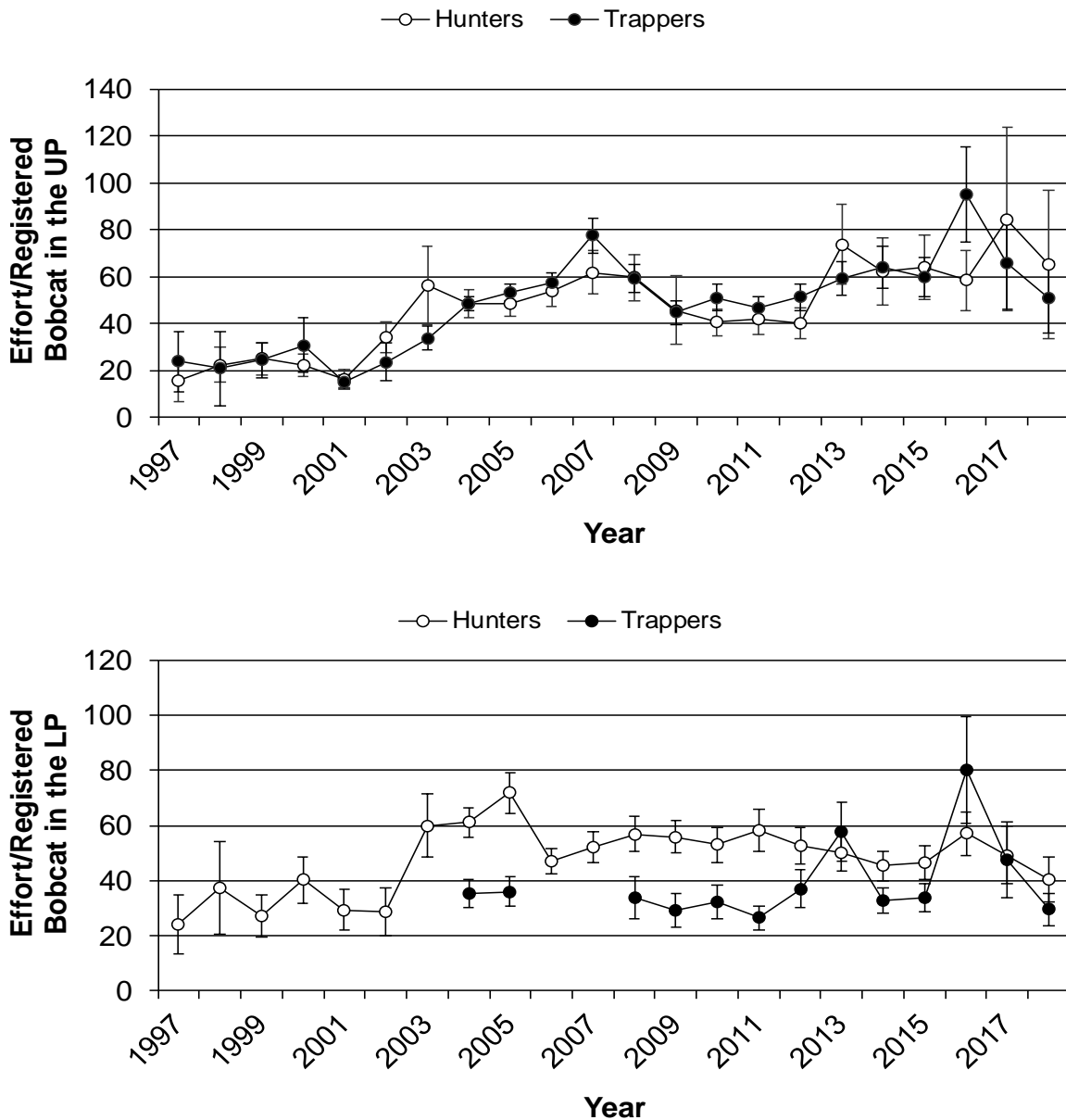


Figure 8. Estimated number of days of effort per bobcat registered in Michigan by hunters and trappers for the 1997-2018 seasons, summarized by region. Vertical error bars represent the 95% CL. Bobcat could be harvested by trappers in portions of the LP during 2004-2005 and 2008-2018 only.

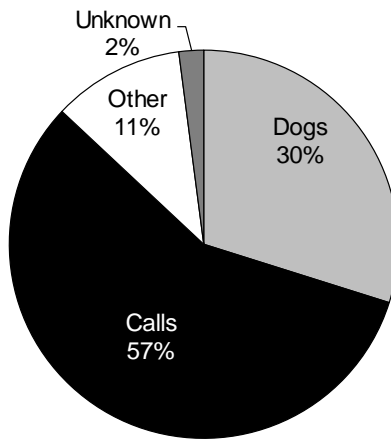


Figure 9. The proportion of hunting effort among the various hunting methods used in Michigan during 2018.

