

JOB COMPLETION REPORT
SURVEYS AND INVESTIGATIONS PROJECTS

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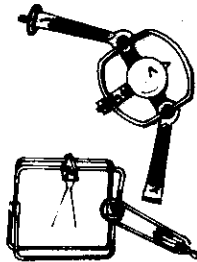
Federal Aid Project No. W-49-R(28)

Study XV: Wildlife Harvests

Job No. 4: Trapper harvest survey, 1980-81

By

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JOB COMPLETION REPORT

SURVEYS AND INVESTIGATIONS PROJECTS

STATE OF ILLINOIS

PROJECT NO. W-49-R-28

STUDY XV

JOB NO. 4

STUDY XV: Wildlife Harvests

JOB NO. 4: Trapper harvest survey, 1980-81

ABSTRACT: A stratified random sample of 1,300 persons who purchased 1980 series resident trapping licenses in Illinois was surveyed after the trapping season. The licensees were contacted by first class mail in 3 mailings. Questionnaires were deliverable to 1,297 (99.77%) recipients from which 1,046 useable replies were received (80.65% return). Of these, 89.67% were active, i.e. set 1 or more traps during the season. Only 2.24% of the active trappers were ineffective, i.e. caught nothing.

The 1980-81 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, 3) for the 2 furbearer management zones currently in use, and 4) for 3 alternative furbearer management zones. 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) 14,171 (474,445), mink (Mustela vison) 9,506 (29,754), raccoon (Procyon lotor) 14,344 (136,842), opossum (Didelphis marsupialis) 8,462 (37,741), red fox (Vulpes vulpes) 3,415 (9,767), gray fox (Urocyon cinereoargenteus) 2,637 (5,643), beaver (Castor canadensis) 2,999 (11,246), striped skunk (Mephitis mephitis) 4,552 (14,293), weasel (Mustela frenata, M. nivalis) 323 (362), and coyote (Canis latrans) 1,917 (5,713).

The average trapper had traps set for 24.83 days (or nights). Only 11.11% of the individuals who responded indicated they were members of a trapping club or organization. Private land was utilized by 96.44% of all trappers, 6.16% trapped on lands owned by municipalities, and 2.60% and 5.10% set traps on federal and state-owned lands, respectively. The majority of effective muskrat trappers (58.10%) caught 20 or fewer muskrats during the season. Most effective raccoon trappers (86.51%) harvested from 1 to 15 raccoons for the entire season and 92.20% trapped 25 or less. Trappers sold 97.86% of their 1980-81 catch of which 4.60% was sold out-of-state. An accidental catch rate of 2.80% was reported. 28.50% of the licensed trappers also hunted furbearers, primarily raccoons. The harvest of pelts by hunting trappers amounted to 6.50% of the total trapped catch in the sample.

JOB COMPLETION REPORT

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STATE OF ILLINOIS

PROJECT NO.: W-49-R-28

STUDY XV

JOB NO. 4

STUDY XV: Wildlife Harvests

JOB NO. 4: Trapper harvest survey, 1980-81

OBJECTIVE: To collect information on the annual resident 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 5 resident trapping licenses in the 1980 series (total sales estimate 19,845 - 1 July 1981) (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 1973-77 trapping license sales was drawn. The size of the sub-sample was set at 1,300 since this quantity would result in 1,000 to 1,100 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 2 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 (15.0¢) was used for all mailings.

Questionnaires were returned via business reply permit printed on the back of the form. Those received were checked for useability, and the respondents were initially placed into 1 of 2 categories: inactive - those that did not set traps for furbearers during the 1980-81 seasons; active - those that did set 1 or more traps for furbearers during the 1980-81 seasons. Active trappers were further classified as: effective - those who caught 1 or more furbearers of the species in question, or ineffective - those who did not catch any furbearers. Next, the county trapped in most, non-target catches, 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. David Spoor, 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:

1980-81 Trapping Seasons

The 1980-81 fur-bearing mammal trapping seasons varied from 30 to 106 days in length (Table 1). The seasons for all species except beaver, red fox, gray fox, and coyote were 45 days long with the northern management zone opening 10 days before the southern management zone (Fig. 8). Beaver trapping season was 96 or 106 days in length and opened simultaneously with all other species except fox and coyote. Red fox, gray fox, and coyote could be legally trapped for 30 days statewide. No bag limits were in effect for any furbearer. Special regulations prohibited beaver trapping in Cook County and reduced the length of the beaver season along the Mississippi River from Interstate 80 north to the Wisconsin state line.

1980-81 Trapper Mail Survey

The initial mailing of 1,300 questionnaires was made on 20 January 1981. The 2 follow-up mailings to non-respondents were made on 19 February (744) and 19 March (425) and closed out on 20 April 1981. Approximately 2 days preparation was required for each mailing.

A total of 1,297 (99.77%) licensees in the 1980-81 survey sample was reached by the Postal Service via first class mail. The 3 remaining questionnaires were returned as undeliverable. There were 1,046 useable replies received from the licensees contacted, representing an 80.65% response on the number delivered. Of these respondents, 938 (89.67%) reported that they set 1 or more traps for furbearers during the season and were classified as active. A total of 917 (97.76%) active trappers were effective, i.e. caught 1 or more furbearers, and the remaining 21 (2.24%) were ineffective, i.e. caught nothing.

a. Number of days trapped

Active trappers had traps set an average of 24.83 days (or nights) during the 1980-81 season (Fig. 9). The maximum number of days a trapper could have legally trapped was 106. However, only 1.0% of the respondents stated they had traps set for over 45 days, and 26.2% trapped over 30 days (Fig. 9). The vast majority of trapping activity appears to be concentrated during the initial 30 days of the muskrat, mink, and raccoon seasons. In 1979-80, Illinois trappers had traps set an average of 21.19 days during a 111-day season (Hubert 1980a). The average number of days trapped in 1978-79 was 24.11 (Hubert 1980b).

b. Trapper organization membership

Illinois trappers have a low rate of participation in trapper organizations such as Fur-takers of America, National Trappers Association, and the Illinois Trappers Association. Only 11.11% of the individuals who responded (n = 1,035) indicated they belonged to a trapping club or organization. Evidently, most Illinois trappers believe the cost of organization membership outweighs the benefits received in spite of high fur prices and ever-increasing anti-trapping sentiment.

c. Land ownership

The private lands of Illinois provide the bulk of trapping opportunity for resident trappers. Of the 1,039 persons who reported the type(s) (ownership) of land trapped, 1,002 (96.44%) utilized private land, 27 (2.60%) used federal land, 53 (5.10%) used state land, and 64 (6.16%) set traps on lands owned by municipalities such as cities or counties. This distribution of trapping activity is not surprising since over 95% of Illinois is in private ownership.

d. Trapper harvest summary

A statewide summary for the 10 species of furbearers surveyed in 1980-81 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 the 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 to 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 1 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 1980-81, effective raccoon trappers were the most numerous and their projected number varied by only $\pm 3.83\%$. The 95% confidence interval projections for less numerous mink trappers varied by $\pm 6.45\%$ and for uncommon weasel trappers by $\pm 47.99\%$.

e. Distribution of harvest among effective trappers

Muskrat and raccoon were the 2 most important furbearers trapped during the 1980-81 season in terms of number of effective trappers, average season catch, and total harvest (Table 2). The reported number of muskrats harvested by 747 effective muskrat trappers ranged from 1 to 450 and averaged 33.48 (Tables 2, 13, 14, Fig. 10). Approximately 73% of these trappers took less than the average catch (Fig. 10). During the season, 58.10% harvested 20 or fewer muskrats and 93.44% caught 100 or less. All values are similar to those obtained in the 1979-80 survey (Hubert 1980a). Relatively few trappers are extremely successful at catching muskrats. Of the effective trappers who responded, 147 (19.68%) stated their catch averaged 1 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 756 effective raccoon trappers who reported averaged 9.54 and ranged from 1 to 200 (Tables 2, 13, 14, Fig. 11). Less than the average season catch was taken by 69.58% of these trappers (Fig. 11). For the entire season, 86.51% harvested 15 or fewer raccoons and 92.20% trapped 25 or less. Only 15 (1.98%) of the effective raccoon trappers reported making an average daily catch of 1 or more raccoons throughout the season.

The harvest of the other 8 open season furbearers was distributed among effective trappers much like the muskrat and raccoon harvests (Table 15). For 5 of these species, less than 12% of the effective trappers made season catches exceeding 5 pelts. The exceptions were: effective mink trappers - 12.78% of these individuals trapped more than 5 mink during the season; effective opossum trappers - 22.42% trapped more than 5 opossums during the season; and effective beaver trappers - 16.46% caught more than 5 beaver during the season.

