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2020 MICHIGAN BLACK BEAR HUNTER SURVEY

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ABSTRACT

We contacted a random sample of bear hunters after the 2020 hunting season to determine hunter participation, hunting methods, bear harvest, and hunter satisfaction. In 2020, an estimated 5,368 hunters spent nearly 36,387 days afield and harvested about 1,881 bears. The estimated number of hunters in 2020 increased significantly by 6% from 2019; however, hunting effort and the number of bears harvested did not increase significantly in 2020. Statewide, 35% of hunters harvested a bear in 2020, which was similar to hunter success in 2019. The average number of days required to harvest a bear statewide was 19.3 days in 2020, which was not significantly different than in 2019 (19.1 days). About 86% of hunters primarily used only bait to hunt bears and 79% of harvested bears were taken by these hunters. Hunters using dogs had greater hunting success than hunters that only used bait (59% for dog hunters versus 33% for bait-only hunters). Statewide, about 57% of hunters rated their hunting experience as very good or good in 2020 (versus 57% in 2019).

INTRODUCTION

Beginning in 1990, the Michigan Department of Natural Resources (DNR) created black bear (*Ursus americanus*) management units and limited the number of bear hunting licenses issued for each unit. Before 1990, an unlimited number of bear licenses were available, and licenses were valid in all areas open to bear hunting. In 2000, the DNR modified the licensing system by implementing a zone and quota system based on preference points for issuing bear hunting licenses. Under this system, hunters received one preference point if they applied for a hunt but were unsuccessful in the drawing. Hunters also could obtain a preference point by

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completing an application but forgoing the drawing. Applicants with the greatest number of preference points had the greatest chance of being drawn for a hunt, but no more than 5% of the licenses were issued to nonresidents.

In 2020, ten bear management units (BMU) in Michigan, totaling about 35,360 square miles, were open for bear hunting (Figure 1). Hunters could pursue bears from September 9-October 26 in all the Upper Peninsula (UP) units, except the Drummond Island Management Unit (September 9-October 21). Hunters could pursue bears from September 13-21 for counties in the Northern Lower Peninsula (LP) units. Hunters could use either bait or dogs to hunt except during the following restricted dates: (1) only bait hunting was allowed during the first five days of the first hunt period [Sept. 9-13] in the UP, (2) only bait hunting was allowed during the first day of each hunt period [September 13] in the LP, and (3) only dog hunting was allowed in the last two days of the hunt periods in the LP [September 20-21]. In addition, the Red Oak Management Unit in the LP also had an archery-only hunt during October 2-8 (i.e., firearms and hunting with dogs prohibited).

The number of bear hunting licenses available in 2020 (license quota) was the same as in 2019. Licenses were valid on all land ownership types and allowed a hunter to take one bear of either sex, excluding cubs and female bears with cubs. Hunters could harvest bears with a firearm, crossbow, or archery equipment, except for the special archery-only hunt in the Red Oak Bear Management Unit. Youth hunters 9 years of age and younger could hunt bear with a mentored youth hunting license. A person older than 9 years old who did not have a hunter safety certificate could hunt with an apprentice license. Mentored youth and apprentice hunters had to be accompanied while hunting by a qualified adult.

The Pure Michigan Hunt (PMH) was a multi-species hunting opportunity offered for the first time in 2010. Individuals could purchase an unlimited number of applications for the PMH. Three winners, selected by random draw, received elk, bear, spring turkey, fall turkey, and antlerless deer hunting licenses and could participate in a reserved waterfowl hunt on a managed waterfowl area. The bear hunting licenses were valid for all areas open for hunting bear, except Drummond Island, and during all bear hunting periods. Furthermore, the PMH license holder could hunt any bear season until they filled their bear harvest tag.

The DNR and Natural Resources Commission (NRC) 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 by the DNR to accomplish its statutory responsibility. Estimating harvest, hunting effort, and hunter satisfaction are the primary objectives of these surveys. The DNR and NRC use estimates derived from harvest surveys, as well as harvest reported by hunters at mandatory registration stations and other indices to monitor bear populations and establish harvest regulations.

METHODS

The DNR provided all bear hunters the option to report information about their bear hunting activity voluntarily via an internet survey. Hunters reported whether they hunted, the number of days spent afield, whether they harvested a bear, the date of harvest, and their hunting

methods. Hunters also reported whether other hunters (including bear hunters) caused interference during their hunt. The questionnaire asked successful hunters to report the harvest date, sex of the bear taken, and harvest method. The questionnaire asked hunters to report how satisfied they were with the number of bears seen, the number of opportunities they had to take a bear, and their overall bear hunting experience. Finally, hunters were asked to report whether they used bait and trail cameras to hunt bears. Following the 2020 bear hunting season, a questionnaire (Appendix A) was mailed to 3,425 randomly selected people (Table 1) that had purchased a bear hunting license (resident, nonresident bear licenses, comprehensive lifetime bear license, and Pure Michigan Hunt). The questionnaire sent via mail asked the same questions as the internet version.

We calculated parameter estimates using a stratified random sampling design that included 11 strata (Cochran 1977). We stratified hunters based on the management unit where their license was valid (10 management units). We considered hunters who purchased a license valid in multiple management units (PMH license holders) as a separate stratum (stratum 11). We calculated the statewide estimate of the mean number of days required to harvest a bear using a different ratio for each stratum (i.e., separate ratio estimator). To improve the precision of ratio estimates, we used the number of bears registered in each stratum as an auxiliary variate.

Every successful hunter was required to present their harvested bear at a DNR registration station (e.g., DNR office). During registration, the hunter reported the date and location of harvest, the sex of the bear, and submitted a premolar tooth. The DNR examined the cementum annuli of each submitted tooth to determine the age of the bear (Willey 1974, Coy and Garshelis 1992). If a successful hunter had returned a harvest survey, the information collected from their registered bear was matched to their survey responses.

We calculated a 95% confidence limit (CL) for each parameter estimate. In theory, we can determine the 95% confidence interval by adding and subtracting the CL from the estimate. The confidence interval is a measure of the precision associated with the estimate and implies that the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include the failure of participants to provide answers (nonresponse bias), question-wording, and question order. It is very difficult to measure these biases; thus, we did not adjust the estimates for these possible biases.

Statistical tests determine the likelihood that the differences among estimates are larger than expected by chance alone. To determine whether estimates differed, we examined the respective 95% confidence intervals for overlapping values. Non-overlapping 95% confidence intervals was equivalent to stating that the difference between the means was larger than would be expected 95 out of 100 times if the study had been repeated (Payton et al. 2003).

We initially mailed questionnaires during late November 2020 and sent a maximum of two follow-up questionnaires to nonrespondents. Of the 3,430 questionnaires mailed, 37 were undeliverable, resulting in an adjusted sample size of 3,423. We received questionnaires from 2,068 people, yielding a 60% adjusted response rate.

RESULTS AND DISCUSSION

In 2020, 27,705 people purchased an application to receive a bear hunting license (excluded preference point only applications), which was 11% fewer people than in 2019 (Table 1 and Figure 2). About 55% of the applicants sought a hunt in the UP and 45% wanted a hunt in the LP. The number of people applying for a license in 2020 decreased by 6% for UP hunts and decreased by 17% for LP hunts (Table 2). In contrast, the number of people applying only for a preference point increased by nearly 24% in 2020 from 2019. The number of people applying only for a preference point surpassed the number of people applying for a hunt for the first time in 2020 (Figure 2).

In 2020, hunters purchased 5,824 bear hunting licenses (Table 1), which was an increase of 4% from 2019 (5,613). Most of the hunters buying a license in 2020 were men (89%), and the average age of the license buyers was 49 years (Figure 3). About 4% of the license buyers (252) were younger than 17 years old.

Compared to 10 years ago, the number of people buying a bear hunting license in 2020 decreased by 35% (8,976 people purchased a license in 2010). The decrease in the number of licenses purchased primarily reflected the decrease in licenses available for sale. The license quota declined by nearly 40% between 2010 and 2020 (11,742 licenses available in 2010 versus 7,083 in 2020). Although the overall number of license buyers decreased between 2010 and 2020, hunter numbers among the youngest and oldest age classes were similar or slightly higher in 2020 than in 2010 (Figure 4). The consistency of hunter numbers in the oldest age classes likely represented the rising share of older people in the population as the baby-boom generation aged. The increased participation among the youngest hunters reflected the elimination of an age requirement. In 2020, there was no minimum age requirement to participate; while the hunters had to be at least 10 years old to participate in 2010.

Nearly 92 ± 1% of the license buyers hunted bear (Table 3). These hunters spent 36,387 days afield ($\overline{x}$ = 6.8 days/hunter) and harvested 1,881 bears. The estimated number of hunters in 2020 increased significantly by 6% from 2019; however, hunting effort and the number of bears harvested did not increase significantly in 2020 (Figure 5). Baraga and Ontonagon counties had the greatest number of bear hunters, and these two counties also had the greatest number of bears harvested during 2020 (Table 4).

The amount of hunting effort (days) per bear harvested was a measure of how difficult it was to harvest a bear and may be an indirect measure of the abundance of bears. Increasing effort per harvested bear suggested that the bear population may have decreased while decreasing effort per bear suggested that the bear population may have increased. The average number of days required to harvest a bear statewide was 19.3 days in 2020 (Table 3, Figure 6), which was similar to the number of days hunted per bear in 2019 (19.1 days). Mean effort per harvested bear in each region also was similar between 2019 and 2020 (Figure 7). The units having the highest effort per harvested bear during recent years have been Carney, Gwinn, and Newberry management units, while Baldwin, Drummond Island, and Red Oak management units have had the lowest effort per harvested bear (Figure 8).

In the UP, the long-term trends of effort per harvested bear suggest that the bear population has been relatively stable since 1992; while the trends in the LP suggest that the bear population has been increasing steadily (Figure 7). Long-term trends are difficult to interpret because of changes to the length of hunting seasons, and the addition of hunt periods and new areas open to hunting since 1992; thus, these annual estimates are not always directly comparable. In 1994, most early hunt periods were increased from 37 to 42 days and a third hunt period was added in the Gwinn Management Unit. In 1995, a third hunt period was added to the Baraga Management Unit. In 1996, Baldwin and Gladwin management units were created, and a third period was added to Bergland, Amasa, Carney, and Newberry management units. In 2002, the management units in the LP were expanded slightly to coincide with county boundaries. In 2007, the area of the Baldwin Management Unit was increased slightly with the addition of Leelanau County.

About 38% of the bear hunters hunted on private lands only in 2020, 44% hunted on public lands only, and 17% hunted on both private and public lands (Table 5). Bear hunters spent 14,534 days afield on private land, 14,570 days hunting on public land only, and 7,158 days hunting on both private and public lands (Table 6). Of the estimated 1,881 bears harvested in 2020, hunters harvested 38 ± 3% of these bears (709 ± 61) on private land. Hunters harvested about 62 ± 3% of the bears (1,172 ± 81) on public land.

Based on reported harvest dates, hunters took about 26% of these bears during September 9-13 (i.e., the first five days for most units) and 58% during September 9-18 (i.e., the first ten days, Figure 9). Of the bears harvested and their sex known, 60 ± 3% were males (1,121 ± 79) and 40 ± 3% were females (756 ± 65; Table 2). Statewide, 35% of hunters harvested a bear in 2020 (Table 3), which is the same percentage as in 2019. Hunter success ranged from 26-80% among the bear management units (Table 3).

Most hunters (86%) used firearms while hunting bears, although 11% of the hunters used archery equipment (compound, recurve, or longbows), and 10% used a crossbow (Tables 7 and 8). The total equals more than 100% because hunters could use more than one type of equipment during the season. Most hunters (87%) used a firearm to harvest their bear, while 7% used archery equipment, and 6% used a crossbow (Tables 9 and 10).

