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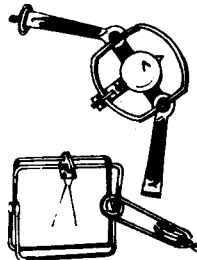
Study XV: Wildlife Harvests

Job No. 4: Trapper harvest survey, 1984-85

By

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*By wildlife mgmt
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14 August 1985

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Study XV - Job No. 4

JOB COMPLETION REPORT

SURVEYS AND INVESTIGATIONS PROJECTS

STATE OF ILLINOIS

PROJECT NO. W-49-R-32

STUDY XV: Wildlife Harvests

JOB NO. 4: Trapper harvest survey, 1984-85

ABSTRACT: A stratified random sample of 1,200 persons who purchased 1984 series trapping licenses in Illinois was surveyed after the trapping season. The licensees were contacted by first class mail in three mailings. Questionnaires were deliverable to 1,190 (99.17%) recipients from which 945 useable replies were received (79.41% return). Of these, 89.95% were active, i.e. set one or more traps during the season. Only 2.35% of the active trappers were ineffective, i.e. caught nothing.

The 1984-85 survey covered 10 furbearer species. Findings are presented: 1) on a statewide basis, 2) for each of the 10 wildlife management units in the state, and 3) for the two furbearer management zones currently in use. Data include estimated number and density of effective trappers, estimated total trapper harvest and trapper harvest per unit area, and average season catch. Statewide projections for number of effective trappers and total trapper harvest (in parentheses) are: muskrat (Ondatra zibethicus) 8,123 (217,615), mink (Mustela vison) 5,196 (15,848), raccoon (Procyon lotor) 9,213 (120,230), opossum (Didelphis marsupialis) 6,616 (45,518), red fox (Vulpes vulpes) 2,661 (8,356), gray fox (Urocyon cinereo-argenteus) 1,292 (2,468), beaver (Castor canadensis) 2,104 (7,553), striped skunk (Mephitis mephitis) 1,863 (5,142), weasel (Mustela frenata, M. nivalis) 228 (278), and coyote (Canis latrans) 1,812 (4,621).

The average trapper had traps set for 26 days (or nights). Active trappers spent an average of \$142 on trapping expenses. Hunting or combination hunting and fishing licenses were purchased by 80.55% of the active trappers. The majority of effective muskrat trappers (59.91%) caught 20 or fewer muskrats during the season. Most effective raccoon trappers (75.38%) harvested from 1 to 15 raccoons for the entire season and 88.72% trapped 25 or less. Trappers sold 95.90% of their 1984-85 catch of which 4.79% was sold out-of-state. Accidental catches were reported by 34.93% of the trappers who responded to the survey. The accidental catch rate was 2.80% or one accidental catch for every 36 furbearers trapped. 30.44% of the licensed trappers also hunted furbearers, primarily raccoons. The harvest of pelts by hunting trappers amounted to 6.78% of the total trapped catch in the sample.

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JOB COMPLETION REPORT

SURVEYS AND INVESTIGATIONS PROJECTS

STATE OF ILLINOIS

PROJECT NO.: W-49-R-32

STUDY XV: Wildlife Harvests

JOB NO. 4: Trapper harvest survey, 1984-85

OBJECTIVE: To collect information on the annual trapper harvest of furbearers in Illinois and associated trapper characteristics.

PROCEDURES: A stratified random mail survey of individuals who purchased trapping licenses was the basic technique employed. Mail survey address cards were filled out by license vendors for the first license sold in each book of five resident and non-resident trapping licenses in the 1984 series (total sales estimate 11,976 - 1 July 1985) (Fig.1). At the same time, the person purchasing the license was provided with an information card which requested him to keep a record of his activities since he might be contacted after the close of the season (Fig. 2). The survey address cards were returned to the Division of Fish and Wildlife Resources via business reply mail and were filed according to the licensee's county of residence.

Prior to the close of the muskrat trapping season, a random sub-sample based on the distribution of the 1978-82 trapping license sales was drawn. The size of the sub-sample was set at 1,200 since this quantity would result in 900 to 1,000 useable replies for adequate reliability at the statewide level. Address cards in the drawn sample were manually marked with serial numbers to provide for the removal of respondents and undeliverables from the initial and first follow-up mailings.

An initial and two follow-up mailings to non-respondents were made with a different letter of transmittal for each mailing (Figs. 3, 4, 5). Questionnaire cards were numbered to correspond with appropriate address cards and included with each transmittal letter (Fig. 6). First class postage (22.0¢) was used for all mailings.

Questionnaires were returned via business reply permit printed on the back of the form. Those received were checked for useableness, and the respondents were initially placed into one of two categories: inactive - those who did not set traps for furbearers during the 1984-85 seasons; active - those who did set one or more traps for furbearers during the 1984-85 seasons. Active trappers were further classified as: effective - those who caught one or more furbearers of the species in question, or ineffective - those who did not catch any furbearers. Next, the county trapped in most, species trapped, and species hunted were numerically coded.

Reply data were transferred directly to magnetic computer tape at the Coordinated Sciences Laboratory, University of Illinois, Urbana, Illinois, using remote terminals and stored for subsequent analysis. Mr. Jude Shavlik, a consultant employed by the Coordinated Sciences Laboratory, prepared the data entry and analysis programs and obtained output.

Reply data for each species surveyed were compiled for the 10 wildlife management units in Illinois (Fig. 7). In addition, confidence limits at the 95% level were calculated by species for the number of effective trappers, average season catch, and total trapper harvest on a statewide basis. The formulas used were described by Cochran (1953) and Snedecor and Cochran (1967). These are as follows:

a. Number of effective trappers for species:

where N = total license sales

n = number of licensees in sample

p = Portion of licensees in sample who effectively trapped species in question

q = 1-p

$$\pm 2N \sqrt{\frac{pq}{n}}$$

b. Average season catch per effective trapper for species in question:

where n_1 = number of licensees in sample who effectively trapped species in question

x_i = reported season catch for species in question

$$\frac{\pm 1.96 \sqrt{\frac{\sum (x_i - \bar{x})^2}{n_1 - 1}}}{\sqrt{n_1}}$$

c. Total trapper harvest:

where x = reported season catch for all licensees responding to survey

$$\pm 2N \left(\frac{\sqrt{\frac{\sum (x - \bar{x})^2}{n-1}}}{\sqrt{n}} \right)$$

All calculations assumed there were no differences between the activities of the licensees who returned the questionnaire and those who did not.

FINDINGS AND ANALYSIS:

1984-85 Trapping Seasons

The 1984-85 fur-bearing mammal trapping seasons varied from 35 to 108 days in length (Table 1). The seasons for all species except beaver, red fox, gray fox, and coyote lasted 47 days in the northern management zone and 45 days in the southern management zone (Fig. 8). Opening dates were 13 November 1984 and 25 November 1984, respectively. Red fox, gray fox, and coyote could be legally trapped for 35 days in the northern zone and 45 days in the southern zone starting 25 November 1984. Beaver trapping season was 96 or 108 days in length depending on zone and opened simultaneously with all other species except fox and coyote. No bag limits were in effect for any furbearer. Special regulations reduced the length of the beaver season to 47 days along the Mississippi River from Interstate 80 north to the Wisconsin state line as a protective measure for river otter (Lutra canadensis).

1984-85 Trapper Mail Survey

The initial mailing of 1,200 questionnaires was made on 24 January 1985. The two follow-up mailings to non-respondents were made on 6 March (667) and 10 April (381) and closed out on 10 May 1985. Approximately two days preparation was required for each mailing.

A total of 1,190 (99.17%) licensees in the 1984-85 survey sample was reached by the Postal Service via first class mail. The 10 remaining questionnaires were returned as undeliverable. There were 945 useable replies received from the licensees contacted, representing a 79.41% response on the number delivered. Of these respondents, 850 (89.95%) reported that they set one or more traps for furbearers during the season and were classified as active. A total of 830 (97.65%) active trappers were effective, i.e. caught one or more furbearers, and the remaining 20 (2.35%) were ineffective, i.e. caught nothing.

a. Number of days trapped

Active trappers had traps set an average of 26.00 days (or nights) during the 1984-85 season (Fig. 9). The maximum number of days a trapper could have legally trapped was 108. However, only 2.02% of the respondents stated they had traps set for over 47 days, and just 30.95% trapped over 30 days. The vast majority of trapping activity is concentrated during the initial 15 to 30 days of the muskrat, mink, and raccoon seasons. In 1983-84, Illinois trappers had traps set an average of 23.06 days during a 106-day season (Hubert 1984). The mean number of days trapped in 1982-83 was 24.55 (Hubert 1983).

b. Trapping expenses

Active trappers in 1984-85 spent an average of \$142 on trapping expenses (Fig. 10). Close to half (41.04%) spent over \$100 on traps,

lures, license, fuel, and other trapping-related supplies. In 1972, the estimated trapping expenses for Missouri trappers averaged \$76.64 (Sampson 1973). Hubert (1985) estimated the average trapper in Illinois harvested \$240.29 worth of pelts during the 1984-85 season. Therefore, in light of costs involved, the term "sport trapping" appears well justified.

c. Hunting license purchases

During the 1984-85 season, 80.55% of the active trappers who responded to the survey (n = 802) indicated they had purchased an Illinois hunting license or combination hunting and fishing license. The actual percentage of trappers who hunt is somewhat higher because persons 65 years of age and older are not required to buy a hunting license. In summary, most trappers participate in at least one other form of activity which results in the harvest of wildlife.

d. Trapper harvest summary

A statewide summary for the 10 species of furbearers surveyed in 1984-85 is presented in Table 2. The data for each species include the estimated number of effective trappers and their percent of all licensees, average season catch per effective trapper, estimated total trapper harvest, and estimated percent and total sold. Similar information for each of 10 species plus the estimated density of effective trappers and pelts harvested in each of the 10 wildlife management units is provided in Tables 3 through 12. The original sample sizes from which these data were derived are presented in Table 13 which also provides the percent of effective trappers for each species (season catch of one or more).

Statewide confidence intervals at the 95% level for number of effective trappers, average season catch per effective trapper, and total harvest for each furbearer are given in Table 14. In most instances, those species with the greater number of effective trappers in the sample have smaller limits of variability which result in greater confidence in the projections. In 1984-85, effective raccoon trappers were the most numerous and their projected number varied by only $\pm 3.56\%$. The 95% confidence interval projections for less numerous opossum trappers varied by $\pm 5.85\%$ and for uncommon weasel trappers by $\pm 46.49\%$.

e. Distribution of harvest among effective trappers

The muskrat and raccoon were the two most important furbearers trapped during the 1984-85 season in terms of number of effective trappers, average season catch, and total harvest (Table 2). The reported number of muskrats harvested by 641 effective muskrat trappers ranged from 1 to 225 and averaged 26.79 (Tables 2, 13, 14, Fig. 11). During the season, 59.91% harvested 20 or fewer muskrats and 95.94% caught 100 or less. All values are similar to those obtained in the 1980-81, 1981-82, 1982-83, and 1983-84 surveys (Hubert 1981, 1982, 1983, 1984). Relatively few trappers are extremely successful at catching muskrats. Of the effective trappers who responded, 110 (17.16%) stated their catch averaged one or more muskrats per day for the entire season.

