



The Raven

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J. J. MURRAY, EDITOR
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A NOTE ON THE RED-COCKADED WOODPECKER By C. C. Steirly

Occasionally while working in the pure pine forests along the North Carolina boundary I observe the red-cockaded woodpecker (*Dendrocopos borealis*) and its nest holes. This is, as far as I know, the only bird making its nest cavity in the living pine tree. These nest trees are rather curious as heavy exudations of resin have been caused to flow down the tree from the vicinity of the cavity and from deliberately pecked holes above and laterally from the cavity. Often the streaks of pitch extend for four or five feet down the tree. In Virginia I have observed them only in the pure pine forests of lower Southampton County and on one

occasion in extreme southeastern Sussex County. Generally these have been found within the area representing the extreme northern limit of the longleaf pine (*Pinus palustris*) although all of the cavities that I have observed have been in loblolly pine (*Pinus taeda*).

On a timber tract of 250 acres which I recently examined intensively while marking timber for selective cutting, I found only three trees being used as nest sites by this species. One tree had two nest holes in it; approximately six feet apart with the holes on opposite sides of the tree from each other. In working through this tract of pine timber I examined almost every tree on the entire tract (over 4500 trees), yet found only the three nest trees which were widely separated from each other.

Incidentally I did not mark any of these nest trees for cutting, but left them as seed trees - primarily to give these unique woodpeckers a break.

Virginia Forest Service
Waverly, Virginia

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THE 1948 CHRISTMAS CENSUS REPORTS

Back Bay National Wildlife Refuge, Va. (Refuge area including Long Island, ocean beach from Refuge north to Sand Bridge, and woods and farmland around Sigma, Pungo, and Pleasant Ridge; open farmland 8%, pine woodland 12%, deciduous woodland 10%, ocean beach 20%, marshes and inland bay 50%). - Jan. 2; 6 a.m. to 6 p.m. Clear; temp. 38°-47°F.; wind W, 8-18 m.p.h.; ground bare; water open. Eight observers in 2 and 3 parties in early a.m., 12 observers together for rest of day. Total hours, 15 (12 on foot, 1 in motorboat, 2 in truck along beach and marsh road); total miles, 23 (6 on foot, 4 in boat, 13 in truck). Common loon, 21; red-throated loon, 34 (200 est. loons, seen migrating off shore at dawn were probably of this species); horned grebe, 30; pied-billed grebe, 10; gannet, 3; great blue heron, 2; black-crowned night heron, 13; American bittern, 2; whistling swan, 1000 (est.); Canada goose, 3780 (3500 est., 280-1 Hutchins's goose, hardly half the size of the other Canada geese, was seen and compared with the other geese both at rest and in flight by R.J.B. and L.L.W.); snow goose, 3000 (est.); blue goose, 1; mallard, 50 (est.); black duck, 500 (est.); baldpate, 800 (est.); pintail, 100 (est.); green-winged teal, 6; redhead, 500 (est.); ring-necked duck, 603; canvas-back, 1500 (est.); scaup duck (sp.), 206 (200 est., 6); American golden-eye, 7; bufflehead, 12; old squaw, 10; white-winged scoter, 2; surf scoter, 6; American scoter, 12; ruddy duck, 28; hooded merganser, 8; American merganser, 37; red-breasted merganser, 22; turkey vulture, 9; black vulture, 37; red-tailed hawk, 1; red-shouldered hawk, 1; rough-legged hawk, 2; bald eagle, 14; marsh hawk, 14; peregrine falcon, 2; sparrow hawk, 7; American doot, 3000 (est.); killdeer, 2; woodcock, 1; lesser yellow-legs, 1 (L.L.W.); least sandpiper, 25; western sandpiper, 3; sand-erling, 38; great black-backed gull, 2; herring gull, 115 (100 est., 15); ring-billed gull, 294 (250 est., 44); laughing gull, 3; Bonaparte's gull 8; mourning dove, 2; barn owl, 1; belted kingfisher, 2; flicker, 25; pileated woodpecker, 3; red-bellied woodpecker, 3; downy woodpecker, 7;

horned lark (northern), 60 (est.); raven, 1 (characteristics of flight and size noted by L.L.W.-this species has been recorded before on the Virginia coast); American crow, 37; fish crow, 7; Carolina chickadee, 9; tufted titmouse, 6; white-breasted nuthatch, 2; brown-headed nuthatch, 13; house wren, 3 (seen by two parties - F.R.S., C.E.S., L.L.W.); winter wren, 3; Carolina wren, 25; short-billed marsh wren, 13; mockingbird, 5; catbird, 10; brown thrasher, 2; robin, 161; hermit thrush, 5; bluebird, 19; ruby-crowned kinglet, 10; American pipit, 56; cedar waxwing, 4; starling, 6; myrtle warbler, 234; pine warbler, 4; yellow-throat, 2; English sparrow, 13; meadowlark, 41; red-wing, 1011 (500 est., 511); rusty blackbird, 1; purple grackle, 1; cowbird, 6; cardinal, 28; purple finch, 17; pine siskin, 6; American goldfinch, 536; eastern towhee, 8; savannah sparrow, 12; slate-colored junco, 10; tree sparrow, 1 (K.L., C.E.S., L.L.W., et al.); chipping sparrow, 2; field sparrow, 10; white-throated sparrow, 127; fox sparrow, 4; swamp sparrow, 119; song sparrow, 109; Lapland longspur, 1 (L.L.W.). Total, 105 species (1 additional subspecies); about 18,884 individuals. (Seen in area Dec. 29 - double-crested cormorant, 1; black-bellied plover, 2; Wilson's snipe, 4; hairy woodpecker, 3; palm warbler (western), 1; sharp-tailed sparrow, 9.) A bad cold spell several days before this count froze up a large part of upper Back Bay and caused most of the waterfowl to move south to Currituck Sound. - R.J. Beasley, Harold Coolidge, N. J. Coolidge, T. R. Coolidge, Kenneth Lawless, Mr. and Mrs. Jack E. Perkins, Mr. and Mrs. A. C. Reed, F. R. Scott, C. E. Stevens, Jr., Lester L. Walsh (members and guests, Virginia Society of Ornithology).

Yorktown, Va. (Newport News Reservoir, Harwood's Mill Reservoir, Colonial Battlefield Park including Wormley Lake and waterfront of Yorktown, York River shore from Yorktown northeast to Felgaters Creek, lower part of Back Creek, and woods and marshes along Colonial National Monument Parkway and on the York-Poquoson Rivers peninsula; open farmland 15%, pine woodland 20%, deciduous woodland 13%, bushy fields 7%, marshes and open water 45%). - Dec. 27, 6:15 a.m. to 6 p.m. Clear; temp. 14°-38°F.; wind NW, 2-10 m.p.h.; ground covered with scattered snow up to 1 inch deep; marshes frozen, lakes 35% frozen. Two observers together most of day. Total hours, 12 (on foot); total miles, 60 (52 by car, 8 on foot). Common loon, 1; horned grebe, 98; pied-billed grebe, 14; great blue heron, 13; Canada goose, 183; mallard, 1; black duck, 5; gadwall, 84; baldpate, 123; pintail, 22; green-winged teal, 2; redhead, 141; ring-necked duck, 455; canvas-back, 105; scaup duck (sp.), 347; American golden-eye, 276; bufflehead, 214; ruddy duck, 1632; hooded merganser, 87; American merganser, 115; red-breasted merganser, 6; turkey vulture, 25; black vulture, 6; red-tailed hawk, 1; red-shouldered hawk, 1; bald eagle, 7; clapper rail, 1; killdeer, 19; Wilson's snipe, 3; herring gull, 56; ring-billed gull, 160; mourning dove, 2; belted kingfisher, 4; flicker, 6; red-bellied woodpecker, 8; yellow-bellied sapsucker, 1; downy woodpecker, 15; American crow, 82; fish crow, 1; Carolina chickadee, 35; tufted titmouse, 25; white-breasted nuthatch, 4; brown-headed nuthatch, 3; brown creeper, 5; Carolina wren, 24; short-billed marsh wren, 3; mockingbird, 7; catbird, 1; brown thrasher, 3; robin, 23; hermit thrush, 6; bluebird, 12; golden-crowned kinglet, 48; ruby-crowned kinglet, 10, Amer-

ican pipit, 21; starling, 54; myrtle warbler, 441; pine warbler, 7; English sparrow, 23; meadowlark, 105; red-wing, 15; cowbird, 1; cardinal, 30; purple finch, 2; American goldfinch, 43; eastern towhee, 41; savannah sparrow, 10; sharp-tailed sparrow, 3; slate-colored junco, 192; field sparrow, 29; white-throated sparrow, 179; fox sparrow, 27; swamp sparrow, 18; song sparrow, 69. Total, 74 species; about 5843 individuals. - F. R. Scott, C. E. Stevens, Jr.

Richmond, Va. (North and west parts of Richmond east to Curles Neck Farm in Henrico Co., including pine woods and farmland in the vicinity of Fort Harrison and Varina; open farmland 30%, pine woodland 12%, deciduous woodland 10%, residential districts 8%, maple-gum swamp 20%, marshes and river shore 20%). - Dec. 26; 6:45 a.m.-6 p.m. Clear; temp. 15°-31°F.; wind N, 5-12 m.p.h.; ground covered with up to 1 inch of snow; marshes frozen, lakes and backwaters 30% frozen. Two observers together most of day. Total hours, 11 (on foot); total miles, 42 (35 by car, 7 on foot). Pied-billed grebe, 9; great blue heron, 1; Canada goose, 3000 (est.); snow goose, 1; mallard, 308 (250 est., 58); black duck, 369 (350 est., 19); baldpate, 25; pintail, 202 (200 est., 2); wood duck, 3; ring-necked duck, 77; lesser scaup duck, 18; ruddy duck, 6; hooded merganser, 8; American merganser, 121; red-breasted merganser, 4; turkey vulture, 38; black vulture, 24; Cooper's hawk, 1; red-tailed hawk, 4; red-shouldered hawk, 1; bald eagle, 4; marsh hawk, 1; sparrow hawk, 1; turkey, 1 (fresh tracks); American doot, 90; killdeer, 3; Wilson's snipe, 33; herring gull, 6; ring-billed gull, 68; mourning dove, 14; belted kingfisher, 1; flicker, 25; pileated woodpecker, 6; red-bellied woodpecker, 15; yellow-bellied sapsucker, 3; hairy woodpecker, 4; downy woodpecker, 10; phoebe, 1; horned lark, 255 (prairie, 250 est.; northern, 5); blue jay, 7; American crow, 149; Carolina chickadee, 40; tufted titmouse, 22; white-breasted nuthatch, 12; brown creeper, 13; winter wren, 1; Carolina wren, 16; mockingbird, 19; hermit thrush, 7; bluebird, 58; golden-crowned kinglet, 46; ruby-crowned kinglet, 9; cedar waxwing, 14; starling, 361 (300 est., 61); myrtle warbler, 111; pine warbler, 5; English sparrow, 28; meadowlark, 69; red-wing, 80; cowbird, 4; cardinal, 97; purple finch, 6; American goldfinch, 60; towhee, 14; savannah sparrow, 1; slate-colored junco, 236; field sparrow, 48; white-throated sparrow, 266; fox sparrow, 1; swamp sparrow, 7; song sparrow, 29. Total, 71 species (1 additional subspecies); about 6607 individuals. - F. R. Scott, C. E. Stevens, Jr.

Charlottesville, Va. (City reservoir, Albemarle Lake, Henley's Lake, Thraves Pond, Bellair Pond, Whitehall, Barracks Road area, 6 miles along Rivanna and South Fork Rivanna River from Burnt Mills to Hotops Cliff, plus 2 feeding stations in town reported; farmland 35%, lakes and ponds 25%; riverbottom 20%, deciduous woods 10%, pine woods 5%, city 5%). - Dec. 30; 6:45 a.m. to 5:15 p.m. Rain accompanied by 5-25 m.p.h. SW winds during most of day; rain ceased and wind increased to 20-30 m.p.h. in late afternoon; lowlands partially flooded; temp. 33° to 44°. Four observers in 4 parties, plus 2 others at feeding stations. Total hours, 36; total miles, 166 (146 by car, 20 afoot). Pied-billed grebe, 1;

great blue heron, 1; mallard, 49; scaup duck (sp.), 1; buffle-head, 1; hooded merganser, 1; American merganser, 1; turkey vulture, 20; black vulture, 20; Cooper's hawk, 1; red-tailed hawk, 2; red-shouldered hawk, 1; sparrow hawk, 3; bob-white, 15 (2 coveys); killdeer, 1; Wilson's snipe, 2; mourning dove, 103; barred owl, 1; belted kingfisher, 4; flicker, 7; pileated woodpecker, 5; red-bellied woodpecker, 9; red-headed woodpecker, 4; hairy woodpecker, 2; downy woodpecker, 14; horned lark (prairie), 24; blue jay, 57; raven, 1 (croaking and being harassed by several crows - F.R.S.); American crow, 606; fish crow, 1; Carolina chickadee, 88; tufted titmouse, 31; white-breasted nuthatch, 9; red-breasted nuthatch, 1; brown creeper, 3; winter wren, 2; Carolina wren, 16; mockingbird, 11; robin, 7; hermit thrush, 6; bluebird, 68; golden-crowned kinglet, 104; ruby-crowned kinglet, 15; cedar waxwing, 8; loggerhead shrike, 2; starling, 174; myrtle warbler, 6; English sparrow, 30; meadowlark, 1; red-wing, 1; cowbird, 217; cardinal, 162; purple finch, 40; American goldfinch, 184; slate-colored junco, 448; tree sparrow, 86; chipping sparrow, 2; field sparrow, 101; white-throated sparrow, 149; fox sparrow, 4; swamp sparrow, 4; song sparrow, 102. Total, 62 species; approximately 3035 individuals. The raven is a resident in the Blue Ridge about 18 miles west of Charlottesville, but this is our first record of a bird away from the mountains. - John H. Grey, Jr., Kenneth Lawless, Mrs. Hewson Michie, Fred R. Scott, Charles E. Stevens, Jr., Mrs. Harrison Whiteman.

Warren (Albemarle County), Va. (James River from Hatton to Goosby Island and area about Warren and Rock Castle Creek; riverbottom and flooded lowlands 40%, farmland 30%, deciduous woods 15%, pine woods 15%). Dec. 31; 7:00 a.m. to 5:00 p.m. Cloudy; temp. 32° to 41°; wind W, 10-25 m.p.h. Total hours, 10; total miles, 20 (4 by car, 16 afoot). Black duck, 7; American merganser, 1; turkey vulture, 15; black vulture, 29; sharp-shinned hawk, 1; Cooper's hawk, 1; red-tailed hawk, 4; sparrow hawk, 3; bob-white, 17 (2 coveys and a lone bird); killdeer, 14; mourning dove, 129; flicker, 6; pileated woodpecker, 3; red-bellied woodpecker, 5; downy woodpecker, 9; horned lark (prairie), 19; blue jay, 58; American crow, 408; Carolina chickadee, 54; tufted titmouse, 4; white-breasted nuthatch, 1; red-breasted nuthatch, 3; winter wren, 5; Carolina wren, 7; mockingbird, 8; robin, 43; bluebird, 57; golden-crowned kinglet, 33; ruby-crowned kinglet, 6; cedar waxwing, 5; loggerhead shrike, 5; starling, 881 (partly est.); myrtle warbler, 6; English sparrow, 14; meadowlark, 49; cowbird, 39; cardinal, 56; purple finch, 24; American goldfinch, 32; towhee, 2; slate-colored junco, 131; tree sparrow, 31; field sparrow, 33; white-throated sparrow, 54; song sparrow, 31. Total, 45 species; about 2343 individuals. - Charles E. Stevens, Jr.

Sweet Briar College, Sweet Briar, Va. (Cut-over pine and deciduous woods 30%, brushy creek bottoms 20%, lake edges 15%, pasture 10%, mature deciduous woods 10%, newly plowed fields 10%, about yards and buildings 5%). Jan. 2; temp. 28° in morning to 41° in afternoon; wind velocity from 10 m.p.h. to 11 m.p.h. all day; cloudy from 7:30 a.m. all day; 8:00 a.m. to 12:00 M. and 2:00 p.m. to 4:00 p.m.; total miles, 7, on foot;

four observers together for whole time. Red-bellied woodpecker, 6; red-headed woodpecker, 4; downy woodpecker, 3; hairy woodpecker, 1; flicker, 2; pileated woodpecker, 3; yellow-bellied sapsucker, 1; white-breasted nuthatch, 1; Carolina chickadee, 6; myrtle warbler, 15; cardinal, 15; mockingbird, 4; white-throated sparrow, 15; field sparrow, 3; tree sparrow, 2; song sparrow, 15; Carolina wren, 5; winter wren, 1; starling, 150 (est.); crow, 25; purple grackle, 32; cowbird, 5; kingfisher, 1; great blue heron, 1; blue jay, 3; tufted titmouse, 6; bluebird, 6; slate-colored junco, 100 (est.); goldfinch, 10; mourning dove, 60 (Partly est.); turkey vulture, 5; black vulture, 1; shrike, 1; red-shouldered hawk, 1; sparrow hawk, 1; ruby-crowned kinglet, 1; golden-crowned kinglet, 1; English sparrow, 10. Total species, 39, about 530 individuals. - Dr. Samuel Guss, Gertrude Prior, George Giles, Robert Giles.

Lynchburg, Va. (Timber Lake area, College Lake area, Airport, Graves' Mill and Tomahawk Swamp area, Rivermont Park; fields 28%; open woods 63%; lakes and marshes 9%). - Dec. 27; 7:00 a.m. to 5:30 p.m. Clear most of day, some cirrus around noon; temp. 10° to 40° to 39°; wind SSW to WSW, 0-15 m.p.h.; ground covered with 1 inch of snow; lakes mostly frozen over, streams open. Five observers, 2 parties in a.m., 1 party in p.m. Total hours, 32 (28 on foot, 4 in car); total miles, 132 (30 on foot, 102 in car). Pied-billed grebe, 1; turkey vulture, 9; black vulture, 13; Cooper's hawk, 2; sparrow hawk, 1; mourning dove, 12; screech owl, 1; flicker, 6; red-bellied woodpecker, 3; red-headed woodpecker, 5; yellow-bellied sapsucker, 3; hairy woodpecker, 1; downy woodpecker, 9; prairie horned lark, 9; blue jay, 33; American crow, 52; chickadee, 24; titmouse, 9; white-breasted nuthatch, 8; red-breasted nuthatch, 1; brown creeper, 5; winter wren, 2; Carolina wren, 11; mockingbird, 9; robin, 21; hermit thrush, 2; bluebird, 30; golden-crowned kinglet, 55; ruby-crowned kinglet, 27; starling, 17; myrtle warbler, 6; pine warbler, 3; meadowlark, 5; rusty blackbird, 17; cardinal, 39; purple finch, 33; pine siskin, 12; goldfinch, 55; towhee, 6; savannah sparrow, 1; junco, 188; tree sparrow, 136; chipping sparrow, 1; field sparrow, 23; white-throated sparrow, 37; fox sparrow, 10; swamp sparrow, 1; song sparrow, 15; total species, 48, 969 individuals. - Jane Freer, Ruskin S. Freer, Kenneth Lawless (a.m. only), Dr. Herbert Nagin (p.m. only), M. B. Tillotson.

Naruna, Va. Dec. 27; clear, southwesterly wind, 1 inch snow on ground, almost gone by afternoon; temp. at early morning 12°, up to 20° at 9:00 a.m. Birds seen around my home and fields and garden back of home. 3 mile walk in afternoon. Time 9:00 a.m. to 4:00 p.m. Turkey vulture, 6; black vulture, 4; red-shouldered hawk, 1; mourning dove, 12; yellow-bellied sapsucker, 1; downy woodpecker, 1; phoebe, 1; blue jay, 2; crow, 12; chickadee, 1; tufted titmouse, 2; white-breasted nuthatch, 2; Carolina wren, 1; mockingbird, 4; bluebird, 1; cardinal, 3; goldfinch, 15; junco, 10; field sparrow, 25; white-throated sparrow, 10; song sparrow, 10; English sparrow, 15. Total species 22, 139 individuals. 12 pipits were seen on Nov. 8. First fall record for this species at Naruna. 25 robins on Dec. 22. Bewick's wren Dec. 30. Meadowlarks absent since middle of Dec. - Bertha Daniel.

Danville (Pittsylvania Co.) Va. (Circle around the town with a radius of about 7 miles; gold course 5%; Dan River Lakes 15%; river bottom land 10%; road sides and open fields 50%; deciduous woods 10%; pine woods 10%). - Dec. 29; 7:30 a.m. to 5:00 p.m. Cloudy and mild with gentle winds and scattered showers all day; temp. 42° to 58°; wind NW about 5 to 10 m.p.h.; part of lake frozen, swamp and river open. Four observers together all day. Total hours, 3 on foot, 6½ in car; total miles, 5 on foot, about 50 in car. Hooded merganser, 1; turkey vulture, 17; black vulture, 7; marsh hawk, 1; sparrow hawk, 1; killdeer, 5; rock dove, 10; mourning dove, 8; flicker, 5; red-bellied woodpecker, 4; red-headed woodpecker, 2; yellow-bellied sapsucker, 1; hairy woodpecker, 1; downy woodpecker, 1; horned lark, 200(est.); blue jay, 8; crow, 21; Carolina chickadee, 11; tufted titmouse, 10; red-breasted nuthatch, 1; brown-headed nuthatch, 3; brown creeper, 2; Carolina wren, 7; mockingbird, 8; robin, 72; hermit thrush, 1; bluebird, 25; golden-crowned kinglet, 19; cedar waxwing, 2; starling, 150 (est.); myrtle warbler, 8; pine warbler, 1; English sparrow, 29; meadowlark, 13; cardinal, 6; goldfinch, 62; towhee, 2; junco, 200 (est.); field sparrow, 10; white-throated sparrow, 42; song sparrow, 18. Total: 42 species, about 997 individuals. (Observed Dec. 28: brown thrasher, 2(JW); Dec. 31: baldpate, 1(RL). Johnny Westbrook, Steve Bendall, Jim Overbey, Royster Lyle.

Shenandoah National Park, Va. (Big Meadows, Fishers Gap, Hawksbill, Skyland, Stony Man, Cedar Run Trail from Hawksbill Gap to White Oak Canyon, Old Ragfire Road from Limberlost to within a mile of Old Rag Post-office; altitude 2300-4049 ft.; deciduous woods 70%, abandoned fields 20%, hemlock groves 5%, birch scrub 3%, pine woods 2%). - Dec. 29; 7:30 a.m. to 4:30 p.m. Intermittent fog and drizzle with SSW winds of 20-40 m.p.h. on ridge; temp. 42° to 48°; 1-inch snow in sheltered places. Three observers in 2 parties. Total hours, 25; total miles, 74 (55 by car, 19 afoot). Red-tailed hawk, 3; duck hawk, 1; ruffed grouse, 5; pileated woodpecker, 2; hairy woodpecker, 2; downy woodpecker, 7; raven, 1; Carolina chickadee, 29; tufted titmouse, 11; white-breasted nuthatch, 2; red-breasted nuthatch, 1; winter wren, 1; Carolina wren, 1; hermit thrush, 1; golden-crowned kinglet, 7; ruby-crowned kinglet, 1; starling, 3; cardinal, 4; pine siskin, 1; American goldfinch, 25; slate-colored junco, 61 (both Carolina and typical slate-colored seen); tree sparrow, 8; white-throated sparrow, 2; song sparrow, 2. Total, 24 species (1 additional subspecies); 176 individuals. - Kenneth Lawless, Fred R. Scott, Charles E. Stevens, Jr.

Harrisonburg, Va. (Waterman Wood to Tide Spring, a total distance of 12 miles including oak-hickory-cedar-pine woodlot 60%, oak-hickory woodlot 10%, small village bordering school campus 10%, cedar-pine wasteland 10%, pasture field and fence rows 10%). Small pond in oak-hickory woodlot covered with inch coating of ice. Ground frozen and covered with a light three-day old snow. - Dec. 27; 8:00 a.m. to 3:00 p.m. At beginning sky was 1/5 overcast, cirrostratus clouds; temp. 19°F., wind SE 5 m.p.h. Noon sky 9/10 overcast, temp. 37°F., wind SE 10 m.p.h. At close sky 1/5 overcast, temp. 37°F., calm. Three observers working together within calling distance. Total hours, 7 on foot; total miles, 8 on foot.