Most hunters (86 ± 1%) relied primarily on baiting only as a means of locating and attracting bears (Table 11). About 12% (±1%) of hunters relied primarily on dogs alone or a combination of baiting and dogs to locate bears. About 1% of hunters relied on a hunting method not involving dogs or bait. Among hunters using bait, about 72% of hunters used either bakery products or corn and grains as bait (Tables 12 and 13).

Hunters harvested about 79 ± 2% of the bears with the aid of bait only (Table 11). Hunting success for hunters primarily using bait only was 33 ± 2%, while hunting success for hunters using dogs was 59 ± 5% in 2020. Success among hunters using dogs has usually been greater than among hunters only using bait (Figures 10 and 11). In addition, bait hunters that used a trail camera generally have had greater hunting success than hunters that only bait alone, although the differences were not always significantly different each year (Figure 11). Hunters using dogs also generally harvested older bears than bait hunters (Figure 11). Hunters using dogs have frequently been reported as more selective and harvesting older individuals

than bait hunters (e.g., Malcolm and Van Deelen 2010). Bait hunters that used a trail camera also generally harvested older bears than hunters that only used bait, but the differences were not significantly different in any year.

About 39% of bear hunters statewide rated the number of bears seen during the 2020 hunting season as very good or good, and 36% rated bear seen as poor or very poor (Table 14). Similarly, about 31% of hunters statewide rated the number of chances they had to take a bear during the 2020 hunting season as very good or good, and 41% rated their chances as poor or very poor (Table 15).

Statewide, about 57% of hunters rated their hunting experiences as very good or good (versus 57% in 2019), and 22% rated their hunting experiences as poor or very poor (Table 16). Many factors may affect hunter satisfaction; however, satisfaction appeared more closely associated with hunting success than with hunter interference (Figure 12). In 2020, 20% of the hunters reported that other hunters interfered with their hunts (Table 17). Other bear hunters accounted for most of the interference reported; 13% of the hunters reported that other bear hunters interfered with their hunt. Generally, hunters in the UP experienced less interference than hunters in the LP (Table 17, Figure 13).

Only 14% of the hunters (725 hunters) hired a hunting guide in 2020 (Table 18). Most hunting guides (79%) relied on baiting only to locate bears for their clients in 2020 (Table 19). The hunting success of hunters using a guide was significantly greater than hunters that did not use a guide (51 ± 5% with a guide versus 33 ± 2% without a guide).

About 81% of the bear hunters using bait also used a trail camera to monitor bear activity in hunt areas (Table 20). Among the hunters using a trail camera, 91% reported they detected a bear (Table 21). An increased proportion of hunters in 2020 detected a coyote (33% in 2020 versus 27% in 2019), deer (45% versus 39%), bobcat (8% versus 6%), wolves (29% versus 26%), marten (24% versus 19%), and fisher (30% versus 23%) (Figure 14).

ACKNOWLEDGMENTS

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Figure 1. Bear management units open to hunting in Michigan, 2020.

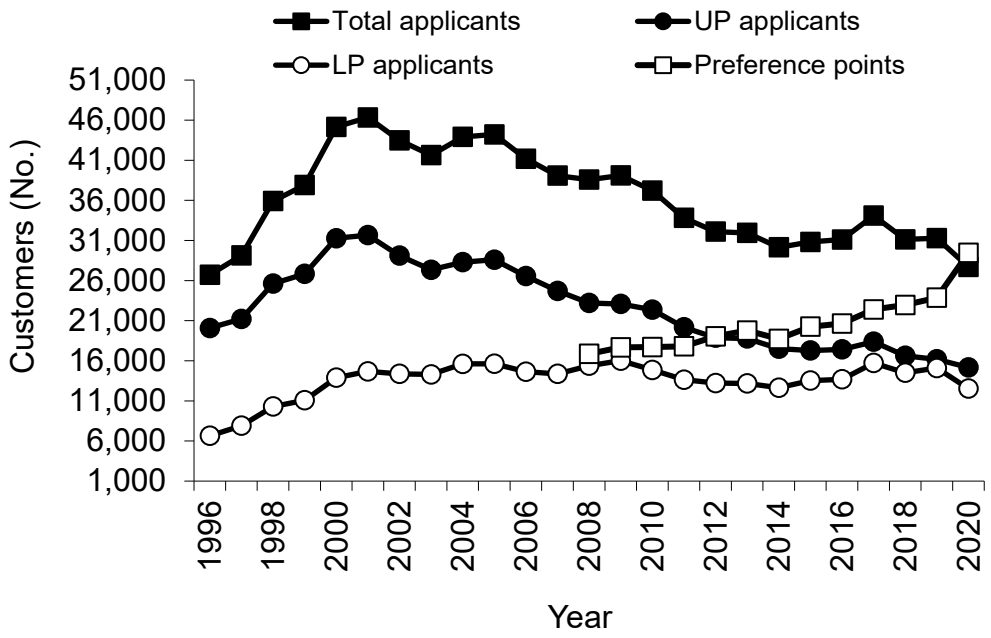

Figure 2. The number of people that applied for a bear hunting license or purchased a preference point during 1996-2020. Beginning in 2008, people could choose to receive a preference point rather than enter the drawing for a bear hunting license for the current year.

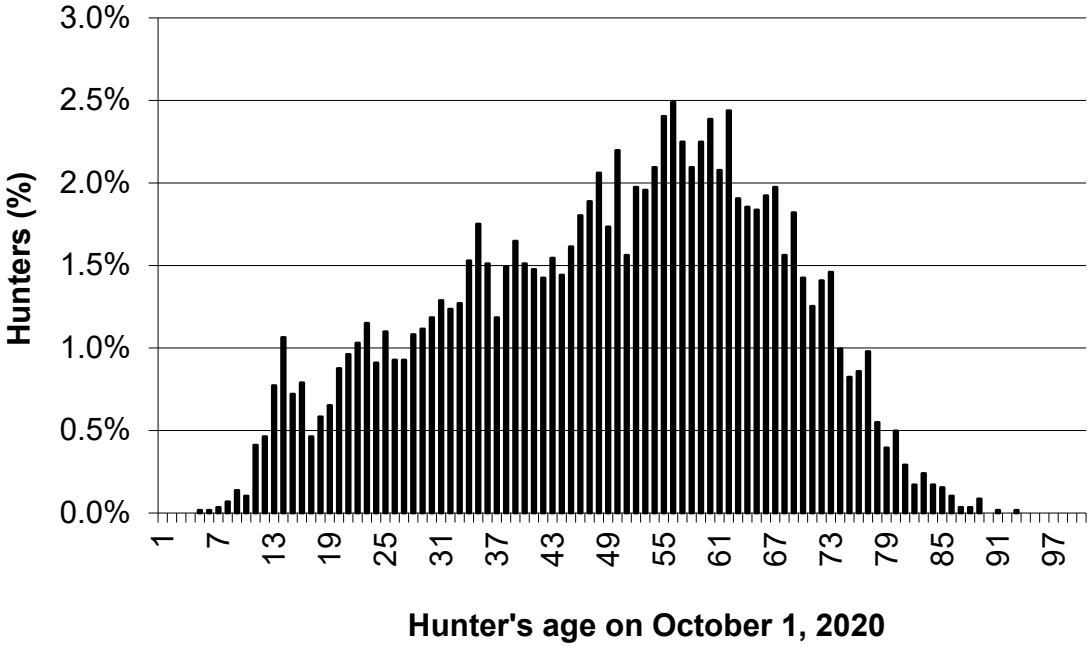

Figure 3. Age of people that purchased a bear hunting license in Michigan for the 2020 hunting season (mean = 49 years). Licenses were purchased by 5,824 people.

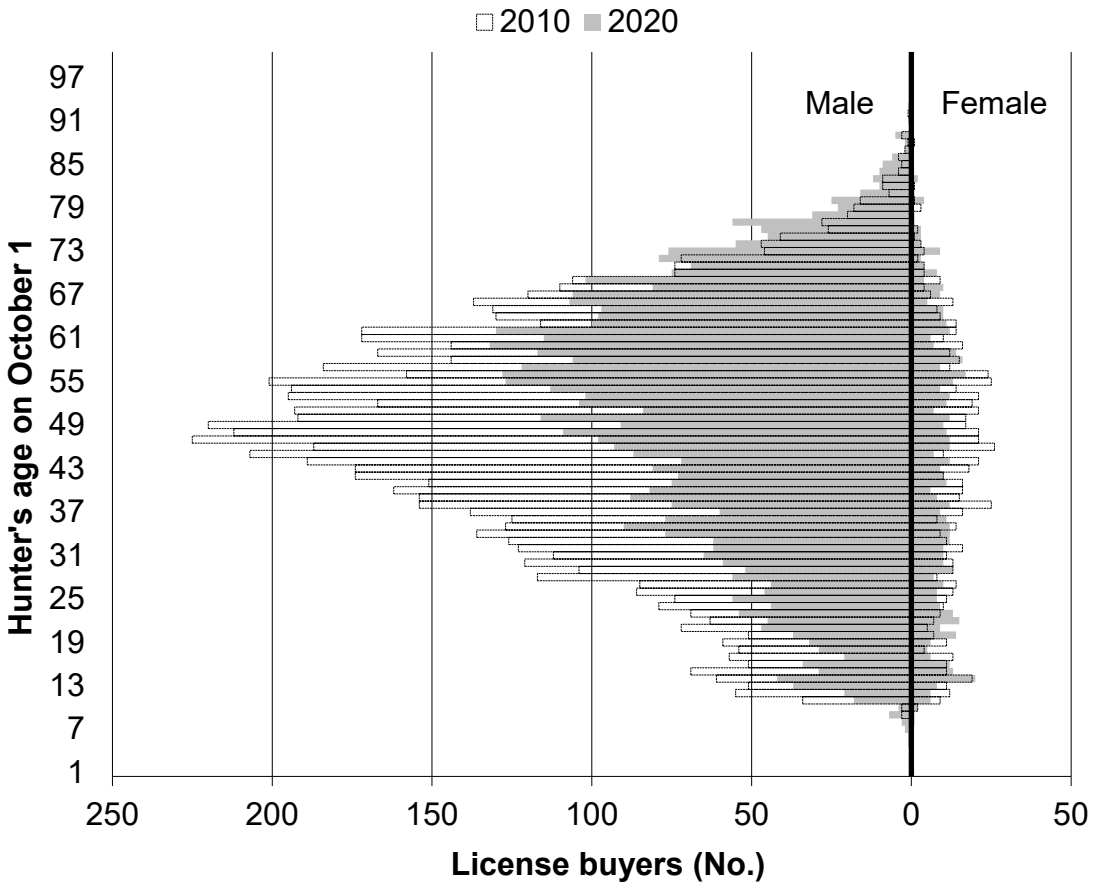

Figure 4. Number of bear hunting license buyers in Michigan by age and sex during 2010 and 2020 hunting seasons. The number of people buying a license was 8,976 in 2010 and 5,824 in 2020.

