

# FALL AND WINTER BIRDS NEAR HOMESTEAD, FLORIDA

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## INTRODUCTION

Because Florida stretches some 475 miles north to south with a variety of climates and habitats, birds common in the north are often uncommon or rare in the south. Most fall passerines probably pass across north Florida to the Gulf coast rather than through the Southern Peninsula. Only 20 years ago species now common, not uncommon or wintering in south Florida were considered rare, uncommon, or absent in winter. The change may be due in part to range expansion but more likely is due to the recent increase of competent observers.

The present report is a summary of fall banding operations and winter bird distributions at my home in Homestead, Florida from 1968 to 1974 with some additional information from 1966 and 1967. All birds were measured, weighed, aged, and sexed by using information available at the time for skull ossification, plumage, eye color, wing chord, and fat quantities. Ten nets were used originally, increased later to 20, placed about my rural cottage in an area of approximately 2.5 acres, around a small pond, in woods, and among scrub growth where the vegetation thickened and grew higher each year. Nets exposed to the sun were often closed for midday. Rain was rarely a factor because showers were hard, but brief. Two double-cell Potter traps were used irregularly.

## STATISTICS

I operated the station 1968 to 1974 from 22 September to 6 November, on an informal basis in 1966 to 1967, 1975 to 1976, and irregularly during the winter-spring seasons. During this time, 22,272 individuals of 116 species were banded. Data on net-hours are given in Table 1.

Returns from previous seasons were 1,039 for 36 species. Forty-four individuals of four species banded at the station were recovered in 12 states, Cuba, and Canada. Fourteen individuals of five species banded elsewhere were recovered at the station.

The 10 most common species and number banded were:		The 9 most common fall migrants were:	
Gray Catbird, fall and winter	4,332	Gray Catbird	3,193
Yellow-rumped Warbler, winter	3,663	American Redstart	861
American Robin, late Jan. to early Feb.	3,170	Ovenbird	602
Painted Bunting, fall and winter	1,167	Painted Bunting	691
American Redstart, fall	861	White-eyed Vireo (includes residents)	545
Red-winged Blackbird, all seasons	765	Common Yellowthroat	441
American Goldfinch, winter	747	Red-eyed Vireo	414
Indigo Bunting, late fall and winter	666	Veery	281
Black-throated Blue Warbler, fall	604	Prairie Warbler	199
Ovenbird, fall	602		

TABLE 1  
Data on net-hours and birds handled.

Year	Fall migration						
	1968	1969	1970	1971	1972	1973	1974
Net-hours	2,712	6,122	5,191	6,896	7,109	7,907	11,500
Species	41	45	46	47	43	42	40
Individuals	761	1,301	1,876	1,658	1,837	1,066	1,450
Birds/1,000 net-hours	280.6	212.5	361.4	240.4	258.4	134.8	126.1

#### HABITATS

The station in Dade County is approximately 30 miles south of Miami, 15 miles inland from Biscayne Bay, in pine hammock and revegetating agricultural fields, hardwood hammock, and uncleared pineland growing up to hardwood hammock with thick understory. All of these are abundantly rimmed with Florida Holly, also called Brazilian Pepper (*Schinus terebenthifolia*), the fruit of which is eaten by many birds. Thickets of native and decorative food-bearing shrubs have grown or been planted about the station. A shallow, artificial pond 20 ft × 40 ft holds cattails, pickerel weed, tall grasses, and other native vegetation. Bird baths and feeders were heavily patronized, with little human disturbance. Predators observed were Gray Fox, Raccoon, Sharp-shinned Hawk, American Kestrel, Indigo Snake, Box Turtle, feral and domestic cats. In some years Great Horned and Screech owls were present.

#### EXPLANATORY NOTES

"Status" in the accounts that follow refers to the Southern Peninsula, not just the station. The status was obtained from the fall and winter listings in *Audubon Field Notes (AFN)* and *American Birds (AB)*, from Sprunt (1954), Abramson (1961), Cunningham (1961), and Ogden (1969). I thank William B. Robertson, Jr. for assistance in this matter.

Double dates indicate the winter season; single dates are for fall only, through approximately 6 Nov. Birds per net-hour were used for fall migrants only. Winter banding was irregular and net-hours not kept.

Birds were classified as adult after 1 Jan. according to the Bird Banding Laboratory regulations, until the more recent years when the author's knowledge of SY vs. AHY plumages had expanded. HY (hatching year), SY (second year, after 1 Jan.), AHY (after 1 Jan.), ASY (after the second 1 Jan.) are Bird Banding Laboratory terms. Abbreviations are: Bird Banding Laboratory (BBL), Everglades National Park (ENP), University of Miami Reference Collection (UMRC), and *Florida Naturalist (FN)*, and *Florida Field Naturalist (FFN)*.

When it seemed useful, I added records from 1966 to 1977, and from December 1974 to 1976, chiefly for return and recovery data.

TABLE 2  
Significant changes in certain species, calculated in birds per net-hour.<sup>1</sup>

Species	Total banded	1968	1969	1970	1971	1972	1973	1974	r <sup>1</sup>
Least Flycatcher	51	2.2	1.1	1.7	1.3	1.0	0.5	0.5	.874
Blue Jay	337	7.0	10.4	10.6	5.5	2.4	2.5	1.6	.820
House Wren	88	5.2	1.8	3.5	2.3	2.1	0.9	0.4	.839
Common Yellow-throat	441	17.3	14.0	17.3	11.9	8.9	5.3	4.1	.939
Cardinal	334	10.3	12.9	8.3	13.0	7.6	3.3	1.2	.805
Painted Bunting	1,127	31.7	21.7	22.0	16.4	12.8	10.9	5.9	.974
Rufous-sided Towhee	41	4.1	2.9	2.5	2.6	1.7	1.0	0.6	.973
Sharp-shinned Hawk <sup>2</sup>	35	0	3	3	6	4	10	9	.910
White-winged Dove <sup>3</sup>									

<sup>1</sup> Significant at 95% level if  $r = .754$  or greater, at 99% level if  $r = .874$  or greater (Robbins).

<sup>2</sup> Number taken throughout season, not by net-hour.

<sup>3</sup> Personal observations and reports show a pronounced increase due to the local release of imported birds in 1954.

Sample sizes were too small and irregular for full statistical treatments. Measurements were averaged only, with some extremes shown. Birds are listed as "fat" if any amount of fat was detected. Station dates are specified; otherwise dates are for the Southern Peninsula.

Temperatures at the station in the fall ranged from 70–90°F with an occasional early morning drop as low as 66°F, associated with a front. Except when grounded by rain (which could double the daily take), most migrants apparently overfly or remain closer to the coast. The usual rain came in tropical showers brief enough so that nets were not closed. Over the years on only 10 days were more than 100 birds handled. These "heavy days" all immediately preceded or followed cold fronts with rain; in 1972, for example, 140 birds were taken on 3 Oct., 166 on 8 Oct. with a front intervening. Hurricane Gladys in 1968, greatly destructive in northern Florida, did not affect the station. Hurricane Gerda in 1969, building up from the south and stalling off the Carolina coast, produced two days of over 100 birds. Unfortunately the big front of 16–18 Oct. 1970, which clotted the Atlantic Coast from Maine to the Florida Keys with migrants, came during my absence, as did a less dramatic front 21–25 Oct. 1971. Extremely wet years (1968 and 1969) with departures from normal of 1.7 and 6.8 in of rain, respectively, resulted in unusually good migratory movements. The years 1970 to 1973 were dry, with departures of -1.8, -3.3, -5.1, and -5.1 in, respectively. Drought-plagued 1971 produced a disproportionate number of Ground and Mourning doves, Swainson's Thrush, American Redstart, and Rose-breasted Grosbeak. The year 1973 was a hot, bland fall with no local fronts, reflected in a decrease in all species except Black-and-white Warbler and in the number of species.

TABLE 3

Returns in subsequent seasons. Returns were calculated seasonally, from one fall-winter year to another, rather than from the Bird Banding Laboratory's 3-month periods. They are given for birds banded at the station from 1966 to April 1976.

Species <sup>1</sup>	Banded	Re- turned	Year																	
			1	2	3	4	5	6	7	8	9	10								
Smooth-billed Ani	26	1		1																
<u>Whip-poor-will</u>	75	4	3		1															
Common Flicker	31	9	4	4	1															
Red-bellied Woodpecker	40	2	1		1															
Downy Woodpecker	12	2		1		1														
<u>Eastern Phoebe</u>	36	2	1		1															
<u>Least Flycatcher</u>	51	1	1																	
Blue Jay	337	51	24	15	5	3	2	2												
<u>House Wren</u>	88	2	2																	
Carolina Wren	11	7	3	3	1															
Mockingbird	451	52	27	15	7	1	1													1
<u>Gray Catbird</u>	4,310	65	34	20	7	1	2	1												
Brown Thrasher	89	3	1			1	1													
<u>Hermit thrush</u>	34	4	3	1																
Blue-gray Gnatcatcher	59	12	6	2	3	1														
<u>Ruby-crowned Kinglet</u>	24	1		1																
<u>White-eyed Vireo</u>	545	52	26	16	5	4	1													
<u>Orange-crowned Warbler</u>	15	1		1																
<u>Cape May Warbler</u>	59	1		1																
<u>Yellow-rumped Warbler</u>	3,663	31	21	5	4	1														
<u>Black-throated Green</u>	13	1		1																
<u>Warbler</u>																				
Pine Warbler	9	2		1		1														
<u>Prairie Warbler</u>	199	8	2	3	2	1														
<u>Palm Warbler</u>	127	2	2																	
<u>Ovenbird</u>	602	16	8	5	2		1													
<u>Common Yellowthroat</u>	411	10	4	4	2															
<u>Yellow-breasted Chat</u>	14	1			1															
<u>American Redstart</u>	861	1						1												
Red-winged Blackbird	469	126	75	36	10	2		1												
Spotted-breasted Oriole	23	1																		1
Cardinal	334	134	55	29	20	15	9	5	1											
<u>Rose-breasted Grosbeak</u>	62	5	2	1	1		1													
<u>Indigo Bunting</u>	666	130	64	27	21	9	6	2	1											
<u>Painted Bunting</u>	1,167	301	92	73	37	29	22	9	3	5	2	1								
<u>American Goldfinch</u>	747	16	9	5	4															
Rufous-sided Towhee	119	19	11	4	7	1	1													

<sup>1</sup> Once underlined species are migrant only, twice underlined both migrant and resident. Others are resident, although Mockingbirds, Blue Jays, and Cardinals show indication of at least fall movement.