The distribution of harvest among effective raccoon trappers was similar to that for muskrat. The number of raccoons caught by 727 effective raccoon trappers who reported averaged 13.05 and ranged from 1 to 250 (Tables 2, 13, 14, Fig. 12). Less than the average season catch was taken by 68.64% of these trappers (Fig. 12). For the entire season, 75.38% harvested 15 or fewer raccoons and 88.72% trapped 25 or less. Only 28 (3.85%) of the effective raccoon trappers reported making an average daily catch of one or more raccons throughout the season.

The harvest of the other eight open season furbearers was distributed among effective trappers much like the muskrat and raccoon harvests (Table 15). For six of these species, 12% or less of the effective trappers made season catches exceeding five pelts. The exceptions were: effective opossum trappers - 42.33% of these individuals trapped more than five opossums during the season, and effective beaver trappers - 18.67% caught more than five beavers during the season.

The above data emphasize the inapplicability of bag limits (both daily and seasonal) to furbearer trapping in Illinois. Few trappers are successful in making large seasonal catches. The ones who do are active throughout the season over extensive areas. Reductions in season length offer the most potential for reducing the furbearer harvest by highly successful trappers. Bag limits could potentially increase harvest because of their goal-setting effect.

f. Pelt sales

Trappers sold an estimated 95.90% of their catch during 1984-85 (Table 2). The previous season (1983-84), 95.33% of all trapped pelts were sold (Hubert 1984). The portion of each species sold ranged from a low of 25.84% for striped skunk to a high of 99.73% for raccoon. The fraction of pelts sold in Illinois and out-of-state also varied among species (Table 16). Overall, 95.21% of the marketed portion of the trapped catch was sold in Illinois and 4.79% out-of-state. Hubert (1984) found that Illinois trappers sold 6.14% of their pelts outside the state in 1983-84. Resident trappers sold an average of 4.77% of their pelts out-of-state during the last five seasons (Hubert 1981, 1982, 1983, 1984, this study).

g. Non-target catches

Accidental catches were reported by 329 (34.93%) of all trappers who responded to the 1984-85 survey (Table 17). In comparison, 38.71% of the active trappers made non-target catches. Trappers making accidental catches averaged 2.86 for the year. The estimated total number of non-target animals caught by trappers during the season was 11,954. As stated earlier, the estimated total furbearer catch by trappers was 427,629 (Table 2). Therefore, the accidental catch rate was 2.80% or one accidental catch for every 36 furbearers trapped. If rats and mice are excluded from the accidental catch list, the non-target

catch rate would be 2.76%. Many respondents indicated that some or all of the animals they accidentally captured were released. During the 1983-84 season, resident trappers had an accidental catch rate of 2.45% (Hubert 1984).

h. Fur hunting by trappers

A total of 270 (30.44%) trappers reported they hunted furbearers with gun and/or dogs in 1984-85 (Table 18). Their total hunting harvest was 2,147 pelts or an average of 7.95 per hunting trapper. This is equivalent to 6.78% of the total trapped catch in the sample. The raccoon was hunted by more trappers than any other species. Next in popularity was the coyote. In 1983-84, 29.29% of the trappers in Illinois also hunted furbearers (Hubert 1984). Sampson (1973) reported 33.6% of the trappers in Missouri were fur hunters. Obviously, there is much overlap between the user groups designated as fur trappers and fur hunters.

i. Management zone data summary

Management zone and statewide data summaries for each of the 10 species of furbearers surveyed in 1979-80 (Hubert 1980), 1980-81 (Hubert 1981), 1981-82 (Hubert 1982), 1982-83 (Hubert 1983), 1983-84 (Hubert 1984), and 1984-85 are presented in Tables 19 through 28. The data for each species include estimated number and density of effective trappers, average season catch, estimated total trapper harvest, and trapper harvest per unit area. The northern and southern zones listed (Fig. 13) are nearly identical to the zones employed for regulatory management from 1979-80 through 1984-85 (Fig. 8).

RECOMMENDATIONS:

A mail survey of this type probably realizes its best use and reliability for furbearer management as an indicator of trends in trapping pressure, trapper success, trapper harvest, and trapping recreation. In addition, this particular survey provides the only regional harvest data available for the trapped portion of the annual fur catch. It is recommended that the survey be continued in essentially the same form.

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DATA AND REPORTS:

Original data and reports in this investigation are on file in the Division of Fish and Wildlife Resources office, Illinois Department of Conservation, Springfield, Illinois 62706.

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Table 1. Illinois fur-bearing mammal trapping season for 1984-85.

Species	Trapping season	
	Northern zone	Southern zone
Muskrat, Mink, Raccoon, Opossum, Striped Skunk, Weasel	13 Nov - 29 Dec (47) ^a	25 Nov - 8 Jan (45)
Beaver	13 Nov - 28 Feb (108) ^b	25 Nov - 28 Feb (96)
Red Fox, Gray Fox, Coyote	25 Nov - 29 Dec (35)	25 Nov - 8 Jan (45)

^a Numbers in parentheses are season lengths in days.

^b Those portions of JoDaviess, Carroll, Whiteside, and Rock Island counties lying west of Illinois Rt. 84 and US Rt. 20, from Interstate-80 north to the Wisconsin line were open to beaver trapping from 13 Nov. - 29 Dec. 1984 only.

Table 2. Summary of statewide data from post-season mail survey of Illinois resident trappers, 1984-85 season (n = 945).

Species	Estimated number of effective trappers	Percent of total licensees	Average season catch	Estimated total trapper harvest	Estimated percent sold ^a	Estimated total sold
Muskrat	8,123	67.83	26.79	217,615	99.70	216,962
Mink	5,196	43.39	3.05	15,848	99.66	15,794
Raccoon	9,213	76.93	13.05	120,230	99.73	119,905
Opossum	6,616	55.24	6.88	45,518	76.20	34,685
Red fox	2,661	22.22	3.14	8,356	97.45	8,143
Gray fox	1,292	10.79	1.91	2,468	96.79	2,389
Beaver	2,104	17.57	3.59	7,553	87.11	6,579
Striped skunk	1,863	15.56	2.76	5,142	25.84	1,329
Weasel	228	1.90	1.22	278	45.45	126
Coyote	1,812	15.13	2.55	4,621	90.69	4,191

^a n = 887

Table 3. Summary of muskrat trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 641).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest ^a	Estimated trapper harvest/100 km ²
Northwest Hills	912 (11.23) ^b	9.70	38.01 (10)	34,688 (15.94) ^b	369.06
Northeast Moraine	545 (6.71)	6.59	36.19 (12)	19,716 (9.06)	238.34
Mississippi Border-North	557 (6.86)	7.10	29.73 (3)	16,560 (7.61)	211.01
Mississippi Border-South	887 (10.92)	6.49	26.44 (4)	23,459 (10.78)	171.55
Western Prairie/Forest	900 (11.08)	6.24	20.80	18,715 (8.60)	129.78
Central Sand Prairie	279 (3.43)	6.73	29.23 (4)	8,139 (3.74)	196.26
Grand Prairie	2,623 (32.29)	4.98	28.35 (5)	74,359 (34.17)	141.28
Southern Plain	1,027 (12.64)	4.33	16.02	16,452 (7.56)	69.34
Wabash Border	266 (3.28)	3.95	9.86	2,633 (1.21)	39.05
Shawnee Hills	127 (1.56)	2.43	22.90 (3)	2,894 (1.33)	55.48
Statewide	8,123 (100.00)	5.56	26.79	217,615 (100.00)	148.96

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 4. Summary of mink trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 410).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest ^a	Estimated total trapper harvest/100 km ²
Northwest Hills	469 (9.03) ^b	4.99	2.68 (47)	1,255 (7.92) ^b	13.35
Northeast Moraine	367 (7.07)	4.44	4.59 (2)	1,686 (10.64)	20.38
Mississippi Border-North	292 (5.61)	3.72	1.78 (9)	520 (3.28)	6.63
Mississippi Border-South	621 (11.95)	4.54	2.80 (4)	1,737 (10.96)	12.70
Western Prairie/Forest	494 (9.51)	3.43	2.62 (7)	1,293 (8.16)	8.97
Central Sand Prairie	139 (2.68)	3.35	1.91 (8)	266 (1.68)	6.41
Grand Prairie	1,749 (33.66)	3.32	3.42 (3)	5,984 (37.76)	11.37
Southern Plain	824 (15.85)	3.47	2.72 (5)	2,244 (14.16)	9.46
Wabash Border	127 (2.44)	1.88	1.70 (10)	216 (1.36)	3.20
Shawnee Hills	114 (2.20)	2.19	5.67 (1)	647 (4.08)	12.40
Statewide	5,196 (100.00)	3.56	3.05	15,848 (100.00)	10.85

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 5. Summary of raccoon trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 727).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest ^a	Estimated trapper harvest/100 km ²
Northwest Hills	773 (8.39) ^b	8.22	10.74	8,296 (6.90) ^b	88.26
Northeast Moraine	532 (5.78)	6.43	14.05 (3)	7,478 (6.22)	90.40
Mississippi Border-North	672 (7.29)	8.56	15.30 (2)	10,280 (8.55)	130.99
Mississippi Border-South	976 (10.59)	7.14	12.69 (4)	12,384 (10.30)	90.56
Western Prairie/Forest	1,140 (12.38)	7.91	15.49 (1)	17,662 (14.69)	122.47
Central Sand Prairie	304 (3.30)	7.33	13.50 (5)	4,112 (3.42)	99.16
Grand Prairie	2,928 (31.78)	5.56	12.51 (3)	36,634 (30.47)	69.60
Southern Plain	1,330 (14.44)	5.61	13.54 (4)	18,022 (14.99)	75.96
Wabash Border	355 (3.85)	5.27	8.93	3,174 (2.64)	47.08
Shawnee Hills	203 (2.20)	3.89	10.81 (4)	2,188 (1.82) ^c	41.95
Statewide	9,213 (100.00)	6.31	13.05	120,230 (100.00)	82.30