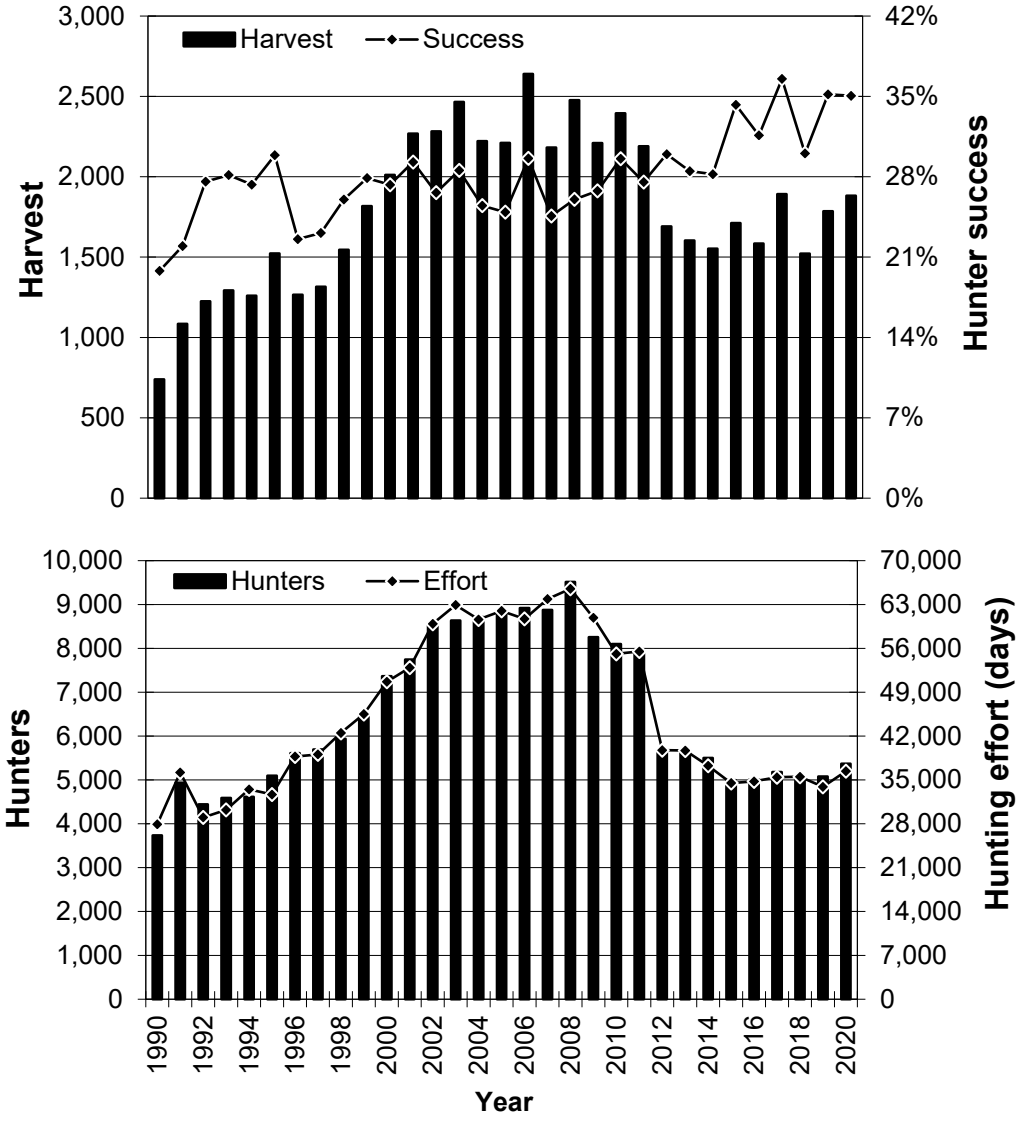

Figure 5. Estimated harvest, hunting success, number of hunters, and hunting effort during bear hunting seasons, 1990-2020.

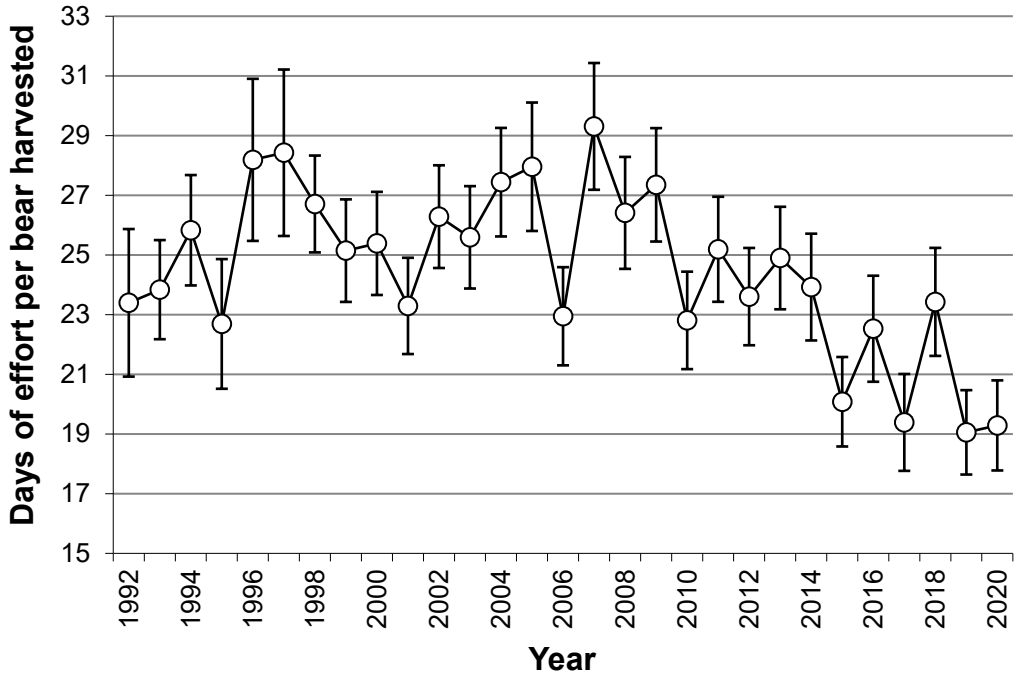

Figure 6. Estimated mean number of days required to harvest a bear statewide in Michigan during 1992-2020. Vertical bars represent the 95% confidence interval.

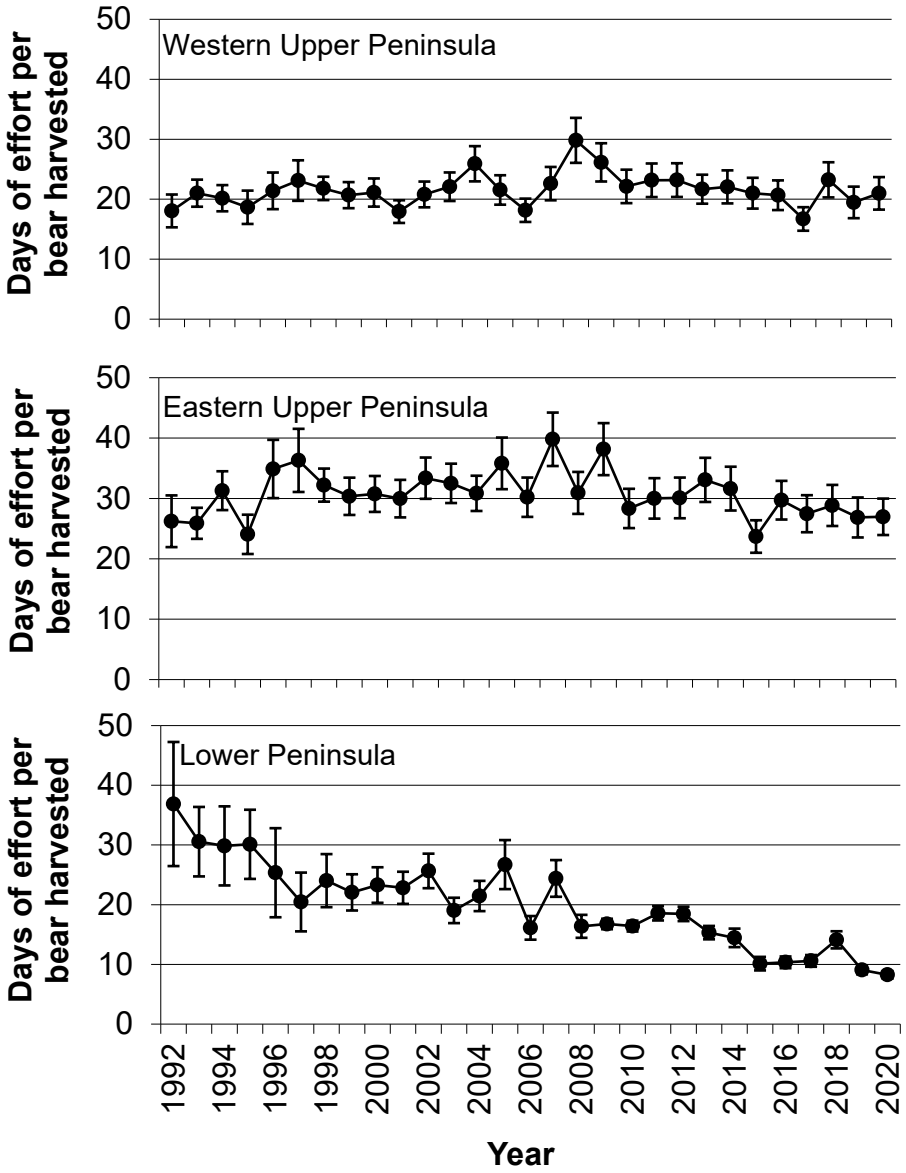

Figure 7. Estimated mean number of days required to harvest a bear in Michigan during 1992-2020, summarized by ecological region. Western UP consisted of Amasa, Baraga, and Bergland units, and Eastern UP consisted of Carney, Gwinn, and Newberry units (Drummond Island Management Unit excluded). Lower Peninsula consisted of Baldwin, Gladwin, and Red Oak management units. Vertical bars represent the 95% confidence interval.

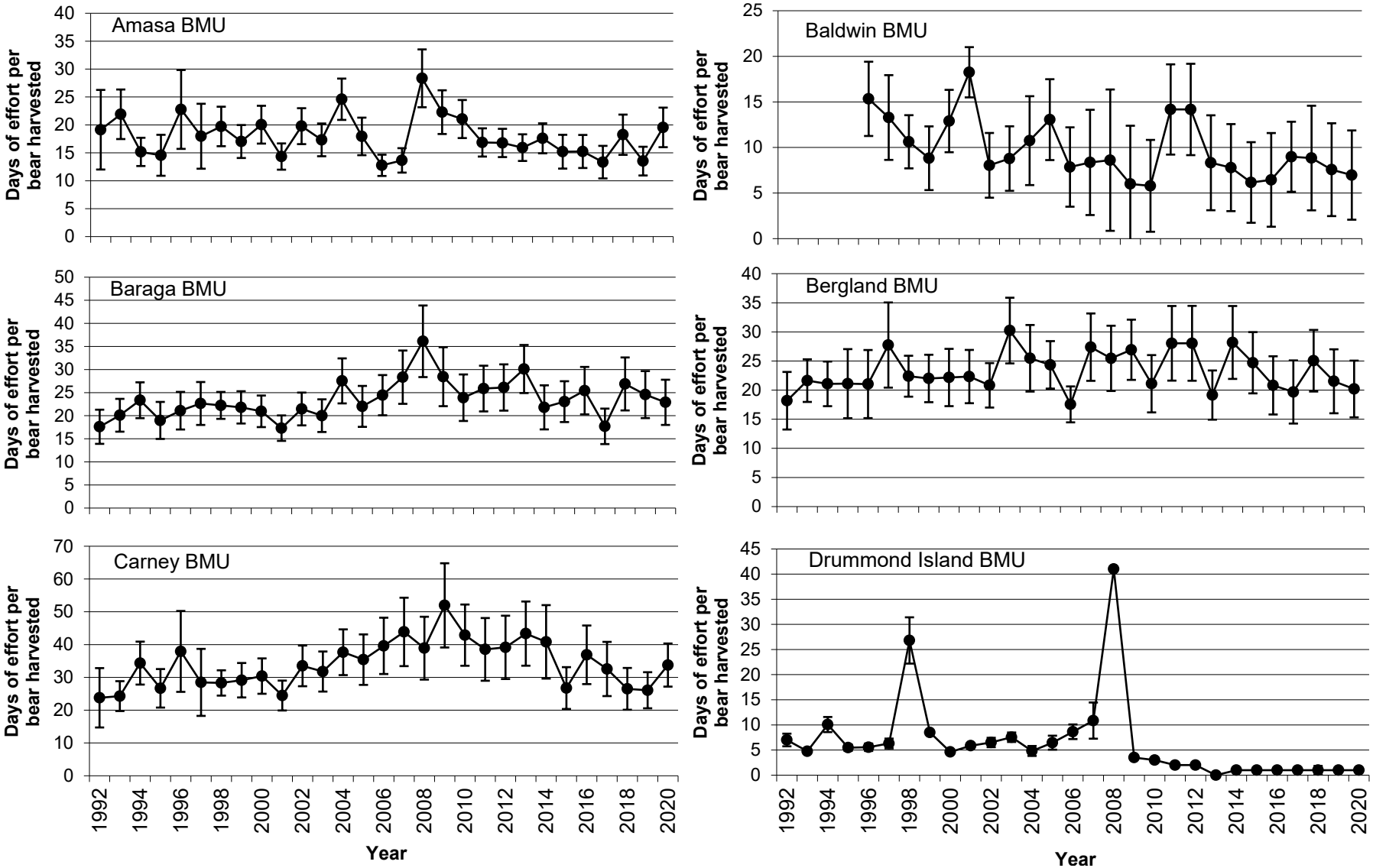

Figure 8. Estimated mean number of days required to harvest a bear in Michigan during 1992-2020, summarized by management unit. Baldwin and Gladwin management units were created in 1996. Vertical bars represent the 95% confidence interval. The scale of the vertical axis differs for each unit.