Turkey vulture, 28; red-tailed hawk, 2; sparrow hawk, 3; flicker, 3; pileated woodpecker, 2; red-bellied woodpecker, 1; downy woodpecker, 15; crow, 92; Carolina chickadee, 22; tufted titmouse, 26; white-breasted nuthatch, 2-; mockingbird, 12; robin, 2; bluebird, 41; starling, 181; myrtle warbler, 1; English sparrow, 144; cardinal, 43; purple finch, 25; goldfinch, 6; slate-colored junco, 86; tree sparrow, 45; white-throated sparrow, 1; song sparrow, 2. Total species, 24, 803 individuals.- Daniel B. Suter, Richard Weaver, D. Ralph Hostetter.

Lexington, Va. (Lexington cemetery, city reservoir, Brushy Hills, Big Spring Pond, cedar woods at Lime Kiln Bridge and East Lexington, oak woods and open fields). - Dec. 27; 8:00 a.m. to 5:00 p.m. Clear; temp. 7° to 40°, no wind. Observers together. Total hours, 9; total miles, about 30. Great blue heron, 3; mallard duck, 13; black duck, 15; turkey vulture, 19; red-tailed hawk, 1; marsh hawk, 1; sparrow hawk, 2; Wilson's snipe, 1; belted kingfisher, 3; flicker, 2; pileated woodpecker, 3; red-bellied woodpecker, 3; red-headed woodpecker, 1; downy woodpecker, 4; hairy woodpecker, 1; horned lark, 6; blue jay, 15; crow, 132; Carolina chickadee, 32; tufted titmouse, 16; white-breasted nuthatch, 6; brown creeper, 2; winter wren, 2; Carolina wren, 10; mockingbird, 9; robin, 3; hermit thrush, 1; bluebird, 15; golden-crowned kinglet, 6; migrant shrike, 3; starling, 45; myrtle warbler, 14; English sparrow, 66; meadowlark, 11; cardinal, 44; goldfinch, 7; purple finch, 13; junco, 100; field sparrow, 4; tree sparrow, 52; white-throated sparrow, 122; song sparrow, 15. Total: 43 species, 743 individuals. - Col. R. P. Carroll, Robert Paxton, Alice Carroll, W. L. Richards, F. M. Yellott, Robert Moses, Joe Magee (morning only).

Roanoke, Va. (Murray's Pond and Bennett's Springs). - Dec. 27; 9:15 a.m. - 4:30 p.m. Clear; temp. 15° at start, 30° at finish. On foot and in car 24 miles. Black duck, 5; lesser scaup, 3; turkey vulture, 15; black vulture, 3; sparrow hawk, 1; flicker, 2; hairy woodpecker, 2; downy woodpecker, 4; horned lark, 8; blue jay, 9; crow, 22; chickadee, 6; white-breasted nuthatch, 2; tufted titmouse, 2; Carolina wren, 2; mockingbird, 5; bluebird, 1; golden-crowned kinglet, 3; meadowlark, 2; cardinal, 10; purple finch, 3; junco, 8; white-crowned sparrow, 2; white-throated sparrow, 6; song sparrow, 12; total species 26; individuals 148. Included are species observed by Mrs. N. R. Lehmann at her feeding stations on the 27th. - Frank Robertson, A. O. English.

Blacksburg (Montgomery Co.), Va. (VPI campus and farm, Strouble's Creek to New River, Brush Mt. and Tom's Creek to New River, along New River from mouth of Strouble's Creek to Goodwin's Ferry; same course as last year; woods 45%, farmland 35%, river-bottom 20%). - Dec. 27; 6:30 a.m. to 5:30 p.m. Clear; temp. -3° to 30°; wind SW, 8-12 m.p.h. on mountain tops early a.m.; calm in valleys; ground covered with 1-3 inches snow; all marshes except about springs frozen. Six observers in 4 parties. Total hours, 38 (36 on foot, 2 in car used by one party in shifting from place to place and in picking up two other parties at

end of day); total miles 85 (55 on foot, 30 by car). Common loon, 1; pied-billed grebe, 2; mallard, 218; black duck, 211; gadwall, 4; pintail 1; green-winged teal, 21; blue-winged teal, 1; baldpate, 29; wood duck, 2; ring-necked duck, 2; American golden-eye, 12; buffle-head, 2; hooded merganser, 17; duck (unidentified, probably American golden-eye), 75; turkey vulture, 13; black vulture, 8; sharp-shinned hawk, 1; Cooper's hawk, 1; red-tailed hawk, 3; red-shouldered hawk, 1; marsh hawk, 1; sparrow hawk, 9; ruffed grouse, 2; bobwhite, 44 (6 coveys); coot, 1; killdeer, 14; Wilson's snipe, 14; domestic pigeon (feral), 22; mourning dove, 36 (remains of another which had been killed by a red fox during the previous night); screech owl, 3; great horned owl, 1; barred owl, 2; belted kingfisher, 5; flicker, 7; pileated woodpecker, 3; red-bellied woodpecker, 5; red-headed woodpecker, 3; yellow-bellied sapsucker, 1; hairy woodpecker, 4; downy woodpecker, 25; phoebe, 1; horned lark, 95; blue jay, 24; American crow, 161; Carolina chickadee, 160; tufted titmouse, 86; white-breasted nuthatch, 21; red-breasted nuthatch, 10; brown creeper, 15; winter wren, 14; Carolina wren, 25; mockingbird, 14; hermit thrush, 9; bluebird, 23; golden-crowned kinglet, 95; ruby-crowned kinglet, 2; loggerhead shrike, 5; starling, 224; myrtle warbler, 2; English sparrow, 121; meadowlark, 60; red-wing, 2; rusty blackbird, 10; cardinal, 156; purple finch, 24; American goldfinch, 152; towhee, 1; slate-colored junco, 729; tree sparrow, 282; field sparrow, 60; white-crowned sparrow, 119; white-throated sparrow, 10; song sparrow, 167. Total, 73 species; about 3,706 individuals. (Seen in area Dec. 25: green heron, 1 - found dead on Dec. 27; Dec. 26: robin, 1.) - C. O. Handley, Sr. and Jr., John M. Handley, Robert J. Watson, J. W. Murray, W. R. DeGarmo.



The Raven

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WATERFOWL RECORDS FOR TWO WINTERS AT DANVILLE

By Royster Lyle, Jr.

In recent years no one in Danville has kept records on ducks or known just what ducks winter here. There was someone who kept accurate accounts of waterfowl on the Dan River years ago, but these records are not now available.

In starting the list of Pittsylvania County birds we had to start from the beginning on ducks, because of this lack of accurate data. We knew that such ducks as mallard and black duck were common winter visitors, but that most of the rarer waterfowl are forced here by storms or severe weather up north. Beginning about the middle of the 1947-1948 winter, daily observations have been made on the Dan River and a few small ponds near Danville. Since we started, over a year ago, there have been 20 species of waterfowl recorded here. (This includes loons, grebes, gulls, etc.).

There follows an account of waterfowl observed on the Dan River during the last two winters, 1947-1948 and 1948-1949.

Common Loon. Seen on the River November 25, 1948. This is probably not the first time it has been seen here, but it is the first official record.

Horned Grebe. Observed on the River March 12, 1948. This is also a first Danville record.

Pied-billed Grebe. Quite common since November 28, 1947. One late observation, May 2, 1948.

Black-crowned Night Heron. One seen on October 18, 1948. First record for Danville. Also observed on October 19, 22.

Canada Goose. One record on March 20, 1948. There is a previous record for March 9, 1945.

Mallard. First record, March 9, 1945; ten seen on January 29, 1948; five on January 30, 1949.

Baldpate. First record December 31, 1948, at a small pond east of Danville. The Baldpate was observed there for two weeks.

Ruddy Duck. First record, May 2, 1948 (very late); again November 27, 1948, and February 1, 1949.

Black Duck. Nine seen on the Christmas Census, December 22, 1947; four more February 10, 1948; and about twenty on October 4, 1948.

Canvas - back. Very abundant last year although we have no record this year. First record, January 18, 1947; twenty-six observed on January 29, 1948; fifty on January 31, 1948; twenty-three on February 7, 1948; twenty on February 10, 1948.

Scaup. First record, January 30, 1948; again on February 7, 1948; March 20, 1948; May 1, 1948 (very late); February 1, 1949; February 3, 1949; February 5, 1949.

Old-squaw. One record on February 1, 1949. This is the first Danville record.

American Golden-eye. First date January 30, 1948. Quite common in 1948; only one record this winter. One on January 31, 1948; four on February 7, 1948; one on February 10, 1948; two on March 5, 1948; two on April 10, 1948; two on February 5, 1949.

Ring-necked Duck. First one positively identified on November 27, 1948; four more on November 29, 1948; three on January 30, 1949.

Wood Duck. One observation: twelve on October 2, 1948. This duck is probably a resident.

American Merganser. One seen first on January 30, 1948; observed for over a month; last seen on March 5, 1948.

Hooded Merganser. First record, January 30, 1948; seen again on February 7 and 10, 1948. Another recorded on the Christmas Census, December 29, 1948.

Coot. Two records, October 18 and 19, 1948. Many have been observed here before.

Ring-billed Gull. First sure identification, January 30, 1949. Gulls have frequently been seen here, but none identified.

Bonaparte's Gull. One immature recorded, January 30, 1949. First Danville record. The Bonaparte's Gull and the Old-squaw were seen a few days before a heavy snow. Both were observed at rather close range and with binoculars.

Danville, Virginia

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BIRD CHECK LIST - BLUE RIDGE PARKWAY - ROCKY KNOB DISTRICT
By William Lord

The Blue Ridge Parkway through Virginia and North Carolina is a scenic drive extending nearly 500 miles along its namesake mountains. Administered by the National Park Service, it brings the Blue Ridge region into convenient focus, revealing both the natural beauty and

historical "culture" inherent in the landscape. Thus, Mabry Mill, Puckett's Cabin, and the old hilltop home of the Trails', preserve the past for the present, amid the natural beauty of their day.

Rocky Knob district defines the parkway through southwest Virginia, ranging, near the escarpment, over the rolling Blue Ridge plateau. It provides an excellent access to the study of Virginia's high-land bird life. The variety of habitats induce a great number of individual species. Wooded land varies from extensive tracts of near-virgin timber to clean-cut, stump-laden meadows. These extremes are much less prevalent than the modest sized woodlots, commonly occupying the higher land, and patterned in with extensive pastures and rowcrop fields.

The general lack of ponds and rivers indicates a scarcity of aquatic species. Ducks, herons, gulls, etc., are both occasional and adventitious. However, the kingfisher, spotted sandpiper, and Louisiana water-thrush are fairly common, and the pied-billed grebe tarries during spring and fall.

The abounding majority are of those species preferring a woods and field habitat. Warblers are conspicuously abundant. Eleven species were observed as summer residents. Careful observation will surely reveal others, i. e., the Canada warbler.

A note on the Bewick's wren may be of interest. It is dominant in numbers over both the house and the Carolina wrens. All three are commonly seen, sometimes in close, if not harmonious, association.

It is hoped that many VSO members will avail themselves of the opportunity offered by the parkway. In the Rocky Knob district, for example, three recreational areas, ranging from 400 to 4,000 acres in extent, are spaced along its route. In addition to picnic and camping facilities, each area possesses many fine trails leading through the wildwood.

Rocky Knob district is readily accessible to the motorist. All crossings and junctions with major highways are posted with large road signs. From Roanoke, route 221 leads to a junction with the parkway motor road, 19 miles south of the city. Intersections occur at route 8 between Christiansburg and Stewart; route 58 between Hillsville and Martinsville; and route 52 between Wytheville and Mount Airy.

Bird hikers are cordially welcome. The ranger personnel gladly offer their services. Booklets more thoroughly explaining the Blue Ridge Parkway may be obtained through Dr. Murray, or by getting in contact with a ranger during a visit to the parkway.

Legend

The following check list covers the period from February 3, 1948 to October 31, 1948. It is presented as being representative of the area.

Each of the 88 species listed is described in the following manner: (1) Name, (2) Date first seen, (3) Period of occurrence, (4) Relative abundance, and (5) Type or types of environment in which it is found.

For convenience, the period of occurrence is abbreviated as follows: WR, Winter Resident; SR, Summer Resident; PR, Permanent Resident; SM, Spring Migrant; FM, Fall Migrant; I, Infrequent, but seen throughout the year.

Relative abundance has been abbreviated as follows: A, Abundant; B, Common; C, Fairly common; D, Not common; E, Rare. In considering relative abundance, deference is given to the life pyramid. In example, one red-tailed hawk per square mile is an A classification. Robins found in these numbers would merit a D category.

Environments are described and abbreviated as follows:

W, Woods - Areas of several hundred acres. Along the escarpment and over terrain of higher relief, too rugged for farming. Red, black, scarlet, white, and chestnut oaks, shagbark hickory, red maple, tulip tree and white pine predominate. Second story growth is mostly of dogwood or of mountain laurel and rhododendron. Ground cover is not profuse except during the fall influx of mountain golden rod and white woods aster. ~~Epidaceous~~ plants are generally most common.

w, Woodlots - Small sections of woods, spotted in among the fields similar in content to the forests. The mean size would be ten to thirty acres.

Wb, Wood's Borders - There is usually an outer trimming of sassafras, black locust, and sumac, profusely garlanded with smilax. The large hardwoods rise abruptly, their branches often heavily burdened with the twining coils of wild grape.

F, Fields - Devoted mainly to grazing and row crops of wheat, oats, corn, and buckwheat. The average farm is 50-100 acres, a fourth to half of which is woodlot.

MF, Marshy Fields - Small brooks, ~~dis~~issuring into life from springs, needle swiftly toward larger streams west of the parkway. The water table is close to the surface. When the brooks pass through open fields they tend to make them marshy for a width up to several hundred feet.

WB, Wooded Brooks - Through woods, they are densely shrowded by red maple, shadblow, hemlock, rhododendron, and mountain laurel.

FD, Farm Dwellings - Farm house with retinue of barn and various sheds, mixed orchards of apple, pear, cherry, and peach; and family sized gardens.

P, Ponds - One small pond, about 250'x40', lies parallel to the motor road. It is an infrequently used rest haven for migrating water fowl.

Finally, then, the treatment of each species will be in this manner:

Eastern Wood Pewee May 8 SR C W & w

The list follows:

	<u>Date 1st.</u> <u>seen</u>	<u>Period of</u> <u>occurrence</u>	<u>Relative</u> <u>abundance</u>	<u>Where</u> <u>found</u>
Pied-billed Grebe	Oct. 6	FM	E	P
Wood Duck	Oct. 20	FM	E	P
Woodcock	Apr. 19	SR	E	Moist woods
Wilson's Snipe	Apr. 6	SM	E	MF
Killdeer		SR	C	F
Turkey Vulture		PR	A	Familiar in skyway. Nests on escarpment
Black Vulture		I	D	As with above
Red-tailed Hawk		PR	C	F & W
Red-shouldered Hawk		PR	E	F & W
Sparrow Hawk		PR	C	F
Sharp-shinned Hawk		PR	D	Wb & F
Cooper's Hawk		PR	C	Wb & F
Ruffed Grouse		PR	C	W
Bob-White		PR	B	F & w
Mourning Dove		PR	C	F & w
Black-billed Cuckoo	June 9	SR	D	F & W
Belted Kingfisher	May 9	SR	D	Open streams
Screech Owl		PR	E	F & w
Great Horned Owl		PR	D	F & W
Whip-poor-will	Apr. 24	SR	C	F & w
Nighthawk	Aug. 22	FM	A	Large, loose casually mi- grating flock
Chimney Swift	Apr. 20	SR	B	FD
Ruby-throated Hummingbird	May 9	SR	B	FD & Wb
Flicker		PR	B	FD & w
Red-headed Woodpecker	Sept. 5	FM	D	w
Hairy Woodpecker		WR	C	W
Downy Woodpecker		PR	B	FD & w
Yellow-bellied Sapsucker	Mar. 6	SM	D	FD & w
Crested Flycatcher	May 1	SR	B	W & w
Phoebe		PR	B	WB & FD
Wood Pewee	May 8	SR	C	W & w
Least Flycatcher	Apr. 26	SR	D	FD
Kingbird	May 1	SR	D	Orchards & F
Prairie Horned Lark	Sept. 25	WR	B	F
Barn Swallow	Apr. 23	SR	B	FD
Blue Jay		PR	B (winter) D (summer)	F & w
Crow		PR	A	F & w
Carolina Chickadee		PR	B	W & w

	<u>Date 1st.</u> <u>seen</u>	<u>Period of</u> <u>occurrence</u>	<u>Relative</u> <u>abundance</u>	<u>Where</u> <u>found</u>
Tufted Titmouse		PR	B	W & w
White-breasted Nuthatch		WR	C	W & w
Mockingbird	May 1	SR	D	F & FD
Catbird	May 1	SR	B	WB & moist thickets
Brown Thrasher	Apr. 13	SR	B	Dense thickets & second growth timber
House Wren	Apr. 14	SR	C	FD
Bewick's Wren	Apr. 6	SR	B	FD
Carolina Wren		PR	C	FD
Robin		PR	A	F & Orchards
Wood Thrush	Apr. 25	SR	B	Moist woods
Veery	Apr. 9	SR	C	Moist woods
Golden-Crowned Kinglet		WR	C	W & w
Blue-gray Gnatcatcher	Apr. 25	SM	D	W & w
Cedar Waxwing		PR	B	W & F
Starling		PR	C	FD & F
Red-eyed Vireo	Apr. 16	SR	B	W & w
Yellow-throated Vireo	May 15	SR	E	W
Black and White Warbler	Apr. 24	SR	B	W & w
Cape May Warbler	May 2	SM	D	Orchard
Cairn's Warbler	Apr. 30	SR	C	W
Chestnut-sided Warbler	May 2	SR	C	WB
Black-poll Warbler	May 12	SM	D	W
Prairie Warbler	Apr. 15	SR	B	Wb
Yellow Warbler	Apr. 15	SR	B	FD
Oven-bird	Apr. 20	SR	A	W & w
Louisiana Water-thrush	Apr. 21	SR	D	Wooded streams
Maryland Yellow-throat	Apr. 7	SR	C	Thickets along open streams
Yellow-breasted Chat	May 8	SR	B	Dense thickets
Hooded Warbler	May 8	SR	B	W
Redstart	May 8	SR	A	W & w
English Sparrow		PR	C	FD
Meadowlark		PR	C	F
Red-winged Blackbird	Feb. 22	SR	C	MF
Baltimore Oriole	Apr. 20	SR	D	FD
Grackle	Feb. 26	SR	C	F & Orchards
Cowbird	Feb. 26	SR	C	F
Scarlet Tanager	May 2	SR	C	W
Cardinal		PR	B	W, w, & Wb
Indigo Bunting	Apr. 19	SR	B	F & Wb
Goldfinch	Apr. 15	SR	B	F
Towhee	Mar. 15	SR	B	Wb
Vesper Sparrow	June 8	SR	D	F
Slate-colored Junco		WR	A	F & Wb

Chipping Sparrow	Feb. 24	SR	B	F
Field Sparrow	Feb. 24	SR	A	F
White-crowned Sparrow	May 9	SM	D	W
White-throated Sparrow	May 1	SM	C	W
Song Sparrow		PR	C	FD & F
Grasshopper Sparrow	June 10	SR	D	F

Rocky Knob, Floyd, Virginia

(Almost certainly, a longer period of field work will add many species to this list. Editor)

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THE LURE OF NATURE THROUGH PARTICIPATION IN AUDUBON JUNIOR CLUBS

By Evelyn Watkins
Harrisonburg, Va.

Children love adventure. Show them the fun and adventure they can derive from exploration of the great outdoors. Many exciting discoveries may be made in their own backyard, on their school ground, in their community. Fascinating creatures are nearby. Thrilling experiences await the child who learns to explore, to question, to experiment, to discover.

Have you stopped to watch a pair of cardinals building their nest? Have you thrilled at a wood thrush's song or the beauty of a flock of gulls against the blue sky? Have you stood entranced as a spider spun its intricate web? Did you ever gaze at the miracle of a butterfly slowly emerging and eventually spreading its gay and beautiful wings? Have you ever peered through the microscope as even the smallest insect took on new enchantment?

Yes, children have right at hand a world of wonder and delight. But they need help. Your guidance and enthusiasm will be magic keys to open doors to endless enjoyment of nature.

And as children witness the wonders of nature, many questions will arise. Gradually by observing changes in the plant and animal world, children can become aware of the interdependence of all life. Each infinitesimal organism has some part to play; each is dependent upon another. As children watch the robin tugging at the earthworm to feed his hungry babies or the hawk preying upon the smaller bird, they can eventually come to accept the chain that exists from the largest plant or animal to the smallest. Let children see that predation is present; let them recognize and understand it.

Yes, children can develop desired concepts concerning the interrelationships of nature. But they need wise guidance.

Down through the years much of our rich heritage has vanished. Forest, grass and marsh land, soil and water are still being destroyed. If we plunder as we have in the past, future generations will have a desert for a homeland. So what we have left we must utilize more wisely. Children need to learn early to recognize that fact. How much life is in and around one big tree! How necessary is the grass that holds the earth together! How important it is that we recognize man's dependence on soil, water, and forests for his very existence! Children should learn the truth about our rapidly depleted land, our dwindling water supply, the destruction of our great forests, the disappearance of much of our wildlife. All the devastation that has been wrought cannot be redeemed. But if America's children are shown the urgent need for conservation, much can be done to preserve what we have left and to renew our scattered resources.

One excellent way to attempt to carry out the above objectives is through Audubon Junior Clubs. The purpose of these clubs is to introduce children, through bird study, to the wonders of plant and animal life, and to develop an interest in the interdependence of nature and the conservation of wildlife and other natural resources. Bird life is a fascinating beginning of nature study. For many children it will be a growing hobby; for others even a life time career.

Since the organization of the Audubon Junior Clubs in 1910, over 8 million children have enrolled. During 1947-48, 311,768 children joined nearly 13,000 clubs scattered throughout the 48 states. There were also clubs operating in every province of Canada and in a few of the other countries. Virginia had 234 clubs with 5600 children as members. Although a tremendous work has been done by the Audubon Junior Clubs, a big job still awaits teachers and other leaders. Increasing the number of Audubon Junior Clubs and concentrating on the underlying purposes should pay big dividends.

Perhaps you sponsor a club each session. If so, start earlier this year. Try to accomplish more than ever before. Perhaps you can also influence other teachers and friends to organize Audubon Junior Clubs in your community. Try it. How many Audubon Junior Clubs are now in your community? What are the clubs doing? Find out.

For the benefit of those who may wish to organize an Audubon Junior Club for the first time, here is some information. Ten or more children of school age constitute a club. Members pay dues of 15¢ each to an adult adviser who forwards the collected money to Audubon Juniors, 1000 Fifth Avenue, New York City. The dues should go with a letter stating how many sets of Leaflets in the Junior Edition (large type and simple text for grades below the sixth) or Senior Edition (smaller type and longer text) are required. Each child receives six four-page Bird Leaflets, with color plates of birds, and a membership button. Each club receives "Audubon Junior Club News" four times during the school year, and each adviser receives the "Audubon Teachers' Guide".

The Guide, edited by Dorothy A. Treat from the National Audubon Society, contains many worth-while suggestions for nature adventures to be experienced outdoors and in the classroom. It contains directions for making bird houses, feeding trays and bird calendars, ideas for taking field trips and for planning club meetings and assembly programs. It gives helpful information on conservation and annotated bibliographies of books and pamphlets for teachers of natural science. The Audubon Society also has films, slides, charts, pictures, and other materials.

For Audubon Junior Club advisers, teachers, principals, superintendents, leaders of young people, and others interested in nature professionally or as a hobby, the National Audubon Camps offer thrilling and never-to-be forgotten experiences. The camps are inspiring, invigorating and helpful. There is fun and recreation provided for all. Field classes in Nature Study and Bird Life are fascinating. Other optional classes in Plant and Animal Life are offered. Most of the work is done in the field and under the guidance of expert leaders. At the end of each session students receive certificates describing the work covered. Try a two-weeks session next summer; or tell some friend about it.

