

ILLINOIS NATURAL HISTORY SURVEY

JOB COMPLETION REPORT

SURVEYS AND INVESTIGATIONS PROJECTS

As Required By

FEDERAL AID IN WILDLIFE RESTORATION ACT

ILLINOIS



Section of Wildlife Research

Federal Aid Project No. W-49-R(31)

Study XII: Raccoon Investigations

Job No. 5: Cooperative raccoon collections

By

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13 July 1984

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JOB COMPLETION REPORT
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STATE OF ILLINOIS

PROJECT NO.: W-49-R-31

STUDY NO.: XII

JOB NO.: 5

JOB TITLE: Cooperative raccoon collections

ABSTRACT: Raccoons were examined and data collected at Perardi Bros. Fur and Wool, Inc., Farmington, Fulton County, Illinois, as they have been for the past 28 seasons. Three trips were made to the furhouse and 305 raccoons examined. Except for several body weights, which were the highest found in 29 seasons, and the average litter size, which was also the largest found, most of the data collected fell within the range of data collected at the same furhouse beginning with the 1955-56 season. Perhaps the higher than average body weights were a result of a generally higher than average percentage of adults and because the weather turned extremely cold and no raccoons were examined late in the season, when weights are lowest. The average number of dark placental scars per group (average litter size) was the highest found (4.03) in the 29-year period. There is no obvious reason; however, this figure is relatively uniform. The average for the 29 years is 3.56. All males and nulliparous adult females had the highest average weights reported during the 29 seasons. All males in 1983-84 averaged 14.24 lb, compared with a 29-season average of 13.05 lb. This higher than average weight of all males was at least partially a result of only 65.09% juveniles among the males compared with 69.03% for the 29-year period. All raccoons taken by trappers in 1983-84 were heavier than average and all groups except adult males had the highest body weights reported for the entire period of study. If the data collected are indices to major changes in the population, they do not indicate such changes in the raccoon population in west central Illinois. However,

these data probably would not reflect a major change in the population until the year after the change occurred. The harvest in 1983-84 decreased 30.31% from that for 1982-83, and the harvest in 1982-83 was the second highest in recent years. The harvest in 1983-84 was the lowest recorded since the 1976-77 season. However, the average pelt value declined 41.56% from 1981-82 through 1983-84--\$22.50 in 1981-82, \$14.55 in 1982-83, and \$13.15 in 1983-84. Illinois raccoon populations probably have not declined drastically during this period, with the decline in harvest in 1983-84 probably a result of declining pelt values and extremely cold weather after the middle of December in 1983. Young-of-the-year raccoons comprised 65.57% of the raccoons examined in 1983-84, there were 5.56 young per parous female, females comprised 44.59% of the harvest, and the mean litter size for the 1983 breeding season was 4.03. The average litter size for 1983 was the highest for the 29 years of this study. Adult males comprised 34.91% of the male harvest in 1983-84; 4% above the 29-year average. Parous females comprised 26.47% of all females in the 1983-84 sample. The 29-year average was 27.74% parous females. Thus, it appears that the increased percentage of parous females found during the 1981-82 and 1982-83 seasons was a chance occurrence rather than an indication of an increased percentage harvest of the total population. Juvenile males averaged 12.46 pounds and juvenile females 11.63 pounds. Adult males weighed an average of 17.77, parous adult females 15.24, and nulliparous adult females 15.77 pounds. Weights vary as much as 1.5 pounds from one year to the next but have shown no trends during the past 29 seasons. Average weights of all groups, except for four parous females killed on highways were higher than average in 1983-84. Hunters harvested 76.72% and trappers 21.31% and road killed animals 1.96% of the raccoons examined.

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OBJECTIVE: To collect data on the sex, age, weights, productivity, and condition of raccoons harvested in west-central Illinois.

PROCEDURES: Every other week during the raccoon hunting and trapping season a large furhouse (Perardi Bros. Fur and Wool, Inc., Farmington, Fulton County, Illinois) was visited and data were collected on 100 raccoons brought in by hunters and trappers. Most of the raccoons were caught within 100 miles of Farmington; however, the exact locations of capture were unknown. Animals were selected at random and data collected before and after the raccoons were skinned by employees of the furhouse. The data collected at the furhouse included body weight (nearest 0.1 lb), body length (nearest 5 mm), sex, how caught (hunter, trapper, or killed on road), condition of nipples for females, condition of penis for males, general health (animals with distemper were noted), and toes missing from previous encounters with traps. Specimens collected included one front leg (halfway between the wrist and elbow), penis bone from males, one testis and epididymis from each male, and the uterus and ovaries from each female. In the laboratory the epiphyses and bacula were examined--with other recorded information--to determine age, one testis was weighed, two ovaries were weighed, each epididymis was examined for the presence of sperm, and each uterus was examined and the number of placental scars counted. All information

Similar data have been collected at this same furhouse beginning with the 1955-56 season. The data for the entire period have been placed on floppy discs and tape, and, as time permits, programs will be written, data analyzed, reports written, and manuscripts prepared. Each year the data will be summarized in a series of tables and a figure (Tables 1-9, Fig. 1) and presented with the data for the previous years (back to the 1955-56 season).

Small differences--when they occur--in the data in the Tables from similar data presented in previous years are a result of placing the data on discs and tabulating the data by computer instead of by hand. A few corrections in interpretation of the data were made before entering them on the discs. Other minor differences result from rounding errors and from errors made by hand tabulation.

The raccoon hunting season was the same in 1983-84 as in the three previous seasons. The hunting season in the Northern Zone was 15 November 1983 - 13 January 1984. The hunting season in the Southern Zone was 25 November 1983 - 23 January 1985. The raccoon trapping season was also the same in 1983-84 as in the two previous seasons. The trapping season in the Northern Zone was 15 November 1983 - 29 December 1983. The raccoon trapping season in the Southern Zone was 25 November 1983 - 8 January 1984.

