

# ILLINOIS NATURAL HISTORY SURVEY

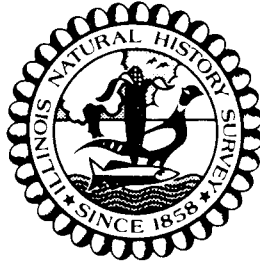
JOB COMPLETION REPORT

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(30)

Study XII: Raccoon Investigations

Job No. 5: Cooperative raccoon collections

By

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8 August 1983

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JOB COMPLETION REPORT  
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STATE OF ILLINOIS

PROJECT NO.: W-49-R-30

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 27 seasons. Four trips were made to the furhouse and 404 raccoons examined. Except for body weights, most of the data collected fell within the range of data collected at the same furhouse beginning with the 1955-56 season. In 1982-83 young-of-the-year females comprised only 56.06% of the females examined; the lowest percentage found in the 28-year period. This percentage appeared to be low because of a higher than average number of parous females in the sample in 1982-83--33.87%, the third highest percentage for the 28 years of the study. The high number of parous females caused the number of young raccoons (of both sexes) per parous female to be lower than the average during both 1981-82 and 1982-83--3.62 in 1981-82 and 4.19 in 1982-83 compared with the 28-year average of 5.13. Other results of the large number of parous females were lower than average percentages of young-of-the-year animals among all raccoons for the past two seasons--61.71% in 1981-82 and 65.35% in 1982-83 compared with the 28-year average of 67.87%--and the highest average body weight of all female raccoons--13.28 lb compared with the 28-year average of 11.69 lb. However, juvenile, parous, and nulliparous adult females, juvenile males, and all raccoons had the highest average weights reported during the 28 seasons. Adult males in 1982-83 averaged

average of 18.25 lb. The mild weather during 1982-83 is believed to have resulted in these higher than usual body 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. The harvest in 1982-83 decreased only 7.23% from that for 1981-82, and the harvest in 1981-82 was the second highest in recent years. However, the average pelt value declined 35.3%--from \$22.50 in 1981-82 to \$14.55 in 1982-83. Thus, Illinois raccoon populations have not declined drastically as some verbal reports from hunters, trappers, and furbuyers have suggested. Young-of-the-year raccoons comprised 65.35% of the raccoons examined in 1982-83, there were 4.19 young per parous female, females comprised 46.04% of the harvest, and the mean litter size for the 1982 breeding season was 3.33. The average litter size for 1982 was only slightly lower than the 28-year average. Adult males comprised 28.44% of the male harvest in 1982-83, less than 3% below the 28-year average. Thus, it appears that the increased percentage of parous females during the past two seasons was a chance occurrence rather than an indication of an increased percentage harvest of the total population. Juvenile males averaged 12.60 pounds and juvenile females 11.70 pounds. Adult males weighed an average of 18.12, parous adult females 15.60, and nulliparous adult females 14.93 pounds. Weights vary as much as 1.5 pounds from one year to the next but have shown no trends during the past 28 seasons. Hunters harvested 80.00% and trappers 20.00% of the raccoons examined. No salvaged raccoons killed on roads were examined during 1982-83, although during the past 10 seasons they have comprised 1.36% of all raccoons examined at this furhouse.

JOB COMPLETION REPORT  
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STATE OF ILLINOIS

PROJECT NO.: W-49-R-30

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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).

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 1982-83 as in the two previous seasons. The hunting season in the Northern Zone was 15 November 1982 - 13 January 1983. The hunting season in the Southern Zone was 25 November 1982 - 23 January 1983. The raccoon trapping season was also the same in 1982-83 as in the two previous seasons. The trapping season in the Northern Zone was 15 November 1982 - 29 December 1982. The raccoon trapping season in the Southern Zone was 25 November 1982 - 8 January 1983.