The four camps are in Maine, Connecticut, Texas, and California. For details write to the National Audubon Society in New York City, and take your choice for a stimulating experience at one of the National Audubon Camps.

(Reprinted by permission from Virginia Journal of Education, Nov., 1948)

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WINTER BIRD POPULATION STUDY, 1949

By Charles E. Stevens, Jr.

VIRGINIA PINE - SHORLEAF PINE FOREST. SIZE: 45 acres. LOCATION: 1 mile south of Proffit, Albemarle County, Virginia. DESCRIPTION OF AREA: A young pine stand located on rolling land and transversed by several old gullies which drain southeastwardly. The canopy is 40-60 feet, without openings, and composed 50% of shortleaf pine (Pinus echinata) and 50% of Virginia pine (P. virginiana). There is a scant growth of alder (Alnus rugosa), sycamore (Platanus occidentalis), and tulip poplar (Liriodendron tulipifera) in 2 of the gullies. In the majority of the woods there is no understory, but where it occurs it is made up of red cedar (Juniperus virginiana), southern red oak (Quercus falcata), dogwood (Cornus florida), persimmon (Diospyros virginiana), white oak (Q. alba), red maple (Acer rubrum), and greenbrier (Smilax rotundifolia). Except for running cedar (Lycopodium flabelliforme) and Christmas fern (Polystichum acrostichoides) the herbaceous ground cover is negligible. The pinewoods is typical of those in this section of piedmont Virginia. Pine-oak scrub, deciduous woods, and

broomsedge fields bound the area. CLIMATE: Daily mean temperature during census period, 43.3° (extremes, 18° to 72°); total precipitation, 5.2 inches (ground covered with 2 inches of snow on last trip). The winter was abnormally mild, moths and other insects being seen on several trips, and a few Spring Peepers heard on all but one trip. CENSUS DATES: January 7, 12, 13, 15, 22, 24, 28; February 1. Total, 8 trips. Hours per trip averaged $1\frac{1}{2}$. CENSUS - Average number of birds seen per 100 acres of habitat (with average number of individuals in area per trip in parentheses): Yellow-bellied sapsucker, 1 (.5); downy woodpecker, 3 (1.1); blue jay, 4 (.1); Carolina chickadee, 19 (8.6); tufted titmouse, 4 (2.0); red-breasted nuthatch, 4 (1.9); brown creeper, 1 (.6); robin, 8 (3.8); golden-crowned kinglet, 37 (16.5); ruby-crowned kinglet, 4 (1.8); myrtle warbler, 6 (2.5); purple finch, 1 (.6); slate-colored junco, 1 (.5). Total: average of 91 birds per 100 acres. Species recorded flying over area: Turkey vulture, 2 (.8); black vulture, 1 (.5); Am. crow, 6 (2.6); fish crow, 4 (.1); robin, 8 (3.8); purple finch, 1 (.6); Am. goldfinch, 1 (.5). Final total: average of 108 birds per 100 acres. REMARKS: The large number of birds seen flying over the tract made the method for recording them somewhat problematical. The above classification is not particularly satisfactory. Vultures seen flying overhead should certainly be counted, but should goldfinches? Black ducks and horned larks were also seen flying over the tract but were removed from the list. Species seen in the excluded, 100 ft. margin of pine which were not found in the study area included: Carolina wren, bluebird, and cardinal. Individuals recorded in the study area spent about 75% of the time that they were in the pinewoods in the 100 ft. margin. No birds seemed confined to the study area.

Charlottesville, Virginia

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VIRGINIA NOTES

By J. J. Murray

Chincoteague Refuge, Va. John H. Buckalew, Refuge Manager, reports a hudsonian Godwit seen on the beach on October 6, 1948; and two Razor-billed Auks collected, November 19, 1948, ten miles south of Chincoteague.

Back Bay Refuge, Va. Dr. Locke Mackenzie, 829 Park Avenue, New York 21, picked up a dead Dovekie, badly mangled by crabs, on January 22, 1949 on the beach on the Virginia side of the state line, and a few minutes later saw another flying south just inside the surf line. Jack Perkins also saw a Dovekie at Back Bay on January 15, 1949.

Bridgewater, Va. Max Carpenter, Rt. 1, Dayton, saw a flock of 50-75 American Pipits near Bridgewater, October 29-November 8, 1948.

Lexington, Va. The writer observed a male Wood Duck feeding on devil's shoe-string berries (Symphoricarpos orbiculatus) at Cameron's Pond,

Lexington, on November 29, 1948. Rains had spread the waters of the pond back into the shoestring thickets. The duck was pulling the branches down and stripping off the berries.

Blacksburg, Va. James W. Engle, Jr., of the Virginia Co-operative Wildlife Unit at V. P. I. caught a Sora, February 2, 1949, in a steel-trap that had been set for muskrat on Stobles Creek. The skin is in the Unit collection.

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RECENT BOOKS ON BIRDS

Roger Peterson, well-known for his aids to bird students, has gotten out a new book for bird study, "How to Know the Birds". It has been published in two editions: the regular Houghton-Mifflin edition, in cloth, 144 pages, 400 line drawings and silhouettes, with color plates, at \$2.00; and an inexpensive edition, in the Mentor (pocket-type) books, at 35¢, which has everything but the cloth and the color plates of the main edition. The book is a fine aid not only to beginners but to all bird students. The cheap edition has more for the money than any bird book ever published in America. It is a wonderful thing to give to Boy Scouts or Girl Scouts or anyone interested in learning something about birds.

The Pennsylvania Game Commission (Harrisburg, Pa.) has just published two attractive bulletins: "Pennsylvania Birdlife", with six color plates and 100 or more photographs, at 50¢. This presents the more common birds of the State; and "Pennsylvania Birds of Prey", with four color plates and photographs and charts, at 25¢ deals in a very fair and graphic way with the hawks and owls of Pennsylvania.

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NOTICE OF ANNUAL MEETING

The 1949 annual meeting of the VSO will be held in Charlottesville, Va. May 20 and 21. The program follows:

Friday, May 20, 1949 Monticello Hotel

- 12:30 p.m. Executive Committee Luncheon
- 2:00 p.m. Afternoon session with a break for tea and fellowship around 4 o'clock
- 6:30 p.m. Dinner
- 8:00 p.m. Evening session - speaker to be announced

Saturday, May 21

- 6:30 a.m. Breakfast at The Griddle
- 7:00 a.m. Field Trip
- 12:00 noon Luncheon - place to be announced

Single rooms at The Monticello \$3.50 & up, double rooms \$7 & up. For names of tourist homes write John Grey, Box 550, Charlottesville.



The Raven

BULLETIN OF THE VIRGINIA SOCIETY OF ORNITHOLOGY
PUBLISHED AT LYNCHBURG, VIRGINIA

DR. J. J. MURRAY, EDITOR
LEXINGTON, VA.

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SIXTEENTH ANNUAL MEETING, MAY 20-21, 1949

By E. Gertrude Prior

The Sixteenth Annual Meeting of the V. S. O. was held in Charlottesville at the Monticello Hotel, beginning at 2:00 P.M. on Friday afternoon, May 20. Dr. John H. Grey, the president, presided. After a word of welcome, Miss Evelyn Watkins was introduced as the first speaker. Her paper on "Nature Study Experiences with Young Children" dealt with her own experiences in encouraging children to an interest in all forms of nature. She said that all children are interested in these things if given stimulation, and told of her trips to the field to collect specimens, starting out the year's work with insects, and going on to rocks, flowers, turtles, frogs, rabbits, etc. Trips to the fish market, seed store and hatchery were included. Work on birds was done through bird slides, records of bird songs, taking bird walks, building trays and nest boxes, playing bird games, and recording observations. Through all of these activities Miss Watkins feels that children can learn to protect rather than destroy, to accept things realistically and to find out that all things of nature bear relationships to all of life. They can learn how human interference has been detrimental, that predation does occur and must be accepted. Children can develop responsibility through such a nature program, skills, social habits; they learn that there are still things we do not know, and to go to authorities for information. Miss Watkins encouraged V. S. O. members to enter into the Junior Audubon program wherever possible and work for conservation.

A. Lawrence Dean, Extension Wildlife Specialist at V. P. I. next told of his work through the Agricultural Extension Service in reaching groups throughout the State. He has visited schools, 4H Club camps, garden clubs, Home Demonstration groups, Scouts, stressing in all his lectures the economic importance of bird life. He cited the need for education along this line, pointing out the still prevalent belief among many people that all hawks and owls should be destroyed, and telling of the woman he knew who was employing children to shoot the birds in her garden with slingshots, because they made too much noise. Mr. Dean said that we of the V. S. O. have a great chance to help in educating the public about birds, and their importance to all life.

R. J. Watson of Blacksburg then told of his visit last summer to the foray held by the Brooks Bird Club in West Virginia. He felt that the V. S. O. should consider such a project in Virginia, and pointed out the varied habitats we have which would offer good opportunities for forays in different sections. Forays, he said, would involve careful planning, but he urged that we should think about organizing such a worthwhile project for bird study.

Professor Bruce Reynolds, who directs the summer school at Mountain Lake Biological Station, suggested that place as a good one for a foray. He described the physical plant with auditorium, cottages for 80 people, laboratories, and kitchen facilities. Pictures of the Station were shown.

The Bureau of Game and Inland Fisheries was represented by William P. Blackwell, who told of the work on doves that is being conducted in the State. The object of the investigation is to set more wisely the hunting regulations. Such information as the migration routes and time of migration, the percentage of birds breeding in the fall, areas of concentration, the gun pressure and the kill, is being collected, and banding is to begin on July 1. Only 116 doves have been banded in Virginia since 1920. Mr. Blackwell solicited the help of V. S. O. members in banding and gathering any of this data on doves.

Mrs. James W. Wiltshire, Jr. of Lynchburg gave an account of her trip last December to Bull's Island, a part of the Federal Cape Romaine Wildlife Refuge, 20 miles off the northern coast of Charleston, S. C. The tour was conducted by Alexander Sprunt of the Audubon Society. Mrs. Wiltshire showed colored slides of the island and its birds, and said that they counted 109 species on the two-day trip. She mentioned the great wealth of bird life, having seen such species as oyster catchers, gannets, brown pelicans, willets, long-billed marsh wrens and many others.

Dr. Ivey Lewis told of an amusing experiment he and Dr. Paul Burch made 20 years ago in trying to figure out the effectiveness of sight and smell of the turkey vulture in locating food. He was convinced, after his friend had dropped as if dead by a fence, and the vultures swooped toward him, that the birds hunted by sight. Dr. Lewis said that this was probably not very scientific, but that a lot of fun and information could be gathered from such simple experiments.

A full description of the raven was then presented by J. J. Murray, who pointed out that ravens were probably more common in Rockbridge County than in any other part of the State. There are about ten pairs. Dr. Murray told of the inaccessibility of the nests, the large size and contents. Eggs are laid usually the first part of March and hatch in April, the young birds leaving in early May. The same sites are used many times over. Dr. Murray said that the chief danger to the raven is the pressure of civilization.

C. O. Handley of Charleston, W. Va. told of having recorded this year the first lark bunting known from West Virginia. The lark bunting is about the size of the bobolink, with a large white patch on the wing. It is a bird of the western plains and its occurrence in the east is entirely accidental. Mr. Handley said the bunting was first found on the Christmas bird count with a flock of English sparrows. He saw it the next day, and on the following day he and Prof. Maurice Brooks collected the bird.

The question of the scarcity of purple martins around Charlottesville was then described by Dr. Ivey Lewis. He said that he had thought them very rare. In North Carolina they seem to nest in gourds rather than boxes, while further north boxes seem to be preferred. Dr. Lewis asked, "Where is the Mason-Dixon line for martins?"

After a recess for refreshments, Jack Perkins showed some moving pictures and gave a brief description of the nesting refuges, migrating refuges, and refuges for wintering birds in the U. S. Back Bay is just one of 201 refuges, and was established in 1938.

The annual dinner was held in the Rose Room of the Monticello Hotel, with about 50 persons present. Many others came for the evening session held there. Dr. Alexander Wetmore of the Smithsonian Institution was introduced by Dr. Murray, and he told of his recent seven week's trip to Panama for the observation and collecting of birds. After a description of the climate and general topography of the area, he gave an account of their work and trip up the river toward Colombia. Some 310 species were recorded on the entire trip, and a collection of 270 species was made. Dr. Wetmore said that in this area of Panama he saw more species and more numbers of birds than any place else he had ever been. Trails had to be cut through the dense undergrowth, which made it very difficult to see the birds. He said that he heard birds many times that he was never able to see. He brought back two birds that were described by a Frenchman and not seen since 1876.

Dr. Wetmore gave a description of the canoes that the Indians in Panama make, and told of using these in the trip on the rivers. He said that the Indians were very friendly, and of great help to the party. Work on collecting was begun at sunrise and continued until about 10 or 11 o'clock. The arduous task of preparing the skins took up most of the afternoon. He mentioned many of the migrants that go through Panama, and said that the native birds there are much shyer than the migrants. He observed that to really appreciate migration you must see the birds in the south, for then you realize what a great distance they travel.

After a short question and answer period, and a movie of some of the more common song birds, taken by Hydencamp of Pittsburgh, Dr. Grey announced plans for the next day, and the meeting adjourned.

The Saturday field trip started out in the rain, but this soon stopped, and the rest of the day was cloudy and cool. The group ended up about 12 o'clock in Ivy at the home of Mrs. A. H. Michie, where the ladies of St. Paul's Episcopal Church served a very ample hot luncheon.

An informal business meeting then was convened by Dr. Grey. Someone suggested that at the next annual meeting we have name tags for those attending, so that people will become better acquainted. This suggestion met with everyone's approval. A discussion of a fall or summer field trip, or both, was then held. About 12 persons expressed an interest in an August trip to the eastern shore, and many more in one in December to Back Bay. Jack Perkins said he would take care of arrangements for either or both of these, Charles Stevens, Jr. would work with him for the August trip, and Fred Scott for the December one.

Dr. Murray said that he would like volunteers in getting information for the Audubon Field Notes. These come out 4 times a year, and include anything interesting or unusual in population, migration, concentration, nesting activities, etc.

The question of some sort of folder or card, telling about the V. S. O. was then considered. A. O. English volunteered to draw up some sort of literature, but the whole question of publicity was referred to the Executive Committee.

Dr. Grey then called for the report of the Nominating Committee, and A. O. English named the slate: James Eike, President; Mrs. Colgate Darden, Vice-President; Miss Florence Hague, Secretary; W. Edwin Miller, Treasurer; Dr. Grey, Jack Perkins, and Miss Gertrude Prior, members of the Executive Committee. Miss Prior was named secretary pro tem in Miss Hague's absence of this and next year.

Mr. Eike took over the chair, and there was some discussion of having a longer time at the afternoon meeting for questions and sociability. The question of continuing the rather formal and expensive annual dinners was referred to the Executive Committee, as was the planning for the next year's meeting. Miss Evelyn Watkins has invited the group to Harrisonburg, and Dr. Murray said that the best time for a meeting there was the last part of April. Mr. English suggested that notices for the annual meeting be sent out further in advance. Dr. Murray made the motion, which was carried, that John B. Lewis of Broadnax be elected an honorary member.

There being no further business, the meeting adjourned.

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V.S.O. FIELD TRIP - 1949
By Charles E. Stevens, Jr.

May 21, 1949. Pied-billed grebe, 1; double-crested cormorant, 1; great blue heron, 1; green heron, 9; least bittern, 1; black, 1 (cripple); baldpate, 2; lesser scaup, 2; red-breasted merganser, 1; turkey vulture, 27; black vulture, 4; red-tailed hawk, 1; sparrow hawk, 3; bobwhite, 10; killdeer, 7; woodcock, 1; spotted sandpiper, 25; solitary sandpiper, 3; greater yellow-legs, 2; least sandpiper, 2; mourning dove, 28; yellow-billed cuckoo, 2; barred owl, 1; whip-poor-will, 1; nighthawk, 1; swift, 71; hummingbird, 5; kingfisher, 4; flicker, 6; pileated woodpecker, 2; red-bellied woodpecker, 2; red-headed woodpecker, 1; downy woodpecker, 3; kingbird, 21; crested flycatcher, 8; phoebe, 18; Acadian flycatcher, 19; wood pewee, 15; prairie horned lark, 9; bank swallow, 2; rough-winged swallow, 12; barn swallow, 12; blue jay, 4; crow, 36; fish crow, 1; Carolina chickadee, 14; tufted titmouse, 9; white-breasted nuthatch, 2; house wren, 13; Carolina wren, 6;

short-billed marsh wren, 1; mockingbird, 19; catbird, 19; brown thrasher, 14; robin, 47; wood thrush, 33; olive-backed thrush, 2; veery, 1; bluebird, 22; gnatcatcher, 9; cedar waxwing, 117; shrike, 5; starling, 176; white-eyed vireo, 6; yellow-throated vireo, 6; mountain vireo, 1; red-eyed vireo, 38; black & white warbler, 4; worm-eating warbler, 3; parula warbler, 10; yellow warbler, 11; magnolia warbler, 2; black-throated blue, 1; black-throated green, 2; cerulean, 2; blackburnian, 2; yellow-throated warbler, 5; chestnut-sided, 1; black-poll, 21; pine, 5; prairie, 19; oven-bird, 22; Louisiana water-thrush, 10; Kentucky warbler, 3; Maryland yellow-throat, 26; chat, 19; hooded, 16; Wilson's warbler, 1; Canada warbler, 5; redstart, 32; English sparrow, 19; bobolink, 6; meadowlark, 37; red-wing, 95; orchard oriole, 5; Baltimore oriole, 1; purple grackle, 153; cowbird, 9; scarlet tanager, 11; summer tanager, 5; cardinal, 28; blue grosbeak, 5; indigo bunting, 49; goldfinch, 21; towhee, 35; grasshopper sparrow, 20; Henslow's sparrow, 2; vesper sparrow, 2; chipping sparrow, 38; field sparrow, 42; song sparrow, 37. 111 species.

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A MARCH TRIP ALONG THE VIRGINIA COAST

By Maurice Richter, Jr.

(With an introduction by John H. Grey)

(The following account of a field trip along the Eastern Shore and from Cape Henry to the North Carolina line is interesting for several reasons: 1. Richter, a youthful bird student, has listed the actual number of birds seen in each locality, instead of using the more general terms as common or abundant. Thus we have accurate information on each species in each locality. 2. We know little about the bird life of the Eastern Shore, so that each report adds to our knowledge. Cobb Island has been studied for breeding birds, but little has been published about wintering birds, and almost nothing has been written about land birds in the area. 3. Late March is a time that has been neglected, for it is after the bulk of waterfowl have left and before we think of the spring migration as being well started. I suspect his record of Oyster-catchers on March 28th. is the earliest for Virginia, as Bailey in Birds of Virginia lists arrival as about April 18th.

(Three species listed in the paper may well be regarded with some reservation: 1. Pacific Loon (Gavia arctica pacifica), is listed in the 4th. A.O.U. Checklist of 1931 as occurring only twice east of the Mississippi-New Hampshire and Long Island, and in 1937 Witmer Stone did not list it in his Bird Life at Old Cape May. However, Cruickshank in Birds Around New York City in 1942 records it as being observed five times in the area, four of these being between 1937 and 1941. It would be difficult to get a Virginia record accepted without a specimen. 2. Mourning Warbler (Oporornis philadelphia) has been recorded in Virginia and the Carolinas only in the mountains

and the District of Columbia - the reason for this apparently being that this species migrates across the Gulf of Mexico and up the Mississippi Flyway and thus only touches the Blue Ridge with the fringes of migration. It also is a late migrant; Oberholser giving April 16 as early for Louisiana, and Miss Cooke lists May 4th. as the earliest for Washington, D. C. Thus a bird at Norfolk on March 30th. would be regarded as five weeks early and off the migration route. 3. Orange-crowned Warbler, (Vermivora celata celata), our only record for the Cape Henry region is one bird December 30, 1923, on Cedar Island in Back Bay, observed by Ludlow Griscom. Its migration is also up the Mississippi Valley, although the birds winter at Charleston, S. C., and at Washington, D. C. it is accidental - taken only twice, and in October; while in Maryland there are only two other records - January 4, 1928, and October 3, 1942. On Long Island it is very rare in spring and only slightly less in October. Thus, at Norfolk, the burden of proof would rest upon the observer.)

The following notes include observations made in 1948 on March 27 at Exmore, Willis Wharf, and Hog Island Bay; on March 28 at Hog Island; on March 29 at Hog Island, Hog Island Bay, and the mouth of Chesapeake Bay from Cape Charles to Little Creek; on March 30 in the vicinity of Seashore State Park near Cape Henry and on down to Virginia Beach; and on March 31 at Virginia Beach and Back Bay.

Loons. About 80 Common and 30 Red-throated Loons were seen flying north across the mouth of Chesapeake Bay. At least one Common Loon was in complete breeding plumage. Elsewhere along the coast small numbers of both species were observed.

On the morning of March 29 a Loon which was hardly larger than a Holboell's Grebe was found swimming in a sheltered cove only a few feet off the shore of Hog Island. The bill was quite thin, but not upturned. The back was distinctly blackish with a scaly appearance, and the dark coloration on the head and hindneck was considerably paler than that of the Common Loon, yet much more extensive than that of the Red-throated. The sides of the head were dull and streaked; the eye was brown and surrounded by dark feathers, and the bird was evidently sick or exhausted. Although a Pacific Loon would be extremely unusual anywhere on the Atlantic coast south of Long Island, and in spite of the fact that this bird was in winter plumage, we are convinced, after careful examination of the bird at close range in good light, and after studies of museum skins, color plates, and textual descriptions, that our bird belonged to that species.

Grebes. In Hog Island Bay, the Holboell's Grebe was almost as abundant as the Horned Grebe at the time of our visit, and both Grebes were much more numerous here than further south. We saw 40 Holboell's Grebes in that area, 5 at Cape Charles, and none in the Virginia Beach area. About 150 Horned Grebes were seen altogether, including several at Virginia Beach. Two Pied-billed Grebes were found swimming in the ocean off Hog Island.

Gannets. Four hundred, including about 20 young birds, were observed from the Cape Charles ferry between Cape Charles and Little Creek. About 500 were seen in the Virginia Beach region. We were told that there was a large movement of fish in the area, which probably accounts for the large numbers of Gannets and Red-breasted Mergansers.

Cormorants. A total of about 40 Double-crested Cormorants were seen migrating north overhead.

Heron. On Hog Island we found 10 Great Blue Herons, 100 Snowy Egrets, 65 Louisiana Herons, and 15 Little Blues. Several Great Blue Herons were also recorded at Willis Wharf and Back Bay.

Geese. Two Canada Geese were observed at Hog Island, and an estimated 150 at Back Bay. About 600 Snow Geese were at Back Bay on the date of our visit, and Jack Perkins said that many more had passed through the previous day. We saw 15 Brant flying west near Virginia Beach.

Dabbling Ducks. At Back Bay we saw one Mallard, 60 Black Ducks, a pair of Gadwall, and 10 Green-winged Teal. Most of the ducks had already departed.

Diving Ducks. In Hog Island Bay there were 30 Golden-eyes, one Scaup, 40 Bufflehead, and two male Surf Scoters. About 80 Old-squaw, 6 Surf Scoters, and 3 American Mergansers were observed from the Cape Charles ferry. Three Hooded Mergansers were seen flying over Hog Island. The Red-breasted Merganser was very abundant everywhere. In addition to 400 of these birds found in Hog Island Bay and other places, we encountered one flock in the ocean near Back Bay which Jack Perkins estimated to contain 1400 ducks. The large numbers of Mergansers was probably correlated with the large movement of fish which has already been mentioned.

Hawks. We saw a total of 90 Turkey and 2 Black Vultures. At Little Creek there were 9 Bald Eagles and one Cooper's Hawk. Two more Eagles and 4 Sparrow Hawks were seen between Virginia Beach and Back Bay. About 45 Ospreys were seen altogether, including nesting birds on Hog Island.

Coots. We saw 134 at Back Bay.

