TRAPPING HARVEST STATISTICS

Division of Fish and Wildlife
500 Lafayette Road, Box 20
Saint Paul, MN 55155-4020
(651) 259-5207

2019 TRAPPER HARVEST SURVEY

Margaret Dexter, Wildlife Research Unit

INTRODUCTION

The Minnesota Department of Natural Resources (MNDNR) annually conducts a mail survey of licensed trappers. Annual harvest estimates from the survey data are used to help assess and set trapping regulations and season structure. Beginning in 2000, survey cards were sent to all trappers with a valid mailing address. Beginning in 2017, we excluded license holders <18 years old at the time of the survey, which represents ~3% of license sales. Information concerning registered harvest (fisher, marten, bobcat, and otter) is obtained from mandatory registration of these animals. Details regarding methods and results can be found in the Registered Furbearer Harvest report on the DNR website.

METHODS

The sampling frame consisted of all individuals with active MNDNR trapping licenses (all types) except for youth <18 years old who were excluded from the survey, listed in the Electronic License System (ELS) database in late February 2020. There were 6,386 active trapping licenses in the ELS database, which consisted of 4,448 Resident Regular Trappers, 16 age - eligible (of 166) Resident Junior Trappers, 1,176 Resident Senior Trappers, 567 "active" Lifetime Trappers, and 10 Nonresident (MN landowners) license holders. License type was reclassified as "adult" (regular, lifetime, and non-resident) or "youth" for analysis purposes.

The MNDNR Trapper Harvest Survey is a census but the response rate is <100% (mean = 68%, range: 56–79%). Thus, uncertainty in harvest estimates is strictly a function of non-response (missing data) rather than random sampling. However, if non-response (unit and item) is completely random then data from respondents can be treated as a random sample, which is how the Trapper Harvest Survey has been analyzed historically. The critical assumption is that non-response is completely random (e.g., if you repeated the survey, non-respondents would be a random subset of licensed trappers). For consistency with previous analyses, the response data was treated as a random sample.

A postcard survey (Figure 1) was sent to all trapping license holders (>=18-yr old) with a valid mailing address at the close of the license year. Trappers that returned the survey questionnaire within three weeks were marked returned and eliminated from follow-up mailings. A single follow-up mailing was sent to non-respondents. Returned questionnaires were checked for completeness, consistency, and biological practicability. Cards were marked with numeric county codes corresponding to the trapper's written information. Data from each usable card was converted to an electronic database. Duel key-entry and quality control checks were used to minimize transcription errors. Data were tabulated using Viking Data Entry VDE+ software, and then summarized using the R programming language (R version 4.0.0 (2020-04-24); R Development Core Team 2018).

RESULTS

We mailed out 6,218 surveys, 71 surveys were undeliverable and 3,431 were returned for an adjusted response rate of 55.8%. Among respondents, 64% reported setting traps for at least one species (Table 1, Figure 2). Historic trapper estimates are presented in Table 2, Table 3, and Table 4.

ACKNOWLEDGMENTS

Dear Trapper:

You are being asked as a trapping license buyer to assist us in evaluating the 2019-2020 trapping season (**March 2019-February 2020**). For Spring Beaver, please report only animals taken between March 1, 2019 and May 15, 2019. We need this information to estimate the season's harvest and to help set future furbearer trapping seasons. Similar to past years we are also asking for the **average number of traps you checked per day** for each species. If a trap is set for multiple species, count the trap for both species when answering the question. For example, if you ran 20 mink/coon traps each day, enter 20 traps/day for both mink and coon.

YOUR RESPONSE IS NEEDED
EVEN IF YOU DID NOT SET TRAPS THIS YEAR.

Please fill out the attached questionnaire and mail as soon as possible. A reminder will be sent to individuals not returning the questionnaire within three weeks. No envelope or stamp is necessary; just tear along the perforation and drop into a mailbox.