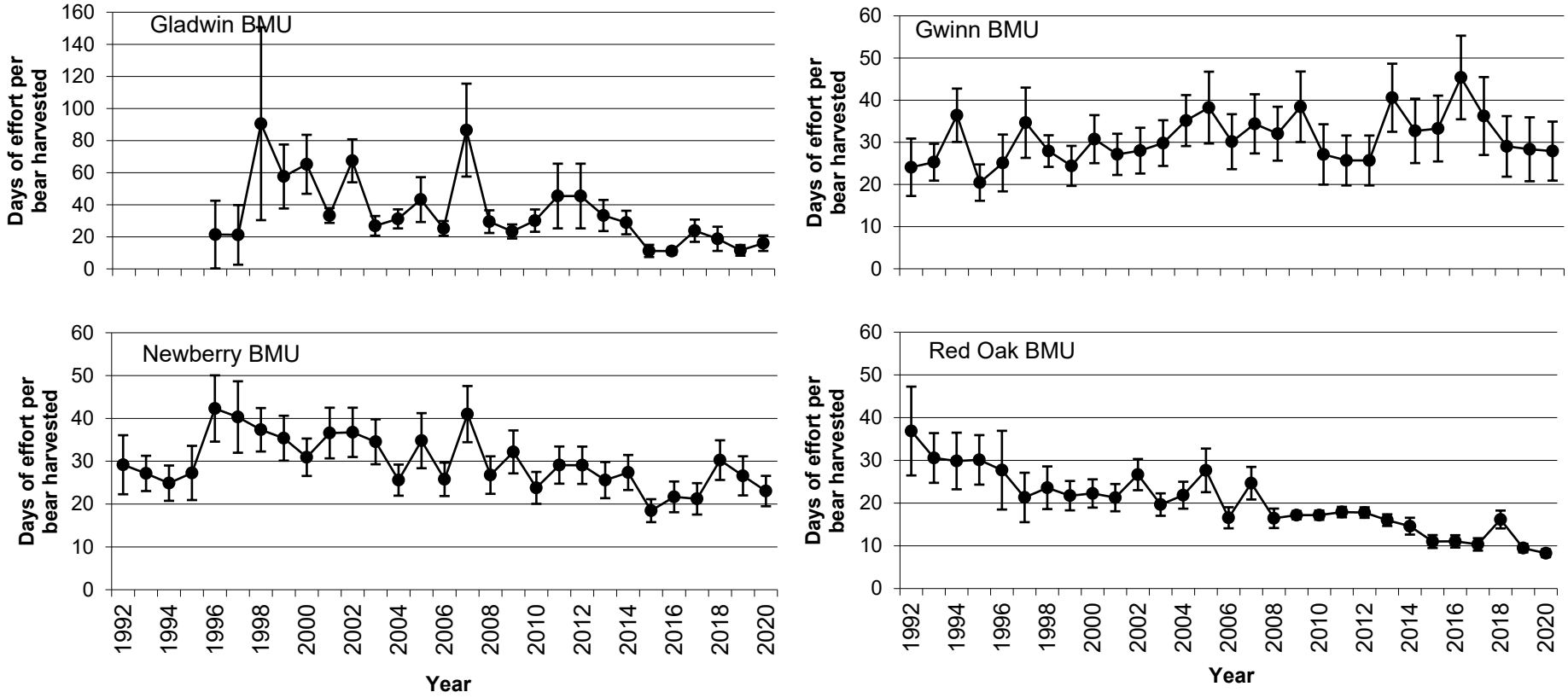

Figure 8 (continued). Estimated mean number of days required to harvest a bear in Michigan during 1992-2020, summarized by management unit. Baldwin and Gladwin management units were created in 1996. Vertical bars represent the 95% confidence interval. The scale of the vertical axis differs for each unit.

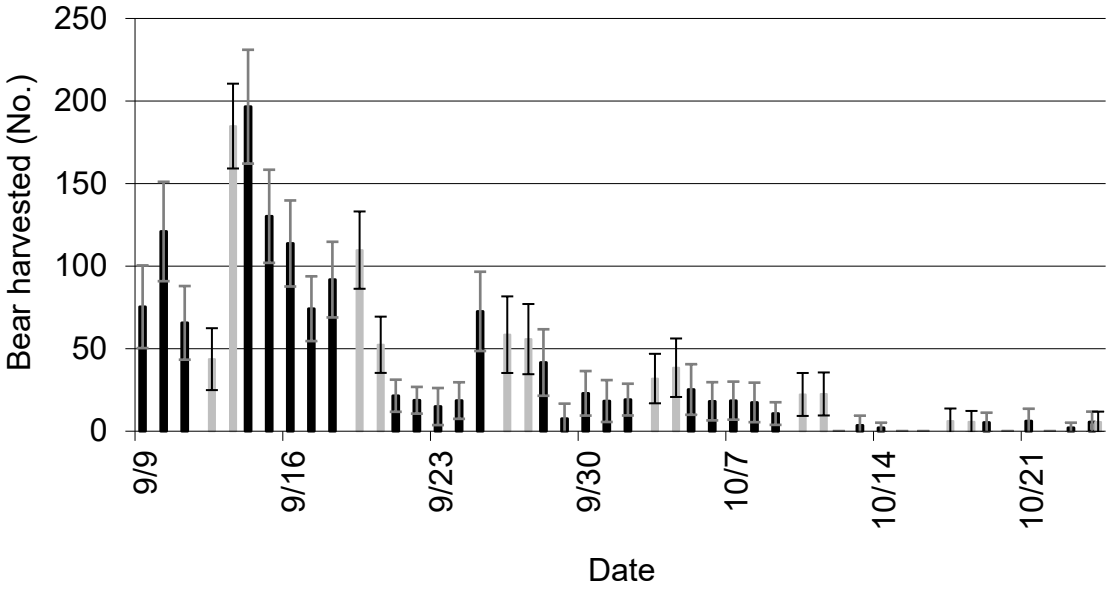

Figure 9. Estimated number of bear harvested by date during the 2020 bear hunting season (includes all hunt periods). Gray-shaded bars indicate weekends. Vertical bars represent the 95% confidence interval. The opening of the bear hunting season was September 9 in the UP and September 13 in the LP. Hunting with dogs in the UP and LP started on September 14.

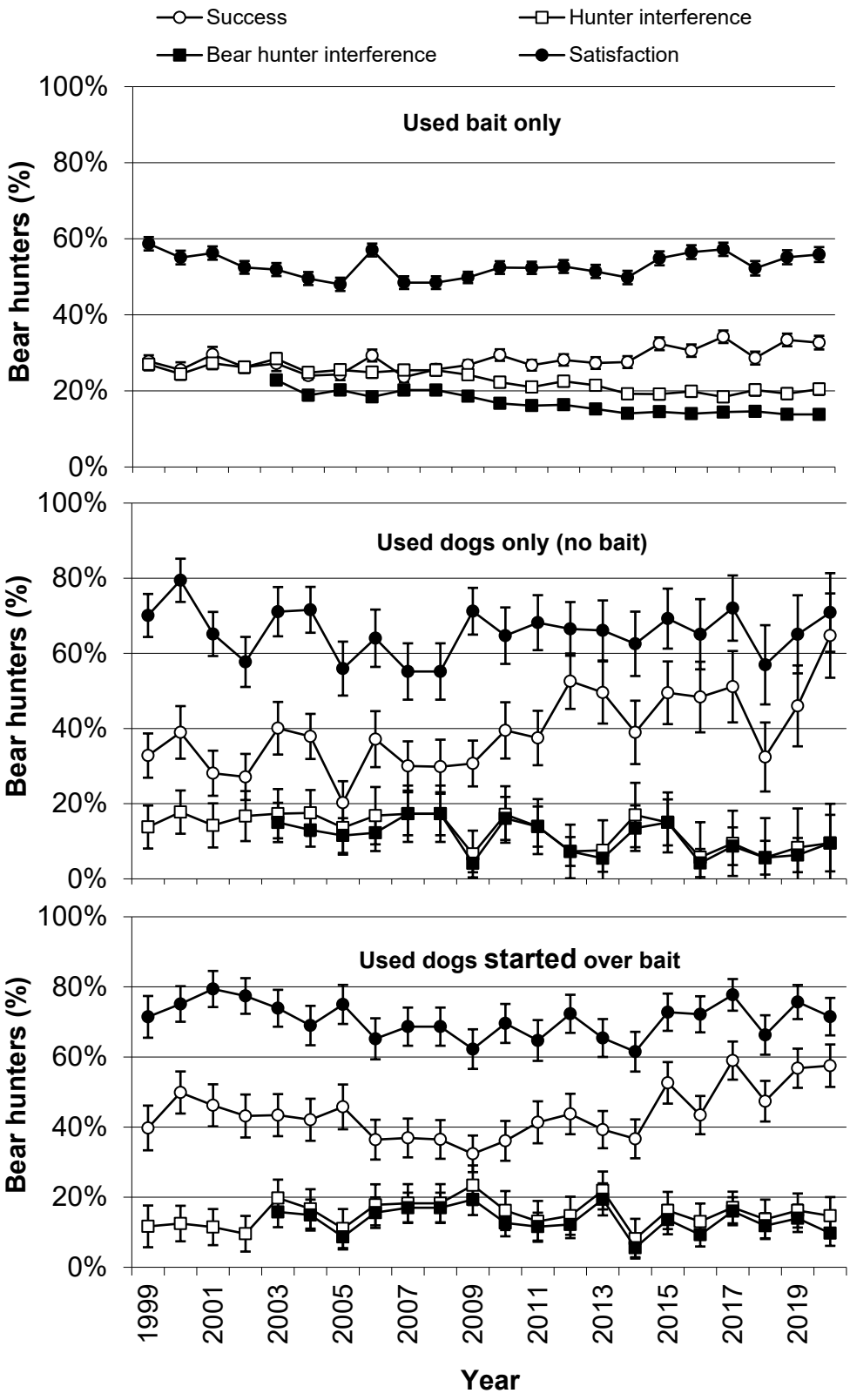

Figure 10. Estimated hunter success, interference, and satisfaction of bear hunters with their hunting experience in Michigan during 1999-2020, summarized by primary method of hunt. Vertical bars represent the 95% confidence interval. Interference was the proportion of hunters indicating they experienced interference from other hunters. Satisfaction was the proportion of hunters rating their hunting experience as very good or good.

