

# THE ORIOLE

A Quarterly Journal of Georgia Ornithology; Official Organ of the  
Georgia Ornithological Society



VOL. 44

DECEMBER, 1979

NO. 4

# THE ORIOLE

(ISSN 0030-5553)

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## BIRDS OF EUFAULA NATIONAL WILDLIFE REFUGE, 1967-79

Brent Ortego, Julian L. Dusi, D. Mark Brown,  
and Dan Combs

The 4,518 ha Eufaula National Wildlife Refuge (hereafter Refuge) is located on a northern portion of the ca 18,000 ha Walter F. George Reservoir (completed in 1963) and is 10 km north of Eufaula, Alabama and Georgetown, Georgia. The Refuge occupies 3,210 ha in Alabama and 1,308 ha in Georgia. The major habitats of the Refuge include open water, exposed mud flats, upland and lowland grain fields, pastures, riparian woodlands, beaver ponds, marshes and upland hardwoods.

Detailed studies of birds that occur on the Refuge have been conducted by Johnson and Kennamer (1976) on Canada Geese, Drake (1970) on Mallards, and Schaffer (1978) on Wood Ducks. Monthly waterfowl counts have been conducted by Refuge personnel since 1967, mid-winter Refuge bird counts from 1969-75 by Dusi, with assistance from members of the Chattahoochee Valley Natural History Club, and Christmas Bird Counts from 1973-77 by Mike Fuller (1974-75) and Sam Pate (1976-78). Other publications have dealt with sightings of rare species or brief population studies (Brown and Ortego 1979, Dusi 1972, Ortego 1977-79).

The Refuge is visited by many Alabama and Georgia residents. Occasionally, their observations have been published in *Alabama Birdlife*, *American Birds*, *Chattahoochee Valley Natural History Club Bulletin*, *Columbus Audubon Society Observer*, and *The Oriole*. Especially noteworthy are the many sightings made by B. S. (Sam) Pate, William Matheny, and Andrew K. Bates.

## METHODS

Our study started in 1967 when Dusi began making periodic visits to conduct bird counts for research and for Auburn University class field trips. Weekly observations were made from January 1977-June 1979 by Ortego, when he began a research project on Canada Geese, and by the other authors who helped at various times with field work, with arranging transportation, and in obtaining funds to cover expenses of weekly visits.

During the intensive study period from 1977-79, all sections of the Refuge were visited at least once each week, with at least 1 hour of each



trip being spent in woodlands or upland habitats. After September 1978, an additional hour was used to survey forested areas for woodland species. Little data was gathered on owls and goatsuckers because most trips to the Refuge lasted from sunrise to 1 hour before sunset.

The Species Account section of this paper includes a list of 277 species of birds that have been observed at or near the Refuge. The observations of each species were either published, placed in the Refuge file, passed on to the authors by reliable sources, or were made by the authors. Even though data from Christmas Bird Counts included observations of birds off the Refuge, they were accepted because most observations were made on the Refuge and the species and their densities reported from near the Refuge were typical of those found on it.

Sixty-seven species have been known to breed on the Refuge and 22 more are suspected of having bred there. Evidence of breeding was based on observations of a nest, an egg, and/or young that was not capable of sustained flight. Species that are suspected of breeding have bred in the Coastal Plain of Alabama (Imhof 1976), have been observed to establish a territory on the Refuge during the breeding season, or adults have been observed regularly during this period. Species that are known to have bred are noted (\*) in the Species Accounts. The species that are suspected of breeding are: Snowy Egret, Yellow-crowned Night Heron, Turkey Vulture, Black Vulture, Cooper's Hawk, Broad-winged Hawk, Wild Turkey, American Coot, Barred Owl, Chuck-will's-widow, Chimney Swift, Hairy Woodpecker, Eastern Pewee, Common Crow, Fish Crow, Gray Catbird, Yellow-throated Vireo, Pine Warbler, Prairie Warbler, Yellow-breasted Chat, Bachman's Sparrow, and Chipping Sparrow.

For the purpose of this paper, the Refuge was divided into six sections depending on their accessibility (Fig. 1). All sections can be visited by boat from any of the marinas on the Walter F. George Reservoir. Section B can be reached from Georgia Highway 39, sections D, E, and F, from U.S. Highway 431. We recommend that visitors entering sections other than D by car or foot should first check with the Refuge office (phone: 205-687-4065). It is legal to visit all sections by boat as long as you do not pass the U.S. Corps of Engineers red boundary line, or pass fences or signs indicating restricted use.

Generally, 50 per cent of our time was spent in sections C and D, and about equal amounts in A, B, E, and F. Major habitats of each section in order of abundance are:

- A. pastures, open lake, riparian woods, and upland hardwoods;
- B. open lake, grain fields, beaver ponds, and riparian woods;
- C. open lake, upland hardwoods, sloughs, beaver ponds, pastures, and marshes;
- D. grain fields, riparian woods, open lake, beaver pond, pastures, and marshes;
- E. open lake, marshes, beaver ponds, and riparian woods;
- F. open lake, riparian woods, marshes, grain fields, upland pine, and beaver ponds.

# EUFAULA NATIONAL WILDLIFE REFUGE

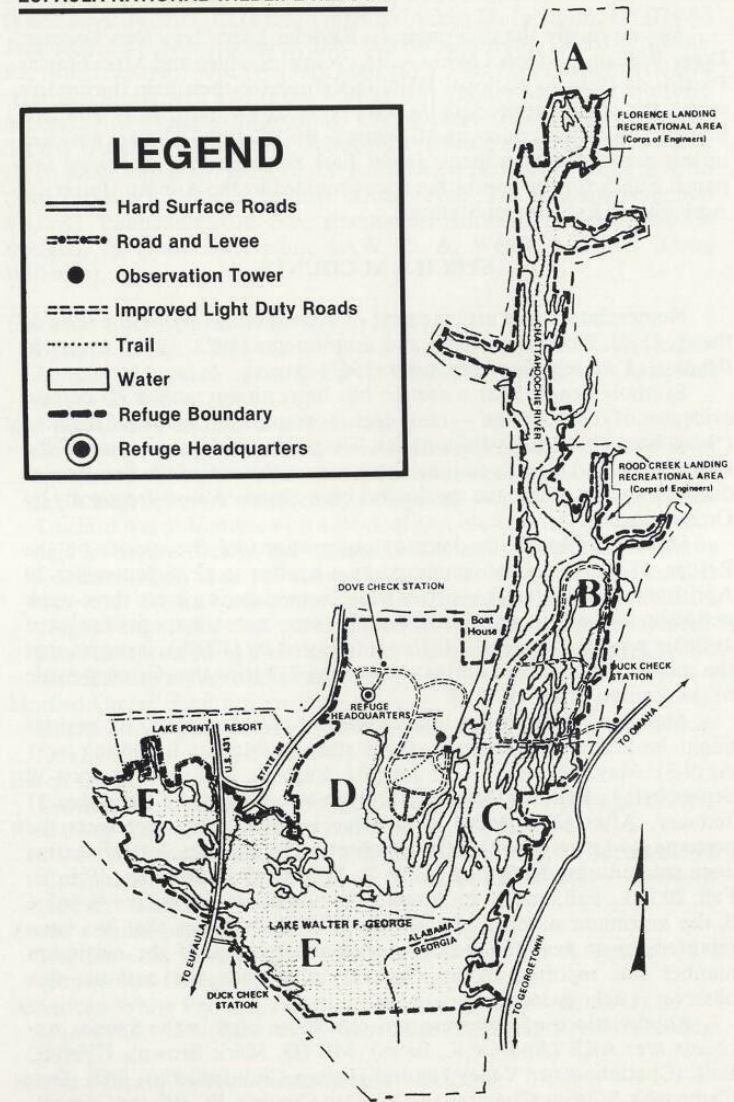


Fig. 1. Sections (A, B, C, D, E, F) and recreational areas at Eufaula National Wildlife Refuge, Alabama-Georgia, 1979.



## ACKNOWLEDGMENTS

We especially thank Jimmie L. Tisdale, Larry Ivy, Dan Doshier, Doug Williams, Ralph Lloyd, A. H. "Gus" Saville, and Mrs. Francis Parrish of Eufaula National Wildlife Refuge for their help during this study. We greatly appreciate the data provided by individuals who participated in Refuge counts and Christmas Bird Counts, who are not cited in this paper. We also thank James Earl Kennamer for reviewing this paper. Funds for transportation were provided by the Auburn University Agricultural Experiment Station.

## SPECIES ACCOUNTS

Nomenclature and arrangement of each species follows the style of the A. O. U. Check-list (1957) and supplements (1973, 1976), except in the case of shorebirds where Stout (1967) is used.

Symbols denote that a species has been photographed (!) or that evidences of reproduction — nest, eggs, or young not capable of flight — (\*) has been observed by the authors. The presence of one or more of the letters A, B, C, D, E, F, and their sequence at the end of the first line indicates localities where the species has been observed most frequently by Ortego (Fig. 1).

Dates: Represent the dates of observations of the species on the Refuge. If two dates are connected by a hyphen (e.g. 25 September-29 April), it indicates that the species was observed during every three-week period by the authors or contributors. In some cases the species are listed as being present "all year". If this is followed by (100%), it means that the species was observed during each of the 217 trips that Ortego made to the Refuge, from 1977-79.

Abundance: Depending on occurrence of the species, six periods might be listed: E. Spring = 1 February-31 March; L. Spring = 1 April-31 May; Summer = 1 June-31 July; E. Fall = 1 August-30 September; L. Fall = 1 October-30 November; Winter = 1 December-31 January. After each period a % value is listed. This represents the percentage of trips on which Ortego observed this species. Fifty-five trips were made during E. Spring, 61 in L. Spring, 49 in Summer, 19 in E. Fall, 20 in L. Fall, and 13 in Winter. The number following the % value is the maximum number of individuals of that species that has been reported on or near the Refuge during that period. If the maximum number was reported by an observer other than the authors, this observer is acknowledged.

Abbreviations of observers and references cited in the Species Accounts are: AKB (Andrew K. Bates), MB (D. Mark Brown), CVNHC Bull. (Chattahoochee Valley Natural History Club Bulletin), DCa (Dan Carbaugh), SC (Sue Chambliss), DC (Dan Combs), EC (Elaine Combs), ERC (Ernest Corley), JLD (Julian Dusi), RTD (Rosemary T. Dusi), JRE (J. R. Eadie), GF (George Folkerts), TF (Tom French), MF (Mike

Fuller), SG (Sid Gates), WG (W. Gibbs), DFH (Dennis F. Holland), TAI (Thomas A. Imhof), LI (Larry Ivy), GDJ (Greg D. Jackson), DJ (David Jennings), SJ (Steve Johnson), DJO (David Johnston), BK (B. Kravtin), RL (Ralph Lloyd), WM (William Matheny), TMe (Tom Meadows), HM (Harriett Meadows), FM (Fred Miller), JM (James Miller), TM (Terry Moore), VM (Vaughn Morrison), CAS Observ. (Columbus Audubon Society Observer), BO (Brent Ortego), DP (Dick Parks), SP (Sam Pate), IR (Isabelle Ragland), EGR (E. G. Reid), RRR (Robert R. Reid, Jr.), SS (Sharon Sauer), GS (Gus Saville), Albany Aud. Soc. (Albany Audubon Society), Panhandle Aud. Soc. (Panhandle Audubon Society), SSp (S. Spiegel), JS (John Swiderski), LAW (L. A. Wells), and DW (Doug Williams).

Common Loon, *Gavia immer* ! - C, E, D, B.

Dates: 2-29 April, 24 June, 9 October (SP in CVNHC Bull. 18(1):2-28 January. Abundance: L. Spring (18%) - 15; Spring (2%) - 1; L. Fall (5%) - 2; Winter (15%) - 2.

Red-throated Loon, *Gavia stellata* - E, C.