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 6. Summary of opossum trapper and harvest data for wildlife management units in Illinois, 19⁶⁴-85, from post-season resident trapper mail survey (n = 522).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper ^a harvest	Estimated trapper harvest/100 km ²
Northwest Hills	608 (9.19) ^b	6.47	6.02 (9)	3,664 (8.05) ^b	38.98
Northeast Moraine	418 (6.32)	5.05	8.30 (2)	3,473 (7.63)	41.98
Mississippi Border-North	532 (8.04)	6.78	7.76 (4)	4,133 (9.08)	52.66
Mississippi Border-South	697 (10.54)	5.10	8.25 (3)	5,758 (12.65)	42.11
Western Prairie/Forest	774 (11.69)	5.37	6.79 (7)	5,253 (11.54)	36.43
Central Sand Prairie	177 (2.68)	4.27	8.86 (1)	1,575 (3.46)	37.98
Grand Prairie	2,091 (31.61)	3.97	6.42 (8)	13,441 (29.53)	25.54
Southern Plain	951 (14.37)	4.01	5.92 (10)	5,631 (12.37)	23.73
Wabash Border	228 (3.45)	3.38	7.11 (5)	1,625 (3.57)	24.10
Shawnee Hills	140 (2.11)	2.68	6.91 (6)	965 (2.12)	18.50
Statewide	6,616 (100.00)	4.53	6.88	45,518 (100.00)	31.16

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 7. Summary of red fox trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 210).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest ^a	Estimated trapper harvest/100 km ²
Northwest Hills	165 (6.19) ^b	1.76	2.69 (5)	443 (5.30) ^b	4.71
Northeast Moraine	253 (9.52)	3.06	6.00 (17)	1,519 (18.18)	18.36
Mississippi Border-North	215 (8.09)	2.74	2.76 (4)	595 (7.12)	7.58
Mississippi Border-South	178 (6.67)	1.30	2.00 (7)	354 (4.24)	2.59
Western Prairie/Forest	279 (10.48)	1.93	1.91 (4)	532 (6.36)	3.69
Central Sand Prairie	76 (2.86)	1.83	3.50 (7)	266 (3.18)	6.41
Grand Prairie	849 (31.90)	1.61	3.97 (9)	3,368 (40.31)	6.40
Southern Plain	494 (18.57)	2.08	2.18 (6)	1,076 (12.88)	4.53
Wabash Border	76 (2.86)	1.13	1.00	76 (0.91)	1.13
Shawnee Hills	76 (2.86)	1.46	1.67 (8)	127 (1.52)	2.43
Statewide	2,661 (100.00)	1.82	3.14	8,356 (100.00)	5.72

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 8. Summary of gray fox trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 102).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest ^a	Estimated trapper harvest/100 km ²
Northwest Hills	101 (7.84) ^b	1.07	1.88 ⁽⁵⁾	190 (7.69) ^b	2.02
Northeast Moraine	241 (18.63)	2.91	1.84 ⁽⁶⁾	443 (17.95)	5.36
Mississippi Border-North	13 (0.98)	0.17	1.00 ⁽¹⁰⁾	13 (0.51)	0.17
Mississippi Border-South	139 (10.79)	1.02	1.82 ⁽⁷⁾	253 (10.26)	1.85
Western Prairie/Forest	38 (2.94)	0.26	1.33 ⁽⁹⁾	51 (2.05)	0.35
Central Sand Prairie	25 (1.96)	0.60	2.50 ⁽²⁾	63 (2.56)	1.52
Grand Prairie	355 (27.45)	0.67	1.36 ⁽⁸⁾	481 (19.49)	0.91
Southern Plain	304 (23.53)	1.28	2.71 ⁽¹⁾	822 (33.33)	3.46
Wabash Border	13 (0.98)	0.19	2.00 ⁽³⁾	25 (1.03)	0.37
Shawnee Hills	63 (4.90)	1.21	2.00 ⁽³⁾	127 (5.13)	2.43
Statewide	1,292 (100.00)	0.88	1.91	2,468 (100.00)	1.69

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 9. Summary of beaver trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 166).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper ^a harvest	Estimated trapper harvest/100 km ²
Northwest Hills	177 (8.43) ^b	1.88	3.14 (4)	557 (7.38) ^b	5.93
Northeast Moraine	139 (6.62)	1.68	4.27 (2)	596 (7.89)	7.20
Mississippi Border-North	152 (7.23)	1.94	5.17 (1)	785 (10.40)	10.00
Mississippi Border-South	127 (6.02)	0.93	3.20 (2)	406 (5.37)	2.97
Western Prairie/Forest	190 (9.04)	1.32	4.00 (3)	761 (10.07)	5.28
Central Sand Prairie	89 (4.22)	2.15	3.71 (5)	329 (4.36)	7.93
Grand Prairie	887 (42.17)	1.69	3.69 (6)	3,270 (43.29)	6.21
Southern Plain	203 (9.64)	0.86	1.75	355 (4.70)	1.50
Wabash Border	89 (4.22)	1.32	3.86 (4)	342 (4.53)	5.07
Shawnee Hills	51 (2.41)	0.98	3.00 (4)	152 (2.01)	2.91
Statewide	2,104 (100.00)	1.44	3.59	7,553 (100.00)	5.17

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 10. Summary of striped skunk trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 147).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper ^a harvest	Estimated trapper ² harvest/100 km
Northwest Hills	139 (7.49) ^b	1.48	1.82	254 (4.93) ^b	2.70
Northeast Moraine	152 (8.16)	1.84	3.58 (3)	545 (10.59)	6.59
Mississippi Border-North	152 (8.16)	1.94	2.33 (6)	355 (6.90)	4.52
Mississippi Border-South	165 (8.84)	1.21	1.23	203 (3.94)	1.48
Western Prairie/Forest	216 (11.57)	1.50	1.82	392 (7.63)	2.72
Central Sand Prairie	101 (5.44)	2.44	3.88 (1)	392 (7.63)	9.45
Grand Prairie	672 (36.06)	1.28	3.30 (4)	2,216 (43.10)	4.21
Southern Plain	165 (8.84)	0.70	3.00 (5)	494 (9.61)	2.08
Wabash Border	63 (3.40)	0.93	3.40 (3)	215 (4.19)	3.19
Shawnee Hills	38 (2.04)	0.73	2.00 (3)	76 (1.48)	1.46
Statewide	1,863 (100.00)	1.28	2.76	5,142 (100.00)	3.52

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 11. Summary of weasel trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 18).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest ^a	Estimated total trapper harvest/100 km ²
Northwest Hills	25 (11.11) ^b	0.27	1.00 ²	25 (9.10) ^b	0.27
Northeast Moraine	13 (5.56)	0.16	1.00 ²	13 (4.50)	0.16
Mississippi Border-North	25 (11.11)	0.32	1.00 ²	25 (9.10)	0.32
Mississippi Border-South	--	--	--	--	--
Western Prairie/Forest	25 (11.11)	0.17	1.00 ¹	25 (9.10)	0.17
Central Sand Prairie	--	--	--	--	--
Grand Prairie	90 (38.89)	0.17	1.56(1)	140 (50.00)	0.27
Southern Plain	25 (11.11)	0.11	1.00 ¹	25 (9.10)	0.11
Wabash Border	--	--	--	--	--
Shawnee Hills	25 (11.11)	0.48	1.00 ²	25 (9.10)	0.48
Statewide	228 (100.00)	0.16	1.22	278 (100.00)	0.19

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 12. Summary of coyote trapper and harvest data for wildlife management units in Illinois, 1984-85, from post-season resident trapper mail survey (n = 143).

Wildlife management unit	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest ^a	Estimated trapper harvest/100 km ²
Northwest Hills	51 (2.80) ^b	0.54	1.25 (8)	63 (1.37) ^b	0.67
Northeast Moraine	64 (3.50)	0.77	1.20 (9)	76 (1.64)	0.92
Mississippi Border-North	101 (5.59)	1.29	3.00 (5)	303 (6.57)	3.86
Mississippi Border-South	241 (13.29)	1.76	2.84 (4)	683 (14.79)	4.99
Western Prairie/Forest	304 (16.78)	2.11	3.63 (2)	1,102 (23.84)	7.64
Central Sand Prairie	76 (4.20)	1.83	2.17 (6)	165 (3.56)	3.98
Grand Prairie	532 (29.37)	1.01	2.07 (7)	1,102 (23.84)	2.09
Southern Plain	291 (16.08)	1.23	2.30 (5)	671 (14.52)	2.83
Wabash Border	101 (5.59)	1.50	4.00 (1)	405 (8.77)	6.01
Shawnee Hills	51 (2.80)	0.98	1.00 (10)	51 (1.10)	0.98
Statewide	1,812 (100.00)	1.24	2.55	4,621 (100.00)	3.16

^a Sum of wildlife management unit totals may not equal statewide total due to rounding error.

^b Numbers in parentheses are percentages of statewide total.

Table 13. Statewide sample sizes for 1984-85 post-season mail survey of Illinois resident trappers (n = 945).

Species	Total effective trappers	Percent effective trappers	Total season catch
Muskrat	641	67.83	17,175
Mink	410	43.39	1,250
Raccoon	727	76.93	9,486
Opossum	522	55.24	3,589
Red fox	210	22.22	660
Gray fox	102	10.79	195
Beaver	166	17.57	596
Striped skunk	147	15.56	406
Weasel	18	1.90	22
Coyote	143	15.13	365

Table 14. Estimated number of effective trappers, average season catch, and total trapper harvest by species in Illinois for 1984-85 season based on post-season trapper mail survey (n = 945).

Species	Estimated number of effective trappers	Estimated average season catch	Estimated total harvest
Muskrat	8,123 ± 364 ^a	26.79 ± 2.61	217,615 ± 23,765 ^a
Mink	5,196 ± 386	3.05 ± 0.33	15,848 ± 2,127
Raccoon	9,213 ± 328	13.05 ± 1.27	120,230 ± 12,690
Opossum	6,615 ± 387	6.88 ± 0.70	45,511 ± 5,449
Red fox	2,661 ± 324	3.14 ± 0.68	8,356 ± 2,116
Gray fox	1,293 ± 242	1.91 ± 0.31	2,470 ± 618
Beaver	2,104 ± 296	3.59 ± 0.63	7,553 ± 1,716
Striped skunk	1,863 ± 282	2.76 ± 0.53	5,142 ± 1,280
Weasel	228 ± 106	1.22 ± 0.30	278 ± 147
Coyote	1,812 ± 279	2.55 ± 0.51	4,621 ± 1,173

^a 95% confidence interval.

Table 15. Distribution of harvest among effective trappers for 8 species of furbearers in Illinois, 1984-85, from post-season resident trapper mail survey.

Total season catch	Percentage of effective trappers for species							
	Mink (410) ^a	Opossum (522)	Red fox (210)	Gray fox (102)	Beaver (166)	Striped skunk (147)	Weasel (18)	Coyote (143)
1	36.83	14.94	50.48	59.80	36.75	48.98	88.89	49.65
2	25.61	14.18	16.19	20.59	19.88	23.13	--	23.78
3	12.20	10.54	10.48	5.88	14.46	6.80	11.11	9.09
4	7.07	11.11	5.24	5.88	6.63	4.76	--	3.50
5	7.07	6.90	6.19	4.90	3.61	4.76	--	3.50
6	3.17	7.47	2.38	--	5.42	2.72	--	2.80
7	1.46	3.64	0.95	0.98	1.81	0.68	--	2.10
8	1.22	6.13	0.48	0.98	3.01	1.36	--	1.40
9	0.24	2.49	1.90	--	1.20	0.68	--	0.70
10	1.46	5.36	1.90	0.98	1.20	3.40	--	2.10
11	0.24	0.77	0.48	--	--	0.68	--	--
12	0.73	3.07	0.95	--	1.20	--	--	--
13	0.49	1.15	--	--	--	--	--	--
14	0.49	0.96	0.48	--	1.20	0.68	--	--
15	0.49	3.26	--	--	0.60	--	--	0.70
16-20	0.49	4.21	--	--	1.81	0.68	--	--
21-25	0.24	1.15	0.48	--	1.20	0.68	--	--
>25	0.49	2.68	1.43	--	--	--	--	0.70

^a Numbers in parentheses indicate sample size for species.