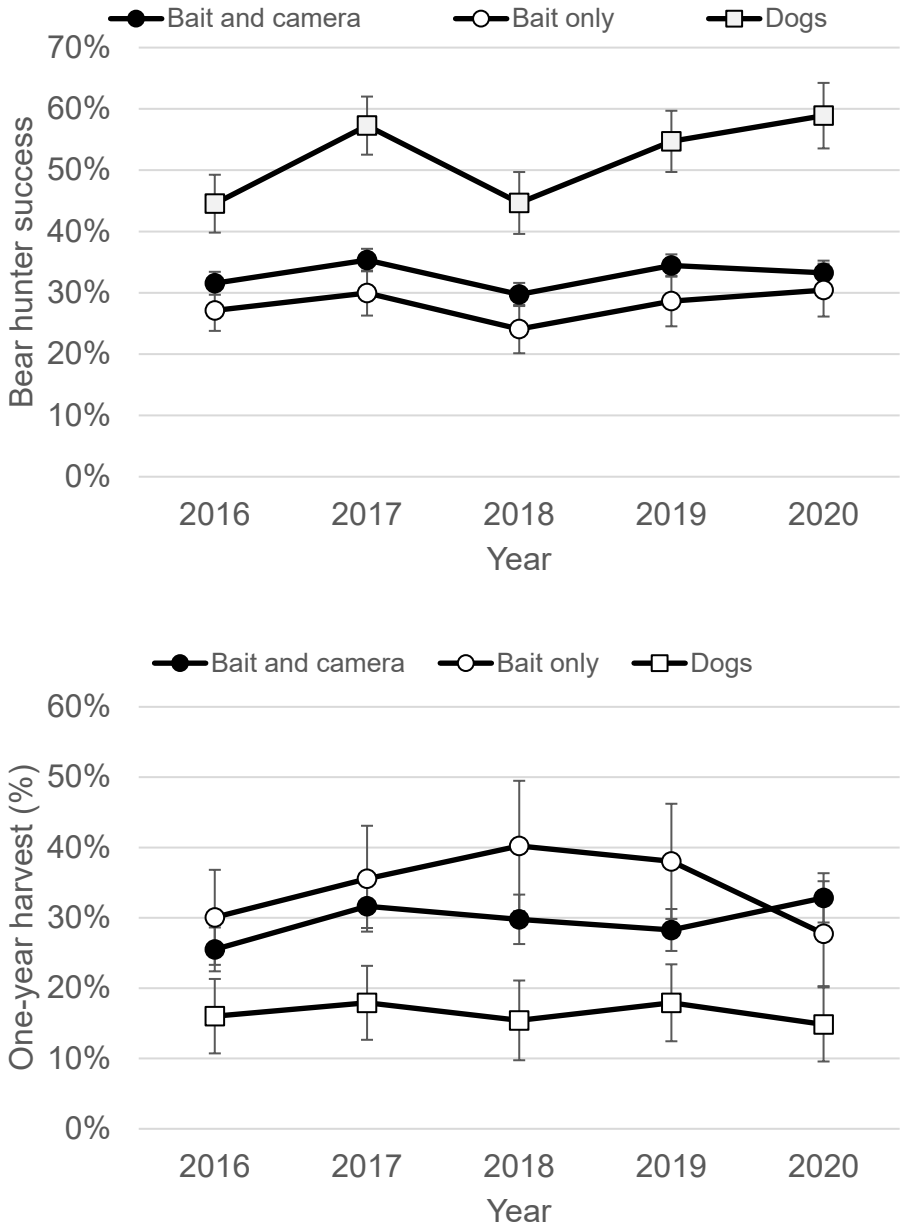

Figure 11. The proportion of bear hunters harvesting a bear by each hunting method (top) and the proportion of harvested bears taken by each hunting method that were one year old (bottom) during 2016-2020.

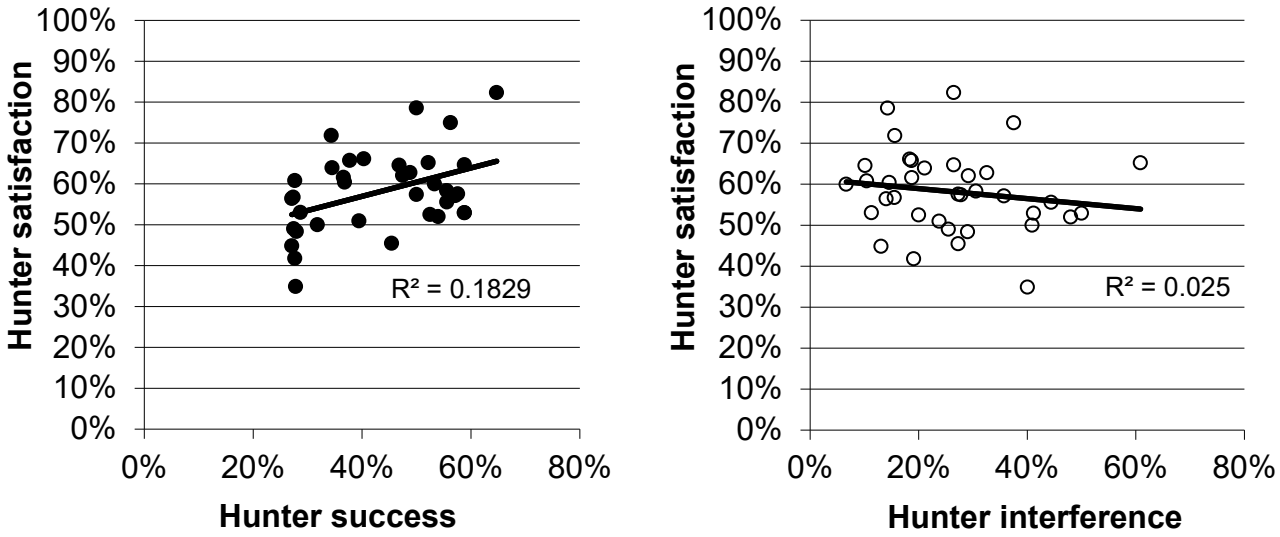

Figure 12. Hunter satisfaction (hunters rating their hunting experience as very good or good) relative to hunter success and hunter interference for 36 counties in Michigan during the 2020 bear hunting season (included only counties with at least 20 hunters).

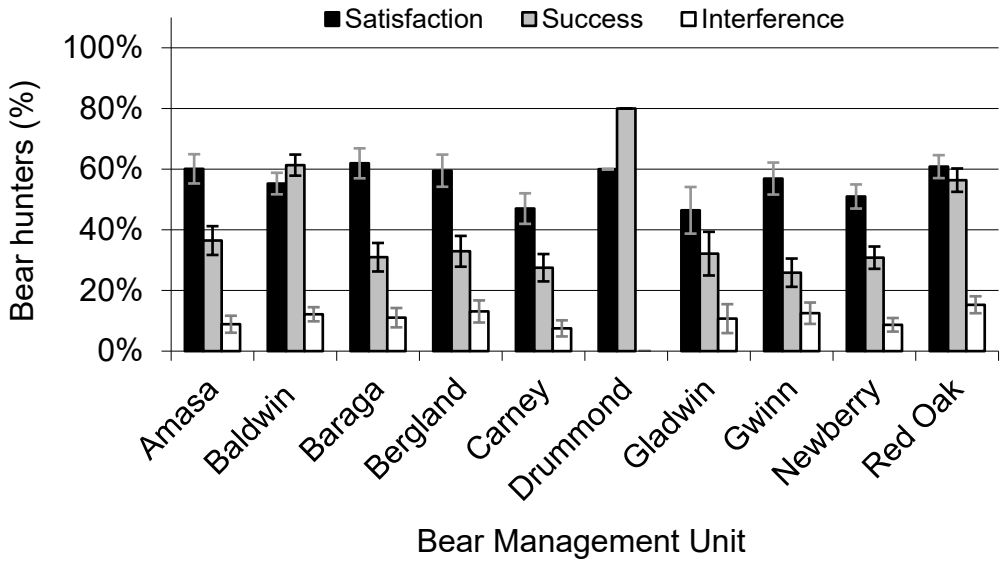

Figure 13. Estimated hunter satisfaction, hunting success, and level of hunter interference in Michigan's bear management units during the 2020 bear hunting season. Satisfaction measures the proportion of hunters rating their hunting experiences as very good or good. Error bars represent the 95% confidence limit. Interference was the proportion of hunters that reported interference from other hunters (all types of hunters).

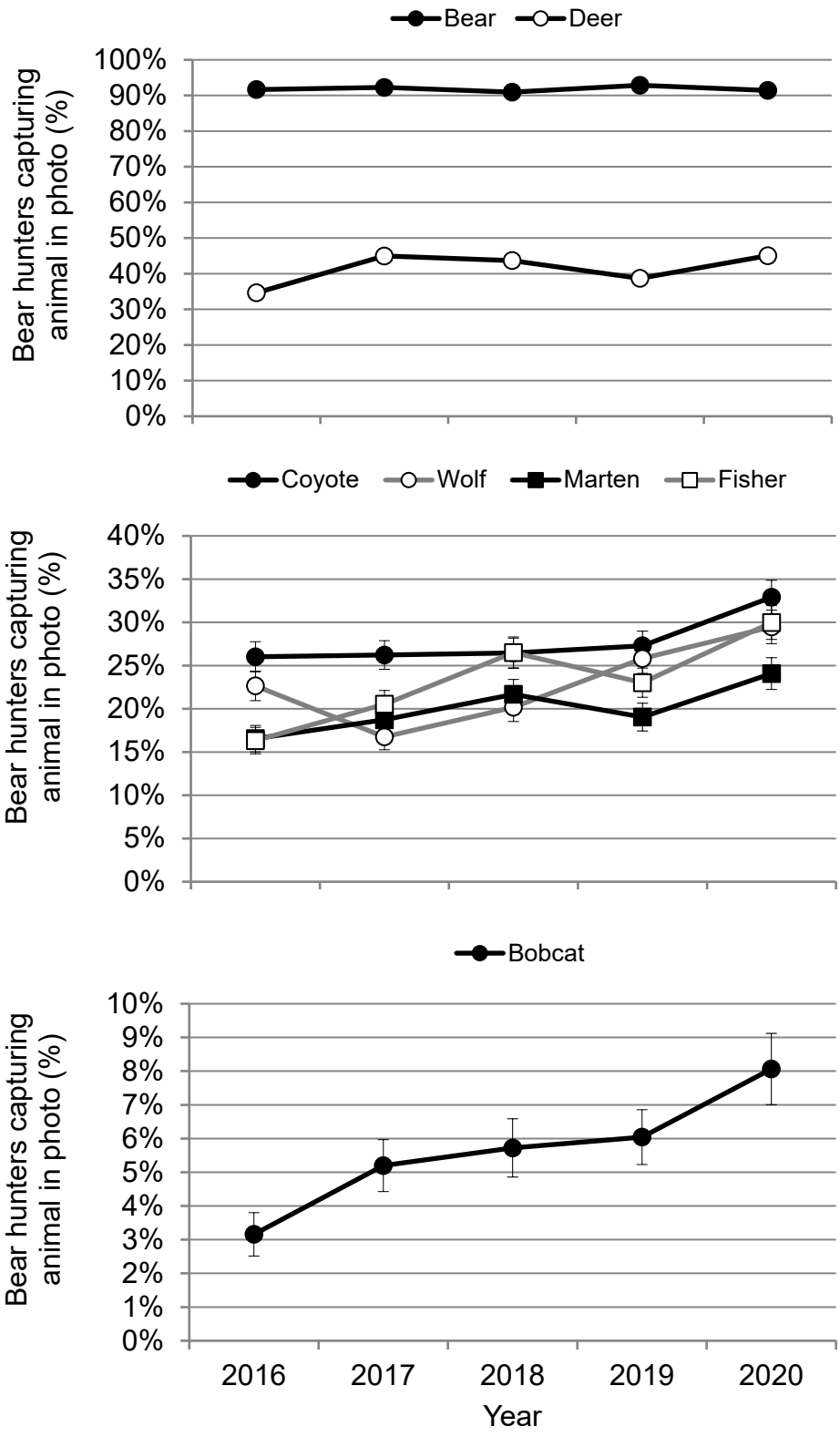

Figure 14. The proportion of bear hunters that used a trail camera and detected selected carnivores and deer with their camera in 2016-2020.