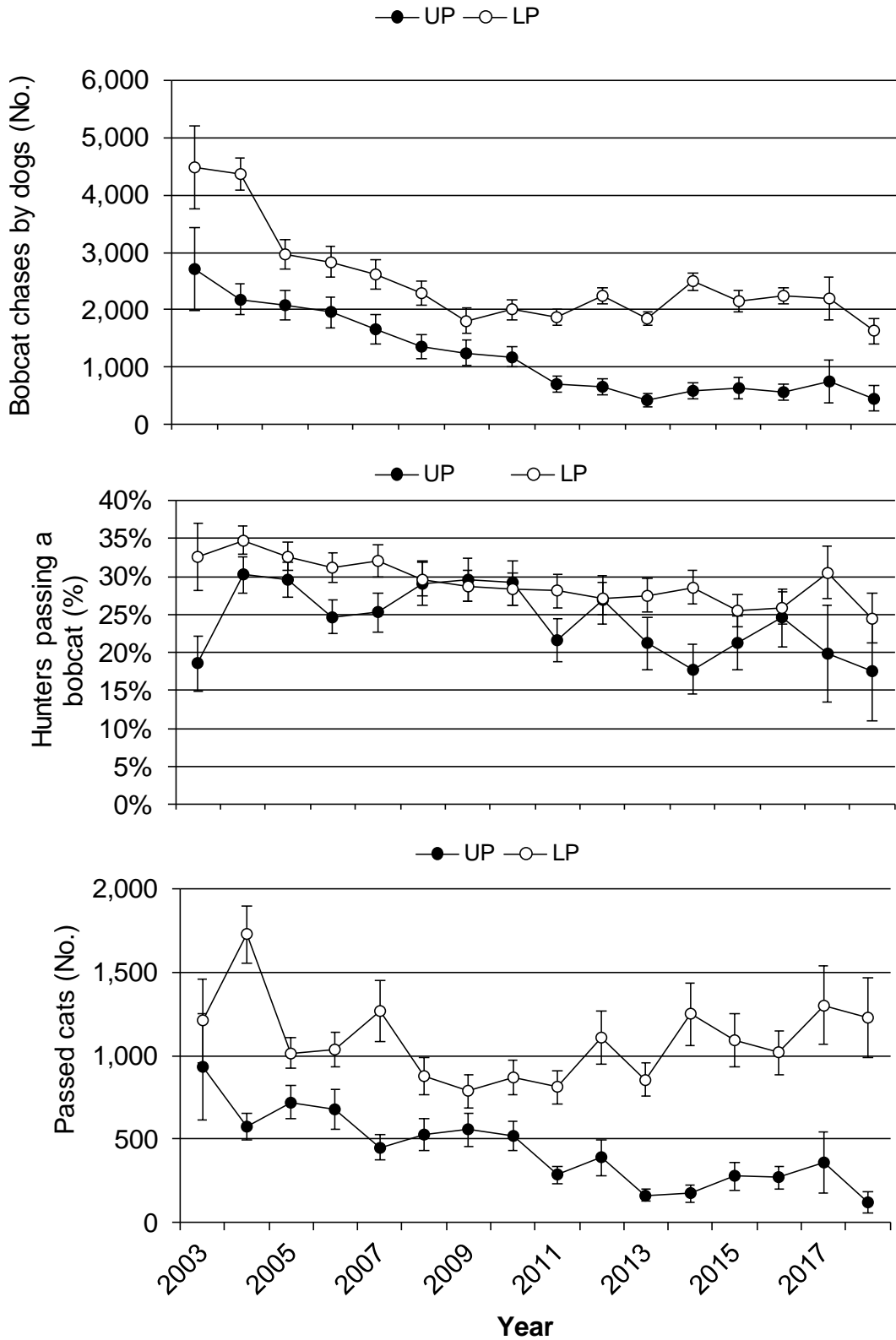


Figure 10. Number of bobcat chases by dogs, proportion of hunters passing a bobcat (bobcats within range or treed but not harvested), and number of bobcats passed by hunters (all types of hunting) in Michigan, 2003-2018. Vertical bars represent the 95% CL.

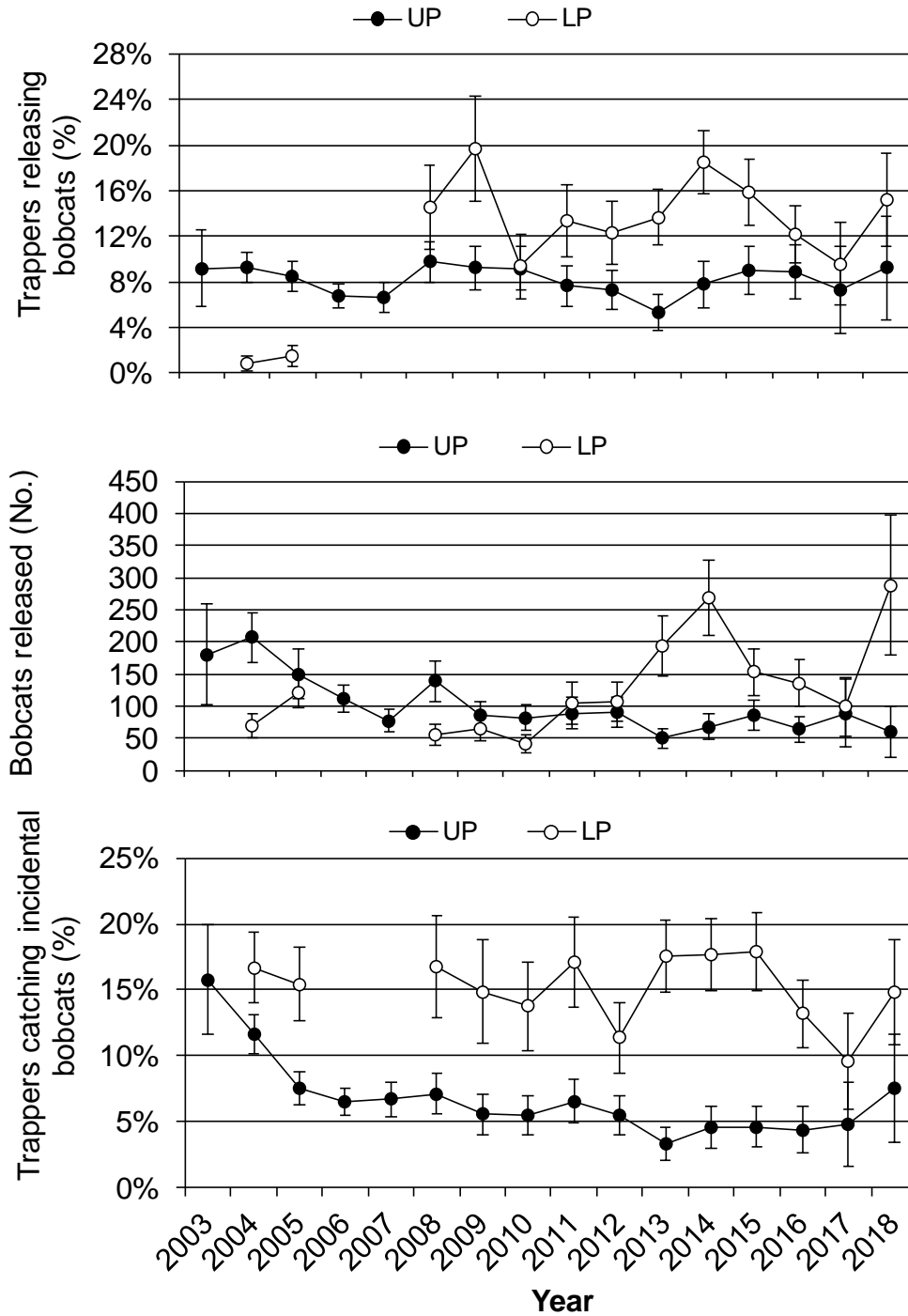


Figure 11. Number of trappers releasing bobcats from their traps, number of bobcats released from traps, and proportion of trappers that caught a bobcat in a trap set for another species (incidental catch) in Michigan, 2003-2018. Trapping of bobcat in the LP was permitted in 2004-2005 and 2008-2018 only. Vertical bars represent the 95% CL.

Table 1. Resident bobcat **hunting** season dates and seasonal bag limits in Michigan, 1989-2018.