1974 was also bland. The significant drop in numbers (Table 2) might have been due to overflying or to the increasing use of chemical sprays and increasing habitat destruction.

Initials of collectors are: Erma J. Fisk (EJF), John C. Ogden (JCO), Dennis R. Paulson (DRP), Alexander Sprunt, IV (AS), George Sutton (GS), and Glen E. Woolfenden (GEW).

#### RESULTS

The status of some species changed significantly through the years (Table 2). Data on Returns and Recoveries are given in Tables 3, 4, and 5.

Peaks of passage varied annually, with the largest number of birds taken 8–18 Oct. The sampling was too small to give an accurate picture. Of the more abundant migrants approximately 50% of the Gray Catbirds were banded by 15 Oct., 64% by 20 Oct.; 80% of the American Redstarts came through before 16 Oct.; 75% of the adult and 52% of HY Ovenbirds by 18 Oct.; 60% of White-eyed Vireos by 15 Oct. Black-throated Blue Warblers were affected by fronts; Parula Warblers showed no pattern. Only 1% of Veeries were recorded after 15 Oct. although they were numerous up until the 15th. Adult Painted Buntings preceded (10–20 Oct.) the HY birds (20–30 Oct.) with males preceding females.

For every year of this study, numbers of HY birds exceeded those of adults (Fig. 1). In some species, HY individuals comprised 70 to 80% of the fall migrants (Black-and-white and Cape May warblers; Table 6), in others, adults slightly exceeded HY birds (Amer. Redstart, Painted Bunting).

Data on molt are presented in Table 7. The data, although incomplete, include migrants, wintering individuals, and residents.

Some data were obtained on external parasites and obvious deformities. These data are given in Table 8.

#### MIGRANT, WINTERING, AND RESIDENT BIRDS HANDLED<sup>1</sup>

Green Heron (*Butorides striatus*). Common resident. Banded 2, 1971. Ad.: wing 180, wt. 182. HY: wing 180, wt. 164.

Sharp-shinned Hawk (*Accipiter striatus*). Migrant and common winter resident, Oct.–mid-May. Banded 35. Station dates 1 Oct.–19 Mar.

1969–70	1970	1971–72	1972–73	1973–74	1974
3	3	6	4	10	9

Ad. M: 1, wing 167. Ad. F: 4, wing 190–200 ( $\bar{x}$  = 195), wt. (2) 176.0–179.1 ( $\bar{x}$  = 177.5). HY-SY M: 23, wing 150–177 ( $\bar{x}$  = 167), wt. (20) 89.1–122.5 ( $\bar{x}$  = 110.5). HY-SY F: 5, wing 200–201 ( $\bar{x}$  = 201.5), wt. (20) 164.1–179.2 ( $\bar{x}$  = 171.6).

American Kestrel (*Falco sparverius*). Abundant migrant and winter resident. Banded 2. Station dates 11 Oct.–23 Dec. 1973. Ad. M: wing 188, 195, wt. 131.1.

Common Snipe (*Capella gallinago*). Uncommon winter resident, Sept.–May. Banded 1, 12 Feb. 1973. AHY U: wing 135, wt. 101.0, bill 67.

<sup>1</sup> In the species accounts, all linear measurements (wing, for example) are given in mm, and all weights are in g.

TABLE 4  
Recoveries from 1966 to spring 1976, of birds banded in Homestead.

Species	Number	Recovery location	Age <sup>1</sup> at banding	Sex	Date
Mourning Dove	2	Wauchula, FL	AHY	F	01-06-71 to 01-09-72
		Palm Beach, FL	AHY	F	11-09-68 to 12-21-68
		Tuskegee, AL	AHY	M	01-27-68 to 01-05-69
Ground Dove	1	Pompano Beach, FL	AHY	F	10-09-69 to 08-01-70
Blue Jay	1	Miami, FL	AHY	U	09-28-69 to 02-08-73
Mockingbird	2	Pompano Beach, FL	AHY	U	Spring 65-Fall 66 (no data kept)
		Port St. Lucie, FL	HY	U	09-23-70 to 03-13-75
Gray Catbird	10	Clewiston, FL	AHY	U	11-10-71 to 02-16-72
		Gray, GA	HY	U	11-02-69 to 05-11-70
		Chapel Hill, NC	AHY	U	11-05-71 to 06-12-72
		Alexandria, VA	HY	U	10-13-72 to 05-0?-73
		Annandale, VA		U	10-21-70 to 04-30-72
		Churchville, VA	HY	U	10-20-70 to 09-25-72
		Frederica, DE	SY	U	03-14-73 to 06-30-74
		Laurel, MD	AHY	U	10-18-72 to 05-06-74
		Tuckerton, NJ	AHY	U	02-10-74 to 05-05-76
Parker Ford, PA	HY	U	10-26-74 to 07-01-75		
Amer. Robin	19	Waldo, FL	AHY	U	02-11-73 to 02-23-73
		Blackshear, GA	AHY	U	01-23-70 to 03-25-73
		Aiken, SC	AHY	U	01-27-70 to 03-0?-75
		Ash, NC	AHY	U	01-27-66 to 02-27-69
		Flat Rock, NC	AHY	U	02-05-72 to 01-29-73
		Frederick, MD	AHY	U	01-09-72 to 06-16-74
		Dover, NJ	AHY	U	02-09-69 to 06-06-72
		Matawan, NJ	AHY	U	01-26-70 to 04-22-70
		Westwood, NJ	AHY	U	02-24-71 to 10-?-73
		Chester, PA	AHY	U	02-08-74 to 07-0?-75
		Edinboro, PA	AHY	U	02-14-72 to 06-15-72
		Lehighton, PA	AHY	U	02-18-68 to 05-0?-69
		McKeesport, PA	AHY	U	02-18-68 to 04-29-68
		Bayport, NY	AHY	U	02-11-73 to 05-16-73
		N. Massesqua, NY	AHY	U	01-29-72 to 05-16-72
		Webster, NY	AHY	U	02-20-68 to 02-27-69
Dunsford, Ont.	AHY	U	01-30-69 to 06-18-69		
Georgetown, Ont.	AHY	U	02-20-68 to 06-21-69		
Peoria, IL	AHY	U	02-02-69 to 04-22-70		
Veery	1	Labelle, Que.	AHY	U	10-04-70 to 06-13-71
Black-throated Blue Warbler	1	Cuba	AHY	M	10-29-69 to 12-0?-69
Yellow-rumped Warbler	1	Frewsburg, NY	—	—	02-12-73 to 05-05-74
Red-winged Blackbird	6	Ft. Lauderdale, FL	AHY	M	10-04-68 to 01-20-74
		Boca Raton, FL	AHY	M	03-17-68 to 01-09-69
		W. Palm Beach, FL	SY	M	03-31-69 to 01-10-70
		Belle Glade, FL	Nest	U	05-25-66 to 02-18-72

TABLE 4  
Continued.

Species	Number	Recovery location	Age <sup>1</sup> at banding	Sex	Date
Common Grackle	1	E. of Naples, FL	AHY	M	03-09-69 to 04-11-67
		Springfield, MA	AHY	M	12-31-68 to 04-16-69
		Plantation Key, FL	AHY	U	10-13-68 to 05-14-69
Brown-headed Cowbird	1	Vero Beach, FL	AHY	F	02-18-66 to 03-27-67
Northern Oriole	1	Quakertown, PA	AHY	F	11-10-70 to 06-08-73
Painted Bunting	3	Hilton Head, SC	HY	F	10-09-71 to 05-12-72
		Adams Run, SC	HY	F	10-27-70 to 05-15-72
		Wilmington, NC	HY	U	10-19-74 to 06-20-76

<sup>1</sup> HY = Hatching year, SY = Second year, AHY = After hatching year, Nest = nestling.

Killdeer (*Charadrius vociferus*). Common to abundant in winter. Uncommon May–Sept., Banded 1, 30 Dec. 1972. Wing 155, wt. 67.7, AHY U.

Sandwich Tern (*Sterna sandvicensis*). Rare, coastal. 1 found 15 mi inland freshly dead in the road by the station 17 Mar. 1968. Photo ENP.

White-winged Dove (*Zenaida asiatica*). Released and locally resident since 1960, becoming abundant. Banded 47, irregularly in the station area. Ad. U: 46, wing 150–180 ( $\bar{x}$  = 161.1), wt. (n = 24) 139.7–183.8 ( $\bar{x}$  = 166.3). HY U: 1, wing 142, wt. 123.3.

TABLE 5  
Foreign recoveries: birds banded elsewhere, taken at Homestead.