The above data emphasize the inapplicability of bag limits (both daily and seasonal) to furbearer trapping. 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 harvests because of their goal-setting effect.

f. Pelt sales

Trappers sold an estimated 97.86% of their catch during 1980-81. The previous season (1979-80), 97.98% of all trapped pelts were sold (Hubert 1980a). The portion of each species sold ranged from a low of 29.33% for striped skunk to a high of 99.77% for muskrat (Table 2). The fraction of pelts sold in Illinois and out-of-state also varied among species (Table 16). Overall, 95.40% of the marketed portion of the trapped catch was sold in Illinois and 4.60% out-of-state. Hubert (1980a) found that Illinois trappers sold 5.66% of their pelts outside the state in 1979-80. Resident trappers sold an average of 4.20% of their pelts out-of-state during the last 4 seasons (Hubert 1978, 1980a, 1980b, this study).

g. Non-target catches

Accidental catches were reported by 312 (29.97%) of all trappers who responded to the 1980-81 survey (Table 17). In comparison, 33.26% of the active trappers made non-target catches. Trappers making accidental catches averaged 3.41 for the year. The estimated total number of non-target animals caught by trappers during the season was 20,321. As stated earlier, the estimated total furbearer catch by trappers was 725,806 (Table 2). Therefore, the accidental catch rate was 2.80% or 1 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 2.67%. Many respondents indicated that some or all of the animals they accidentally captured were released. During the last 4 seasons, resident trappers had an average accidental catch rate of 2.80% (Hubert 1978, 1980a, 1980b, this study).

h. Fur hunting by trappers

A total of 269 (28.50%) trappers reported they hunted furbearers with gun and/or dogs in 1980-81 (Table 18). Their total hunting harvest was 2,231 pelts or an average of 8.29 per hunting trapper. This is equivalent to 6.50% of the total trapped catch in the sample. The raccoon was hunted by more trappers than any other species. Next in popularity was the opossum. From 1977-78 through 1980-81, an average of 26.87% of the trappers in Illinois also hunted furbearers (Hubert 1978, 1980a, 1980b, this study). Sampson (1973) reported 33.6% of the trappers in Missouri were also fur hunters. Obviously, there is a great deal of overlap between the 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 1980a) and 1980-81 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 under the 2-zone system (Fig. 12) are nearly identical to the zones employed for regulatory management in 1979-80 (Hubert 1980a) and 1980-81 (Fig. 8). The northern, central, and southern zones listed under the 3-zone system (Fig. 13) represent alternate management zones which potentially could be utilized in the future if a need develops. Dividing lines for the latter 3 zones follow county boundaries along the paths of Interstate Routes 70 and 80.

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.

LITERATURE CITED:

Cochran, W. G. 1953. Sampling techniques, 2nd ed. Wiley and Sons, New York. 413pp.

Hubert, G. F., Jr. 1978. Trapper harvest survey, 1977-78, Illinois Dept. of Conservation P-R Proj. Rep. W-49-R-25, Study II, Job 4. 36pp.

_____. 1980a. Trapper harvest survey, 1979-80. Illinois Dept. of Conservation P-R Proj. Rep. W-49-R-27, Study XV, Job 4. 36pp.

_____. 1980b. Trapper harvest survey, 1978-79. Illinois Dept. of Conservation P-R Proj. Rep. W-49-R-26, Study II, Job 4. 36pp.

Sampson, F. W. 1973. Fur harvest survey, 1972-73. Missouri Dept. of Conservation P-R Proj. Rep. W-13-R-28, Study X, Job 1. 16pp.

Snedecor, G. W. and W. G. Cochran. 1967. Statistical methods, 6th ed. Iowa State Univ. Press, Ames. 593pp.

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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GH:gh

Table 1. Illinois fur-bearing mammal trapping seasons for 1980-81.

Species	Trapping season	
	Northern zone	Southern zone
Muskrat, Mink, Raccoon, Opossum, Striped Skunk, Weasel	15 Nov - 29 Dec (45) ^a	25 Nov - 8 Jan (45)
Beaver	15 Nov - 28 Feb (106)	25 Nov - 28 Feb (96)
Red Fox, Gray Fox, Coyote	30 Nov - 29 Dec (30)	30 Nov - 29 Dec (30)

^a Numbers in parentheses are season lengths in days.

Table 2. Summary of statewide data from post-season mail survey of Illinois resident trappers, 1980-81 season (n = 1,046).

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	14,171	71.41	33.48	474,445	99.77	473,354
Mink	9,506	47.90	3.13	29,754	99.30	29,546
Raccoon	14,344	72.28	9.54	136,842	99.65	136,363
Opossum	8,462	42.64	4.46	37,741	92.50	34,910
Red fox	3,415	17.21	2.86	9,767	99.44	9,712
Gray fox	2,637	13.29	2.14	5,643	99.61	5,621
Beaver	2,999	15.11	3.75	11,246	96.44	10,846
Striped skunk	4,552	22.94	3.14	14,293	29.33	4,192
Weasel	323	1.63	1.12	362	75.00	272
Coyote	1,917	9.66	2.98	5,713	95.24	5,441

^a n = 944.

Table 3. Summary of muskrat trapper and harvest data for wildlife management units in Illinois, 1980-81, from post-season resident trapper mail survey (n = 747).

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	1,992 (14.06) ^b	21.19	58.57	116,671 (24.59) ^b	1,241.31
Northeast Moraine	1,100 (7.76)	13.30	55.98	61,578 (12.98)	744.41
Mississippi Border-North	853 (6.02)	10.87	35.51	30,290 (6.39)	385.96
Mississippi Border-South	1,613 (11.38)	11.80	27.36	44,132 (9.30)	322.72
Western Prairie/Forest	1,328 (9.37)	9.21	19.30	25,630 (5.40)	177.73
Central Sand Prairie	323 (2.28)	7.79	35.76	11,550 (2.43)	278.51
Grand Prairie	4,155 (29.32)	7.89	32.78	136,201 (28.70)	258.79
Southern Plain	1,954 (13.79)	8.24	17.01	33,238 (7.01)	140.09
Wabash Border	588 (4.15)	8.72	16.00	9,408 (1.98)	139.54
Shawnee Hills	265 (1.87)	5.08	21.71	5,753 (1.22)	110.30
Statewide	14,171(100.00)	9.70	33.48	474,445(100.00)	324.79

^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, 1980-81, from post-season resident trapper mail survey (n = 501).

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	1,252 (13.17) ^b	13.32	2.70	3,380 (11.37) ^b	35.96
Northeast Moraine	759 (7.98)	9.18	4.35	3,302 (11.11)	39.92
Mississippi Border-North	474 (4.99)	6.04	2.40	1,138 (3.83)	14.50
Mississippi Border-South	1,139 (11.98)	8.33	3.05	3,474 (11.69)	25.40
Western Prairie/Forest	892 (9.38)	6.19	2.45	2,185 (7.34)	15.15
Central Sand Prairie	190 (2.00)	4.58	3.40	646 (2.17)	15.58
Grand Prairie	2,865 (30.14)	5.44	3.38	9,684 (32.57)	18.40
Southern Plain	1,385 (14.57)	5.84	2.71	3,753 (12.64)	15.82
Wabash Border	322 (3.39)	4.78	3.24	1,043 (3.51)	15.47
Shawnee Hills	228 (2.40)	4.37	4.92	1,122 (3.77)	21.51
Statewide	9,506(100.00)	6.51	3.13	29,754(100.00)	20.37

^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, 1980-81, from post-season resident trapper mail survey (n = 756).

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	1,670 (11.64) ^b	17.77	10.51	17,552 (12.82) ^b	186.74
Northeast Moraine	987 (6.88)	11.93	12.67	12,505 (9.13)	151.17
Mississippi Border-North	968 (6.75)	12.33	15.98	15,469 (11.30)	197.11
Mississippi Border-South	1,575 (10.98)	11.52	9.27	14,600 (10.66)	106.76
Western Prairie/Forest	1,594 (11.11)	11.05	9.27	14,776 (10.80)	102.46
Central Sand Prairie	417 (2.91)	10.06	13.73	5,725 (4.19)	138.05
Grand Prairie	4,117 (28.70)	7.82	8.15	33,554 (24.50)	63.76
Southern Plain	1,916 (13.36)	8.08	6.93	13,278 (9.70)	55.96
Wabash Border	759 (5.29)	11.26	7.48	5,677 (4.14)	84.20
Shawnee Hills	341 (2.38)	6.54	11.06	3,771 (2.76)	72.30
Statewide	14,344(100.00)	9.82	9.54	136,842(100.00)	93.68

^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, 1980-81, from post-season resident trapper mail survey (n = 446).

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	493 (5.83) ^b	5.25	2.58	1,272 (3.37)	13.53
Northeast Moraine	550 (6.50)	6.65	6.41	3,526 (9.35)	42.63
Mississippi Border-North	493 (5.83)	6.28	3.77	1,859 (4.92)	23.69
Mississippi Border-South	1,271 (15.02)	9.29	5.84	7,423 (19.65)	54.28
Western Prairie/Forest	968 (11.44)	6.71	3.92	3,795 (10.05)	26.32
Central Sand Prairie	284 (3.36)	6.85	4.40	1,250 (3.32)	30.14
Grand Prairie	1,917 (22.65)	3.64	3.53	6,767 (17.94)	12.86
Southern Plain	1,557 (18.39)	6.56	4.46	6,944 (18.39)	29.27
Wabash Border	645 (7.62)	9.57	4.65	2,999 (7.94)	44.48
Shawnee Hills	284 (3.36)	5.44	6.73	1,911 (5.07)	36.64
Statewide	8,462(100.00)	5.79	4.46	37,741(100.00)	25.84

^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, 1980-81, from post-season resident trapper mail survey (n = 180).