Table 16. Distribution of pelt sales by trappers for 10 species of furbearers in Illinois, 1984-85 season, from post-season resident trapper mail survey (n = 887).

Species	Total number of pelts sold	Total number of pelts sold in Illinois	Percent sold in Illinois	Total number of pelts sold outside Illinois	Percent sold outside Illinois
Muskrat	15,846	15,217	96.03	629	3.97
Mink	1,168	1,126	96.40	42	3.60
Raccoon	8,648	8,196	94.77	452	5.23
Opossum	2,597	2,410	92.80	187	7.20
Red fox	612	543	88.73	69	11.27
Gray fox	181	170	93.92	11	6.08
Beaver	446	421	94.39	25	5.61
Striped skunk	100	100	100.00	0	0.00
Weasel	10	7	70.00	3	30.00
Coyote	302	287	95.03	15	4.97
Total or Average	29,910	28,477	95.21	1,433	4.79

Table 17. Summary of non-target catches by trappers in Illinois, 1984-85 season, from post-season resident trapper mail survey (n = 942).

Species	Number of trappers catching species	Total number caught	Average number caught	Estimated percent of all trappers catching species	Estimated total caught by all trappers
Cat	164	343	2.09	17.41	4,358
Dog	113	183	1.62	12.00	2,328
Squirrel	30	83	2.77	3.18	1,055
Rabbit	40	96	2.40	4.25	1,222
Rat	4	10	2.50	0.42	126
Mouse	2	2	1.00	0.21	25
Crow	18	23	1.28	1.91	293
Blue jay	15	35	2.33	1.59	444
Hawk	9	9	1.00	0.96	115
Owl	16	18	1.13	1.70	230
Bird - Unspecified	60	121	2.02	6.37	1,541
Other (e.g. ground hog, fish, frog)	11	17	1.55	1.17	217
Totals	329	940	2.86	34.93	11,954

Table 18. Summary of fur hunting activities of trappers in Illinois, 1984-85 season, from post-season resident trapper mail survey (n = 887).

Species	Number of trappers hunting species	Total number harvested by hunting	Average number harvested by hunting	Estimated percent of all trappers effectively hunting species	Estimated total harvest by all trappers effectively hunting species
Raccoon	164	1,645	10.03	18.49	22,206
Opossum	56	176	3.14	6.31	2,374
Red fox	38	124	3.26	4.28	1,672
Gray fox	15	27	1.80	1.69	364
Striped skunk	5	7	1.40	0.56	94
Coyote	60	168	2.80	6.76	2,268
All species	270	2,147	7.95	30.44	28,978

Table 19. Summary of muskrat trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 730; 747; 696; 691; 646; 641).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	9,224 (62.19) ^a	11.27	39.63 (+6.48) ^b	365,592 (77.10) ^a	446.73
1980-81	8,745 (61.71)	10.69	40.86 (+5.19)	357,305 (75.31)	436.61
1981-82	7,590 (63.79)	9.27	27.69 (+3.05)	210,246 (78.01)	256.90
1982-83	6,316 (61.36)	7.72	35.33 (+4.91)	223,160 (75.86)	272.69
1983-84	4,922 (65.79)	6.01	35.59 (+4.33)	175,148 (82.66)	214.02
1984-85	5,221 (64.27)	6.38	30.43 (+3.67)	158,837 (72.99)	194.09
SOUTHERN ZONE					
1979-80	5,608 (37.81)	8.73	19.37 (+3.07)	108,587 (22.90)	169.04
1980-81	5,426 (38.29)	8.45	21.59 (+4.32)	117,140 (24.69)	182.35
1981-82	4,309 (36.21)	6.71	13.75 (+2.25)	59,266 (21.99)	92.26
1982-83	3,977 (38.64)	6.19	17.85 (+3.29)	71,014 (24.14)	110.55
1983-84	2,560 (34.21)	3.99	14.36 (+2.91)	36,742 (17.34)	57.20
1984-85	2,902 (35.73)	4.52	20.26 (+2.97)	58,778 (27.01)	91.50
STATEWIDE					
1979-80	14,832	10.15	31.97 (+4.25)	474,179	324.61
1980-81	14,171	9.70	33.48 (+3.66)	474,445	324.79
1981-82	11,899	8.15	22.65 (+2.17)	269,512	184.50
1982-83	10,293	7.05	28.58 (+3.33)	294,174	201.38
1983-84	7,482	5.12	28.32 (+3.11)	211,890	145.05
1984-85	8,123	5.56	26.79 (+2.61)	217,615	148.97

^a Numbers in parentheses are percentages of statewide totals.

^b 95% confidence interval.

Table 20. Summary of mink trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 419; 501; 471; 445; 439; 410).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	5,040 (59.19) ^a	6.16	2.86 (+0.43) ^b	14,428 (61.17) ^a	17.63
1980-81	5,559 (58.48)	6.79	3.13 (+0.45)	17,403 (58.49)	21.27
1981-82	5,146 (63.91)	6.29	3.12 (+0.36)	16,029 (64.01)	19.59
1982-83	3,814 (57.53)	4.66	2.92 (+0.39)	11,144 (60.47)	13.62
1983-84	2,942 (57.86)	3.59	2.94 (+0.40)	8,651 (58.67)	10.57
1984-85	3,092 (59.51)	3.78	3.08 (+0.48)	9,521 (60.08)	11.63
SOUTHERN ZONE					
1979-80	3,475 (40.81)	5.41	2.63 (+0.41)	9,159 (38.83)	14.26
1980-81	3,947 (41.52)	6.14	3.13 (+0.47)	12,351 (41.51)	19.23
1981-82	2,906 (36.09)	4.52	3.11 (+0.55)	9,013 (35.99)	14.03
1982-83	2,815 (42.47)	4.38	2.59 (+0.36)	7,285 (39.53)	11.34
1983-84	2,143 (42.14)	3.36	2.85 (+0.41)	6,095 (41.33)	9.49
1984-85	2,104 (40.49)	3.28	3.01 (+0.44)	6,327 (39.92)	9.85
STATEWIDE					
1979-80	8,515	5.83	2.77 (+0.31)	23,587	16.15
1980-81	9,506	6.51	3.13 (+0.33)	29,754	20.37
1981-82	8,052	5.51	3.11 (+0.30)	25,042	17.14
1982-83	6,629	4.54	2.78 (+0.27)	18,429	12.62
1983-84	5,085	3.48	2.90 (+0.29)	14,746	10.09
1984-85	5,196	3.56	3.05 (+0.33)	15,848	10.85

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 21. Summary of raccoon trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 755; 756; 815; 816; 753; 727).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	9,265 (60.40) ^a	11.32	9.86 (+1.36) ^b	91,338 (64.51) ^a	111.61
1980-81	8,576 (59.79)	10.48	10.44 (+1.70)	89,481 (65.39)	109.34
1981-82	8,411 (60.37)	10.28	9.96 (+1.12)	83,766 (64.30)	102.36
1982-83	7,150 (58.82)	8.74	11.51 (+1.54)	82,316 (65.18)	100.59
1983-84	5,247 (60.16)	6.41	9.55 (+1.26)	50,123 (63.29)	61.25
1984-85	5,564 (60.39)	6.80	13.36 (+1.76)	74,326 (61.82)	90.82
SOUTHERN ZONE					
1979-80	6,075 (39.60)	9.46	8.27 (+1.17)	50,250 (35.49)	78.22
1980-81	5,768 (40.21)	8.98	8.21 (+1.05)	47,361 (34.61)	73.73
1981-82	5,522 (39.63)	8.60	8.42 (+0.98)	46,508 (35.70)	72.40
1982-83	5,005 (41.18)	7.79	8.79 (+1.16)	43,974 (34.82)	68.45
1983-84	3,475 (39.84)	5.41	8.37 (+1.08)	29,073 (36.71)	45.26
1984-85	3,649 (39.61)	5.68	12.58 (+1.77)	45,904 (38.18)	71.46
STATEWIDE					
1979-80	15,340	10.50	9.23 (+0.94)	141,588	96.93
1980-81	14,344	9.82	9.54 (+1.10)	136,842	93.68
1981-82	13,933	9.54	9.35 (+0.78)	130,274	89.18
1982-83	12,155	8.32	10.39 (+1.03)	126,290	86.45
1983-84	8,722	5.97	9.08 (+0.87)	79,196	54.22
1984-85	9,213	6.31	13.05 (+1.27)	120,230	82.31

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 22. Summary of opossum trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 374; 446; 549; 542; 484; 522).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	3,413 (44.92) ^a	4.17	2.68 (+0.38) ^b	9,151 (33.36) ^a	11.18
1980-81	3,832 (45.29)	4.68	3.60 (+1.12)	13,806 (36.58)	16.87
1981-82	5,266 (56.10)	6.43	4.34 (+0.53)	22,841 (42.03)	27.91
1982-83	4,543 (56.27)	5.55	6.13 (+1.03)	27,892 (51.56)	34.08
1983-84	3,139 (55.99)	3.84	6.32 (+0.98)	19,846 (54.97)	24.25
1984-85	4,056 (61.30)	4.96	6.84 (+0.94)	27,775 (61.02)	33.94
SOUTHERN ZONE					
1979-80	4,186 (55.08)	6.52	4.37 (+0.62)	18,281 (66.64)	28.46
1980-81	4,630 (54.71)	7.21	5.17 (+0.66)	23,935 (63.42)	37.26
1981-82	4,120 (43.90)	6.41	7.65 (+1.11)	31,504 (57.97)	49.04
1982-83	3,531 (43.73)	5.50	7.42 (+1.02)	26,204 (48.44)	40.79
1983-84	2,467 (44.01)	3.84	6.59 (+0.94)	16,257 (45.03)	25.31
1984-85	2,560 (38.70)	3.99	6.93 (+1.05)	17,743 (38.98)	27.62
STATEWIDE					
1979-80	7,599	5.20	3.61 (+0.39)	27,432	18.78
1980-81	8,462	5.79	4.46 (+0.63)	37,741	25.84
1981-82	9,386	6.43	5.79 (+0.59)	54,345	37.20
1982-83	8,074	5.53	6.70 (+0.74)	54,096	37.03
1983-84	5,606	3.84	6.44 (+0.69)	36,103	24.72
1984-85	6,616	4.53	6.88 (+0.70)	45,518	31.16