Species	Number	Banding location	Age	Sex	Date
Gray Catbird	2	Island Beach, NJ	—	U	09-23-67 to 01-19-69
		Seaside Park, NY	AHY		09-18-66 to 03-27-69
Amer. Robin	4	New Vernon, NJ	HY		07-19-73 to 02-10-74
		Clarksville, PA	AHY	U	04-11-65 to 03-15-69
		Cohoes, NY	AHY	U	10-19-69 to 01-29-72
		Manomet, MA	AHY	U	10-05-69 to 01-26-72
Myrtle Warbler	1	Speonk, Long Is., NY	—	U	10-20-64 to 01-28-68
Red-winged Blackbird	4	Boca Raton, FL	AHY	M	02-02-66 to 02-26-67
		Del Ray Beach, FL	AHY	M	12-23-65 to 03-09-69
		<sup>1</sup> Del Ray Beach, FL	AHY	M	01-05-69 to 04-15-71
		Naples, FL	—	U	05-25-72 11-24-66 to 04-11-67
Painted Bunting	1	Savannah, GA	Nest	—	08-05-68
		taken 11 times as	AHY	M	01-01-69 to 03-13-72

<sup>1</sup> Recaptured in successive years.

TABLE 6  
Comparisons of age and sex in fall migrants.

Species	AHY	HY	Male	Female
Black-and-white Warbler		71%	56%	
Parula Warbler		55%		51%
Cape May Warbler		83%	83%	
Black-throated Blue Warbler		56%		56%
Prairie Warbler		54%		56%
Common Yellowthroat		62%		51%
American Redstart	54%			61%
Northern Oriole (Baltimore)		70%	63%	
Indigo Bunting		52%		62%
Painted Bunting	57%			60%

History: In 1959, "about 25 birds" bred from 3 to 5 pairs imported from Central America in 1954 were released a few miles north of Homestead (Fisk, 1968, *FN*, 41: 126). By 1967, a flock of 200 came daily for feed. The species is now widespread in the Redlands, frequenting avocado groves, pines, and bird feeders in flocks of 40 to 60 and more. Individuals reported from the Keys in previous years have probably been western vagrants.

Mourning Dove (*Z. macroura*). Abundant resident, some fall and winter birds probably migratory. Banded 81

1968	1969	1970	1971	1972	1973	1974
1	2	4	41	9	15	9

Ad. M: 30, wing (n = 22) 136-152 ( $\bar{x}$  = 143). Ad. F: 37, wing (n = 27) 13.5-14.8 ( $\bar{x}$  = 13.7).

Ground Dove (*Columbina passerina*). Common resident. Banded 447. Wing and weight not taken.

1968	1969	1970	1971	1972	1973	1974
26	48	37	157	18	13	69
9.7	7.8	7.1	22.8	2.5	1.6	6.0

(% per 1,000 net-hr)

Ad. M: 123, Ad. F: 124, U: 121.

Yellow-billed Cuckoo (*Coccyzus americanus*). Summer resident, few or none winter. Banded 61. Station dates 30 Sept.-6 Nov.

1968	1969	1970	1971	1972	1973	1974
3	12	8	15	4	11	8
1.1	2.0	1.5	2.2	.6	1.4	.7

(% per 1,000 net-hr)

Ad.: 24, wing 133-150 ( $\bar{x}$  = 143); wt. 42.3-82.1 ( $\bar{x}$  = 65.2), HY: 34, wing (32), 133-150 ( $\bar{x}$  = 142); wt. (33) 48.4-76.7 ( $\bar{x}$  = 58.9). Winter reports: from S. Peninsula Christmas Counts, 1968 (1), 1973 (4).

Smooth-billed Ani (*Crotophaga ani*). Resident, increasingly common. Banded 26. Station dates 26 Sept.-9 April.

1968	1969-70	1970-71	1971	1972	1973-74	1974
8	3	5	4	1	4	1

Ad. U: 20, wing 140-160 ( $\bar{x}$  = 150); wt. (16) 82.3-120.0 ( $\bar{x}$  = 103.9). Return: 1, 29 Sept. 1973 to 4 Mar. 1974.

Screech Owl (*Otus asio*). Common permanent resident. Banded 13 (gray phase 11, red phase 2). Station dates 26 Sept.-7 May.



TABLE 7  
Fall birds showing molt; data incomplete.

Species	Sample size	Dates	Specifics
Ground Dove	10	09-23 to 10-03	1 HY, 9 AHY (1 in complete molt)
Yellow-billed Cuckoo	1	10-12	HY
Smooth-billed Ani		Always molting one	or more flight feathers
Screech Owl	1	09-25	HY
Whip-poor-will	1	10-09	AHY
Red-bellied Woodpecker	2	09-26 to 11-08	U
Blue Jay	5	09-23 to 10-31	U
Carolina Wren	4	09-24 to 09-26	AHY, 2 in complete molt
Mockingbird	24	09-22 to 10-23	12 known HY, 10 known adult, 1 in complete molt 09-25
Gray Catbird	10	09-26 to 10-26	9 HY, 1 AHY
Brown Thrasher	2	09-28 to 10-02	HY
Swainson's Thrush	2	10-09	HY, 10-21 juv. gape
Veery	1	10-13	HY
Blue-gray Gnatcatcher	10	09-22 to 11-06	7 HY, 3U
White-eyed Vireo	6	09-23 to 10-01	4 HY, 2 AHY
Black-and-white Warbler	1	10-01	AHY
Palm Warbler	1	10-10	HY
Ovenbird	4	09-28 to 10-18	3 HY, 1 AHY
Common Yellowthroat	2	09-23 to 09-28	2 HY
Red-winged Blackbird	50	09-27	
Common Grackle	1	10-15	AHY
Cardinal	78	09-25 to 11-04	HY and AHY
Rose-breasted Grosbeak	1	10-19	AHY
Indigo Bunting	2	11-03, 11-07	complete molt, 2 HY
Painted Bunting	25	09-30 to 10-31	6 HY, 2 SY, 17 AHY, one in complete quill molt 09-26, HY, was released able to fly 10-02, one in complete molt 09-28
Rufous-sided Towhee	33	09-30 to 10-27	23 HY, 5 AHY, 5 U, two in juv. plumage 10-10, 10-21, 8 in complete molt
Other molt dates of interest:			
Yellow-rumped Warbler		first winter date	03-01 (2)
American Goldfinch		first date	01-10

1969

3

1970-71

3

1971

2

1973-74

5

Presumed Ad.: 8, wing 140-157 ( $\bar{x}$  = 146.7). HY: 2, wing 145, 150; wt. 119.0-135.5.

Short-eared Owl (*Asio flammeus*). Rare winter resident, Nov.-Mar. Banded 1. Picked up with apparent pesticide poisoning in a corn field 23 Nov. 1971, released 5 Dec. "Earliest definite Southern Peninsula record" (*AB*, 26: 52, Robertson). Previous record: one collected 1955 near Goulds, S. Dade, 7 February (*AFN* 10: 246, Stevenson).

TABLE 8  
Parasites and deformities.<sup>1</sup>

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Hippoboscid flies: Sharp-shinned Hawk (1), Mourning, White-winged, and Ground doves (many), Gray Catbird, Cardinal, Painted Bunting, Rufous-sided Towhee

Ticks: Blue Jay, House Wren, Gray Catbird, Amer. Robin, Hermit Thrush, Black-throated Blue Warbler, Common Yellowthroat, Amer. Redstart, Painted Bunting, Rufous-sided Towhee

Lice: Gray Catbird, Red-winged Blackbird, Painted Bunting

Red mites: House Wren (3)1971 only, Mockingbird (1)

Leg broken or partially lacking: Mourning Dove, Red-bellied Woodpecker, Mockingbird (4), Gray Catbird (6), White-eyed Vireo, Red-eyed Vireo, Common Yellowthroat, Common Grackle, Scarlet Tanager, Cardinal, Painted Bunting (3), Indigo Bunting

Bill deformed or broken: Mourning Dove, Ground Dove, Yellow-shafted Flicker, Blue Jay, Mockingbird (2), Gray Catbird (6), Amer. Robin, Swainson's Thrush, Veery (2), Common Yellowthroat (2), Red-winged Blackbird, Cardinal (10), Painted Bunting, Amer. Goldfinch (2)

Eye diseased or blind: Ground Dove, Mockingbird (2), Gray Catbird, Red-eyed Vireo, Red-winged Blackbird, Cardinal, Painted Bunting (2), Rufous-sided Towhee

Tumors: Mockingbird, many and often severe (27, both AHY and HY), Gray Catbird, Red-winged Blackbird, Painted Bunting

Foot pox (mites): Ground Dove, Gray Catbird (1, severe infestation), Amer. Robin (2, severe), Worm-eating Warbler, Red-winged Blackbird (very common and severe), Amer. Goldfinch

Head scars: Gray Catbird (4), Swainson's Thrush, Cedar Waxwing, Black-throated Blue Warbler, Prairie Warbler, Ovenbird, Common Yellowthroat, Cardinal, Amer. Goldfinch, Painted Bunting

Albino feathers: Gray Catbird (2), Black-throated Blue Warbler (2), Amer. Redstart, Red-winged Blackbird (50% on 1 bird), Painted Bunting (2)

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<sup>1</sup> Complete records not kept; one individual unless otherwise noted.

Chuck-will's-widow (*Caprimulgus carolinensis*). Resident, common Apr.–Oct. Uncommon in winter. Banded 16. Station dates 25 Sept.–22 Oct. (30 Mar., 1).

1968	1969	1970	1971	1972	1974	
1	2	2	6	2	3	
.4	.3	.2	.9	.3	.3	(% per 1,000 net-hr)

M: 2, wing 212, 221; wt. (1) 123.5. F: 14, wing 203–230 ( $\bar{x}$  = 214); wt. (13) 117.1–147.0 ( $\bar{x}$  = 133.0).

Whip-poor-will (*Caprimulgus vociferus*). Not uncommon winter resident, Oct.–Apr. Banded 75. Station dates 27 Sept.–11 Feb.