THANK YOU FOR YOUR COOPERATION

Lou Cornicelli, Wildlife Research Program Manager
Division of Fish and Wildlife
Department of Natural Resources

mn DEPARTMENT OF NATURAL RESOURCES
500 Lafayette Road Box 20
St Paul MN 55155

RETURN SERVICE REQUESTED

Presorted
First-Class Mail
US Postage
PAID
Twin Cities MN
Permit No 171

mn DEPARTMENT OF NATURAL RESOURCES
500 Lafayette Road Box 20
St Paul MN 55155

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL   PERMIT NO. 171   ST. PAUL, MN
POSTAGE WILL BE PAID BY ADDRESSEE

Department of Natural Resources - Wildlife
STATE OF MINNESOTA
395 JOHN IRELAND BLVD
SAINT PAUL, MN 55101-9798

2019 Trapper Report

1. Did you set traps / snares in Minnesota during the 2019-2020 trapping season?
   ☐ No   ☐ Yes   (Please check one)
2. Indicate your harvest, the number of days you trapped for each species, the average number of traps you checked PER DAY for each species, and the county in which you trapped **most** for each species. Report only animals **YOU personally** trapped in Minnesota. Animals taken by hunting should **NOT** be reported here.

Species Trapped		Number YOU Trapped All Season	# Days Trapped All Season	Average # Traps/Snares Checked Per Day	County You Trapped In Most
Muskrat	80				
Mink	32				
Gray Fox	96				
Striped skunk	34				
Coyote (brush wolf)	97				
Beaver (Mar-May '19)	81				
Beaver (Oct '19-Feb '20)	82				
Pine marten	37				
Otter	38				
Fisher	36				
Badger	35				
Long-tailed weasel	31				
Short-tailed weasel	30				
Opossum	10				
Bobcat	98				
Raccoon	94				
Red Fox	95				

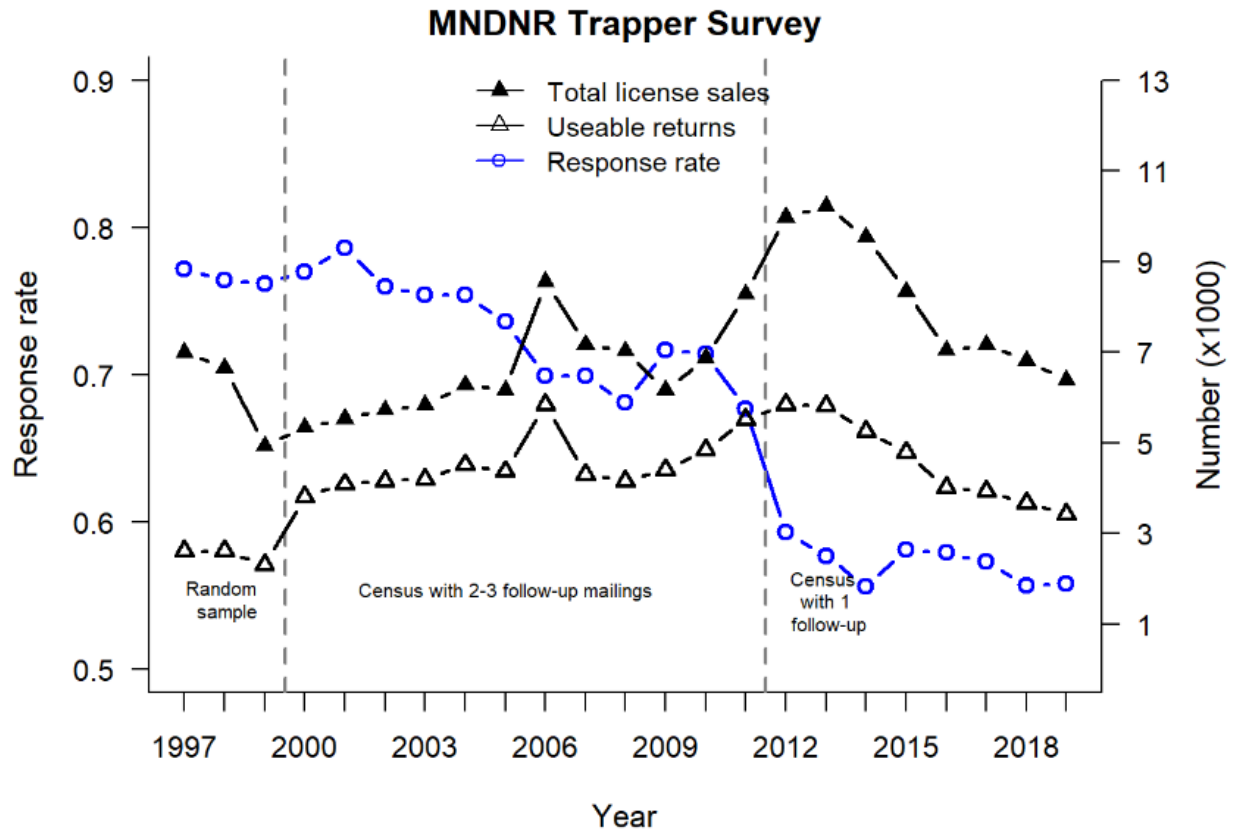Figure 1. Trapper survey card 2019.

