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THE 1978 BREEDING-BIRD CENSUSES

GILBERT S. RAYNOR

September 1978

ATMOSPHERIC SCIENCES DIVISION
DEPARTMENT OF ENERGY AND ENVIRONMENT

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ABSTRACT

As part of a program to characterize the plant and animal life of the Laboratory site and surrounding areas, the two breeding-bird censuses taken in 1977 were repeated in 1978. Five observers made thirteen census trips to both the BNL and Westhampton plots. A decrease in Rufous-sided Towhees occurred on both plots, but other changes were small and not considered significant.

The two breeding-bird censuses initiated in 1977 and reported in BNL 50775 were repeated in 1978. The same four observers (James H. Clinton, David L. Larsen, Gilbert S. Raynor, and John J. Ruscica) shared coverage of both plots. They were joined by Robert Adamo who is not affiliated with BNL and worked only on the Westhampton plot.

No significant change occurred in the vegetation of either plot. Two minor plant species not found in 1977 were noted, the Bird's-foot Violet (Viola pedata) and Pink-Lady's Slipper (Cypripedium acaule) at Westhampton and the Lady's Slipper at BNL.

A description of the census trips with weather conditions is given in Table 1. One additional evening visit was made at BNL to listen for nocturnal species. Because of the length of time needed for surveying and marking the plots, coverage was not started until late May 1977 and the early part of the breeding season was missed. Coverage in 1977 continued until mid-July at Westhampton and late July at BNL, but the trips after early July contributed little useful data. Therefore, coverage in 1978 was started in late April and terminated in early July with most frequent trips at the height of the breeding season in June. At BNL, man-hours totaled 33 in 1978 as compared with 28 in 1977. At Westhampton, man-hours totaled 32 in 1977 and 28 in 1978. The decrease was caused by omitting one census trip for which the record was lost. The numbers on the stakes were painted in April prior to the census period.

The species composition and density of territorial males on the BNL plot are given in Table 2 and on the Westhampton plot in Table 3. Because of better data and more experience, the best estimates of the number of territories are given instead of ranges as in 1977. At BNL, one Towhee nest was found. A pair of Black-capped Chickadees was observed attempting to excavate

a nesthole on an early visit but the wood proved too hard and the attempt was abandoned. Visitors included Yellow-billed Cuckoo, Eastern Wood Pewee, Wood Thrush, Common Yellowthroat, Common Grackle, Brown-headed Cowbird, and Cardinal.

Trends cannot be discerned with only two years of data but changes in number of males and species composition were relatively minor. The decrease in Towhees is believed real. No new species occurred as a territorial male. Two of the three species recorded in 1977 but not in 1978 were considered visitors in 1978. The White-breasted Nuthatch was not present.

Several typographical errors were discovered in Table 7 of BNL 50775. The total of territorial males should have been 46.5 - 60.5 instead of 82 - 96. In the columns No./Km² and No./100 Acres, the six consecutive values of 4 and 11 should be interchanged. However, the column totals are correct.

At Westhampton, one Towhee nest was found. Visitors included Marsh Hawk, Mourning Dove, Tree Swallow, Barn Swallow, Purple Martin, Blue Jay, Black-capped Chickadee, and Common Grackle.

Compared with 1977, the number of Towhees decreased at Westhampton as well as at BNL. The apparent increase in Prairie Warblers and Field Sparrows is probably due to better coverage early in the season. Other changes are not significant.

The census will be continued in future years.

Table 1
Description of 1978 Census Trips

Date	Time (EST)	Wind		Temp. (°F)	Weather
		Speed (mps)	Dir.		
BNL					
Apr. 29	0600-0915	3-5	NW	52-62	Clear
May 4	0520-0640	0-0.5	N	29-46	Clear
May 12	0645-0830	1	SW	54-63	Clear
May 19	0530-0830	1-1.5	NW	53-64	Overcast stratus and light fog to clear and haze
May 27	0630-0930	1-3.5	NE	60-65	Overcast stratus
June 1	0455-0655	1-3	NW	66-74	Broken cirrus, altostratus and altocumulus to clear, haze
June 4	0530-1130	1-3.5	NW-N-NW	58-71	Clear
June 7	0452-0710	0-2.5	SSW-S	49-66	Clear, haze
June 11	0440-0620	1-2	SSW	58-65	Clear
June 20	0515-0800	0-3	NW	56-70	Clear
June 23	0455-0700	0-1	N-NE	48-62	Scattered cirrus, altocumulus
July 1	0630-0930	1-4	NW	64-70	Clear
July 12	0530-0800	1-3	NW	52-67	Clear
Westhampton					
Apr. 29	0740-0900	4-9	NW	59-62	Clear
May 7	0702-0840	1-5	NW	53-58	Broken to overcast strato-cumulus
May 19	0435-0640	1-1.5	NW	52-54	Overcast stratus and fog to clear and haze to broken stratus and light fog
May 26	0420-0540	1-2	NE	61-63	Overcast stratus
May 30	0415-0645	0-1.5	NW	61-62	Overcast stratus and light fog
June 4	0730-1030	1.5-3.5	NW	62-70	Clear
June 7	0430-0645	1-2.5	SSW-S	49-65	Clear, haze
June 12	0500-0700	0-2	SW	58-68	Clear
June 20	0530-0900	0-4	NW	57-74	Clear
June 23	0455-0700	0-1	N-NE	48-62	Scattered cirrus and alto-cumulus
July 1	0630-0930	1-4	NW	64-70	Clear
July 12	0530-0800	1-3	NW	52-67	Clear

Table 2

Species Composition and Density of Territorial Males on BNL Plot

<u>Species</u>	<u>Territorial males</u>	<u>No./km²</u>	<u>No./100 acres</u>
Rufous-sided Towhee	12.5	134	54
Ovenbird	7	75	31
Crested Flycatcher	3.5	38	15
Baltimore Oriole	3.5	38	15
Blue Jay	3	32	13
Black-capped Chickadee	3	32	13
Brown Thrasher	1.5	-	-
Hermit Thrush	1.5	-	-
Scarlet Tanager	1.5	-	-
Tufted Titmouse	1	-	-
Black and White Warbler	1	-	-
Pine Warbler	1	-	-
Whip-poor-will	+	-	-
Common Flicker	+	-	-
Downy Woodpecker	+	-	-
TOTAL	40	349	141

Table 3

Species Composition and Density of Territorial Males
on Westhampton Plot

<u>Species</u>	<u>Territorial males</u>	<u>No./km²</u>	<u>No./100 acres</u>
Prairie Warbler	14.5	150	61
Rufous-sided Towhee	11.5	119	48
Field Sparrow	6	62	25
Brown Thrasher	2	21	8
Mockingbird	+	-	-
Common Yellowthroat	+	-	-
Total	34	352	142