Fall	1968	1969	1970	1971	1972	1973	1974	
	7	7	10	12	14	2	12	
	2.6	1.1	1.9	1.7	2.0	.2	1.0	(% per 1,000 net-hr)

M: 35, wing (34) 145–176 ( $\bar{x}$  = 162); wt. (32) 43.0–63.7 ( $\bar{x}$  = 55.3). F: 39, wing (38) 140–169 ( $\bar{x}$  = 155); wt. 44.5–61.2 ( $\bar{x}$  = 50.6).

Common Nighthawk (*Chordeiles minor*). Common summer resident. Banded 1. Ad. M: 12 Apr. 1976, wing 195, wt. 56.0.

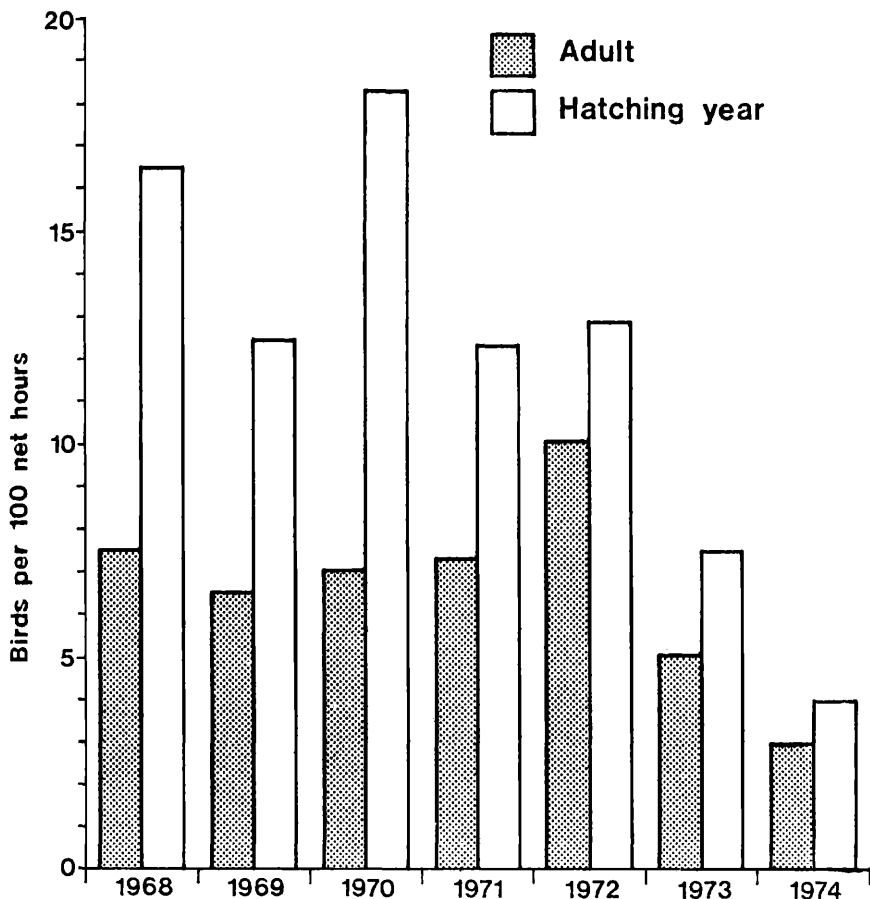


FIGURE 1. Comparison of age classes of birds taken in fall migration. 1968 and 1969 were excessively wet years; 1970, 1971, 1972 were dry; 1973 and 1974 were bland with no fronts.

Ruby-throated Hummingbird (*Archilochus colubris*). Common winter resident. Banded 14 in 1971. Discontinued due to difficulty in handling. Station dates for banding 20 Oct.–15 Nov., observations 20 Oct. to 10 May. HY U: 10, wing 40–46 ( $\bar{x}$  = 43); wt. (9) 2.7–3.9 ( $\bar{x}$  = 3.2).

Rufous Hummingbird (*Selasphorus rufus*). First record for S. Peninsula, 19 Oct. 1974 (FFN, 6: 23–26, 1978). Photo: ENP.

Bahama Woodstar (*Calliphlox evelynae*). Second occurrence in the U.S., 7 Apr.–early July 1974. AB, 26: 52 (Robertson) gives the dates as 7 Apr.–15 May, when I left Homestead for the summer. The bird was documented after that by many observers and recorded regularly by Paul Sykes (pers. comm.) until the first week in July in the company of a female (or immature) Ruby-throated Hummingbird.

Belted Kingfisher (*Megasceryle alcyon*). Common winter resident, Sept.–Apr., uncommon

in summer. Banded 3. Station dates 28 Sept.–20 Feb. 1969 (1), 1971 (2). UM: wing 106; wt. 135.8. HY F: 2, wing 157; wt. 130.0, 130.5.

Common Flicker (*Colaptes auratus*). Common resident. Banded 31.

1968–69	1969	1970–71	1971	1972	1973	1974
3	6	5	5	6	4	2

Ad. M: 7, wing (6) 127–145 ( $\bar{x}$  = 139); wt. (5) 103.0–123.3 ( $\bar{x}$  = 108.6). HY-SY M: 8, wing 140–157 ( $\bar{x}$  = 146); wt. (7) 109.0–134.0 ( $\bar{x}$  = 115.0). HY-SY F: 9, wing 106–158 ( $\bar{x}$  = 143); wt. (6) 87.9–125.0 ( $\bar{x}$  = 110.4).

Red-bellied Woodpecker (*Centurus carolinus*). Common resident. Banded 40. Station dates 24 Sept.–26 May.

1968–69	1969–70	1970–71	1971–72	1972–73	1973–74	1974
6	5	8	9	3	5	4

Ad. M: 8, wing 120–130 ( $\bar{x}$  = 125); wt. (3) 62.0–65.5 ( $\bar{x}$  = 64.0). Ad. F: 6, wing (5) 108–126 ( $\bar{x}$  = 120); wt. (4) 58.0–73.0 ( $\bar{x}$  = 64.5). HY-SY M: 11, wing 118–129 ( $\bar{x}$  = 122); wt. (7) 60.0–75.5 ( $\bar{x}$  = 67.1). HY-SY F: 10, (9) 119–130 ( $\bar{x}$  = 122); wt. (7) 45.9–62.2 ( $\bar{x}$  = 55.8).

Yellow-bellied Sapsucker (*Sphyrapicus varius*). Common winter resident. Banded 18.

1968	1969–70	1970	1971–72	1972–73	1974
2	4	3	3	5	1

Ad. F: 7, wing (6) 120–126 ( $\bar{x}$  = 122); wt. (3) 43.0–43.6 ( $\bar{x}$  = 43.3). HY-SY M: 1, wing 124; wt. 45.6. HY-SY F: 8, wing (7) 122–128 ( $\bar{x}$  = 125); wt. (6) 42.4–48.5 ( $\bar{x}$  = 45.6).

Hairy Woodpecker (*Picoides villosus*). Uncommon resident. Banded 3. 1969(1), 1971(1), 1972(1). HY-SY F: 2, wing 111, 112; wt. (1) 50.5. U: 1, wing 116; wt. 64.6.

Downy Woodpecker (*P. pubescens*). Fairly common resident. Banded 12. Station dates 26 Sept.–15 Mar.

1968	1970	1970	1972–73	1973	1974
1	2	2	5	1	1

Ad. M: 3, wing 82–96 ( $\bar{x}$  = 87); wt. (n = 2) 23.2, 26.6. Ad. F: 1, wing 90, wt. 23.4. HY M: 4, wing 83–88 ( $\bar{x}$  = 85). HY F: 4 (3) wing 85–88 ( $\bar{x}$  = 86); wt. 20.7–22.9 ( $\bar{x}$  = 21.8).

Great Crested Flycatcher (*Myiarchus crinitus*). Common winter resident, less common Apr.–Sept. Banded 35. Station dates 25 Sept.–26 May.

1968–69	1969–70	1970–71	1971–72	1972–73	1973	1974
7	7	9	2	4	1	6

Ad. U: 32, wing 94–106 ( $\bar{x}$  = 99.2); wt. (24) 32.1–43.9 ( $\bar{x}$  = 35.2).

Wied's Crested Flycatcher (*M. tyrannulus*). Rare winter resident. Banded 3. Station dates 23 Jan.–10 Mar. 1969 (1), 1971 (2). 10 Mar. photo to ENP. Ad. U: 3, wing 100, 101, 101; wt. (2) 33.8, 33.4.

Other records: First Florida record 1 January 1953 (Sutton). Specimen Univ. Oklahoma (Sprunt, 1963). Second Florida record 19 March 1960 near Goulds, S. Dade (AFN, 14: 303, Stevenson). Skeleton UMRC #6874S (ENP). Eight further records to 1971 (AFN, AB). 1976, Jan., Castellow Hammock, S. Dade, two or three weeks; 31 Jan., Matheson Hammock, S. Miami (Tropical Aud. Soc.).

Eastern Phoebe (*Sayornis phoebe*). Formerly common winter resident, recently uncommon. Banded 36. Station dates 13 Oct.–10 Mar. Ad. U: 29, wing (20) 153–219 ( $\bar{x}$  = 184). HY-SY: 7, wing (6) 69–85 ( $\bar{x}$  = 81.7); wt. 16.2–19.9 ( $\bar{x}$  = 17.6).

Yellow-bellied Flycatcher (*Empidonax flaviventris*). Rare migrant. Banded 5. Station dates 30 Sept.–22 Oct. 1969 (1), 1970 (2), 1971 (2). Ad. U: 2, wing 61–64 ( $\bar{x}$  = 63); wt. 10.0–13.4 ( $\bar{x}$  = 11.7). HY U: 3, wing 61–68 ( $\bar{x}$  = 64); wt. 8.7–14.0 ( $\bar{x}$  = 10.0). Other records: Sprunt (1954) gives one seen by himself and H. H. Dick at Fort Jefferson, Dry Tortugas, as the only S. Peninsula record. The first Fisk bird "constituted the latest certain

record for Florida and probably the first Southern Florida specimen" (*AFN*, 24: 36, Robertson) collected 22 October 1969, identification corroborated by W. E. Lanyon; specimen deposited at ENP. Subsequent birds were corroborated by Robertson and Ogden. Since then one bird has been recorded by Sykes at Loxahatchee Refuge, Palm Beach County, 28 October 1974 (*AB*, 29: 46, Edscorn) and 2 identified by call by J. King at Castellow Hammock north of Homestead 21 May 1975 (*AB*, 29: 843, Kale). Apparently the species can be present as a migrant but is not separated in the field from the other *Empidonax*.

