

JOB COMPLETION REPORT
SURVEYS AND INVESTIGATIONS PROJECTS

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Study XII: Raccoon Investigations

Job No. 5: Cooperative raccoon collections

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STATE OF ILLINOIS

PROJECT NO.: W-49-R-28

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 25 seasons. Five trips were made to the furhouse and 484 raccoons examined. Most of the data collected fell within the range of data collected at the same furhouse beginning with the 1955-56 season. In 1980-81 parous females had the highest average weight for the 26-year period and both juvenile and nulliparous adult females had average weights that were only slightly lower than the maximum average weights found during the previous 25 seasons. As a result, all females had the highest average weight (12.58 lb) found during the 26 years of this study. The 26-year mean weight for all females was 11.62 lb. Weights of young-of-the-year males, adult males, all males, and all raccoons were within the ranges found during the past 25 years, but in 1980-81 all were above the 26-year mean weights. 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, but even though the harvest in 1980-81 decreased 17.4% from that for 1979-80, the harvest was still the second highest in recent years. Thus, Illinois raccoon populations have not declined drastically as some have reported. Young-of-the-year raccoons comprised 68.4% of the raccoons examined

in 1980-81, and females comprised 46.7%. The mean litter size for the 1980 breeding season was 3.3. Juvenile males averaged 11.6 pounds and juvenile females 11.3 pounds. Adult males weighed an average of 17.4, parous adult females 15.5, and nulliparous adult females 14.2 pounds. Weights vary as much as 1.5 pounds from one year to the next but have shown no trends during the past 26 seasons. Hunters harvested 76.5% and trappers 21.7% of the raccoons examined. Salvaged raccoons killed on roads comprised the remaining 1.9%.

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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 was recorded in standardized data sheets in a notebook.

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). During the past year one manuscript was prepared for publication (Junge and Sanderson 1982). Additional analyses of the data are expected during the coming year.

Small differences from similar data presented in previous years, when they occur, in the data in the Tables 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 in the Northern Zone was 8 November 1980 - 15 January 1981 compared with 10 November 1979 - 19 December 1979. The hunting season in the Southern Zone was 15 November 1980 - 23 January 1981 compared with 20 November - 19 December 1979. The raccoon trapping season in the Northern Zone was 8 November 1980 - 15 January 1981 compared with 10 November - 9 December 1979. The raccoon trapping season in the Southern Zone was 15 November 1980 - 23 January 1981 compared with 20 November - 19 December 1979.

FINDINGS AND ANALYSIS:

1980-81 Hunting and Trapping Season

During 5 trips to the furhouse between 24 November 1980 and 12 January 1981, 484 raccoons were examined. Most of the data collected fell within the range of similar data collected from the 1955-56 season through the 1979-80 season; however, parous females and all females had the highest average body weights found during the 26 years of this study (Table 6). All sex and age classes had weights in 1980-81 that were heavier than the 26-year averages. Nulliparous adults comprised 7.5% of all females examined during the past season (Table 1), and the 26-season average was 5.6%. Females comprised 49.3% of the adults examined in 1980-81 compared with 50.3% in 1979-80 (Table 2), and females comprised 48.1% of all raccoons examined in 1980-81 (Table 3) compared with 51.2% in 1979-80. The 26-year averages were 49.4% and 48.1%, respectively. Mean body weight of juvenile males in 1980-81 was 11.6 lb (Table 5) compared with 10.4 lb in 1979-80 and the 26-year average of 11.3 lb.

Other than the highest mean weights for parous females and all females found in 1980-81, all other data showed no substantial differences from the 26-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. If, however, an overharvest occurred during the 1980-81 season, data such as these probably would not reflect the change until the 1981-82 season. Harvest figures for the 1980-81 season (314,777, Table 7) were 17.4% lower than for the 1979-80 season, but the hunting and trapping seasons in the Northern Zone in Illinois in 1980-81 were 29 days (72.5%) longer than they were in 1979-80. Also, the harvest in 1980-81 was the second highest reported in recent years (Table 7). Thus, it seems apparent that an overharvest of Illinois raccoons did not occur in 1979-80.

Age Composition

Young-of-the-year animals comprised 68.1% of the females examined (Table 1). This figure was a slight decrease over the 69.1% seen in 1979-80, but was well within the range of the past 26 seasons and was only 1% higher than the 26-year average of 67.1%. Parous adults comprised 24.3% of the females, a 4.2% decrease over the 28.5% observed in 1979-80, and only slightly less than 3% below the 26-year mean of 27.3%. Nulliparous adults (7.5%) were slightly higher than the 26-year average of 5.6%.