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 23. Summary of red fox trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 175; 180; 187; 190; 173; 210).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	2,052 (57.71) ^a	2.51	4.20 (+1.92) ^b	8,616 (68.06) ^a	10.53
1980-81	2,220 (65.00)	2.71	3.02 (+1.64)	6,694 (68.54)	8.18
1981-82	1,932 (60.43)	2.36	2.95 (+0.58)	5,694 (64.53)	6.96
1982-83	1,757 (62.11)	2.15	3.27 (+0.78)	5,742 (66.55)	7.02
1983-84	1,158 (57.80)	1.42	3.05 (+0.81)	3,538 (63.28)	4.32
1984-85	1,635 (61.43)	2.00	3.93 (+1.07)	6,419 (76.82)	7.84
SOUTHERN ZONE					
1979-80	1,504 (42.29)	2.34	2.69 (+0.82)	4,043 (31.94)	6.29
1980-81	1,195 (35.00)	1.86	2.57 (+1.05)	3,073 (31.46)	4.78
1981-82	1,265 (39.57)	1.97	2.47 (+0.61)	3,130 (35.47)	4.87
1982-83	1,072 (37.89)	1.67	2.69 (+0.66)	2,886 (33.45)	4.49
1983-84	846 (42.20)	1.32	2.42 (+0.63)	2,053 (36.72)	3.20
1984-85	1,026 (38.57)	1.60	1.89 (+0.34)	1,937 (23.18)	3.02
STATEWIDE					
1979-80	3,556	2.43	3.56 (+1.17)	12,659	8.67
1980-81	3,415	2.34	2.86 (+1.12)	9,767	6.69
1981-82	3,197	2.19	2.76 (+0.43)	8,824	6.04
1982-83	2,829	1.94	3.05 (+0.54)	8,628	5.91
1983-84	2,004	1.37	2.79 (+0.54)	5,591	3.83
1984-85	2,661	1.82	3.14 (+0.68)	8,356	5.72

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 24. Summary of gray fox trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 146; 139; 145; 130; 111; 102).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	1,301 (43.84) ^a	1.59	1.48 (+0.20) ^b	1,931 (32.87) ^a	2.36
1980-81	1,271 (48.20)	1.55	2.03 (+0.60)	2,584 (45.79)	3.16
1981-82	1,163 (46.90)	1.42	1.44 (+0.24)	1,675 (37.55)	2.05
1982-83	745 (38.46)	0.91	2.00 (+0.61)	1,488 (39.22)	1.82
1983-84	510 (39.64)	0.62	1.98 (+0.78)	1,009 (40.65)	1.23
1984-85	659 (50.98)	0.81	1.69 (+0.36)	1,114 (45.13)	1.36
SOUTHERN ZONE					
1979-80	1,666 (56.16)	2.59	2.37 (+0.71)	3,944 (67.13)	6.14
1980-81	1,366 (51.80)	2.13	2.24 (+0.73)	3,059 (54.21)	4.76
1981-82	1,316 (53.10)	2.05	2.12 (+0.31)	2,787 (62.45)	4.34
1982-83	1,191 (61.54)	1.85	1.94 (+0.31)	2,307 (60.78)	3.59
1983-84	776 (60.36)	1.21	1.90 (+0.30)	1,473 (59.35)	2.29
1984-85	633 (49.02)	0.99	2.14 (+0.51)	1,354 (54.87)	2.11
STATEWIDE					
1979-80	2,967	2.03	1.98 (+0.41)	5,875	4.02
1980-81	2,637	1.81	2.14 (+0.47)	5,643	3.86
1981-82	2,479	1.70	1.80 (+0.21)	4,462	3.05
1982-83	1,936	1.33	1.96 (+0.30)	3,795	2.60
1983-84	1,286	0.88	1.93 (+0.36)	2,482	1.70
1984-85	1,292	0.88	1.91 (+0.31)	2,468	1.69

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 25. Summary of beaver trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 131; 158; 142; 129; 117; 166).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest 100/km ²
NORTHERN ZONE					
1979-80	1,849 (69.47) ^a	2.26	3.52 (+0.88) ^b	6,500 (72.89) ^a	7.94
1980-81	2,031 (67.72)	2.48	3.41 (+0.78)	6,934 (61.66)	8.47
1981-82	1,693 (69.72)	2.07	2.92 (+0.59)	4,938 (71.36)	6.03
1982-83	1,415 (73.64)	1.73	3.94 (+0.97)	5,575 (83.11)	6.81
1983-84	1,042 (76.92)	1.27	4.06 (+0.90)	4,223 (82.02)	5.16
1984-85	1,521 (72.29)	1.86	3.93 (+0.82)	5,981 (79.19)	7.31
SOUTHERN ZONE					
1979-80	813 (30.53)	1.27	2.97 (+1.19)	2,418 (27.11)	3.76
1980-81	968 (32.28)	1.51	4.45 (+1.53)	4,312 (38.34)	6.71
1981-82	735 (30.28)	1.14	2.70 (+0.83)	1,982 (28.64)	3.09
1982-83	507 (26.36)	0.79	2.24 (+0.67)	1,133 (16.89)	1.76
1983-84	313 (23.08)	0.49	2.96 (+1.11)	926 (17.98)	1.44
1984-85	583 (27.71)	0.91	2.70 (+0.72)	1,572 (20.81)	2.45
STATEWIDE					
1979-80	2,662	1.82	3.35 (+0.71)	8,918	6.11
1980-81	2,999	2.05	3.75 (+0.73)	11,246	7.70
1981-82	2,428	1.66	2.85 (+0.48)	6,920	4.74
1982-83	1,922	1.32	3.49 (+0.74)	6,708	4.59
1983-84	1,355	0.93	3.80 (+0.74)	5,149	3.52
1984-85	2,104	1.44	3.59 (+0.63)	7,553	5.17

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 26. Summary of striped skunk trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 258; 240; 179; 215; 128; 147).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	3,392 (64.73) ^a	4.14	2.85 (+0.35) ^b	9,664 (61.26) ^a	11.81
1980-81	2,940 (64.58)	3.59	3.10 (+0.58)	9,118 (63.79)	11.44
1981-82	2,000 (65.36)	2.44	2.93 (+0.55)	5,871 (60.71)	7.17
1982-83	2,220 (69.30)	2.71	3.28 (+0.71)	7,278 (71.91)	8.89
1983-84	985 (66.41)	1.20	3.48 (+0.81)	3,432 (78.72)	4.19
1984-85	1,305 (70.07)	1.59	3.00 (+0.71)	3,914 (76.11)	4.78
SOUTHERN ZONE					
1979-80	1,849 (35.27)	2.88	3.31 (+0.65)	6,111 (38.74)	9.51
1980-81	1,612 (35.42)	2.51	3.21 (+0.92)	5,175 (36.21)	8.06
1981-82	1,060 (34.64)	1.65	3.58 (+0.92)	3,799 (39.29)	5.91
1982-83	983 (30.70)	1.53	2.89 (+0.74)	2,843 (28.09)	4.43
1983-84	498 (33.59)	0.78	1.86 (+0.36)	928 (21.28)	1.44
1984-85	558 (29.93)	0.87	2.20 (+0.65)	1,228 (23.89)	1.91
STATEWIDE					
1979-80	5,241	3.59	3.01 (+0.32)	15,775	10.80
1980-81	4,552	3.12	3.14 (+0.49)	14,293	9.78
1981-82	3,060	2.09	3.16 (+0.48)	9,670	6.62
1982-83	3,203	2.19	3.16 (+0.54)	10,121	6.93
1983-84	1,483	1.02	2.94 (+0.57)	4,360	2.98
1984-85	1,863	1.28	2.76 (+0.53)	5,142	3.52

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 27. Summary of weasel trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 16; 17; 11; 16; 16; 18).

Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated total trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	163 (50.00) ^a	0.20	1.00 (+0.00) ^b	163 (47.06) ^a	0.20
1980-81	171 (52.94)	0.21	1.00 (+0.00)	171 (47.37)	0.21
1981-82	171 (90.91)	0.21	1.40 (+0.43)	239 (93.33)	0.29
1982-83	105 (43.75)	0.13	1.14 (+0.28)	119 (47.06)	0.15
1983-84	92 (50.00)	0.11	1.13 (+0.24)	104 (47.37)	0.13
1984-85	139 (61.11)	0.17	1.18 (+0.36)	164 (59.09)	0.20
SOUTHERN ZONE					
1979-80	163 (50.00)	0.25	1.13 (+0.24)	183 (52.94)	0.28
1980-81	152 (47.06)	0.24	1.25 (+0.32)	191 (52.63)	0.30
1981-82	17 (9.09)	0.03	1.00 (+0.00)	17 (6.67)	0.03
1982-83	134 (56.25)	0.21	1.00 (+0.00)	134 (52.94)	0.21
1983-84	93 (50.00)	0.14	1.25 (+0.32)	116 (52.63)	0.18
1984-85	89 (38.89)	0.14	1.29 (+0.56)	114 (40.91)	0.18
STATEWIDE					
1979-80	326	0.22	1.06 (+0.12)	346	0.24
1980-81	323	0.22	1.12 (+0.16)	362	0.25
1981-82	188	0.13	1.36 (+0.40)	256	0.18
1982-83	239	0.16	1.06 (+0.12)	253	0.17
1983-84	185	0.13	1.19 (+0.20)	220	0.15
1984-85	228	0.16	1.22 (+0.30)	278	0.19

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

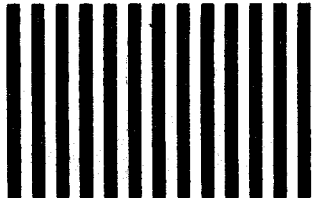
Table 28. Summary of coyote trapper and harvest data for furbearer management zones in Illinois, 1979-80 through 1984-85, from post-season resident trapper mail survey (n = 102; 101; 129; 116; 147; 143).