Table 1. The number of people purchasing hunting licenses for the 2020 Michigan bear hunting seasons and the number of people selected for the survey sample.

Management unit	Licenses available (quota)	Number of eligible applicants[a]	Licenses sold[b]	Number of people included in mail survey sample[c]
Amasa	490	1,728	440	310
Baldwin	260	2,705	243	243
Baraga	1,550	2,770	1,217	494
Bergland	1,195	1,685	963	454
Carney	600	1,831	482	326
Drummond Island	5	187	5	5
Gladwin	110	1,046	91	91
Gwinn	1,060	2,162	789	418
Newberry	1,110	4,809	939	600
Red Oak	700	8,782	652	486
Pure Michigan Hunt	3	NA	3	3
Statewide	7,083	27,705	5,824	3,430
Applicants opting for Preference Point[d]	NA	29,459	NA	NA

[a]Number of eligible applicants that selected the management unit as their first choice to hunt.
[b]Fewer licenses were sold than the number available because some successful applicants failed to purchase a license.
[c]An additional 480 hunters responded on the internet before the mail sample was selected; these internet responders were assigned to a separate stratum when calculating survey estimates.
[d]Applicants that chose to receive a preference point rather than enter the drawing for a hunting license.

Table 2. The number of applicants, licenses sold, estimated number of hunters, harvest, hunting effort (days), and hunting success during Michigan bear hunting seasons, 2013-2020.

Region	2014	2015	2016	2017	2018	2019	2020
UP applicants	17,510	17,284	17,425	18,380	16,625	16,188	15,172
UP licenses sold	5,322	4,729	4,759	4,867	4,730	4,641	4,835
UP hunters	4,784	4,280	4,323	4,334	4,235	4,142	4,426
UP harvest	1,297	1,387	1,255	1,479	1,194	1,288	1,359
UP males (%)	63	59	61	58	58	63	63
UP females (%)	36	41	38	41	41	37	37
UP unknown (%)	0	0	0	1	1	0	0
UP hunter-days	33,702	31,279	31,361	31,094	30,866	29,363	32,050
UP hunter success	27	32	29	34	28	31	31
LP applicants	12,641	13,534	13,695	15,722	14,508	15,098	12,533
LP licenses sold	757	732	721	888	858	969	986
LP hunters	715	711	688	843	828	931	939
LP harvest	256	323	327	409	325	495	521
LP males (%)	55	64	46	55	58	54	52
LP females (%)	45	36	54	45	42	46	48
LP unknown (%)	0	0	0	0	0	0	0
LP hunter-days	3,548	3,209	3,401	4,330	4,630	4,532	4,327
LP hunter success	36	45	48	49	39	53	55
All applicants[a]	48,882	51,077	51,767	56,502	54,095	55,148	57,164
All licenses sold[b]	6,082	5,464	5,483	5,759	5,591	5,613	5,824
All hunters[c]	5,499	4,991	5,011	5,177	5,063	5,073	5,366
All harvest[c]	1,552	1,710	1,582	1,888	1,519	1,783	1,879
All males (%)	62	60	58	57	58	61	60
All females (%)	38	40	42	42	41	39	40
All unknown (%)	0	0	0	1	0	0	0
All hunter-days[c]	37,250	34,488	34,763	35,424	35,496	33,895	36,377
All hunter success[c]	28	34	32	36	30	35	35

[a]Number of applicants statewide included people that applied for a preference point.
[b]Number of licenses sold statewide included people that received Pure Michigan Hunt licenses, which were valid in both the UP and LP.
[c]Excluded Pure Michigan Hunt licenses.

Table 3. Estimated number of hunters, harvest, hunter success, hunting effort, mean days hunted, and mean effort per harvested bear during the 2020 Michigan bear hunting season, summarized by area.

Management Unit	Hunters total	Hunters total 95% CL[a]	Harvest total	Harvest total 95% CL[a]	Hunter success %	Hunter success 95% CL[a]	Hunting effort Days	Hunting effort 95% CL[a]	Days hunted per hunter	Days hunted per hunter 95% CL[a]	Days hunted per harvested bear	Days hunted per harvested bear 95% CL[a]
Amasa	415	10	151	20	36	5	2,961	280	7.1	0.7	19.6	3.5
Baldwin	238	2	146	8	61	3	1,017	50	4.3	0.2	7.0	0.6
Baraga	1,144	29	354	55	31	5	8,108	805	7.1	0.7	22.9	4.9
Bergland	839	33	276	44	33	5	5,576	615	6.6	0.7	20.2	4.9
Carney	425	15	117	20	28	5	3,943	336	9.3	0.7	33.8	6.6
Drummond Is.	5	0	4	0	80	0	27	0	5.4	0.0	6.8	0.0
Gladwin	85	3	27	6	32	7	437	44	5.1	0.5	16.0	4.8
Gwinn	732	21	189	35	26	5	5,286	506	7.2	0.7	27.9	7.0
Newberry	866	19	267	32	31	4	6,148	488	7.1	0.5	23.0	3.5
Red Oak	617	11	348	25	56	4	2,873	173	4.7	0.3	8.3	0.9
Pure MI Hunt	2	0	2	0	100	0	10	0	5.0	0.0	5.0	0.0
Statewide[b]	5,368	56	1,881	93	35	2	36,387	1,321	6.8	0.2	19.3	1.5

[a]95% confidence limits.

[b]Column totals may not equal statewide totals because of rounding error.

Table 4. Estimated number of hunters, harvest, hunter success, hunting effort, hunter satisfaction, and hunt interference during the 2020 Michigan bear hunting season, summarized by county.

County	Hunters[a] total	Hunters 95% CL	Harvest[a] total	Harvest 95% CL	Hunter success %	Hunter success 95% CL	Hunting effort (days)[a]	Hunting effort 95% CL	Hunter satisfaction[b] %	Hunter satisfaction 95% CL	Interfered hunters[c] %	Interfered hunters 95% CL
Alcona	106	18	53	13	50	9	505	107	57	9	28	8
Alger	143	31	49	19	35	11	983	281	64	11	21	10
Alpena	67	15	39	12	59	12	216	65	65	11	26	10
Antrim	22	9	10	6	45	21	67	36	45	21	27	18
Arenac	2	2	0	0	0	0	2	2	100	0	0	0
Baraga	499	59	136	37	27	7	2,870	478	57	8	16	5
Bay	0	0	0	0	0	0	0	0	0	0	0	0
Benzie	21	5	12	3	56	12	74	21	56	12	44	12
Charlevoix	10	6	6	5	60	30	26	23	60	30	40	30
Cheboygan	27	10	14	7	50	18	126	53	79	15	14	13
Chippewa	216	30	60	17	28	7	1,784	354	42	8	19	6
Clare	12	5	3	2	25	18	50	24	63	20	13	13
Crawford	29	10	16	8	53	18	116	49	60	17	7	9
Delta	265	39	72	22	27	7	1,984	418	56	8	14	6
Dickinson	155	28	61	19	39	10	1,271	303	51	10	24	8
Emmet	12	7	8	5	67	26	33	24	67	26	33	26
Gladwin	33	7	11	4	32	11	185	42	50	12	41	12

[a]Number of hunters does not add up to the statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.
[b]Proportion of hunters that rated their hunting experience as very good or good.
[c]Proportion of hunters that indicated that they experienced interference from other hunters (all types of hunters).

Table 4 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunt interference during the 2020 Michigan bear hunting season, summarized by county.

County	Hunt-ers[a] total	Hunt-ers 95% CL	Har-vest[a] total	Harvest 95% CL	Hunter success %	Hunter success 95% CL	Hunting effort (days)[a]	Hunt-ing effort 95% CL	Hunter satis-faction[b] %	Hunter satis-faction 95% CL	Inter-fered hunters[c] %	Interfered hunters 95% CL
Gogebic	303	45	114	31	38	9	1,836	416	66	8	19	7
Gd. Traverse	26	6	14	5	53	12	72	24	53	12	20	9
Houghton	228	46	83	30	37	11	1,698	532	62	11	19	9
Iosco	18	8	6	5	33	22	88	47	67	22	44	23
Iron	295	20	108	18	37	6	2,092	255	60	6	15	4
Isabella	0	0	0	0	0	0	0	0	0	0	0	0
Kalkaska	22	9	14	7	65	19	64	36	82	15	26	18
Keweenaw	130	37	45	23	34	14	944	387	72	14	16	11
Lake	66	8	35	6	54	7	247	36	52	7	48	7
Leelanau	9	3	3	2	29	0	46	19	43	18	57	18
Luce	226	31	63	18	28	7	1,497	271	48	8	29	7
Mackinac	124	24	34	13	27	9	832	216	49	11	25	9
Manistee	45	7	26	5	59	8	177	33	53	8	50	8
Marquette	557	61	154	37	28	6	4,167	678	61	6	10	4
Mason	14	4	5	2	36	14	54	18	45	14	64	14
Mecosta	1	1	0	0	0	0	0	0	0	0	0	0
Menominee	244	23	70	16	29	6	2,255	312	53	7	11	4

[a]Number of hunters does not add up to the statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.
[b]Proportion of hunters that rated their hunting experience as very good or good.
[c]Proportion of hunters that indicated that they experienced interference from other hunters (all types of hunters).

Table 4 (continued). Estimated number of hunters, hunting effort, harvest, hunter success, hunter satisfaction, and hunt interference during the 2020 Michigan bear hunting season, summarized by county.

County	Hunt-ers[a] total	Hunt-ers 95% CL	Har-vest[a] total	Harvest 95% CL	Hunter success %	Hunter success 95% CL	Hunting effort (days)[a]	Hunt-ing effort 95% CL	Hunter satis-faction[b] %	Hunter satis-faction 95% CL	Inter-fered hunters[c] %	Interfered hunters 95% CL
Midland	3	2	2	2	50	41	21	17	50	41	50	41
Missaukee	33	11	20	8	59	16	114	48	53	17	41	16
Montmorency	84	17	41	12	49	10	340	83	63	10	33	10
Muskegon	0	0	0	0	0	0	0	0	0	0	0	0
Newaygo	47	7	26	5	56	8	168	31	58	8	31	7
Oceana	13	4	5	2	40	15	41	17	70	14	40	15
Ogemaw	56	13	15	7	28	10	260	73	35	11	40	12
Ontonagon	532	59	215	43	40	7	3,496	624	66	6	18	5
Osceola	22	6	6	3	27	13	105	33	45	14	13	9
Oscoda	55	14	31	11	57	13	257	79	57	13	36	12
Otsego	31	11	18	8	56	17	120	48	75	15	38	17
Presque Isle	65	15	37	11	58	12	287	80	58	12	27	11
Roscommon	45	12	24	9	52	14	169	61	65	14	61	14
Schoolcraft	192	29	90	21	47	8	1,225	292	65	8	10	5
Wexford	45	8	21	5	47	9	113	24	62	9	29	9
Unknown	498	58	5	6	1	1	3,311	556	38	6	23	5

[a]Number of hunters does not add up to the statewide total because hunters can hunt in more than one county. Column totals for hunting effort and harvest may not equal statewide totals because of rounding errors.
[b]Proportion of hunters that rated their hunting experience as very good or good.
[c]Proportion of hunters that indicated that they experienced interference from other hunters (all types of hunters).

Table 5. Estimated number and proportion of hunters hunting on private and public lands during the 2020 bear hunting season, summarized by area.