Specimen UMRC, 12 Oct. 1957, Cutler (Dade Co.) #1865 (DEP).

Acadian Flycatcher (*E. viregens*). Uncommon migrant Aug.-Mar. Banded 1, 6 Oct. 1972. HY U: wing 72; wt. 15.0. Records for this species in the Southern Peninsula are sparse. The bird is an early migrant, and may be overlooked. Bartsch recorded it from the Dry Tortugas, 19 and 25 Aug. 1925. Paulson collected specimens in S. Dade Co. 12 Oct. 1957, 20 Sept. 1959, 26 Sept. 1974 (UMRC #1856, 2592, 9584). Since 1959 *AFN* and *AB* lists only 4 records, all for S. Dade, and one from the Dry Tortugas "presumed to be Acadian" (*AB*, 25: 732, Kale).

Least Flycatcher (*E. minimus*). Fairly common migrant and winter resident, Aug.-Apr. Banded 51. Station dates 24 Sept.-25 Mar.

1968	1969-70	1970-71	1971	1972	1973	1974	
6	7	9	9	7	4	6	Fall
2.2	1.1	1.7	1.3	1.0	.5	.5	(% per 1,000 net-hr)
	1	2					Winter

Ad. U: wing 58-65 ( $\bar{x}$  = 61); wt. (2) 8.4-10.5 ( $\bar{x}$  = 9.6). HY U: 11, wing 58-63 ( $\bar{x}$  = 60); wt. 9.0-11.2 ( $\bar{x}$  = 10.0). Birds fat: 1. Returns: 1, 10-14-69 (U) to 10-4-70.

Records: Howell lists as a "very rare migrant": a specimen taken at Kissimmee 13 May 1893 and another taken at Tallahassee 6 Aug. 1900 (Howell: 325). By 1959, Stevenson (*AFN*, 14: 303) writes "seems to be an established winter resident in the Miami area." In 1969, Robertson (*AFN*, 24: 36) states, "It is clear that the Least Flycatcher winters locally in southern Florida." Several specimens, UMRC (DRP, AS, EJJ).

Trail's Flycatcher (*E. trillii*). Not uncommon fall migrant. Banded 60. Station dates 22 Sept.-19 Oct., one 8 Nov.

1967	1968	1969	1970	1971	1972	1973	1974	
1	0	3	27	9	2	5	13	
.4	0	.5	5.2	1.3	.3	.6	1.1	(% per 1,000 net-hr)

Ad.: 16, wing 64-71 ( $\bar{x}$  = 67); wt. 10.9-14.8 ( $\bar{x}$  = 13.2). HY: 38, wing 63-72 ( $\bar{x}$  = 64); wt. (31) 10.3-17.4 ( $\bar{x}$  = 14.3). Birds fat: 18.

Fisk's 1967 bird was corroborated by Robertson, Ogden, and Phillips, the latter suspecting it to be the "fee-bee-o" form (*Bird-Banding*, 41: 40 and/or 42: 121).

Other records: 1957, 26 October, collected at E. Princeton (DRP). Specimen UMRC 1968, 11 Sept., (2), 1 collected (JCO). Specimen ENP (*AFN*, 23: 38, Robertson and Ogden). 1970, 7 Nov., Loxahatchee (*AFN*, 25: 48, Stevenson). 1971, 18 Sept., Royal Palm (*AFN*, 26: 52, Robertson). 1972, 23 Sept., Key Biscayne (*AB*, 27: 47, Stevenson).

Eastern Wood Pewee (*Contopus virens*). Uncommon migrant. Banded 6. Station dates 4-22 Oct.

1968	1969	1970	1971	1972	1973	1974	
1	1	0	2	1	0	1	
.4	.2	0	.3	.1	0	.09	(% per 1,000 net-hr)

Ad.: 1, wing 82; wt. 16.0. HY: 4, wing 74-80 ( $\bar{x}$  = 78); wt. 12.2-15.5 ( $\bar{x}$  = 13.9). Birds fat: 2.

Blue Jay (*Cyanocitta cristata*) Common resident. Banded 337. Station dates 22 Sept.-16 May, Fall only, 232.

1968	1969	1970	1971	1972	1973	1974	
19	64	55	38	17	20	19	
7.0	10.4	10.6	5.5	2.4	2.5	1.6	(% per 1,000 net-hr)

Ad.: 197, wing (174) 110-137 ( $\bar{x}$  = 124); wt. (85) 59.9-87.1 ( $\bar{x}$  = 73.7). HY-SY: 140, wing (126) 112-128 ( $\bar{x}$  = 121); wt. (56) 60.4-87.6 (one at 58.7) ( $\bar{x}$  = 73.0). Note: there is a question as to correct aging in the early years. Data recorded as used at the time.

House Wren (*Troglodytes aedon*). Common migrant and winter resident. Banded 88. Station dates 2 Oct. to Mar.

Fall	1971-						1974	(% per 1,000 net-hr)
	1968	1969	1970	72	1972	1973		
	14	11	18	16	15	7	5	
	5.2	1.8	3.5	2.3	2.1	.9	.4	

Ad.: 13, wing 48-52 ( $\bar{x}$  = 50); wt. (12) 9.2-11.0 ( $\bar{x}$  = 10.2). HY: 66, wing (64) 48-55 ( $\bar{x}$  = 52); wt. (59) 9.2-12.2 ( $\bar{x}$  = 10.3. Birds fat: 3.

Carolina Wren (*Thryothorus ludovicianus*). Common resident. Banded 11. Station dates 26 Sept.-24 Jan.

1968-69	1969	1970	1971	1972	1973	1974	(% per 1,000 net-hr)
1	1	2	1	3	1	2	
	.2	.4	.1	.4	.1	.2	

Ad.: 6, wing 55-63 ( $\bar{x}$  = 58); wt. (3) 18.8-24.5 ( $\bar{x}$  = 21.8). HY: 4, wing 56-64 ( $\bar{x}$  = 61); wt. (3) 19.0-24.1 ( $\bar{x}$  = 21.4).

Mockingbird (*Mimus polyglottos*). Common resident. Banded 451. Station dates 22 Sept.-16 Apr.

1968-	1969-	1970-	1971-	1972-	1973-	1974	Fall	(% per 1,000 net-hr)
69	70	71	72	73	74			
25	45	116	107	53	52	53		
9	28	68	54	34	36	51		
3.3	4.6	13.1	7.8	4.8	4.5	4.4		

Ad.: U: 380, wing (365) 92-115 ( $\bar{x}$  = 106); wt. (221) 36.2-55.7 ( $\bar{x}$  = 48.5). Known HY: 71, wing (65) 82-117 ( $\bar{x}$  = 100); wt. (44) 33.4-53.2 ( $\bar{x}$  = 46.1). In South Florida this species breeds from midwinter into summer. Only HY known by eye color or juvenal plumage were so classified.

Gray Catbird (*Dumetella carolinensis*). Abundant migrant and common winter resident. Banded 4,332, Fall 3,193; Winter banding irregular, 1,139. Station dates 26 Sept.-6 Nov. (fall), 26 Sept.-10 May (winter).

Fall	1968	1969	1970	1971	1972	1973	1974	(% per 1,000 net-hr)
	215	376	450	391	770	305	686	
	79.3	61.4	86.7	56.7	108.3	54.6	59.6	

Ad.: 952, wing (180) 82-95 ( $\bar{x}$  = 89); wt. (180) 29.5-44.4 ( $\bar{x}$  = 37.3). Birds fat: 77. HY: 2,230, wing (180) 83-95 ( $\bar{x}$  = 87); wt. (180) 32.3-44.2 ( $\bar{x}$  = 36.7). Birds fat: 47. Due to the numbers handled measurements were taken randomly from the records with an attempt to represent each day and varying hours of the day, 10 of each age for the periods of 25 Sept.-10 Oct., 11-20 Oct., 21 Oct.-6 Nov. from 1968-73. Weights were not always taken, and no measurements were taken in 1974. Wintering birds—banding irregular.

1968-69	1969-70	1970-71	1971-72	1972-73	1973-74
153	163	264	230	191	138

Brown Thrasher (*Toxostoma rufum*). Winter resident, uncommon in summer, a few breed locally. Banded 89. Station dates 22 Sept.-6 Apr.

1968	1969	1970	1971-72	1972-73	1973	1974	Fall	(% per 1,000 net-hr)
4	15	14	12	11	12	21		
3	14	14	8	8	12	21		
1.1	2.3	2.7	1.2	1.1	1.5	1.8		

Unknown: 84, wing (82) 90-110 ( $\bar{x}$  = 95); wt. (73) 60.6-78.5 ( $\bar{x}$  = 67.2). Known HY: 6, wing 94-100 ( $\bar{x}$  = 98); wt. (4) 67.3-74.1 ( $\bar{x}$  = 70.9).

American Robin (*Turdus migratorius*). Abundant winter visitor. 3 Summer records (AFN, 9: 21; 10: 21). One HY bird taken at Station 25 Oct. 1970 (AFN, 25: 48). Banded 3, 170.

1968	1969	1970	1971	1972	1973	1974
316	329	448	170	851	172	884

Comparison not significant as banding was sporadic. No weight or wing measurements taken.

