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## 2000 MARTEN HARVEST SURVEY

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### ABSTRACT

*A survey was completed to determine the number of furtakers who set traps for martens, the number of martens that they caught, the types of equipment they used, and the number of days they trapped. In 2000, 354 trappers obtained a permit to trap martens. About  $54 \pm 2\%$  of the permit holders set traps for martens ( $191 \pm 6$  trappers). Trappers spent  $1,245 \pm 53$  days afield trapping martens ( $\bar{x} = 6.5 \pm 0.2$  days/trapper) and captured  $125 \pm 11$  martens. The greatest number of martens were captured in Gogebic (29 martens), Marquette (20), and Alger (18) counties.*

### INTRODUCTION

American marten (*Martes americana*) historically were found throughout Michigan. However, extensive logging and uncontrolled harvests combined to eliminate them from much of their range. Efforts to restore martens in Michigan began in the mid-1950s. Martens were obtained from Ontario and released across the western and central Upper Peninsula and the northern Lower Peninsula. In addition, martens were relocated within Michigan during the late-1980s to supplement existing populations.

Efforts to restore the American marten have been successful throughout the Upper Peninsula and portions of the northern Lower Peninsula. As a result, martens were removed from the state's threatened species list in March 1999. In 2000, the abundance of martens in the Upper Peninsula was sufficient to support a limited harvest. Thus, the marten trapping season, which had been closed since 1924, was re-opened.

In 2000, martens could be trapped in the Upper Peninsula during December 1-11, which was concurrent with the fisher trapping season. The entire Upper Peninsula, except Drummond Island and the Pictured Rocks National Lakeshore, was opened to trapping. In order to trap



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martens, trappers were required to obtain a free marten trapping permit, in addition to a Fur Harvester License. Trappers were limited to one marten, and successful trappers were required to register marten taken within five days of harvest. Trappers could use body-gripping or conibear-type traps and foothold traps to capture marten. Live traps were also legal if set within 150 yards of a residence or farm building.

The Wildlife Division has the authority and responsibility to protect and manage the wildlife resources of the State of Michigan. Harvest surveys are a management tool used by the Wildlife Division to accomplish its statutory responsibility. The main objectives of this harvest survey were to determine the number of furtakers who set traps for martens, the number of martens that they caught, the types of equipment they used, and the number of days they trapped.

## **METHODS**

A questionnaire was sent to everyone that obtained a marten trapping permit in 2000. Trappers receiving the questionnaire were asked to report whether they trapped for martens, number of days spent afield, and the number of martens that they caught (including all incidental catches and releases). Trappers were also asked to indicate the status of the marten population in the county where they primarily trapped.

Estimates were calculated using a simple random sampling design (Cochran 1977) and were presented along with their 95% confidence limit (CL). This confidence limit 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 that the true value would be within this interval 95 times out of 100. Estimates were not adjusted for nonresponse bias.

Questionnaires were mailed initially during mid-February 2001, and a reminder note and up to two follow-up questionnaires were mailed to nonrespondents. Although 354 people were sent the questionnaire, 9 surveys were undeliverable resulting in an adjusted sample size of 346. Questionnaires were returned by 317 of 345 people receiving the questionnaire (92% response rate).

## **RESULTS AND DISCUSSION**

In 2000, 354 trappers obtained a permit to trap martens. Men obtained most of these permits (331), women obtained 18 permits, and the sex of 5 permit holders was unknown. About  $54 \pm 2\%$  of the permit holders set traps for martens ( $191 \pm 6$  trappers). Trappers spent  $1,245 \pm 53$  days afield trapping ( $\bar{x} = 6.5 \pm 0.2$  days/trapper) and captured  $125 \pm 11$  martens. The greatest number of martens was captured in Gogebic (29 martens), Marquette (20), and Alger (18) counties (Table 1). The estimated number of martens captured includes animals that were accidentally captured and released. Because trappers were not asked to report the number of animals that they released, the estimated number of martens captured should be higher than the number of martens registered.

Most trappers used conibear-type traps to capture martens ( $75 \pm 2\%$ ), although foothold traps also were used frequently ( $40 \pm 2\%$ ). A few trappers ( $1 \pm 1\%$ ) used live traps to capture

martens. Among trappers using foothold traps, the mean number of foothold traps set was  $4.4 \pm 0.5$  traps. Among trappers using conibear traps, the mean number of conibear traps set was  $5.5 \pm 0.3$  traps.

Forty-six percent of trappers ( $\pm 2\%$ ) believed that marten numbers were increasing in the county where they trapped most often, while  $33 \pm 2\%$  thought marten numbers were stable,  $3 \pm 1\%$  thought they were declining,  $9 \pm 1\%$  indicated that martens were rare, and  $9 \pm 1\%$  did not comment on the status of marten.

### LITERATURE CITED

Cochran, W. G. 1977. Sampling techniques. John Wiley & Sons, New York. USA.

Table 1. Number of trappers, trapping efforts, and martens captured (including all incidental catches and releases) during the 2000 Michigan marten trapping season.

County	Trappers		Trapping efforts (days)		Martens captured	
	Total	95% CL <sup>a</sup>	Total	95% CL <sup>a</sup>	Total	95% CL <sup>a</sup>
Alger	15	3	79	16	18	4
Baraga	25	3	109	18	12	2
Chippewa	8	2	41	11	6	2
Delta	7	2	34	10	2	1
Dickinson	1	1	8	5	0	0
Gogebic	29	3	144	20	29	6
Houghton	12	2	86	18	2	1
Iron	29	3	207	27	6	2
Keweenaw	4	1	46	14	0	0
Luce	18	3	79	14	8	2
Mackinac	1	1	9	6	0	0
Marquette	31	4	211	27	20	4
Menominee	2	1	23	11	0	0
Ontonagon	17	3	117	20	9	4
Schoolcraft	10	2	51	13	13	5
Statewide <sup>b</sup>	191	6	1,245	53	125	11

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

<sup>b</sup>Number of trappers does not add up to statewide total because trappers could trap in more than one county. Column totals for trapping effort and capture may not equal statewide totals because of rounding errors.