FINDINGS AND ANALYSIS:

1983-84 Hunting and Trapping Season

During 3 trips to the furhouse between 28 November 1983 and 3 January 1984, 305 raccoons were examined. Most of the data collected fell within the range of similar data collected from the 1955-56 season through the 1982-83 season. The percentage of young-of-the-year females (66.18%) was near average (66.48%) for the 29 years of this study and was considerably higher than in 1982-83 (58.06%) (Table 1). Young-of-the-year females comprised 45.00% of all young examined; a figure that is only slightly below the 29-year average, and well within the range of previous years. Parous females comprised 26.47% of the female harvest; a figure only slightly lower than the 29-year average, but well below the percentages found for the previous two seasons. Adult males comprised 34.91% of the males examined in 1983-84 (Table 2). This figure was 3.94% above the 29-year mean and was 6.47% higher than in 1982-83. Young-of-the-year raccoons comprised 65.57% of all raccoons examined in 1983-84 compared with the 29-year average of 67.81% young-of-the-year. The overall sex ratio (44.59% females) was 3.39% below the 29-year average, 47.98% (Table 3). The average litter size (4.03) was 0.47 above the 29-year average, 3.56 (Table 4) and was the highest found during this study.

Mean body weight of juvenile males in 1983-84 was 12.46 lb (Table 5) compared with 12.60 lb in 1982-83 and the 29-year average of 11.36 lb. Body weights of all age and sex groups were higher than the 29-year average in 1983-84, and all males and nulliparous adult females had the highest weights for the 29-year study. The higher than average body weights found in 1983-84 are believed to be a result of the extremely cold weather, which began after the middle of December. Thus, few raccoons were taken after the middle of December, when body weights are usually lower than they are early in the season. Data were collected on 28 November and 12 December 1983 and 3 January

1984, but most of the raccoons examined on the latter date had been killed earlier in the season and frozen. Not enough raccoons were bought in January to make it worthwhile to collect data from animals killed late in the season. The mean litter size (4.03, Table 4) was the highest found during the entire study. All other data showed no substantial differences from the 29-year averages. Thus, if these data are indices to population changes--such as overharvest--they do not indicate major changes in the raccoon populations in west-central Illinois.

Harvest figures for the 1983-84 season (Table 7) were 30.31% lower than for the 1981-82 season, and were the lowest reported since the 1976-77 season. The hunting seasons in the Northern and Southern zones in Illinois were the same in 1983-84 as in 1982-83, and the trapping seasons were the same in both zones in 1983-84 as they were in 1982-83. Thus, it seems apparent that there was no substantial overharvest of Illinois raccoons in 1983-84.

Age Composition

Young-of-the-year animals comprised 66.18% of the females examined (Table 1). This figure was a substantial increase over the 58.06% seen in 1982-83, and was only slightly lower than the 29-year average (66.48%). Parous adults comprised 26.47% of the females, which was lower than the 33.87% found in 1982-83, but was only slightly lower than the 29-year average (27.74%). Nulliparous adults (7.35%) were higher than the 29-year average of 5.79%.

Young-of-the-year males (65.09%) were 6.47% lower than in 1982-83 and were 3.94% lower than the 29-year (69.03%) average (Table 2). Of the 305 raccoons examined for age, 65.57% were young-of-the-year animals; essentially the same as the 65.35% observed in 1982-83 and 2.24% lower than the 29-year average of 67.81%. There were 5.56 young-of-the-year per parous female among the

raccoons examined during the 1983-84 season. The 29-year average was 5.14 young per parous female. These figures do not represent the number of young animals per parous female in the population because young animals are more vulnerable than adults to hunters and trappers. Note that the 29-year average of dark placental scars per uterus--believed to represent the average litter size--was 3.56 (Table 4).

Sex Ratios

Females comprised 44.59% (Table 3) of the raccoons examined at Perardi Bros. Fur and Wool, Inc., during the 1983-84 season. This was a decrease of 1.45% from 46.04% in 1982-83 and was 3.39% below the 29-year average (47.98%). Of the 200 young-of-the-year raccoons examined in 1983-84, 45.00% were females (Table 1); a figure only slightly below the 29-year average of 46.67%. Females comprised 43.81% of the adult raccoons examined during the past season (Table 2); a figure that is 11.90% lower than the 55.71% found in 1982-83 and 5.78% lower than the 29-year average of 49.59%.

Placental Scars

Some of my earlier work has shown that placental scars persists longer in the wild than they do in captivity. Thus, the significance of a group of pale and a group of dark placental scars in the same uterus in a wild female is not clear. They may represent two litters in one year (when the first litter is resorbed or lost at or near birth) or the pale scars may represent litters from the previous year. It seems reasonably clear that groups of single scars in a uterus and the groups of dark scars--when two groups of scars are present--represent the number of embryos implanted during the most recent breeding season (average litter size).

The mean litter size for the 1983 breeding season, as determined from single groups of scars and dark groups of placental scars when pale and dark groups were both present, was 4.03, the highest found during this study (Table 4, Fig. 1). The 29-year average litter size determined in this manner was 3.56. If all visible scars in each uterus were combined, the average number of scars per uterus with 1 or more scars was 4.92 in 1983-84 (Table 4) and the 29-year mean was 4.36.

Body Weight

Weights of raccoons examined in west-central Illinois during the past 29 seasons have varied as much as 2.84 lb from year to year depending on age and sex (Tables 5 and 6); however, annual variation is usually less than 1.0 lb and the weights have shown no trends. It seems that the annual variations in body weights are largely caused by weather conditions. Unusually mild weather during January will result in a proportionately larger number of raccoons caught during this month when the average weights are lower than they are in November and December. Also, unusually cold weather in December will result in less daily feeding by raccoons and an increased loss of weight, but extremely cold weather after the middle of December 1983 and in January 1984 resulted in little harvest of raccoons during this time in west-central Illinois. Thus, a large majority of the raccoons examined during the 1983-84 season were killed before the middle of December when their body weights were high.