Comments: Although several have been reported by L. A. Wells at Columbus, Georgia (Wells 1973), there has been only one record for the Refuge: one was observed by Ortego and Combs on 21 April 1979. The bird was swimming with a flock of Double-crested Cormorants. It held its neck vertically and its small bill (much smaller than a nearby Common Loon's) at 30° above the horizontal. Its body was smaller than that of the cormorants and the Common Loon and it had a deeper wing stroke than the Common's when they both were flushed. The Red-throated had red eyes and a brown back and nape, which blended into a very white neck and belly.

Horned Grebe, *Podiceps auritus* - C, E.

Dates: 14 October-25 March. Abundance: L. Fall (0%) - 1; Winter (0%) - 1 (Dusi 1974, Pate 1977); E. Spring (5%) - 1.

Eared Grebe, *Podiceps nigricollis* - C, E.

Details: One observed by Ortego on 22 March 1979 (Ortego 1979).

Pied-billed Grebe, *Podilymbus podiceps* ! \* - D, B, E, C, A, F.

Dates: All year. Abundance: E. Spring (100%) - 20; L. Spring (25%) - 3; Summer (4%) - 2; E. Fall (21%) 4; L. Fall (70%) - 8; Winter (100%) - 31 (Pate 1977).

Leach's Storm-petrel, *Oceanodroma leucorhoa* - D.

Details: One salvaged by Brown and Ortego on 7 October 1978 (Brown and Ortego 1979).

American White Pelican, *Pelecanus erythrorhynchos* - B, C, D, E.

Comments: 160 observed by Sam Pate on 28 April 1977 (Teulings 1977).

Brown Pelican, *Pelecanus occidentalis* - C, D.

Dates: late March, 14 April, 12 November (DJ). Abundance: E. Spring (0%) - 1; L. Spring (2%) - 1; L. Fall (0%) - 1 (DJ). Details: Ortego (1978).



- Double-crested Cormorant, *Phalacrocorax auritus* ! - D, E, C, B, A.  
 Dates: All year. Abundance: E. Spring (15%) - 5; L. Spring (59%) - 60; Summer (41%) - 3; E. Fall (37%) - 4; L. Fall (40%) - 11; Winter (23%) - 10.
- American Anhinga, *Anhinga anhinga* - C.  
 Dates: 31 August (FM, SS in Refuge File), 14 October. Abundance: E. Fall (0%) - 1 (FM, SS); L. Fall (5%) - 1.
- Great Blue Heron, *Ardea herodias* ! - D, C, E, B, A, F.  
 Dates: All year (100%). E. Spring - 160; L. Spring - 98; Summer - 38; E. Fall - 65; L. Fall - 200; Winter - 448 (JLD in Reid 1970).
- Northern Green Heron, *Butorides striatus* ! \* - C, B, D, E, A, F.  
 Dates: 1 April - 28 October, 4 January (Dusi 1975). Abundance: L. Spring (100%) - 60; Summer (100%) - 25; E. Fall (47%) - 36; L. Fall (15%) - 1; Winter (0%) - 1 (Dusi 1975).
- Little Blue Heron, *Florida caerulea* ! \* - B, D, C, E, A, F.  
 Dates: All year. Abundance: E. Spring (36%) - 17; L. Spring (100%) - 164; Summer (100%) - 89; E. Fall (100%) - 85; L. Fall (80%) - 23; Winter (62%) - 25.
- Cattle Egret, *Bubulcus ibis* ! \* - B, C, A, D, E, F.  
 Dates: 11 March - 26 December (Pate 1978). Abundance: E. Spring (5%) - 35; L. Spring (100%) - 400; Summer (100%) - 600; E. Fall (100%) - 883; L. Fall (25%) - 300; Winter (15%) - 13 (Pate 1978).
- Reddish Egret, *Dichromanassa rufescens* ! - D, E.  
 Dates: 12 November - 24 February (GF), 22 April (BO, MB). Abundance: L. Fall (20%) - 1; Winter (46%) - 1; E. Spring (2%) - 1 (BO, MB, DC, GF); L. Spring (2%) - 1.
- Great Egret, *Casmerodius albus* ! - D, C, E, B, F, A.  
 Dates: All year. Abundance: E. Spring (100%) - 65; L. Spring (48%) - 6; Summer (100%) - 114; E. Fall (100%) - 167; L. Fall (100%) - 206; Winter (100%) - 111.
- Snowy Egret, *Egretta thula* ! - B, C, D, E, A.  
 Dates: 12 February (Chandler 1966) - 10 August. Abundance: E. Spring (2%) - 1 (Chandler 1966; BO); L. Spring (21%) - 8; Summer (16%) - 4, E. Fall (0%) - 1.
- Louisiana Heron, *Hydranassa tricolor* ! \* - B, E, D, C.  
 Dates: 13 March - September (JRE in Imhoff 1976:80), 7 January JLD in Reid 1973). Abundance: E. Spring (4%) - 2; L. Spring (26%) - 5; Summer (6%) - 3; E. Fall (0%) - 4; Winter (0%) - 1 (JLD in Reid 1973).
- Black-crowned Night Heron, *Nycticorax nycticorax* ! - C, D, B, E.  
 Dates: All year. Abundance: E. Spring (100%) - 250; L. Spring (100%) - 92; Summer (45%) - 35; E. Fall (42%) - 3; L. Fall (100%) - 33 (RL); Winter (100%) - 89.
- Yellow-crowned Night Heron, *Nyctanassa violacea* - C, D.  
 Dates: 25 March - 17 July, 4 November. Abundance: E. Spring (4%) - 8; L. Spring (15%) - 26; Summer (6%) - 6; L. Fall (0%) - 1.
- Least Bittern, *Ixobrychus exilis* ! \* - D, B, E, C.

- Dates: 19 April - 19 August. Abundance: L. Spring (21%) - 3; Summer (16%) - 6 (BO, IR); E. Fall (16%) - 3.
- American Bittern, *Botaurus lentiginosus* - B, D, E.  
 Dates: 8 July - 7 May. Abundance: Summer (2%) - 1; E. Fall (16%) - 1; L. Fall (20%) - 2; Winter (38%) - 7 (Pate 1978); E. Spring (15%) - 2; L. Spring (15%) - 3.
- Wood Stork, *Mycteria americana* - B, D.  
 Dates: 10 August (SP, WM in CAS Observ. 3(4): 3-4) - 21 September. Abundance: E. Fall (5%) - 10 (SP, WM in CAS Observ. 3(4): 3-4).
- Glossy Ibis, *Plegadis falcinellus* - B, D.  
 Dates: 1-16 February (LAW, GS, SP, ErC in Imhoff 1969b). 10-21 April. Abundance: E. Spring (0%) - 1 (LAW, GS, SP, ErC in Imhoff 1969b); L. Spring (3%) - 2.
- White Ibis, *Eudocimus albus* ! - D, C, B, E.  
 Dates: 12 June - 3 April. Abundance: Summer (16%) - 5; E. Fall (42%) - 16; L. Fall (60%) - 26; Winter (15%) - 6 (GDJ in Hamilton 1977); E. Spring (11%) - 5; L. Spring (2%) - 2.
- Whistling Swan, *Olor columbianus* ! - B, D.  
 Dates: 5 November (JRE, RRR, EGR in Imhoff 1976:94) - 1 March (RL). Abundance: L. Fall (5%) - 1; Winter (31%) - 1; E. Spring (2%) - 1 (BO, DC, RL).
- Canada Goose, *Branta canadensis* ! \* - C, D, E, A, B, F.  
 Dates: All year (100%). Abundance: E. Spring - 384; L. Spring - 275; Summer - 275; E. Fall - 312; L. Fall - 350; Winter - 410 (LI, DW).
- White-fronted Goose, *Anser albifrons* - C, D, B.  
 Dates: 8 October - 29 March (DFH in Imhof 1969b). Abundance: L. Fall (30%) - 4; Winter (100%) - 14; E. Spring (51%) - 14.
- Snow Goose, *Chen caerulescens* ! - C, D, B, E, A.  
 Dates: 8 October - 8 April. Abundance: L. Fall (40%) - 19; Winter (100%) - 54; E. Spring (65%) - 79; L. Spring (5%) - 1.
- Fulvous Whistling Duck, *Dendrocygna bicolor*.  
 Dates: 1 December (LAW in Imhof 1976:100), early March (SP, SSP in CVNHC Bull. 16(4):2). Abundance: Winter (0%) - 1 (LAW in Imhof 1976:100); E. Spring (0%) - 1 (SP, SSP in CVNHC Bull. 16(4):2).
- Mallard, *Anas platyrhynchos* ! \* - B, D, E, C, A, F.  
 Dates: All year (100%). Abundance: E. Spring - 1,985; L. Spring - 180; Summer - 89; E. Fall - 117; L. Fall - 3,073; Winter - 16,000 (JLD in Reid 1970).
- Black Duck, *Anas rubripes* ! - D, B, E, C, A.  
 Dates: 5 August - 22 April (BO, MB, DC, EC). Abundance: E. Fall (21%) - 6; L. Fall (100%) - 130; Winter (100%) - 4,000 (JLD in Reid 1971); E. Spring (100%) - 175; L. Spring (11%) - 1 (BO, MB, DC, EC).
- Gadwall, *Anas strepera* - B, D, C, E, A.  
 Dates: 7 October - 1 April. Abundance: L. Fall (75%) - 670; Winter (100%) - 700 (JLD in Reid 1970); E. Spring (76%) - 128; L. Spring (3%) - 3.



Northern Pintail, *Anas acuta* ! - B, D, E, C, A.

Dates: 24 September - 6 April. Abundance: E. Fall (16%) - 10; L. Fall (100%) - 681; Winter (100%) - 2,500 (JLD in Reid 1971); E. Spring (58%) - 10; L. Spring (2%) - 1.

Green-winged Teal, *Anas crecca* ! - C, B, D, E, A.

Dates: 30 September - 8 April. Abundance: E. Fall (11%) - 25; L. Fall (100%) - 716; Winter (100%) - 2,500 (JLD in Reid 1971); E. Spring (100%) - 795; L. Spring (5%) - 6.

Blue-winged Teal, *Anas discors* ! - B, D, E, C, A, F.

Dates: All year. Abundance: E. Spring (87%) - 401; L. Spring (100%) - 528; Summer (20%) - 2; E. Fall (100%) - 300; L. Fall (100%) - 800; Winter (31%) - 25 (JLD in Reid 1971).

American Wigeon, *Anas americana* ! - B, C, D, E, A, F.

Dates: All year. Abundance: E. Fall (63%) - 70; L. Fall (100%) - 1,539; Winter (100%) - 3,500 (JLD in Reid 1971); E. Spring (100%) - 445; L. Spring (74%) - 106; Summer (16%) - 4.

Northern Shoveler, *Anas clypeata* ! - B, D, E, C, A, F.

Dates: 22 September (SP, WM in Imhof 1976:110) - 29 April. Abundance: E. Fall (37%) - 57; L. Fall (100%) - 140; Winter (100%) - 2,000 (JLD in Reid 1971); E. Spring (100%) - 983; L. Spring (41%) - 235.

Wood Duck, *Aix sponsa* ! \* - C, B, D, E, F, A.

Dates: All year (100%). Abundance: E. Spring - 230; L. Spring - 171; Summer - 500 (Eadie 1966); E. Fall - 80; L. Fall - 2,000; Winter - 2,500 (JLD in Reid 1971).

Redhead, *Aythya americana* ! - D, B, E.

Dates: 28 October - 15 April. Abundance: L. Fall (25%) - 10; Winter (77%) - 50 (JLD in Reid 1971); E. Spring (42%) - 5; L. Spring (11%) - 2.

Ring-necked Duck, *Aythya collaris* ! - D, C, B, E.

Dates: 7 October - 21 April. Abundance: L. Fall (16%) - 1,746; Winter (100%) - 3,740; E. Spring (100%) - 230; L. Spring (36%) - 46.

Canvasback, *Aythya valisineria* ! - D, B, E, C.

Dates: 8 October - 5 April. Abundance: L. Fall (40%) - 78; Winter (100%) - 90; E. Spring (53%) - 85; L. Spring (2%) - 5.

Greater Scaup, *Aythya marila* - B, C, D.

Dates: 8 December - 15 January. Abundance: Winter (23%) - 2.

Lesser Scaup, *Aythya affinis* ! - D, C, B, E.