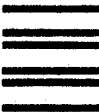
Area/Season	Estimated number of effective trappers	Estimated number of effective trappers/100 km ²	Average season catch	Estimated total trapper harvest	Estimated trapper harvest/100 km ²
NORTHERN ZONE					
1979-80	894 (43.14) ^a	1.09	4.86 (+4.84) ^b	4,350 (59.44) ^a	5.32
1980-81	797 (41.58)	0.97	4.10 (+4.06)	3,264 (57.14)	3.99
1981-82	855 (38.76)	1.04	1.92 (+0.55)	1,644 (31.07)	2.01
1982-83	551 (31.90)	0.67	1.92 (+0.55)	1,059 (26.30)	1.29
1983-84	741 (43.54)	0.91	2.77 (+0.85)	2,050 (47.20)	2.50
1984-85	925 (51.05)	1.13	2.23 (+0.51)	2,064 (44.66)	2.52
SOUTHERN ZONE					
1979-80	1,179 (56.86)	1.84	2.52 (+1.12)	2,968 (40.56)	4.62
1980-81	1,120 (58.42)	1.74	2.19 (+0.44)	2,449 (42.86)	3.81
1981-82	1,350 (61.24)	2.10	2.70 (+0.65)	3,648 (68.93)	5.68
1982-83	1,177 (68.10)	1.83	2.52 (+0.63)	2,967 (73.70)	4.62
1983-84	962 (56.46)	1.50	2.39 (+0.40)	2,293 (52.80)	3.57
1984-85	887 (48.95)	1.38	2.89 (+0.88)	2,557 (55.34)	3.98
STATEWIDE					
1979-80	2,073	1.42	3.53 (+2.18)	7,318	5.01
1980-81	1,917	1.31	2.98 (+1.71)	5,713	3.91
1981-82	2,205	1.51	2.40 (+0.45)	5,292	3.62
1982-83	1,728	1.18	2.33 (+0.46)	4,026	2.76
1983-84	1,703	1.17	2.55 (+0.43)	4,343	2.97
1984-85	1,812	1.24	2.55 (+0.51)	4,621	3.16

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

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DEPARTMENT OF CONSERVATION

Wildlife Resources Division

Furbearer Section

LINCOLN TOWER PLAZA
624 SOUTH SECOND STREET
SPRINGFIELD, ILLINOIS 62706

TO ISSUING AGENT:

COMPLETE THIS FORM AND MAIL
IMMEDIATELY UPON SALE OF
FIRST LICENSE IN BOOK

The Department of Conservation is conducting a survey to estimate the fur harvest in Illinois. To effect this, we need the names and addresses of part of our licensed trappers. Please print at the bottom of this page, in space provided, name, mailing address including zip code, and county of residence of the person who purchases the first license in this book. Please detach the next page and give to license purchaser.

Thank you for your cooperation. Please note reverse side is Business Reply postal card, perforated at binding for removing.

MAIL IMMEDIATELY UPON SALE
OF LICENSE
TRAPPING (1984 SERIES)
Please Print Plainly

Name	JOHN DOE
Rural Route or Street Address	1234 Oak St.
Post Office	Springfield IL
Zip Code	62710
County of Residence	Sangamon

Figure 1. Mail survey address card issued to license vendors in 1984-85 post-season trapper mail survey.

**DETACH THIS PAGE AND GIVE TO
PERSON WHO PURCHASES FIRST
LICENSE IN BOOK**

Dear Trapper:

Please keep an accurate record of the **number of days you had traps set, the average number and kinds of traps you used during the season, the number of furbearers you caught in traps, what county you trapped in most, and the number and kinds of pelts you sold in Illinois and Out of State.**

You may be one of the selected trappers contacted at the close of the trapping season and provided a form to return to the Illinois Department of Conservation.

Thanks for your cooperation.

**THE BACK SIDE OF THIS CARD MAY BE USED FOR
RECORD KEEPING.**

Number of TRAPS I had set: _____

Number of DAYS I had traps set: _____

FURBEARERS CAUGHT IN TRAPS: _____

Species	Total Number Caught	Number Sold	
		In Illinois	Out-of- State
Muskrat			
Mink			
Raccoon			
Opossum			
Beaver			
Red Fox			
Gray Fox			
Coyote			
Striped Skunk			
Weasel			

Other Animals Caught: _____

Figure 2. Information and activity record card issued to trappers in 1984-85 post-season trapper mail survey.



LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62706
CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 60601
~~XX~~

1

1984-85

Dear Illinois Trapper:

The harvest of fur-bearing animals is one of the few field and stream sports that is tied to our economy through a return from the crop. In the 1983-84 season, there were 513,223 pelts sold by Illinois fur-takers for a value to them of \$4,188,314. We need information on the trapped portion of the catch for the 1984-85 season.

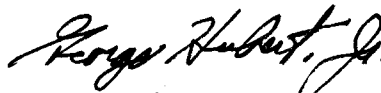
You can make an important contribution to the future management of Illinois' fur harvests and trapping activity by completing the enclosed questionnaire. The questionnaire is self-explanatory. If you did not trap, simply answer questions #1 and #8 and return the questionnaire. If you did trap, please fill out the questionnaire completely.

The information requested from you and other trappers is used in determining catch, trapping success, trapping pressure, and trapper characteristics on a statewide basis. These facts are necessary for a better understanding of how regulations affect your trapping and the welfare of the furbearer populations. Also, with your help, the future of sport trapping will be assured.

Please take a few minutes and fill out the questionnaire. If you do not remember exact figures, please give your best estimate. Also, if you trapped in partnership with another person, list only your half of the catch. Drop the completed questionnaire in the mail; no postage is required. Please reply even if you did not trap this season or were not successful.

Yours for better trapping.

Sincerely,



George Hubert, Jr.
Furbearer Biologist

Figure 3. Letter of transmittal sent with initial mailing in 1984-85 post-season trapper mail survey.



LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62706
CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 60601

2

Dear Illinois Trapper:

Recently we mailed to you a Trapping Survey Questionnaire and requested that you fill out and return the completed form. We have not received your form at this time - perhaps because you have misplaced the questionnaire card or haven't found time to complete it and return it to us.

We are enclosing another questionnaire card which we hope you will complete and return as soon as possible. If you have already returned a questionnaire, please destroy this one. The information supplied by you and other trappers being sampled will be of great value to the Conservation Department in better directing the management of the Illinois furbearer resource.

Please fill out the form completely and return it even if you did not trap or were not successful. If you trapped in partnership with another person, please list only your half of the catch. No postage is required to return the completed questionnaire. Simply fill it out and drop it in the mail.

Your prompt attention will be greatly appreciated. Thank you.

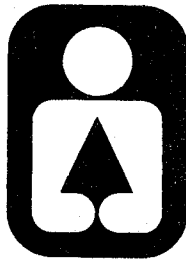
Sincerely,

A handwritten signature in cursive script that reads "George Hubert, Jr.".

George Hubert, Jr.
Furbearer Biologist
Div. of Fish & Wildlife Resources

Figure 4. Letter of transmittal sent with first follow-up mailing in 1984-85 post-season trapper mail survey.

Illinois



Department of Conservation

life and land together

LINCOLN TOWER PLAZA • 524 SOUTH SECOND STREET • SPRINGFIELD 62706

CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 60601

~~XX~~

3

Dear Illinois Trapper:

This is to remind you that we still would like to receive an answer to the questionnaire concerning your trapping activity this past season. We don't like to keep bothering you, but this is very important information which only you can supply.

Another copy of the questionnaire card is enclosed. We hope you will complete and return it as soon as possible. If you have already returned a questionnaire, simply destroy this one. We are making a final effort to obtain a complete response so that we may compile the information received from all co-operating trappers and prepare a report of our findings. Remember, your response is needed - even though you did not trap or had an unsuccessful season. Also, if you trapped in partnership with another person, kindly list only your half of the catch.

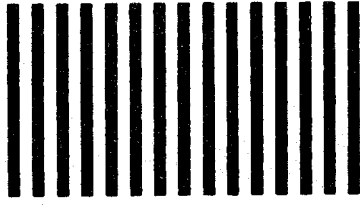
No postage is required to return the completed questionnaire card. Just fill it out and drop it in the mail. Please help us complete this survey by sending it in now!

Sincerely,

George Hubert, Jr.
Furbearer Biologist
Div. of Fish & Wildlife Resources

Figure 5. Letter of transmittal sent with second follow-up mailing in 1984-85 post-season trapper mail survey.

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Illinois Department of Conservation
Div. of Fish & Wildl. Resources — Furbearer
Lincoln Tower Plaza
524 South 2nd Street
Springfield, Illinois 62701-9990
Attn: George Hubert, Jr.

FURBEARER TRAPPING SURVEY 1984-85 SEASON

1. Did you trap for furbearers in Illinois during the 1984-85 season? Yes No
2. In what COUNTY did you do MOST of your trapping? _____

3. How many days (or nights) did you have traps set? _____

4. Estimate your total trapping expenses for the 1984-85 season (traps, lures, gas, license, etc.):

\$ _____

5. Did you purchase an Illinois hunting license or combination hunting and fishing license for the 1984-85 season? Yes No
6. Please fill in **all three blanks** for each kind of furbearer you trapped in Illinois during the 1984-85 season:

	Number Caught In Traps	Number SOLD In Illinois	Number SOLD Out of State
Muskrat	_____	_____	_____
Mink	_____	_____	_____
Raccoon	_____	_____	_____
Opossum	_____	_____	_____
Red Fox	_____	_____	_____
Gray Fox	_____	_____	_____
Beaver	_____	_____	_____
Skunk	_____	_____	_____
Weasel	_____	_____	_____
Coyote	_____	_____	_____

7. Did you have any accidental catches during the 1984-85 season (birds, dogs, cats, etc.)? Yes No If yes, please list what kind and how many: _____

8. Did you also HUNT furbearers with gun and/or dogs during the 1984-85 season? Yes No If yes, please give the number of each kind taken:

Raccoon _____ Red Fox _____ Skunk _____
Opossum _____ Gray Fox _____ Coyote _____

**THANK YOU FOR YOUR COOPERATION!!!
NO POSTAGE REQUIRED**

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The Department of Conservation is an equal opportunity employer.

The Dept. of Conservation is requesting this information as outlined under the Wildlife Code, Chapter 61. Providing this information is voluntary. This form has been approved by the State Forms Management Center.

IL422-0387

Figure 6. Questionnaire form for post-season mail survey of Illinois trappers, 1984-85 season.