Young-of-the-year males weighed an average of 12.46 lb (Table 5) compared with 11.63 lb for young-of-the-year females (Table 6). Adult males averaged 17.77 lb (Table 5), parous females 15.24 lb, and nulliparous adult females 15.77 lb (Table 6), the highest body weight found for this age and sex category during this study. The 29-season averages were: young-of-the-year males, 11.36 lb; adult males, 16.66 lb; young-of-the-year females 10.60 lb; parous

females, 14.18 lb; and nulliparous adult females, 13.20 lb. The average weight for all raccoons is of little or no significance because it varies according to the number in each age and sex group in the total sample.

All sex and age classes averaged heavier in 1983-84 than their 29-season average weights (Tables 5 and 6), and all males and nulliparous adult females had the highest average weights for the entire study. All sex and age classes except all males and nulliparous adult females had lower average weights in 1983-84 than in 1982-83. The sample sizes for nulliparous females were small for both seasons.

Juvenile males killed by hunters weighed an average of 12.42 lb compared with 12.73 lb for juvenile males killed by trappers (Table 8). Adult males taken by hunters averaged 17.84 lb and those taken by trappers 17.59 lb. Juvenile females from hunters averaged 11.74 lb and from trappers 11.83 lb. Parous females killed by hunters weighed an average of 15.39 lb each and those killed by trappers 16.34 lb. Except for adult males, the mean weights of all age and sex groups were heavier for animals taken by trappers than for those taken by hunters in 1983-84. All differences were relatively small, but during most seasons trapped animals weigh a little less than raccoons taken by hunters. I have no explanation for this change in 1983-84. During 11 recent seasons, 3,776 raccoons killed by hunters weighed an average of 12.55 lb each compared with 12.21 lb for 1,063 raccoons killed by trappers (Table 8). A preliminary analysis of the data for 5 recent seasons (not including 1978-79 - 1983-84) indicates no significant differences in body weights of raccoons taken by hunters and those taken by trappers.

Harvest by Hunters and Trappers

Hunters took 76.72% and trappers 21.31% of the raccoons examined. During 11 recent seasons, hunters accounted for 77.01% and trappers for 21.64% of the raccoons and cars for 1.35%. There were few differences in the various age and

sex groups. Cars accounted for 1.47% of the juvenile females, 1.39% of the juvenile males, 1.11% of the adult males, and 1.36% of the parous females. Only one nulliparous adult female was killed by a car and brought to the furhouse during the 11-year period (Table 9).

RECOMMENDATIONS:

This study should continue to allow for completion of the analysis of the data collected during the past 29 seasons and to collect additional data so that comparisons can be made with similar data from northern and southern Illinois.

DATA AND REPORTS:

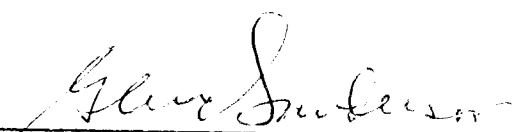
Original data and related reports in this investigation are on file in the Section of Wildlife Research, Illinois Natural History Survey, Natural Resources Building, Champaign, Illinois 61820.

The data for the 1955-56 through the 1983-84 seasons have been placed on discs and tape so that the data can be analyzed by computer, when the programs have been written.

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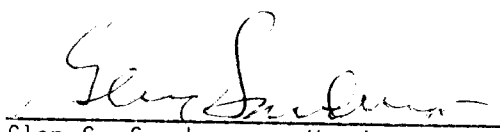
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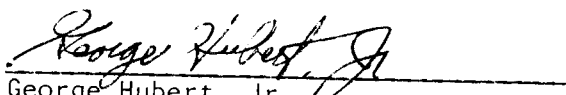
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Table 1. Age composition of female raccoons examined at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Young-of-the-year (percent)	Parous Adults (percent)	Nulliparous Adults (%)	Young-of-the-year (percent females)	Yg/Parous F
1955-56	58.14 (25) ^a	41.86 (18)	(0)	32.50 (77)	4.28
1956-57	62.77 (86)	29.20 (40)	8.03 (11)	39.63 (217)	5.42
1957-58	71.91 (64)	24.72 (22)	3.37 (3)	49.23 (130)	5.91
1958-59	78.22 (97)	18.55 (23)	3.22 (4)	46.63 (208)	9.04
1959-60	67.30 (142)	27.49 (58)	5.21 (11)	47.02 (302)	5.21
1960-61	67.42 (178)	31.44 (83)	1.14 (3)	51.90 (343)	4.13
1961-62	66.67 (240)	28.33 (102)	5.00 (18)	48.19 (498)	4.88
1962-63	66.07 (294)	29.21 (130)	4.72 (21)	44.75 (657)	5.05
1963-64	63.72 (72)	28.32 (32)	7.96 (9)	49.66 (145)	4.53
1964-65	70.52 (177)	23.50 (59)	5.98 (15)	49.86 (355)	6.02
1965-66	64.28 (180)	32.86 (92)	2.86 (8)	49.59 (363)	3.94
1966-67	75.00 (108)	19.44 (28)	5.56 (8)	50.70 (213)	7.61
1967-68	67.57 (125)	26.49 (49)	5.94 (11)	45.13 (277)	5.65
1968-69	64.54 (162)	31.88 (80)	3.58 (9)	47.23 (343)	4.29
1969-70	65.16 (159)	27.87 (68)	6.97 (17)	42.86 (371)	5.46
1970-71	71.08 (177)	21.69 (54)	7.23 (18)	46.34 (382)	7.07
1971-72	67.03 (122)	24.72 (45)	8.24 (15)	46.21 (264)	5.87
1972-73	62.63 (181)	31.14 (90)	6.23 (18)	48.92 (370)	4.11
1973-74	60.45 (133)	32.73 (72)	6.82 (15)	38.33 (347)	4.82
1974-75	63.16 (180)	30.88 (88)	6.95 (17)	48.13 (374)	4.25
1975-76	70.26 (137)	23.08 (45)	6.67 (13)	45.82 (299)	6.64
1976-77	70.29 (168)	25.10 (60)	4.60 (11)	47.19 (356)	5.93
1977-78	78.83 (189)	19.14 (49)	7.03 (18)	49.09 (385)	7.86
1978-79	63.11 (154)	25.41 (62)	11.48 (28)	49.68 (310)	5.00
1979-80	69.14 (177)	28.52 (73)	2.34 (6)	51.60 (343)	4.70
1980-81	68.14 (154)	24.34 (55)	7.52 (17)	46.52 (331)	6.02
1981-82	56.82 (125)	35.45 (78)	7.73 (17)	44.33 (282)	3.62
1982-83	58.06 (108)	33.87 (63)	8.06 (15)	40.90 (264)	4.19
1983-84	66.18 (90)	26.47 (36)	7.35 (10)	45.00 (200)	5.56
Total or 29-yr Mean	66.48 (4,204)	27.74 (1,754)	5.79 (366)	46.67 (9,007)	5.14