Figure 2. Trapper annual license sales and mail survey response, 1997-98 through 2019-20.

Table 1. Use of trapper licenses, 2008-09 through 2019-20.

Year		Returns from mail survey	Projections from license sales
2008-09	Trapped Did not trap	3,154 (75.7%) 1,012 (24.3%) 4,166 (100.0%)	5,319 1,708 7,027[a]
2009-10	Trapped Did not trap	3,202 (72.7%) 1,202 (27.3%) 4,404 (100.0%)	4,467 1,677 6,144[a]
2010-11	Trapped Did not trap	3,546 (73.2%) 1,298 (26.8%) 4,844 (100.0%)	5,032 1,843 6,875[a]
2011-12	Trapped Did not trap	4,498 (81.5%) 1,019 (18.5%) 5,517 (100.0%)	6,748 1,532 8,280[a]
2012-13	Trapped Did not trap	4,537 (77.6%) 1,307 (22.4%) 5,844 (100.0%)	7,747 2,236 9,983[a]
2013-14	Trapped Did not trap	4,342 (74.6%) 1,480 (25.4%) 5,822 (100.0%)	7,627 2,597 10,224[a]
2014-15	Trapped Did not trap	3,786 (72.2%) 1,459 (27.8%) 5,245 (100.0%)	6,888 2,652 9,540[a]
2015-16	Trapped Did not trap	3,296 (68.8%) 1,496 (31.2%) 4,792 (100.0%)	5,734 2,600 8,334[a]
2016-17	Trapped Did not trap	2,558 (63.7%) 1,458 (36.3%) 4,016 (100.0%)	4,487 2,557 7,044[a]
2017-18	Trapped Did not trap	2,654 (67.6%) 1,272 (32.4%) 3,926 (100.0%)	4,692 2,249 6,941[a]
2018-19	Trapped Did not trap	2,382 (64.8%) 1,292 (35.2%) 3,674 (100%)	4,326 2,350 6,676[a]
2019-20	Trapped Did not trap	2,182 (63.6%) 1,249 (36.4%) 3,431 (100%)	3,954 2,263 6,217[a]

[a] excludes duplicates.

Table 2. Estimated number of trappers of various furbearers, 2008-09 through 2019-20.