Wood Thrush (*Hylocichla mustelina*). Uncommon migrant. Banded 4. Station dates 20 Oct.–25 Nov., 1968 (2), 1972 (1), 1973 (1). HY U: 4, wing 106–116 ( $\bar{x}$  = 110); wt. 48.2–49.8 ( $\bar{x}$  = 49.0). Birds fat: 1.

Swainson's Thrush (*Catharus ustulata*). Common migrant, late Sept.–Oct., mid-Apr.–May. Banded—Fall 117, Spring 2. Station dates 23 Sept.–4 Nov.; 29 Apr. 1973.

Fall	1968	1969	1970	1971	1972	1973	1974	
	5	6	10	34	31	5	26	
	1.8	1.0	1.9	4.9	4.4	.6	2.3	(% per 1,000 net-hr)

Ad. M: 2, wing 100; wt. (1) 33.8. Birds fat: 2. U: 20, wing 91–97 ( $\bar{x}$  = 95); wt. (17) 25.2–38.2 ( $\bar{x}$  = 30.1). Birds fat: 9. HY M: 23, wing 99–103 ( $\bar{x}$  = 101); wt. (21) 25.2–43.1 ( $\bar{x}$  = 35.4). Birds fat: 15. HY U: 64, wing (62) 91–99 ( $\bar{x}$  = 97); wt. (56) 24.5–38.4 ( $\bar{x}$  = 32.0). Birds fat: 21.

Gray-cheeked Thrush (*C. minima*). Not uncommon migrant. Banded 63. Station dates 1 Oct.–6 Nov.

1968	1969	1970	1971	1972	1973	1974	
5	4	11	12	12	7	12	
1.8	.6	2.1	1.7	1.7	.9	1.0	(% per 1,000 net-hr)

Ad: 18, wing (15) 97–107 ( $\bar{x}$  = 103) (one at 90); wt. (16) 28.7–41.9 ( $\bar{x}$  = 36.2). Birds fat: 8. HY: 40, wing (39) 90–108 ( $\bar{x}$  = 96); wt. 24.3–44.0 ( $\bar{x}$  = 33.8). Birds fat: 20.

Hermit Thrush (*C. guttata*). Uncommon, late migrant and winter resident Dec.–Feb. Banded 34. Station dates 28 Oct.–14 Mar.

1969	1969–70	1970	1971	1972–73	1973
2	11	2	9	9	1

Ad.: 15, wing (14, 1 at 95 not included), 86–90 ( $\bar{x}$  = 88); wt. (13) 26.1–36.4 ( $\bar{x}$  = 27.4). HY-SY: 19, wing 85–94 ( $\bar{x}$  = 89); wt. (14) 27.0–32.2 ( $\bar{x}$  = 28.7).

Veery (*C. fuscescens*). Common migrant. Banded 281. Station dates 24 Sept.–31 Oct. 19, 22 Nov.

1968	1969	1970	1971	1972	1973	1974	
3	21	0	57	104	22	74	
1.1	3.4	—	8.3	14.6	2.8	6.4	(% per 1,000 net-hr)

Ad.: 73, wing 90–106 ( $\bar{x}$  = 97); wt. (71) 28.4–45.0 ( $\bar{x}$  = 33.1). Birds fat: 26. HY: 208, wing (207) 89–105 ( $\bar{x}$  = 95.8); wt. (170) 26.2–46.2 ( $\bar{x}$  = 32.2). Extreme weights not included 22.0, 52.0. Birds fat: 87.

Previous status: As late as 1956 considered rare. "Only 3 records in the Florida peninsula were known to me until this year, when more than 20 additional records were made . . . all but 4 in extreme S. Florida." (AFN, 11: 20, Stevenson).

Ruby-crowned Kinglet (*Regulus calendula*). Migrant and uncommon winter resident. Banded 24. Station dates 1 Oct.–14 Feb. A late migrant. Only 2 arrivals (15, 23 Oct.) were before 1 Nov., antedating the 1956 report "very early, Florida City, Oct. 26" (AFN, 12: 24).

1968–69	1969	1970	1971	1972	1973	1974
3	2	6	6	3	4	0

M: 5, wing 56–57 ( $\bar{x}$  = 57); wt. (4) 5.5–6.0 ( $\bar{x}$  = 5.8). (One at 6.5 g not included.) U: 19. This species' skull ossifies early so Ad. F and HY birds could not be separated. Wing (17) 51–59 ( $\bar{x}$  = 57); wt. 4.9–6.1 ( $\bar{x}$  = 57).

Blue-gray Gnatcatcher (*Poliophtila caerulea*). Fairly common winter resident, mid-Oct.–Mar.: uncommon Apr.–July. Banded 59. Station dates 9 Sept.–3 Mar.

Fall	1968	1969	1970	1971	1972	1973	1974	
	0	5	7	8	7	8	8	
	—	.8	1.3	1.1	1.0	1.0	.7	(% per 1,000 net-hr)

Ad.: 9, wing 47–53 ( $\bar{x}$  = 50); wt. (7) 5.2–6.4 ( $\bar{x}$  = 5.9). HY: 31, wing 47–55 ( $\bar{x}$  = 51); wt. (27) 5.2–5.6 ( $\bar{x}$  = 5.8).

Cedar Waxwing (*Bombycilla cedrorum*). Irregular but fairly common winter resident. Banded 314. Station dates 27 Jan.–12 Apr.

	1970	1971	1972	1974
	4	227	15	68

Age and sex not safely separable. 1970–72: wing (242) 87–98 ( $\bar{x}$  = 92); wt. (189) 27.5–38.5 ( $\bar{x}$  = 31.4) (1 at 26.6 not included). 1974: wing (67) 85–99 ( $\bar{x}$  = 92); wt. (67) 38.9–46.5 ( $\bar{x}$  = 42.2) (1 at 50.2 not included).

Note on weight difference. The 1974 birds, similar in wing length to those of the other years but averaging 10.8 g heavier, were taken on 3 days only, 8–10 Feb. from a flock present only briefly. Birds in 1972 were taken 20–21 Feb.; birds in 1971 were taken by sporadic banding from a very large flock irregularly present 5 Mar.–12 Apr.

Hill Mynah (*Gracula religiosa*). Locally resident, since 1971. Rare. Banded 2. 24 Sept., 2 Oct. 1971.

Age and sex unknown. Wing 138, 144; wt. 125.0, 129.4. These birds were part of a group of 3, possibly 4 birds. Since their tails were frayed and broken they were thought to be escaped, or released cage birds. At least two were still within a mile of the Station, frequenting private property in the spring of 1976. They were thought to be nesting in the trunk of a dead Royal Palm in the spring of 1972 but no young were observed.

White-eyed Vireo (*Vireo griseus*). Common, migrant and resident. Banded 545; fall only 484. As migrants could not be separated from residents, the following figures refer to birds banded between 23 Sept. and 6 Nov.

1968	1969	1970	1971	1972	1973	1974	
47	57	128	69	114	39	30	
17.3	9.3	24.6	10.0	16.4	4.9	2.6	(% per 1,000 net-hr)

Ad.: 179, wing (172) 56–63 ( $\bar{x}$  = 60); wt. (153) 10.0–14.3 ( $\bar{x}$  = 11.4). Birds fat: 45. HY: 281, wing (257) 51–67 ( $\bar{x}$  = 59); wt. (221) 10.2–14.2 ( $\bar{x}$  = 12.0). Birds fat: 78.

Bell's Vireo (*V. bellii*). Rare, fall and winter. Banded 3: 1968 (1), 5 Nov.; 1971 (2), 3 Oct., 26 Oct., repeating 6 Nov. Wing 50–55 ( $\bar{x}$  = 53); wt. 7.9–10.0 ( $\bar{x}$  = 8.7). Birds fat: 2. Photos: ENP.

Yellow-throated Vireo (*V. flavifrons*). Uncommon, Aug.–Mar. Banded 6. Station dates 30 Sept.–7 Oct.

1968 (1), 1970 (3), 1972 (1), 1974 (1) Ad.: 2, wing 72–75 ( $\bar{x}$  = 74); wt. 17.2–19.0 ( $\bar{x}$  = 18.1). HY: 4, wing 72–75 ( $\bar{x}$  = 73); wt. 17.7–25.7 ( $\bar{x}$  = 20.0). Birds fat: 4.

Solitary Vireo (*V. solitarius*). Uncommon migrant and winter resident, Nov.–Mar. Banded 8. Station dates 15 Oct.–14 Apr.

1968	1969	1970	1971	1972	1973	1974
1	1	0	1	2	1	2

Ad.: 3, wing 70–76 ( $\bar{x}$  = 73); wt. 157–161 ( $\bar{x}$  = 158). HY: 4, wing 71–75 ( $\bar{x}$  = 73); wt. 14.0–16.8 ( $\bar{x}$  = 15.6).

Red-eyed Vireo (*V. olivaceus*). Common migrant. Banded 414. Station dates 22 Sept.–2 Nov.; 12 Apr. (3).

1968	1969	1970	1971	1972	1973	1974	
18	59	95	81	83	35	43	
6.6	9.6	18.3	11.7	11.8	4.4	3.7	(% per 1,000 net-hr)



Wing, weight and sex data 1970 to 74 only. Sex differentiation used; HY M wing >79, HY F < 77 (BBL). Ad., presumed M: 6, wing 79–82 ( $\bar{x}$  = 80); wt. 16.5–26.3 ( $\bar{x}$  = 21.6). Birds fat: 5. Ad., presumed F: 5, wing 71–77 ( $\bar{x}$  = 74); wt. 16.0–20.3 ( $\bar{x}$  = 18.2). Birds fat: 2. HY M: 70, wing (69) 79–82 ( $\bar{x}$  = 80); wt. (56) 15.3–22.0 ( $\bar{x}$  = 18.7) (23.2, 24.4 not included). Birds fat: 36. HY F: 208, wing (204) 69–77 ( $\bar{x}$  = 75); wt. (172) 15.0 (14.6)–22.5 ( $\bar{x}$  = 18.2). Birds fat: 121.