^a Numbers in parentheses indicate sample sizes.

Table 2. Age composition of raccoons examined at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Males		All Raccoons Young-of-the- year (%)	Percentage of adults that are females
	Young-of-the- year (%)	Adults (%)		
1955-56	71.23 (52) ^a	28.77 (21)	66.38 (116)	46.15 (39)
1956-57	68.23 (131)	31.77 (61)	65.96 (329)	45.54 (112)
1957-58	75.86 (66)	24.14 (21)	73.86 (176)	54.35 (46)
1958-59	68.94 (111)	31.06 (50)	72.98 (285)	35.06 (77)
1959-60	73.06 (160)	26.94 (59)	70.23 (430)	53.91 (128)
1960-61	62.74 (165)	37.26 (98)	65.08 (527)	46.74 (184)
1961-62	62.77 (258)	37.22 (153)	64.59 (771)	43.96 (273)
1962-63	73.33 (363)	26.67 (132)	69.89 (940)	53.36 (283)
1963-64	58.87 (73)	41.13 (51)	61.18 (237)	44.57 (92)
1964-65	74.17 (178)	25.83 (62)	72.30 (491)	54.41 (136)
1965-66	62.24 (183)	37.76 (111)	63.24 (574)	47.39 (211)
1966-67	65.62 (105)	34.38 (55)	70.06 (304)	39.56 (91)
1967-68	69.72 (152)	30.28 (66)	68.73 (403)	47.62 (126)
1968-69	69.35 (181)	30.65 (80)	66.99 (512)	52.66 (169)
1969-70	72.60 (212)	27.40 (80)	69.22 (536)	51.52 (165)
1970-71	77.07 (205)	22.93 (61)	74.17 (515)	54.14 (133)
1971-72	73.20 (142)	26.80 (52)	70.21 (376)	53.57 (112)
1972-73	66.08 (189)	33.92 (97)	64.35 (575)	52.68 (205)
1973-74	73.79 (214)	26.21 (76)	68.04 (510)	53.87 (163)
1974-75	64.67 (194)	35.33 (106)	63.93 (585)	49.76 (211)
1975-76	72.32 (162)	27.68 (62)	71.36 (419)	48.33 (120)
1976-77	70.68 (188)	29.32 (78)	70.50 (505)	47.65 (149)
1977-78	68.29 (196)	31.70 (91)	70.90 (543)	42.41 (158)
1978-79	68.42 (156)	31.58 (72)	65.68 (472)	55.55 (162)
1979-80	68.03 (166)	31.97 (78)	68.60 (500)	50.32 (157)
1980-81	68.60 (177)	31.40 (81)	68.39 (484)	52.94 (153)
1981-82	66.24 (157)	33.76 (80)	61.71 (457)	54.28 (175)
1982-83	71.56 (156)	28.44 (62)	65.35 (404)	55.71 (140)
1983-84	65.09 (110)	34.91 (59)	65.57 (305)	43.81 (105)
Total or 29-yr Mean	69.03 (4,803)	30.97 (2,155)	67.81 (13,282)	49.59 (4,275)

^a Numbers in parentheses indicate sample sizes.

Table 3. Sex ratios of raccoons examined at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Number Females	Number Males	Percent Females
1955-56	54	73	42.52
1956-57	145	192	43.03
1957-58	89	87	50.57
1958-59	126	161	43.90
1959-60	211	219	49.07
1960-61	269	263	50.56
1961-62	364	411	46.97
1962-63	448	495	47.51
1963-64	125	124	50.20
1964-65	251	240	51.12
1965-66	281	294	48.87
1966-67	145	160	47.54
1967-68	193	218	46.96
1968-69	255	261	49.42
1969-70	263	292	47.39
1970-71	249	266	48.35
1971-72	182	194	48.40
1972-73	289	286	50.26
1973-74	222	290	43.36
1974-75	290	300	49.15
1975-76	195	224	46.54
1976-77	239	266	47.33
1977-78	256	287	47.15
1978-79	244	228	51.69
1979-80	244	256	51.20
1980-81	226	258	46.69
1981-82	220	237	48.14
1982-83	186	218	46.04
1983-84	136	169	44.59
Total or 29-yr Mean	6,409	6,949	47.98