	Estimated number of trappers											
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Muskrat	2394	2088	2760	4,320	4,110	3,410	2,902	2,218	1,797	1,882	1,583	1.225
Mink	2045	1541	1847	2,470	3,110	2,780	2,158	1,587	1,049	1,084	995	795
Short-tailed weasel	512	417	546	800	690	510	666	289	195	283	166	261
Long-tailed weasel	346	254	333	560	540	480	519	265	174	190	151	168
Raccoon	3150	2320	2567	4,060	4,680	4,660	4,182	2,781	2,032	2,168	1,952	1.806
Striped skunk	1488	949	1130	1,800	1,940	1,610	1,541	1,234	907	840	798	739
Badger	293	206	229	310	360	390	284	247	193	167	164	161
Opossum	1170	701	645	830	1,100	1,110	575	463	469	785	646	548
Red fox	1233	1006	1068	1,900	2,240	2,080	2,012	1,434	1,048	1,258	1,091	955
Gray fox	657	529	555	970	1,180	1,060	1,035	684	446	458	381	241
Coyote	1141	888	998	1,720	2,360	2,200	2,396	1,981	1,479	1,781	1,586	1.344
Beaver (Oct - Feb)	1877	1650	1722	2,360	2,620	2,710	2,189	1,894	1,642	1,495	1,535	1.333
Beaver (previous Spring)	1258	1260	1367	1,510	1,810	1,150	1,305	1,145	1,130	1,194	1,000	1.153

Note: Estimates prior to 2009 may differ from values published in previous reports because of rounding and more recent estimates were recomputed using a standardized historic dataset (vs. being carried forward from previous reports).

Table 3. Estimated take per trapper of various furbearers, 2008-09 through 2019-2020.

	Estimated take per successful trapper reporting that species											
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Muskrat	34	48	66	82	59	36	39	51	49	45	40	32
Mink	9	9	8	7	6	6	5	5	6	5	5	5
Short-tailed weasel	7	8	10	10	7	5	8	4	5	5	6	5
Long-tailed weasel	4	4	6	6	4	3	5	3	3	3	3	3
Raccoon	23	20	23	25	18	16	15	11	12	14	13	17
Striped skunk	7	7	8	7	7	6	6	6	7	6	5	6
Badger	2	2	2	2	2	2	2	2	2	2	2	2
Opossum	10	8	7	6	7	7	7	4	5	8	9	7
Red fox	3	3	4	4	4	3	4	3	3	4	4	4
Gray fox	3	3	2	3	3	2	2	2	2	2	2	2
Coyote	4	5	5	6	5	5	5	6	5	7	8	7
Beaver (Oct –Feb)	12	12	10	12	10	9	8	8	8	8	9	8
Beaver (previous Spring)	23	20	22	20	20	9	16	14	17	19	19	23

Note: Estimates may differ from values published in previous reports because of rounding and they were recomputed using a ratio of estimated totals (estimated harvest / estimated trappers), which were computed from the standardized, historic harvest dataset.

Table 4. Minnesota trapper license sales and estimated annual harvest, 2008-09 through 2019-2020[a]