## FINDINGS AND ANALYSIS:

### 1982-83 Hunting and Trapping Season

During 4 trips to the furhouse between 22 November 1982 and 3 January 1983, 404 raccoons were examined. Most of the data collected fell within the range of similar data collected from the 1955-56 season through the 1981-82 season; however, the percentage of young-of-the-year females was the lowest (56.06%) it has been during the 28 years of this study (Table 1). The average for the 28 years of the study is 67.87% young-of-the-year. Young-of-the-year females comprised 40.90% of all young examined; a figure that was 5.81% below the 28-year average, but within the range of previous years. Parous females comprised 33.87% of the female harvest; the third highest percentage in the 28 years of this study. Thus, it appears that the relatively low percentage of young-of-the-year females among all females examined was caused by a higher than usual percentage of parous females and not by a reduction in the number of young females. Most of the increase in parous females came from the sample examined on 3 January 1983. On that date 48.00% of 50 females examined were parous compared with 30.30% of 33 females examined on 12 January 1981. Adult males comprised 28.44% of the males examined in 1982-83 (Table 2). This figure was 2.43% below the 28-year mean and was within the range of percentages for previous years. Thus, even though the number of young per parous female (4.19, Table 1) was 0.94 lower in 1982-83 than the 28-year average, the low figure appears to be, at least in part, a result of the higher than average number of parous females examined rather than to increased pressure on the population causing additional adults of both sexes to be taken by hunters and trappers. The overall sex ratio (46.04% females) was only 2.02% below the 28-year average, 48.06% (Table 3). Also, the average litter size (3.33) was only 0.22 below the 28-year average, 3.55 (Table 4).

Mean body weight of juvenile males in 1982-83 was 12.60 lb (Table 5) compared with 11.25 lb in 1981-82 and the 28-year average of 11.32 lb. Except for adult males, which had the second highest average weights in 1982-83 of any season during the 28-year period, all age and sex categories had the highest average weights in 1982-83. The higher than average body weights found in 1982-83 are believed to be a result of the extremely mild winter. Raccoons could continue to feed during the unseasonably mild winter weather and there was less of a drain on their fat reserves to maintain body temperatures. All other data showed no substantial differences from the 28-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 1982-83 season (Table 7) were 7.23% lower than for the 1981-82 season, and the harvest in 1982-83 was the lowest reported since the 1977-78 season. The hunting seasons in the Northern and Southern zones in Illinois were the same in 1982-83 as in 1981-82, and the trapping seasons were the same in both zones in 1982-83 as they were in 1981-82. Thus, it seems apparent that there was no substantial overharvest of Illinois raccoons in 1981-82.

#### Age Composition

Young-of-the-year animals comprised 56.06% of the females examined (Table 1). This figure was a slight decrease over the 56.82% seen in 1981-82, and was the lowest percentage found in the past 28 seasons. Parous adults comprised 33.87% of the females, the third highest percentage found in the 28 seasons and 6.11% above the 28-year mean of 27.76%. Nulliparous adults (8.06%) were higher than the 28-year average of 5.75%.



Young-of-the-year males (71.56%) were 5.32% higher than in 1981-82 and were 2.43% higher than the 28-year (69.13%) average (Table 2). Of the 404 raccoons examined for age, 65.35% were young-of-the-year animals; somewhat higher than the 61.71% observed in 1981-82 and 2.52% lower than the 28-year average of 67.87%. There were 4.19 young-of-the-year per parous female among the raccoons examined during the 1982-83 season. The 28-year average was 5.13 young per parous female. The number of young per parous female in 1982-83 was the fifth lowest found during the 28 years of this study and was 0.94 lower than the 28-year average. This low ratio was apparently a result of higher than average number of parous females examined and not because of a decrease in the number of young produced per parous female (Table 4). 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 28-year average of dark placental scars per uterus--believed to represent the average litter size--was 3.55 (Table 4).

#### Sex Ratios

Females comprised 46.04% (Table 3) of the raccoons examined at Perardi Bros. Fur and Wool, Inc., during the 1982-83 season. This was a decrease of 2.10% from 48.14% in 1981-82 and was 2.02% below the 28-year average (48.06%). Of the 264 young-of-the-year raccoons examined in 1982-83, 40.90% were females (Table 1); a figure 5.81% below the 28-year average of 46.71%. Females comprised 55.71% of the adult raccoons examined during the past season (Table 2); a figure that is 5.97% higher than the 28-year average of 49.74%.

#### 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 1982 breeding season, as determined from single groups of scars and dark groups of placental scars when pale and dark groups were both present, was 3.33 (Table 4, Fig. 1). The 28-year average litter size determined in this manner was 3.55. If all visible scars in each uterus were combined, the average number of scars per uterus with 1 or more scars was 4.28 in 1982-83 (Table 4) and the 28-year mean was 4.34.

#### Body Weight

Weights of raccoons examined in west-central Illinois during the past 28 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.