Dates: 14 October - 4 May. Abundance: L. Fall (50%) - 1,619; Winter (100%) - 300 (Pate 1978); E. Spring (100%) - 300; L. Spring (26%) - 65.

Common Goldeneye, *Bucephala clangula* - D, B.

Dates: 22 December - 8 April. Abundance: Winter (0%) - 1,000 (JLD in Reid 1970); E. Spring (7%) - 1; L. Spring (3%) - 4.

Bufflehead, *Bucephala albeola* ! - D, B, C, E.

Dates: 12 November - 14 April. Abundance: L. Fall (30%) - 50; Winter (100%) - 60; E. Spring (100%) - 113; L. Spring (15%) - 21.

Ruddy Duck, *Oxyura jamaicensis* - D, B, E.

Dates: 29 October - 13 May. Abundance: L. Fall (35%) - 8; Winter (100%) - 150 (JLD in Reid 1971); E. Spring (40%) - 16; L. Spring (5%) - 3.

Hooded Merganser, *Lophodytes cucullatus* - D, E, B, C.

Dates: 31 October (SP in CVNHC Bull. 17(1):1) - 26 April. Abundance: L. Fall (35%) - 130 (SP, WM in CAS Observ. 3(4):3); Winter (100%) - 250 (JLD in Reid 1971); E. Spring (69%) - 228; L. Spring (2%) - 1.

Common Merganser, *Mergus merganser* - C, B, E.

Dates: 19 November - 24 March. Abundance: L. Fall (10%) - 2; Winter (23%) - 1; E. Spring (4%) - 1.

Red-breasted Merganser, *Mergus serrator* - C, B, E, D, A, F.

Dates: 29 October - 19 April. Abundance: L. Fall (10%) - 2,000 (SP, WM in Imhof 1976:127); Winter (23%) - 13 (Pate 1978); E. Spring (15%) - 125; L. Spring (3%) - 14.

Turkey Vulture, *Cathartes aura* ! - B, D, A, E, F, C.

Dates: All year. Abundance: E. Spring (100%) - 14; L. Spring (52%) - 17; Summer (42%) - 4; E. Fall (53%) - 3; L. Fall (100%) - 56; Winter (100%) - 33 (Pate 1977).

Black Vulture, *Coragyps atratus* ! - A, B, D, F, C, E.

Dates: All year. Abundance: E. Spring (58%) - 50; L. Spring (46%) - 19; Summer (51%) - 6; E. Fall (32%) - 2; L. Fall (50%) - 23; Winter (77%) - 18 (Dusi 1974).

Sharp-shinned Hawk, *Accipiter striatus* - D, C, B.

Dates: 22 April - 4 May, 5 August - 26 February (BO, SJ). Abundance: E. Spring (2%) - 1 (BO, SJ, JLD); L. Spring (3%) - 1 (DC, EC, BO); E. Fall (21%) - 1; L. Fall (30%) - 3; Winter (77%) - 5 (Pate 1978).

Cooper's Hawk, *Accipiter cooperi* - D, F.

Dates: 10 October (WM in CAS Observ. 1976 (Nov.)) - 8 April, 28 June. Abundance: L. Fall (5%) - 1 (WM in CAS Observ. 1976 (Nov.)), BO; Winter (15%) - 3 (Pate 1978); E. Spring (5%) - 2; L. Spring (2%) - 1; Summer (4%) - 1.

Red-tailed Hawk, *Buteo jamaicensis* \* - D, B, C, A, E, F.

Dates: All year (100%). Abundance: E. Spring - 37; L. Spring - 8; Summer - 4; E. Fall - 3; L. Fall - 56; Winter - 43 (Fuller 1975).

Red-shouldered Hawk, *Buteo lineatus* ! \* - E, C, D, B, A, F.

Dates: All year. Abundance: E. Spring (22%) - 4; L. Spring (16%) - 3; Summer (16%) - 5; E. Fall (37%) - 4; L. Fall (20%) - 7; Winter (31%) - 15 (JLD in Reid 1970).

Broad-winged Hawk, *Buteo platypterus* - C, D.

Dates: 31 March (DC, EC) - 13 May, 14 October. Abundance: E. Spring (0%) - 1 (DC, EC); L. Spring (6%) - 2; L. Fall (10%) - 2.

Swainson's Hawk, *Buteo swainsoni*.

Comments: One was reported by SP, VM, TM, m.ob on 9 October 1978 (CVNHCS Bull. 18(1):1).

Rough-legged Hawk, *Buteo lagopus*.



- Dates: 14 November (TF) - December (Pate 1978). Abundance: L. Fall (0%) - 1 (TF); Winter (0%) - 1 (Pate 1978).
- Golden Eagle, *Aquila chrysaetos* - C, B, D.  
 Dates: 8 December - 21 February (WM, SP, TM in Hamilton 1975).  
 Abundance: Winter (38%) - 3; E. Spring (5%) - 2 (WM, SP, TM in Hamilton 1975).
- Bald Eagle, *Haliaeetus leucocephalus* ! - C, D, E, B.  
 Dates: 22 July - 13 May. Abundance: Summer (2%) - 2 (BO, IR); E. Fall (11%) - 1; L. Fall (20%) - 2; Winter (38%) - 4; E. Spring (7%) - 3 (SP, WM in LeGrand 1978); L. Spring (9%) - 2.
- Northern Harrier, *Circus cyaneus* ! - D, B, F, C, E, A.  
 Dates: 12 September (SP, BK in Imhof 1976:145) - 22 April. Abundance: E. Fall (32%) - 3; L. Fall (100%) - 14 (TAI in Refuge File); Winter (100%) - 63 (JLD in Reid 1970); E. Spring (100%) - 14; L. Spring (43%) - 7.
- Osprey, *Pandion haliaetus* ! - D, C, E, B, F, A.  
 Dates: All year. Abundance: E. Spring (15%) - 1; L. Spring (74%) - 8; Summer (27%) - 2; E. Fall (74%) - 2; L. Fall (30%) - 2; Winter (8%) - 3 (BO, SJ).
- Peregrine Falcon, *Falco peregrinus* - C, D, E, B.  
 Dates: 24 September - 5 February (TMe, HM in Imhof 1972), 14 April. Abundance: E. Fall (5%) - 1; L. Spring (15%) - 2 (SP in CVNHC Bull. 18 (1):2); Winter (8%) - 4 (JLD in Reid 1971); E. Spring (2%) - 1 (TMe, HM in Imhof 1972, BO) L. Spring (2%) - 1.
- Merlin, *Falco columbarius* - D, B.  
 Dates: 30 September - 24 March. Abundance: E. Fall (5%) - 1; L. Fall (15%) - 2 (SP in CAS Observer 1976 (Dec.)); Winter (31%) - 2 (Pate 1977); E. Spring (4%) - 1.
- American Kestrel, *Falco sparverius* - D, C, B, F, A.  
 Dates: 28 June - 27 April. Abundance: Summer (8%) - 1; E. Fall (53%) - 2; L. Fall (100%) - 9; Winter (100%) - 29 (Pate 1978); E. Spring (64%) - 4; L. Spring (5%) - 1.
- Bobwhite, *Colinus virginianus* ! \* - D, F, B, A, C, E.  
 Dates: All year (100%). Abundance: E. Spring - 49; L. Spring - 65; Summer - 100 (Eadie 1966); E. Fall - 75; L. Fall - 21; Winter - 122 (Pate 1976).
- Turkey, *Meleagris gallopavo* - D, A, F.  
 Dates: 1-29 April, 14 October. Abundance: L. Spring (10%) - 12 (LI); L. Fall (5%) - 1.
- Sandhill Crane, *Grus canadensis* ! - D, B.  
 Dates: 29 January (SP in LeGrand 1977) - 26 February (BO, SJ).  
 Abundance: Winter (0%) - 1 (SP in LeGrand 1977); E. Spring (13%) - 2 (BO, SJ).
- King Rail, *Rallus elegans* ! \* - D, B, C, E.  
 Dates: All year. Abundance: E. Spring (11%) - 2; L. Spring (21%) - 2; Summer (6%) - 6 (AKB in Imhof 1969a); E. Fall (11%) - 2; L. Fall (30%) - 2.

- Virginia Rail, *Rallus limicola* - D, B.  
 Dates: 26 November - 28 April (WG, WM in Imhof 1976:159). Abundance: L. Fall (5%) - 1; Winter (8%) - 2 (Pate 1978); E. Spring (5%) - 2; L. Spring (5%) - 4 (MF, SP in Imhof 1974).
- Sora, *Porzana carolina* ! - D, B, C, E.  
 Dates: 24 September - 24 April. Abundance: E. Fall (16%) - 1; L. Fall (15%) - 2; Winter (8%) - 4 (Pate 1978); E. Spring (4%) - 3; L. Spring (8%) - 2.
- Yellow Rail, *Coturnicops novboracensis*.  
 Comments: One on 1 April 1975 (Refuge File). Observer unknown.
- Black Rail, *Laterallus jamaicensis* - B.  
 Comments: One observed on 1 May 1976 (TM, JS in Teulings 1976).
- Purple Gallinule, *Porphyryla martinica* \* - B, D, E, C.  
 Dates: 17 March (JM in Imhof 1976:162) - 9 October (SP in Imhof 1976:162). Abundance: E. Spring (0%) - 1 (JM in Imhof 1976:162); L. Spring (66%) - 18; Summer (37%) - 28; E. Fall (21%) - 3; L. Fall (0%) - 1 (SP in Imhof 1976:162).
- Common Gallinule, *Gallinula chloropus* ! \* - B, C, D, E.  
 Dates: 4 March - 30 September. Abundance: E. Spring (9%) - 4; L. Spring (64%) - 15; Summer (65%) - 6; E. Fall (16%) - 5.
- American Coot, *Fulica americana* ! - B, C, D, E, A, F.  
 Dates: All year (100%). Abundance: E. Fall - 27; L. Fall - 8,000; Winter - 7,000 (Tisdale 1972); E. Spring - 626; L. Spring - 122; Summer - 27.
- American Avocet, *Recurvirostra americana*.  
 Dates: 2 July (JM in Imhof 1976:195), 19 August (Eadie 1966), 30 October - 13 February (JRE in Refuge File). Abundance: Summer (0%) - 5 (JM in Imhof 1976:195); E. Fall (0%) - 1 (Eadie 1966); L. Fall (0%) - 3 (GS); Winter (0%) - 1 (JRE); E. Spring (0%) - 1 (JRE).
- Black-necked Stilt, *Himantopus mexicanus*.  
 Comments: One observed from 19-23 August 1969 after Hurricane Camille (AKB in Imhof 1969a).
- Semipalmated Plover, *Charadrius semipalmatus* - B, D, C, E.  
 Dates: 22 April - 13 May, 24 July (AKB in Imhof 1969a) - 4 November. Abundance: L. Spring (15%) - 16 (JM in CAS Observ. 1977 (July)); Summer (4%) - 5; E. Fall (21%) - 13; L. Fall (10%) - 3.
- Piping Plover, *Charadrius melodus* ! - C, D.  
 Dates: 28 April (WG, WM in Imhof 1976:167) - 8 May, 22 July - 15 August (JLD). Abundance: L. Spring (3%) - 2; Summer (2%) - 1; E. Fall (5%) - 1.
- Wilson's Plover, *Charadrius wilsonia*.  
 Comments: One observed on 2 September 1974 (SP, SG in Purrington 1975).
- Killdeer, *Charadrius vociferus* ! \* - D, A, B, C, E, F.  
 Dates: All year (100%). Abundance: E. Spring - 45; L. Spring - 43; Summer - 29 (BO, IR); E. Fall - 65; L. Fall - 135; Winter - 145 (Fuller 1974).