Young-of-the-year males (68.6%) were only slightly higher than in 1979-80 and were about 0.5% below the 26-year (69.2%) average (Table 2). Of the 484 raccoons examined for age, 68.4% were young-of-the-year animals; essentially the same as the 68.6% observed in 1979-80 and slightly higher than the 26-year average of 68.2%. There were 6.0 young-of-the-year per parous female among the raccoons examined during the 1980-81 season. The 26-year average was 5.2 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 26-year average of dark placental scars per uterus--believed to represent the average litter size--was 3.6 (Table 4).

Sex Ratios

Females comprised 46.7% (Table 3) of the raccoons examined at Perardi Bros. Fur and Wool, Inc., during the 1980-81 season. This was a slight decrease from 51.2% in 1979-80 and was 1.4% lower than the 26-year average (48.1%). Of the 331 young-of-the-year raccoons examined in 1980-81, 46.5% were females (Table 1); a figure 0.5% below the 26-year average of 47.0%. Females comprised 52.9% of the adult raccoons examined during the past season (Table 2); a figure that is 3.6% higher than the 26-year average of 49.3%.

Placental Scars

Some of my earlier work has shown that placental scars persist 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 1980 breeding season, as determined from single groups of scars and dark groups of placental scars when pale and dark groups were both present, was 3.3 (Table 4, Fig. 1). The 26-year average litter size determined in this manner was 3.6. If all visible scars in each uterus were combined, the average number of scars per uterus with 1 or more scars was 4.3 in 1980-81 (Table 4) and the 26-year mean was 4.3.

Body Weight

Weights of raccoons examined in west-central Illinois during the past 26 seasons have varied as much as 2.8 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.

Young-of-the-year males weighed an average of 11.6 lb (Table 5) compared with 11.3 lb for young-of-the-year females (Table 6). Adult males averaged

17.4 lb (Table 5), parous adult females 15.5 lb, and nulliparous adult females 14.2 lb (Table 6). The 26-season averages were: young-of-the-year males, 11.3 lb; adult males, 16.5 lb; young-of-the-year females 10.5 lb; parous adult females, 14.1 lb; and nulliparous adult females, 12.9 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 1980-81 than their 26-season average weights (Tables 5 and 6). All sex and age classes except adult males and nulliparous adult females had higher average weights in 1980-81 than in all of the previous 5 seasons. These differences can probably be explained by the relatively mild weather during the 1980-81 hunting and trapping season; however, the raccoon hunting and trapping seasons in the Northern Zone closed 15 January 1981 compared with 9 December 1979. Thus, the raccoons examined during the 1980-81 season, on the average, were killed later in the season than raccoons examined during the previous season and should have weighed less during a season, with average weather conditions.

Juvenile males killed by hunters weighed an average of 11.8 lb compared with 11.4 lb for juvenile males killed by trappers (Table 8). Adult males taken by hunters averaged 17.5 lb and those taken by trappers 17.1 lb. Juvenile females from both hunters and trappers weighed 11.3 lb. Parous adult females killed by hunters weighed an average of 15.7 lb each and those killed by trappers 15.1 lb. During 8 recent seasons, 2,882 raccoons killed by hunters weighed an average of 12.2 lb each compared with 11.8 lb for 803 raccoons killed by trappers (Table 8). A preliminary analysis of the data for 5 recent seasons (not including 1978-79 - 1980-81) indicates no significant differences between raccoons taken by hunters and those taken by trappers.

Harvest by Hunters and Trappers

Hunters took 76.5% and trappers 21.7% of the raccoons examined; raccoons killed by cars comprised the remaining 1.9%. During 8 recent seasons, hunters accounted for 76.9% and trappers for 21.6% of the raccoons and cars for 1.6%. There were few differences in the various age and sex groups. Cars accounted for 1.9% of the juvenile females, 1.6% of the juvenile males, 1.3% of the adult males, and 1.0% of the parous adult females. No nulliparous adult females were killed by cars and brought to the furhouse (Table 9).

Although the data have not been analyzed, it appears that with the recent increases in pelt values (Table 7), hunters may be accounting for a slightly increased percentage of the raccoons sold. For example, in 1972-73 and 1974-75, when the average pelt value was \$6.70, hunters, trappers, and cars, respectively, accounted for 71.8, 26.6, and 1.6% of the raccoons examined, whereas in 1978-79, 1979-80, and 1980-81, when the average pelt value was 24.05, the same groups accounted for 76.6, 21.2, and 1.5%, respectively.

RECOMMENDATIONS:

The study should continue to allow for completion of the analysis of the data collected during the past 26 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 1980-81 seasons have been placed on discs and tape so that the data can be analyzed by computer, when the programs have been written.

REFERENCES CITED:

- Hubert, G. F., Jr. 1981. Fur harvest survey, 1980-81. Illinois Department of Conservation P-R Proj. Rep. W-49-R-28, Study XV, Job 3. In preparation.
- Sanderson, Glen C. and G. F. Hubert, Jr. 1980. Selected demographic characteristics of Illinois (U.S.A.) raccoons (Procyon lotor). Worldwide Furbearer Conference, Frostburg, Maryland, U.S.A., 3-11 August 1980. (In press).