Table 4. Placental scars in raccoon uteri collected at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Number of Parous Uteri	No. Groups of Scars		Total Number of Scars		Mean Litter Size		Mean No. Visible Scars/Uterus
		Pale ^a	Dark ^b	Pale	Dark	Pale	Dark	
1955-56	16	1	16	2	58	2.00	3.62	3.75
1956-57	29	4	29	9	103	2.25	3.55	3.86
1957-58	18	7	18	18	71	2.57	3.94	4.94
1958-59	23	10	23	31	80	3.10	3.48	4.83
1959-60	57	25	57	50	204	2.00	3.58	4.46
1960-61	77	33	77	87	250	2.64	3.25	4.33
1961-62	74	26	74	59	265	2.27	3.58	4.38
1962-63	122	41	122	108	409	2.63	3.35	4.24
1963-64	31	11	31	25	98	2.27	3.16	3.97
1964-65	56	21	56	52	197	2.48	3.52	4.45
1965-66	81	26	81	81	303	3.12	3.74	4.74
1966-67	28	6	28	13	103	2.17	3.68	4.14
1967-68	49	16	49	45	188	2.81	3.84	4.76
1968-69	80	9	80	22	311	2.44	3.89	4.16
1969-70	66	19	66	52	249	2.74	3.77	4.56
1970-71	54	11	54	35	191	3.18	3.54	4.18
1971-72	42	7	42	17	153	2.43	3.64	4.05
1972-73	75	12	75	36	258	3.00	3.44	3.92
1973-74	70	14	70	54	247	3.86	3.53	4.30
1974-75	87	21	87	52	312	2.48	3.59	4.18
1975-76	44	15	44	45	161	3.00	3.66	4.68
1976-77	56	18	56	53	210	2.94	3.75	4.70
1977-78	48	13	48	32	167	2.46	3.48	4.14
1978-79	60	20	60	43	214	2.15	3.57	4.28
1979-80	73	28	73	71	253	2.54	3.46	4.44
1980-81	54	24	54	54	179	2.25	3.31	4.31
1981-82	75	31	75	75	269	2.42	3.59	4.59
1982-83	61	23	61	58	203	2.52	3.33	4.28
1983-84	36	11	36	32	145	2.91	4.03	4.92
Total or 29-yr Mean	1,642	503	1,642	1,311	5,851	2.61	3.56	4.36

^a Presumably from the previous breeding season.

^b Presumably from the most recent breeding season.

Table 5. Mean body weights (lb) of male raccoons weighed at Perardi Bros. Fur and Wool Co., Inc., Farmington, Illinois.

Season	Young-of-the-year	Adults	All Males	All Raccoons
1955-56	10.86 (34) ^a	15.92 (20)	12.74 (54)	11.76 (97)
1956-57	11.50 (128)	15.96 (59)	12.90 (187)	12.39 (322)
1957-58	12.15 (59)	18.25 (16)	13.45 (75)	12.78 (155)
1958-59	11.21 (108)	16.12 (49)	12.74 (157)	12.13 (280)
1959-60	11.07 (149)	15.98 (56)	12.41 (205)	11.92 (411)
1960-61	11.23 (153)	17.15 (88)	13.39 (241)	12.64 (496)
1961-62	11.12 (255)	15.59 (153)	12.80 (408)	12.23 (765)
1962-63	11.46 (350)	17.19 (128)	13.00 (478)	12.45 (911)
1963-64	10.43 (70)	16.21 (51)	12.86 (121)	12.20 (232)
1964-65	10.99 (176)	16.44 (62)	12.41 (238)	11.86 (484)
1965-66	11.48 (178)	16.15 (106)	13.22 (284)	12.53 (558)
1966-67	11.56 (104)	17.09 (55)	13.47 (159)	12.53 (303)
1967-68	12.26 (152)	16.68 (64)	13.57 (216)	12.94 (399)
1968-69	11.57 (181)	16.90 (80)	13.26 (261)	12.65 (511)
1969-70	11.27 (211)	15.34 (80)	12.39 (291)	11.81 (535)
1970-71	12.45 (204)	17.96 (60)	13.70 (264)	13.06 (512)
1971-72	12.29 (140)	17.24 (52)	13.63 (192)	12.91 (374)
1972-73	11.27 (188)	15.59 (96)	12.73 (284)	12.16 (573)
1973-74	11.38 (213)	15.39 (76)	12.43 (289)	12.16 (507)
1974-75	11.24 (194)	15.75 (106)	12.83 (300)	12.18 (583)
1975-76	11.42 (155)	16.49 (60)	12.84 (215)	12.14 (396)
1976-77	10.61 (188)	16.17 (77)	12.23 (265)	11.58 (502)
1977-78	10.32 (195)	16.30 (91)	12.22 (286)	11.45 (541)
1978-79	10.12 (155)	17.20 (72)	12.36 (227)	11.92 (470)
1979-80	10.39 (166)	17.86 (78)	12.78 (244)	12.30 (500)
1980-81	11.56 (176)	17.44 (82)	13.43 (258)	13.04 (483)
1981-82	11.25 (156)	16.97 (80)	13.19 (236)	12.77 (456)
1982-83	12.60 (156)	18.12 (62)	14.17 (218)	13.76 (404)
1983-84	12.46 (110)	17.77 (56)	14.24 (166)	13.60 (302)
29-year Mean	11.36 (4,704)	16.66 (2,115)	13.05 (6,819)	12.40 (13,062)

^a Numbers in parentheses indicate sample sizes.

Table 6. Mean body weights (lb) of female raccoons weighed at Perardi Bros. Fur and Wool Co., Inc., Farmington, Illinois.