- Lesser Golden Plover, *Pluvialis dominica* - A, B, D.  
 Dates: 21 March - 22 April, 21 October - 12 November. Abundance: E. Spring (4%) - 2; L. Spring (8%) - 21; L. Fall (35%) - 7.
- Black-bellied Plover, *Pluvialis squatarola* - C, D, B, E.  
 Dates: 6 March - 7 May, 13 August - 15 January. Abundance: E. Spring (4%) - 15; L. Spring (10%) - 8; E. Fall (11%) - 2; L. Fall (30%) - 11; Winter (8%) - 1.
- Marbled Godwit, *Limosa fedoa* ! - B.  
 Comments: One observed on 13 August 1978 by Ortego.
- Whimbrel, *Numenius phaeopus* - D.  
 Comments: One observed on 2 August 1977 by Ortego.
- Upland Sandpiper, *Bartramia longicauda* ! - A, D, C.  
 Dates: 24 March (SP in CVNHC Bull. 17(6):1) - 24 June, 17 August (SP, WM in Imhof 1976:178) - 8 November. Abundance: E. Spring (4%) - 8; L. Spring (20%) - 22; Summer (2%) - 3; E. Fall (0%) - 1 (SP, WM in Imhof 1976:178); L. Fall (0%) - 2.
- Solitary Sandpiper, *Tringa solitaria* ! - B, D, C, E, A.  
 Dates: 1 April - 20 May, 4 July (JM in Imhof 1975b) - 8 November. Abundance: L. Spring (48%) - 7; Summer (2%) - 10 (AKB in Imhof 1969a); E. Fall (16%) - 1; L. Fall (5%) - 6.
- Greater Yellowlegs, *Tringa melanoleucus* ! - C, E, B, D, A, F.  
 Dates: 28 June - 11 May. Abundance: Summer (18%) - 30; E. Fall (42%) - 9; L. Fall (75%) - 35; Winter (31%) - 7; E. Spring (100%) - 36; L. Spring (57%) - 53.
- Lesser Yellowlegs, *Tringa flavipes* ! - B, C, E, D, A, F.  
 Dates: All year. Abundance: E. Spring (47%) - 101; L. Spring (82%) - 101; Summer (20%) - 13; E. Fall (37%) - 16; L. Fall (85%) - 21; Winter (15%) - 9 (Pate 1978).
- Willet, *Tringa semipalmatus* ! - B, C, A, D.  
 Dates: 22 February, 24 April - 25 June, 22 July (BO, IR) - 19 August (AKB in Imhof 1969a). Abundance: E. Spring (3%) - 2; L. Spring (5%) - 23; Summer (4%) - 3; E. Fall (11%) - 2 (AKB in Imhof 1969a).
- Spotted Sandpiper, *Actitis macularia* ! - C, D, E, B, A.  
 Dates: 1 April - 20 January. Abundance: L. Spring (100%) - 31; Summer (27%) - 25; E. Fall (58%) - 10; L. Fall (15%) - 3; Winter (15%) - 2 (Pate 1978; JLD in Reid 1971).
- Buff-breasted Sandpiper, *Tryngites subruficollis* - D, A.  
 Dates: 7 April, 5 August - 28 October. Abundance: L. Spring (2%) - 1; E. Fall (11%) - 1; L. Fall (10%) - 3.
- Ruff, *Philomachus pugnax* ! - D, B.  
 Dates: 10 August 1971 (Dusi 1972), 1 May 1976 (TM, JS in Teulings 1976). Abundance (0%) - 1.
- Least Sandpiper, *Calidris minutilla* ! - C, D, B, E, A.  
 Dates: 12 July - 13 May. Abundance: Summer (24%) - 90; E. Fall (100%) - 665; L. Fall (100%) - 361; Winter (100%) - 100 (JLD in Reid 1971); E. Spring (100%) - 200; L. Spring (66%) - 381.
- Semipalmated Sandpiper, *Calidris pusillus* ! - D, B, E, C.

- Dates: 25 March - 13 May, 21 July (AKB in Imhof 1969a) - 24 November. Abundance: E. Spring (2%) - 1; L. Spring (11%) - 112; Summer (8%) - 75 (AKB in Imhof 1969a); E. Fall (16%) - 56; L. Fall (25%) - 26 (TAI in Refuge File).
- Western Sandpiper, *Calidris mauri* ! - D, B, E, C.  
 Dates: 2 January - 4 May, 22 July - 29 October. Abundance: Winter (23%) - 5; E. Spring (5%) - 2; L. Spring (7%) - 37; Summer (2%) - 5; E. Fall (11%) - 10 (AKB in Imhof 1969a); L. Fall (5%) - 1 (BO, TAI, DP in Refuge File).
- Baird's Sandpiper, *Calidris bairdii* - C, D, B.  
 Dates: 4-14 May, 19 August, 24 September. Abundance: L. Spring (5%) - 4; E. Fall (11%) - 27. Details: Ortego (1979).
- White-rumped Sandpiper, *Calidris fuscicollis* - A, E, C, D.  
 Dates: 7 April (WM in Teulings 1975) - 16 May (SP in LeGrand 1976), 11 August, 5 November. Abundance: L. Spring (10%) - 80; E. Fall (5%) - 4; L. Fall (5%) - 1.
- Dunlin, *Calidris alpina* ! - D, C, E, B, A.  
 Dates: 14 October - 13 May. Abundance: L. Fall (75%) - 313; Winter (100%) - 51; E. Spring (100%) - 35; L. Spring (48%) - 59.
- Pectoral Sandpiper, *Calidris melanotos* ! - E, B, D, C, A.  
 Dates: 17 February (SP, WG in Imhof 1976:184) - 13 May, 28 June - 18 November. Abundance: E. Spring (76%) - 267; L. Spring (57%) - 505; Summer (20%) - 59; E. Fall (79%) - 281; L. Fall (40%) - 51.
- Sanderling, *Calidris alba* - D, E, C.  
 Dates: 13-20 March, 14 May, 26 July, 24 September - 5 November. Abundance: E. Spring (4%) - 3; L. Spring (2%) - 2; Summer (6%) - 3; E. Fall (11%) - 2; L. Fall (10%) - 16.
- Red Knot, *Calidris canutus* ! - D.  
 Comments: Two observed on 24 September 1978 by Ortego.
- Short-billed Dowitcher, *Limnodromus griseus* ! - D, B, C, E.  
 Dates: 24 April - 11 May, 3 July - 18 January (Albany Aud. Soc.). Abundance: L. Spring (3%) - 15; Summer (8%) - 6; E. Fall (11%) - 10; L. Fall (15%) - 12; Winter (15%) - 8 (Pate 1976).
- Long-billed Dowitcher, *Limnodromus scolopaceus* - D, B, C, E.  
 Dates: 20 March - 4 May; 9 August, 29 October - 26 November. Abundance: E. Spring (2%) - 3; L. Spring (10%) - 24; E. Fall (5%) - 1; L. Fall (65%) - 12.
- American Woodcock, *Philohela minor* - E, D, C, F, B.  
 Dates: 22 July - 1 April. Abundance: Summer (4%) - 1 (BO, IR); E. Fall (16%) - 2; L. Fall (30%) - 4; Winter (62%) - 4 (Pate 1978); E. Spring (11%) - 4; L. Spring (3%) - 1.
- Common Snipe, *Capella gallinago* ! - B, D, E, C, A, F.  
 Dates: 7 July - 20 May. Abundance: Summer (8%) - 1; E. Fall (32%) - 45; L. Fall (100%) - 116; Winter (100%) - 150 (JLD in Reid 1971); E. Spring (100%) - 241; L. Spring (38%) - 562.
- Stilt Sandpiper, *Micropalama himantopus* - B, D, C.  
 Dates: 24 April - 13 May, 22 July - 19 October. Abundance: L. Spring



- (5%) - 4; Summer (8%) - 3; E. Fall (0%) - 6 (AKB in Imhof 1969a); L. Fall (10%) - 6.
- Ruddy Turnstone, *Arenaria interpres* ! - E, D.  
Dates: 4 May, 5 August, 28 October. Abundance: L. Spring (2%) - 1; E. Fall (5%) - 1; L. Fall (5%) - 1.
- Red Phalarope, *Phalaropus fulicarius* - C, E.  
Details: Ortego and Combs observed one on 5 November 1978 (Ortego et al. 1979).
- Northern Phalarope, *Lobipes lobatus* - C, D.  
Details: Two observed by Ortego from 24 - 26 July 1977, had white bodies with light striped gray backs, white wing stripes, green legs, dark eye stripes and napes, and very thin dark bills that tapered from 2 to 1 mm. They were observed mostly at 100 m with a 30x60 mm spotting scope during satisfactory light conditions.
- Wilson's Phalarope, *Steganopus tricolor* - C, D, E.  
Dates: 31 March (DC, EC) - 13 April (WM in Teulings 1975), 22 July - 20 November. Abundance: E. Spring (0%) - 1 (DC, EC); L. Spring (10%) - 3 (WM in Teulings 1975); Summer (2%) - 2; E. Fall (16%) - 5; L. Fall (40%) - 1 (BO, WM, SP in Crawford 1978).
- Herring Gull, *Larus argentatus* ! - C, E, D, B, A.  
Dates: All year. Abundance: E. Fall (16%) - 2; L. Fall (40%) - 5; Winter (69%) - 25 (JRE in Refuge File); E. Spring (22%) - 20; L. Spring (36%) - 12; Summer (6%) - 2.
- Ring-billed Gull, *Larus delawarensis* ! - C, D, E, B, A, F.  
Dates: All year. Abundance: E. Fall (16%) - 1; L. Fall (65%) - 226; Winter (100%) - 1,680; E. Spring (100%) - 500; L. Spring (100%) - 268; Summer (6%) - 5.
- Laughing Gull, *Larus atricilla* ! - C, E, D, B, A.  
Dates: 1 April - 14 January. Abundance: L. Spring (16%) - 9; Summer (12%) - 14; E. Fall (5%) - 1; L. Fall (20%) - 2; Winter (15%) - 10.
- Bonaparte's Gull, *Larus philadelphia* ! - E, D, C, B, A.  
Dates: 29 October - 22 April. Abundance: L. Fall (35%) - 78; Winter (31%) - 230; E. Spring (22%) - 135; L. Spring (13%) - 40.
- Gull-billed Tern, *Gelochelidon nilotica* - E.  
Comments: One observed on 8 December 1977 by Ortego.
- Forster's Tern, *Sterna forsteri* ! - E, D, C, B, A.  
Dates: 7 January - 13 November. Abundance: Winter (15%) - 2; E. Spring (2%) - 1; L. Spring (10%) - 2; Summer (12%) - 8; E. Fall (37%) - 10; L. Fall (70%) - 12.
- Common Tern, *Sterna hirundo* - E.  
Dates: 12 April, 3 August (AKB in Imhof 1976:212). Abundance: L. Spring (2%) - 1; E. Fall (0%) - 1 (AKB in Imhof 1976:212).
- Least Tern, *Sterna albifrons* - E, D.  
Dates: 8-13 June, 19 August (AKB in Imhof 1969a), 8 October. Abundance: Summer (4%) - 1; E. Fall (0%) - 1 (AKB in Imhof 1969a); L. Fall (0%) - 1.
- Royal Tern, *Sterna maximus* - C, E.