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

Year	Young-of-the-year (percent)	Parous Adults (percent)	Nulliparous Adults (%)	Young-of-the-year (percent females)	Yg/Parous F
1957-58	58.14 (25) ^a	41.86 (18)	(0)	32.50 (77)	4.28
1958-59	62.77 (86)	29.20 (40)	8.03 (11)	39.63 (217)	5.42
1959-60	71.91 (64)	24.72 (22)	3.37 (3)	49.23 (130)	3.91
1960-61	78.22 (97)	18.55 (23)	3.22 (4)	46.63 (208)	9.04
1961-62	67.30 (142)	27.49 (58)	5.21 (11)	47.02 (302)	5.21
1962-63	67.42 (178)	31.44 (83)	1.14 (3)	51.90 (343)	4.13
1963-64	66.67 (240)	28.33 (102)	5.00 (18)	48.19 (498)	4.88
1964-65	66.07 (294)	29.21 (130)	4.72 (21)	44.75 (657)	5.05
1965-66	63.72 (72)	28.32 (32)	7.96 (9)	49.66 (145)	4.53
1966-67	70.52 (177)	23.50 (59)	5.98 (15)	49.86 (355)	6.02
1967-68	64.28 (180)	32.86 (92)	2.86 (8)	49.59 (363)	3.94
1968-69	75.00 (108)	19.44 (28)	5.56 (8)	50.70 (213)	7.61
1969-70	67.57 (125)	26.49 (49)	5.94 (11)	45.13 (277)	5.65
1970-71	64.54 (162)	31.88 (80)	3.58 (9)	47.23 (343)	4.29
1971-72	65.16 (159)	27.87 (68)	6.97 (17)	42.86 (371)	5.46
1972-73	71.08 (177)	21.69 (54)	7.23 (18)	46.34 (382)	7.07
1973-74	67.03 (122)	24.72 (45)	8.24 (15)	46.21 (264)	5.87
1974-75	62.63 (181)	31.14 (90)	6.23 (18)	48.92 (370)	4.11
1975-76	60.45 (133)	32.73 (72)	6.82 (15)	38.33 (347)	4.82
1976-77	63.16 (180)	30.88 (88)	5.96 (17)	48.13 (374)	4.25
1977-78	70.26 (137)	23.08 (45)	6.67 (13)	45.82 (299)	6.64
1978-79	70.29 (168)	25.10 (60)	4.60 (11)	47.19 (356)	5.93
1979-80	78.83 (189)	19.14 (49)	7.03 (18)	49.09 (385)	7.86
1980-81	63.11 (154)	25.41 (62)	11.48 (28)	49.68 (310)	5.00
1981-82	69.14 (177)	28.52 (73)	2.34 (6)	51.60 (343)	4.70
1982-83	68.14 (154)	24.34 (55)	7.52 (17)	46.52 (331)	6.02
Total or 26-yr Mean	67.12 (3,881)	27.27 (1,577)	5.60 (324)	46.98 (8,261)	5.24

^aNumbers 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)
Total or 26-yr Mean	69.15 (4,380)	30.85 (1,954)	68.18 (12,116)	49.31 (3,855)

^aNumbers 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
1956-56	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
Total or 26-yr Mean	5,867	6,325	48.12

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
Total or 26-yr Mean	1,470	438	1,470	1,146	5,234	2.62	3.56	4.34

Table 5. Mean body weights (lb) of male raccoons weighed at Perardi Bros. Fur and Coat 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 (260)	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)
26-year Mean	11.28 (4,283)	16.46 (1,917)	12.88 (6,200)	12.29 (11,901)

^aNumbers 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)
Total or 26-yr Mean	10.52 (3,828)	14.07 (1,551)	12.86 (322)	11.62 (5,701)

^aNumbers in parentheses indicate sample sizes.

Table 7. Average values and numbers of Illinois raccoon pelts, from 1968-69 through 1980-81.^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)

^aData 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 Perardi Bros. Fur and Wool Co., Inc., Farmington, Illinois--1972-73 and 1974-75 through 1980-81.