Season	Young-of-the-year	Parous	Nulliparous Adults	All Females
1955-56	9.24 (25) ^a	12.32 (18)	(0)	10.53 (43)
1956-57	10.68 (85)	13.47 (39)	12.86 (11)	11.66 (135)
1957-58	11.33 (56)	14.16 (21)	13.21 (3)	12.14 (80)
1958-59	10.79 (96)	13.71 (23)	11.14 (4)	11.35 (123)
1959-60	10.40 (137)	13.74 (58)	12.28 (11)	11.44 (206)
1960-61	10.53 (175)	15.03 (77)	13.38 (3)	11.92 (255)
1961-62	10.76 (237)	13.25 (102)	12.81 (18)	11.57 (357)
1962-63	10.64 (287)	14.28 (125)	13.86 (21)	11.84 (433)
1963-64	10.39 (72)	13.88 (31)	11.85 (8)	11.47 (111)
1964-65	10.25 (174)	13.84 (57)	14.42 (15)	11.34 (246)
1965-66	10.48 (178)	14.34 (88)	13.82 (8)	11.82 (274)
1966-67	10.74 (108)	14.08 (28)	12.55 (8)	11.49 (144)
1967-68	11.13 (123)	14.72 (49)	13.10 (11)	12.21 (183)
1968-69	11.08 (161)	14.01 (80)	12.60 (9)	12.07 (250)
1969-70	10.03 (159)	13.44 (68)	12.06 (17)	11.12 (244)
1970-71	11.31 (176)	15.04 (54)	14.90 (18)	12.38 (248)
1971-72	11.12 (122)	14.79 (45)	12.65 (15)	12.16 (182)
1972-73	10.19 (181)	14.12 (90)	13.20 (18)	11.60 (289)
1973-74	10.71 (131)	13.86 (72)	11.33 (15)	11.79 (218)
1974-75	10.22 (179)	13.89 (88)	12.22 (16)	11.48 (283)
1975-76	10.42 (129)	13.62 (41)	13.19 (11)	11.31 (181)
1976-77	9.81 (167)	13.69 (59)	11.45 (11)	10.85 (237)
1977-78	9.69 (188)	13.08 (49)	13.21 (18)	10.59 (255)
1978-79	9.74 (154)	14.97 (61)	13.63 (28)	11.50 (243)
1979-80	10.47 (177)	14.99 (73)	14.40 (6)	11.85 (256)
1980-81	11.30 (151)	15.53 (55)	14.25 (19)	12.58 (225)
1981-82	10.61 (125)	14.53 (78)	14.52 (17)	12.30 (220)
1982-83	11.70 (108)	15.60 (63)	14.93 (15)	13.28 (186)
1983-84	11.63 (93)	15.24 (36)	15.77 (7)	12.80 (136)
Total or 29-yr Mean	10.60 (4,154)	14.18 (1,728)	13.20 (361)	11.74 (6,243)

^a Numbers in parentheses indicate sample sizes.

Table 7. Average values and numbers of Illinois raccoon pelts, from 1968-69 through 1983-84. ^a

Season	Average Value	Average Number Harvested
1968-69	\$ 3.11	49,429
1969-70	2.44	62,949
1970-71	1.35	52,866
1971-72	2.95	68,174
1972-73	5.37	85,536
1973-74	7.36	181,776
1974-75	8.03	No Data
1975-76	14.00	310,593
1976-77	17.17	187,377
1977-78	18.00	237,315
1978-79	27.25	292,728
1979-80	25.50	381,006
1980-81	19.40	314,777 (Hubert 1981)
1981-82	22.50	314,963 (Hubert 1982)
1982-83	14.55	292,189 (Hubert 1983)
1983-84	13.15	203,633 (Hubert 1984)

^a Data from Sanderson and Hubert (1980), except as noted.

Table 8. Average body weights (lb) of raccoons killed by hunters, trappers, and roadkills and examined at Perard Bros. Fur and Wool Co., Inc., Farmington, Illinois--1972-73 and 1974-75 through 1983-84.

Season	Juvenile Males			Adult Males			Juvenile Females		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	11.31 (113)	11.21 (36)	14.90 (2)	15.65 (60)	15.57 (23)	15.55 (2)	9.93 (112)	10.58 (41)	10.80 (1)
1974-75	11.24 (91)	11.40 (32)	12.50 (1)	15.71 (49)	14.99 (15)	14.95 (2)	10.46 (83)	10.14 (24)	10.30 (4)
1975-76	11.44 (120)	10.93 (34)	8.70 (1)	16.57 (45)	16.14 (14)	17.00 (1)	10.17 (90)	11.01 (35)	(0)
1976-77	10.76 (154)	9.99 (33)	11.20 (1)	16.30 (67)	15.12 (9)	15.60 (1)	9.88 (139)	9.56 (27)	7.77 (3)
1977-78	10.31 (183)	10.58 (28)	8.65 (6)	16.30 (74)	14.54 (17)	(0)	10.56 (116)	7.82 (45)	10.88 (4)
1978-79	10.02 (117)	10.15 (32)	10.00 (1)	17.43 (56)	16.37(11)	17.45 (2)	9.64 (113)	9.67 (29)	9.74 (5)
1979-80	10.49 (128)	10.12 (33)	8.18 (4)	18.00 (66)	16.95 (12)	(0)	10.56 (138)	9.92 (37)	7.70 (1)
1980-81	11.78 (137)	11.37 (34)	9.95 (4)	17.49 (69)	17.14 (13)	(0)	11.29 (109)	11.31 (37)	10.98 (4)
1981-82	11.41 (119)	10.79 (36)	9.40 (1)	17.05 (64)	17.37 (15)	12.80 (1)	10.69 (96)	10.55 (31)	(0)
1982-83	12.69 (136)	11.99 (20)	(0)	18.16 (48)	17.98 (14)	(0)	11.96 (82)	10.84 (24)	(0)
1983-84	12.42 (89)	12.72 (20)	10.90 (1)	17.84 (46)	17.59 (10)	(0)	11.74 (69)	11.83 (24)	(0)
Mean of Means	11.26 (1,387)	11.02 (338)	10.44 (22)	16.95 (644)	16.34 (153)	15.56 (9)	10.62 (1,147)	10.29 (354)	9.74 (22)