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	436 (12.78) ^b	4.64	2.43	1,059 (10.87) ^b	11.27
Northeast Moraine	341 (10.00)	4.12	2.94	1,003 (10.29)	12.13
Mississippi Border-North	190 (5.56)	2.42	1.90	361 (3.69)	4.60
Mississippi Border-South	209 (6.11)	1.53	2.91	608 (6.21)	4.45
Western Prairie/Forest	341 (10.00)	2.36	1.44	491 (5.05)	3.40
Central Sand Prairie	114 (3.33)	2.75	2.67	304 (3.11)	7.33
Grand Prairie	1,044 (30.56)	1.98	4.36	4,552 (46.60)	8.65
Southern Plain	493 (14.44)	2.08	1.85	912 (9.32)	3.84
Wabash Border	114 (3.33)	1.69	1.17	133 (1.36)	1.97
Shawnee Hills	133 (3.89)	2.55	2.57	342 (3.50)	6.56
Statewide	3,415 (100.00)	2.34	2.86	9,767 (100.00)	6.69

^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 8. Summary of gray fox trapper and harvest data for wildlife management units in Illinois, 1980-81, from post-season resident trapper mail survey (n = 139).

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	303 (11.51) ^b	3.22	2.13	645 (11.45)	6.86
Northeast Moraine	247 (9.35)	2.99	2.31	571 (10.10)	6.90
Mississippi Border-North	38 (1.44)	0.48	1.50	57 (1.01)	0.73
Mississippi Border-South	436 (16.55)	3.19	2.39	1,042 (18.52)	7.62
Western Prairie/Forest	209 (7.91)	1.45	1.73	362 (6.40)	2.51
Central Sand Prairie	152 (5.76)	3.67	2.13	324 (5.72)	7.81
Grand Prairie	607 (23.02)	1.15	2.34	1,420 (25.25)	2.70
Southern Plain	512 (19.42)	2.16	1.89	968 (17.17)	4.08
Wabash Border	57 (2.16)	0.85	1.33	76 (1.35)	1.13
Shawnee Hills	76 (2.88)	1.46	2.25	171 (3.03)	3.28
Statewide	2,637(100.00)	1.81	2.14	5,643(100.00)	3.86

^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, 1980-81, from post-season resident trapper mail survey (n = 158).

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	436 (14.56) ^b	4.64	2.43	1,059 (9.46) ^b	11.27
Northeast Moraine	190 (6.33)	2.30	3.00	570 (5.07)	6.89
Mississippi Border-North	209 (6.96)	2.66	5.18	1,083 (9.63)	13.80
Mississippi Border-South	341 (11.39)	2.49	5.33	1,818 (16.21)	13.29
Western Prairie/Forest	361 (12.03)	2.50	2.11	762 (6.76)	5.28
Central Sand Prairie	95 (3.16)	2.29	4.60	437 (3.88)	10.54
Grand Prairie	911 (30.38)	1.73	4.04	3,680 (32.77)	6.99
Southern Plain	266 (8.86)	1.12	3.36	894 (7.94)	3.77
Wabash Border	38 (1.27)	0.56	4.50	171 (1.52)	2.54
Shawnee Hills	152 (5.06)	2.91	5.00	760 (6.76)	14.57
Statewide	2,999(100.00)	2.05	3.75	11,246(100.00)	7.70

^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, 1980-81, from post-season resident trapper mail survey (n = 240).

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	645 (14.17) ^b	6.86	3.18	2,051 (14.32) ^b	21.82
Northeast Moraine	304 (6.67)	3.68	4.13	1,256 (8.75)	15.18
Mississippi Border-North	285 (6.25)	3.63	2.07	590 (4.11)	7.52
Mississippi Border-South	379 (8.33)	2.77	2.40	910 (6.37)	6.65
Western Prairie/Forest	588 (12.91)	4.08	4.13	2,428 (16.98)	16.84
Central Sand Prairie	208 (4.58)	5.02	3.27	680 (4.78)	16.40
Grand Prairie	1,346 (29.58)	2.56	3.21	4,321 (30.24)	8.21
Southern Plain	645 (14.17)	2.72	2.91	1,877 (13.13)	7.91
Wabash Border	76 (1.67)	1.13	1.25	95 (0.66)	1.41
Shawnee Hills	76 (1.67)	1.46	1.25	95 (0.66)	1.82
Statewide	4,552(100.00)	3.12	3.14	14,293(100.00)	9.78

^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, 1980-81, from post-season resident trapper mail survey (n = 17).

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	19 (5.88) ^b	0.20	1.00	19 (5.26) ^b	0.20
Northeast Moraine	76 (23.53)	0.92	1.00	76 (21.05)	0.92
Mississippi Border-North	38 (11.76)	0.48	1.00	38 (10.53)	0.48
Mississippi Border-South	19 (5.88)	0.14	2.00	38 (10.53)	0.28
Western Prairie/Forest	-	-	-	-	-
Central Sand Prairie	-	-	-	-	-
Grand Prairie	76 (23.53)	0.14	1.00	76 (21.05)	0.14
Southern Plain	57 (17.66)	0.24	1.33	76 (21.05)	0.32
Wabash Border	38 (11.76)	0.56	1.00	38 (10.53)	0.56
Shawnee Hills	-	-	-	-	-
Statewide	323(100.00)	0.22	1.12	362(100.00)	0.25

^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, 1980-81, from post-season resident trapper mail survey (n = 101).

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	190 (9.90) ^b	2.02	1.60	304 (5.32) ^b	3.23
Northeast Moraine	-	-	-	-	-
Mississippi Border-North	133 (6.93)	1.69	3.43	456 (7.97)	5.81
Mississippi Border-South	265 (13.86)	1.94	2.43	644 (11.30)	4.71
Western Prairie/Forest	284 (14.86)	1.97	1.60	454 (7.97)	3.15
Central Sand Prairie	76 (3.96)	1.83	1.75	133 (2.32)	3.21
Grand Prairie	323 (16.83)	0.61	7.12	2,300 (40.20)	4.37
Southern Plain	323 (16.83)	1.36	1.59	514 (8.97)	2.17
Wabash Border	152 (7.92)	2.25	3.13	476 (8.31)	7.06
Shawnee Hills	171 (8.91)	3.28	2.56	438 (7.64)	8.40
Statewide	1,917(100.00)	1.31	2.98	5,713(100.00)	3.91

^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 1980-81 post-season mail survey of Illinois resident trappers (n = 1,046).

Species	Total effective trappers	Percent effective trappers	Total season catch
Muskrat	747	71.41	25,010
Mink	501	47.90	1,566
Raccoon	756	72.28	7,215
Opossum	446	42.64	1,990
Red fox	180	17.21	515
Gray fox	139	13.29	297
Beaver	158	15.11	592
Striped skunk	240	22.94	754
Weasel	17	1.63	19
Coyote	101	9.66	301

Table 14. Estimated number of effective trappers, average season catch, and total trapper harvest by species in Illinois for 1980-81 season based on post-season trapper mail survey (n = 1,046).

Species	Estimated number of effective trappers	Estimated average season catch	Estimated total harvest
Muskrat	14,171 ± 554 ^a	33.48 ± 3.66 ^a	474,445 ± 56,148 ^a
Mink	9,506 ± 613	3.13 ± 0.33	29,754 ± 3,694
Raccoon	14,344 ± 549	9.54 ± 1.10	136,842 ± 16,924
Opossum	8,462 ± 607	4.46 ± 0.63	37,741 ± 6,050
Red fox	3,415 ± 463	2.86 ± 1.12	9,767 ± 4,136
Gray fox	2,637 ± 416	2.14 ± 0.47	5,643 ± 1,551
Beaver	2,999 ± 439	3.75 ± 0.73	11,246 ± 2,762
Striped skunk	4,552 ± 516	3.14 ± 0.49	14,293 ± 2,805
Weasel	323 ± 155	1.12 ± 0.16	362 ± 181
Coyote	1,917 ± 362	2.98 ± 1.71	5,713 ± 3,493

^a 95% confidence interval.

Table 15. Distribution of harvest among effective trappers for 8 species of furbearers in Illinois, 1980-81, from post-season resident trapper mail survey.