- Comments: One observed by Ortego on 25 June 1977.
- Sandwich Tern, *Sterna sandvicensis*.  
Comments: Three observed by Andrew K. Bates on 19 August 1969 after Hurricane Camille (Imhof 1976:216).
- Caspian Tern, *Sterna caspia* ! - E, C, D, B, A.  
Dates: 1 April - 24 July; 12 November - 22 December, 18 January (Albany Aud. Soc.). Abundance: L. Spring (13%) - 3; Summer (4%) - 3; L. Fall (10%) - 1; Winter (0%) - 1 (JLD; Albany Aud. Soc.).
- Black Tern, *Chlidonias niger* - D, E, C, B.  
Dates: 1-28 May, 2 July - 22 August (ErC in Imhof 1976:278). Abundance: L. Spring (5%) - 10; Summer (8%) - 13; E. Fall (47%) - 80 (ErC in Imhof 1976:218).
- Black Skimmer, *Rynchops niger*.  
Comments: Two observed from 24-25 August 1969 by Andrew K. Bates after Hurricane Camille (Imhof 1969a).
- Rock Dove, *Columbia livia* ! \* - B, D, E, C, A, F.  
Dates: All year (100%). Abundance: E. Spring - 64; L. Spring - 72; Summer - 81; E. Fall - 48; L. Fall - 46; Winter - 181 (Pate 1978).
- Mourning Dove, *Zenaida macroura* ! \* - D, F, B, C, E, A.  
Dates: All year (100%). Abundance: E. Spring - 89; L. Spring - 96; Summer - 1,200; E. Fall - 1,043; L. Fall - 620; Winter - 2,056 (JLD in Reid 1970).
- Common Ground Dove, *Columbina passerina* ! \* - D, B, F, C.  
Dates: All year. Abundance: E. Spring (5%) - 6; L. Spring (100%) - 28; Summer (100%) - 100 (Refuge File); E. Fall (32%) - 27; L. Fall (45%) - 10; Winter (23%) - 60 (JLD in Reid 1970).
- Yellow-billed Cuckoo, *Coccyzus americanus* \* - C, D, F, B, A, E.  
Dates: 28 February (MF, GS, in Imhof 1973), 19 April - 4 November. Abundance: E. Spring (0%) - 2 (MF, GS in Imhof 1973); L. Spring (52%) - 15; Summer (100%) - 18; E. Fall (37%) - 7; L. Fall (5%) - 1.
- Black-billed Cuckoo, *Coccyzus erythrophthalmus* - D, C, A.  
Dates: 10 August - 21 September (WM in Crawford 1975). Abundance: E. Fall (11%) - 2 (WM in Crawford 1975).
- Groove-billed Ani, *Crotophaga sulcirostris* ! - D.  
Details: One observed on 18 November 1978 (BO, MB in Ortego 1979).
- Barn Owl, *Tyto alba* ! \* - B, C, D.  
Dates: All year. Abundance: E. Spring (4%) - 2; L. Spring (10%) - 2; Summer (4%) - 2; E. Fall (16%) - 2; L. Fall (10%) - 2; Winter (15%) - 3 (Pate 1978).
- Common Screech Owl, *Otus asio* ! \* - D, C, E, F, B, A.  
Dates: All year. Abundance: E. Spring (7%) - 6; L. Spring (23%) - 8; Summer (4%) - 6; E. Fall (16%) - 4; L. Fall (15%) - 4; Winter (31%) - 16 (Fuller 1975).
- Saw-whet Owl, *Aegolius acadicus*.  
Comments: One salvaged by Mike Fuller on 4 or 11 December 1972 (Purrrington 1973).



- Great Horned Owl, *Bubo virginianus* \* - D, F, C, A, E.  
Dates: All year. Abundance: E. Spring (11%) - 4; L. Spring (25%) - 3; Summer (4%) - 2; E. Fall (16%) - 2; L. Fall (10%) - 2; Winter (23%) - 5.
- Barred Owl, *Strix varia* - C, A, D, F, B.  
Dates: All year. Abundance: E. Spring (4%) - 4; L. Spring (11%) - 3; Summer (6%) - 2; E. Fall (16%) - 2; L. Fall (20%) - 2; Winter (38%) - 4 (Pate 1978).
- Long-eared Owl, *Asio otus* - D.  
Details: Ortego heard one calling on 23 January 1977 and observed a medium-sized owl flush at 150 m as he approached the source of calling at the edge of a pine (*Pinus* sp.) thicket.
- Short-eared Owl, *Asio flammeus* ! - C, D.  
Dates: 26 December (Pate 1978) - 1 April (SP in Imhof 1975). Abundance: Winter (8%) - 30 (SJ); E. Spring (16%) - 15 (SJ); L. Spring (0%) - 1 (SP in Imhof 1975).
- Chuck-will's-widow, *Caprimulgus carolinensis* - D, A, F.  
Dates: 8 April - 10 July. Abundance: L. Spring (30%) - 9; Summer (6%) - 5.
- Whip-poor-will, *Caprimulgus vociferus* - D.  
Dates: 7 April - 26 May. Abundance: L. Spring (3%) - 1.
- Common Nighthawk, *Chordeiles minor* - D.  
Dates: 10 April - 4 August. Abundance: L. Spring (7%) - 15; Summer (4%) - 2; E. Fall (5%) - 1.
- Chimney Swift, *Chaetura pelagica* - D, C, A, B, E, F.  
Dates: 24 March - 19 October (TAI in Refuge File). Abundance: E. Spring (5%) - 8; L. Spring (100%) - 38; Summer (100%) - 24; E. Fall (100%) - 14; L. Fall (10%) - 1 (BO, TAI in Refuge File).
- Ruby-throated Hummingbird, *Archilochus colubris* \* - C, D, A, B.  
Dates: 8 April - 15 August. Abundance: L. Spring (8%) - 3; Summer (6%) - 4; E. Fall (0%) - 1.
- Belted Kingfisher, *Megasceryle alcyon* ! \* - D, C, B, E, F, A.  
Dates: All year (100%). Abundance: E. Spring - 9; L. Spring - 28; Summer - 6; E. Fall - 8; L. Fall - 14; Winter - 16 (Pate 1978).
- Common Flicker, *Colaptes auratus* \* - D, F, B, A, C, E.  
Dates: All year. Abundance: E. Spring (100%) - 8; L. Spring (100%) - 4; Summer (20%) - 4; E. Fall (32%) - 18; L. Fall (100%) - 45; Winter (100%) - 48 (Pate 1977).
- Pileated Woodpecker, *Dryocopus pileatus* \* - C, B, A, D, F, E.  
Dates: All year. Abundance: E. Spring (5%) - 4; L. Spring (18%) - 8; Summer (12%) - 3; E. Fall (21%) - 2; L. Fall (30%) - 2; Winter (62%) - 14 (Pate 1978).
- Red-bellied Woodpecker, *Melanerpes carolinus* \* - C, A, D, B, F, E.  
Dates: All year (100%). Abundance: E. Spring - 5; L. Spring - 8; Summer - 4; E. Fall - 5; L. Fall - 9; Winter - 51 (Pate 1978).
- Red-headed Woodpecker, *Melanerpes erythrocephalus* - D, B.  
Dates: All year. Abundance: E. Spring (2%) - 1; L. Spring (3%) - 1;

- Summer (4%) - 1; E. Fall (5%) - 1; L. Fall (5%) - 1; Winter (8%) - 26 (Pate 1978).
- Yellow-bellied Sapsucker, *Sphyrapicus varius* - C, A, B, D, F, E.  
Dates: 14 October - 24 March. Abundance: L. Fall (30%) - 4; Winter (100%) - 18 (Pate 1978); E. Spring (38%) - 3.
- Hairy Woodpecker, *Picoides villosus* - C, A, D, B, F, E.  
Dates: All year. Abundance: E. Spring (7%) - 2; L. Spring (7%) - 2; Summer (2%) - 2; E. Fall (16%) - 3; L. Fall (20%) - 2; Winter (54%) - 6 (Dusi 1974).
- Downy Woodpecker, *Picoides pubescens* \* - C, A, D, F, B, E.  
Dates: All year (100%). Abundance: E. Spring - 8; L. Spring - 10; Summer - 4; E. Fall - 5; L. Fall - 3; Winter - 17 (BO, Pate 1978).
- Red-cockaded Woodpecker, *Picoides borealis*.  
Comments: One observed on 6 January 1974 (Dusi 1974).
- Eastern Kingbird, *Tyrannus tyrannus* ! \* - A, C, B, D, F, E.  
Dates: 1 April - 19 August. Abundance: L. Spring (100%) - 28; Summer (100%) - 24; E. Fall (32%) - 20.
- Great Crested Flycatcher, *Myiarchus crinitus* \* - C, A, D, B, F, E.  
Dates: 1 April - 19 August. Abundance: L. Spring (69%) - 17; Summer (100%) - 14; E. Fall (16%) - 3.
- Eastern Phoebe, *Sayornis phoebe* - C, B, E, D, F.  
Dates: 8 October - 21 April (MF, SP in Imhof 1974). Abundance: L. Fall (60%) - 12; Winter (100%) - 38 (Pate 1977); E. Spring (18%) - 15; L. Spring (7%) - 2.
- Acadian Flycatcher, *Empidonax virens* \* - C, A, D, F, B, E.  
Dates: 8 April - 7 October. Abundance: L. April (34%) - 6; Summer (100%) - 8; E. Fall (53%) - 4; L. Fall (5%) - 1.
- Alder Flycatcher, *Empidonax alnorum* - C.  
Dates: 10 - 15 May. Abundance: L. Spring (5%) - 1.
- Least Flycatcher, *Empidonax minimus* - C.  
Dates: 10 - 22 April. Abundance: L. Spring (5%) - 2.
- Eastern Pewee, *Contopus virens* - B, D, F, E.  
Dates: 7 April - 24 September. Abundance: L. Spring (7%) - 2; Summer (2%) - 2; E. Fall (5%) - 1.
- Horned Lark, *Eremophila alpestris* - D.  
Comments: Nine observed on 15 January 1978 by Ortego.
- Tree Swallow, *Iridoprocne bicolor* - D, E, C, B, A.  
Dates: 15 February - 10 May, 5 August - 29 October. Abundance: E. Spring (20%) - 20; L. Spring (39%) - 98; E. Fall (21%) - 130; L. Fall (50%) - 4,200.
- Bank Swallow, *Riparia riparia* ! - D, E, C, B, A.  
Dates: 20 March - 6 May, 16 July - 14 October. Abundance: E. Spring (5%) - 5; L. Spring (13%) - 35; Summer (16%) - 4,600; E. Fall (100%) - 6,000; L. Fall (50%) - 8.
- Rough-winged Swallow, *Stelgidopteryx ruficollis* ! \* - F, D, B, A, C, E.  
Dates: 5 March - 18 December (Pate 1977). Abundance: E. Spring (16%) - 9; L. Spring (100%) - 163; Summer (100%) - 2,400; E. Fall



- (100%) - 3,000; L. Fall (50%) - 2,550; Winter (0%) - 1 (Pate 1977).  
 Barn Swallow, *Hirundo rustica* ! \* - E, B, A, D, F, C.  
 Dates: 21 March - 10 November (JM in CVNHC Bull. 15(1)). Abundance: E. Spring (13%) - 280; L. Spring (100%) - 220; Summer (100%) - 260; E. Fall (100%) - 175; L. Fall (80%) - 695.  
 Cliff Swallow, *Petrochelidon pyrrhonota* - D.  
 Dates: 24 March, 7 - 14 October. Abundance: E. Spring (2%) - 1; L. Fall (10%) - 5.  
 Purple Martin, *Progne subis* ! \* - D, E, C, B, A.  
 Dates: 12 February - 19 August. Abundance: E. Spring (31%) - 250; L. Spring (100%) - 252; Summer (100%) - 140; E. Fall (42%) - 28.  
 Blue Jay, *Cyanocitta cristata* \* - D, F, C, B, A, E.  
 Dates: All Year (100%). Abundance: E. Spring - 40; L. Spring - 36; Summer - 65; E. Fall - 46; L. Fall - 170 (TAI in Imhof 1976:282).  
 Common Crow, *Corvus brachyrhynchos* ! - D, C, F, E, B, A.  
 Dates: All year (100%). Abundance: E. Spring - 92; L. Spring - 39; Summer - 12; E. Fall - 18; L. Fall - 80; Winter - 380 (Pate 1978).  
 Fish Crow, *Corvus ossifragus* ! - C, D, F, E, B, A.  
 Dates: All year (100%). Abundance: E. Spring - 37; L. Spring - 20; Summer - 20; E. Fall - 25; L. Fall - 192; Winter - 13 (Pate 1978).  
 Carolina Chickadee, *Parus carolinensis* \* - C, D, F, A, B, E.  
 Dates: All year (100%). Abundance: E. Spring - 16; L. Spring - 21; Summer - 18; E. Fall - 30; L. Fall - 37; Winter - 73 (Pate 1978).  
 Tufted Titmouse, *Parus bicolor* \* - C, A, D, F, B, E.  
 Dates: All year (100%). Abundance: E. Spring - 8; L. Spring - 11; Summer - 5; E. Fall - 11; L. Fall - 18; Winter - 33 (Pate 1977).  
 White-breasted Nuthatch, *Sitta carolinensis*.  
 Dates: 21 December (Fuller 1975) - 4 January (Pate 1976). Abundance: Winter (0%) - 2 (Pate 1978).  
 Red-breasted Nuthatch, *Sitta canadensis* - C.  
 Dates: 14 February (Chandler 1966) - 24 March. Abundance: E. Spring (2%) - 1.  
 Brown-headed Nuthatch, *Sitta pusilla* \* - F, D, C, A, B, E.  
 Dates: All year (100%). Abundance: E. Spring - 8; L. Spring - 15; Summer - 6; E. Fall - 7; L. Fall - 8; Winter - 55 (Pate 1978).  
 Brown Creeper, *Certhia familiaris* - F, D, C, A.  
 Dates: 6 November - 8 April. Abundance: L. Fall (10%) - 2; Winter (31%) - 6 (Pate 1978); E. Spring (7%) - 2; L. Spring (2%) - 1.  
 House Wren, *Troglodytes aedon* - D, C, B.  
 Dates: 28 October - 22 April. Abundance: L. Fall (15%) - 2; Winter (38%) - 13 (Pate 1977); E. Spring (5%) - 3; L. Spring (8%) - 3.  
 Winter Wren, *Troglodytes troglodytes* - D, C, B, F.  
 Dates: 10 October - 4 March. Abundance: L. Fall (10%) - 2; Winter (15%) - 5 (Pate 1978); E. Spring (2%) - 1.  
 Bewick's Wren, *Thryomanes bewickii*.  
 Dates: 18 December (Pate 1977) - 26 December (Pate 1978). Abundance: Winter (0%) - 1 (Pate 1977, 1978).