Philadelphia Vireo (*V. philadelphicus*). Uncommon fall migrant, occasionally winters. Banded 22. Station dates 1 Oct.–17 Nov.; 23 Dec., 21 Feb.

1968	1969	1970	1971	1972	1973	1974	
2	6	4	10	1	0	0	
.7	1.0	.8	1.4	.1	—	—	(% per 1,000 net-hr)

Ad.: 6, wing 64–66 ( $\bar{x}$  = 65); wt. (5) 11.6–15.7 ( $\bar{x}$  = 13.8). HY: 16, wing 60–69 ( $\bar{x}$  = 65); wt. 9.1–13.6 ( $\bar{x}$  = 11.6). Birds fat: 7. Specimen: ENP #214 “found dead north of Homestead, 15 Oct. 1967” (*AFN*, 22: 30, Robertson and Ogden). Photos: ENP (2) October 1968, 20 October 1969, 1 October 1970, 16 October 1971).

Black-and-white Warbler (*Mniotilta varia*). Fairly common, July–May. Banded 160. Station dates (Fall) 23 Sept.–14 Nov. Figures for fall migration only (147).

1968	1969	1970	1971	1972	1973	1974	
6	7	17	12	32	42	31	
2.2	1.1	3.3	1.7	4.5	5.3	2.7	(% per 1,000 net-hr)

Ad. M: 16, wing 66–72 ( $\bar{x}$  = 69); wt. (16) 10.2–12.5 ( $\bar{x}$  = 11.6). Birds fat: 12. HY M: 48, wing (43) 61–77 ( $\bar{x}$  = 68); wt. (32) 9.6–13.0 ( $\bar{x}$  = 11.0). Birds fat: 16. Ad. F: 26, wing (23) 65–68 ( $\bar{x}$  = 67); wt. (23) 9.5–12.0 ( $\bar{x}$  = 10.2). Birds fat: 12. HY F: 55, wing (51) 59–71 ( $\bar{x}$  = 68), wt. (40) 8.9–12.7 ( $\bar{x}$  = 10.8). Birds fat: 17.

Prothonotary Warbler (*Protonotaria citrea*). Uncommon migrant Aug.–early Oct. Banded 2–26 Sept. 1971, photo ENP: 22 Oct. 1973. HY: 2, wing 66, 70; wt. 11.3, 13.4. Other records: 6 Oct. 1953 “near Miami” (*AFN*, 8: 15, Stevenson). 1966 “apparently wintered on Virginia Key (Miami), last seen on March 30” (*AFN*, 20: 415, Cunningham).

Swainson's Warbler (*Limnothlypis swainsonii*). Uncommon migrant. Banded 7. Station dates 2–3 Oct. (5), 18 Apr. (2).

1969	1970–71	1972	1973
1	3	1	2

Ad.: 4, wing 69–72 ( $\bar{x}$  = 70); wt. 14.1–18.2 ( $\bar{x}$  = 15.0). HY: 3, (2) wing 66, 69; wt. 14.5, 16.2. Birds fat: 1. Photo: ENP 8 Oct. 1969.

Other records: 2 Oct. 1953, Miami (*AFN*, 8: 15, Stevenson).

Worm-eating Warbler (*Helmitheros vermivorus*). Uncommon migrant, rare in winter. Banded 40. Station dates 22 Sept.–13 Nov.; 12–18 Apr. (4).

(1967)	1968	1969	1970	1971	1972	1973	1974	
1	1	3	10	5	4	8	5	
—	.4	.5	1.9	.7	.6	1.0	.4	(% per 1,000 net-hr)

Photo: ENP (2 October 1969).

Other records: 1950: 23 April “East of Princeton, rare record” (*AFN*, 4: 239, Brookfield). 1953: 25 October, Miami (*AFN*, 8: 15, Stevenson). 1973: “4 near Homestead Feb. 1 (JMK) was a high in winter even for S. Florida” (*AFNN*, 27: 60, Woolfenden). 1974 Coot Bay Christmas Count, 29 December (King).

Golden-winged Warbler (*Vermivora chrysoptera*). Rare migrant. Banded 1, Oct. 1971. HY F: wing 56; wt. 11.6. Photo: ENP. Specimens: UMR 1957, 22 Sept., Goulds (DRP) #1820: 1959, 25 Oct., “East of Princeton (DRP) #4019.” Previous records: 1932: 12 April, S. Florida, 16, 17 April, Florida Keys (*FN*, 24: 17, Stimson). 1952: 12 October, Key West (*AFN*, 17: 13, Brookfield). 1957: 22 September “near Goulds, the third fall record for that division (*AFN*, 12: 25, Stevenson). 1955–67: 8 fall records (*AFN*).

Blue-winged Warbler (*V. pinus*). Uncommon migrant, late Aug.–Apr. Banded 2: 18 Oct. 1973, 19 Oct. 1974. HY M: 2, wing 60, 53; wt. 10.4, 7.9. Birds fat: 1.

Hybrid Warbler (*V. chrysoptera* × *pinus*). HY F: showing characteristics of the Golden-winged, Blue-winged, and Brewster's. Netted and collected 8 Oct. 1969. (EJF) (*AFN*, 24: 37, Robertson). Date given of 1960 in *Bird-Banding*, 41: 131–132 is an error. Specimen: Amer. Mus. Nat. Hist. #778589.

Tennessee Warbler (*V. peregrina*). Uncommon migrant. Banded 19. Station dates 30 Sept.–6 Nov.

1968	1969	1970	1971	1972	1973	1974	
4	2	3	2	2	3	3	
1.5	.3	.6	.3	.3	.4	.3	(% per 1,000 net-hr)

Ad. M: 4, wing 64–65 ( $\bar{x}$  = 65); wt. 9.4–12.6 ( $\bar{x}$  = 11.5). Birds fat: 3. HY M: 6, wing 64–69 ( $\bar{x}$  = 65); wt. (5) 9.3–12.5 ( $\bar{x}$  = 11.3). Birds fat: 4. Photo: ENP 2 Nov. 1969. Previous records: (Fall and Winter only) 1889: KeyWest 5–6 October (Sprunt, 1954). 1915 Princeton, 23 September (Sprunt, 1954). 1954: Miami, 23 October (*AFN*, 9: 22, Stevenson). 1957: Marathon, 1 November (*AFN*, 12: 25, Stevenson). 1968: Coot Bay and Lower Keys Christmas Counts (*AFN*, 23: 238, Ogden, 245, Sprunt). 1970: Lower Keys Christmas Count (*AFN*, 25: 289, Crane).

Orange-crowned Warbler (*V. celata*). Common migrant, Oct.–mid-Mar.; rare Aug.–Sept. Banded 15. Station dates 27 Oct.–4 Apr.

1968–69	1970 winter	1970 fall	1973 fall	
6	4	4	1	
		.8	.1	(% per 1,000 net-hr)

AHY (winter birds of unknown age): 4, wing 59–63 ( $\bar{x}$  = 61); wt. (1) 10.2. Bird fat: 1 (Apr.). HY: 11, wing 58–60 ( $\bar{x}$  = 59); wt. (7) 8.1–9.9 ( $\bar{x}$  = 9.1). Birds fat: 1.

Nashville Warbler (*V. ruficapilla*). Rare migrant. Banded 3. 1 in Fall, (8 Nov. 1970), 2 in Spring, (9 Apr. 1970, 15 Feb. 1971), photo: ENP. Ad. M: 1, wing 60; wt. 8.2. HY F: 1, wing 57; wt. 8.4.

Other records: Sprunt (1954) lists this species as "a very rare migrant and a rare winter resident in the extreme southern parts, giving only 10 records in the S. Peninsula, with the latest in 1917." His Addendum—1963: adds one bird at Okeechobee 18 Feb. 1955. 1956–1973: 9 records, Miami–Key West, 14 Sept.–21 Feb. (*AFN*, *AB*, *ENP*).

Parula Warbler (*Parula americana*). Common migrant and winter resident, late Aug.–early May. Banded 137. Station dates 23 Sept.–6 Nov., 1 Jan.–19 Apr. (3).

1968	1969–70	1970	1971–72	1972	1973	1974	
11	22	30	20	19	12	7	Fall
3	8		5				Winter
.4	3.5	5.8	2.9	2.7	1.5	.6	(% per 1,000 net-hr)

Since no seasonal variation in the measurements was found, all are combined. Ad. M: 42, wing (24) 55–64 ( $\bar{x}$  = 59); wt. (18) 7.1–10.2 ( $\bar{x}$  = 8.5). Birds fat: 16. HY M: 24, wing (17) 50–69 ( $\bar{x}$  = 59); wt. (17) 7.0–10.1 ( $\bar{x}$  = 8.1). Birds fat: 13. Ad. F: 34, wing (33) 52–60 ( $\bar{x}$  = 53); wt. (26) 7.1–9.6 ( $\bar{x}$  = 8.6) (6.2, 6.4 not included). Birds fat: 24. HY F: 38, wing (30) 50–60 ( $\bar{x}$  = 53); wt. (26) 7.1–9.6 ( $\bar{x}$  = 8.6). (Bird with wing 49, wt. 6.0 not included.) Birds fat: 11.

Magnolia Warbler (*Dendroica magnolia*). Uncommon migrant, late Sept.–early May, common in Oct. Banded 27. Station dates 26 Sept.–25 Oct., 14 Nov. (1).