Shorebirds. On a sandy peninsula near the south end of Hog Island, we encountered a great flock of shorebirds which we estimated to include 15,000 individuals, although the number may well have been higher. Of course it was impossible to identify more than a fraction of the birds, but judging from the number of each species identified in comparison with the total number examined, we were able to estimate the total number for each species. According to our calculations there were about 12,000 Red-backed Sandpipers, 1000 Sanderlings, and 400 Black-bellied Plovers in the flock. In addition, we saw 6 Piping Plovers, 2 Dowitchers, 40 Semi-palmated Plovers, 2 Least Sandpipers, and a minimum of 21 Oystercatchers. At Back Bay we observed one Red-backed Sandpiper, 2 Greater Yellowlegs, one Wilson's Snipe, and 5 Killdeer.

Gulls. We saw a total of well over a thousand Herry Gulls, and about 110 Laughing Gulls. Six hundred Bonaparte's Gulls were found near Virginia Beach, and 60 on the way between Cape Charles and Little Creek. We only saw about 2 Ring-bills, probably because we didn't pay too much attention to the Gulls, and the Ring-bill is rather difficult to find in a flock of other Gulls, without careful scrutiny.

Terns. About 50 Forster's Terns were observed in Hog Island Bay, and one Royal Tern at Little Creek.

Razor-billed Auk. An immature auk (lacking the mark on the bill) was seen swimming near the shore of Hog Island by the coastguardsmen on May 27. It was again observed the following day, and collected in the evening. The bird was badly oiled on the belly.

Doves. We saw two Mourning Doves on Hog Island, one at Little Creek, and 10 near Lynhaven Inlet.

Kingfisher. One at Willis Wharf.

Woodpeckers. We saw a total of over 20 Flickers, and 4 Downies at Exmore. There were 2 or 3 Red-bellied Woodpeckers in the swampy woods behind Virginia Beach.

Flycatchers. There were very few of these birds. Only 4 Phoebees were recorded.

Swallows. We recorded 200 Tree Swallows at Hog Island and 2 at Back Bay; 2 Purple Martins on the Island and 12 in Virginia Beach.

Crows. About 30 Common and 70 Fish Crows were recorded - the numbers are estimates because the birds can only be separated definitely by voice. We did not see or hear a single Blue Jay on the entire trip!

Titmice. The Tufty, of course was common in the wooded areas. We saw about 25 altogether. Several Carolina Chickadees were found nesting near Seashore State Park.

Nuthatches. We found a single flock of 12 Brown-headed Nuthatches near Lynhaven Inlet.

Wrens. The Carolina Wren was common almost everywhere in the woods and shrubby areas.

Mimics. The Mockingbird was the commonest of the three species. Five Catbirds were found around Seashore State Park, and 5 Brown Thrashers at scattered localities.

Thrushes. The Robin was abundant and several Bluebirds were seen. We were rather surprised not to find any Hermit Thrushes, which had already arrived in New York at the time of our visit.

Gnatcatchers. Twenty of these birds were seen in Seashore Park.

Waxwings. We encountered a flock of 150 in Virginia Beach, and 30 at Little Creek.

Warblers. The Myrtle was by far the most abundant of all the Warblers. We recorded 100 in Seashore State Park and vicinity, 40 near Virginia Beach, 20 at Little Creek, and 30 on Hog Island. Thirty Pine Warblers were seen between Little Creek and Virginia Beach. In the swampy woods behind Virginia Beach there were 2 Parulas. Evidently there was a small flight on the night of the 30th., for we saw 10 Yellow-throats on the 31st., but only one the previous day. On March 30, in tangled shrubbery on the edge of a clearing in the wet woods near Virginia Beach, we had an excellent observation of a female Mourning Warbler. The bird fit the descriptions perfectly and had a very distinct hood with no eye-ring. Although this record is very unusual, we are absolutely certain of our identification. The following morning in the same general area we had an equally satisfactory observation of an Orange-crowned Warbler. On the 30th., I saw a Warbler which showed all the field marks of the Cerulean, but since the bird was not seen for more than a few seconds and since there is a slight possibility that it might have been a Myrtle Warbler which lacked the yellow rump and other marks, it is best not to accept it as a positive record.

Blackbirds. There were 50 Meadowlarks seen on Hog Island and small numbers elsewhere. Redwings were observed in small numbers (40 seen altogether) but we did not find any large flocks of hundreds such as we commonly get in the New York area. One flock of Boat-tailed Grackles on Hog Island was composed of about 500 birds, and a few were also seen at Back Bay. About 30 Purple Grackles were seen altogether, as well as 20 Cowbirds near Little Creek.

Finches. The Cardinal was common, yet we were interested by the fact that it was not much more common than in some areas of northern New Jersey with which we are familiar. The Chipping, Field, White-throated, and Song Sparrows were all common, as well as the Towhee. We saw 4 Goldfinches and 3 Vesper Sparrows in Exmore. In Seashore State Park there was a flock of about 40 Juncos. One Swamp Sparrow was recorded at Virginia Beach. On Hog Island there were many sparrows in the marshes, but we only paused to identify a few. Of these, 3 were Savannahs, 4 were Henslow's and 2 were Seaside Sparrows.

- 102 Crescent Ave., Leonia, New Jersey

RANDOM NOTES
By F. R. Scott

Charles City Co.: A black and white warbler was watched for some time with a flock of pine warblers on February 6 just west of the Hope-well ferry. The bird appeared to be in perfect health at the time and was crawling over the trunks of several large pines. The temperature at the time was about 40°, and many of the pine warblers were in song.

Pocohontas State Park, Chesterfield Co.: A pine warbler's nest with young was found here on April 18 and constitutes the earliest nesting on record for this species in this area.

Cape Charles-Little Creek ferry: A special trip on this ferry was made on April 19 with the main purpose being to locate any Wilson's petrels which might be in the area at this date. While none of these birds were found, the crossing proved interesting from another standpoint. The following birds were seen:

Common loon, 18; red-throated loon, 6; gannet, 69; double-crested cormorant, 300 (est. - at Cape Charles); surf scoter, 12; American scoter, 681; herring gull, 300 (est.); ring-billed gull, 300 (est.); laughing gull, 450 (est.); Bonaparte's gull, 34; royal tern, 17.

The abundance of American scoters and the absence of white-winged scoters seems somewhat unusual. On a similar trip made January 30 the ratio of scoters was 630 white-winged, 56 surf, and 32 American.

York Co.: Two Christmas bird counts have been made in this area, and the counts of waterfowl have proven to be quite interesting. There are few if any published records, however, of the waterfowl found here in late spring. Consequently, the birds seen in two areas visited on April 19 might be of some value. The first area was a marsh fronting on the Chesapeake Bay near Seaford. Here were seen the following: gannet, 1; black duck, 5; spotted sandpiper, 2; greater yellow-legs, 10.

The second area was the south shore of the York River from Yorktown west a few miles. The birds seen were as follows: common loon, 1; horned grebe, 30; pied-billed grebe, 6; double-crested cormorant, 57; blue-winged teal, 10; lesser scaup, 104; bufflehead, 202; ruddy duck, 259; hooded merganser, 5; red-breasted merganser, 6; osprey, 5; killdeer, 5; spotted sandpiper, 11; herring gull, 14; ring-billed gull, 25; laughing gull, 450 (est.); kingfisher, 4; fish crow, 6; A higher count of shore birds could undoubtedly have been obtained if more time had been available to cover the shore line thoroughly. A good view was had of a number of scaups through a 20x, 60mm. spotting scope, and all that were examined carefully were lesser scaups.

Hopewell, Prince George Co.: Two Caspian terns were identified on the James River here on April 24 and were examined for some time as they dove for fish. They were with a rather large flock of Bonaparte's gulls.

- Hampden-Sydney, Virginia

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NEW MEMBERS OF THE V. S. O.

A list of new members received since the publication of the membership list in the January-February issue of THE RAVEN follows:

Captain R. H. Blair	East Hundred, Cobham, Va.
Lt. (Jr.) C. H. Blair	F. P. O., New York, N. Y.
Dr. T. C. Bradshaw	% First National Bank Bldg., Blackstone, Va.

Miss Ruth Bredekamp	3731 S. Second St., Arlington, Va.
Mr. Frank C. Cross	9413 Second Av., Silver Springs, Md.
Mrs. J. D. DeJarnett	Box 230, Rt. 5, Lynchburg, Va.
Mrs. Keith Grant	606 Cabel Av., University, Va.
Miss Muriel Hegwood	Radford, Va.
Mr. John M. Irvine, Jr.	Wexford, Pa.
Mr. Kenneth R. Lawless	Univ. Hall, Univ. of Va., Charlottesville
Mrs. Thelma Y. Lehmann	2618 Crystal Spring Av., Roanoke, Va.
Miss Katherine M. Lewis	% Mrs. C. W. Darden, Jr., Charlottesville
Mrs. Royster Lyle	Mt. View Av., Danville, Va.
Miss Martha Moore	Stony Point Rd., Charlottesville, Va.
Miss Edith Pace	3308 Hanover Av., Richmond, Va.
Mrs. Nancy T. Pace	" "
Mr. & Mrs. Bruce D. Reynolds	1702 Burnly Av., Charlottesville, Va.
Mr. Stephen M. Russell	Oakland, Rt. 3, Abingdon, Va.
Mrs. Linden Stuart	R. F. D. #2, Charlottesville, Va.
Miss Laura V. Townge	4824 W. Seminary Av., Richmond, Va.
Mr. F. A. Wells	1816 Rosser Lane, Charlottesville, Va.
Mr. J. C. Womeldorf	Lexington, Va.

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FINANCIAL REPORT OF THE TREASURER OF THE
VIRGINIA SOCIETY OF ORNITHOLOGY
FOR THE YEAR 1948

RECEIPTS

Balance on hand January 1, 1948	\$138.12
Received for membership dues	201.00
Received for back issues of THE RAVEN	5.75
Received special contribution (Mr. Harold H. Bailey)	10.00
Total	<u>\$354.87</u>

DISBURSEMENTS

Issues of THE RAVEN	\$57.00
Postage	25.85
Stationery	66.25
Supplies	7.13
Express charges (shipping typewriter)	3.91
National Audubon Society, N. Y., Dues to Oct. 1948	10.00
" " " 1949	10.00
Expenses Annual Meeting 1948 - Prof. Maurice Brooks	25.00
Guest tickets for dinner	6.00
	<u>\$211.14</u>

Balance in the State-Planters Bank & Trust Co., Richmond, Va.
December 31, 1948 \$143.73

W. Edwin Miller, Treasurer



The Raven

BULLETIN OF THE VIRGINIA SOCIETY OF ORNITHOLOGY

J. J. MURRAY, EDITOR
LEXINGTON, VA.

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NESTING HABITS OF THE RAVEN IN ROCKBRIDGE COUNTY

By J. J. Murray

Beside a nest high up in a cliff on White Rock Mountain sits a female Raven. On the mountain-side that drops steeply away from the cliff the trees are venturing into tender green leaf. Through the treetops pioneer warblers are working their way northward - Black & Whites, Parulas, and Black-throated Greens, with some belated Myrtles. A Scarlet Tanager's strident song is heard, and the explosive but musical scream of a Crested Flycatcher, while from a dead tree on the ridge a Pileated Woodpecker calls its hoarse "whucker-whucker-whucker." Below the woods the Raven sees the signs of a civilization in which it has no part: the open pastures where the cattle feed, the barns where they shelter, and the homes of their human masters. Farther still is a glimpse of the winding ribbon of Highway 60, with its passing cars. Across the valley rises the magnificent double bulk of House Mountain; and in the haze of the horizon stretches the long line of the Blue Ridge.

On her perch on the ledge the Raven ruffles her feathers and opens them to the warm April sunshine, while she watches the slope of the mountain for approaching enemies. High above her swings her mate in search of food. The eggs on which she sat through the cool days of late March and early April have now hatched. With the food that she and her mate have been pecking down their blood-red throats, the young Ravens have been growing fast. Before half the days of May have gone, they will leave the nesting ledge and go out to increase the Raven population of this beautiful mountain country.

There is probably no section in the eastern United States where the Raven is more common than in Rockbridge County, Virginia. Either Ravens are on the increase in recent years in the Southern Appalachians, or there were always more birds than was generally thought. The former alternative is probably the true one. This increase may come in part from the fact that larger birds are not so mercilessly persecuted as in earlier days. At least along the Blue Ridge Parkway, the increase may be due to greater abundance of food, because of scraps left at the camps and picnic grounds by tourists. At any rate, in Rockbridge County, which is the roughest and wildest county along the main Valley highway, this great bird has become familiar to all students. I even see them occasionally flying high over my yard in Lexington. Some years ago (in 1940) I had reports from some mountaineers cutting chestnut wood in the Blue Ridge of an albino Raven which they had seen frequently.

With all this, however, it is not easy to locate a Raven's nest; and it is still more difficult to reach one when located. At present we have three nesting sites under observation in Rockbridge County, and have two other pairs narrowed down to a fairly small area. One of the known sites has been shown to V. S. O. groups. For obvious reasons, I shall not locate the others at all definitely.

The nesting site of the Raven is always very inaccessible, even though at times it may be in plain view. The V. S. O. site is the only one I have seen that can be reached without ropes. In this section the nest is always built on a protected shelf in a cliff. Some of the older mountaineers have told me of seeing nests in pines, but they may have confused these with crow nests. Bailey states that in Giles County they breed in large 'balsams.' The cliff in which the nest is located is normally a sheer one, of rather solid rock, with no slanting crevices that can be climbed, and from 75 to 100 feet in height. The nest is placed from 30 to 60 feet from the bottom of the cliff. Invariably in my experience there is above the nest shelf an overhang projecting for six feet or more, and there is either a projection below the shelf or the shelf is deep, with the nest at the back of it. In only one case that I have seen can one actually look into the nest from any vantage point on the cliff. Sometimes a view can be secured by climbing a tree growing near the base of the cliff. In the latest location to be discovered there is not only an overhang above and a projection below the nest but there are stone buttresses at each side to hide the nest. The outer material of the nest could be seen but no view of its contents could be secured. Interestingly enough, the incubating Raven could look down upon cars passing along a hard-surfaced road not 200 yards from the nest.

A nesting cliff is apparently used again and again, even if, as in the case of what I have called the V. S. O. nest, the birds are much disturbed by visitors. For this nest the Ravens have two cliff sites on the same mountain, not far apart, which they use, alternating between them as a general rule but sometimes sticking to the same cliff for two years at a time. Here we know that the birds have raised families of young for twelve years; probably, of course, for a much longer period. One of these two locations is the most accessible site that I have known Ravens to use. The nest of this pair has been visited every year since it was discovered in 1938 without driving the birds away. In the latest nesting site, discovered this year, an old nest on a shelf some ten feet away indicates that the site is not a new one.

The V. S. O. nest, first discovered by Mr. Jacob H. Hostetter, was unusual in two respects, that it was very low, being only 20 feet from the base of the cliff, and that it was on a very shallow shelf, about 18 inches deep. In other respects it may serve as a typical nest for a description. In over-all measurements it was about five feet long and 18 inches wide, this being the full width of the shelf, and 10 inches deep. In inside measurements it was 8 or 9 inches across and 7 inches deep. It consisted of a mass of sticks, varying from $\frac{3}{4}$ of an inch in diameter down to twigs. In the outer layer the sticks were loosely put together, with pieces of vine hanging down from the mass. Some of the material had broken loose and fallen to the ground. The inside cup was tightly built, lined with grape and cedar bark, soft lichens, and short animal hairs. In other nests I have seen soft grasses, feathers, and sheep's wool. About this nest, as with most of them, there hung a distinctly unpleasant odor.

Eggs are usually laid during the first half of March. One nest visited on February 28, 1944, was empty but apparently ready for eggs. On March 16 it had six eggs, arranged in two rows of three each. At the nest just discovered this spring the bird seemed to be incubating on March 22. The eggs ordinarily hatch early in April, although Col. R. P. Carroll reported fairly large young in a nest on March 28, 1943. Even though more eggs are laid I have never known more than five young to be reared. The young leave the nest from early to middle May. Mr. Hostetter told me that the birds did not leave the nest in 1932 until May 20, which according to him was later than usual. I have seen young almost naked on April 18 (in 1938), and almost grown on April 19 (in 1947). The inside of the mouths of young birds is blood red.

The adult Raven is a voracious and even a filthy feeder. I know of no living creature that is more nearly omnivorous. The young are given a wide variety of animal food. I gathered for analysis a handful of bones at the base of a nesting cliff in 1942, and a handful at another nest in 1943. The contents were listed as follows:

- 1942: 10 flying squirrels
1 Norway rat
1 adult gray squirrel
1 squirrel, probably a young gray squirrel
1 mourning dove
1 blue jay, and 1 unidentified bird of the same size
1 colubrine snake
short-horned grasshoppers
- 1943: 6 flying squirrels
1 bird of blue jay size
1 ruffed grouse

In each case a Polygyra snail shell was present, but as they are abundant on the mountain sides they may not have come from the nest. It would be interesting to know how much of this material was taken alive; some of it undoubtedly was. Ravens share with Turkey Vultures the habit of gathering freshly-killed prey on highways in the mountains. I have twice passed in a car a Raven by the side of Route 60 at the top of the Blue Ridge without frightening it up from its meal.

The chief reason that the Raven has survived and even increased in this section, with the hand of man so long against it, is its exceeding wariness. It is impossible to come anywhere near a nest without being noticed by the birds. When the visitor is still at a distance, the bird will leave the nest. Then, as long as the intruders are in the neighborhood, both birds will fly around, occasionally stopping in a tree at a safe distance, and will call frequently. Unless incubation is well advanced or there are very small birds to brood, the bird will not return to the nest while one is in sight. Large birds, such as vultures or hawks, which approach the nest are promptly driven away. Only in the case of the Duck Hawk, which oc-

casionally nests near the Ravens, is there an uneasy armistice. Even with these the truce is apt to be broken at any time and a battle ensue. In such cases the Duck Hawk seems to be the aggressor.

The Raven is so shrewd and powerful a bird that it does not suffer too much from its natural enemies, either living or elemental. Its chief danger is from the pressure of civilization. Even that, however, the Raven, if given a decent chance, can stand. If man will cease his deliberate persecution, there seems to be no reason why this magnificent bird may not continue to be a striking feature of our mountain landscape and even re-enter much of its former range.

Lexington, Virginia

(Read at the Annual Meeting of the V. S. O., Charlottesville, Va., May 20, 1949)

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NOTES ON SOME NESTING WARBLERS OF MONTGOMERY COUNTY

By John W. Murray & Robert J. Watson

The following notes were compiled during a two-day trip made on June 19 and 20, 1949, to two of the lesser-known regions of Montgomery County. Despite the great amount of ornithological research which has been done in Montgomery County, it appears that these two regions have been almost entirely neglected from an ornithological standpoint.

The first of these two regions which we visited on this trip was Poor Mountain, located in the southeast corner of the County. The greater part of this mountain is in Roanoke County, but the westernmost tip of it projects into Montgomery County and, rising to a height of just over 3,700 feet, forms the highest point in the County. The area covered in our survey was the summit of the Montgomery County portion, from the fire tower northeastward along the crest of the mountain for a distance of approximately a mile. This region was covered in an overnight trip lasting from the late afternoon of June 19 to early in the morning of June 20.

The other region visited was Gap Mountain, which we surveyed rather more briefly on June 20, immediately after leaving Poor Mountain. Gap Mountain is a lower ridge with a maximum elevation of about 3,000 feet, which runs along the northwestern border of the County and forms part of the Montgomery-Giles boundary. We covered only a small part of this mountain, extending not over two miles westward along the top of the mountain from U. S. Highway 460. An earlier survey of this region, made on June 24, 1948, and covering a considerably larger portion of the mountain, has already been published (The Raven, 1948, 19:52-54)

In general, the bird life observed in these areas was precisely what one would expect to find in such regions and did not differ appreciably from that of other similar parts of the County. However, the following species observed on the trip seem worthy of some mention.

Worm-eating Warbler. This species occurs regularly in Montgomery County as a breeding bird, but in general does not usually appear to be particularly numerous. Its abundance on Gap Mountain may therefore be worth noting. From the frequency with which it was encountered on both of the two Gap Mountain trips, this bird appears to be commoner on Gap Mountain than anywhere else in the County, and, together with the ovenbird and the hooded warbler, is the commonest warbler on the mountain. We also observed this species on Poor Mountain, near the summit, at an elevation of perhaps 3,000 feet.

Chestnut-sided Warbler. The late Dr. E. A. Smyth, in his published survey of Montgomery County birds ("Birds Observed in Montgomery County, Virginia", The Auk, 1912, 29:508-530), recorded this species as a migrant and occasional breeding bird; he gives two nesting records, both for May 23, 1909, as his only breeding records (p. 524). He does not state where these two records were obtained. Since then it has not, so far as we know, been recorded as a breeding bird from the County.

We found this species abundant on the summit of Poor Mountain. An electric power line, running westward, crosses the mountain top within a few yards of the fire tower. Along the power line and around the fire tower, the forest growth has been cut away and has been replaced by a bushy growth of shrubbery some five or six feet high which forms an ideal habitat for this bird. At least a half dozen singing males could be heard within a few hundred yards of the fire tower. Doubtless this species nests regularly in this region.

Black-throated Blue Warbler. Both this and the next species are recorded by Smyth (loc. cit.) merely as migrants, and we know of no previous nesting records from Montgomery County for this species. However, three or four singing males (doubtless cairnsi) were observed on Poor Mountain along the mile or so of roadway running northeastward from the firetower.

In this connection, it might be mentioned that a VPI student, Mr. Willis C. Royall, Jr., of Salem, Virginia, reported seeing a singing male of this species on June 8, 1949, on top of Brush Mountain, near the fire tower, at an elevation of approximately 2,600 ft.

Black-throated Green Warbler. Somewhat to our surprise, we did not find this species on Poor Mountain. However, one singing male was observed on Gap Mountain, at a point just below the crest of the mountain on the Montgomery County side, approximately two miles west of Highway 460. An earlier record (June 24, 1948) of a singing male of this species from almost this same location has already been

published (The Raven, 1948, 19:53). This second record suggests that the earlier record was not a mere freak and that this species is probably a regular, though uncommon, breeding bird in this little-known section of an otherwise well-worked county.

In conclusion, one final observation, though not made in Montgomery County, might be mentioned. On June 20, as we were leaving "Tony's Cave", in Giles County, where we had gone to eat our lunch, we observed a singing Least Flycatcher perched in a large apple tree on the other side of Sinking Creek. Tony's Cave is located along Sinking Creek at the foot of Salt Pond Mountain, a few hundred yards from where the Mountain Lake road branches off from U. S. Route 460. The elevation here is about 2,000 feet. While the Least Flycatcher is, of course, of regular occurrence in the vicinity of Mountain Lake, a few miles distant, at an elevation of 4,000 feet or more, it seems slightly unusual to find it at such a low elevation.

Blacksburg, Virginia

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IN MEMORIAM - ELIZABETH MARTIN SHAW

By Ada Dandridge Ball

On July 18, 1949, death removed from our midst one of the most active members of the Virginia Society of Ornithology, Elizabeth Martin Shaw (Mrs. Frederick William Shaw).

Elizabeth Martin was born in Independence, Kansas, and spent her girlhood in that place, Fort Scott and Fort Leavenworth. In 1909 she married Dr. Frederick William Shaw. In 1911 Dr. Shaw's army duties took them to the Philippine Islands where they lived for two years. During a part of that time Mrs. Shaw taught the native girls handwork. On their return to America they spent about a year in the Navajo Indian Reservation in New Mexico. While Mrs. Shaw had always loved the wild birds, it was there that the unfamiliar birds so fascinated her as to inspire the serious study of bird life that made her such an authority in that field. She lived for some time in Rolla, Missouri, where her husband taught in the School of Mines and Metallurgy. Then in 1924 Dr. Shaw accepted a professorship at the Medical College of Virginia, which he held until his death a few years ago.

So great was Mrs. Shaw's knowledge of birds that she was in demand as a speaker on that subject before the garden clubs of Richmond and vicinity, and her interest in nature and her love for young people led her to do volunteer work with the Richmond Public Schools and the Girl Scouts, taking the children on bird walks and thus opening to them the beauties and the wonders of the world of nature.