- Carolina Wren, *Thyrothorus ludovicianus* \* - C, D, A, F, B, E.  
 Dates: All year (100%). Abundance: E. Spring - 22; L. Spring - 26; Summer - 10; E. Fall - 11; L. Fall - 15; Winter - 87 (Pate 1977).  
 Marsh Wren, *Cistothorus palustris* - C, E, D, B, A, F.  
 Dates: 28 October - 4 May. Abundance: L. Fall (20%) - 4; Winter (100%) - 39 (Fuller 1974); E. Spring (100%) - 12; L. Spring (38%) - 4.  
 Sedge Wren, *Cistothorus platensis* - D, B, C, E, F, A.  
 Dates: 7 October - 1 May. Abundance: L. Fall (63%) - 8; Winter (100%) - 56 (Pate 1977); E. Spring (100%) - 16; L. Spring (16%) - 3.  
 Northern Mockingbird, *Mimus polyglottos* ! \* - D, A, B, F, E, C.  
 Dates: All year (100%). Abundance: E. Spring - 18; L. Spring - 16; Summer - 18; E. Fall - 12; L. Fall - 13; Winter - 86 (Pate 1978).  
 Gray Catbird, *Dumetella carolinensis* - D, C, B, A, F.  
 Dates: 8 April - 26 December (Pate 1978). Abundance: L. Spring (11%) - 7; Summer (8%) - 4; E. Fall (32%) - 2; L. Fall (10%) - 2; Winter (0%) - 2 (Pate 1978).  
 Brown Thrasher, *Toxostoma rufum* ! \* - D, A, F, B, C, E.  
 Dates: All year (100%). Abundance: E. Spring - 18; L. Spring - 32; Summer - 22; E. Fall - 18; L. Fall - 51; Winter - 39 (JLD in Reid 1970).  
 American Robin, *Turdus migratorius* ! - D, A, F, B, E, C.  
 Dates: 15 August - 9 April. Abundance: E. Fall (11%) - 1; L. Fall (100%) - 26; Winter (100%) - 300; E. Spring (100%) - 400; L. Spring (13%) - 4.  
 Wood Thrush, *Hyloichia mustelina* \* - C, A, D, F, E, B.  
 Dates: 8 April - 13 August. Abundance: L. Spring (54%) - 16; Summer (100%) - 12; E. Fall (16%) - 4.  
 Hermit Thrush, *Catharus guttatus* - C, A, D, F, B, E.  
 Dates: 1 November - 29 April. Abundance: L. Fall (15%) - 4; Winter (100%) - 27 (Pate 1977); E. Spring (100%) - 8; L. Spring (15%) - 5.  
 Swainson's Thrush, *Catharus ustulatus* - C, A, D.  
 Dates: 8 April - 1 May, 20 October (TAI, DP in Refuge File). Abundance: L. Spring (7%) - 2; L. Fall (0%) - 1 (TAI, DP in Refuge File).  
 Gray-cheeked Thrush, *Catharus minima* - C, A.  
 Dates: 14 April - 8 May, 20 October. Abundance: L. Spring (7%) - 2; L. Fall (0%) - 1 (TAI, DP in Refuge File).  
 Veery, *Catharus fuscescens* - C, D, A.  
 Dates: 14 April - 8 May. Abundance: L. Spring (10%) - 2.  
 Eastern Bluebird, *Sialia sialis* \* - D, A, F.  
 Dates: All year. Abundance: E. Spring (7%) - 4; L. Spring (100%) - 6; Summer (100%) - 4; E. Fall (100%) - 4; L. Fall (20%) - 2; Winter (23%) - 71 (Pate 1978).  
 Blue-gray Gnatcatcher, *Poliophtila caerulea* \* - C, A, F, D, E, B.  
 Dates: All year. Abundance: E. Spring (7%) - 6; L. Spring (100%) - 25; Summer (100%) - 16; E. Fall (100%) - 5; L. Fall (15%) - 3; Winter (15%) - 8 (Fuller 1975).  
 Golden-crowned Kinglet, *Regulus satrapa* - F, C, D, A, E.  
 Dates: 28 October - 14 February. Abundance: L. Fall (10%) - 4;



- Winter (31%) - 43 (Pate 1977); E. Spring (4%) - 4.  
 Ruby-crowned Kinglet, *Regulus calendula* - C, A, F, D, B, E.  
 Dates: 14 October - 28 April. Abundance: L. Fall (25%) - 24; Winter (100%) - 241 (Pate 1978); E. Spring (100%) - 12; L. Spring (22%) - 8.  
 Water Pipit, *Anthus spinoletta* ! - D, C, B, A, E, F.  
 Dates: 19 October (TAI in Imhof 1976:315) - 23 April. Abundance: L. Fall (30%) - 315; Winter (100%) - 174 (Pate 1978); E. Spring (100%) - 98; L. Spring (16%) - 17.  
 Cedar Waxwing, *Bombocilla cedrorum* - C, D, A, B, F, E.  
 Dates: 7 November (JM in CVNHC Bull. 17 (1)) - 13 May. Abundance: L. Fall (10%) - 14; Winter (100%) - 222 (Pate 1977); E. Spring (100%) - 18; L. Spring (39%) - 26.  
 Loggerhead Shrike, *Lanius ludovicianus* ! \* - A, D, F, B, C, E.  
 Dates: All year (100%). Abundance: E. Spring - 9; L. Spring - 8; Summer - 8; E. Fall - 10; L. Fall - 14; Winter - 31 (Pate 1978).  
 European Starling, *Sturnus vulgaris* \* - D, E, C, B, A, F.  
 Dates: All year (100%). Abundance: E. Spring - 140; L. Spring - 98; Summer - 40; E. Fall - 46; L. Fall - 68; Winter - 625.  
 White-eyed Vireo, *Vireo griseus* \* - C, A, D, B, F, E.  
 Dates: All year. Abundance: E. Spring (4%) - 2; L. Spring (41%) - 13; Summer (100%) - 12; E. Fall (100%) - 6; L. Fall (15%) - 3; Winter (15%) - 2.  
 Yellow-throated Vireo, *Vireo flavifrons* - C, A.  
 Dates: 25 March - 21 April. Abundance: L. Spring (8%) - 1.  
 Red-eyed Vireo, *Vireo olivaceus* \* - C, A, F, D, E, B.  
 Dates: 1 April - 28 October. Abundance: L. Spring (69%) - 18; Summer (100%) - 12; E. Fall (100%) - 2; L. Fall (30%) - 1.  
 Philadelphia Vireo, *Vireo philadelphicus* - B.  
 Dates: 15 August - 30 September. Abundance: E. Fall (10%) - 1 (BO, WM, SP in Crawford 1978).  
 Solitary Vireo, *Vireo solitarius* - A, D, C, B, E.  
 Dates: 14 October - 21 March. Abundance: L. Fall (20%) - 1; Winter (15%) - 7 (Pate 1977); E. Spring (7%) - 1.  
 Warbling Vireo, *Vireo gilvus* - E, C.  
 Dates: 8 April - 22 April, 14 October. Abundance: L. Spring (7%) - 1; L. Fall (5%) - 1.  
 Black-and-white Warbler, *Mniotilta varia* - C, A, B, D.  
 Dates: 22 March - 11 May, 7-28 October, 18 December (Pate 1977) - 27 January (Panhandle Aud. Soc.). Abundance: E. Spring (4%) - 1; L. Spring (15%) - 1; L. Fall (30%) - 2; Winter (8%) - 1 (BO, Pate 1976, 1977, Panhandle Aud. Soc.).  
 Prothonotary Warbler, *Protonotaria citrea* \* - B, C, D, F, E, A.  
 Dates: 1 April - 26 August. Abundance: L. Spring (49%) - 19; Summer (100%) - 16; E. Fall (11%) - 4.  
 Swainson's Warbler, *Limnithlypis swainsonii* - C.  
 Dates: 20 April - 4 May. Abundance: L. Spring (3%) - 1.  
 Worm-eating Warbler, *Helmitheros vermivorus* - C.

- Dates: 8 - 22 April, 15 August. Abundance: L. Spring (8%) - 5; E. Fall (5%) - 1.  
 Blue-winged Warbler, *Vermivora pinus* - C.  
 Comments: One observed by Combs and Ortego on 15 April 1979.  
 Tennessee Warbler, *Vermivora peregrina* - D, E, B.  
 Dates: 22 April, 30 September - 28 October. Abundance: L. Spring (3%) - 1; E. Fall (5%) - 1; L. Fall (20%) - 4.  
 Orange-crowned Warbler, *Vermivora celata* - D, A, B, F, E.  
 Dates: 31 October (SP in CVNHC Bull. 17(1)) - 14 April. Abundance: L. Fall (10%) - 3; Winter (100%) - 6 (Pate 1977); E. Spring (5%) - 2; L. Spring (5%) - 2.  
 Nashville Warbler, *Vermivora ruficapilla* - D.  
 Dates: 7 October - 27 October (Refuge File). Abundance: L. Fall (5%) - 1.  
 Northern Parula Warbler, *Parula americana* \* - C, A, F, D, E, B.  
 Dates: 21 March - 21 October. Abundance: E. Spring (9%) - 42; L. Spring (100%) - 70; Summer (100%) - 46; E. Fall (11%) - 4; L. Fall (10%) - 2.  
 Yellow Warbler, *Dendroica petechia* - D, B, C, E.  
 Dates: 14 April - 4 May, 15 August. Abundance: E. Spring (34%) - 5; E. Fall (0%) - 1.  
 Magnolia Warbler, *Dendroica magnolia* - D, B, F.  
 Dates: 4 May, 4-28 October. Abundance: L. Spring (2%) - 1; L. Fall (20%) - 4.  
 Cape May Warbler, *Dendroica tigrina* - A.  
 Dates: 8-10 April. Abundance: L. Spring (3%) - 1.  
 Yellow-rumped Warbler, *Dendroica coronata* - D, B, C, F, A, E.  
 Dates: 14 October - 4 May. Abundance: L. Fall (50%) - 78; Winter (100%) - 600; E. Spring (100%) - 350; L. Spring (61%) - 280.  
 Black-throated Green Warbler, *Dendroica virens* - B, C.  
 Dates: 20-22 April, 14 October. Abundance: L. Spring (5%) - 2; L. Fall (0%) - 1.  
 Cerulean Warbler, *Dendroica cerulea* - B.  
 Comments: One observed by Ortego on 28 April 1977.  
 Blackburnian Warbler, *Dendroica fusca* - E, A, C.  
 Dates: 14 April - 4 May, 7 - 28 October. Abundance: L. Spring (7%) - 1; L. Fall (15%) - 2.  
 Yellow-throated Warbler, *Dendroica dominica* \* - C, A, F, D, E, B.  
 Dates: 21 March - 7 October. Abundance: E. Spring (24%) - 22; L. Spring (100%) - 28; Summer (100%) - 14; E. Fall (21%) - 6; L. Fall (10%) - 1.  
 Chestnut-sided Warbler, *Dendroica pensylvanica* - A.  
 Comments: Two observed by Ortego on 6 May 1977.  
 Bay-breasted Warbler, *Dendroica castanea* - E, D, B.  
 Dates: 1-28 October. Abundance: L. Fall (35%) - 4.  
 Blackpoll Warbler, *Dendroica striata* - D.  
 Dates: 17 April (MF in Imhof 1976:354) - 24 April. Abundance: L.