Year	Bobcat management unit									
	State-wide bag limit <sup>a</sup>	Upper Peninsula				Lower Peninsula				
		Unit A <sup>b</sup>		Unit B <sup>c</sup>		Unit C <sup>d</sup>	Unit D <sup>e</sup>	Unit E <sup>f</sup>	Unit F <sup>g</sup>	
	Season dates	Bag limit <sup>a</sup>	Season dates	Bag limit <sup>a</sup>	Season dates	Season dates	Season dates	Season dates	Season dates	Bag limit <sup>a</sup>
1989	1	10/25-3/1	1	Closed	0	1/1-3/1	1/1-2/1	Closed	Closed	1
1990	1	10/25-3/1	1	Closed	0	1/1-3/1	1/1-2/1	Closed	Closed	1
1991	1	10/25-3/1	1	Closed	0	1/1-3/1	1/15-2/16	Closed	Closed	1
1992	1	10/25-3/1	1	Closed	0	1/1-3/1	1/15-2/16	Closed	Closed	1
1993	1	10/25-3/1	1	Closed	0	1/1-3/1	1/15-2/16	Closed	Closed	1
1994	2	10/25-3/1	2	Closed	0	1/1-3/1	1/15-2/16	Closed	Closed	1
1995	2	10/25-3/1	2	10/25-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
1996	3	10/25-3/1	3	10/25-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
1997	3	10/25-3/1	3	10/25-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
1998	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
1999	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
2000	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
2001	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
2002	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
2003	3	12/1-3/1	3	12/1-3/1	1	1/1-3/1	1/15-2/16	Closed	Closed	1
2004	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2005	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2006	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2007	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2008	2	12/1-3/1	2	12/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2009	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2010	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2011	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2012	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	Closed	Closed	1
2013	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	1/1-11	1/1-11	1
2014	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	1/1-11	1/1-11	1
2015	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	1/1-11	1/1-11	1
2016	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	1/1-11	1/1-11	1
2017	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	1/1-11	1/1-11	1
2018 <sup>h</sup>	2	1/1-3/1	2	1/1-3/1	1	1/1-3/1	1/1-2/1	1/1-11	1/1-11	1

<sup>a</sup>The 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).

<sup>b</sup>Excluded Drummond Island in the Upper Peninsula.

<sup>c</sup>Drummond Island only.

<sup>d</sup>During 1989-2018, Unit C included Alpena, Antrim, Charlevoix, Cheboygan, Emmet, Montmorency, Otsego, and Presque Isle. Alcona and Oscoda counties were added during 1991-2018.

<sup>e</sup>During 1989-2018, Unit D 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. Unit D also included Alcona and Oscoda counties during 1989-1990.

<sup>f</sup>Unit E included Leelanau, Benzie, Grand Traverse, Manistee, Mason, and Lake counties.

<sup>g</sup>Unit F included the counties of Oceana, Newaygo, Mecosta, Isabella, Midland, and portions of Bay and Arenac.

<sup>h</sup>One kill tag is valid for all lands and for all units combined. A second kill tag is valid on private lands (excluding Commercial Forest lands) for Unit A only.

Table 2. Resident bobcat **trapping** season dates and seasonal bag limits in Michigan, 1989-2018.

Year	Bobcat management unit									
	State-wide bag limit <sup>a</sup>	Upper Peninsula				Lower Peninsula				
		Unit A <sup>b</sup>		Unit B <sup>c</sup>		Unit C <sup>d</sup>	Unit D <sup>e</sup>	Unit E <sup>f</sup>	Unit F <sup>g</sup>	
	Season dates	Bag limit <sup>a</sup>	Season dates	Bag limit <sup>a</sup>	Season dates	Season dates	Season dates	Season dates	Season dates	Bag limit <sup>a</sup>
1989	1	10/25-3/1	1	Closed	0	Closed	Closed	Closed	Closed	1
1990	1	10/25-3/1	1	Closed	0	Closed	Closed	Closed	Closed	1
1991	1	10/25-3/1	1	Closed	0	Closed	Closed	Closed	Closed	1
1992	1	10/25-3/1	1	Closed	0	Closed	Closed	Closed	Closed	1
1993	1	10/25-3/1	1	Closed	0	Closed	Closed	Closed	Closed	1
1994	2	10/25-3/1	2	Closed	0	Closed	Closed	Closed	Closed	1
1995	2	10/25-3/1	2	10/25-3/1	1	Closed	Closed	Closed	Closed	1
1996	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
1997	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
1998	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
1999	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
2000	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
2001	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
2002	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
2003	3	10/25-3/1	3	10/25-3/1	1	Closed	Closed	Closed	Closed	1
2004	2	10/25-3/1	2	10/25-3/1	1	12/10-20	12/10-20	Closed	Closed	1
2005	2	10/25-3/1	2	10/25-3/1	1	12/10-20	12/10-20	Closed	Closed	1
2006	2	10/25-3/1	2	10/25-3/1	1	Closed	Closed	Closed	Closed	1
2007	2	10/25-3/1	2	10/25-3/1	1	Closed	Closed	Closed	Closed	1
2008	2	10/25-3/1	2	10/25-3/1	1	12/10-20	12/10-20	Closed	Closed	1
2009	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	Closed	Closed	1
2010	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	Closed	Closed	1
2011	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	Closed	Closed	1
2012	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	Closed	Closed	1
2013	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	12/10-20	12/10-20	1
2014	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	12/10-20	12/10-20	1
2015	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	12/10-20	12/10-20	1
2016	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	12/10-20	12/10-20	1
2017	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	12/10-20	12/10-20	1
2018 <sup>h</sup>	2	12/1-2/1	2	12/1-2/1	1	12/10-20	12/10-20	12/10-20	12/10-20	1

<sup>a</sup>The 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).

<sup>b</sup>Excluded Drummond Island in the Upper Peninsula.

<sup>c</sup>Drummond Island only.

<sup>d</sup>During 1989-2018, Unit C included Alpena, Antrim, Charlevoix, Cheboygan, Emmet, Montmorency, Otsego, and Presque Isle. Alcona and Oscoda counties were added during 1991-2018.

<sup>e</sup>During 1989-2018, Unit D 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. Unit D also included Alcona and Oscoda counties during 1989-1990.

<sup>f</sup>Unit E included Leelanau, Benzie, Grand Traverse, Manistee, Mason, and Lake counties.

<sup>g</sup>Unit F included the counties of Oceana, Newaygo, Mecosta, Isabella, Midland, and portions of Bay and Arenac.

<sup>h</sup>One kill tag is valid for all lands and for all units combined. A second kill tag is valid on private lands (excluding Commercial Forest lands) for Unit A only.

Table 3. Estimated number of furtakers (hunters and trappers combined) pursuing bobcat and their hunting and trapping effort (days combined) in Michigan for 2017 and 2018, summarized by area.

Area	Furtakers <sup>a</sup>					Hunting and trapping effort				
	Year		Change (%)	Year		Change (%)				
	2017	2018		2017	2018					
No.	95 CL	No.	95 CL	Days	95 CL	Days	95 CL			
Upper Peninsula	777	81	821	94	6	12,080	1,769	13,218	2,204	9
Lower Peninsula	2,134	123	2,796	154	31*	17,203	1,807	19,221	1,610	12
Unit C	706	78	902	98	28*	7,137	1,376	7,178	1,191	1
Unit D	839	84	1,110	108	32*	5,767	827	6,840	879	19
Unit E	274	50	500	75	82*	1,367	308	2,634	489	93*
Unit F	479	65	471	73	-2	2,932	581	2,569	515	-12
Unspecified	106	31	57	26	-46	161	88	252	154	57
Statewide	2,956	136	3,630	165	23*	29,444	2,476	32,690	2,640	11

<sup>a</sup>Number of furtakers does not add up to statewide total because furtakers could hunt in more than one area.

\*P<0.05.

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 2017 and 2018, summarized by area.