Management unit	Private land only total	Private land only 95% CL	Private land only %	Private land only 95% CL	Public land only total	Public land only 95% CL	Public land only %	Public land only 95% CL	Both private and public lands Total	Both private and public lands 95% CL	Both private and public lands %	Both private and public lands 95% CL	Unknown land total	Unknown land 95% CL	Unknown land %	Unknown land 95% CL
Amasa	141	20	34	5	192	21	46	5	78	16	19	4	4	4	1	1
Baldwin	92	8	39	3	79	8	33	3	63	8	27	3	4	2	2	1
Baraga	334	54	29	5	611	60	53	5	199	44	17	4	0	0	0	0
Bergland	241	42	29	5	453	48	54	5	142	34	17	4	4	6	0	1
Carney	257	23	61	5	106	19	25	4	59	15	14	4	2	3	1	1
Drummond Is.	2	0	40	0	2	0	40	0	1	0	20	0	0	0	0	0
Gladwin	61	6	71	7	12	5	14	5	12	5	14	5	0	0	0	0
Gwinn	287	39	39	5	325	40	44	5	114	28	16	4	6	7	1	1
Newberry	308	34	36	4	391	35	45	4	153	27	18	3	15	9	2	1
Red Oak	306	25	50	4	212	23	34	4	88	17	14	3	10	6	2	1
Pure MI Hunt	0	0	0	0	0	0	0	0	2	0	100	0	0	0	0	0
Statewide	2,029	94	38	2	2,383	101	44	2	911	74	17	1	44	15	1	0

Table 6. Estimated number of days of hunting effort on private and public lands during the 2020 Michigan bear hunting season, summarized by area.

Management unit	Private lands total	Private lands 95% CL	Public lands total	Public lands 95% CL	Both private and public lands total	Both private and public lands 95% CL	Unknown total	Unknown 95% CL
Amasa	1,162	227	1,171	227	626	165	2	3
Baldwin	472	48	320	40	211	36	13	10
Baraga	2,556	647	3,810	583	1,742	540	0	0
Bergland	1,837	480	2,765	491	959	293	14	24
Carney	2,408	320	854	208	667	205	15	21
Drummond Is.	21	0	5	0	1	0	0	0
Gladwin	306	42	80	33	50	25	0	0
Gwinn	2,178	430	2,159	398	950	313	0	0
Newberry	2,111	318	2,397	336	1,601	406	39	42
Red Oak	1,483	158	1,005	134	344	95	41	32
Pure MI Hunt	0	0	4	0	6	0	0	0
Statewide[a]	14,534	1,057	14,570	984	7,158	849	124	63

[a]Column totals may not equal statewide totals because of rounding errors.

Table 7. The estimated proportion of hunters that used firearms, crossbows, and archery equipment while hunting bears in Michigan, 2020, summarized by area.

Management unit	Fire-arms %	Fire-arms 95% CL	Compound, recurve, or longbows %	Compound, recurve, or longbows 95% CL	Cross-bows %	Cross-bows 95% CL	Un-known %	Un-known 95% CL
Amasa	85	4	9	3	10	3	0	1
Baldwin	86	2	12	2	7	2	1	1
Baraga	83	4	11	3	10	3	0	0
Bergland	85	4	13	4	7	3	1	1
Carney	88	3	8	3	12	3	0	0
Drummond Is.	100	0	0	0	0	0	0	0
Gladwin	91	4	11	5	0	0	2	2
Gwinn	86	4	13	4	8	3	0	0
Newberry	86	3	9	2	6	2	1	1
Red Oak	89	2	15	3	25	3	0	0
Pure MI Hunt	100	0	0	0	0	0	0	0
Statewide[a]	86	1	11	1	10	1	0	0

[a]Row totals equal more than 100% because hunters could use more than one type of equipment during the season.

Table 8. Estimated number of hunters that used firearms, crossbows, and archery equipment while hunting bears in Michigan, 2020, summarized by area.

Management unit	Fire-arms total	Fire-arms 95% CL	Compound, recurve, or longbows total	Compound, recurve, or longbows 95% CL	Cross-bows total	Cross-bows 95% CL	Un-known total	Un-known 95% CL
Amasa	352	17	37	12	43	13	2	3
Baldwin	205	6	29	6	16	4	1	1
Baraga	952	50	126	37	118	36	0	0
Bergland	715	42	110	31	57	23	7	8
Carney	372	19	32	11	49	14	0	0
Drummond Is.	5	0	0	0	0	0	0	0
Gladwin	77	5	9	4	0	0	2	2
Gwinn	631	32	92	26	60	21	0	0
Newberry	745	29	75	19	56	17	10	7
Red Oak	548	18	94	17	151	21	0	0
Pure MI Hunt	2	0	0	0	0	0	0	0
Statewide[a]	4,604	85	604	63	549	58	22	12

[a]Row totals equal more than the estimated number of hunters in the unit because hunters could use more than one type of equipment during the season.

Table 9. The estimated proportion of bears harvested by firearms, crossbows, and archery equipment during the 2020 bear hunting season in Michigan, summarized by area.

Management unit	Fire-arms %	Fire-arms 95% CL	Compound, recurve, or longbows %	Compound, recurve, or longbows 95% CL	Cross-bows %	Cross-bows 95% CL	Un-known %	Un-known 95% CL
Amasa	86	6	8	4	5	4	0	0
Baldwin	88	3	6	2	5	2	0	0
Baraga	83	7	9	5	8	5	0	0
Bergland	88	6	5	4	6	5	0	0
Carney	87	6	7	5	5	4	0	0
Drummond Is.	100	0	0	0	0	0	0	0
Gladwin	83	10	17	10	0	0	0	0
Gwinn	93	5	7	5	0	0	0	0
Newberry	89	4	5	3	5	3	0	0
Red Oak	86	4	5	2	9	3	0	0
Pure MI Hunt	100	0	0	0	0	0	0	0
Statewide	87	2	7	2	6	1	0	0

Table 10. Estimated number of bears harvested during the 2020 bear hunting season in Michigan, summarized by hunting equipment used to take the bear, summarized by area.

Management unit	Fire-arms total	Fire-arms 95% CL	Compound, recurve, or longbows total	Compound, recurve, or longbows 95% CL	Cross-bows total	Cross-bows 95% CL	Un-known total	Un-known 95% CL
Amasa	131	19	12	7	8	6	0	0
Baldwin	129	9	9	3	8	3	0	0
Baraga	293	51	33	19	28	18	0	0
Bergland	244	42	14	12	18	13	0	0
Carney	102	19	8	6	6	5	0	0
Drummond Is.	4	0	0	0	0	0	0	0
Gladwin	23	6	5	3	0	0	0	0
Gwinn	177	34	13	10	0	0	0	0
Newberry	238	31	15	9	15	9	0	0
Red Oak	299	25	18	8	31	11	0	0
Pure MI Hunt	2	0	0	0	0	0	0	0
Statewide	1,641	89	126	29	115	28	0	0

Table 11. The primary hunting method used by bear hunters and the number of bears taken by each hunting method in Michigan, 2020.

Method	Number of hunters by a method	Number of hunters by a method 95% CL	Number of bears taken by a method	Number of bears taken by a method 95% CL
Bait only	4,628	84	1,484	87
Dogs only	119	27	128	26
Dogs and bait	503	58	255	42
Other	83	26	7	4
Unknown	35	15	8	6

Table 12. Proportion of bait hunters that used various types of bait, summarized by management unit.[a,b,c]

Management unit	Fruit or vegetables %	Fruit or vegetables 95% CL	Corn, grains, or granola %	Corn, grains, or granola 95% CL	Bakery products including jams, jellies, or sweeteners %	Bakery products including jams, jellies, or sweeteners 95% CL	Meat and meat products, including dog food or grease %	Meat and meat products, including dog food or grease 95% CL	Fish products, including cat food %	Fish products, including cat food 95% CL
Amasa	17	4	74	4	78	4	25	4	9	3
Baldwin	23	3	64	4	79	3	41	4	15	3
Baraga	20	4	71	5	70	5	29	5	12	3
Bergland	18	4	70	5	72	5	28	5	7	3
Carney	14	4	80	4	64	5	18	4	7	3
Drummond Is.	20	0	80	0	60	0	20	0	0	0
Gladwin	22	7	69	7	89	5	28	7	7	4
Gwinn	23	5	77	5	68	5	31	5	9	3
Newberry	21	3	77	4	65	4	26	4	5	2
Red Oak	21	3	64	4	84	3	35	4	10	2
Pure MI Hunt	0	0	100	0	0	0	0	0	0	0
Statewide	20	2	72	2	72	2	29	2	9	1

[a]Bait was allowed from 31 days before the start of the bear hunting season until the end of the season. It was illegal to establish a bait station that attracted bears before August 11 and after October 26 in Amasa, Bergland, Baraga, Carney, Gwinn, and Newberry units; before August 11 and after October 21 in Drummond Island Unit; before August 15 and after September 23 in the Baldwin and Gladwin units, and before August 15 and after October 11 in the Red Oak unit.

[b]Excluded hunters that did not use bait.

[c]Row totals equal more than 100% because hunters could use more than one type of bait.

Table 13. Number of bait hunters that used various types of bait, summarized by management unit.[a,b]

Management unit	Fruit or vegetables %	Fruit or vegetables 95% CL	Corn, grains, or granola %	Corn, grains, or granola 95% CL	Bakery products including jams, jellies, or sweeteners %	Bakery products including jams, jellies, or sweeteners 95% CL	Meat and meat products, including dog food or grease %	Meat and meat products, including dog food or grease 95% CL	Fish products, including cat food %	Fish products, including cat food 95% CL
Amasa	71	16	306	20	321	19	105	18	36	12
Baldwin	54	7	148	8	182	8	95	8	36	6
Baraga	219	46	780	58	771	58	326	54	132	38
Bergland	147	35	573	48	584	48	226	41	57	23
Carney	58	15	324	22	260	23	75	17	28	11
Drummond Is.	1	0	4	0	3	0	1	0	0	0
Gladwin	19	6	57	7	74	5	23	6	6	3
Gwinn	160	33	543	38	479	40	217	37	64	22
Newberry	168	28	621	34	530	36	209	30	42	15
Red Oak	125	20	376	25	493	21	207	23	60	14
Pure MI Hunt	0	0	2	0	0	0	0	0	0	0
Statewide	1,020	79	3,733	99	3,697	100	1,484	90	460	56

[a]Bait was allowed from 31 days before the start of the bear hunting season until the end of the season. It was illegal to establish a bait station that attracted bears before August 11 and after October 26 in Amasa, Bergland, Baraga, Carney, Gwinn, and Newberry units; before August 11 and after October 21 in Drummond Island Unit; before August 15 and after September 23 in the Baldwin and Gladwin units, and before August 15 and after October 11 in the Red Oak unit.

[b]Excluded hunters that did not use bait.

Table 14. Hunters' level of satisfaction with the number of bears seen during the 2020 bear hunting season, summarized by area.

Management unit	Very good or good %	Very good or good 95% CL	Neutral %	Neutral 95% CL	Poor or very poor %	Poor or very poor 95% CL	No answer or not applicable %	No answer or not applicable 95% CL
Amasa	45	5	16	4	31	5	8	3
Baldwin	47	4	16	3	33	3	4	1
Baraga	38	5	16	4	40	5	7	3
Bergland	39	5	19	4	32	5	9	3
Carney	37	5	16	4	40	5	9	3
Drummond Is.	40	0	20	0	40	0	0	0
Gladwin	34	7	14	5	45	8	7	4
Gwinn	35	5	17	4	39	5	9	3
Newberry	34	4	13	3	42	4	10	2
Red Oak	49	4	17	3	28	3	6	2
Pure MI Hunt	50	0	0	0	50	0	0	0
Statewide	39	2	16	1	36	2	8	1

Table 15. Hunters' level of satisfaction with the number of opportunities to take a bear during the 2020 bear hunting season, summarized by area.