Not only was she one of the earliest members of the Virginia Society of Ornithology, but so active was her interest that for many of us to think of V. S. O. was to think of Mrs. Shaw. She used to attend the meetings of the Wilson Bird Club and, though for the past few years she was unable to walk without the aid of crutches, she attended the annual meetings of the V. S. O. She had just returned from the meeting of the Brooks Bird Club at Jones' Spring, West Virginia when she was stricken. Such was her enthusiasm that during her last illness she was hoping that she might go on the V. S. O. field trip in August.

She was never too busy to respond to the needs of less expert bird students, but in response to phone calls such as, "What bird is this in my yard?" she would cheerfully and painstakingly tell the novice just how to proceed and what points to look for in identifying birds. Her sweet and gentle ways, her knowledge and love of nature, and her dauntless courage endeared her to all who knew her and made her a valuable member of this society. Her place cannot be filled, and all of us shall miss her sadly.

Richmond, Virginia

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NOTES ON SPRING MIGRATION AT CHARLOTTESVILLE

By Charles E. Stevens, Jr.

A White-winged Scoter in juvenile plumage appeared on Henley's Lake, a 25-acre pond about 12 miles west of Charlottesville, on January 24, 1949, where it was joined by another juvenile bird on February 16. The two ducks were usually seen together and were rather difficult to flush. Their plumage brightened noticeably towards early April, and they seemed apparently of the same sex. They were last observed on April 22 by Kenneth Lawless.

This is the first record of the bird for Albemarle County, and one of the few records for inland Virginia. Two other records which I know of are: five birds at Lynchburg, April 24, 1940 (Raven, 1940, p. 43), and an immature female at Blacksburg, May 9, 1943 (Raven, 1945, p. 77).

On May 7, 1949, Kenneth Lawless, R. J. Watson, and the writer observed a singing Prothonotary Warbler at a small pond on Route 613 about two miles northwest of Scottsville. The bird was probably a transient as it was not found on later visits to the vicinity. This occurrence is remarkably far inland. Fred R. Scott finds it breeding in the edge of the Piedmont near Richmond, and Morton Marshall recorded it in Appomattox County near Pamplin.

Also of unusual note this spring was a seemingly crippled Junco which remained on the University of Virginia grounds until a quite

late date. Seen several times in the vicinity of the Geology Building it was first noted by Dean Ivey F. Lewis on May 20, and was last observed by R. J. Watson on May 28.

Charlottesville, Virginia

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CAUTION URGED IN OUTDOOR USE OF INSECTICIDES

"Reports of heavy mortality of birds, fish, frogs, crebs and other marine and fresh water life, allegedly as a result of insecticide dusts and sprays, has led the National Audubon Society to investigate the situation"; John H. Baker, president, said today. His complete statement follows:

"Far too little attention has been paid to repeated warnings by the U. S. Fish & Wildlife Service and the Department of Agriculture on the danger of employing certain new insecticides in heavy concentrations in outdoor areas. With the expanding use of such poisons, increasingly serious damage can be expected unless great care is taken in dusting and spraying. These new insecticides include DDT, DDD, TEPP and chlorinated camphene.

"These toxic agents in heavy applications not only kill birds and fish, but lead to heavy destruction of bees and other insects valued by farmers and fruit-growers. Land fertility may also be affected. With the spring spraying season at hand, the problem is urgent. It concerns human welfare as well as wildlife.

"Surveys and experiments conducted by the U. S. Fish & Wildlife Service have demonstrated how and in what concentrations DDT may safely be used. Other organics have not yet been fully tested. Some of them are more deadly than DDT to warm-blooded animals. Wildlife mortality has been cited by scores of observers after checking the results of local insecticide spraying and dusting. Such evidence confirms the hazards of drenching outdoor areas with the new insecticides.

50% Bird Mortality from Insecticide

"Among specific examples of destruction of wildlife was a reduction of 50% or more in the bird population in six days in a test plot in Texas, dusted with 4.36 pounds of DDT to the acre. A reduction of 65% took place in six days among common bird species in a Maryland woodland tract, following serial treatment with a similar amount. Quail fed on diets containing low percentages of various new insecticides did not begin to succumb until the eighth day. Deaths continued among them up to the 34th. day of the experiment.

"Heavy kills of fish and crabs occurred after aerial applications where as little as $\frac{1}{2}$ pound of DDT to the acre of water was employed, the poison being fatal to aquatic life in much lower concentrations than to land animals.

"Where lighter woodland applications of DDT than 2 pounds per acre have been used, little or no animal mortality has apparently resulted. Even in such cases, however, the destruction of all types of insects by this toxic agent has occasionally been followed by aphid or mite outbreaks resulting from loss of natural control by other insects.

"A great deal more research is clearly needed to establish the value and limitations of organic insecticides, and their safe employment out of doors. There is no question but that certain crops have benefited by the proper use of these poisons, but every precaution should be taken in their application at this early stage of their development.

Slow Action Fatal to Birds

"The peril of the new insecticides to birds lies in the fact that these organic poisons act slowly. Some of them have residual, cumulative effects. Birds usually devour only living insects, but poisoned and poison-laden insects which have not yet succumbed can provide a fatal diet for adult birds and their young. A nest brought to the Audubon Society's offices contained four dead nestling robins, surrounded by dead carrion beetles which had in turn been poisoned.

"Adult birds may fly many miles from a sprayed area before they are seized by the convulsions which precede death from DDT. It should also be borne in mind that insectivorous birds avoid or abandon any territory in which insect life has been practically exterminated. This explains the disappearance of birds from many areas subjected to repeated heavy spraying. Practically all our land birds are insectivorous in the nesting season.

"The opinions of many qualified officials who have generously cooperated in our survey emphasize that rigorous measures should be taken by farmers, municipal authorities, golf-course officials and other private property owners to avoid damage from using excessive amounts of these poisons. The experience of the U. S. Fish & Wildlife Service in treating many types of land should serve as a dependable guide to safe, effective concentrations for various purposes. Most important of its findings is the conclusion that such poisons should be used only when and where they are needed, and in the minimum quantities necessary to control the specific insect target.

Concentrations for Use over Land and Water

"With regard to DDT, the Fish & Wildlife Service recommends the use of less than $\frac{1}{5}$ pound per acre over water or marsh, in oil solution, not in dust, to avoid kills of fish, crabs and crayfish. Less

then 2 pounds of DDT per acre should be used even in forest areas, to prevent death or injury to birds, frogs and mammals. On turf and lawns heavily infested by Japanese beetles, effective larva control can only be carried out by concentrations as high as 20 or 25 pounds of actual DDT per acre. This can be expected to take a moderate to severe toll of bird life.

"DDT should be applied in early spring for early insects and not again until late July or August, after the bird-nesting period, to control late-appearing insects. The extreme sensitivity of fish and crabs to this poison makes its direct application inadvisable on streams, lakes and coastal bays where injury would be inflicted on commercial or sport fishing, and on ducks, shorebirds and other species which feed on aquatic animals.

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NEW \$2 DUCK STAMP TO AID CONSERVATION

"Duck stamps" required by law to be used by migratory waterfowl hunters over 16 years of age, will cost \$2 this year under the terms of the Johnson-Thompson Duck Stamp Bill which was passed in the 81st. Congress. The "duck stamp" has been sold for \$1 since the law was first passed in 1934. The Department of the Interior's Fish and Wildlife Service anticipates that the sale of stamps will exceed 2,000,000, last year's record figure. The additional money obtained from the increased price will go to offset rising costs encountered by the Fish and Wildlife Service in its efforts to expand the important work on the conservation of waterfowl. Ten per cent of the money secured from the sale of the stamps will be used principally for enforcement, the most important phase of waterfowl conservation. This limitation continues budgetary restrictions on game law enforcement, which have been in effect for some time. Rising costs of equipment, such as boats, automobiles and sidearms, necessary in the conservation program, will limit the number of new enforcement agents that can be assigned to field work. A few land negotiators and engineers will be added to the present staff.

Additional revenues, however, will permit the Service to complete development work on existing refuges and to acquire critical areas along the important flyways. Rehabilitation work on refuge structures, in many cases delayed by the war, will be the first step in the program. Improvements of areas already under government ownership will provide additional food and protection for ducks and geese. Development work is only partially completed on many existing refuges and on recently acquired areas, work has not been started.

The new amendment to the duck stamp bill will permit the opening of not more than 25 percent of the newly acquired areas to hunting - at the discretion of the Secretary of the Interior - when duck populations are at favorable levels.

The purchase and development of these refuge areas will be costly. It will take several years of duck stamp revenues to be able to do it. The areas to be improved have already been tentatively selected, but state conservation departments will be consulted, and public hearings held, before purchases of lands are made.

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SPRING SEASON - 1949 - VIRGINIA

By J. J. Murray

(With this issue we begin a series of Season Reports somewhat after the fashion of the regional reports in Audubon Field Notes. We plan to use not only the Virginia material appearing in Audubon Field Notes, but also a fuller selection of notes than can be used in the limited space in that journal. The Editor will be glad to have reports from all V. S. O. members. It will help if the material is arranged as in this article. Reports should be received by the Editor not later than the following dates: for the Winter Season, April 1; Spring Season, June 1; Summer Season, August 15; Fall Season, December 1.)

The Spring Season. March and April were about normal in temperature, although early warm spells brought out the vegetation ahead of normal. The migration seems to have been spread out, without great waves of small birds, and was consequently rather disappointing.

Pelagic Birds. Stevens had a few Common Loon records in May in Charlottesville. Scott saw 18 Common and 6 Red-throated Loons from the Cape Charles Ferry on April 19. He also saw 30 Horned Grebes in York Co., on the same date; but found them surprisingly scarce inland, with only two records: 4 at Curles Neck and Hopewell, March 20, and 2 at Hampden-Sydney, May 10. Stevens had fewer Horned Grebes than usual in Albemarle Co., with only four records, although Lawless found 9 on March 25. There were 25 Gannets at Virginia Beach, March 20; and Scott saw 69 from the Cape Charles Ferry and one in York Co., April 19. Following a hard northeast wind Jack Perkins saw 3 Brown Pelicans at Sandbridge, near Back Bay, on May 10. Double-crested Cormorants were common at Hopewell through May, with a high count of 18 on May 15 (Scott). Scott counted 300 at Cape Charles, April 19; the V. S. O. group saw one at Henley's Lake, Albemarle Co., May 21; and J. W. Taylor saw one at Front Royal, May 29.

Hérons, Etc. The heron flight was poor at Back Bay (Perkins). An American Egret on May 7 was a first spring record for Hopewell (Scott). Five Great Blues were seen in a flight at Lexington on April 13 (Murray), the first record for more than 2 at a time. Lawless found the first Green Heron's nest for Albemarle, with 5 eggs on May 28. The Black-crowned Night Heron was recorded at Charlottesville on April 9 (male and 2 females, April 28, and May 1 (Stevens).

There was only one previous record. Max Carpenter found the Yellow-crowned Night Heron again near Bridgewater; he saw 3 on several occasions in May, but could secure no nesting record. Lawless secured the second and third Albemarle records for the Least Bittern; one at Henley's on May 11, and one at Hatton, on the James River, on May 21. One of the most interesting records for the season was made when Mrs. Thomas P. Thompson, while crossing York River, saw what she was sure was a Wood Ibis. She had a good look with binoculars and compared it with the picture in Peterson's Field Guide.

Wildfowl. Two flocks of Canada Geese passed over Hampden-Sydney on the night of March 25; one flock, apparently confused by the lights of the college dormitories, circling the area for 15 minutes (Scott). The high count at Curles Neck was 3292 on March 27, a decrease from last year. The wintering flock left the first week in April, but migrating flocks were seen as late as May 1 (Scott). A flock remained at Henley's Lake, near Charlottesville, until April 22 (Stevens). The Snow Goose migration was late at Back Bay. Some 10,000 were seen on March 27, with the last seen on April 12 (Perkins). A Snow Goose and a Blue Goose, both adults, were last seen at Curles Neck on March 27 (Scott). Perkins saw 10 Blue Geese at Back Bay on March 27 and 2 (immatures) on May 15. Gadwalls were seen regularly, 2 to 8 at a time, in Albemarle through April 13 (Stevens); and Scott saw 2 on April 9 and on April 18 at Byrd Park. T. W. Donnelly and N. Shelton saw 8 young Mallards at Roaches Run Sanctuary on April 18. Perkins saw a pair of Baldpates at Back Bay on May 15, but was not able to determine whether they were nesting. This species passed through Richmond rather late, 2 being seen at Byrd Park as late as May 20 (Scott). It was more common than usual in Albemarle; and a few were seen as late as May 21 (Stevens). Feb. 26 was the earliest date and May 3 the latest at Lexington. The Pintail, usually scarce in Albemarle, was seen 8 times, with high counts at Henley's of 18 on March 5 (Lawless) and 24 on March 10 (Stevens). Green-winged Teal, ordinarily scarce in Albemarle, were noted 6 times, with 9 on March 18, and a very late male on May 11 (Lawless). Two small flocks were seen at Curles Neck, March 20 and April 10, where it has been rare for many years. Perkins had several unverified reports of Blue-winged Teals nesting at Dam Neck, near Back Bay, both this and last year. This species was more common than usual in Albemarle, but only fairly common at Richmond. It was common up to May 3 at Lexington. Wood Ducks are definitely increasing around Lexington. Two Shovellers were seen at Roaches Run Sanctuary, near Alexandria, on March 5. This species, of which there had been only one previous local record, was found several times, March 11-18, in Albemarle. Twenty Ring-necked Ducks were seen at Dyke on April 10. Two Greater Scaup were carefully identified by Scott at Richmond on March 6 and 20. Lesser Scaups were present in Richmond until May 28 and in Albemarle until May 29. High counts in the Hopewell-Curles Neck area were 177 on April 24 and 206 on May 1. In Albemarle the Golden-eye was amazingly scarce this year, while Buffleheads and Hooded and Red-breasted Mergansers were less common than usual. Scott had two inland Old-squaw records:

Hopewell, March 20, and Byrd Park, April 14. Ruddy Ducks stayed in the Hopewell area until May 15, with a high count of 445 on March 27 (Scott). The American Merganser was noted at Lexington on February 28 (3 males and 4 females) and on March 8 (5). Red-breasted Mergansers were fairly common in the Richmond area until June 8 (Scott).

Birds of Prey. Scott made a remarkable count of 337 Black Vultures on May 7 at Shirley, on the James. The birds were gathered about the refuse from nets after a day's commercial fishing. Lawless found a Black Vulture's nest near Farmington, which had one egg on April 23 and a hissing, downy youngster on May 31. Charles Platt reports a young Red-tail out of the nest in Albemarle on May 12. Scott and John Irvine saw a Pigeon Hawk at Henley's Lake, Albemarle, on April 11.

Rails and Shorebirds. The high count of Coots at Byrd Park, 97 on March 13, was the lowest for years (Scott). There were 7 at Roaches Run on March 5. A King Rail was seen at Front Royal, May 29 (J.W. Taylor). A very early Killdeer nest, with 4 eggs, was found by Major Abbott at Fort Belvoir, March 17. A Semipalmated Plover at the Whitehall gravel pits on May 25 was a first record for Albemarle (Stevens). Two Semipalmated Sandpipers on May 28 made the second record for Albemarle County. The shorebird migration was very poor at Back Bay except for Yellow-legs and Snipe, the latter being more numerous than usual in late April. There were few shorebirds at Richmond, the only interesting item being a flock of 20 Lesser Yellow-legs, with 6 Greater Yellow-legs at Curles Neck, May 1 (Scott). Murray collected a White-rumped Sandpiper on May 23 at Cameron's Pond, near Lexington, a second record for Rockbridge County.

Gulls and Terns. The last Herring Gull at Hopewell was seen on April 16. Ring-billed Gulls were more common in the Hopewell-Curles Neck area, with a high count of 861 on March 20, including one flock of 350 birds at Curles Neck (Scott). A Laughing Gull at Hopewell on May 15 is a first spring record (Scott). Bonaparte's Gulls were common at Hopewell, April 16 to May 29, with a high count of 57 on April 24 (Scott). Stevens recorded four gulls - Herring, Ring-billed, Laughing, and Bonaparte's - in Albemarle this spring. One Bonaparte's Gull was seen on May 4 at a small fishpond on the Womeldorf Farm near Lexington. Caspian Terns were reported as follows: 2 at Hopewell, April 24 (Scott); 8 at Roaches Run, April 7 (Donnelly); 3 at Four Mile Run, April 18; 4 at Dyke, April 20; and one at Henley's Lake, May 1, first Albemarle County record (Lawless). A Common Tern was seen at Henley's Lake, April 13.

Land Birds. Scott found an immature Prairie Horned Lark, just a few days out of the nest, at Curles Neck on May 7. This is much the farthest east record for breeding in Virginia. In the Richmond area the Tree Swallows migrated early, and the Bank Swallows late. A Cliff Swallow, rare in that area, was seen on May 29 at Curles Neck.

The first Phoebe was seen at Fort Belvoir on March 5 and at Arlington on March 6. The Fish Crow seems to be fairly common in Piedmont Virginia and even in the central part of the Valley, but few nests are known. Lawless found one this spring in a pine near Scott Stadium at the University of Virginia. The Red-breasted Nuthatch was seen at Fairfax through April 21. Three Short-billed Marsh Wrens were found at Curles Neck on May 15 and 20 (Scott); and one in a wet meadow at Hatton, Albemarle County, on May 21 (Stevens). Lawless saw a late Hermit Thrush at Charlottesville on May 7; and Stevens saw and heard a Gray-cheeked Thrush there on May 28 and 31. The high count for Pipits at Curles Neck was of 400 on March 13. Shrikes were feeding young at Richmond on May 22; and young were out of the nest in Albemarle on May 7. Murray saw a White-eyed Vireo at the foot of House Mountain, Rockbridge County, on May 15. Scott saw a Blue-winged Warbler at Curles Neck on May 1 and on May 15. He found a Pine Warbler's nest with young at Swift Creek, April 18. Black-polls remained at Richmond until June 8. A Prothonotary Warbler, seen and heard in May at Scottsville by Stevens, is much the farthest inland record for Virginia. Scott counted 37 Yellow-throated Warblers in the Richmond-Hopewell area, March 27. A Nashville Warbler, rare in the area, was seen at Lexington on May 2. Ruskin Freer, in his weekly column in the Lynchburg News reported flocks of Siskins on his lawn in Lynchburg on several days during the spring; Murray saw 20 at Lexington on April 11; there was a light invasion in Albemarle from March 15 to May 5, with a maximum of 39 on April 14 (Stevens); and there was a maximum count at Dyke of 50 on April 20 (Donnelly). Dickcissels have now appeared at Curles Neck for the fourth successive year, one being first seen by Scott on May 7 and up to 3 by May 20. A new colony of Henslow's Sparrows, with about 6 singing birds, was found by Stevens near Scottsville. A Savannah Sparrow flew in a dormitory window at Hampden-Sydney College on the foggy night of March 25.

Lexington, Virginia

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The Raven

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V. S. O. FALL FIELD TRIP TO BACK BAY

By Charles E. Stevens Jr.

On August 20 a party of 14 (Misses Reevely, Tomkins, and Woodson, Mrs. Floy Barefield, Cooper Barefield, R. J. Beasley, F. R. Scott, Kenneth Lawless, Dr. J. H. Grey, Jr., Col. R. P. Carroll, Robert Paxton, Royster Lyle, Jr., W. F. Minor, C. E. Stevens, Jr.) joined Jack Perkins for a field trip at the Back Bay National Wildlife Refuge, migrating shorebirds being the primary attraction. The day was somewhat windy and drizzly in the A. M. Covering some of the Sand Bridge area, about 7 miles of open beach, the Wash Flats, and visiting Long Island, the group recorded 77 species.

Outstanding were 4 early Great Black-backed Gulls, a few early Cedar Waxwings, and the tremendous numbers of Tree Swallows along the telephone wires back of the beach. As usual, the number of shorebirds was not comparable with the amount that can be found on the Eastern Shore at this season.

The day's list follows:

Pied-billed grebe, 1; double-crested cormorant, 7; great blue heron, 3; American egret, 34; snowy egret, 6; La. heron, 1; little blue heron, 32; Am. bittern, 3; least bittern, 3; mallard, 7; black duck, 28; blue-winged teal, 8; red-shouldered hawk, 1; bald eagle, 4; marsh hawk, 1; osprey, 2; clapper rail, 1; semipalmated plover, 21; black-bellied plover, 24; ruddy turnstone, 19; Hudsonian curlew, 1; spotted sandpiper, 2; willet, 6; greater yellow-legs, 12; lesser yellow-legs, 28; knot, 6; least sandpiper, 111; dowitcher, 17; semipalmated sandpiper, 88; sanderling, 660 (est.); great black-backed gull, 4; herring gull, 180 (est.); ring-billed gull, 43; laughing gull, 220 (est.); gull-billed tern, 5; Forster's tern, 13; common tern, 82; least tern, 17; royal tern, 10; Caspian tern, 29; black tern, 9; black skimmer, 4; mourning dove, 7; yellow-billed cuckoo, 1; chimney swift, 4; hummingbird, 3; kingfisher, 3; flicker, 5; eastern kingbird, 28; tree swallow, 2470 (est.); bank swallow, 5; barn swallow, 244 (est.); purple martin, 8; crow, 12; fish crow, 14; brown-headed nuthatch, 3; house wren, 2; Car. wren, 10; long-billed marsh wren, 4; short-billed marsh wren, 9; catbird, 16; cedar waxwing, 7; starling, 6; white-eyed vireo, 1; pine warbler, 3; yellow-throat, 27; bobolink, 165 (est.); meadowlark, 29; red-wing, 179 (est.); boat-tailed grackle, 1; cardinal, 5; indigo bunting, 2; towhee, 2; Henslow's sparrow, 2; sharp-tailed sparrow, 3; field sparrow, 14; song sparrow, 24.

TWO UNUSUAL NESTING SITES OF THE SPARROW HAWK

By J. J. Murray

The Sparrow Hawk has been steadily increasing in recent years in Rockbridge County, Virginia. Although sharing the persecution to which all forms of hawks are subjected, it has had a much easier time since the bounty system was discontinued. This is an illustration of the obvious fact that the only hawks the bounty system succeeds in effectively reducing are the beneficial species. In fact, it can probably be argued that the success of the bounty plan is directly proportional to the economically beneficial character of the hawk, the little Sparrow Hawk being the worst sufferer, the Red-tail next, and the Cooper's Hawk least of all.

During the 1949 breeding season two pairs of Sparrow Hawks in Rockbridge County chose unusual nesting sites, both of these being in the town of Lexington. Whether or not the choice of these sites was due to the increase in Sparrow Hawks and the consequent increase in competition within the species for suitable nesting cavities, I would hesitate to say. It is not improbable that this is the case.

The first of these sites was on a shelf under the eaves of Reid Hall, the Physics building on the campus of Washington and Lee University. At the back of the building the roof has an overhang of two feet or more. A cornice shelf makes a deep recess, protected above and below and on two sides, the other sides being open. The shelf is inaccessible, except with very long ladders, to anything without wings. It is not even possible from any point in range to see into the innermost corner of the recess. Here a pair of Sparrow Hawks have established themselves. I first discovered this nest in 1947, when I watched the birds carrying food to the young. Last year I neglected to investigate the site. This year again saw the birds going in and out. I believe they were successful in raising their brood. The male bird often rested in the similar recess at the other corner of the building.

The second site is in the roof of the house where I live. All spring a pair of Sparrow Hawks visited the yard. From their actions, and particularly from the way in which they battled with the Starlings, Jays, and Robins, I was very early sure that they were trying to nest, but could not find the cavity on which they had set their hearts. Two large locusts, one on each side of the house,

are full of old Flicker holes, thus serving as veritable Starling tenement houses. One of these holes, which had been enlarged by the breaking away of a branch from the tree in a wind, was the first place I suspected the hawks of using. For a long time my efforts to pin the birds down were in vain. Often on hearing the hawks scream their "killy-killy-killy-killy" I would step out the front door, when they would promptly fly away. Even when they continued to circle above the house and to light in the tops of the locusts, they declined to disclose their secret. Especially in late afternoon we would hear them call excitedly and see them in skirmishes with their smaller foes.