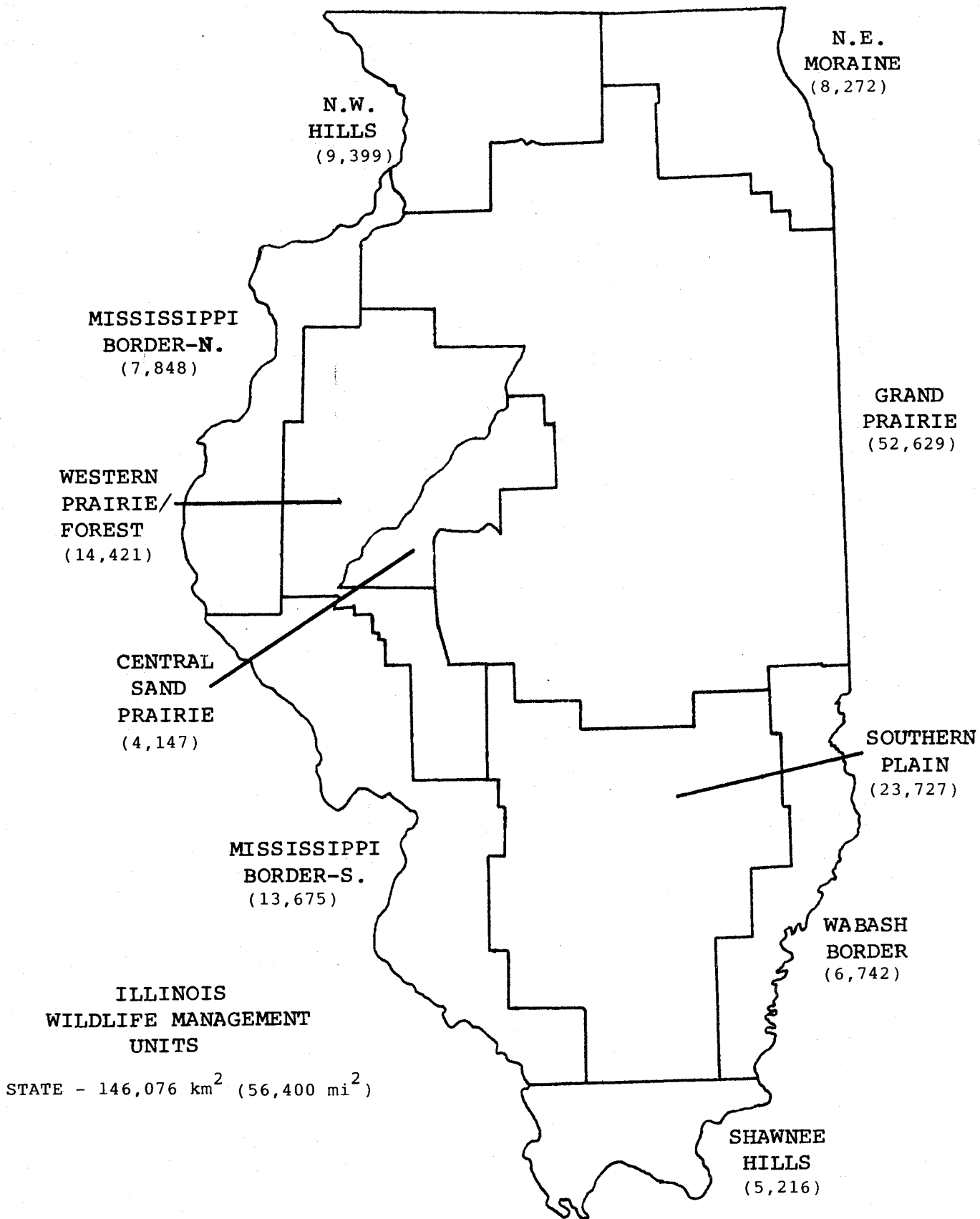


Figure 7. Area (km²) of wildlife management units in Illinois.



Figure 8. Furbearer management zones for the 1984-85 season.

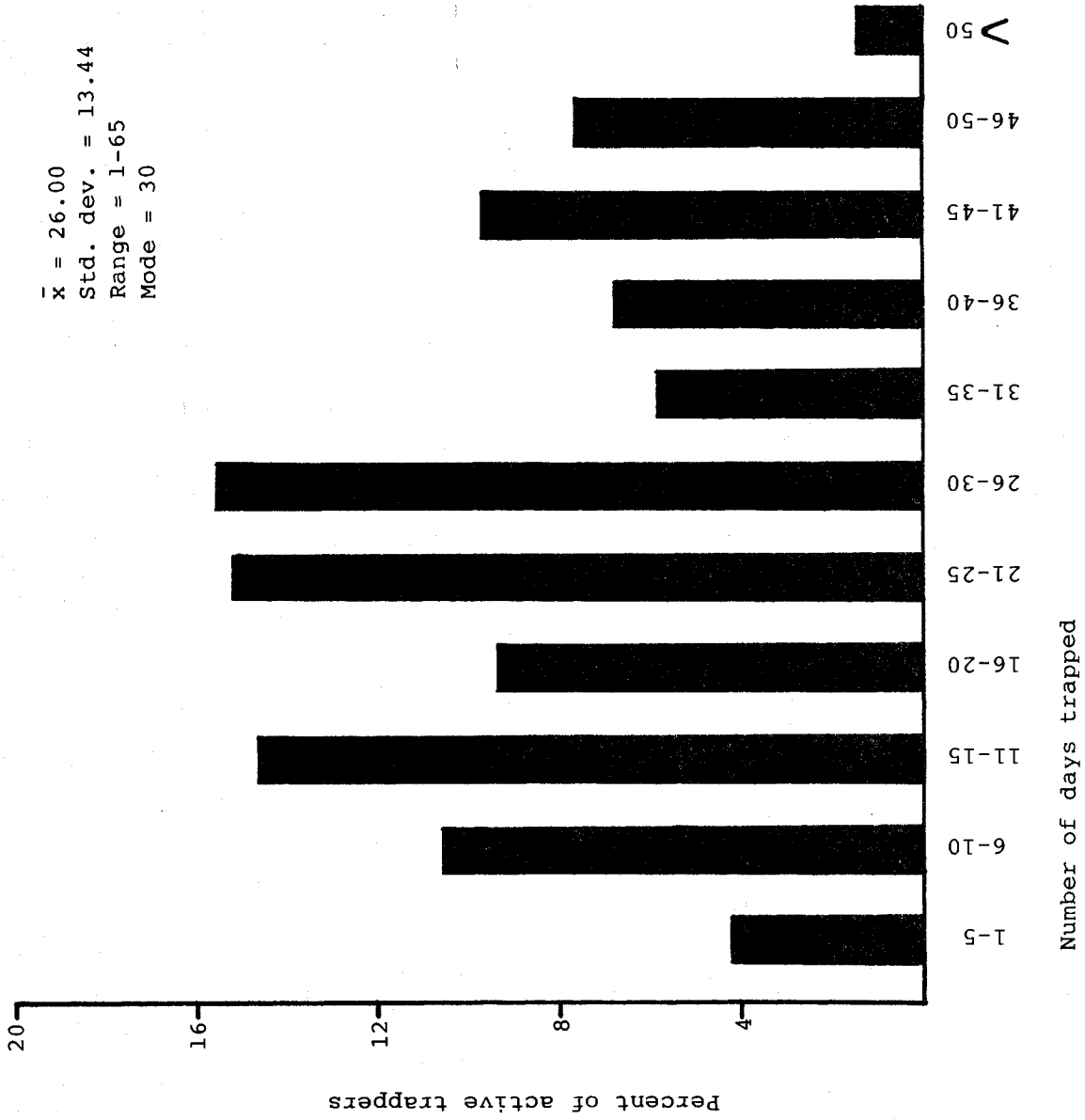


Figure 9. Distribution of days trapped per active trapper in Illinois, 1984-85 season (n = 840).

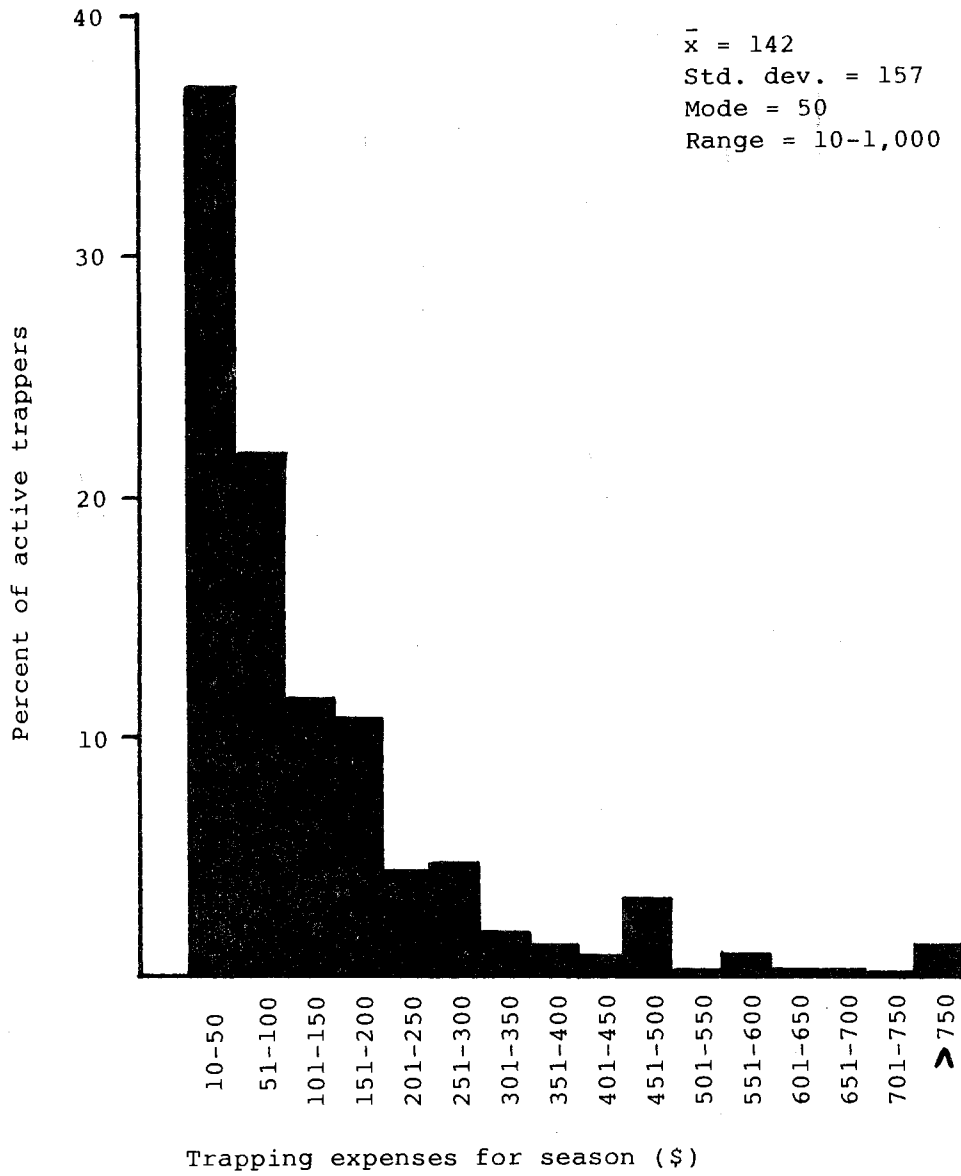


Figure 10. Annual trapping expenses (\$) per active trapper in Illinois, 1984-85 season (n = 843).