Area	Bobcats registered <sup>a</sup>					Furtakers registering a bobcat				
	Year		Change (%)	Year		Difference (%)				
	2017	2018		2017	2018					
No.	95 CL	No.	95 CL	%	95 CL	%	95 CL			
Upper Peninsula	171	48	244	64	42	17	4	23	5	6
Lower Peninsula	353	57	541	78	53*	16	2	19	3	3
Unit C	164	40	191	47	16	23	5	21	5	-2
Unit D	113	32	203	48	80*	13	4	18	4	5
Unit E	34	18	53	25	54	13	6	11	5	-2
Unit F	41	20	93	33	127	9	4	20	6	11*
Unspecified	3	6	8	10	137	3	5	14	16	11
Statewide	527	74	793	99	50*	16	2	20	2	4

<sup>a</sup>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.

\*P<0.05.



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 2018 in Michigan, summarized by county.

County	Furtakers <sup>a</sup>		Hunting and trapping effort (days)		Bobcats registered		Furtakers that registered a bobcat	
	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL
Alcona	203	48	1,398	518	57	26	28	11
Alger	37	21	476	321	12	15	22	24
Alpena	142	41	1,264	449	20	15	14	10
Antrim	45	23	382	240	0	0	0	0
Arenac	20	15	69	60	0	0	0	0
Baraga	57	26	890	571	8	14	7	12
Bay	0	0	0	0	0	0	0	0
Benzie	57	26	244	143	4	7	7	12
Charlevoix	65	28	488	286	20	15	31	20
Cheboygan	73	29	378	197	20	15	28	18
Chippewa	89	32	1,045	536	24	20	23	15
Clare	146	41	793	258	33	20	22	12
Crawford	57	26	272	148	4	7	7	12
Delta	138	40	2,244	919	37	21	26	13
Dickinson	61	27	837	573	16	17	20	18
Emmet	53	25	484	303	12	12	23	20
Gladwin	118	37	740	304	20	15	17	12
Gogebic	33	20	508	350	20	18	50	30
Gd. Traverse	53	25	293	174	8	10	15	17
Houghton	12	12	57	74	8	14	33	46
Iosco	102	34	630	268	16	14	16	12
Iron	69	28	622	394	12	12	18	16
Isabella	41	22	171	123	4	7	10	16
Kalkaska	85	32	492	226	12	12	14	13
Keweenaw	16	14	333	314	0	0	0	0

<sup>a</sup>Number of furtakers does not add up to statewide total because furtakers could hunt and trap in more than one county.

Table 5 (Continued). 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 2018 in Michigan, summarized by county.

County	Furtakers <sup>a</sup>		Hunting and trapping effort (days)		Bobcats registered		Furtakers that registered a bobcat	
	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL
Lake	122	38	508	190	12	12	10	9
Leelanau	61	27	305	154	12	12	20	18
Luce	20	15	224	236	12	15	40	37
Mackinac	45	23	728	561	12	15	18	20
Manistee	110	36	528	214	4	7	4	6
Marquette	85	32	1,414	717	12	12	14	13
Mason	130	39	756	280	12	12	9	9
Mecosta	154	42	768	249	37	21	24	12
Menominee	122	38	2,187	944	24	22	13	11
Midland	33	20	195	129	8	10	25	26
Missaukee	102	34	541	225	12	12	12	11
Montmorency	191	47	1,000	352	28	18	15	9
Newaygo	118	37	638	255	12	12	10	10
Oceana	159	43	797	269	33	20	21	11
Ogemaw	142	41	784	350	24	17	17	11
Ontonagon	65	28	894	559	24	22	25	18
Osceola	175	45	963	317	41	22	23	11
Oscoda	102	34	626	285	8	10	8	9
Otsego	33	20	248	227	0	0	0	0
Presque Isle	106	35	910	448	24	17	23	14
Roscommon	150	42	813	304	24	17	16	10
Schoolcraft	81	31	760	374	20	15	25	16
Wexford	138	40	744	262	16	14	12	9
Unspecified	57	26	252	154	8	10	14	16

<sup>a</sup>Number of furtakers does not add up to statewide total because furtakers could hunt and trap in more than one county.

Table 6. The estimated number of bobcat pelts used for various purposes in Michigan, 2018.

	Hunters		Trappers		Hunter and trappers combined	
	Total <sup>a</sup>	95% CL <sup>b</sup>	Total <sup>a</sup>	95% CL <sup>b</sup>	Total <sup>a</sup>	95% CL <sup>b</sup>
Sold to a fur buyer	20	15	89	36	110	40
Sold at fur auction	4	7	45	27	49	28
Sold to taxidermist	4	7	8	10	12	12
Sold to a private individual	0	0	8	10	8	10
Kept for personal use	309	60	285	60	585	83
Other	0	0	0	0	0	0
Unknown	28	18	0	0	28	18

<sup>a</sup>95% confidence limits.

<sup>b</sup>The sum of pelts for trappers and hunters is greater than the number of pelts for hunter and trappers combined because a few furtakers harvested a bobcat while hunting and also harvested a bobcat while trapping and these animals were double-counted.

Table 7. Estimated number of bobcat hunters and hunting effort (days) in Michigan for 2017 and 2018, summarized by area.

Area	Hunters <sup>a</sup>					Hunting effort				
	Year		Year		Change (%)	Year		Year		Change (%)
	2017	2018	2017	2018		2017	2018	2017	2018	
No.	95% CL	No.	95% CL	Days	95% CL	Days	95% CL			
Upper Peninsula	373	58	406	68	9	3,767	831	3,443	907	-9
Lower Peninsula	1,692	113	2,101	140	24*	12,330	1,672	12,145	1,327	-1
Unit C	613	73	752	91	23	6,014	1,323	5,276	1,017	-12
Unit D	675	76	829	95	23	4,014	700	4,451	726	11
Unit E	212	44	337	62	59*	825	203	1,227	269	49
Unit F	312	53	317	60	2	1,476	441	1,191	281	-19
Unspecified	51	22	53	25	3	151	86	228	149	51
Statewide	2,058	122	2,512	149	22*	16,248	1,874	15,815	1,587	-3

<sup>a</sup>Number of hunters does not add up to statewide total because hunters could hunt in more than one area.

\*P<0.05.

Table 8. Estimated number of bobcats passed, bobcats registered by hunters, and proportion of hunters that registered at least one bobcat in Michigan for 2017 and 2018, summarized by area.

Area	Bobcats passed					Bobcats registered					Hunters that registered a bobcat				
	Year		Year		Change (%)	Year		Year		Change (%)	Year		Year		Difference (%)
	2017	2018	2017	2018		2017	2018	2017	2018		2017	2018			
No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL	%	95% CL		
Upper Peninsula	360	186	122	66	-66	45	23	53	25	19	10	5	13	6	3
Lower Peninsula	1,301	232	1,227	238	-6	250	48	301	59	20	15	3	14	3	0
Unit C	579	158	447	139	-23	130	35	134	39	3	21	5	18	5	-3
Unit D	387	108	402	136	4	86	28	102	34	19	13	4	12	4	0
Unit E	120	57	203	95	70	14	11	20	15	48	6	5	6	4	0
Unit F	216	95	175	97	-19	21	14	45	23	118	7	4	14	7	8
Unspecified	3	6	28	21	731	3	6	8	10	137	7	11	15	17	9
Statewide	1,664	308	1,378	248	-17	298	54	362	64	21	14	2	14	2	1

P<0.05.