Finally one day, probably because incubation duties were pressing, one of the hawks let us see it go into the nesting site, when it turned out that they were actually rooming with us in our home. At the front of the Manse the roof forms a steep gable, with the eaves overhanging the brick walls some eighteen inches. In the point of the gable is set a wooden ornament, six feet high, like a ship's figure-head. Behind this figure-head, the brick at the apex of the wall is missing. The hawks were entering this opening, turning right through an opening in the boxing of the eaves, and there finding a sheltered and dry nesting place.

On May 2 the male hawk was on the eggs when I visited the nest. There were four eggs, the final number laid. I could get my face within eighteen inches of the sitting bird. As has been the case in previous experiences, these Sparrow Hawks stuck closely to the nest. When I punched this bird with a stick, he simply moved a little farther back. It took a great deal of persuasion to make him leave the nest; and he then returned almost at once to the opening in the brick wall, hanging there as long as I stayed in sight. Interestingly enough, a pair of Starlings had a nest in a similar cavity in the boxing on the other side of the opening in the wall, no more than two feet from the nest of the hawks.

As the eggs were still unhatched on May 30, we realized that something was wrong. The birds continued to incubate, however, until we removed the eggs on June 20, which means that they had stuck to their task for not less than fifty days. We found that the eggs were addled from the extreme heat that came from the tin roof just a few inches above them. The Starling eggs in the opposite nest and in another nest in the attic met the same fate.

Arthur C. Bent states that "the sparrow hawk frequently makes use of buildings and bird boxes for breeding purposes", but these two sites are the first of their kind in my own experience.

Lexington, Virginia

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A HAWK FLIGHT OVER REDDISH KNOB

By Max Carpenter

(On September 17 observers were stationed on various peaks of the Blue Ridge, mostly in Maryland, in line with a scheme organized by Chandler S. Robbins of the Patuxent Research Refuge for a simultaneous count of hawks. Counts were to be made from 9:00 A.M. to 5:00 P.M. and tabulated by half-hour periods.

Mr. and Mrs. Max Carpenter spent the day on Reddish Knob in Augusta County, Virginia. The elevation of the knob is 4398 feet, with a 50 foot tower. We quote parts of his letter giving the counts.)

It was a very foggy morning, consequently we did not leave for the mountains until we were sure that we could see. On the way up we were delayed by the heating of the car, so that we were not able to start counting until 11:00 o'clock. The tops of the peaks were sunny, with haze all around the edge, covering the foothills. The temperature was 65-70 degrees.

The tabulation of hawks follows.

9:30 - 1 Broad-winged hawk seen at foot of mountains
10:50 - 3 Red-shouldered hawks seen from the knob

11 - 11:30: 10 Red-shouldered; 65 Broad-winged; 8
unidentified (too far away)

11:30 - 12: 101 Broad-winged; 3 Red-shouldered;
1 Red-tailed; 19 unidentified (too far
away)

12 - 12:30: 102 Broad-winged; 2 Red-shouldered; 1
Rough-leg (?); 1 Red-tailed; 3 unidentified (too far away)

12:30 - 1 : 82 Broad-winged; 4 Red-shouldered; 8
unidentified (too far away)

- 1 - 1:30 : 70 Broad-winged; 2 Red-shouldered; 2 Osprey; 3 Cooper's; 2 unidentified (too far away)
- 1:30 - 2 : 89 Broad-winged; 1 Red-shouldered; 14 unidentified (too high)
- 2 - 2:30 : 36 unidentified (haze started closing in and hawks were very high)
- 2:30 - 3 : 3 hawks unidentified (too high)
- 3:00 - 5 : None seen

Summary of birds seen:

510 Broad-winged hawks
25 Red-shouldered "
2 Red-tailed "
3 Cooper's "
93 Unidentified "
2 Osprey
1 Rough-leg (?)
636 Total

Other species seen from Tower: 12 Slate-colored juncos; 5 Chimney swifts; 1 Raven; 2 Pileated woodpeckers (heard); 5 Barn swallows.

Rt. 1, Dayton, Virginia

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NEWS AND NOTES

December Field Trip of the V. S. O. The winter field trip to Back Bay, to see the great concentrations of ducks and geese and particularly the Snow Geese and Swans, will be held on December 3. The group will leave Sandbridge, across the causeway from Pungo, at 7:00 A.M. Headquarters for the trip will be the Essex House, Virginia Beach. Each one will make his own reservation with the Essex House. Room rates of \$2.50 with bath and \$2.00 without bath have been made us. Lunch will probably be served by one of the churches near Sandbridge. Water-proof footwear and plenty of warm clothes should be worn. Last year we struck a mild day, but that rarely happens. It can be bitter cold in the trucks and in the boat. We hope to have some members of the Brooks Bird Club of West Virginia on the trip.

1950 V. S. O. Meeting. Next year's Annual Meeting, according to the recent decision of the Executive Committee, will be held in Harrisonburg. The exact date has not been settled, as we must fit in with the Virginia Academy of Science and other meetings; but it will be in either the first or second week in May. A very interesting field trip, to include water birds as well as land migrants, has been planned.

The Wilson Ornithological Club Meeting for 1950 has been set for April 28-30 at Jackson's Mill, West Virginia, where a cabin camp site should give simple but ample accommodations. This is the nearest to our territory that a meeting of the W. O. C. has ever been held, and should offer a good opportunity to our members to attend.

Dowitchers at Saltville, Virginia. Roby C. Thompson, Jr., of Abingdon, reports several Dowitchers seen on the salt marshes at Saltville, Va., August 28, 1949. He and two companions saw them several times that day. He writes: "We at first thought them to be Snipes, but when they flew we all three noticed that they had white extending to their shoulders. One of my friends (Steve Russell) identified them first and said that he had known the bird before. While they were on the ground we observed them at about ten yards with 7x50 binoculars. One peculiar thing we noticed was the sewing-machine-like movement of the long bill." They also saw 12 Black Terns and some of the more common sandpipers at the same time.

Cliff Swallows. On page 60 of the September-October, 1948, issue of The Raven, we reported several small colonies of Cliff Swallows and asked for other reports. Royster Lyle, Jr., reports two old nests, but of this year, on a barn at the farm of Major E. A. Sale, in Rockbridge County near Natural Bridge. Max Carpenter furnishes the following data for 1949 stations in the Bridgewater region of Rockingham County: Bridgewater, July 3, three pairs in Pope's barn; Montezuma, July 5, one nest in Kyser's barn and six adults seen; Montezuma, July 11, 7 pairs in C. H. Hilbert's barn; Montezuma, July 12, an adult feeding 3 young at Glick's Mill; July 8, 25 nests counted at Bell's barn at Spring Creek, the farmer stating that most of the nests had been made last year but that the birds were run out by English Sparrows.

Mockingbird Flashing Its Wings. Much has appeared recently about a peculiar habit of the Mockingbird, that of flashing its wings as it feeds. Various interpretations of the purpose of this act have been given. On July 13, on a very dark day, with a light rain falling, I watched a Mockingbird going through this performance. It was feeding on the ground in a field that had just been mowed. While I watched it for five minutes, the bird flashed its wings frequently, raising them and opening them quickly, so that the white patch showed distinctly and suddenly. One of the explanations that has been given of this act is that it helps the bird to see insects in the grass. Other birds feeding on the ground do not seem to need such aid. This bird, when it flashed its wings, usually had its head held high, not looking at the ground at all, which led me to think that the purpose of the flash is not to give additional light on the ground, but simply to startle insects into flight so that they will be easier to catch. J. J. Murray

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1949 BREEDING-BIRD CENSUS, LEXINGTON, VIRGINIA

Open mixed hardwoods with grassy clearings. About 20 acres of open, lightly-grazed woodlot, with thick, rapidly growing undergrowth; 2 grass openings of $2\frac{1}{2}$ and $1\frac{1}{2}$ acres; located three miles north of Lexington, Virginia. First censused in 1944. Coverage: March 28; April 2, 11, 18; May 5, 9, 16, 23, 28, 30; June 3, 18, 24; July 1, 4, 6, 7, 8, 9, 10, 12, 13, 14. Total, 36 hours. WEATHER: Spring normal, except for early warm spells; June, hot and dry; July, hot and humid. Continued spread of Eleagnus sp. CENSUS: Field sparrow, 12 (2N, 6Y, 4P); cardinal, 9 (4N, 2Y, 3P); indigo bunting, 6 (1N, 2Y, 3P); blue-gray gnatcatcher, 5 (1N, 4P); yellow-breasted chat, 5 (3N, 1Y, 1P); Carolina chickadee, 4 (1N, 2Y, 1P); cowbird, 4 (4P); yellow-billed cuckoo, 3.5 (.5Y, 3P); wood pewee, 3.5 (1N, 2.5P); downy woodpecker, 3 (1Y, 2P); Carolina wren, 3 (2Y, 1P); goldfinch, 3 (3P); chipping sparrow, 3 (1N, 2P); red-eyed vireo, 2.5 (1N, 1.5P); prairie warbler, 2.5 (1Y, 1.5P); ruby-throated hummingbird, 2 (2P); phoebe, 10 (1N, 1P); Acadian flycatcher, 2 (1N, 1P); tufted titmouse, 2 (1N, 1Y); yellow-throated vireo, 2 (1Y, 1P); black and white warbler, 2 (1Y, 1P); cerulean warbler, 2 (2Y); ovenbird, 2 (1Y, 1P); summer tanager, 1.5 (1.5P); bobwhite, 1 (1P); screech owl, 1 (1Y); crested flycatcher, 1 (1Y); white-breasted nuthatch, 1 (1P); brown thrasher, 1 (1N); bluebird, 1 (1P); starling, 1 (1Y); worm-eating warbler, 1 (1Y); parula warbler, 1 (1Y); Maryland

yellow-throat, 1 (1P); hooded warbler, 1 (1N); redstart, 1 (1Y); English sparrow, 1 (1N); blue grosbeak, 1 (1N); towhee, 1 (1P); song sparrow, 1 (1Y); Total, 40 species; density, 102.5 pairs. 512 pairs per 100 acres (530 in 1944, 560 in 1945, 570 in 1946, 525 in 1947, 480 in 1948). FREQUENT VISITORS: wood duck, turkey vulture, chimney swift (roosted in cabin chimney, but did not nest), belted kingfisher, pileated woodpecker, red-bellied woodpecker, yellow-shafted flicker, crow, mockingbird, catbird, robin (large flocks in late summer, feeding on Eleagnus berries), English sparrow, Baltimore oriole, orchard oriole. An unmated male red-headed woodpecker was present through the early summer. The Carolina wren has not yet recovered from losses of 1947-1948 winter. The male blue grosbeak was a first year breeder, different from the old male of 1948. J. J. Murray, Lexington, Virginia.

SUMMER SEASON - 1949 - VIRGINIA

By J. J. Murray

(The Season Reports for Virginia, inaugurated in the last issue of The Raven, will be of greater interest if more members of the V. S. O. will send in contributions. Notes should be arranged according to groups of species as in this and in the first of the reports. Reports on the Fall Season, covering the migration period from mid-August to mid-November, should be in the hands of the Editor by December 1.)

The Summer Season as a whole was abnormally hot, records being broken on many days. June was dry; July very humid. Early August brought cooler weather.

Pelagic Birds. Scott saw a pair of Pied-billed Grebes in York County on June 22; C. E. Stevens, Jr. saw a pair at Henley's Lake, Albemarle Co., July 12 and 14. A Wilson's Petrel, seen at the end of May by Dr. Paul Bartsch and party, was of special interest since we have no previous Virginia coast records from the end of March to mid-June. Two Double-crested Cormorants were seen at Chincoteague Causeway on July 23; Scott saw one at Yorktown and one at Hopewell on June 22, and James Murray, Jr. saw one at Camp Monocan in Nelson County about July 15.

Herons. Checking the Chickahominy Swamp from a light plane on June 6, Scott failed to find any evidence of the egret rookeries formerly reported from this area. He located a flock of 13 American Egrets at Jones Neck, across the James River from Curles Neck. American Egrets were reported at Alexandria on May 21, 28 (2), and June 15 (10).

High counts of American Egrets (30) and Snowy Egrets (20) were made at Chincoteague Causeway on August 6, and of Little Blue Herons (70) at the same place on July 23. A Little Blue Heron was seen at Cobb's Island on May 14, and two Louisiana Herons at Chincoteague Causeway on July 24. Lawless found the nest of a Green Heron with 5 eggs in Albemarle County, May 28.

Ducks. Scott gathered the following duck records during the summer, all non-breeders, of course: 3 Lesser Scaup in York County, June 22; 13 Ruddies in breeding plumage on the Potomac near Dahlgren, within 50 feet of the Virginia shore; Red-breasted Merganser on June 8 at Curles Neck and on June 22 near Yorktown.

Birds of Prey. Murray found a Turkey Vulture's nest with 4 eggs, April 18, in a cliff along Maury River at Lexington, and three Sparrow Hawk nests: one, apparently with young, in a dead tree, May 3, and one, May 3, in an inaccessible shelf under the eaves of one of the buildings on the campus of Washington and Lee University, and one in the eaves of his home in Lexington, with four eggs on May 2, the eggs later being addled by heat from the roof.

Rails and Shorebirds. Clapper Rails had a successful breeding season in the marshes along Chincoteague Causeway, 26, including many young, being seen on July 23, and 30 on August 6. Stevens and Lawless flushed a King Rail in a wet meadow at Hatton, Albemarle County, on James River, July 23. A pair of Coots was much in evidence at Byrd Park throughout June (Scott). C. Clark saw two Oyster-catchers over Chincoteague Bay, August 8. A late downy Piping Plover was seen at Chincoteague Refuge, July 3 (Buckalew, etc.) Murray found an early Killdeer nest, with four eggs, April 4, at Lexington. Stevens and Lawless saw a Solitary Sandpiper at Hatton on July 23, and Murray saw one at Cameron's Pond, Lexington, on July 6, that could have been going either north or south. Scott found a Least Sandpiper in York County (on the Chesapeake) on June 22, a very unusual date.

Terns. Scott found 15 Least Tern nests, in most of which the eggs had recently hatched, on June 22 in York County, on the Chesapeake.

Land Birds. Some very interesting extensions of the known range of several birds were reported during the summer. The Brown-headed Nuthatch is now known to breed at Danville (Royster Lyle, Jr.), much farther west than hitherto reported for Virginia. The known range of the Chuck-will's-widow has been extended upward to Richmond, where Scott found two pairs through the breeding season, one at

Chesterfield Courthouse, and the other on the south bank of the James. Several additional small colonies of Henslow's Sparrows near Scottsville (Stevens), a few single birds around Charlottesville (Stevens), and a number of singing birds on June 19 around Winchester (Scott), would indicate a considerable extension of range by this bird. The Valley records are particularly interesting. Lyle found a Prairie Horned Lark near Danville, which is an extension southeastward of our summer records. Stevens traced Cerulean Warblers eastward along the low mountains of Albemarle County, all the way to the Orange County line, and on July 2 found several singing birds in Orange County, west of Gordonsville, at the place where the mountains dwindle away. This was an important discovery. Murray found a Blue Grosbeak nest, second record for the Valley of Virginia, with two well-grown young on July 7, the birds leaving the nest on July 10. This male was a first-year bird, different from the male of last year's nest, the nest being in the same neighborhood, three miles north of Lexington.

A Wild Turkey gobbler was flushed on Peavine Mountain, Amherst County, August 8 (Murray, Sr. and Jr.). Stevens found the nest of a Black-billed Cuckoo, with 3 young, at Hatton, one of the few Albemarle records outside the mountains. Murray found the first Rockbridge County Nighthawk nests this summer: one with two eggs on the roof of the Robert E. Lee Hotel in Lexington, June 19, the birds hatching on July 1 and 2, and later leaving the roof successfully; the other, on the roof of the Mayflower Hotel, Lexington, the two young hatching about July 15, but later dying from the heat when workmen on the roof caused the parent bird to stay away too long. It has been a mystery why the Nighthawk, common at Roanoke to the south and at Staunton to the north, should have been absent for many years from Rockbridge County during the summer. For the past few years an occasional pair has been present around Lexington. This summer we had three pairs about the town. Dr. Paul Bartsch and a party visited the Dismal Swamp on May 27-31. Comparing conditions with those at the time of his former visit fifty years ago, he says that Chimney Swifts are less common, because of the smaller number of dead cypresses for nesting places. Lyle found a Kingfisher digging its tunnel at Danville on April 7. Major Abbot found a Hummingbird's nest with eggs at Fort Belvoir on May 18. Scott saw a Yellow-bellied Sapsucker on June 20 on the Virginia side of the Va.-W.Va. state line on Route 250 at the crest of the Allegheny Mountain. Lyle reports the following flycatcher nests at Danville: Kingbird, feeding young in the nest, June 21; Phoebe, building, March 24; Pewee, nest, June 6, 40 feet up in a pine. Scott found the Least Flycatcher com-

mon on June 11, in Highland County and western Augusta County. Murray found an Acadian Flycatcher nest under construction on May 30, at Lexington. Scott saw and heard a Raven at close range at Seaford Marsh, York County, June 22. Scott found three singing Black-capped Chickadees on June 20, at the crest of the Allegheny Countain on Route 250, Highland County. T. R. Hake saw six Brown-headed Nuthatches at Chincoteague Island, August 8. Stevens and Minor heard a Short-billed Marsh Wren in the wet meadow at Hatton on July 20, and he and Lawless found four at the same place on July 23. Lyle found a Blue-gray Gnatcatcher building a nest at Danville on April 7. Two sets of Starling eggs in June in the attic of Murray's home at Lexington met an unusual fate, being addled by heat from the tin roof, which was just a few inches above the nests. Lyle found a White-eyed Vireo incubating at Danville, May 24. Bartsch and party found Wayne's Warbler common in the Dismal Swamp on May 27-31; but he considered, that, because of the lowering of the water level in the Swamp, Prothonotary Warblers were less common than on his visit fifty years before. Scott found the Golden-winged Warbler common in the mountains of Highland County, June 11. Murray found two pairs of Cerulean Warblers feeding young on the wing on July 1, near Lexington, and a Worm-eating Warbler feeding young on the wing on July 14. He found three Yellow-breasted Chat nests at the same place: June 30, 1 young bird; May 28, two eggs and a Cowbird egg; May 30, small young. James Sydnor and Scott found a pair of Purple Finches, with the male singing from the top of a tall spruce, on Sapling Ridge, Middle Mountain, Highland County, June 11.

Lexington, Virginia

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The Birds

of Albemarle County, Virginia

By

John H. Grey, Jr. & Charles E. Stevens, Jr.

THE BIRDS OF ALBEMARLE COUNTY, VIRGINIA
By John H. Gray, Jr. & Charles E. Stevens, Jr.

INTRODUCTION

Albemarle County lies close to the geographical center of the state, being about 60 miles west of Richmond and about 100 miles southwest of Washington, D. C. The county is the fifth largest in the state with an area of 751 square miles. Charlottesville, the county seat, is situated in the center of the county.

The western boundary of Albemarle lies along the crest of the Blue Ridge Mountains while the eastern boundary is located east of the Southwest Mountains and Carter's Mountain, and meets the James River in the south. The altitude varies from 280 feet above sea level at Scottsville, on the James, to 3350 feet at Big Flat Mountain, in the northwest corner of the county in the Blue Ridge.

Physiographically the county is almost equally divided between the Blue Ridge and the Piedmont. The dividing line is rather arbitrary in this locality, but it may be considered to lie near Charlottesville.

A mile east of Charlottesville a small range of mountains occur stretching to the northeast which are known as the Southwest Mountains and which rise to 1814 feet on Peters Mountain. West of this range to the foot of the Blue Ridge proper, around Crozet and Greenwood, the land is mostly rolling. From this point the Blue Ridge rise sharply with the western edge of the county falling along the crest of the ridge and the Skyline Drive. In the southwestern portion of the county, east of the Blue Ridge, exists a rugged terrain made up of many small mountains, the northern part of which are called the Ragged Mountains. The southern mountains have individual names, the highest being Castle Rock, near Covesville, which at 2430 feet is the tallest east of the Blue Ridge.

The Piedmont section as seen from the Southwest Mountains appears rather flat, but is actually rolling. Much of the soil in the county is red clay, being rather heavy when wet and eroding easily. The country is primarily agricultural with corn and wheat crops, peach and apple orchards, and grazing lands for beef and dairy cattle and fine horses. Lumbering has been carried on excessively in the eastern part of the county.

The county is drained by many streams. The Rivanna River rises in the Blue Ridge, flows past Charlottesville, and empties into the James at Columbia, a short distance outside the county. The James flows along the southern border of the county from Howardsville to Scottsville, a distance of ten miles.

There are four fairly large artificial lakes in the county. The largest is the City Reservoir (Mayo's Rock Reservoir) in the

Ragged Mountains, which is actually two adjoining lakes of 35 and 20 acres; however, this is a restricted area and may be visited only on authority of a written permit. The next largest is Albemarle Lake, near Whitehall, built in the 1930's by the C.C.C., covering 50 acres. In 1945 the 25-acre Henley's Lake was dammed on Beaver Creek near Crozet, and in 1947 the city of Charlottesville built an additional reservoir covering 44 acres on Moormans River in Sugar Hollow. In addition to these larger bodies of water there are several small ponds such as Bellair Pond and Thraves Pond, both built in 1946 just outside of Charlottesville, in the midst of suburban home developments. This recent creation of ponds has added a number of waterfowl and shorebird records.

Due to the uneven topography, there are no true swamps or marshes, but there is a 20-acre wet meadow on the floodplain of the James River near Hatton. It is located on the "Hatton Grange" property and contains permanent and intermittent pools with a flora of grasses and semi-aquatic plants, many of which are not found elsewhere in Albemarle. Snipe and Blue-winged Teal are fairly common here in migration with occasional Herons, Sandpipers, Soras, and both Marsh Wrens. This area also contains a high density of nesting Red-wings.

On Moormans River at Whitehall a series of gravel pits is being worked by the State Department of Highways. Some of these pits are abandoned and contain permanent pools with a slight cattail development. The currently worked excavations contain shallow water intermittently and are fairly good shorebird spots.

Previously mentioned Bellair Pond was in 1946 and 1947 probably our most productive shorebird locality. Now it has developed a lush grassy edge, and attracts few of these birds, although Snipe occur around it more commonly.

The very small Farmington Pond, with an alder edge, is always an interesting spot where a few sandpipers are found. It is the surest place in the county to find Northern Water-thrushes during the spring migration.

In looking for waterfowl, Henley's Lake (1 mile northeast of Crozet) is by far the most rewarding locality to visit. On certain days in March and April there is a wealth of ducks on the pond. The water is almost entirely surrounded by open fields, which condition may account for its bird productivity. The Mayo's Rock Reservoir, the Sugar Hollow Reservoir, and to a certain extent Albemarle Lake, having wooded edges, produce fewer ducks.

The mean temperature of the county is 55 degrees; with a summer average of 72 and a winter average of 36. The average rainfall is 45 inches.

About one-third of the land in the county is cleared and used either for a cultivated crop or grazing, the other two-thirds being woodland. Most of the woods are second growth with little large

timber left. The trees are what one would expect in the upper Carolinian zone, with willow oak, sweet gum (mostly around Woodridge), and river birch occurring along the eastern edge of the county. Hemlock and white pine occur sparingly over all the county but are most abundant in the hollows of the Blue Ridge. In a few places along shady, steep-banked creeks in the eastern part of the county it is possible to find hemlocks growing on one bank with river birch on the opposite side.

The avifauna of the county is mainly Carolinian with the Alleghanian beginning in the Blue Ridge at about 1000 feet above sea level in the wooded hollows and at 2000 to 2500 feet on cut-over ridges and in open hollows. The Alleghanian zone extends to the top of the mountains as there is no territory here that is suggestive of Canadian. There are seven mountains in Albemarle over 3000 feet in elevation (the highest is 3350 feet), but all are cut-over, burnt-over, or in pasture. Veritable all of the Albemarle portion of the Blue Ridge has been burned or cut over so that above 2000 feet there are few dense laurel thickets and there is no large timber. Rhododendron is rare. These conditions account for a scarcity of Blackburnian Warblers, Carolina Juncos, and Cairns' Warblers in the county, while they are fairly common elsewhere in the Blue Ridge at corresponding elevations. The Rose-breasted Grosbeak occurs in only one area in Albemarle. Only one summer record has been made of the Canada Warbler, and the Veery has not yet been recorded in summer.