Season	Parous Females			Nulliparous Adult Females			All Raccoons		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	13.67 (51)	14.86 (30)	(0)	12.74 (17)	14.65 (4)	(0)	12.01 (353)	12.69 (134)	14.34 (5)
1974-75	13.85 (40)	13.64 (18)	13.00 (1)	12.09 (8)	12.00 (3)	(0)	12.22 (271)	12.12 (92)	12.08 (8)
1975-76	13.78 (35)	13.02 (7)	(0)	12.49 (10)	14.30 (1)	(0)	12.14 (300)	11.96 (91)	12.85 (2)
1976-77	13.56 (54)	12.65 (11)	12.70 (2)	11.92 (7)	9.63 (3)	(0)	11.73 (421)	10.74 (83)	10.78 (7)
1977-78	12.94 (40)	13.91 (9)	13.30 (1)	13.28 (13)	12.88 (4)	(0)	11.94 (426)	10.42 (103)	8.67 (11)
1978-79	14.94 (45)	14.45 (13)	(0)	13.12 (23)	15.98 (5)	(0)	11.90 (354)	11.70 (90)	11.70 (8)
1979-80	14.87 (50)	15.20 (23)	(0)	14.98 (5)	15.00 (2)	(0)	12.42 (387)	12.00 (107)	8.08 (5)
1980-81	15.66 (42)	15.12 (13)	(0)	14.05 (13)	14.68 (6)	(0)	13.41 (370)	12.80 (103)	10.46 (8)
1981-82	14.50 (49)	14.57 (29)	(0)	15.34 (11)	13.00 (6)	(0)	12.84 (339)	12.62 (117)	11.10 (2)
1982-83	15.56 (43)	15.69 (20)	(0)	15.25 (13)	12.80 (2)	(0)	13.79 (322)	13.64 (80)	(0)
1983-84	15.39 (25)	16.34 (7)	12.40 (4)	15.68 (4)	16.10 (2)	15.50 (1)	13.61 (233)	13.66 (63)	12.65 (6)
Mean of Means	14.43 (474)	14.50 (180)	12.85 (8)	13.72 (124)	13.73 (38)	15.50 (1)	12.55 (3,776)	12.21 (1,063)	11.27 (62)

Table 9. Percentage of raccoons killed by hunters, trappers, and cars and brought into Perardi Bros. Fur and Wool Co., Inc., Farmington, Illinois, 1972-73 and 1974-75 through 1983-84 seasons.

Season	All Raccoons			Parous Females			Juvenile Females		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	70.93 (349)	28.05 (138)	1.02 (5)	62.82 (49)	37.18 (29)	0.00 (0)	68.10 (111)	31.29 (51)	0.61 (1)
1974-75	72.66 (271)	25.20 (94)	2.14 (8)	69.84 (44)	28.57 (18)	1.59 (1)	72.17 (83)	24.35 (28)	3.48 (4)
1975-76	76.34 (300)	23.16 (91)	0.51 (2)	83.33 (35)	16.67 (7)	0.00 (0)	72.00 (90)	28.00 (35)	0.00 (0)
1976-77	83.03 (416)	15.37 (77)	1.60 (8)	84.06 (58)	11.59 (8)	4.35 (3)	81.88 (131)	16.25 (26)	1.88 (3)
1977-78	80.85 (439)	16.94 (92)	2.21 (12)	80.00 (40)	18.00 (9)	2.00 (1)	79.38 (154)	18.56 (36)	2.06 (4)
1978-79	78.65 (356)	19.61 (90)	1.74 (8)	76.79 (43)	23.22 (13)	0.00 (0)	76.82 (116)	19.87 (30)	3.31 (5)
1979-80	76.60 (383)	22.40 (112)	1.00 (5)	68.49 (50)	31.51 (23)	0.00 (0)	78.41 (138)	21.02 (37)	0.57 (1)
1980-81	76.46 (367)	21.67 (104)	1.88 (10)	76.36 (42)	23.64 (13)	0.00 (0)	72.00 (108)	24.67 (37)	3.33 (5)
1981-82	73.85 (336)	25.71 (117)	0.44 (2)	62.82 (49)	37.18 (29)	0.00 (0)	75.40 (95)	24.60 (31)	0.00 (0)
1982-83	80.00 (324)	20.00 (81)	0.00 (0)	68.25 (43)	31.75 (20)	0.00 (0)	77.78 (84)	22.22 (24)	0.00 (0)
1983-84	76.72 (234)	21.31 (65)	1.96 (6)	69.44 (25)	19.44 (7)	11.11 (4)	74.19 (69)	25.81 (24)	0.00 (0)
Mean of Means	77.01 (3,775)	21.64 (1,061)	1.35 (66)	72.10 (478)	26.55 (176)	1.36 (9)	75.53 (1,179)	23.00 (359)	1.47 (23)