Table 9. Estimated number of days of effort per bobcat registered by hunters in Michigan during 2016-2018, summarized by year and area.

Area	Year						Change between 2017 and 2018 (%)
	2016		2017		2018		
	Effort per registered bobcat	95% CL <sup>a</sup>	Effort per registered bobcat	95% CL <sup>a</sup>	Effort per registered bobcat	95% CL	
Upper Peninsula	58.4	13.1	84.6	39.3	65.2	31.6	-23
Lower Peninsula	57.1	7.8	49.3	10.3	40.4	8.0	-18
Unit C	65.7	14.3	46.2	14.0	39.3	12.0	-15
Unit D	56.9	13.0	46.9	14.9	43.8	14.9	-7
Unit E	45.6	17.3	60.3	50.5	60.4	44.7	0
Unit F	41.6	15.5	71.8	51.0	26.6	13.2	-63*
Unspecified	102.0	69.8	44.0	75.3	28.0	28.0	-36
Statewide	58.2	6.8	54.5	10.2	43.7	7.9	-20

<sup>a</sup>95% confidence limits.

\*P<0.05. Comparison between 2017 and 2018.

Table 10. Estimated number of hunters, hunting effort (days), bobcats passed, bobcats registered, and proportion of hunters that registered a bobcat in Michigan during 2018, summarized by county.

County	Hunters <sup>a</sup>		Hunting effort (days)		Bobcats passed by hunters <sup>b</sup>		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	171	44	1,122	449	89	56	45	23	26	12
Alger	16	14	24	22	0	0	0	0	0	0
Alpena	122	38	845	346	65	45	12	12	10	9
Antrim	37	21	285	215	45	35	0	0	0	0
Arenac	12	12	49	54	8	14	0	0	0	0
Baraga	33	20	447	447	0	0	0	0	0	0
Bay	0	0	0	0	0	0	0	0	0	0
Benzie	33	20	81	57	37	37	0	0	0	0
Charlevoix	49	24	329	253	24	24	16	14	33	23
Cheboygan	61	27	289	179	33	32	12	12	20	18
Chippewa	57	26	317	169	28	27	8	10	14	16
Clare	77	30	321	162	37	32	8	10	11	12
Crawford	37	21	134	97	57	90	4	7	11	18
Delta	69	28	663	487	8	10	12	12	18	16
Dickinson	28	18	171	153	12	15	4	7	14	23
Emmet	37	21	272	211	4	7	8	10	22	24
Gladwin	102	34	500	244	41	34	12	12	12	11
Gogebic	8	10	134	197	0	0	4	7	50	60
Gd. Traverse	33	20	106	68	8	10	4	7	13	20
Houghton	4	7	41	69	8	14	0	0	0	0
Iosco	77	30	402	205	20	15	4	7	5	9
Iron	41	22	252	167	4	7	8	10	20	22
Isabella	33	20	98	74	41	51	4	7	13	20
Kalkaska	69	28	350	190	12	15	4	7	6	10
Keweenaw	0	0	0	0	0	0	0	0	0	0

<sup>a</sup>Number of hunters does not add up to statewide total because hunters could hunt in more than one area.

<sup>b</sup>Bobcats that hunter could have harvested but chose not to take.

Table 10. (Continued) Estimated number of hunters, hunting effort (days), bobcats passed, bobcats registered, and proportion of hunters that registered a bobcat in Michigan during 2018, summarized by county.

County	Hunters <sup>a</sup>		Hunting effort (days)		Bobcats passed by hunters <sup>b</sup>		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
Lake	73	29	232	108	20	21	0	0	0	0
Leelanau	57	26	232	114	45	44	12	12	21	19
Luce	8	10	16	28	0	0	0	0	0	0
Mackinac	28	18	150	142	4	7	8	10	29	29
Manistee	73	29	264	134	45	36	4	7	6	9
Marquette	33	20	297	215	12	15	0	0	0	0
Mason	93	33	313	127	49	41	0	0	0	0
Mecosta	114	36	431	166	49	51	12	12	11	10
Menominee	57	26	455	292	16	22	0	0	0	0
Midland	16	14	61	58	12	15	8	10	50	43
Missaukee	102	34	488	204	45	37	12	12	12	11
Montmorency	171	44	719	276	53	32	16	14	10	8
Newaygo	77	30	285	135	45	40	4	7	5	9
Oceana	102	34	317	124	28	27	16	14	16	12
Ogemaw	126	38	614	324	33	37	20	15	16	11
Ontonagon	45	23	280	219	24	35	0	0	0	0
Osceola	130	39	602	231	53	41	20	15	16	11
Oscoda	93	33	541	267	81	89	4	7	4	7
Otsego	28	18	195	214	0	0	0	0	0	0
Presque Isle	85	32	679	391	53	41	20	15	24	16
Roscommon	110	36	516	251	28	27	12	12	11	10
Schoolcraft	45	23	195	122	4	7	8	10	18	20
Wexford	102	34	476	200	69	47	4	7	4	7
Unspecified	53	25	228	149	28	21	8	10	15	17

<sup>a</sup>Number of hunters does not add up to statewide total because hunters could hunt in more than one area.

<sup>b</sup>Bobcats that hunter could have harvested but chose not to harvest.

Table 11. Estimated number of hunters, hunting effort (days), bobcats passed, bobcats registered, and proportion of hunters that registered a bobcat in Michigan during 2018, 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
<b>Hunters (No.)<sup>a</sup></b>								
UP	126	38	215	50	65	28	20	15
LP	549	78	1,467	122	179	45	12	12
Unit C	232	52	463	72	85	32	8	10
Unit D	232	52	581	80	49	24	4	7
Unit E	69	28	244	53	28	18	0	0
Unit F	65	28	256	54	16	14	0	0
Unspecified	20	15	20	15	12	12	0	0
Statewide	663	85	1,699	129	256	54	33	20
<b>Hunting effort (Days)</b>								
UP	1,093	613	1,605	506	549	313	195	209
LP	3,556	840	7,353	918	1,106	419	130	155
Unit C	1,748	658	2,703	619	736	383	89	139
Unit D	1,260	414	2,951	562	199	136	41	69
Unit E	224	114	898	228	106	89	0	0
Unit F	325	180	801	200	65	59	0	0
Unspecified	73	90	77	61	77	101	0	0
Statewide	4,723	1,047	9,035	1,038	1,731	531	325	260
<b>Bobcats passed by hunters (No.)</b>								
UP	37	28	77	58	4	7	4	7
LP	504	146	581	175	142	71	0	0
Unit C	179	74	179	102	89	56	0	0
Unit D	191	78	207	111	4	7	0	0
Unit E	33	24	130	82	41	41	0	0
Unit F	102	87	65	40	8	14	0	0
Unspecified	16	14	12	15	0	0	0	0
Statewide <sup>b</sup>	557	149	671	185	146	72	4	7

<sup>a</sup>Number of hunters does not add up to statewide total because hunters could hunt in more than one area.