On the other hand, Chestnut-sided Warblers and Mountain Vireos are less scarce. Chats and Yellow-throats have been found during the breeding season in abandoned, mountain-top pasturelands up to 3200 feet with Carolina Juncos. A pair each of Acadian Flycatchers and Louisiana Water-thrushes were found in the summer of 1947 occupying a hemlock grove at 2800 feet with Cairns' Warblers, Mountain Vireos, and Blackburnian Warblers.

HISTORICAL SUMMARY

Thomas Jefferson left a list of birds of Virginia which we would expect to be of some value in a study of his home county. However, as pointed out by William Cabell Rives, this is of no help. "Thomas Jefferson....in his Notes on the State of Virginia published in 1781 gives a list of 125 birds chiefly taken from Catesby. This list, although the author was familiar with many of the native birds, is, however, plainly not the result of much personal observation and has in itself no particular interest." (Catalogue of the Birds of the Virginias, p. 20). Rives also suggests that Jefferson included many birds not from Virginia, as the boundary of the state at that time extended to the Mississippi River.

The first real ornithological work for Albemarle County was done by William Cabell Rives, Jr., M.D., of Cobham, in the eastern part of the county. Cobham was the home of Rives as a youth, and he

returned there frequently on visits to the family. His work is published in The Birds of Cobham, Virginia, Rives, Newport, R. I., 1884, which is an annotated list of 128 species found at Cobham, and also a reference to the Fish Crow at Charlottesville, for a total of 129 species.

Five years later Rives published his A Catalogue of the Birds of the Virginias 1889-90, Proceedings of the Natural History Society of Newport, R. I. In this catalogue he adds nine birds to those he formerly listed, thus making a total of 138 species recorded by Rives for Albemarle County.

The next work of importance was done by Ludlow Griscom while teaching ornithology at the summer sessions of the University of Virginia in 1915 and 1916. In an annotated list sent to us Griscom lists 88 species found during these summers, but comments that seven of these were seen, not by him, but by Prof. Scott and J. B. Ferneyhough of Richmond, in the two preceding summers. This gives Griscom 81 species from personal observation. It should be pointed out that he arrived at Charlottesville when the breeding season was beginning to wane. In his list Griscom adds four species not listed before, and Scott and Ferneyhough add another four, thus bringing the list to 146.

Dr. Herbert Friedmann taught here at a University of Virginia summer session in 1923, but left no records.

The next work was done by four men who were students in various capacities at the University of Virginia. Norval R. Barger began in 1924 and worked until 1932, Ruskin S. Freer, John B. Calhoun, and Martin S. Curtler, who did some work as late as 1941. During these years these four men added 44 species to the list. Thus by 1941 the county list stood at 190 forms.

The bulk of the field work in recent years has been done by William F. Minor, Kenneth Lawless, and the co-authors. Minor, now a University of Virginia graduate, kept records as early as 1942. Stevens began in the fall of 1943 and Grey in the summer of 1944. Stevens has frequently made day-long trips on foot keeping counts of individuals. Lawless, a University of Virginia graduate student from Lynchburg, began in the spring of 1947. James E. Irvine, a former University of Virginia student, added two species. This group has been able to add 54 species and subspecies to the county list.

The present list for the county stands at 244 species and subspecies.

Thanks are due to Fred R. Scott of Richmond, who found Albemarle specimens from the Dwight Collection in the American Museum, and to Dr. Alexander Wetmore, who contributed subspecific identifications.

EXPLANATORY MATTER

Under most of the forms in the list we have given a maximum count and a normal count. A maximum count is the greatest number of individuals of a species which we have recorded in a day. A normal count is the number of individuals that you can normally expect to find in a day. These counts are based on good cross-sections of the county and are not the result merely of observations from automobiles, which might run up the counts on certain species.

Where possible, average and extreme migration dates are given.

Common Loon. Gavia immer immer.

Transient, very scarce in fall with 3 dates from November 11, 1945, to "late November", 1945, when two were taken at the City Reservoir by John Sacre. One at Reservoir "late November", 1948 (Sacre).

Uncommon in spring:

April 13, 1948 to May 28, 1948

Recorded at City Reservoir, Sugar Hollow Reservoir, and Henley's Lake, being most numerous in April. Maximum, 6 (April 13 & 28, 1948).

Red-throated Loon. Gavia stellata.

Accidental. Rives in his Catalogue says, "A young male of this species was sent me in February, 1885, by Mr. J. M. F. Williams of Cobham, Albemarle County, where it had been shot on a small creek."

Holboell's Grebe. Colymbus grisegena holboelli.

Rare. One record of two birds at the City Reservoir on March 29, 1948 (Lawless and Stevens). This occurrence was contemporaneous with a flight of these Grebes in the middle eastern states.

Horned Grebe. Colymbus auritus.

Uncommon transient; more common in spring:

March 13, 1948 to April 29, 1947

November 11, 1945 to December 24, 1946

Six birds were seen November 20, 1947 and nine on March 25, 1949.

Pied-billed Grebe. Podilymbus podiceps podiceps.

Common transient and occasional winter visitor:

July 21, 1947 to December 8, 1946

March 3, 1930 to June 2, 1949

Barger recorded this species throughout July 1930 probably at the City Reservoir. Two were seen at Henley's on July 12 & 14, 1949. Maximum, 31 (April).

Brown Pelican. Pelecanus occidentalis carolinensis.

Accidental. On May 1, 1947, Caretaker John Sacre saw a strange bird throughout the day feeding around the edge of the water at the City Reservoir. Late in the afternoon, one of his sons flushed the bird, and it did not return. On May 3 he described the bird to Minor and Stevens, who felt sure it was this species but did not name the bird to Sacre. A few days later Sacre identified the bird as this species from pictures shown him by Grey. The three of us felt positive of the identification from his description, which he backed up by selecting the bird from pictures of half a dozen other species. Sacre stated that the bird's bill was about the size of his forearm.

Double-crested cormorant. Phalacrocorax auritus auritus.

Rare; two records. One was seen in 1947 at Henley's Lake from May 17 to May 23; at Albemarle Lake June 21; and again at Henley's on August 3, 4, & 6. Another seen at Henley's on May 21, 1949. As far as we know the first bird is the only inland summer record for Virginia or North Carolina, except for a July, 1949 record in the adjoining county of Nelson (Raven, XX, 62). Miss Cooke in "Birds of the Washington, D. C. Region" Proc. Biol. Soc. of Washington Vol. 42, 1929, p. 18 lists this species as a casual visitant with three records for June.

Great Blue Heron. Ardea herodias herodias.

Almost a permanent resident; no records from May 31 to June 27. Irregular winter visitor. Most common in April, May, July, August, and September, with an average of 1 to 3 birds in a day. Maximum: a flock of 11 on the Rivanna River, January 9, 1944. No breeding evidence.

American Egret. Casmerodius albus egretta.

Post-breeding summer visitor; somewhat common:

June 27, 1916 (Griscom) to September 23, 1948

Regular in small numbers; average, 3. Maximum, 10.

Little Blue Heron. Florida caerulea caerulea.

Post-breeding summer visitor; less common than the American Egret, but frequently found in larger groups.

June 28, 1949 to September 9, 1946

All birds in white plumage. On July 21, 1947 there was a flock of 37 Little Blues at Henley's Lake.

Eastern Green Heron. Butorides virescens virescens.

Summer resident; somewhat common:

March 25, 1949 (Lawless) to October 14, 1948

Average: 2nd. week in April to mid-September. A flock of 15 birds at Henley's on July 8, 1947. Average, 4. Nest with 5 eggs May 28, 1949 at Belleair Pond.

Black-crowned Night Heron. Nycticorax nycticorax hoactli.

Transient; 4 records: Griscom recorded one on July 11, 1916; a male and two female were seen at Albemarle Lake on April 9, 1949; a bird flew over Charlottesville on the night of April 28, 1949; and another flew over town about dusk on May 1, 1949.

American Bittern. Botaurus lentiginosus.

Uncommon transient:

April 13, 1948 to May 28, 1948; and June 21, 1947 to September 9, 1948

Birds are more common and evenly distributed in the spring migration. June and July birds are taken to be post-breeding wanderers. A flock of 14 seen at Henley's on July 18, 1948.

Eastern Least Bittern. Ixobrychus exilis exilis.

Ludlow Griscom listed it as reported to him by Prof. Scott and J. B. Ferneyhough who during the 1913 or 1914 summer school session of the University of Virginia observed "one pair in a small cattail swamp".

Lawless saw two migrants in 1949: one at Henley's Lake on May 11, and one at the Hatton wet meadow on May 21.

White Ibis. Guara alba.

On August 21, 1944 Stevens found two immature birds on the North Fork of the Rivanna River at Burnt Mills, about a half-mile above the bridge on Route #29 north of Charlottesville. He identified them as Ibises and looked them up in Howell's Florida Bird Life, finding that they tallied with the colored plate showing immature birds of this species. On the following day he and Grey visited the locality again, found the birds, and studied them at 30 ft. with 6x and 8x glasses. The Ibises were quite tame in comparison with nearby Little Blue Herons, and were about the same size as the Herons. In flight the neck of the Ibis was extended, and the white rump was prominent. The birds fed in shallow water, probing around in the sand with their long bills. Their only apparent note was a low duck-like grunt, uttered when alarmed.

Some days later, on September 9, one of these birds was seen at the City Reservoir by Grey and City Manager Seth Burnley. It proved to be unafraid of the boat, and could be approached more closely than on the river. Burnley tried to catch it with a fly rod, dropping the fly close beside the bird, but each time the bird would step aside quickly. Upon taking flight the Ibis passed close to the boat, and Burnley dropped the fly over one wing, securing it, and causing the bird to circle the boat until it dropped onto the water and was hauled into the boat. In loosing the bird it was found that the leader had wrapped around a wing. The Ibis did not appear to be very frightened, but pecked at its captor's hands with its long bill. The surprising fact was that when it gripped their hands there was not much pressure exerted, as though the bill was flexible to such an extent that it could pinch only slightly. Upon

being released, the bird flew to the shore nearby and walked away. It was not seen afterward.

This is the only record for the species in the state. There are two records for North Carolina, and it has been recorded in Connecticut, Vermont, and New York.

Whistling Swan. *Cygnus Columbianus*.

Accidental. February 12 to March 3, 1945, two adults were observed on the upper lake of the City Reservoir. During much of this time the lake was frozen over, and the birds were to be found in a small cove, standing on the edge of the ice. Upon one occasion Mr. Sacre, the caretaker, saw them on the lower reservoir in a small area of open water, and the birds seemed unafraid of men who were working on the dam 50 yards away. Sacre thought the birds arrived in December.

Common Canada Goose. *Branta canadensis canadensis*.

Uncommon but regular transient:

October 9, 1931 to November 16, 1948 and February 22, 1949 to April 22, 1949

Maximum of 50. Flocks seem to linger in spring at Henley's.

Mallard. *Anas platyrhynchos platyrhynchos*.

Fairly common winter visitor:

September 6, 1947 to April 5, 1949

Average: early November to mid-March. Maximum number, 75; average, 12. Most common in midwinter along the lowlands of the Rivanna River.

Black Duck. *Anas rubripes*.

Common winter visitor; our commonest winter duck.

October 6, 1948 to May 1, 1949

Average: late October to early March, being most common in December, January, and February. Maximum, 105; average, 15. One uncrippled female at Henley's on July 5 & 8, 1947.

Gadwall. *Anas strepera*.

Spring transient, not recorded until 1949, from January 22 to April 13. Seen at Henley's Lake, Bellair Pond, and Thraves Pond; flocks ranged from 1 to 8 birds.

Pintail. *Anas acuta tzitzihua*.

Transient; uncommon in spring, March 5, 1949 to April 21, 1949, with a maximum of 24 on March 10, 1949; three fall dates: September 21, 1948; October 6, 1948; and November 20, 1947; one winter record, six on January 18, 1945 (Grey).

Green-winged Teal. Anas carolinensis.

Transient; uncommon in spring, March 10, 1949 to April 13, 1949, and a late bird on May 11, 1949 (Lawless); four fall dates: September 26-30, 1948; September 27, 1949; October 25, 1947 (3 birds); and November 26, 1948. Maximum of 9 on March 18, 1949.

Blue-winged Teal. Anas discors.

Transient; scarce in fall; common in spring:

September 1, 1947 to November 9, 1946

March 11, 1949 to May 28, 1949

Average in spring: late March to early May. Maximum, 50; average, 8. A crippled male was seen at Henley's in 1947 from June 24 to September 17.

Baldpate. Mareca americana.

Transient; scarce in fall; common in spring:

September 22, 1948 to November 30, 1947

February 24, 1949 to May 21, 1949

Common from mid-March to late April. Maximum, 41; average, 15.

Shoveller. Spatula clypeata.

Very scarce spring transient. Three records: April 5, 1947, a pair at the City Reservoir; March 11-12, 1949, a pair at Henley's; March 18, 1949, a male at Albemarle Lake.

Wood Duck. Aix sponsa.

Summer resident; somewhat common:

February 26, 1945 to December 2, 1948

Fairly common as a transient, with large numbers (22-26) in March, April, August, and September. Young: May 10 to July 27 at Albemarle Lake, City Reservoir, Thraves Pond, Bellair Pond, and on the James River.

Redhead. Aythya americana.

Transient; uncommon in spring:

February 15, 1947 to May 3, 1947

Seen regularly at Henley's and Albemarle Lake with a maximum of 10 on February 16, 1949. One fall record: a female shot on December 8, 1947, at Van Clief's Pond near Esmont.

Ring-necked Duck. Aythya collaris.

Transient; uncommon in fall; common in spring:

November 1, 1947 to December 24, 1946

February 3, 1947 to May 17, 1949

Average: mid-November to early December and early March to late April. Maximum, 28; average, 8. A male seen at Henley's on September 7, 1948.

Canvas-back. Aythya valisineria.

One record: a female at Henley's on April 1, 1948 (Stevens).

Lesser Scaup Duck. Aythya affinis.

Transient; scarce in fall; common in spring:

November 16, 1947 to December 30, 1948

February 5, 1949 to May 29, 1949

Average in spring: 3rd. week in March to 1st. week in May.

Maximum, 160 (March 27, 1948); average, 12. A female, probably a cripple, at Albemarle Lake June 21-24, 1947.

American Golden-eye. Glaucionetta clangula americana.

Winter visitor; somewhat uncommon:

November 1, 1947 to April 20, 1930

This is the only Diving Duck found regularly along the Rivas. Maximum, 16; average, 3.

Buffle-head. Glaucionetta albeola.

Uncommon transient:

November 13, 1947 to December 30, 1948

February 3, 1947 to April 30, 1949

Most common during the second two weeks of March. Maximum, 11.

Rives in his Cobham list found it "occasional in colder months of the year".

Old-squaw. Clangula hyemalis.

Three records: January 4, 1947, two females at City Reservoir; April 13, 1948, a male at Albemarle Lake; April 22, 1947, a male at Henley's.

White-winged Scoter. Melanitta fusca deglandi.

One record. A juvenile bird appeared at Henley's on January 24, 1949, and was joined by another juvenile on February 16. Both birds' plumage brightened noticeably as spring advanced, and they were last seen on April 22.

Ruddy Duck. Erismatura jamaicensis rubida.

Transient; somewhat common in spring; less common in fall:

November 3, 1935 (Calhoun) to December 2, 1947

February 26, 1945 to May 20, 1949

A few birds remained throughout the winter of 1948-49 at Henley's and two smaller ponds. Maximum, 25; average, 4.

Hooded Merganser. Lophodytes cucullatus.

Transient; uncommon in fall; fairly common in spring:

November 13, 1947 to December 30, 1948

January 22, 1949 to May 7, 1949

Average in spring: late March to late April. Maximum, 24; average, 4. In 1947 there was an uncrippled female at Henley's from July 22 to August 16.

American Merganser. *Mergus merganser americana*.

Fairly common winter visitor:

December 11, 1947 to April 13, 1949

One record of a pair on November 1, 1947, is unusually early. Maximum, 57 (February 22, 1949); average, 4. Our most regular winter duck, more widely distributed over the rivers and ponds of the county than the Black Duck.

Red-breasted Merganser. *Mergus serrator* subsp.

Uncommon spring transient:

March 10, 1949 to June 2, 1948

No fall records. Fairly common in the spring of 1948 with a maximum of 39 on March 27. Average, 4.

Turkey Vulture. *Cathartes aura septentrionalis*.

Common resident. Maximum, 81 (winter); average, 20. Breeding: Rives in his Cobham list says, "The nest has been found in the Southwest Mts. by the Messrs. Dickinson of Cobham", and Sam Hart of Slate Hill says the birds nested under an old house on their place for several years until the house fell in.

Black Vulture. *Coragyps atratus*.

Resident; not very common. Maximum, 32 (winter); average, 5. Breeding: Dr. Ivey F. Lewis saw young birds on a cliff on the North Fork of the Rivanna several years ago; March 14, 1947, one egg found in the Southwest Mts. by Roberts Coles; April 23, 1949, one good egg and a broken egg in a bare spot in a honeysuckle tangle (Lawless); and on May 31, a downy bird in the same spot.

Sharp-shinned Hawk. *Accipiter striatus velox*.

Winter visitor; scarce. Only 17 records in 7 years.

September 7, 1947 to March 28, 1944

There was a light flight of small hawks along the Blue Ridge on October 8, 1949; 8 Sharp-shins and 2 Cooper's being seen from Big Flat Mts.; and 12 Sharp-shins, 4 Cooper's, and 12 unidentified accipiters being seen from Blackrock.

Cooper's Hawk. *Accipiter cooperii*.

Resident; somewhat common. Maximum in winter, 4; average, 1. September 27, 1945, at about 5:00 p.m., Grey noted a flight over Charlottesville of 60 birds at an elevation of about 300 ft., flying in a northwesterly direction. Apparently the birds had been turned

from their southerly flight along the Southwest Mts., and were headed for the Blue Ridge where a storm was brewing. The hawks straggled over in a loose formation and were all uniform in size. We have no breeding evidence.

Eastern Red-tailed Hawk. Buteo jamaicensis borealis.

Resident; fairly common. Next to the Sparrow Hawk, this is our commonest hawk. Maximum, 5; average, 1. Breeding: July 10, 1947, a young bird out of the nest, and May 12, 1949, a young bird out of the nest (Chas. Platt).

Northern Red-shouldered Hawk. Buteo lineatus lineatus.

Resident; somewhat uncommon in summer, more common in winter. Maximum, 3; average, 1. Breeding: June 1944, young in nest in Sugar Hollow; June 24, 1947, a large young bird in a nest near Crozet.

Broad-winged Hawk. Buteo platypterus platypterus.

Summer resident; uncommon; more common as a transient.

April 12, 1944 to October 21, 1948

Average, 1 (summer). September 15, 1948, Stevens saw a circling flock of about 55 birds just east of Blackrock Gap, in the Blue Ridge, and October 21, 1948, a flock of about 20 birds at the Shadwell Airport. Breeding: April 26, 1947, nest-building on Observatory Mountain (Lewless), and July 16, 1947, young out of the nest near Albermarle Lake.

Southern Bald Eagle. Haliaeetus leucocephalus leucocephalus.

Transient; uncommon in fall.

August 16, 1949 (Minor) to December 22, 1947

3 spring records: February 14, 1948, immature (Grey); April 29, 1947, adult devouring a domestic duck at Henley's; and May 14, 1947, adult. Most records are of adult birds, and most individuals are found at the lakes and reservoirs. Maximum, 2. Rives in his Cobham list writes, "Occasionally met with".

Marsh Hawk. Circus cyaneus hudsonius.

Uncommon transient and scarce winter visitor:

August 13, 1949 to May 7, 1949

Maximum, 3 (January 31, 1947). It is interesting to note that Rives in his Cobham list says, "Resident; rather common".

Osprey. Pandion haliaetus carolinensis.

Uncommon transient:

March 27, 1948 to May 17, 1947 and 1949

August 15, 1949 to November 4, 1948

Maximum, 5 (April 13, 1949); average, 1

Duck Hawk. Falco peregrinus anatum.

Three records: Stevens saw one over Charlottesville in January 1944; one in Sugar Hollow on August 17, 1944; and one at Henley's on November 27, 1948.

Eastern Pigeon Hawk. Falco columbarius columbarius.

Rare transient; 3 records: October 13, 1946, Stevens saw one in his yard in Charlottesville eating a small bird; Lawless and Stevens saw one at the Hatton wet meadow on March 27, 1948; and John Irvine and Fred Scott saw one at Henley's on April 11, 1949.

Eastern Sparrow Hawk. Falco sparverius sparverius.

Fairly common resident; sometimes common in the spring migration. Maximum, 14 (April 13, 1949); average, 2. Breeding: young in the nest, May 26, 1944, and young out of the nest, May 28, 1949.

Ruffed Grouse. Bonasa umbellus subsp.

Resident; common in the Blue Ridge, and found occasionally in the Southwest Mts. and around Heards Mtn. Breeding: young, May 31 to August 25.

Bob-white. Colinus virginianus subsp.

Common resident. Maximum, 36; average, 3-6. Breeding: young, July 8 to August 16.

The Albemarle County Fish and Game Protective Association released 15 pairs of the Texas Bob-white (Colinus virginianus texanus) in September 1947 in the vicinities of Whitehall, Lake Albemarle, Shadwell, Ivy and Earlysville.

According to Aldrich in Auk, 63: 493, 1946, our Bob-white should be the New England Bob-white (C. v. marilandicus).

Ring-necked Pheasant. Phasianus colchicus torquatus.

Introduced. Mr. A. W. Pinkerton of North Garden released some Pheasants in that vicinity about 1932. From 1939 to 1942 Forman Dirickson saw birds near Keswick and in the Hardware River area. Louis Dymond saw a male in 1942 on Pond Ridge Branch in the Blue Ridge. We have not seen it.

Eastern Turkey. Meleagris gallopavo silvestris.

Resident; uncommon. Of wider distribution than the Ruffed Grouse, as it may be found outside of the mountains. No breeding evidence.

King Rail. Rallus elegans elegans.

Three records; all from the Hatton wet meadow: one flushed September 9, 1948 (Stevens); one flushed July 23, 1949 (Lawless and

Stevens); and two flushed August 24, 1949 (Stevens). The July record points to possibility of this species nesting, although Grey and Stevens made a pre-dawn visit to the marsh on August 3, 1949 and did not hear any Rails. However the song season for this bird may have concluded. In any event, the July date seems remarkably early for migrant of this species.

Sora. Porzana carolina.

Scarce transient:

May 7, 1949 to May 21, 1948

August 13, 1949 to September 24, 1949

All records from Hatton wet meadow except one from Henley's.

Maximum, 2 (May 15, 1948).

Florida Gallinule. Gallinula chloropus cachinnans.

Rare transient; one record. A bird at Henley's Lake on May 3 and 4, 1948 (Stevens).

Coot. Fulica americana.

Transient; somewhat scarce, a little more common in spring than in fall:

October 13, 1946 to December 16, 1944

March 8, 1944 to May 25, 1948

Maximum, 4 (April 15, 1948).

Semipalmated Plover. Charadrius hiaticula semipalmatus.

Rare transient; one record. One at the Whitehall gravel pits on May 25, 1949 (Stevens).

Killdeer. Charadrius vociferus vociferus.

Fairly common resident. Scarce in winter; common in migration with a maximum of 120 (October). Breeding: Rives recorded eggs in late April; we have found eggs May 31 and young birds from May 14 to June 5.

Woodcock. Philohela minor.

Scarce resident; rare in winter; commonest in August and early September along creek and river bottoms in alder runs and box elder groves. Breeding: 4 eggs April 11, 1947, near Milton Airport; June 5, 1947, four birds at Thraves Pond, of which one was a juvenile.

Wilson's Snipe. Capella gallinago delicata.