Total season catch	Percentage of effective trappers for species							
	Mink ^a (501)	Opossum (446)	Red fox (180)	Gray fox (139)	Beaver (158)	Striped skunk (240)	Weasel (17)	Coyote (101)
1	38.52	26.23	56.67	58.27	36.71	41.67	88.24	58.42
2	24.15	20.85	20.00	24.46	22.15	20.00	11.76	12.87
3	11.38	15.25	11.11	6.47	12.66	9.58	-	10.89
4	7.78	8.30	2.78	2.88	7.59	10.83	-	4.95
5	5.39	6.95	1.67	2.88	4.43	6.25	-	6.93
6	3.58	4.71	0.56	1.44	3.16	2.92	-	1.98
7	1.80	2.47	2.22	-	0.63	2.08	-	-
8	1.40	3.59	0.56	0.72	0.63	0.83	-	0.99
9	1.20	0.90	0.56	0.72	0.63	0.83	-	-
10	0.80	2.91	-	-	5.06	1.25	-	1.98
11	0.60	0.67	0.56	-	-	0.42	-	-
12	0.40	1.35	1.11	-	0.63	-	-	-
13	0.20	0.22	-	-	-	0.83	-	-
14	0.80	0.45	0.56	-	1.90	-	-	-
15	0.20	2.02	-	0.72	-	0.42	-	-
16-20	0.80	1.57	0.56	0.72	1.27	1.25	-	-
21-25	0.60	0.67	-	0.72	1.90	-	-	-
>25	0.40	0.90	1.11	-	0.63	0.83	-	0.99

^a Numbers in parentheses indicate sample size for species.

Table 16. Distribution of pelt sales by trappers for 10 species of furbearers in Illinois, 1980-81 season, from post-season resident trapper mail survey (n = 1,006).

Species	Total number of pelts sold	Total number of pelts sold in Illinois	Percent sold in Illinois	Total number of pelts sold outside of Illinois	Percent sold outside of Illinois
Muskrat	23,894	22,917	95.91	977	4.09
Mink	1,491	1,448	97.12	43	2.88
Raccoon	6,656	6,263	94.10	393	5.90
Opossum	1,725	1,628	94.38	97	5.62
Red fox	406	367	90.39	39	9.61
Gray fox	272	234	86.03	38	13.97
Beaver	523	506	96.75	17	3.25
Striped skunk	207	196	94.69	11	5.31
Weasel	12	12	100.00	0	0.00
Coyote	196	183	93.37	13	6.63
Total or Average	35,382	33,754	95.40	1,628	4.60

Table 17. Summary of non-target catches by trappers in Illinois, 1980-81 season, from post-season resident trapper mail survey (n = 1,041).

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	166	411	2.48	15.95	7,850
Dog	85	119	1.40	8.17	2,270
Squirrel	31	73	2.35	2.98	1,390
Rabbit	34	69	2.03	3.27	1,317
Rat	10	30	3.00	0.96	572
Mouse	6	20	3.33	0.58	383
Crow	35	58	1.66	3.36	1,107
Blue jay	23	57	2.48	2.21	1,088
Hawk	9	11	1.22	0.86	208
Owl	10	12	1.20	0.96	229
Bird-Unspecified	72	155	2.15	6.92	2,953
Other (e.g. ground hog, fish, frog, turtle)	18	50	2.78	1.73	954
Totals	312	1,065	3.41	29.97	20,321

Table 18. Summary of fur hunting activities of trappers in Illinois, 1980-81 season, from post-season resident trapper mail survey (n = 944).

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	201	1,790	8.91	21.29	37,645
Opossum	47	157	3.34	4.98	3,301
Red fox	30	65	2.17	3.18	1,369
Gray fox	16	27	1.69	1.69	567
Striped skunk	8	25	3.13	0.85	528
Coyote	35	167	4.77	3.71	3,512
All species	269	2,231	8.29	28.50	46,922

Table 19. Summary of muskrat trapper and harvest data for furbearer management zones in Illinois, 1979-80 and 1980-81, from post-season resident trapper mail survey (n = 730; n = 747).

Zone (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
<u>TWO ZONES</u>					
Northern (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
Southern (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
<u>THREE ZONES</u>					
Northern (1979-80)	3,272 (22.06)	15.43	50.69(+12.64)	165,820 (34.97)	781.84
(1980-81)	3,605 (25.44)	17.00	55.81(+9.23)	201,165 (42.40)	948.49
Central (1979-80)	8,533 (57.53)	9.59	29.68(+5.29)	253,259 (53.41)	284.76
(1980-81)	7,322 (51.67)	8.23	29.26(+4.93)	214,259 (45.16)	240.91
Southern (1979-80)	3,027 (20.41)	8.43	18.19(+3.45)	55,100 (11.62)	153.36
(1980-81)	3,244 (22.89)	9.03	18.19(+3.02)	59,021 (12.44)	164.28
<u>STATEWIDE</u> (1979-80)	14,832 (100.00)	10.15	31.97(+4.25)	474,179 (100.00)	324.61
(1980-81)	14,171 (100.00)	9.70	33.48(+3.66)	474,445 (100.00)	324.79

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

Table 20. Summary of mink trapper and harvest data for furbearer management zones in Illinois, 1979-80 and 1980-81, from post-season resident trapper mail survey (n = 419; n = 501).

Zone (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
<u>TWO ZONES</u>					
Northern (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
Southern (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
<u>THREE ZONES</u>					
Northern (1979-80)	1,586 (18.62)	7.48	3.32 (+0.91)	5,272 (22.35)	24.86
(1980-81)	2,391 (25.15)	11.27	3.23 (+0.69)	7,733 (25.99)	36.46
Central (1979-80)	5,141 (60.38)	5.78	2.72 (+0.39)	14,001 (59.36)	15.74
(1980-81)	4,915 (51.70)	5.53	3.12 (+0.47)	15,371 (51.66)	17.28
Southern (1979-80)	1,788 (21.00)	4.98	2.41 (+0.44)	4,314 (18.29)	12.01
(1980-81)	2,200 (23.15)	6.12	3.02 (+0.58)	6,650 (22.35)	18.51
<u>STATEWIDE</u> (1979-80)	8,515 (100.00)	5.83	2.77 (+0.31)	23,587 (100.00)	16.15
(1980-81)	9,506 (100.00)	6.51	3.13 (+0.33)	29,754 (100.00)	20.37

^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 and 1980-81, from post-season resident trapper mail survey (n = 755; n = 756).

Zone (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
<u>TWO ZONES</u>					
Northern (1979-80)	9,265 (60.40) ^a	11.32	9.86 (+1.36) ^b	91,338 (64.51) ^a	111.61
Northern (1980-81)	8,576 (59.79)	10.48	10.44 (+1.70)	89,481 (65.39)	109.34
Southern (1979-80)	6,075 (39.60)	9.46	8.27 (+1.17)	50,250 (35.49)	78.22
Southern (1980-81)	5,768 (40.21)	8.98	8.21 (+1.05)	47,361 (34.61)	73.73
<u>THREE ZONES</u>					
Northern (1979-80)	3,068 (20.00)	14.47	8.77 (+1.92)	26,902 (19.00)	126.84
Northern (1980-81)	3,150 (21.96)	14.85	10.79 (+3.20)	33,964 (24.82)	160.14
Central (1979-80)	9,083 (59.21)	10.21	9.90 (+1.35)	89,894 (63.49)	101.07
Central (1980-81)	7,873 (54.89)	8.85	9.85 (+1.45)	77,535 (56.66)	87.18
Southern (1979-80)	3,189 (20.79)	8.88	7.77 (+1.52)	24,792 (17.51)	69.00
Southern (1980-81)	3,321 (23.15)	9.24	7.63 (+1.19)	25,343 (18.52)	70.54
<u>STATEWIDE</u>					
(1979-80)	15,340 (100.00)	10.50	9.23 (+0.94)	141,588 (100.00)	96.93
(1980-81)	14,344 (100.00)	9.82	9.54 (+1.10)	136,842 (100.00)	93.68

^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 and 1980-81, from post-season resident trapper mail survey (n = 374; n = 446).

Zone (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
<u>TWO ZONES</u>					
Northern (1979-80)	3,413 (44.92) ^a	4.17	2.68 (+0.38) ^b	9,151 (33.36) ^a	11.18
Northern (1980-81)	3,832 (45.29)	4.68	3.60 (+1.12)	13,806 (36.58)	16.87
Southern (1979-80)	4,186 (55.08)	6.52	4.37 (+0.62)	18,281 (66.64)	28.46
Southern (1980-81)	4,630 (54.71)	7.21	5.17 (+0.66)	23,935 (63.42)	37.26
<u>THREE ZONES</u>					
Northern (1979-80)	955 (12.57)	4.50	2.74 (+1.02)	2,617 (9.54)	12.34
Northern (1980-81)	1,233 (14.57)	5.81	4.18 (+3.25)	5,159 (13.67)	24.32
Central (1979-80)	4,206 (55.35)	4.73	3.50 (+0.52)	14,690 (53.55)	16.52
Central (1980-81)	4,591 (54.26)	5.16	4.36 (+0.62)	20,007 (53.01)	22.50
Southern (1979-80)	2,438 (32.08)	6.79	4.16 (+0.72)	10,125 (36.91)	28.18
Southern (1980-81)	2,638 (31.17)	7.34	4.77 (+0.78)	12,575 (33.32)	35.00
<u>STATEWIDE</u> (1979-80)	7,599 (100.00)	5.20	3.61 (+0.39)	27,432 (100.00)	18.78
<u>STATEWIDE</u> (1980-81)	8,462 (100.00)	5.79	4.46 (+0.63)	37,741 (100.00)	25.84

^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 and 1980-81, from post-season resident trapper mail survey (n = 175; n = 180).