Table 11 (Continued). Estimated number of hunters, hunting effort (days), bobcats passed, bobcats registered, and proportion of hunters that registered a bobcat in Michigan during 2018, 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
Bobcats registered by hunters (No.)								
UP	20	15	16	14	4	7	12	12
LP	85	32	203	48	12	12	0	0
Unit C	49	24	81	31	4	7	0	0
Unit D	28	18	65	28	8	10	0	0
Unit E	4	7	16	14	0	0	0	0
Unit F	4	7	41	22	0	0	0	0
Unspecified	4	7	4	7	0	0	0	0
Statewide	110	36	224	51	16	14	12	12
Hunters that registered at least one bobcat (%)								
UP	16	11	8	6	6	10	60	37
LP	16	5	14	3	7	6	0	0
Unit C	21	9	18	6	5	8	0	0
Unit D	12	7	11	4	17	18	0	0
Unit E	6	10	7	5	0	0	0	0
Unit F	6	10	16	8	0	0	0	0
Unspecified	20	30	20	30	0	0	0	0
Statewide	17	5	13	3	6	5	38	29

<sup>a</sup>Number of hunters does not add up to statewide total because hunters could hunt in more than one area.

Table 12. Estimated number of bobcat hunters using dogs and their hunting effort (days) in Michigan for 2017 and 2018, summarized by area.

Area	Hunters using dogs <sup>a</sup>					Hunting effort				
	Year		Change (%)	Year		Change (%)	Year		Change (%)	
	2017	2018		2017	2018		2017	2018		
No.	95% CL	No.	95% CL	Days	95% CL	Days	95% CL			
Upper Peninsula	113	32	126	38	11	1,219	495	1,093	613	-10
Lower Peninsula	521	68	549	78	5	4,610	1,319	3,556	840	-23
Unit C	212	44	232	52	9	2,421	1,002	1,748	658	-28
Unit D	212	44	232	52	9	1,243	447	1,260	414	1
Unit E	58	23	69	28	19	257	120	224	114	-13
Unit F	89	29	65	28	-27	688	395	325	180	-53
Unspecified	21	14	20	15	-1	62	60	73	90	19
Statewide	623	74	663	85	6	5,891	1,421	4,723	1,047	-20

<sup>a</sup>Number of hunters does not add up to statewide total because hunters could hunt in more than one area.

\*P<0.05.

Table 13. 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 2017 and 2018, summarized by area.

Area	Bobcats passed <sup>a</sup>					Bobcats registered					Hunters that registered a bobcat				
	Year		Change (%)	Year		Change (%)	Year		Change (%)	Year		Difference (%)	Year		Difference (%)
	2017	2018		2017	2018		2017	2018		2017	2018				
No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL	%	95% CL		
Upper Peninsula	236	172	37	28	-85	24	17	20	15	-15	18	11	16	11	-2
Lower Peninsula	692	194	504	146	-27	96	31	85	32	-11	18	5	16	5	-2
Unit C	312	132	179	74	-43	62	25	49	24	-21	27	9	21	9	-6
Unit D	158	74	191	78	21	21	14	28	18	38	10	6	12	7	3
Unit E	68	44	33	24	-53	7	8	4	7	-41	12	13	6	10	-6
Unit F	154	87	102	87	-34	7	8	4	7	-41	8	9	6	10	-1
Unspecified	3	6	16	14	375	0	0	4	7	NA	0	0	20	30	20
Statewide	932	272	557	149	-40	120	35	110	36	-8	18	5	17	5	-2

\*P<0.05.

Table 14. Estimated number of bobcat hunters using calls and their hunting effort (days) in Michigan for 2017 and 2018, summarized by area.

Area	Hunters using calls <sup>a</sup>					Hunting effort				
	Year		Change (%)	Year		Change (%)				
	2017	2018		2017	2018					
No.	95% CL	No.	95% CL	Days	95% CL	Days	95% CL			
Upper Peninsula	223	45	215	50	-3	1,969	555	1,605	506	-18
Lower Peninsula	1,120	96	1,467	122	31*	6,528	834	7,353	918	13
Unit C	387	59	463	72	20	2,925	635	2,703	619	-8
Unit D	445	63	581	80	31	2,428	479	2,951	562	22
Unit E	144	36	244	53	70*	476	140	898	228	89*
Unit F	209	44	256	54	23	699	179	801	200	15
Unspecified	17	13	20	15	19	45	35	77	61	73
Statewide	1,339	103	1,699	129	27*	8,542	1,003	9,035	1,038	6

<sup>a</sup>Number of hunters does not add up to statewide total because hunters could hunt in more than one area.

\*P<0.05.

Table 15. 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 2017 and 2018, summarized by area.

Area	Bobcats passed					Bobcats registered					Hunters that registered a bobcat				
	Year		Change (%)	Year		Change (%)	Year		Differ-ence (%)						
	2017	2018		2017	2018		2017	2018							
No.	95% CL	No.	95% CL	No.	95% CL	No.	95% CL	%	95% CL	%	95% CL				
Upper Peninsula	86	58	77	58	-10	14	14	14	16	14	5	4	8	6	3
Lower Peninsula	551	124	581	175	5	127	34	34	203	48	11	3	14	3	3
Unit C	250	82	179	102	-28	58	23	23	81	31	15	6	18	6	2
Unit D	205	75	207	111	1	51	22	22	65	28	12	5	11	4	0
Unit E	38	27	130	82	245	7	8	8	16	14	5	5	7	5	2
Unit F	58	38	65	40	12	10	10	10	41	22	5	5	16	8	11
Unspecified	0	0	12	15	NA	3	6	6	4	7	20	30	20	30	0
Statewide	637	136	671	185	5	144	37	37	224	51	10	3	13	3	3

\*P<0.05.

Table 16. The hunters and trappers' opinion of how weather conditions limited their ability to harvest a bobcat in Michigan, 2018.

Extent of limitation	Hunters		Trappers	
	%	95% CL <sup>a</sup>	%	95% CL <sup>a</sup>
To a great extent	27	3	23	4
Somewhat	35	3	31	4
Very little	20	3	20	4
Not at all	18	3	25	4
Unknown	0	0	0	0

<sup>a</sup>95% confidence limits.

Table 17. Correlation between average bobcat pelt prices and number of hunters, days of effort, bobcats registered, and effort per registered bobcat in Michigan during 1997-2018, summarized by region.<sup>a</sup>

Estimate and region	Correlation <sup>b</sup>	Significance (P-value) <sup>c</sup>
Number of hunters		
UP	0.50	0.02
LP	-0.18	0.43
Days of effort		
UP	0.49	0.02
LP	0.24	0.28
Bobcats registered <sup>d</sup>		
UP	-0.07	0.75
LP	-0.17	0.45
Effort per bobcats registered		
UP	0.13	0.57
LP	0.51	0.01

<sup>a</sup>Mean pelt prices were the average paid in Minnesota and Wisconsin (e.g., Abraham and Dexter 2019, Dhuey 2019). Pelt prices were reported in 2018 dollars by adjusting for inflation using the Consumer Price Index (Bureau of Labor Statistics 2018).