- Spring (3%) - 2.  
 Pine Warbler, *Dendroica pinus* - F, D, A, C, E.  
 Dates: All year (100%). Abundance: E. Spring - 8; L. Spring - 12; Summer - 10; E. Fall - 8; L. Fall - 4; Winter - 24 (Pate 1977).  
 Prairie Warbler, *Dendroica discolor* - A, B, C, D.  
 Dates: 8 April - 28 October. Abundance: L. Spring (13%) - 8; Summer (31%) - 5; E. Fall (11%) - 2; L. Fall (5%) - 1.  
 Palm Warbler, *Dendroica palmarum* - E, D, F, C, B, A.  
 Dates: 30 September - 4 May. Abundance: E. Fall (5%) - 3; L. Fall (100%) - 59; Winter (100%) - 18 (Pate 1977); E. Spring (100%) - 30; L. Spring (46%) - 37.  
 Ovenbird, *Seiurus aurocapillus* - D, B.  
 Dates: 10 April, 7-15 October. Abundance: L. Spring (3%) - 1; L. Fall (20%) - 1.  
 Northern Waterthrush, *Seiurus noveboracensis* - C, D.  
 Dates: 12 April - 4 May, 30 September, 26 December (Pate 1978). Abundance: L. Spring (71%) - 6; E. Fall (5%) - 9; Winter (0%) - 1 (Pate 1978).  
 Louisiana Waterthrush, *Seiurus motacilla* \* - C, D.  
 Dates: 1 April - 12 August. Abundance: L. Spring (25%) - 8; Summer (30%) - 10; E. Fall (5%) - 2.  
 Kentucky Warbler, *Oporornis formosus* \* - C, A, F, D.  
 Dates: 1 April - 30 September. Abundance: L. Spring (39%) - 8; Summer (100%) - 8; E. Fall (16%) - 4.  
 Mourning Warbler, *Oporornis philadelphia*.  
 Comments: In Refuge File, but no data given.  
 Common Yellowthroat, *Geothlypis trichas* \* - B, D, C, E, F, A.  
 Dates: All year (100%). Abundance: E. Spring - 18; L. Spring - 21; Summer - 12; E. Fall - 7; L. Fall - 22; Winter - 21.  
 Yellow-breasted Chat, *Icteria virens* - A, D, B, F.  
 Dates: 14 April - 21 October. Abundance: L. Spring (26%) - 4; Summer (35%) - 6; E. Fall (11%) - 2; L. Fall (5%) - 1.  
 Hooded Warbler, *Wilsonia citrina* \* - C, A, F, D, E, B.  
 Dates: 1 April - 15 August. Abundance: L. Spring (44%) - 8; Summer (100%) - 12; E. Fall (5%) - 2.  
 Wilson's Warbler, *Wilsonia pusilla* - D.  
 Dates: 14 April 1978, 31 October 1977 (SP, m.ob. in CVNHC Bull. 17(1). Abundance: L. Spring (2%) - 1; L. Fall (0%) - 1 (SP, m.ob. in CVNHC Bull. 17(1).  
 American Redstart, *Setophaga ruticilla* - C, A, D.  
 Dates: 1 April - 1 May. Abundance: L. Spring (13%) - 4.  
 House Sparrow, *Passer domesticus* \* - D, A, F.  
 Dates: All year. Abundance: E. Spring (15%) - 28; L. Spring (100%) - 22; Summer (100%) - 18; E. Fall (53%) - 16; L. Fall (50%) - 26; Winter (54%) - 150 (Fuller 1975).  
 Bobolink, *Dolichonyx oryzivorus* - D.  
 Dates: 24 April - 13 May. Abundance: L. Spring (18%) - 200.

- Eastern Meadowlark, *Sturnella magna* ! \* - D, A, B, F, C, E.  
 Dates: All year (100%). Abundance: E. Spring - 200; L. Spring - 120; Summer - 65; E. Fall - 32; L. Fall - 400 (TAI in Imhof 1976:372); Winter - 478 (JLD in Reid 1975).  
 Yellow-headed Blackbird, *Xanthocephalus xanthocephalus*.  
 Dates: 8 September 1970 (JM in Wells 1973) - 9 October 1978 (SP in CVNHC Bull. 18(1):2). Abundance: E. Fall (0%) - 1 (JM in Wells 1973); L. Fall (0%) - 2 (SP in CVNHC Bull. 18(1):2).  
 Red-winged Blackbird, *Agelaius phoeniceus* ! \* - D, B, C, E, F, A.  
 Dates: All year (100%). Abundance: E. Spring - 1,500; L. Spring - 400; Summer - 212; E. Fall - 2,500; L. Fall - 15,000; Winter - 250,000 (JLD in Reid 1971).  
 Orchard Oriole, *Icterus spurius* \* - B, D, E, C, A, F.  
 Dates: 10 April - 19 August. Abundance: L. Spring (56%) - 28; Summer (100%) - 21; E. Fall (16%) - 4.  
 Northern Oriole, *Icterus galbula* - A.  
 Dates: 26-29 April, 26 December (Pate 1978). Abundance: L. Spring (3%) - 1; Winter (0%) - 2 (Pate 1978).  
 Rusty Blackbird, *Euphagus carolinus* - B, A, D, E.  
 Dates: 10 November - 20 March. Abundance: L. Fall (15%) - 4; Winter (31%) - 53 (Pate 1978); E. Spring (13%) - 8.  
 Brewer's Blackbird, *Euphagus cyanocephalus*.  
 Comments: One observed on 26 December 1977 (Pate 1978).  
 Common Grackle, *Quiscalus quiscula* ! \* - D, B, C, A, E, F.  
 Dates: All year (100%). Abundance: E. Spring - 260; L. Spring - 350; Summer - 290; E. Fall - 175; L. Fall - 3,500; Winter - 4,500 (Pate 1977).  
 Brown-headed Cowbird, *Molothrus ater* \* - A, B, D, C, F, E.  
 Dates: All year (100%). Abundance: E. Spring - 46; L. Spring - 150; Summer - 28; E. Fall - 300; L. Fall - 1,000; Winter - 127.  
 Scarlet Tanager, *Piranga olivacea* - A, C.  
 Dates: 20 April - 2 May. Abundance: L. Spring (7%) - 5.  
 Summer Tanager, *Piranga rubra* \* - C, A, D, F, B, E.  
 Dates: 8 April - 25 July. Abundance: L. Spring (44%) - 16; Summer (41%) - 8.  
 Northern Cardinal, *Cardinalis cardinalis* ! \* - D, F, C, A, B, E.  
 Dates: All year (100%). Abundance: E. Spring - 48; L. Spring - 50; Summer - 32; E. Fall - 30; L. Fall - 45; Winter - 259 (Pate 1978).  
 Rose-breasted Grosbeak, *Pheucticus ludovicianus* - C, A.  
 Dates: 22 April - 5 May. Abundance: L. Spring (5%) - 2.  
 Blue Grosbeak, *Guiraca caerulea* \* - D, B, F, A.  
 Dates: 14 April - 28 October. Abundance: L. Spring (72%) - 16; Summer (100%) - 12; E. Fall (32%) - 8; L. Fall (30%) - 7.  
 Indigo Bunting, *Passerina cyanea* \* - D, F, C, A.  
 Dates: 6 April - 28 October. Abundance: L. Spring (51%) - 34; Summer (100%) - 50 (Refuge File); E. Fall (42%) - 18; L. Fall (20%) - 1.  
 Dickcissel, *Spiza americana* - D.



- Dates: 1 May - 7 May (JLD in Imhof 1976:394) 24 October (DCa in CAS Observ. 1976 (Nov.)). Abundance: L. Spring (0%) - 1 (JLD, TAI in Imhof 1976:394); L. Fall (0%) - 1 (DCa in CAS Observ. 1976 (Nov.)).
- Evening Grosbeak, *Hesperiphona vespertina* - D.  
Comments: Thirteen observed on 26 December 1977 (Pate 1978).
- Purple Finch, *Carpodacus purpureus* - D.  
Dates: 7 November (JM in CVNHC Bull. 17(1)). - 14 February. Abundance: L. Fall (5%) - 2; Winter (15%) - 26; E. Spring (4%) - 4.
- Pine Siskin, *Spinus pinus* - D, F, C.  
Dates: 6 December - 29 January. Abundance: Winter (23%) - 44 (Pate 1978).
- American Goldfinch, *Spinus tristis* - F, D, C.  
Dates: All year. Abundance: E. Spring (100%) - 25 (BO, MB, DC); L. Spring (11%) - 6; Summer (6%) - 4; E. Fall (11%) - 5; L. Fall (25%) - 60; Winter (100%) - 251 (Pate 1978).
- Rufous-sided Towhee, *Pipilo erythrophthalmus* ! - D, F, B, E, A, C.  
Dates: All year (100%). Abundance: E. Spring - 28; L. Spring - 35; Summer - 14; E. Fall - 23; L. Fall - 46; Winter - 112 (JLD in Reid 1970).
- Savannah Sparrow, *Passerculus sandwichensis* ! - D, A, C, E, B, F.  
Dates: 24 September - 4 May. Abundance: E. Fall (21%) - 12; L. Fall (100%) - 272; Winter (100%) - 548 (JLD in Reid 1974); E. Spring (100%) - 55; L. Spring (59%) - 46.
- Grasshopper Sparrow, *Ammodramus savannarum* - D, C, B, F.  
Dates: All Year. Abundance: E. Spring (5%) - 1; L. Spring (7%) - 4; Summer (6%) - 2; E. Fall (5%) - 2; L. Fall (10%) - 3; Winter (38%) - 2 (Pate 1977).
- Henslow's Sparrow, *Ammodramus henslowii*.  
Comments: One observed by James Miller on 10 November 1975 (CVNHC Bull. 15(1)).
- LeConte's Sparrow, *Ammodramus lecontei* - C, A, D.  
Dates: 10 November - 22 April. Abundance: L. Fall (5%) - 4; Winter (15%) - 14 (SP, WM); E. Spring (5%) - 3; L. Spring (3%) - 3.
- Vesper Sparrow, *Pooecetes gramineus* - D, B, A, C.  
Dates: 28 October - 14 April. Abundance: L. Fall (10%) - 75 (JLD, RTD); Winter (100%) - 220 (JLD in Reid 1970); E. Spring (100%) - 29; L. Spring (8%) - 14.
- Lark Sparrow, *Chondestes grammacus*.  
Comments: One observed by Dusi on 12 August 1972.
- Bachman's Sparrow, *Aimophila aestivalis* - D.  
Dates: 12 June - 10 October. Abundance: Summer (4%) - 1; E. Fall (5%) - 1; L. Fall (5%) - 1.
- Northern Junco, *Junco hyemalis* ! - D, E, A, B.  
Dates: 30 October - 14 April. Abundance: L. Fall (10%) - 8; Winter (100%) - 200 (Pate 1976); E. Spring (16%) - 18; L. Spring (2%) - 6.
- Chipping Sparrow, *Spizella passerina* - D, F, C, B, E, A.