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Trapper license sales [b]	7,027	6,158	6,885	8,280	9,998	10,224	9,540	8,334	7,044	7,163	6,815	6,386
Estimated harvest [c]												
Muskrat	80,158	98,524	180,480	352,030	242,120	120,500	111,998	112,219	87,958	83,844	63,021	38,777
Mink	16,647	13,207	13,837	15,770	18,460	14,710	10,211	7,745	5,439	5,218	4,412	3,483
Short-tailed weasel	3,515	3,128	4,939	7,300	4,500	2,360	4,806	1,083	930	1,305	995	1,245
Long-tailed weasel	1,118	838	1,728	3,020	2,030	1,410	2,568	734	466	554	340	379
Raccoon	71,893	45,118	57,189	98,240	79,800	70,380	58,868	29,963	22,874	28,899	24,845	29,297
Striped skunk	10,355	6,194	7,979	12,250	12,620	9,430	7,956	6,349	5,458	4,476	3,961	4,078
Badger	424	316	337	490	570	600	347	376	286	278	221	231
Opossum	11,297	4,963	4,194	4,400	6,780	6,720	3,524	1,814	2,124	6,160	5,248	3,548
Red fox	3,501	2,984	3,303	7,250	7,540	5,710	6,040	4,061	2,707	4,500	3,530	2,896
Gray fox	1,321	1,084	1,093	2,100	2,550	1,940	1,902	1,161	715	736	611	336
Coyote	4,533	3,797	4,264	8,780	11,130	9,010	11,703	10,084	7,308	12,303	11,359	8,630
Beaver (Oct- Feb)	21,076	18,178	17,114	26,620	24,590	23,220	15,671	14,181	13,070	11,223	12,937	9,900
Beaver (previous Spring)	27,816	25,008	29,148	29,500	34,600	10,110	20,820	15,966	19,004	22,293	18,649	26,368
Registered harvest [d]												
Otter	1,938	1,544	1,814	2,294	3,171	2,824	2,148	1,955	1195	1,295	1,351	1,050
Lynx [e]	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Bobcat [g]	853	884	1,012	1,711	1,875	1,038	1,380	766	485	731	1,015	695
Fisher	1,712	1,259	903	1,473	1,293	1,146	919	756	399	477	510	463
Marten	1,823	2,073	1,842	2,525	1,472	1,014	1,055	877	551	979	665	585

[a] Includes data for all seasons from October through April of years indicated.

[b] Separate licenses were issued for juveniles (13-17 years old) and adults (18 and older), beginning in 1982. Nonresident (MN Landowner) licenses started in 2004. Senior trapping licenses were first issued in 2007. Lifetime Licenses became available for free when renewing lifetime sports or small game licenses in 2007. As of April, 2020- 6,386 trapping licenses were sold in 2019: 166 (2.6%) were junior licenses, 4,451 (69.7%) were regular adult licenses, 1,177 (18.4%) were senior licenses, 582 (9.1%) were Lifetime licenses, and 10 (<1%) were Nonresident (MN Landowner) licenses. Duplicate licenses excluded.

[c] Based upon trappers' responses to mail surveys. [d] Raccoon and red fox season continuous May 1994 thru March 15, 2006.

[e] Lynx (1984) and Eastern spotted skunk (1996) listed as Special Concern and threatened species (respectively) and are fully protected.

[f.] Registered harvest information as reported from annual, mandatory registration. [g] Registered harvest for bobcat includes animals taken by hunting.

Minnesota Fur Buyers Survey for the 2019-2020 Hunting and Trapping Season

Jason Abraham, Season Setting/Furbearer Specialist
Margaret Dexter, Policy and Research Unit

INTRODUCTION

Fur buyers are individuals licensed by the State of Minnesota to buy and sell raw fur. They are required to keep complete records of all transactions and activities related to buying, selling, and disposing of raw furs. Each year buyers are sent a questionnaire asking them to submit information regarding the "average" price they paid to trappers for various furbearers the previous season.

METHODS

In September 2020, questionnaires were mailed to licensed fur buyers in Minnesota. The survey asked them to report the number and type of fur purchased from Minnesota trappers and hunters and the "average price" paid to those hunters and trappers based on all furs purchased. A total of 18 usable surveys were received, for a return rate of 71 percent.

Calculations of average pelt price for each species were weighted according to the number of pelts purchased by each buyer. Total estimated value of the furbearer harvest to trappers and hunters in 2019-20 was $953,951.88.

Table 1. Minnesota fur prices as reported by licensed fur dealers, 2019-20.