Zone (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
<u>TWO ZONES</u>					
Northern (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
Southern (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
<u>THREE ZONES</u>					
Northern (1979-80)	793 (22.29)	3.74	3.23 (+1.63)	2,560 (20.22)	12.07
(1980-81)	911 (26.67)	4.30	2.44 (+0.92)	2,219 (22.72)	10.46
Central (1979-80)	2,093 (58.86)	2.35	4.17 (+1.87)	8,717 (68.86)	9.80
(1980-81)	1,707 (50.00)	1.92	3.51 (+2.18)	5,993 (61.36)	6.74
Southern (1979-80)	670 (18.85)	1.86	2.06 (+0.49)	1,382 (10.92)	3.85
(1980-81)	797 (23.33)	2.22	1.95 (+0.50)	1,555 (15.92)	4.33
<u>STATEWIDE</u> (1979-80)	3,556 (100.00)	2.43	3.56 (+1.17)	12,659 (100.00)	8.67
(1980-81)	3,415 (100.00)	2.34	2.86 (+1.12)	9,767 (100.00)	6.69

^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 and 1980-81, from post-season resident trapper mail survey (n = 146; n = 139).

Zone (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
<u>TWO ZONES</u>					
Northern (1979-80)	1,301 (43.84) ^a	1.59	1.48 (+0.20) ^b	1,931 (32.87) ^a	2.36
Northern (1980-81)	1,271 (48.20)	1.55	2.03 (+0.60)	2,584 (45.79)	3.16
Southern (1979-80)	1,666 (56.16)	2.59	2.37 (+0.71)	3,944 (67.13)	6.14
Southern (1980-81)	1,366 (51.80)	2.13	2.24 (+0.73)	3,059 (54.21)	4.76
<u>THREE ZONES</u>					
Northern (1979-80)	589 (19.86)	2.78	1.48 (+0.33)	874 (14.88)	4.12
Northern (1980-81)	645 (24.46)	3.04	2.12 (+0.57)	1,368 (24.24)	6.45
Central (1979-80)	1,504 (50.69)	1.69	2.20 (+0.77)	3,314 (56.40)	3.73
Central (1980-81)	1,309 (49.64)	1.47	2.25 (+0.89)	2,945 (52.19)	3.31
Southern (1979-80)	874 (29.45)	2.43	1.93 (+0.42)	1,687 (28.72)	4.70
Southern (1980-81)	683 (25.90)	1.90	1.94 (+0.44)	1,330 (23.57)	3.70
<u>STATEWIDE</u> (1979-80)	2,967 (100.00)	2.03	1.98 (+0.41)	5,875 (100.00)	4.02
<u>STATEWIDE</u> (1980-81)	2,637 (100.00)	1.81	2.14 (+0.47)	5,643 (100.00)	3.86

^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 and 1980-81, from post-season resident trapper mail survey (n = 131; n = 158).

Zone (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
<u>TWO ZONES</u>					
Northern (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
Southern (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
<u>THREE ZONES</u>					
Northern (1979-80)	447 (16.79)	2.11	4.50 (+2.79)	2,011 (22.55)	9.48
(1980-81)	797 (26.58)	3.76	2.69 (+0.68)	2,147 (19.09)	10.12
Central (1979-80)	1,829 (68.70)	2.06	3.22 (+0.73)	5,891 (66.06)	6.62
(1980-81)	1,632 (54.43)	1.83	4.19 (+1.18)	6,839 (60.81)	7.69
Southern (1979-80)	386 (14.51)	1.07	2.63 (+1.33)	1,016 (11.39)	2.83
(1980-81)	570 (18.99)	1.59	3.97 (+1.45)	2,260 (20.10)	6.29
<u>STATEWIDE</u>					
(1979-80)	2,662 (100.00)	1.82	3.35 (+0.71)	8,918 (100.00)	6.11
(1980-81)	2,999 (100.00)	2.05	3.75 (+0.73)	11,246 (100.00)	7.70

^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 and 1980-81, from post-season resident trapper mail survey (n = 258; n = 240).

Zone (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
<u>TWO ZONES</u>					
Northern (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)	11.14
Southern (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
<u>THREE ZONES</u>					
Northern (1979-80)	1,300 (24.81)	6.13	3.22 (+0.58)	4,182 (26.51)	19.72
(1980-81)	1,157 (25.42)	5.46	3.59 (+1.25)	4,152 (29.05)	19.58
Central (1979-80)	3,108 (59.30)	3.49	2.95 (+0.46)	9,156 (58.04)	10.29
(1980-81)	2,655 (58.33)	2.99	3.10 (+0.63)	8,227 (57.56)	9.25
Southern (1979-80)	833 (15.89)	2.32	2.93 (+0.67)	2,437 (15.45)	6.78
(1980-81)	740 (16.25)	2.06	2.59 (+0.59)	1,914 (13.39)	5.33
<u>STATEWIDE</u> (1979-80)	5,241 (100.00)	3.59	3.01 (+0.32)	15,775 (100.00)	10.80
(1980-81)	4,552 (100.00)	3.12	3.14 (+0.49)	14,293 (100.00)	9.78

^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 and 1980-81, from post-season resident trapper mail survey (n = 16; n = 17).

Zone (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
<u>TWO ZONES</u>					
Northern (1979-80)	163 (50.00) ^a	0.20	1.00 (+0.00) ^b	163 (47.06) ^a	0.20
Northern (1980-81)	171 (52.94)	0.21	1.00 (+0.00)	171 (47.37)	0.21
Southern (1979-80)	163 (50.00)	0.25	1.13 (+0.24)	183 (52.94)	0.28
Southern (1980-81)	152 (47.06)	0.24	1.25 (+0.32)	191 (52.63)	0.30
<u>THREE ZONES</u>					
Northern (1979-80)	102 (31.25)	0.48	1.00 (+0.00)	102 (29.40)	0.48
Northern (1980-81)	114 (35.29)	0.54	1.00 (+0.00)	114 (31.58)	0.54
Central (1979-80)	122 (37.50)	0.14	1.00 (+0.00)	122 (35.30)	0.14
Central (1980-81)	133 (41.18)	0.15	1.29 (+0.36)	172 (47.37)	0.19
Southern (1979-80)	102 (31.25)	0.28	1.20 (+0.39)	122 (35.30)	0.34
Southern (1980-81)	76 (23.53)	0.21	1.00 (+0.00)	76 (21.05)	0.21
<u>STATEWIDE</u> (1979-80)	326 (100.00)	0.22	1.06 (+0.12)	346 (100.00)	0.24
<u>STATEWIDE</u> (1980-81)	323 (100.00)	0.22	1.12 (+0.16)	362 (100.00)	0.25

^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 and 1980-81, from post-season resident trapper mail survey (n = 102; n = 101).

Zone (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
<u>TWO ZONES</u>					
Northern (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
Southern (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
<u>THREE ZONES</u>					
Northern (1979-80)	203 (9.80)	0.96	1.20 (+0.26)	244 (3.33)	1.15
(1980-81)	247 (12.87)	1.16	1.46 (+0.36)	361 (6.31)	1.70
Central (1979-80)	1,240 (59.80)	1.39	4.84 (+3.61)	5,997 (81.95)	6.74
(1980-81)	949 (49.51)	1.07	4.00 (+3.42)	3,796 (66.45)	4.27
Southern (1979-80)	630 (30.40)	1.75	1.71 (+0.51)	1,077 (14.72)	3.00
(1980-81)	721 (37.62)	2.01	2.16 (+0.48)	1,556 (27.24)	4.33
<u>STATEWIDE</u> (1979-80)	2,073 (100.00)	1.42	3.53 (+2.18)	7,318 (100.00)	5.01
(1980-81)	1,917 (100.00)	1.31	2.98 (+1.71)	5,713 (100.00)	3.91

^a Numbers in parentheses are percentages of statewide total.

^b 95% confidence interval.

<p>No Postage Necessary If Mailed in the United States</p>	
	<p>BUSINESS REPLY MAIL FIRST CLASS PERMIT NO. 2706 - SPRINGFIELD, IL</p>
	<p>Postage Will Be Paid by Addressee</p>
	<p>DEPARTMENT OF CONSERVATION Wildlife Resources Division Furbearer Section 806 STRATTON BUILDING 401 SOUTH SPRING STREET SPRINGFIELD, ILLINOIS 62706</p>

<p>TO ISSUING CLERK:</p>
<p>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.</p>
<p>Thank you for your cooperation. Please note reverse side is Business Reply postal card, perforated at binding for removing.</p>
<p>MAIL IMMEDIATELY UPON SALE OF LICENSE TRAPPING (1980 SERIES)</p>
<p>Name</p>
<p>Rural Route or Street Address</p>
<p>Post Office</p>
<p>Zip Code</p>
<p>County of Residence</p>

Figure 1. Mail survey address card issued to license vendors in 1980-81 post-season trapper mail survey.