Season	Juveniles Males			Adult Males			Juveniles 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)	14.65 (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)
Mean of Means	10.92	10.71	10.51	16.68	15.86	16.11	10.31	10.00	9.74

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)	12.02 (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)
Mean of Means	14.16	14.11	13.00	13.08	13.64		12.22	11.80	11.12

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 1980-81 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	76.39 (317)	23.13 (96)	1.61 (2)	80.44 (37)	19.57 (9)	0.00 (0)	73.68 (98)	26.32 (35)	0.00 (0)
1976-77	82.90 (417)	15.51 (78)	1.59 (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 (361)	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 (9)	76.36 (42)	23.64 (13)	0.00 (0)	72.00 (108)	24.67 (37)	3.33 (5)
Mean of Means	76.93	21.56	1.65	74.85	24.16	0.99	75.30	22.79	1.90

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	76.39 (317)	23.13 (96)	0.48 (2)	77.02 (124)	22.36 (36)	0.62 (1)	84.62 (11)	15.38 (2)	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)
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)
Mean of Means	80.04	18.70	1.26	78.17	20.29	1.56	71.69	28.30	0.00 (0)

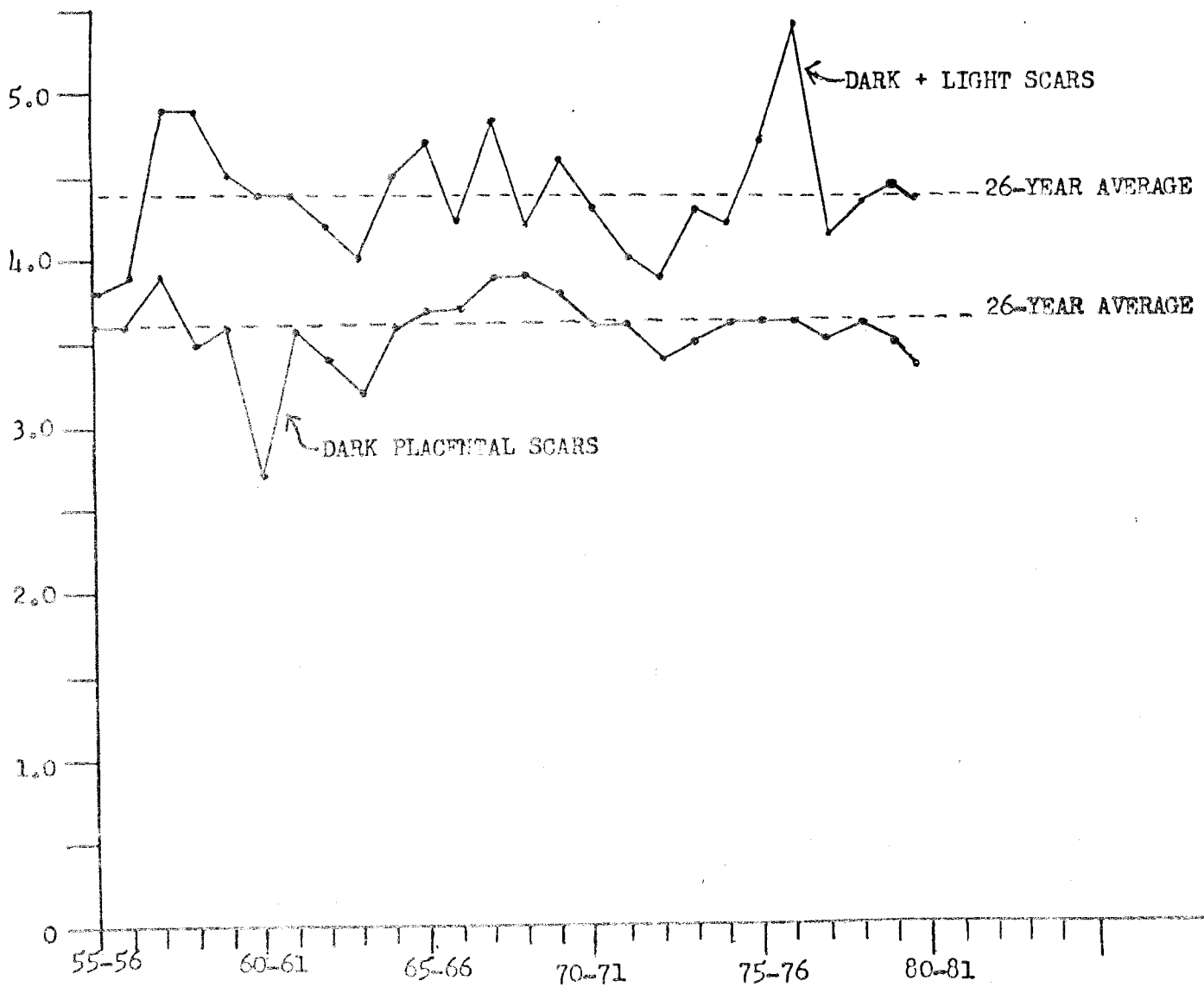


Fig. 1. Average number of placental scars observed per parous female examined at Perardi Bros. Furhouse, Farmington, Illinois--1955-56 through 1980-81 seasons. "Dark" scars represent uteri with only one group of scars whether dark or light and the dark scars when both light and dark scars were present 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.