1968	1969	1970	1971	1972	1973	1974	
1	4	5	5	5	4	3	
.4	.6	1.0	.7	.7	.5	.3	(% per 1,000 net-hr)

Ad. M: 2, wing 60, 63; wt. 10.1, 10.5. Birds fat: 2. HY M: 11, wing 57–62 ( $\bar{x}$  = 60); wt. (10) 8.2–10.9 ( $\bar{x}$  = 9.4). Birds fat: 6. Ad. F: 6, wing 57–60 ( $\bar{x}$  = 58); wt. (5) 7.3–10.0 ( $\bar{x}$  = 8.3). Birds fat: 2. HY F: 5, wing 52–60 ( $\bar{x}$  = 57); wt. 6.8–10.3 ( $\bar{x}$  = 8.4). Birds fat: 2.

Cape May Warbler (*D. tigrina*). Common migrant, rare winter resident. Banded 59. Station dates 26 Sept.–1 Nov., 15 Feb., 18–29 Apr.

Fall	1969	1970	1971	1972	1974	(spring 1972 [5])
	27	12	10	4	2	
	4.4	2.3	1.4	.6	.2	(% per 1,000 net-hr)

Ad. M: 7, (6) 62–68 ( $\bar{x}$  = 65); wt. (5) 10.0–12.0 ( $\bar{x}$  = 10.7) (8.8 not included). Birds fat: 5. HY M: 38, wing (34) 61–69 ( $\bar{x}$  = 65); wt. (33) 9.3–14.2 ( $\bar{x}$  = 10.9). Birds fat: 23. Ad. F: 2, wing 64, 65; wt. 8.9, 10.8. Birds fat: 1. HY F: 7, wing 63–66 ( $\bar{x}$  = 64); wt. (6) 10.5–11.5 ( $\bar{x}$  = 10.7). Birds fat: 3.

Black-throated Blue Warbler (*D. caerulescens*). Common migrant spring and fall with some wintering. Banded 604. 597 Fall, 2 Winter, 5 Spring. Station dates, Fall: 22 Sept.–5 Nov. (22 Nov.).

1968	1969	1970	1971	1972	1973	1974
37	157	84	74	106	77	62
13.6	25.6	16.2	10.7	14.9	9.7	5.9

(% per 1,000 net-hr)

Ad. M: 114, wing (101) 59–68 ( $\bar{x}$  = 64); wt. (89) 8.4–12.4 ( $\bar{x}$  = 10.5). Birds fat: 65. HY M: 148, wing (132) 59–69 ( $\bar{x}$  = 63); wt. (121) 8.7–13.2 ( $\bar{x}$  = 10.5). Birds fat: 87. Ad. F: 149, wing (146) 58–66 ( $\bar{x}$  = 59); wt. (124) 8.8–12.1 ( $\bar{x}$  = 9.8). Birds fat: 85. HY F: 188, wing (179) 58–67 ( $\bar{x}$  = 60); wt. (156) 8.5–12.1 ( $\bar{x}$  = 10.0). Birds fat: 117. Since this species was common to abundant in fall, Stevenson's note of 1956 (*AFN*, 11: 21) that it is "rare at Miami" was doubtless due to the lack of field observers up to recent years.

Yellow-rumped Warbler (*D. coronata*). Abundant but erratic winter visitant. Banded only sporadically 3,663. Station dates 12 Nov.–31 Mar.

1969	1970–71	1971–72	1972–73	1974
1,431	453	863	908	8

M: 1,189, data limited, early in season; wing (45) 64–77 ( $\bar{x}$  = 71); wt. (44) 10.2–16.1 ( $\bar{x}$  = 12.8). Birds fat: (45) 22. F: 1,388, data limited early in season; wing (73) 63–73 ( $\bar{x}$  = 70); wt. (56) 10.0–14.1 ( $\bar{x}$  = 11.9). Birds fat: (56) 40. Females could not be aged, and numbers handled precluded aging most males, if indeed it can be done safely.

Black-throated Gray Warbler (*D. nigrescens*). Rare, migrant and winter resident. Banded 1, 1 Nov. 1971. Ad. M: Wing 59; wt. 7.7. Photo: ENP. Specimen: UMRC, 9 Feb. 1957, Princeton (DRP) #1472.

Other records: 1942–1943: 26 Dec.–16 Feb., Matheson Hammock, Miami (*Fla. Nat.*, 16: 46, Dietrich). 1952–74: 22 records, including "4 at 3 localities." 1954 (*AFN*, 8: 238, Stevenson): "at least 4" Miami Oct.–Feb. 1975–1978 (*AFN*, 12: 275, Stevenson): one bird at Flamingo for 4 consecutive winters (*AB*, 25: 48, Robertson).

Black-throated Green Warbler (*D. virens*). Uncommon to rare migrant. Banded 13. Station dates 2 Oct.–2 Nov., 20 Mar. (1), 29 Apr. (1).

1968	1969	1970	1971	1972	1973	1974
1	3	2	1	3	0	1
.4	.5	.4	.1	.4	—	.1

(% per 1,000 net-hr)

Measurements for fall birds only: HY U: 10, wing 58–65 ( $\bar{x}$  = 61); wt. 8.4–12.1 ( $\bar{x}$  = 9.6). Birds fat: 8.

Blackburnian Warbler (*D. fusca*). Uncommon to rare; reported all months except Jan., June, and Aug. Banded 4. Station dates 30 Sept.–29 Oct.

1969	1970	1972	1974
1	1	1	1

HY U: 4, wing 61–64 ( $\bar{x}$  = 63); wt. 8.9–12.4 ( $\bar{x}$  = 11.7).

Yellow-throated Warbler (*D. dominica*). Common migrant July to May. Banded 9. Station dates 30 Sept.–13 Oct., 28 Jan.–18 Mar.

1968	1979	1970	1971	1972	1973	1974	
1	1	0	1	0	0	2	Fall
1							Winter
		1	2				Spring

Ad.: 6, wing (5) 60-65 ( $\bar{x}$  = 63); wt. (4) 9.4-10.2 ( $\bar{x}$  = 9.8). HY: 2, wing 63, 67; wt. 9.4, 10.7.

Chestnut-sided Warbler (*D. pensylvanica*). Rare migrant. Banded 6. Station dates 27 Sept.-17 Oct.

1968	1970	1971	1973
1	1	1	3

Ad. M: 1, wing 67; wt. 12.2, fat. HY U: 5, wing 58-63 ( $\bar{x}$  = 62); wt. 10.1-12.0 ( $\bar{x}$  = 11.5). Birds fat: 4.

Other records: 1932, 1940: "Stimson has but three records for the Miami area—March 12 and April 19, 1932; October 26, 1940" (Sprunt, 1954; *FN*, 25: 84 1952). 1954: 9 Sept.-2 Oct., Key West (*AFN*, 9: 22, Stevenson). 1955: 24 October, Marathon "third fall record in S. Peninsula" (*AFN*, 10: 22, Stevenson). 1959-1970: 14 records in the Miami and ENP areas, one at Key West: 2 winter, 2 spring, 10 fall. First record for ENP, 14 Sept. 1964.

Bay-breasted Warbler (*D. castanea*). Rare migrant. Banded 3, 1973. Station dates 23 to 30 Oct. Ad. M: 1, wing 75; wt. 14.7. U F: 2, wing 72, 70; wt. 13.4, 13.0. Both fat. Specimens UMRC 26 Oct. 1957, north of Homestead, Princeton (DRP) #1818, 1819. Other records: 1932—no southern records for fall (Howell). 1954: Sprunt lists one spring record at Princeton, 1916 and suggests "the bulk of the birds pass to the westward of Florida." 1954: "Second record for the S. Peninsula" (*AFN*, 8: 22, Stevenson). 1955-1974: 12 records from Miami to Key West (*AFN*, *AB*, ENP) with "at least 12 observed" at Miami on 19, 25 Oct. 1959 (*AFN*, 14: 28-29, Stevenson).

Blackpoll Warbler (*D. striata*). Rare fall migrant, common in spring. Banded 20. Station dates 2-22 Oct. (11); 16 Apr.-12 May (9).

1968	1969	1970	1971	1972	1973	1974	
2	5	0	2	0	1	1	Fall
.7	.8	—	.3	—	.1	.0	(% per 1,000 net-hr)

Ad.: 17, M(8), F(4), U(5). Measurements sexually and seasonally similar. Wing 65-75 ( $\bar{x}$  = 72); wt. (10) 9.9-13.7 ( $\bar{x}$  = 12.2). Birds fat: 10. HY: 3, wing 67-70 ( $\bar{x}$  = 68); wt. 9.7-14.6 ( $\bar{x}$  = 12.0). Birds fat: 3.

Other records: "The normal migration path of this species is off the eastern seaboard" (*Bird-Banding*, 34: 107-138, Nisbet). "Distribution of the Florida records seems to fit the concept of displacement from a migration path east of Florida": (*AFN*, 23: 40, Robertson). 1955-1974: 10 references, Key West to Miami (*AFN*, *AB*, ENP). 1968 records of "about 12" on Key Biscayne 28 Sept., 5 Oct. and "at least 7" on Key Largo 19 Oct. (*AFN*, 23: 40, Robertson and Ogden) could be associated with Hurricane Gladys, 15-19 Oct.; and the birds in 1969 observed on Cape Florida and Virginia Key as well as taken in Homestead with Hurricane Gorda.

Pine Warbler (*D. pinus*). Resident, decreasing with loss of Dade Co. pinelands. Not uncommon. Banded 9. Station dates 30 Sept.-5 Nov.; 25 Feb. (2).

Fall	1970	1971	1972	1974
	1	1	4	1

Ad. M: 1, wing 74; wt. 14.2. Fat. Ad. U: 2, wing 66, 69; wt. 10.2, 12.2. Birds fat 1. HY: 2, wing 68, 74; wt. (1) 11.4. HY U: 4, wing 64-70 ( $\bar{x}$  = 67); wt. 10.7-11.5 ( $\bar{x}$  = 11.1).

(To be continued)