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: _____

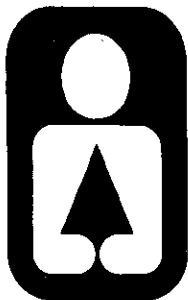
FURBEARERS CAUGHT IN TRAPS: _____

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 1980-81 post-season trapper mail survey.

Illinois



Department of Conservation

life and land together

605 WM. G. STRATTON BUILDING • 400 SOUTH SPRING STREET • SPRINGFIELD 62706
CHICAGO OFFICE – ROOM 100, 160 NO. LASALLE 60601

David Kenney, Director • James C. Helfrich, Assistant Director

1

1980-81

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 1979-80 season, there were 948,392 pelts sold by Illinois fur-takers for a value to them of \$14,717,900. We need information on the trapped portion of the catch for the 1980-81 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, #4, 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

GH:gh
Encl.

Figure 3. Letter of transmittal sent with initial mailing in 1980-81 post-season trapper mail survey.



605 STATE OFFICE BUILDING • 400 SOUTH SPRING STREET • SPRINGFIELD 62706
CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 60601

2

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." is positioned above the typed name.

George Hubert, Jr.
Furbearer Biologist
Division of Wildlife Resources

Figure 4. Letter of transmittal sent with first follow-up mailing in 1980-81 post-season trapper mail survey.



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CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 60601

3

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 cooperating 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.

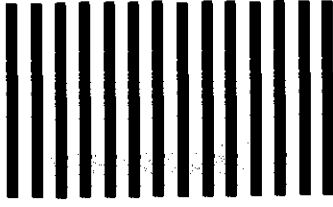
No postage is required to return the completed questionnaire card. Just fill it out and drop it in the mail. Please help us complete this survey by sending it in now!

Sincerely,

George Hubert, Jr.
Furbearer Biologist
Division of Wildlife Resources

Figure 5. Letter of transmittal sent with second follow-up mailing in 1980-81 post-season trapper mail survey.

NO
Postage Stamp
Necessary
If Mailed in the
United States



BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 2032, SPRINGFIELD, IL

POSTAGE WILL BE PAID BY ADDRESSEE

Illinois Department of Conservation
Division of Wildlife Resources — Furbearer
605 Stratton Building
401 South Spring Street
Springfield, Illinois 62706

FURBEARER TRAPPING SURVEY 1980-81 SEASON

1. Did you trap for furbearers in Illinois during the 1980-81 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. Are you a member of a trapping club or organization like Fur-taker's, N.T.A., or Ill. Trappers' Association? Yes No
5. Please check the type(s) of land you trapped on during the 1980-81 season:
Private State-owned
Federal Municipal (city or county-owned)
6. Please fill in all three blanks for each kind of furbearer you trapped in Illinois during the 1980-81 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 last season (birds, dogs, cats, etc.)? Yes No
If so, please list what kind and how many:

8. Did you also HUNT furbearers with gun and/or dogs during the 1980-81 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

Figure 6. Questionnaire form for post-season mail survey of Illinois resident trappers, 1980-81 season.

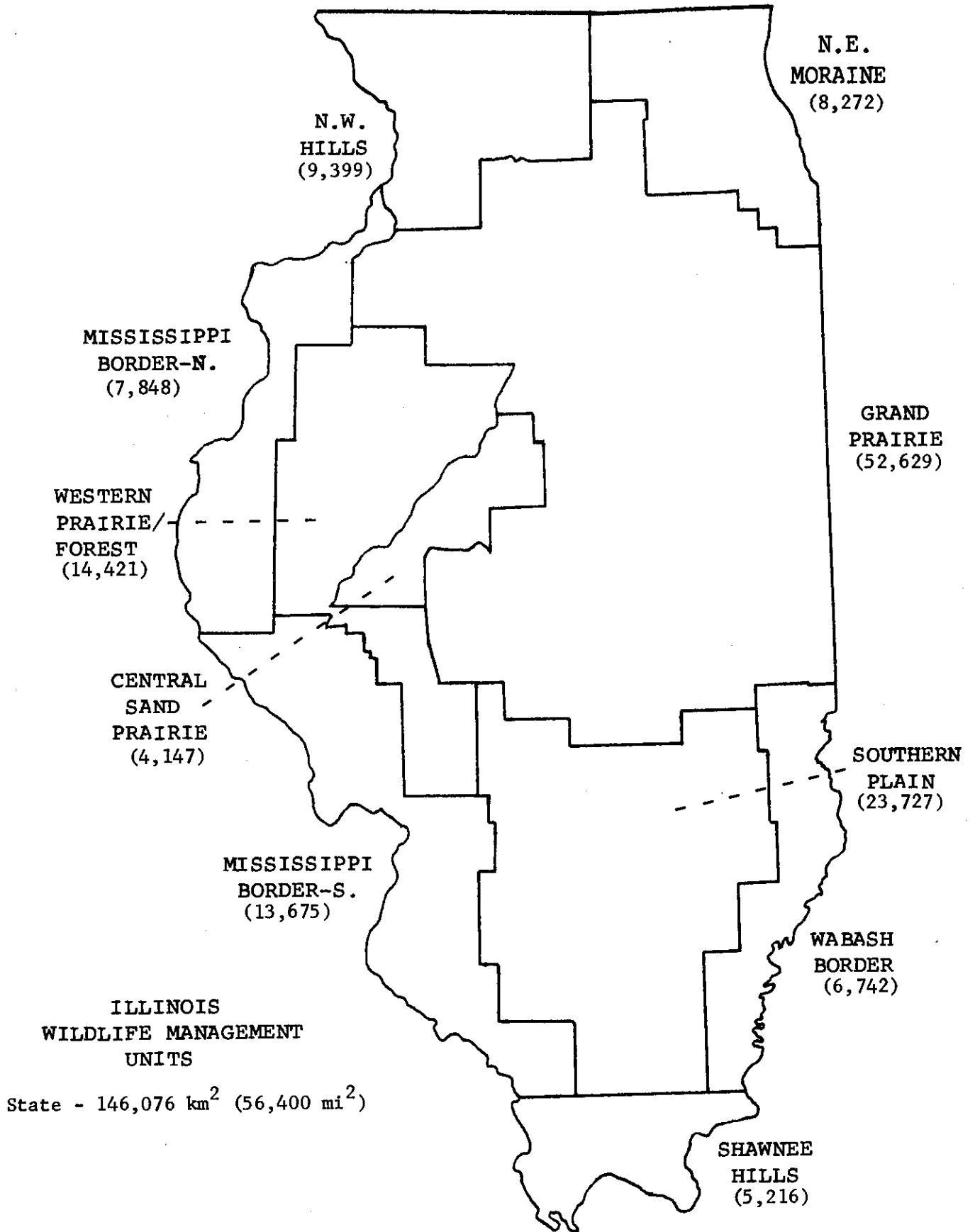


Figure 7. Area (km²) of wildlife management units in Illinois.