<sup>b</sup>Pearson product moment correlation coefficient.

<sup>c</sup>P-value is the probability of obtaining this correlation result (2-sided test).

<sup>d</sup>The tally of bobcats registered by furtakers at DNR registration stations, rather than estimate from survey.

Table 18. Estimated number of bobcat trappers and their trapping effort (days) in Michigan for 2017 and 2018, summarized by area.

Area	Trappers <sup>a</sup>					Trapping effort				
	2017		2018		Change (%) <sup>b</sup>	2017		2018		Change (%) <sup>b</sup>
	No.	95% CL	No.	95% CL		Days	95% CL	Days	95% CL	
Upper Peninsula	486	65	508	75	4	8,312	1,443	9,775	1,943	18
Lower Peninsula	654	75	996	103	52*	4,874	657	7,076	848	45*
Unit C	164	39	248	53	51	1,123	304	1,902	473	69*
Unit D	229	46	350	63	52*	1,754	384	2,390	480	36
Unit E	72	26	199	48	177*	541	229	1,406	379	160*
Unit F	205	43	215	50	5	1,456	353	1,378	373	-5
Unspecified	58	23	4	7	-93*	10	17	24	42	137
Statewide	1,185	98	1,492	122	26*	13,196	1,566	16,876	2,094	28*

<sup>a</sup>Number of trappers does not add up to statewide total because trappers could trap in more than one area.

\*P<0.05.

Table 19. Estimated number of bobcats captured, bobcats released alive, and bobcats registered by trappers in Michigan for 2017 and 2018, summarized by area.

Area	Bobcats captured					Bobcats released alive					Bobcats registered				
	2017		2018		Change (%) <sup>a</sup>	2017		2018		Change (%) <sup>a</sup>	2017		2018		Change (%) <sup>a</sup>
	No.	95% CL	No.	95% CL		No.	95% CL	No.	95% CL		No.	95% CL	No.	95% CL	
Upper Peninsula	216	69	252	78	17	89	52	61	40	-32	127	40	191	58	51
Lower Peninsula	202	59	528	133	161*	99	46	289	109	191*	103	31	240	53	133*
Unit C	48	25	138	82	188	14	14	81	75	493	34	18	57	26	66
Unit D	55	34	199	73	263*	27	30	98	53	256	27	16	102	34	271*
Unit E	51	33	98	51	90	31	26	65	38	111	21	14	33	20	58
Unit F	48	25	93	43	95	27	20	45	32	63	21	14	49	24	137
Unspecified	0	0	0	0	NA	0	0	0	0	NA	0	0	0	0	NA
Statewide	418	94	780	153	87*	188	74	350	116	86	229	50	431	77	88*

\*P<0.05.

Table 20. Estimated proportion of bobcat trappers that captured at least one bobcat and proportion that registered at least one bobcat in Michigan for 2017 and 2018, summarized by area.

Area	Trappers that captured a bobcat					Trappers that registered a bobcat				
	2017		2018		Difference (%)	2017		2018		Difference (%) <sup>a</sup>
	%	95% CL	%	95% CL		%	95% CL	%	95% CL	
Upper Peninsula	27	6	32	7	5	21	6	28	7	7
Lower Peninsula	23	5	33	5	10	16	4	24	5	8
Unit C	25	10	33	10	8	21	10	23	9	2
Unit D	18	8	36	9	18*	12	7	29	8	17*
Unit E	43	18	27	11	-16	29	16	16	9	-12
Unit F	18	8	32	11	14	10	6	23	10	13
Unspecified	0	0	0	0	NA	0	0	0	0	NA
Statewide	23	4	33	4	9*	17	3	26	4	8*

<sup>a</sup>P<0.05.

Table 21. Estimated number of days of effort per bobcat registered in Michigan by trappers for the 2016-2018, summarized by year and area.

Area	Year						Change between 2017 and 2018 (%)
	2016		2017		2018		
	Effort per registered bobcat	95% CL <sup>a</sup>	Effort per registered bobcat	95% CL <sup>a</sup>	Effort per registered bobcat	95% CL	
Upper Peninsula	95.1	20.3	65.6	19.4	51.2	15.3	-22
Lower Peninsula	80.1	19.3	47.4	13.7	29.5	6.0	-38
Unit C	64.5	30.5	32.8	15.4	33.4	14.3	2
Unit D	78.6	29.9	64.0	36.7	23.5	7.0	-63*
Unit E	110.7	85.1	26.3	16.7	43.3	24.4	64
Unit F	87.6	42.7	70.8	48.0	28.3	13.1	-60
Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	NA
Statewide	90.3	14.8	57.5	12.1	39.2	7.1	-32

<sup>a</sup>95% confidence limits.

\*P<0.05. Comparison between 2017 and 2018.

Table 22. 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 2018, summarized by county.

County	Trappers <sup>a</sup>		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		
Alcona	49	24	276	159	12	12	0	0	12	12	25	21	25	21
Alger	28	18	451	315	12	15	0	0	12	15	29	29	29	29
Alpena	53	25	419	213	16	14	8	10	8	10	31	22	15	17
Antrim	12	12	98	102	0	0	0	0	0	0	0	0	0	0
Arenac	8	10	20	25	0	0	0	0	0	0	0	0	0	0
Baraga	24	17	443	355	24	35	16	22	8	14	33	33	17	26
Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benzie	24	17	163	132	12	21	8	14	4	7	17	26	17	26
Charlevoix	16	14	159	135	4	7	0	0	4	7	25	37	25	37
Cheboygan	16	14	89	78	12	15	4	7	8	10	50	43	50	43
Chippewa	45	23	728	478	33	38	16	28	16	17	27	23	27	23
Clare	77	30	471	198	37	28	12	15	24	17	32	18	32	18
Crawford	20	15	138	111	0	0	0	0	0	0	0	0	0	0
Delta	85	32	1,581	774	28	18	4	7	24	17	33	18	29	17
Dickinson	37	21	667	544	12	15	0	0	12	15	22	24	22	24
Emmet	24	17	211	152	8	10	4	7	4	7	33	33	17	26
Gladwin	28	18	240	159	37	36	28	30	8	10	57	32	29	29
Gogebic	28	18	374	285	16	17	0	0	16	17	43	32	43	32
Gd. Traverse	24	17	187	144	16	28	12	21	4	7	17	26	17	26
Houghton	8	10	16	28	8	14	0	0	8	14	50	60	50	60
Iosco	33	20	228	145	16	14	4	7	12	12	50	30	38	29
Iron	28	18	370	357	4	7	0	0	4	7	14	23	14	23
Isabella	12	12	73	84	0	0	0	0	0	0	0	0	0	0
Kalkaska	16	14	142	123	8	10	0	0	8	10	50	43	50	43
Keweenaw	16	14	333	314	0	0	0	0	0	0	0	0	0	0

<sup>a</sup>Number of trappers does not add up to statewide total because trappers could trap in more than one county.

Table 22. (Continued) 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 2018, summarized by county.