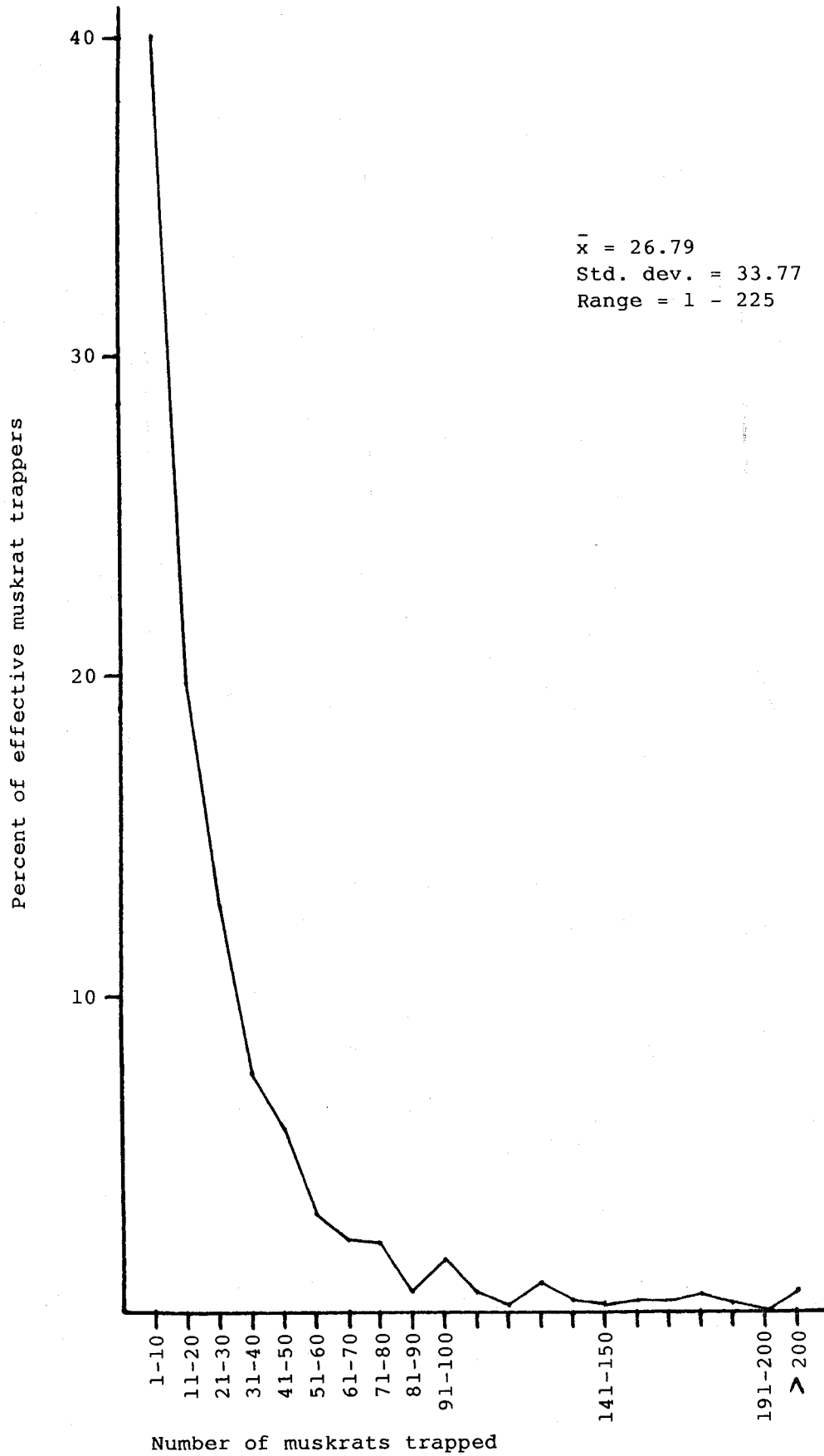


Figure 11. Distribution of muskrats trapper per effective muskrat trapper in Illinois, 1984-85 season (n = 641).

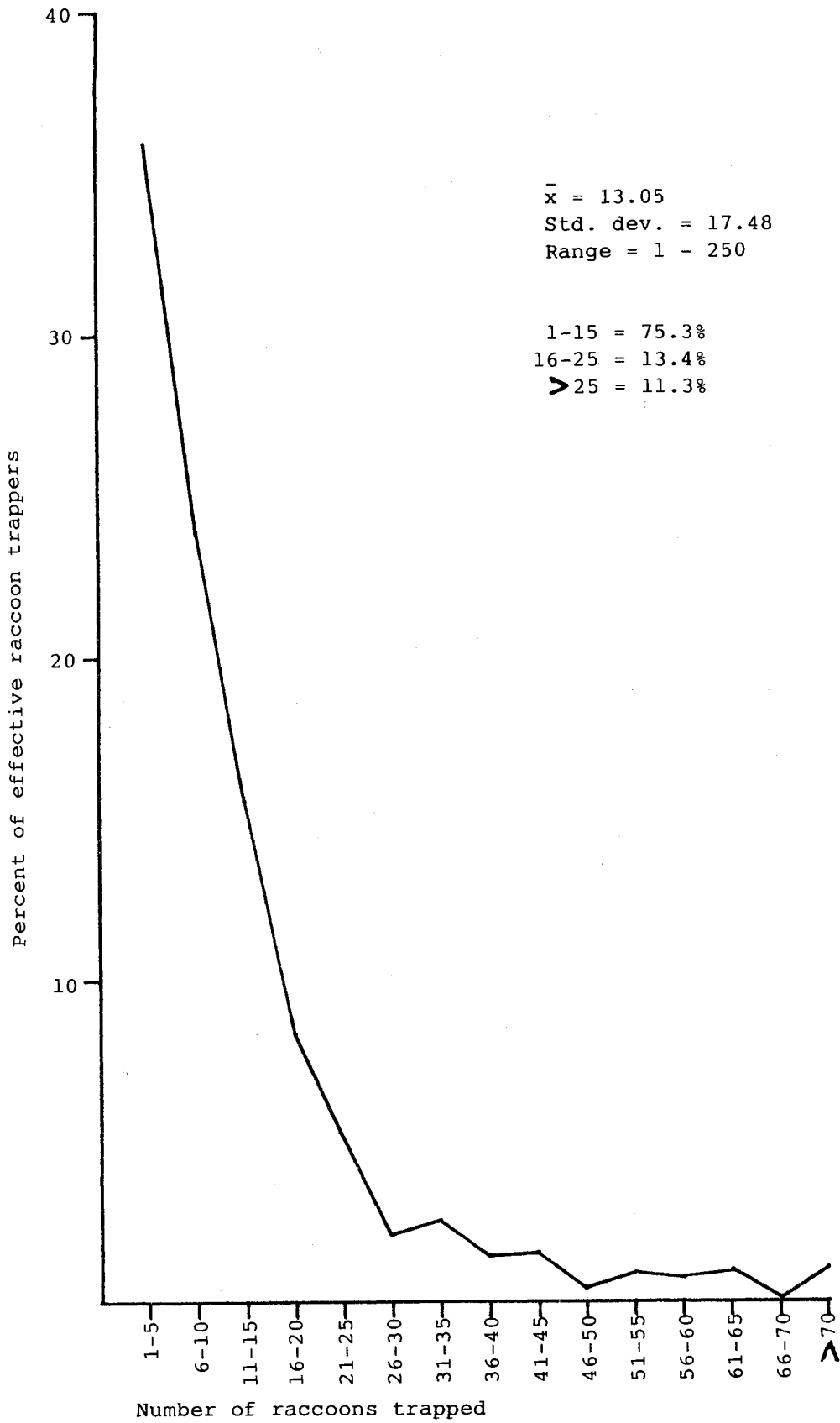


Figure 12. Distribution of number of raccoons trapped per effective raccoon trapper in Illinois, 1984-85 season (n = 727).

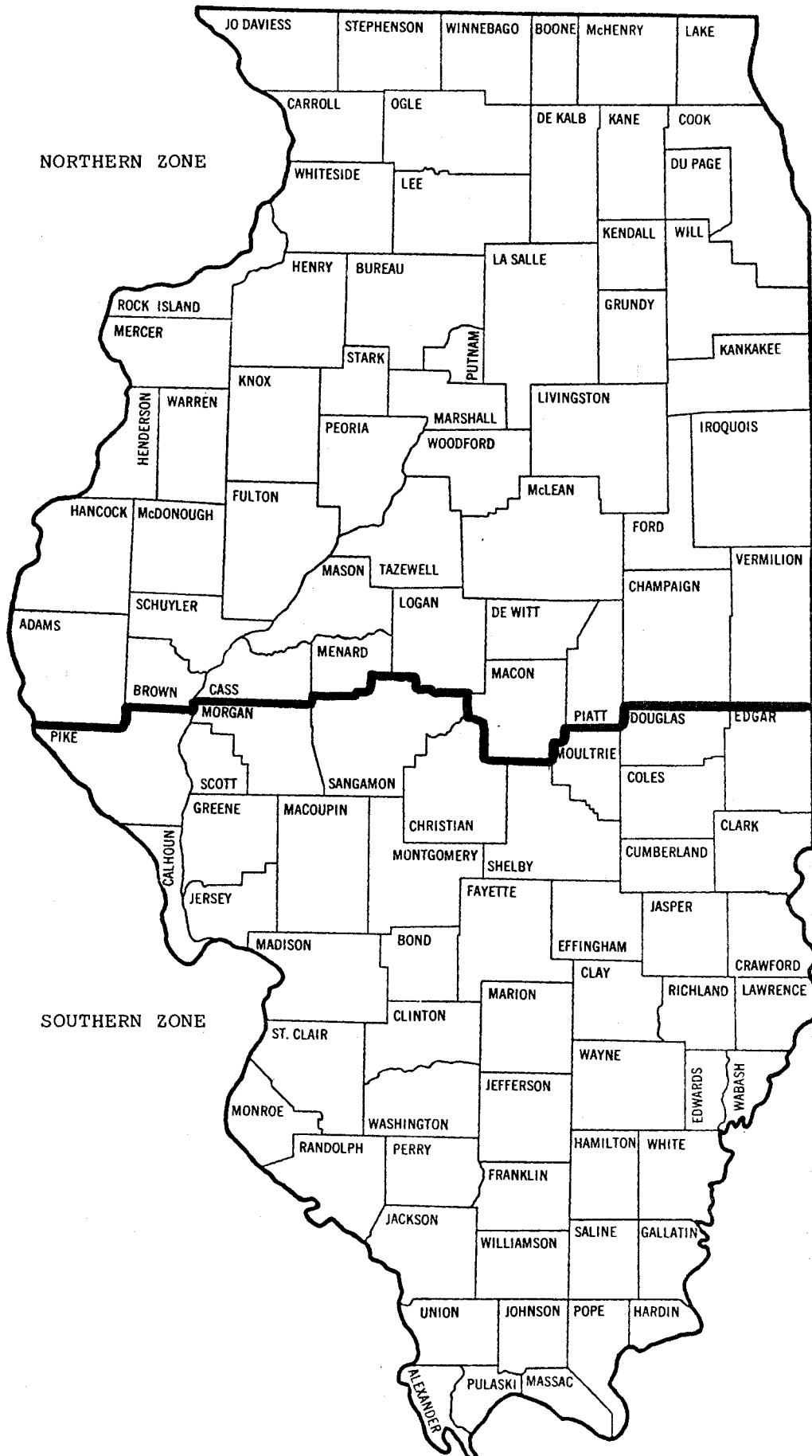


Figure 13. Existing furbearer management zones (based on county boundaries) used to prepare 1979-80 through 1984-85 season data summaries.

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