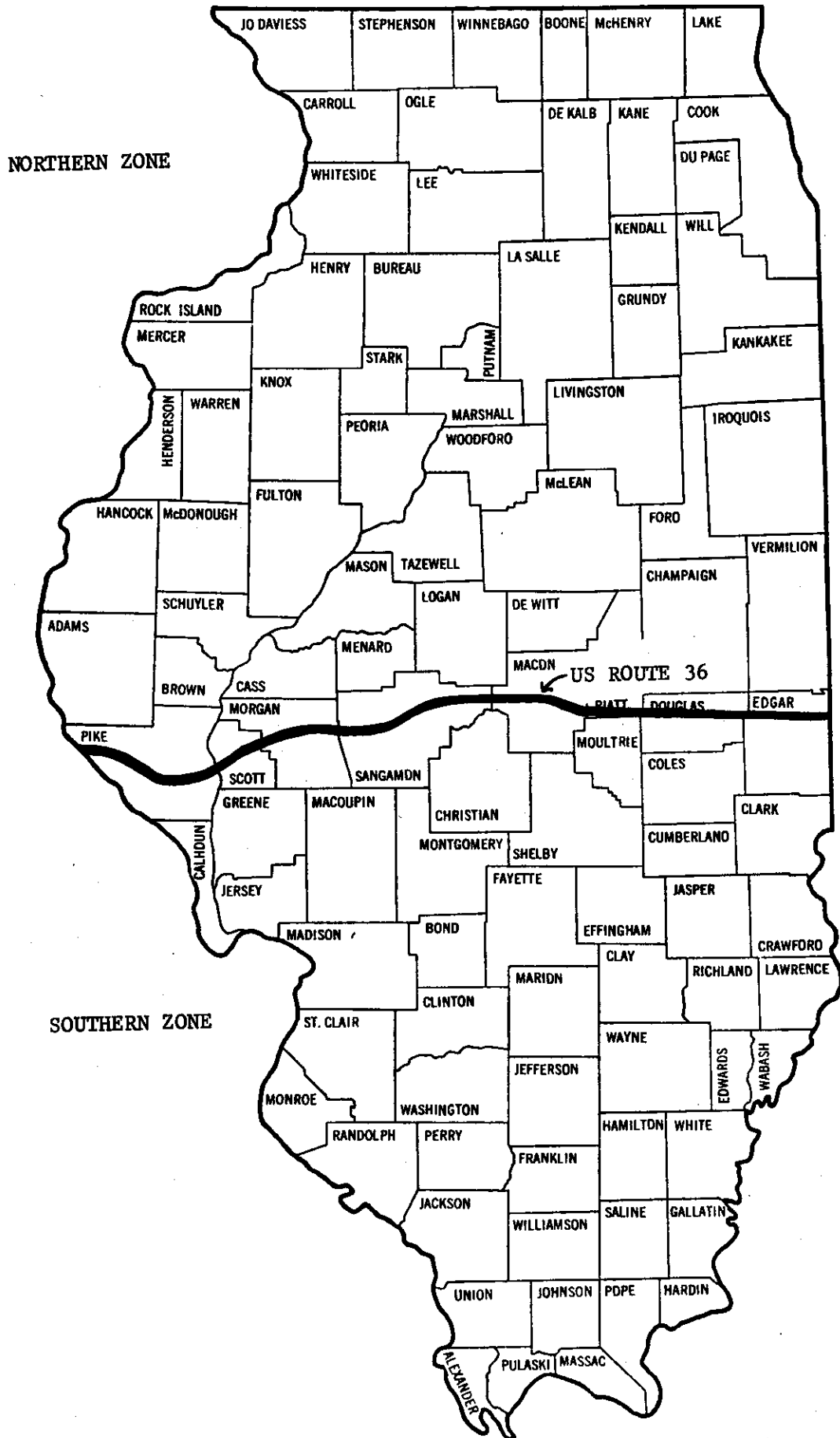


Figure 8. Furbearer management zones for the 1980-81 season.

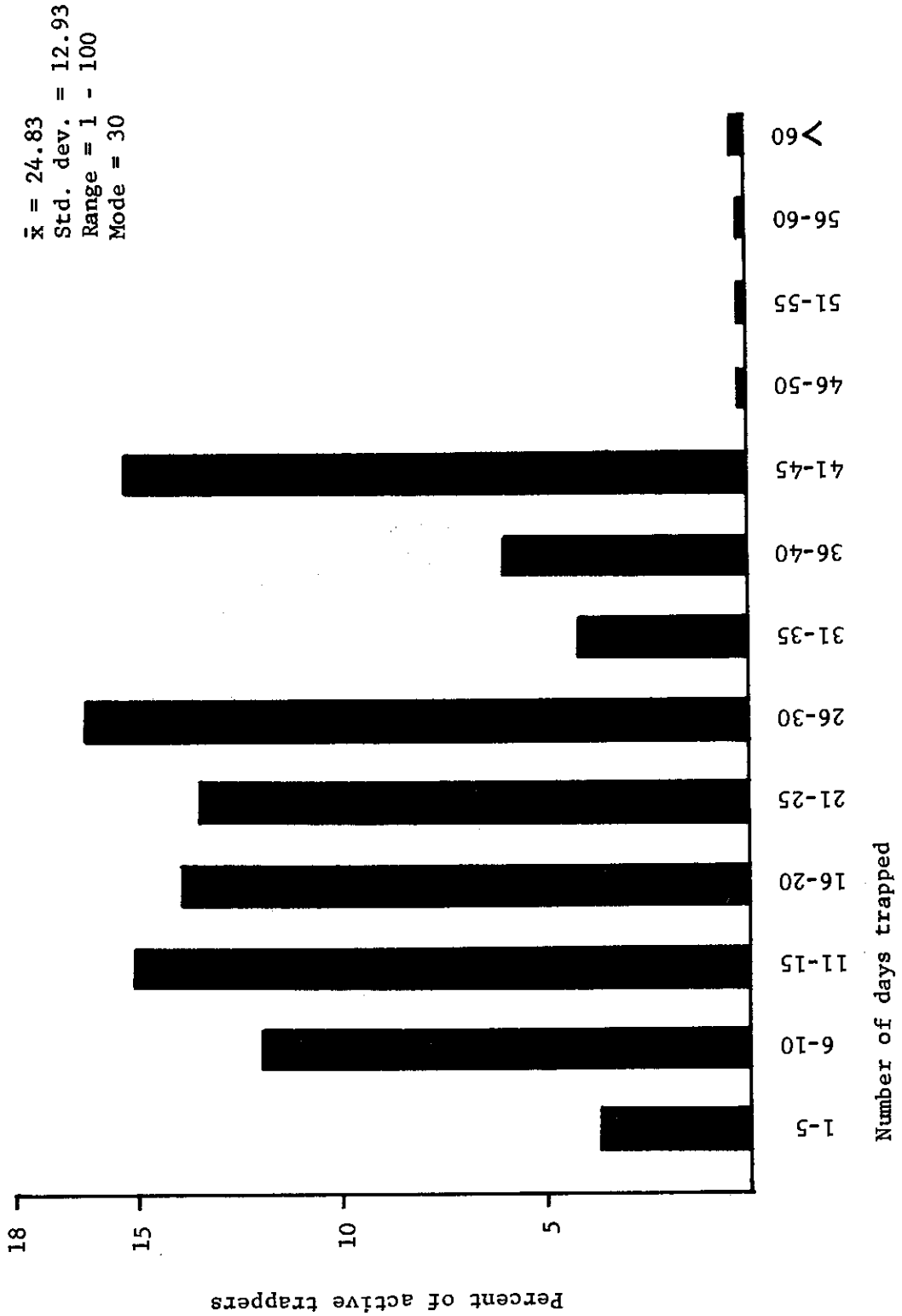


Figure 9. Distribution of days trapped per active trapper in Illinois, 1980-81 season (n = 927).

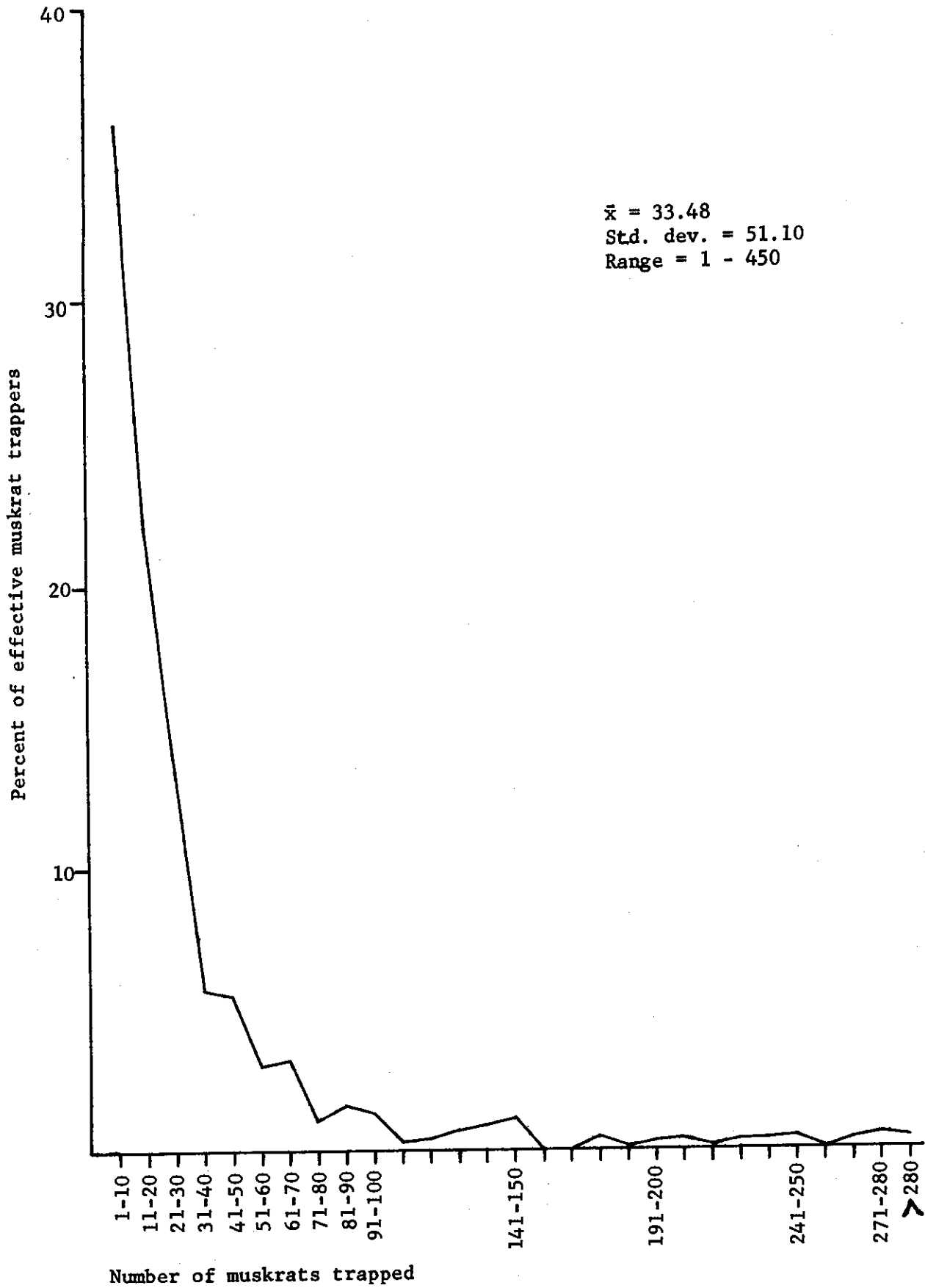


Figure 10. Distribution of muskrats trapped per effective muskrat trapper in Illinois, 1980-81 season (n = 747).