County	Trappers <sup>a</sup>		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		
Lake	53	25	276	149	20	18	8	10	12	12	31	22	23	20
Leelanau	8	10	73	90	0	0	0	0	0	0	0	0	0	0
Luce	16	14	207	226	16	20	4	7	12	15	50	43	50	43
Mackinac	24	17	577	530	12	15	8	10	4	7	33	33	17	26
Manistee	41	22	264	161	12	15	12	15	0	0	20	22	0	0
Marquette	61	27	1,118	606	20	15	8	10	12	12	33	21	20	18
Mason	57	26	443	218	37	27	24	20	12	12	43	23	21	19
Mecosta	57	26	337	175	28	18	4	7	24	17	50	23	43	23
Menominee	77	30	1,731	845	24	22	0	0	24	22	21	16	21	16
Midland	16	14	134	115	0	0	0	0	0	0	0	0	0	0
Missaukee	12	12	53	65	8	14	8	14	0	0	33	46	0	0
Montmorency	41	22	280	161	24	20	12	15	12	12	50	27	30	25
Newaygo	57	26	354	186	28	23	20	18	8	10	36	22	14	16
Oceana	81	31	480	209	37	32	20	25	16	14	25	16	20	15
Ogemaw	24	17	171	126	4	7	0	0	4	7	17	26	17	26
Ontonagon	33	20	614	474	24	22	0	0	24	22	50	30	50	30
Osceola	53	25	362	188	41	38	20	29	20	15	46	24	38	23
Oscoda	20	15	85	83	57	74	53	72	4	7	40	37	20	30
Otsego	8	10	53	72	0	0	0	0	0	0	0	0	0	0
Presque Isle	24	17	232	163	4	7	0	0	4	7	17	26	17	26
Roscommon	41	22	297	173	33	32	20	23	12	12	40	26	30	25
Schoolcraft	41	22	565	349	16	17	4	7	12	12	30	25	30	25
Wexford	45	23	268	165	16	17	4	7	12	12	27	23	27	23
Unspecified	4	7	24	42	0	0	0	0	0	0	0	0	0	0

<sup>a</sup>Number of trappers does not add up to statewide total because trappers could trap in more than one county.



Table 23. Trap type used by bobcat trappers in Michigan during 2018.

Trap type	Trappers (%)	95% CL	Trappers (No.)	95% CL
Foothold traps	88	3	1,309	116
Conibears	24	4	354	63
Other <sup>a</sup>	3	1	41	22

<sup>a</sup>Included snares and live traps, although snares were not legal to use to capture bobcats.

Table 24. Preferred trap type of bobcat trappers in Michigan during 2018.

Trap type	Trappers (%)	95% CL	Trappers (No.)	95% CL
Foothold traps	67	4	1,004	103
Conibears	15	3	224	51
No preference	14	3	211	49
Other <sup>a</sup>	2	1	28	18
No answer	2	1	24	17

<sup>a</sup>Snares were not legal to use to capture bobcats.

Table 25. Correlation between average bobcat pelt prices and number of trappers, days of effort, bobcats registered, and effort per registered bobcat in Michigan during 1997-2018, summarized by region.<sup>a</sup>

Estimate and region	Correlation <sup>b</sup>	Significance (P-value) <sup>c</sup>
Number of trappers		
UP	0.68	<0.01
LP <sup>d</sup>	-0.33	0.28
Days of effort		
UP	0.66	<0.01
LP <sup>d</sup>	-0.31	0.30
Bobcats registered <sup>e</sup>		
UP	0.23	0.30
LP <sup>d</sup>	0.03	0.89
Effort per bobcats registered		
UP	0.13	0.57
LP <sup>d</sup>	-0.19	0.53

<sup>a</sup>Mean pelt prices were the average paid in Minnesota and Wisconsin (e.g., Abraham and Dexter 2019, Dhuey 2019). Pelt prices were reported in 2018 dollars by adjusting for inflation using the Consumer Price Index (Bureau of Labor Statistics 2018).

<sup>b</sup>Pearson product moment correlation coefficient.

<sup>c</sup>P-value is the probability of obtaining this correlation result (2-sided test).

<sup>d</sup>Bobcat could be harvested by trappers in the LP during 2004-2005 and 2008-2018 only.

<sup>e</sup>The tally of bobcats registered by furtakers at DNR registration stations, rather than estimate from survey.

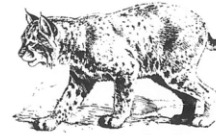
Appendix A. The questionnaire sent to people that obtained a bobcat harvest tag in Michigan for the 2018 bobcat hunting and trapping seasons.



MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WILDLIFE DIVISION  
 PO BOX 30030 LANSING MI 48909-7530

## 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 2018-19 hunting and trapping seasons (December 1, 2018, through March 1, 2019).
- Only the person this questionnaire was addressed to should answer these questions. Do not report results for another person.

### SECTION A: Hunting Questions (Questions about trapping are asked in Section B)

**1. Did you hunt bobcats during the 2018-19 season?**

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

**2. If you hunted bobcats during the 2018-19 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 chose <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				

**3. On what lands did you hunt bobcats during the 2018-19 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.)

**4. How much did weather conditions limit how often you hunted in the 2018-19 season?**

- 1  To a great extent    2  Somewhat                      3  Very little                      4  Not at all

**5. Did you hire a guide to assist with hunting bobcats at any time during the 2018-19 season?**

- 1  Yes    2  No

**6. Did you hunt bobcats with dogs during the 2018-19 season?**

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

**7. Report the number of bobcat chases with dogs you participated in during the 2018-19 season.**

\_\_\_\_\_ Chases

8. Who owned the dogs that you used to hunt bobcats during the 2018-19 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.

**SECTION B: Trapping Questions**

9. Did you attempt to harvest a bobcat while trapping in the 2018-19 season?

- 1  Yes      2  No (Skip to Question #16 in Section C)

10. If you attempted to trap bobcats, 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 only bobcat where a seal was attached to the pelt, and the animal was returned to you.)

11. On what lands did you trap bobcats during the 2018-19 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.)

12. How much did weather conditions limit how often you trapped in the 2018-19 season?

- 1  To a great extent      2  Somewhat      3  Very little      4  Not at all

13. How many of the following traps did you set for bobcat in the 2018-19 season?

(For each type, record the average number used per day.)

- \_\_\_\_\_ Foothold traps  
 \_\_\_\_\_ Conibears  
 \_\_\_\_\_ 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 2018-19 season?

- 1  Yes      2  No

**SECTION C: General Questions (Includes questions for both hunters and trappers)**

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 2018-19 season?

- 1  Increasing      2  Decreasing      3  Stable      4  Not present      5  Unknown

17. If you captured a bobcat in the 2018-19 season, please describe how you used (or plan to use) the animal? Please record the number of bobcat used for each category.

- \_\_\_\_\_ Number sold to local fur buyer  
 \_\_\_\_\_ Number sold at fur auction  
 \_\_\_\_\_ Number sold to taxidermist  
 \_\_\_\_\_ Number sold to a private individual  
 \_\_\_\_\_ Number kept for personal use (for example, tanned hide or taxidermy mount)  
 \_\_\_\_\_ Other: Please describe: \_\_\_\_\_

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