Species	Number Pelts	Minimum Price	Maximum Price	Weighted Mean
Muskrat	18405	1.25	3.50	2.84
Mink Female	789	1.00	7.00	3.07
Mink male	843	1.03	10.00	3.46
Raccoon	15133	1.25	9.60	6.66
Red Fox	671	5.00	27.00	9.95
Gray Fox	77	7.50	18.00	12.70
Coyote	14451	12.00	45.00	38.71
Bobcat	116	35.17	97.50	61.97
River Otter	323	10.00	27.50	20.64
Beaver 10-12	5889	3.00	15.17	7.66
Beaver 3-4	8604	4.00	13.03	7.86
L.T. Weasel	0	0.00	0.00	0.00
S.T. Weasel	264	0.94	5.00	2.08
Striped Skunk	329	2.00	8.16	6.30
Badger	78	2.00	18.00	8.14
Opossum	53	0.50	2.00	0.83
Fisher Male	71	18.67	35.00	21.02
Fisher Female	75	18.67	40.00	19.84
Marten Male	67	20.00	40.00	27.35
Marten Female	58	20.00	40.00	23.75
Deer Hides	33354	1.00	4.20	2.91
Bear Hides	58	22.50	48.00	32.72

Table 2. Average price per pelt paid to hunters and trappers in Minnesota, 2009-10 through 2019-20

Species	Average pelt prices paid hunters and trappers in Minnesota (dollars)										
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Muskrat	4.43	5.33	5.86	7.91	8.72	4.85	2.28	2.65	2.59	2.38	2.84
Mink (female)	8.02	9.33	11.54	17.53	13.72	7.45	4.99	6.20	5.80	6.02	3.07
Mink (male)	9.37	13.66	14.68	18.27	18.11	10.50	6.18	7.47	7.29	7.61	3.46
Raccoon	9.18	10.87	12.57	16.60	16.58	8.64	5.11	4.92	5.76	7.30	6.66
Red Fox	10.85	13.35	22.87	33.52	30.90	20.41	11.86	10.52	13.30	10.93	9.95
Gray Fox	11.55	14.64	15.11	19.20	21.27	14.17	10.64	10.33	11.32	13.42	12.70
Coyote	8.62	9.47	17.99	22.04	21.30	25.10	21.48	17.39	25.15	36.20	38.71
Bobcat	42.77	71.44	98.18	144.79	88.63	66.67	57.46	35.88	63.52	60.33	61.97
Otter	35.65	34.53	51.40	72.12	61.32	34.57	30.03	21.05	21.98	25.07	20.64
Beaver (fall-winter)	12.49	11.95	14.29	18.47	16.52	12.40	8.77	8.14	8.32	8.30	7.66
Beaver (spring)	14.47	14.50	19.96	12.80	14.77	10.69	8.24	7.33	10.39	8.95	7.86
L.T. Weasel	3.12	2.87	4.02	4.10	2.35	1.78	1.46	1.41	0.00	0.00	0.00
S.T. Weasel	3.02	1.50	2.10	2.51	0.00	2.00	1.41	0.00	2.79	2.45	2.08
Striped Skunk	3.66	3.29	3.55	5.00	4.14	3.86	3.65	4.00	7.12	5.25	6.30
Badger	8.81	10.43	13.47	14.54	13.72	9.52	9.57	7.86	9.09	7.94	8.14
Opossum	1.30	2.64	5.80	1.52	1.52	1.17	1.98	1.32	1.34	0.96	0.83
Fisher (male)	34.45	38.19	47.69	62.38	61.32	41.76	34.88	28.00	29.87	43.03	21.02
Fisher (female)	34.90	37.31	39.59	63.02	67.73	50.87	34.39	37.07	36.75	39.57	19.84
Marten (male)	26.76	39.80	42.32	56.57	74.10	38.92	30.83	29.94	36.90	41.81	27.35
Marten (female)	29.95	36.57	39.49	54.29	70.94	32.20	28.89	30.41	33.96	33.06	23.75
Deer Hides	4.44	4.41	3.95	5.18	6.09	5.59	5.62	4.00	4.14	3.18	2.91
Bear Hides	43.00	33.38	28.79	30.28	42.63	32.94	46.03	32.97	25.91	32.33	32.72