Young-of-the-year males weighed an average of 12.60 lb (Table 5) compared with 11.70 lb for young-of-the-year females (Table 6). Adult males averaged 18.12 lb (Table 5), parous females 15.60 lb, and nulliparous adult females 14.93 lb (Table 6). The 28-season averages were: young-of-the-year males, 11.32 lb; adult males, 16.53 lb; young-of-the-year females 10.55 lb; parous females, 14.15 lb; and nulliparous adult females, 13.00 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 1982-83 than their 28-season average weights (Tables 5 and 6). All sex and age classes except adult males had higher average weights in 1982-83 than in 1981-82. The sample sizes for nulliparous females were small for both seasons. These differences can probably be explained by the extremely mild weather during the 1982-83 hunting and trapping season, compared with the more severe weather in 1981-82.

Juvenile males killed by hunters weighed an average of 12.69 lb compared with 11.99 lb for juvenile males killed by trappers (Table 8). Adult males taken by hunters averaged 18.16 lb and those taken by trappers 17.98 lb. Juvenile females from hunters averaged 11.96 lb and from trappers 10.84 lb. Parous females killed by hunters weighed an average of 15.56 lb each and those killed by trappers 15.69 lb. During 10 recent seasons, 3,543 raccoons killed by hunters weighed an average of 12.44 lb each compared with 12.07 lb for 1,000 raccoons killed by trappers (Table 8). A preliminary analysis of the data for 5 recent seasons (not including 1978-79 - 1982-83) indicates no significant differences in body weights of raccoons taken by hunters and those taken by trappers.

#### Harvest by Hunters and Trappers

Hunters took 80.00% and trappers 20.00% of the raccoons examined. During 10 recent seasons, hunters accounted for 76.93% and trappers for 21.82% of the raccoons and cars for 1.36%. There were few differences in the various age and sex groups. Cars accounted for 1.52% of the juvenile females, 1.30% of the juveniles males, 1.13% of the adult males, and 0.79% of the parous 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 1980-81, 1981-82, and 1982-83 when the average pelt value was \$18.82, the same groups accounted for 76.8, 22.5, and 0.8%, respectively.

#### RECOMMENDATIONS:

The study should continue to allow for completion of the analysis of the data collected during the past 28 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 1981-82 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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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) <sup>a</sup>	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
Total or 28-yr Mean	66.48 (4,114)	27.76 (1,718)	5.75 (356)	46.71 (8,807)	5.13

<sup>a</sup> 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) <sup>a</sup>	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)
Total or 28-yr Mean	69.13 (4,693)	30.87 (2,096)	67.87 (12,977)	49.74 (4,170)

<sup>a</sup> 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
Total or 28-yr Mean	6,273	6,780	48.06

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 <sup>a</sup>	Dark <sup>b</sup>	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
Total or 28-yr Mean	1,606	492	1,606	1,279	5,706	2.60	3.55	4.34

<sup>a</sup> Presumably from the previous breeding season.

<sup>b</sup> 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) <sup>a</sup>	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)
1981-82	11.25 (156)	16.97 ( 80)	13.19 (236)	12.77 (457)
1982-83	12.60 (156)	18.12 ( 52)	14.17 (218)	13.76 (404)
28-year Mean	11.32 (4,595)	16.53 (2,059)	12.93 (6,654)	12.36 (12,762)

<sup>a</sup> Numbers in parentheses indicate sample sizes.

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

Season	Young-of-the-year	Parous	Nulliparous Adults	All Females
1955-56	9.24 ( 25) <sup>a</sup>	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)
Total or 28-yr Mean	10.55 (4,061)	14.15 (1,692)	13.00 (354)	11.69 (6,107)

<sup>a</sup> Numbers in parentheses indicate sample sizes.

Table 7. Average values and numbers of Illinois raccoon pelts, from 1968-69 through 1982-83. <sup>a</sup>

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)

<sup>a</sup> 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 Perardi Bros. Fur and Wool Co., Inc., Farmington, Illinois--1972-73 and 1974-75 through 1982-83.