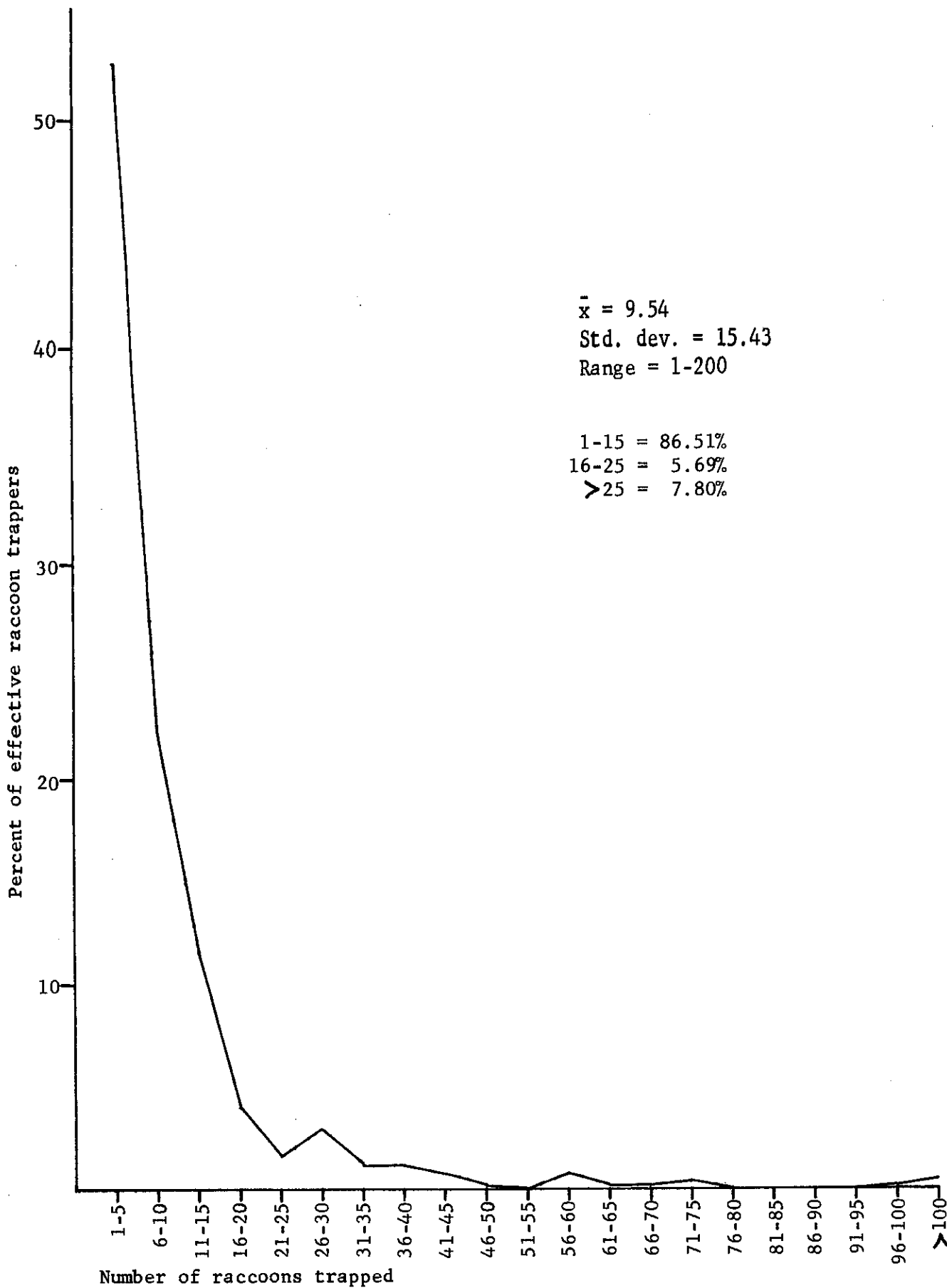


Figure 11. Distribution of number of raccoons trapped per effective raccoon trapper in Illinois, 1980-81 season (n = 756).



Figure 12. Existing furbearer management zones (based on county boundaries) used

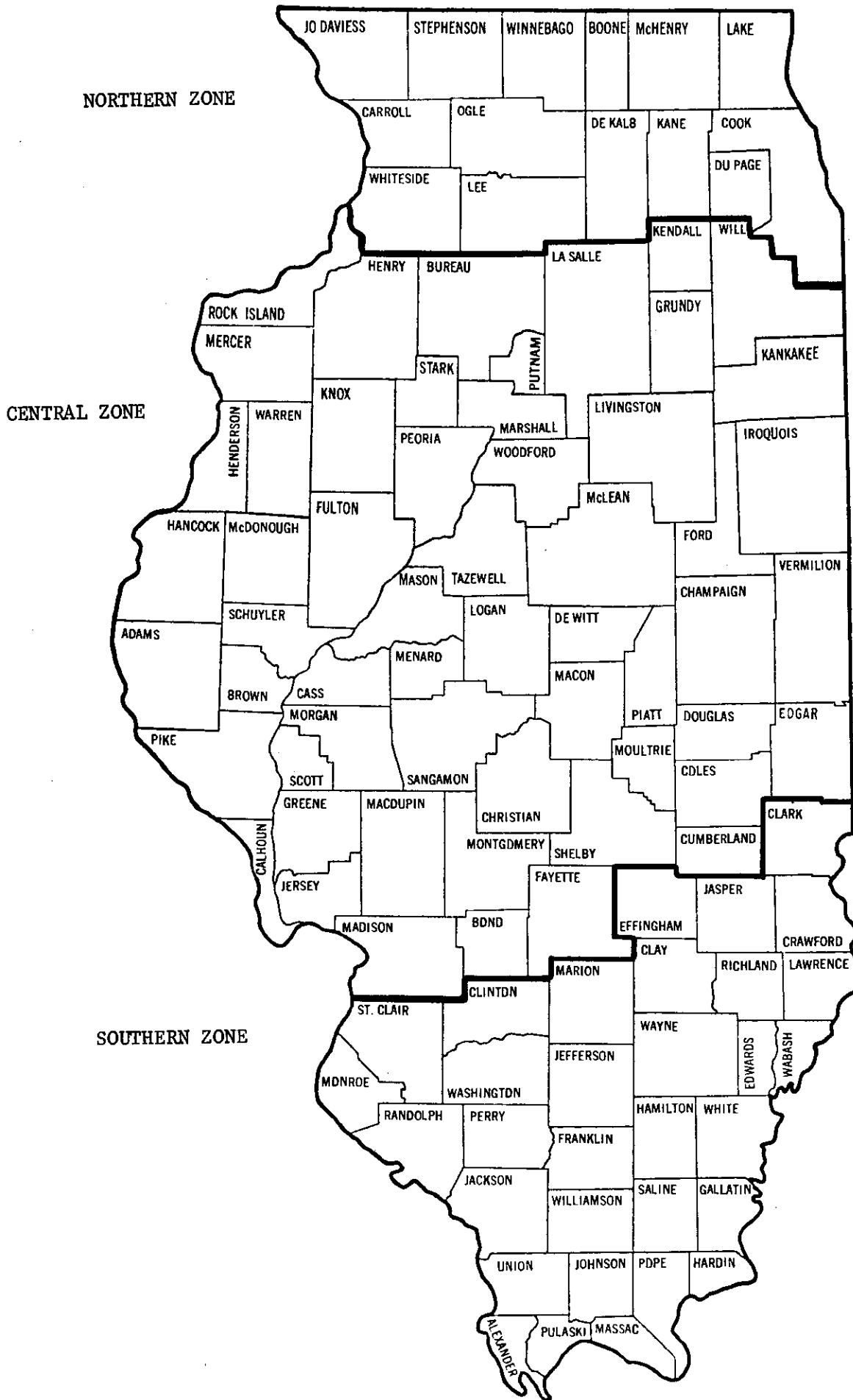


Figure 13. Alternative furbearer management zones (based on county boundaries)