Management unit	Very good or good %	Very good or good 95% CL	Neutral %	Neutral 95% CL	Poor or very poor %	Poor or very poor 95% CL	No answer or not applicable %	No answer or not applicable 95% CL
Amasa	30	5	18	4	36	5	16	4
Baldwin	45	4	10	2	38	3	8	2
Baraga	33	5	15	4	40	5	12	3
Bergland	30	5	16	4	39	5	14	4
Carney	29	5	13	3	45	5	15	4
Drummond Is.	60	0	20	0	20	0	0	0
Gladwin	20	6	9	4	52	8	20	6
Gwinn	23	4	13	4	49	5	16	4
Newberry	28	4	10	2	42	4	20	3
Red Oak	43	4	15	3	32	4	10	2
Pure MI Hunt	50	0	0	0	50	0	0	0
Statewide	31	2	14	1	41	2	14	1

Table 16. Hunters' level of satisfaction with overall bear hunting experience during the 2020 bear hunting season, summarized by area.

Management unit	Very good or good %	Very good or good 95% CL	Neutral %	Neutral 95% CL	Poor or very poor %	Poor or very poor 95% CL	No answer or not applicable %	No answer or not applicable 95% CL
Amasa	60	5	14	3	19	4	7	2
Baldwin	55	4	15	3	25	3	4	1
Baraga	62	5	17	4	19	4	2	2
Bergland	59	5	16	4	21	4	3	2
Carney	47	5	21	4	26	4	7	2
Drummond Is.	60	0	20	0	20	0	0	0
Gladwin	46	8	16	6	36	7	2	2
Gwinn	57	5	20	4	20	4	3	2
Newberry	51	4	16	3	27	4	6	2
Red Oak	61	4	16	3	20	3	3	1
Pure MI Hunt	100	0	0	0	0	0	0	0
Statewide	57	2	17	1	22	1	4	1

Table 17. Number and proportion of hunters that experienced interference with another hunter during the 2020 bear hunting season, summarized by area.

Management unit	Hunters inter-fered by other hunters %	Hunters inter-fered by other hunters 95% CL	Hunters inter-fered by other hunters total	Hunters inter-fered by other hunters 95% CL	Hunters inter-fered by other bear hunters %	Hunters inter-fered by other bear hunters 95% CL	Hunters inter-fered by other bear hunters total	Hunters inter-fered by other bear hunters 95% CL
Amasa	14	3	57	14	10	3	43	13
Baldwin	39	3	93	8	19	3	45	7
Baraga	15	4	167	41	10	3	118	36
Bergland	20	4	170	37	14	4	120	32
Carney	15	4	64	15	9	3	38	12
Drummond Is.	0	0	0	0	0	0	0	0
Gladwin	27	7	23	6	14	5	12	5
Gwinn	16	4	114	28	10	3	76	24
Newberry	20	3	172	28	14	3	124	24
Red Oak	31	4	192	22	21	3	132	20
Pure MI Hunt	0	0	0	0	0	0	0	0
Statewide	20	1	1,052	76	13	1	707	65

Table 18. Number and proportion of hunters that used a hunting guide during the 2020 bear hunting season, summarized by area.

Management unit	%	95% CL	No.	95% CL
Amasa	21	4	86	17
Baldwin	15	3	37	6
Baraga	12	3	142	39
Bergland	18	4	149	35
Carney	10	3	40	13
Drummond Island	20	0	1	0
Gladwin	0	0	0	0
Gwinn	9	3	63	22
Newberry	16	3	138	25
Red Oak	11	2	67	15
Pure MI Hunt	100	0	2	0
Statewide	14	1	725	67

Table 19. Methods used by guides to hunt bear in Michigan, 2020, summarized by area.

Management unit	Hunted over bait only total	Hunted over bait only 95% CL	Used dogs only (no bait) total	Used dogs only (no bait) 95% CL	Used dogs started over bait total	Used dogs started over bait 95% CL	Used another method total.	Used another method 95% CL	Un-known method total	Un-known method 95% CL
Amasa	88	7	0	0	12	7	0	0	0	0
Baldwin	36	9	14	6	50	9	0	0	0	0
Baraga	89	9	6	7	3	5	0	0	3	5
Bergland	86	9	0	0	12	8	2	4	0	0
Carney	68	15	11	10	16	12	0	0	5	7
Drummond Island	0	0	0	0	100	0	0	0	0	0
Gladwin	0	0	0	0	0	0	0	0	0	0
Gwinn	55	18	10	11	35	17	0	0	0	0
Newberry	91	6	4	4	5	4	0	0	0	0
Red Oak	65	11	26	10	9	7	0	0	0	0
Pure MI Hunt	50	0	0	0	50	0	0	0	0	0
Statewide	79	4	6	2	13	3	0	1	1	1

Table 20. Proportion and number of bait hunters using a trail camera in 2020, summarized by area.[a]

Management unit	Bait hunters using a trail camera %	Bait hunters using a trail camera 95% CL	Bait hunters using a trail camera total	Bait hunters using a trail camera 95% CL
Amasa	78	4	323	19
Baldwin	90	2	209	6
Baraga	81	4	891	54
Bergland	75	5	609	47
Carney	82	4	335	21
Drummond Is.	80	0	4	0
Gladwin	81	6	68	6
Gwinn	83	4	581	36
Newberry	81	3	656	33
Red Oak	89	3	521	20
Pure MI Hunt	50	0	1	0
Statewide	81	2	4,196	94

[a]Excluded hunters that did not use bait.

Table 21. Proportion of bear hunters using a trail camera that photographed the following selected carnivores and deer with their trail camera in 2020, summarized by area.[a]

Management unit	Bear %	Bear 95% CL	Coyote %	Coyote 95% CL	Deer %	Deer 95% CL	Bobcat %	Bobcat 95% CL	Wolf %	Wolf 95% CL	Marten %	Marten 95% CL	Fisher %	Fisher 95% CL
Amasa	90	3	28	5	51	6	14	4	37	6	21	5	38	6
Baldwin	90	2	37	4	52	4	16	3	0	0	1	1	0	0
Baraga	93	3	37	6	47	6	7	3	41	6	53	6	50	6
Bergland	89	4	32	6	34	6	4	3	39	6	26	6	38	6
Carney	89	4	34	5	56	6	8	3	22	5	8	3	24	5
Drummond Is.	100	0	50	0	50	0	25	0	0	0	0	0	0	0
Gladwin	93	4	30	8	52	9	18	7	0	0	0	0	0	0
Gwinn	91	4	34	6	53	6	7	3	30	6	19	5	35	6
Newberry	91	3	25	4	37	4	7	2	41	5	26	4	26	4
Red Oak	95	2	37	4	42	4	10	3	0	1	1	1	0	0
Pure MI Hunt	100	0	100	0	100	0	0	0	0	0	0	0	0	0
Statewide	91	1	33	2	45	2	8	1	29	2	24	2	30	2

[a]Excluded hunters that did not use a trail camera.

APPENDIX A

2020 Michigan Bear Harvest Questionnaire

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

2019 MICHIGAN BEAR HARVEST REPORT

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 report even if you did not hunt or harvest a bear. If you want to provide your answers via the internet, visit our website at michigan.gov/bear.

1. Did you hunt bear in Michigan during the 2019 season?

[1] ☐ Yes [2] ☐ No; (If you select "No", you are finished. Please return the survey.)

2. Please report the number of days for each county that you hunted bear in the following table.

COUNTY HUNTED (*List each county that you hunted for bear; for example, Marquette County*)	**NUMBER OF DAYS HUNTED**	**TYPE OF LAND**
		[1] ☐ Private [2] ☐ Public [3] ☐ Both
		[1] ☐ Private [2] ☐ Public [3] ☐ Both
		[1] ☐ Private [2] ☐ Public [3] ☐ Both
		[1] ☐ Private [2] ☐ Public [3] ☐ Both

3. Did you hunt with a firearm, crossbow, or bow during the 2019 bear season? *(select all that apply)*

[1] ☐ Firearm [2] ☐ Crossbow [3] ☐ Bow (recurve, compound, or long bow)

4. What hunting method did you use most often when hunting bear in Michigan during the 2019 bear season? (P*lease select only one item.*)

[1] ☐ Hunted over bait only [2] ☐ Used dogs only (bait not used)
[3] ☐ Used dogs started over bait [4] ☐ Used other methods not involving dogs or bait

5. If you used bait to attract bears, what was the total number of gallons you used during the legal baiting and hunting periods? _____ Please write in gallons used.

6. If you used bait, select the types of bait you used. *(select all that apply)*

[1] ☐ Fruit or vegetables [2] ☐ Corn, grains, or granola
[3] ☐ Bakery products including jams, jellies, or sweeteners [4] ☐ Meat and meat products, including dog food or grease [5] ☐ Fish and fish products, including cat food

7. If you used bait, did you use a trail camera to record events at a bait station?

[1] ☐ Yes [2] ☐ No (*If no, please skip to question 9.)*

8. If you used a trail camera, what animals did you photograph? *(select all that apply)*

[0] ☐ None [1] ☐ Bear [2] ☐ Coyote [3] ☐ Deer [4] ☐ Bobcat
[5] ☐ Wolf [6] ☐ Marten [7] ☐ Fisher [8] ☐ Other:_____

Please continue on back

9. At any time during the 2019 season, did you hire a guide's service to hunt bear in Michigan?

[1] ☐ Yes [2] ☐ No (*If no, please skip to question 11.)*

10. If yes, what hunting techniques were used most often by the guide? (P*lease select only one item.*)

[1] ☐ Hunted over bait only [2] ☐ Used dogs only (bait not used)

[3] ☐ Used dogs started over bait [4] ☐ Used other methods not involving dogs or bait

11. Did you kill a bear and place your harvest tag on it?

[1] ☐ Yes [2] ☐ No (*If no, please skip to question 13.)*

12. If your harvest tag was put on a bear, please fill in the information below

a. What date was the bear harvested?
(*please check [X] the box for the date of harvest*)

September 2019						
S	M	T	W	T	F	S
			11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October 2019						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26

b. What was the sex of the bear?

[1] ☐ Male [2] ☐ Female [3] ☐ Not sure

c. In what county was it harvested? _____
please write in county name

d. On what type of land was the bear harvested?

[1] ☐ Private [2] ☐ Public

e. What weapon was used to harvest bear?

[1] ☐ Firearm [2] ☐ Crossbow [3] ☐ Bow (recurve, compound, or long bow)

f. What was the method of harvest?

[1] ☐ Taken over bait [2] ☐ Used dogs only (bait not used)

[3] ☐ Used dogs started over bait [4] ☐ Used other methods not involving dogs or bait

g. If you used a hunting guide, was your hunting guide responsible for your success in taking a bear? (You can skip this question if you did not use a hunting guide.)

[1] ☐ Yes [2] ☐ No [3] ☐ Not sure

13. Did other hunters interfere with your bear hunting? [1] ☐ Yes [2] ☐ No *(Skip to question 15.)*

14. If you answered "yes" to the previous question, was the interference caused by other bear hunters? [1] ☐ Yes [2] ☐ No

15. How would you rate the following for your 2019 bear hunting season:
(Select one choice per item.)

	Very Good	Good	Neutral	Poor	Very Poor	Not Applicable
a. Number of bear you saw.	[1] ☐	[2] ☐	[3] ☐	[4] ☐	[5] ☐	[6] ☐
b. Number of opportunities you had to take a bear.	[1] ☐	[2] ☐	[3] ☐	[4] ☐	[5] ☐	[6] ☐
c. Your overall bear hunting experience.	[1] ☐	[2] ☐	[3] ☐	[4] ☐	[5] ☐	[6] ☐

Return the completed report in the enclosed postage-paid envelope. Thanks for your help.