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)	0.00 ( 0)
1982-82	12.69 (136)	11.99 ( 20)	( 0)	18.16 ( 48)	17.98 ( 14)	( 0)	11.96 ( 82)	10.84 ( 24)	( 0)
Mean of Means	11.14	10.85	10.39	16.87	16.22	15.56	10.51	10.14	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)	12.01 (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)
Mean of Means	14.33	14.31	13.00	13.53	13.49		12.44	12.07	11.12

Mean of Means	14.33	14.31	13.00	13.53	13.49	12.44	12.07	11.12
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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 1982-83 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)	81.83 (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)
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)
Mean of Means	76.93	21.82	1.36	72.99	26.22	0.79	75.46	22.92	1.52

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)	0.00 ( 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)
Mean of Means	79.72	19.12	1.13	78.83	19.88	1.30	72.27	27.73	0.00 ( 0)

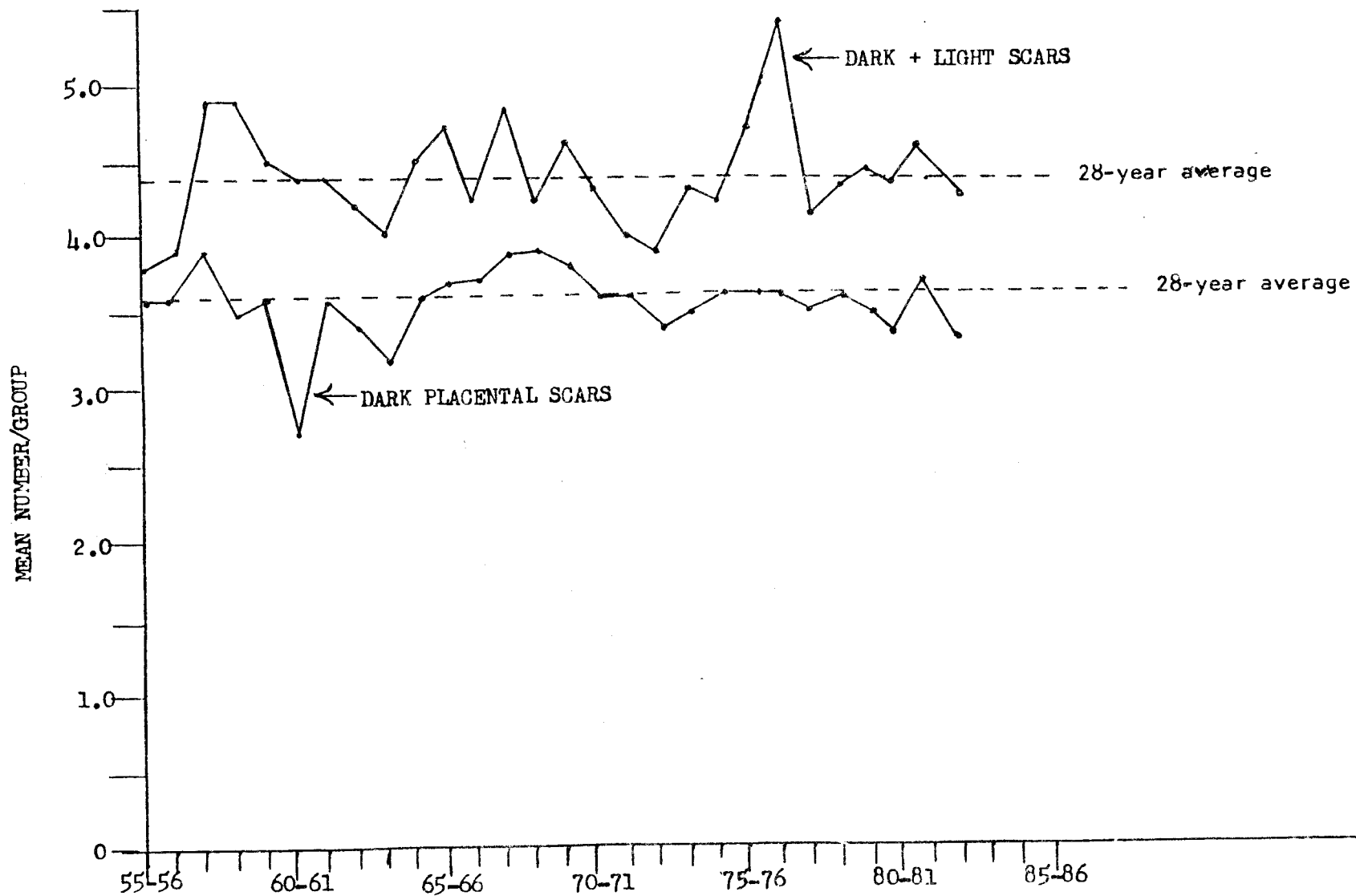


Fig. 1. Average number of placental scars observed per parous female examined at Perardi Bros. Furhouse, Farmington, Illinois--1955-56 through 1982-83 seasons. "Dark" scars represent uteri with only one group of scars whether dark or light and the dark scars when both light and dark scars were present 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.

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