- Dates: All year. Abundance: E. Spring (100%) - 90; L. Spring (26%) - 10; Summer (12%) - 8; E. Fall (21%) - 6; L. Fall (100%) - 60; Winter (100%) - 601 (Fuller 1975).
- Clay-colored Sparrow, *Spizella pallida*.  
Comments: Four observed on 3 May 1975 (SP, WM in Teulings 1975).
- Field Sparrow, *Spizella pusilla* ! - D, B, F, A, E, C.  
Dates: All year (100%). Abundance: E. Spring - 46; L. Spring - 52; Summer - 42; E. Fall - 43; L. Fall - 85; Winter - 268.
- White-crowned Sparrow, *Zonotrichia leucophrys* - D.  
Dates: 14 October (SP in Imhof 1976:418) - 3 May (WM in CAS Observ. 3(9)). Abundance: L. Fall (10%) - 2; Winter (15%) - 17 (Pate 1977); E. Spring (2%) - 4; L. Spring (3%) - 2.
- White-throated Sparrow, *Zonotrichia albicollis* - D, F, A, B, E, C.  
Dates: 14 October - 29 April. Abundance: L. Fall (30%) - 120; Winter (100%) - 810 (Fuller 1975); E. Spring (100%) - 26; L. Spring (21%) - 11.
- Fox Sparrow, *Passerella iliaca* - D, B, A, F, E.  
Dates: 8 November - 10 March. Abundance: L. Fall (10%) - 3; Winter (100%) - 15; E. Spring (13%) - 3.
- Lincoln's Sparrow, *Melospiza lincolni* - C.  
Comments: One observed by Ortego on 6 February 1977.
- Swamp Sparrow, *Melospiza georgiana* ! - E, D, C, B, F, A.  
Dates: 25 September - 30 April. Abundance: E. Fall (11%) - 20; L. Fall (100%) - 285; Winter (100%) - 426 (JLD in Reid 1974); E. Spring (100%) - 140; L. Spring (61%) - 25.
- Song Sparrow, *Melospiza melodia* ! - D, B, A, E, C, F.  
Dates: 25 September - 1 May. Abundance: E. Fall (21%) - 12; L. Fall (100%) - 220; Winter (100%) - 650 (Fuller 1975); E. Spring (100%) - 44; L. Spring (25%) - 10.

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### WOOD STORK BREEDING COLONY IN GLYNN COUNTY, GEORGIA

Ron R. Odom, J. William Guthrie, John H. Rappole,  
and B. J. Freeman

Breeding records for the Wood Stork (*Mycteria americana*) in Georgia are scarce. The only known nesting records are from the Okefenokee National Wildlife Refuge (Hall and Cone 1970; Metzen, pers. comm., 1977) and from private lands in Glynn and McIntosh Counties (Odom 1978). A breeding colony on Little Sapelo Island was mentioned by Menaboni and Menaboni (1950) but has not been referred to by other authors (Burleigh 1958; Denton 1977).

On 12 June 1979 a previously unknown Wood Stork breeding colony was located in Glynn County, Georgia while an aerial heronry survey was being conducted. The colony was visited on foot on 29 June, 18 July, and 11 September 1979.

On the initial visit into the colony an estimated one hundred Wood Storks, twenty Anhingas (*Anhinga anhinga*) and twenty Great Egrets (*Casmerodius albus*) were present and nesting. The number of active Wood Stork nests was estimated at fifty, with most nests containing two or three feathered young. It is possible that Wood Storks nested at this site the year before, since a number of what appeared to be old Wood Stork nests were observed. Department of Natural Resources' pilot W. Vaughn observed wading bird activity at this site during 1978 while making routine law enforcement flights, however, no detailed observations were made.

On the 11 September 1979 visit a number of parameters were measured within the 0.3 ha (0.74 a.) colony from a 0.04 ha (0.1 a.) sample plot. Results of the sample were extrapolated to the entire colony and are as follows:

**MAJOR TREE SPECIES:** Water Tupelo (*Nyssa aquatica*), Carolina Ash (*Fraxinus carolina*), Sweetgum (*Liquidambar styraciflua*), Red Maple (*Acer rubrum*) and Common Buttonbush (*Cephalanthus occidentalis*).

**MAJOR SHRUB SPECIES:** Fetterbush (*Lyonia lucida*), Greenbriar (*Smilax laurifolia*), Greenbriar (*Smilax* sp.), Sweetgum, Dahoon (*Ilex cassine*), Southern Bayberry (*Myrica cerifera*), Bald Cypress (*Taxodium dystichum*), Hackberry (*Celtis* sp.) and Swamp Cyrilla (*Cyrilla racemiflora*).

**MEAN WATER DEPTH:** 0.66 m (26 in.). Surface covered entirely by pondweed (*Potamogeton* sp.).

**MEAN HEIGHT OF WOOD STORK NESTS:** 13.7 m (45 ft.) above water, most in Water Tupelo.

**CANOPY HEIGHT:** 17 m (56 ft.).

The two other coastal Wood Stork nesting colonies reported by Odom (1978) were not active this year. Timber harvest operations around the perimeter of the Camden County colony, prior to and during

the early nesting season, may have caused abandonment of this colony. The reason for the absence of Wood Storks at the Altamaha colony is unknown.

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## GENERAL NOTES

**YELLOW-BELLIED FLYCATCHER IN ATHENS, GEORGIA** — Burleigh (1958, Georgia Birds. Univ. of Oklahoma Press, Norman, 746 pp.) recommended further collecting of flycatchers to determine identification and status of the genus *Empidonax*. Mist netting, however, is an alternative to specimen collecting in some cases and can provide information on scarce or difficult to identify fall migrants.

The Yellow-bellied Flycatcher (*Empidonax flaviventris*) has been taken in Georgia on five occasions (Burleigh 1958). This small flycatcher is extremely difficult to identify, unless you have it in hand. Robbins (1959) in Wood (1969, *A Bird-bander's Guide to Determination of Age and Sex of Selected Species*, College of Agr., Pennsylvania State Univ., University Park, 181 pp.) and Phillips et al. (1966, *Identification of the flycatchers of eastern North America with special emphasis on the genus Empidonax*. Bird-Banding 37:153-171.) have produced keys to the North American tyrant flycatchers that allow positive identification of most of these birds in hand.

On 23 September 1979 at the Horseshoe Bend Ecological Research Area of The University of Georgia, a Yellow-bellied Flycatcher of unknown age and sex was captured with standard 32 mm-mesh mist nets. The bird had a yellow throat, green crown, and green back. Its wing chord and culmen measured 62 mm and 12 mm, respectively. A characteristic measurement from the tip of the longest primary to the tip of the longest secondary was 12 mm. These morphological characteristics definitely placed the bird in the species *E. flaviventris*. The bird was shown to Dr. John H. Rappole, Dept. of Zoology, Univ. of Georgia, who has banded many Yellow-bellied Flycatchers in the Mississippi flyway. He confirmed our original identification. Photographs were submitted and filed at the Museum of Natural History, Univ. of Georgia.

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**WINTER RECORD FOR RUBY-THROATED HUMMINGBIRD IN COBB COUNTY** — On 8 December 1978 I received a call from a Jesse Wall of Marietta, Georgia informing me that he had been noticing what he thought was a hummingbird around his yard for the past couple weeks. He had decided to refill his hummingbird feeder and with that, he finally made sure of his identification. At this point I asked him whether the bird was a Ruby-throated Hummingbird (*Archilochus colubris*) or possibly a Rufous Hummingbird (*Selasphorus rufus*). Since Mr. Wall could not rule out this possibility, I made arrangements to visit the Wall's that afternoon.

Soon after I arrived at the Wall's residence, the hummingbird visited

the feeder which was situated approximately one meter from a living room window thereby affording me an excellent view of the bird. After feeding several times over a half-hour period, it settled into a roost on a branch immediately next to the window allowing viewing from no more than 50 cm. It was obvious that the bird was a Ruby-throated Hummingbird rather than a Rufous due to the lack of rufous on the sides, back, rump and tail. The bird was thought to be a female because of the rounded tail and lack of any red feathers or dark stripes on the throat (*A Bird-bander's Guide to Determination of Age and Sex of Selected Species*, Merrill Wood, Pennsylvania State University, 1969). The only other Georgia winter record was one at Waycross on 8 January 1974 (*Annotated Checklist of Georgia Birds*, Georgia Ornithol. Soc., Occas. Publ. No. 6, 1977).

This particular bird remained at the feeder for three more weeks during which time it survived some nights when the temperature fell to 10° F. It was recorded on the Atlanta Christmas Count on 17 December 1978 and was last seen by the Walls on 3 January 1979. Another hummingbird was noted on the Glynn County Coastal Christmas Count on 31 December 1978 but the details were sketchy as to which species it may have been.

Now that there is a specimen for the Rufous Hummingbird for Georgia and more and more western hummingbirds are being recorded east of the Mississippi, it is important for Georgia observers to closely examine all winter hummingbirds in order to determine exactly which species is present.

Terry S. Moore, 2699 Twiggs Circle, Marietta, Georgia 30067.



## FROM THE FIELD

The format of this informal column precludes presentation of detailed accounts of rare birds. Records listed here are largely unchecked and their appearance in this column should not be considered to constitute scientific publication. They are intended primarily to bring interesting sightings to the attention of the membership and to alert others to look for unusual species in the areas indicated.

## NORTH GEORGIA

Winter birds seemed to be sparse in north Georgia. One report of Evening Grosbeaks in Whitfield County; no Red-breasted Nuthatches or Pine Siskins reported.

Vince Jackson, the last week of September, saw six Eared Grebes at Pendergrass. This species is not on the official or hypothetical lists for the state.

Resource Manager Joe Blackmon and Assistant Resource Manager Paul Jastram at Carter's Dam and Lake, turned in a Bald Eagle report. This mature bird was seen 3 November at the Resource Manager's Office, Murray County. Two other sightings were made on 5 November, one each on 15 and 27 November at Harris Branch, Gilmer County.

Twenty Red Crossbills were heard and seen at the Panther Creek Trailhead, Cohutta Wilderness Area, Fannin County by Harriett DiGioia on 18 December.

Clarence Belger saw a Yellow-bellied Flycatcher at Lake Olmstead near Augusta on 8 September and a "Brewster's" Warbler in Augusta 11 September.

*(Compiled by Harriett G. DiGioia, U.S. Forest Service, 401 Old Ellijay Road, Chatsworth, Georgia 30705.)*

## SOUTH GEORGIA

Spring migration in 1979 produced several early and late dates for some species in the area. A pair of Blackpoll Warblers in Thomas County on 18 May seen by Todd Engstrom was late as were 2 Blue-winged Teal there on 30 April seen by Robert and Beth Crawford. Tom Patterson's observations in Laurens County produced some new local records also. There, Upland Sandpipers appeared earlier (2 on 31 March) and later (3 on 29 April) than recorded previously and Patterson recorded a high count of 38 on 16 April. New Laurens County species were recorded on 5 March (Short-eared Owl by Patterson) and on 28 April (4 Laughing Gulls by Paul Riddle). Patterson noted a large concentration of yellowlegs on 7 April: 45 Greater and 15 Lesser. He also saw a Red-breasted Merganser on 27 May, a returning Mississippi Kite on 30 April, single Ospreys on 24 March, 15 April, and 11 May, 3 Sandhill Cranes on 17 March, a Semipalmated Plover on 19 May, and a Bonaparte's Gull on 24 March. Noel O. Wamer saw a Ring-billed Gull in Moultrie, Colquitt

County, on 9 May.

As usual, Brent Ortego and his coworkers reported many interesting observations from Eufaula National Wildlife Refuge near Columbus. He and Dan Combs saw a Red-throated Loon on 21 April; with Mark Brown he saw a Reddish Egret on 22 April (possibly the same individual that had spent the previous winter there), 2 Least Flycatchers on 22 April (heard), and a Warbling Vireo on 22 April. Ortego saw a Common Merganser and a Red-breasted Nuthatch on 22 March, and a Cliff Swallow seen that day was perhaps the earliest for the state. He and Elaine Combs saw a late Short-eared Owl on 31 March. Ortego saw Laughing Gulls only once during the season: 7 on 12 May. He reports a general decline for this species at the Refuge over the last year or so.

*(Compiled by Robert L. Crawford, Tall Timbers Research Station, Route 1, Box 160, Tallahassee, Florida 32312.)*



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