Season	Adult Males			Juvenile Males			Nulliparous Adult Females		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	70.24 (59)	27.38 (23)	2.38 (2)	77.40 (113)	21.23 (31)	1.37 (2)	80.95 (17)	19.00 (4)	0.00 (0)
1974-75	74.24 (49)	22.73 (15)	3.03 (2)	75.21 (91)	23.97 (29)	0.83 (1)	50.00 (4)	50.00 (4)	0.00 (0)
1975-76	75.00 (45)	23.33 (14)	1.67 (1)	77.42 (120)	21.94 (34)	0.64 (1)	90.91 (10)	9.09 (1)	0.00 (0)
1976-77	88.46 (69)	10.26 (8)	1.28 (1)	81.82 (153)	17.65 (33)	0.53 (1)	71.43 (5)	28.57 (2)	0.00 (0)
1977-78	82.10 (78)	17.89 (17)	0.00 (0)	82.38 (159)	13.99 (27)	3.63 (7)	72.73 (8)	27.27 (3)	0.00 (0)
1978-79	81.16 (56)	15.94 (11)	2.90 (2)	78.29 (119)	21.05 (32)	0.66 (1)	84.62 (22)	15.38 (4)	0.00 (0)
1979-80	83.54 (66)	16.46 (13)	0.00 (0)	75.30 (125)	22.29 (37)	2.41 (4)	66.67 (4)	33.33 (2)	0.00 (0)
1980-81	84.15 (69)	15.85 (13)	0.00 (0)	77.97 (138)	19.77 (35)	2.26 (5)	62.50 (10)	37.50 (6)	0.00 (0)
1981-82	79.45 (63)	18.99 (15)	1.26 (1)	76.28 (119)	23.08 (36)	0.64 (1)	62.50 (10)	37.50 (6)	0.00 (0)
1982-83	77.42 (48)	22.58 (14)	0.00 (0)	86.62 (136)	13.38 (21)	0.00 (0)	86.67 (13)	13.33 (2)	0.00 (0)
1983-84	79.66 (47)	20.34 (12)	0.00 (0)	80.91 (89)	18.18 (20)	0.91 (1)	57.14 (4)	28.57 (2)	14.29 (1)
Mean of Means	79.83 (649)	19.06 (155)	1.11 (9)	79.14 (1,362)	19.46 (355)	1.39 (24)	74.30 (107)	25.00 (36)	0.69 (1)

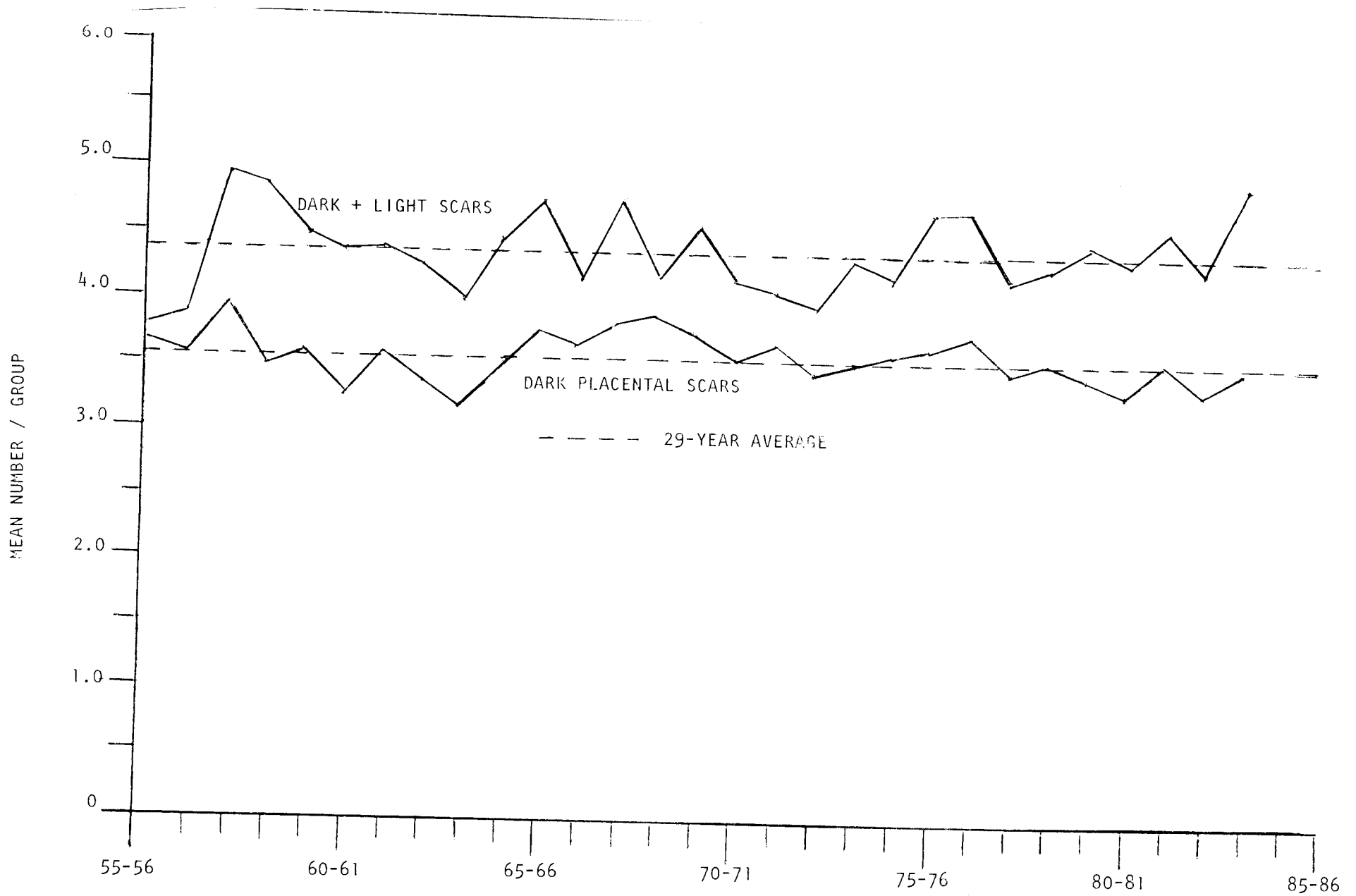


Fig. 1. Average number of placental scars observed per parous female examined at Perardi Bros. Furhouse, Farmington, Illinois--1955-56 through 1983-84 seasons. "Dark" scars represent uteri with only one group of scars whether dark or light and the dark scars when both light and dark scars were present in the same uterus; the "dark + light scars" represent all scars visible in the uterus of a parous female. The average number of "dark" scars is believed to represent the average litter size.