Transient; uncommon in fall; fairly common in spring. Occasional winter visitor on basis of our present information, but more searching around ponds may prove it to be a regular winter visitor, as in the winter of 1948-49 a flock of 12 birds remained at Bellair

Pond and single birds were seen at Hatton.

September 24, 1949 to May 17, 1947

Average, late October to late April. Spring migration begins about March 20. Maximum, 29 (April 13, 1949 at Hatton and Bellair).

Upland Plover. Bartramia longicauda.

Rives in his Cobham list wrote, "Summer resident; rather rare and for the most part restricted to particular localities. More abundant at Green Springs, five miles southeast." Barger listed it in the 1931 Consolidated List. Martin Curtler saw one on the old Richmond road, 20 miles east of Charlottesville on June 19, 1933. We have not seen it.

Spotted Sandpiper. Actitis macularia.

Rather uncommon summer resident; common fall migrant; abundant spring migrant.

April 7, 1947 to October 17, 1946

Average: mid-April to the last week in September. Maximum in migration, 58 (May 10, 1947); normal in spring, 25; normal in June, 1-2; normal in fall, 5. No breeding record. In the fall of 1947 one bird lingered at the City Reservoir until the unusually late date of November 20 (Grey and Stevens). Fall migrants begin to pass through as early as July 21.

Eastern Solitary Sandpiper. Tringa solitaria solitaria.

Transient; common in spring; uncommon in fall:

March 27, 1948 to May 28, 1949

July 23, 1949 to October 11, 1947

Average: mid-April to late May and early August to the third week in September. Maximum, 19 (May 8 and 10, 1947); normal in spring, 10. Griscom saw one on July 11, 1916.

Greater Yellow-legs. Totanus melanoleucus.

Transient; not uncommon in spring; very uncommon in fall:

April 3, 1948 to May 25, 1949

September 8, 1947 to November 4, 1948

Maximum, 6 (May 2-3, 1948); normal, 1.

Lesser Yellow-legs. Totanus flavipes.

Uncommon transient; most common in spring:

April 19, 1947 to May 20, 1949

July 21, 1947 to October 24, 1948

Maximum, 8 (May 3, 1948); normal 1-2.

Pectoral Sandpiper. Erolia melanotos.

Rare transient; two records: April 22, 1947, one at Bellair Pond (Grey & Stevens), and October 7, 1948, one at Hatton (Grey & Stevens).

Least Sandpiper. Erolia minutilla.

Transient; uncommon in spring:

May 3, 1948 to May 28, 1949

Three fall records: August 11, 1944, one on the Rivanna River near Milton; August 17, 1949, one at Whitehall; and August 31, 1946, one at Albemarle Lake. Maximum, 9 (May 28, 1949).

Semipalmated Sandpiper. Ereunetes pusillus.

Scarce transient; one spring and four fall records, all from the Whitehall gravel pits. May 28, 1949, two birds; August 14, 1948, one; August 17, 1949, a remarkable flock of 34 birds with one Least Sandpiper seen by Minor after four days of rain; September 13 & 16, 1949, one bird.

Western Sandpiper. Ereunetes mauri.

One record. Lawless saw one at Bellair Pond on May 20, 1948. This was the same month that Fred R. Scott observed 11 on the James River near Richmond.

Red Phalarope. Phalaropus fulicarius.

Accidental. John B. Colhoun and a Mr. Dickinson collected one on the reflection pool in front of the gymnasium at the University of Virginia on September 18, 1938. Raven IX:109.

Northern Phalarope. Lobipes lobatus.

Accidental. In September 1939 James E. Irvine captured a bird which had alighted on the McIntyre School grounds (Charlottesville) in an exhausted condition. He took it home and identified it as this species with Pearson's Birds of America and "Forbush"; the bird possessed lobed and webbed toes and a needle-like bill. He later liberated it.

Herring Gull. Larus argentatus smithsonianus.

Spring transient; 5 records: April 20, 1947, one flying over Charlottesville; April 29, 1947, one at Albemarle Lake; May 1, 1948, one at Henley's; May 3, 1948, three at Henley's; and May 1, 1949, one at Henley's.

Ring-billed Gull. Larus delawarensis.

Uncommon spring transient; 12 records in 3 years:

March 5, 1949 to May 11, 1949

Maximum, 9 (March 18, 1949 at Henley's). Seen at several of the lakes and the reservoir as well as on the James and Mechums Rivers. This species and the Bonaparte's Gull are our commonest gulls. On several occasions unidentified gulls have been heard flying over Charlottesville on rainy nights.

Laughing Gull. Larus atricilla.

Spring transient; 4 records, all from Henley's: March 26, 1947, one; April 19, 1947, four; April 22, 1947, three; and May 1, 1949, two.

Bonaparte's Gull. Larus philadelphia.

Uncommon spring transient:

March 25, 1949 to May 10, 1947

On March 27, 1948, a compact flock of 15 birds was seen sitting on Henley's Lake following a night of heavy rainfall.

Forster's Tern. Sterna forsteri.

On May 5, 1948, Stevens saw an immature at Henley's. Fred Scott saw two on the James River at Scottsville on September 14, 1948.

John B. Calhoun wrote in the Raven VIII:69, "I was much surprised to see a tern flying over the reflection pool at the University early in October 1937. It was either the common or Forster's." To the writers it seems more likely that the bird was Forster's (Sterna forsteri) as the Common Tern has not been recorded from Cape Henry in fall after September 20 and from Cape Hatteras after early October, while Forster's Terns have been recorded as late as November and December from the Norfolk region.

Common Tern. Sterna hirundo hirundo.

Fred Scott found 5 specimens (358896-900) in the American Museum of Natural History which were from the Dwight Collection and were taken in Albemarle County by Rives. There were no dates recorded.

There are 3 recent records from Henley's: Lawless saw one on April 8, 1948; Minor and Stevens found a bird which had been dead about a day on August 8, 1948; and Lawless and Stevens saw one on April 13, 1949.

Royal Tern. Thalasseus maximus maximus.

Accidental. Stevens saw 5 with a Forster's Tern at Henley's on May 5, 1948, after a night of heavy rain.

Caspian Tern. Hydroprogne caspia.

One record. Lawless observed one at Henley's on May 1, 1949.

Black Tern. Chlidonias nigra surinamensis.

Fall transient. Six records:

August 2, 1948 to September 16, 1949

Most records from Henley's. Maximum, 2 (September 7, 1948).

Rock Dove. Columba livia.

Some truly feral birds nest in buildings and eaves of houses about Charlottesville.

Eastern Mourning Dove. Zenaidura macroura carolinensis.

Common resident. Flocks of 100 or more occasionally seen from early August to late January. Breeding: nest-building, April 8; sitting on nest, April 16 (Rives); carrying food, June 6.

Passenger Pigeon. Ectopistes migratorius.

Extinct. Rives writes in his Cobham list, "Occasional during the colder months of the year."

Yellow-billed Cuckoo. Coccyzus americanus americanus.

Summer resident; not very common.

April 26, 1932 to October 8, 1947

Average: May 3 to September 25. Maximum, 21 (August 16, 1948); average, 3 or 4. Breeding: carrying food August 16.

Black-billed Cuckoo. Coccyzus erythrophthalmus.

Scarce summer resident:

April 27, 1949 to August 13, 1949

Maximum, 4 (May). Breeding: 3 freshly hatched young, July 23, 1949.

Barn Owl. Tyto alba pratincola.

In December, 1889, Rives saw the skin of one that had been shot. Barger mentions one that had been captured a few miles outside of Charlottesville in June, 1930. Calhoun recorded one on October 22, 1936. Stevens heard of one that was shot in a barn near Blenheim in December, 1947.

Southern Screech Owl. Otus asio asio.

Resident; tolerably common, our commonest owl. Breeding: several records of young birds, but no dates. We have listed our Screech Owl as asio, but it is possible that some of our winter birds may be naevius. However, we have not done any collecting.

Great Horned Owl. Bubo virginianus virginianus.

Uncommon resident. Rives in his Cobham list called the bird tolerably common. Breeding: a young bird was found at Hotop's Cliff by Wayne Marshall in late April or early May, 1945.

Snowy Owl. Nyctea scandiaca.

James Irvine saw one that had been shot near Crozet on November 28, 1940 and mounted by Mr. Pete Bruton of Charlottesville.

Northern Barred Owl. Strix varia varia.

Resident; uncommon, but more common than the Great Horned Owl. No breeding record.

Long-eared Owl. Asio otus wilsonianus.

Two records: Rives in his Catalogue says, "I have known of one or more caught in a trap in Albemarle County in the winter of 1887-8". Mr. J. T. Stewart, Jr. of Portsmouth writes in the Raven III:10 that an owl of this species was caught in a steel trap in Sugar Hollow in November 1929.

Saw-whet Owl. Aegolius acadica acadica.

Three records: A dead bird found and given to Calhoun on November 12, 1936, at Charlottesville; January 1944 James Irvine found a dead bird on the Lynchburg highway, near Charlottesville, and made a skin of it; December 7, 1948, one found by Mrs. J. H. Whiteman in a holly tree in her yard in Charlottesville.

Eastern Whip-poor-will. Caprimulgus vociferus vociferus.

Summer resident; common, particularly in the Blue Ridge.

April 10, 1949 to September 25, 1944

No breeding record.

Eastern Nighthawk. Chordeiles minor minor.

Summer resident; rare. Transient; common, abundant in fall some years.

April 25, 1884 (Rives) to October 12, 1946

Average: early May to late September with flocks of fall migrants as early as August 10. Elmo Stevens and his family saw a thousand or more Nighthawks in Sugar Hollow in late August, 1944, just before dark. Coincident with this flight of birds were swarms of dragonflies (Odonata) flying about 6 ft. above the ground. The Nighthawks were not feeding on the dragonflies, however.

No breeding evidence. A pair usually seen flying over downtown Charlottesville and the University.

Chimney Swift. Chaetura pelagica.

Very common summer resident:

April 4, 1945 to October 19, 1947

Average: April 13 (3 years April 16) to about October 15.

Maximum, 510 (September 13, 1947). Breeding: young in nest June 23 to August 30.

Ruby-throated Hummingbird. Archilochus colubris.

Summer resident; somewhat uncommon:

April 15, 1948 to October 6, 1931 (Freer)

Average: late April to late September. Maximum, 23 (August 16, 1948); normal, 2-3. Breeding: May 8, nest-building; July 30, female sitting on nest.

Eastern Belted Kingfisher. Megasceryle alcyon alcyon.

Uncommon resident; scarce in winter. Maximum, 10; normal, 2.

Breeding: March 25, excavating; May 7-28, feeding young in hole.

Northern Flicker. Colaptes auratus luteus.

Resident; common in summer; uncommon or scarce in winter. Becomes scarce after the first week in November and common by early March. Summer status: maximum, 40; normal, 8. Winter status: maximum, 8; normal, 3. Breeding: young in nest, May 31 to June 8; young out, June 4-22.

Southern Pileated Woodpecker. Hylatomus pileatus pileatus.

Resident; uncommon because of scarcity of large timber. Rives listed it as tolerably common. Maximum, 7; normal, 2. On September 18, 1946, a female was shot near "Morven", the stomach of which contained 34 elderberries and a number of ants and small winged insects. The wing measured 9 inches and the tongue 5 inches (when stretched). Breeding: one using a hole in a sycamore at Albemarle Lake throughout April 1949.

Red-bellied Woodpecker. Centurus carolinus.

Fairly common resident. Maximum, 9; normal, 2-3. Breeding: young in hole, April 30 to June 10; young out, June 4.

Red-headed Woodpecker. Melanerpes erythrocephalus erythrocephalus.

Scarce resident. It had not been recorded in some winters before we discovered some of the wintering areas. We now believe there is little difference in its summer and winter status. Griscom from summer observations in 1915 and 1916 called it "notably abundant". Maximum, 9 (December 26, 1925: Barger). In recent years our maximum is 4. Breeding: eggs, May 2 (Charles Platt).

Yellow-bellied Sapsucker. Sphyrapicus varius varius.

Uncommon winter visitor:

October 2, 1944 and 1948 to April 27, 1947

Average: October 4 to April 25. Maximum, 5; normal, 1-2.

Eastern Hairy Woodpecker. Dendrocopus villosus villosus.

Resident; uncommon to scarce in summer, a little more common in winter. Maximum in winter, 8; normal, 1. Scott found a specimen in the American Museum which was collected by Rives in April 1888. Breeding: young in hole, May 22-30.

Northern Downy Woodpecker. Dendrocopus pubescens medianus.

Common resident; most common in winter. Winter status: maximum, 30; normal, 12. Summer status: maximum, 12; normal, 8. Breeding: nest-building, April 13; young in hole, May 9 to June 8; young out, May 17 to June 8.

Red-cockaded Woodpecker. Dendrocopus borealis borealis.

Scott found two specimens in the American Museum which were

collected by Rives at Cobham. Both were males, and one (no. 96427) was taken on the remarkable date of December 30, 1887. Rives in his Cobham list said, "Rare. Observed in April and May. This is a wild, shy species, frequenting usually the thick woods; it utters loud, chirping cries." In his Catalogue he writes, "I have found this species occasionally in Albemarle County, although it is rare. Individuals were observed in the months of January, April, May, and September. I know of no other record for the Virginias, but it will probably prove to be not uncommon south of the James River."

It is surprising that this Austroriparian bird has been recorded in Albemarle County, when today it is rare even in the southeastern corner of the state.

Eastern Kingbird. Tyrannus tyrannus.

Common summer resident:

April 13, 1948 and 1949 to September 11, 1948

Average: Mid-April to the first week in September. Maximum, 22; normal, 10. Breeding: eggs, May 17 to June 21.

Northern Crested Flycatcher. Myiarchus crinitus boreus.

Fairly common summer resident:

April 20, 1947 to September 24, 1946

Average: April 25 to mid-September. Maximum, 18; normal, 5. Breeding: June 5, nest and 5 eggs in a newspaper tube, complete with snakeskin (Minor).

Eastern Phoebe. Sayornis phoebe.

Resident; common in summer, scarce in winter (sometimes absent). Birds usually become common by the last week in March and are scarce after the first week of November. Maximum in winter, 4; in migration, 26; in summer, 16. Normal in summer, 6. Breeding: first brood nest completed, March 16; eggs, April 9027; young in nest, April 22 to May 31; feeding young out of nest, May 5 to June 26. Second brood eggs, June 7 to July 5; young in nest, June 22; young out of nest, July 10.

Yellow-bellied Flycatcher. Empidonax flaviventris.

Fall transient; Five records: August 25, 1947; September 2, 1948; September 7, 1948; September 9, 1946, September 9, 1948.

Acadian Flycatcher. Empidonax virescens.

Common summer resident:

May 1, 1948 to September 13, 1947

Average: May 3 to September 9. Maximum, 29; normal, 13.

This bird is common in the hemlocks of the lower Blue Ridge hollows and has been found as high as 2800 ft. on the headwaters of Ivy Creek near Loft Mt. Breeding: eggs, May 22 to June 10. Dr. Herbert Friedmann recalls a young Cowbird in an Acadian's nest in late June of 1923, when he did some work here.

Alder Flycatcher. Empidonax traillii traillii.

Grey collected a female on September 23, 1948 at Bellair Pond.

Least Flycatcher. Empidonax minimus.

Rare transient according to positive identifications. May 3, 1948, a singing bird (Stevens); May 4, 1932 (Freer); May 6, 1947, a singing bird (Stevens); August 23, 1949, a bird which sang once, an unusual record (Lawless and Stevens). Rives recorded it in his Cobham list, and Minor saw one in the spring of 1943.

Griscom believes the majority of the fall migrants of the genus Empidonax belong to this species. Empidonax flycatchers are seen not uncommonly from August 24 to September 29, of which only the Yellow-bellied and some Acadians are identifiable.

Eastern Wood Pewee. Contopus virens.

Common summer resident:

April 27, 1948 to October 18, 1947

Average: May 5 to October 12. Maximum, 46; normal, 10. Breeding: nest-building, May 8-24; eggs, May 17 to June 24; feeding young out of nest, July 25 to August 25.

Olive-sided Flycatcher. Nuttallornis borealis.

Rare transient; Four records: May 5, 1932 (Freer); May 24, 1947, one in Sugar Hollow (Stevens); September 7, 1948, one on North Fork of Moorman's River (Stevens); and September 12, 1948, one on Big Flat Mtn. (Stevens).

Northern Horned Lark. Eremophila alpestris alpestris.

Very scarce winter visitor. Grey collected one December 6, 1944, and observed 3 others in a flock of Prairies on December 22, 1944 on the Garth Road. October 26, 1946, 4 near Albemarle Lake (Minor and Stevens); February 1, 1947, 5 in the Hessian Barracks vicinity (Stevens); and February 3, 1949, one at Henley's (Grey and Stevens). Rives recorded it in his Catalogue.

Prairie Horned Lark. Eremophila alpestris praticola.

Resident; scarce in summer; not uncommon in winter. In migration it arrives in late September and departs in mid-March. Maximum, 100 (November); normal in winter, 10; normal in summer, 1. Breeding: eggs, March 30 to April 25, all at Henley's.

Tree Swallow. Iridoprocne bicolor.

Transient; uncommon in spring, scarce in fall:

March 30, 1947 to May 22, 1948

August 3, 1947 to October 19, 1946

Griscom reported 2 on July 11, 1916. Maximum in spring, 30.

Bank Swallow. Riparia riparia riparia.

Transient; scarce in spring; very scarce in fall:

May 1, 1948 to May 28, 1949

August 14, 1949 to September 20, 1948

Maximum, 15 (August 15, 1949).

Rough-winged Swallow. Stelgidopteryx ruficollis serripennis.

Uncommon summer resident:

March 26, 1949 to August 16, 1947

Average: late March or early April to late July or the first week in August. Maximum, 29 (summer); normal, 3. Breeding: eggs, May 7-18; young in hole, June 8-24; feeding young out of hole, June 21 to July 8.

Barn Swallow. Hirundo rustica erythrogaster.

Somewhat uncommon summer resident:

April 3, 1949 to September 23, 1948

Average: mid-April to late August. Maximum, about 380 (August 14, 1949); normal, 3. Breeding: feeding young out of nest, August 3.

Northern Cliff Swallow. Petrochelidon pyrrhonota albifrons.

Transient; uncommon in spring:

April 13, 1948 to May 17, 1947

Three fall records: August 3, 1947, one (Minor); August 14, 1948, ten (Stevens); August 14, 1949, three (Minor and Stevens). Maximum, 30 (May 8, 1947). In the summer of 1944 several pairs were thought to have bred at a small pond on Monticello Mtn., but the birds have not been seen at that place since. Rives, in his Cobham list, writes, "Summer visitor - rather rare, nests on building at railway station at Cobham". Grey visited the station in the summer of 1946 but found no signs of nests or birds.

Purple Martin. Progne subis subis.

Former summer resident; only two records in recent years: two birds May 7, 1948 (Lawless), and one May 8, 1948 (Stevens). Dr. H. S. Hedges says that there used to be a large colony in boxes behind Pence and Sterling Drug Store which stood on the corner of Main and Second Streets N. E. in Charlottesville, but that nesting site was disturbed by construction nearby. Barger and Curtler reported it as a rare bird in 1933.

Northern Blue Jay. Cyanocitta cristata cristata.

Somewhat common resident. Breeding: nest-building, April 1-20; eggs, April 12 to May 6; young in nest, May 16 to June 1; young on wing, May 12 to June 10. Calhoun reported in 1935 that on October 10-13 a migration of Jays took place over Charlottesville, the birds following a single route. He watched them for an hour and a half each day and observed that from 150-250 birds passed over dur-

ing a day, flying high in straggling flocks. (Raven VII:7). Grey observed similar flights on October 6, 1944, except there were fewer birds; and again on April 26, 1945, when there was a flock of 25 birds high over the University grounds.

Northern Raven. Corvus corax principalis.

Summer resident in the Blue Ridge section; scarce. It has been recorded over Sugar Hollow and the Moorman's River watershed from May to November, usually in groups of 2 or 3, but once in a group of 5. Maximum, 7 (two groups seen by Fred R. Scott on November 24, 1948 at Jarman's Gap and Calf Mtn.). There are two records of birds seen away from the mountains: In the fall of 1931 Freer saw one on the Rivanna near Charlottesville (Raven July 1933, p.11), and on December 30, 1948 Scott saw one at Farmington Pond just west of Charlottesville.

Minor and Stevens have seen Ravens harry Turkey Vultures until the latter vomited its food. As the regurgitated food fell earthward the Raven would dive after it and catch it on the wing. Sometimes a Raven will harry a Vulture doggedly for about ten minutes, and if it meets with no success will fly away.

Eastern Crow. Corvus brachyrhynchos brachyrhynchos.

Winter visitor; probably makes up the large flocks of birds seen on the lowlands of the Rivanna. One collected December 30, 1944 with a wing spread of 12.1 inches.

Southern Crow. Corvus brachyrhynchos paulus.

Abundant resident. Summer status: maximum, 170; normal, 25. Winter status: maximum, 305; normal, 75. Breeding: carrying nesting material, March 5; young in nest, May; feeding young out of nest, May 29 to July 8. The birds appear to gather in large flocks the latter part of August.

Fish Crow. Corvus ossifragus.

Resident; scarce in summer; uncommon in winter. Maximum, 11 (December); normal, 2. Breeding: Lawless found a nest 35 ft. up in a pine near Scott Stadium on April 21, 1949. This nest appeared to be abandoned later. Robert Ridgeway was the first to record this species for the county, when in his comment in the Bulletin of the Nuttall Ornithological Club VII p. 250, he said, "During a recent trip to Charlottesville, Albemarle County, Virginia, I was much surprised to find the fish crow exceedingly common - quite as numerous in fact as the common crow." Ridgeway did not say what time of year (about 1882) his visit occurred, but it is the only time the bird has been listed as "exceedingly common". Griscom reported several pairs in the summer of 1915 or 1916.

Carolina Chickadee. Parus carolinensis subsp.

Common resident. Winter status: Maximum, 88; normal, 15. Summer status: maximum, 41; normal, 10. Breeding: young in nest, April 29 to May 26; feeding young out of nest, May 31 to June 9.

Tufted Titmouse. Parus bicolor.

Common resident. Winter status: maximum, 39; normal, 10. Summer status: maximum, 23; normal, 9. Breeding: Rives recorded eggs in early May. Young in nest, April 30 to June 6; feeding young out of nest, May 29 to June 21.

White-breasted Nuthatch. Sitta carolinensis carolinensis.

Uncommon resident. Maximum, 14; normal, 2. Breeding: nest-building, March 30 (Calhoun); eggs, April 13 (Calhoun); carrying food, April 29; young on wing, May 11 to June 2. Calhoun in the Raven VII:9 says, "Two white-breasted nuthatches were banded in November. They remained for two months and then left. During the first week of March two returned, but I do not know whether they are the same two, because I have not been able to capture them. On March 30 they began building a nest in a hollow tree in the back yard. Although the nest was finished in a few days no eggs were laid until April 13th. Seven eggs were laid. During the nest-building, which was carried on by only one of the birds, the pair was noisy, but as soon as incubation began the pair was rarely seen and more rarely heard. The eggs hatched early on the morning of April 30th."

Red-breasted Nuthatch. Sitta canadensis.

Winter visitor; somewhat common:

September 15, 1948 to April 29, 1947

One late bird recorded May 17, 1947. Average: late September to the third week in April. Maximum, 19; normal, 3. Unusually scarce during the winters of 1944-5 and 1947-8.

Brown Creeper. Certhia familiaris americana.

Winter visitor; not uncommon:

October 7, 1944 to May 4, 1944

Average: mid-October to mid-April. Maximum, 13; normal, 3.

Eastern House Wren. Troglodytes aedon aedon.

Common summer resident:

April 11, 1947 to October 21, 1948

Average: April 15 to October 5. In the abnormally mild spring of 1948 Minor recorded one bird as early as March 26, and they became numerous by April 3. Maximum, 16; normal, 8. Breeding: young in nest, May 17 to August 4. A male which Grey collected on May 23, 1949 was identified by Wetmore as aedon.

Eastern Winter Wren. Troglodytes troglodytes hiemalis.

Uncommon winter visitor:

September 26, 1948 to May 3, 1944

Average: early October to late April. Maximum, 14; normal, 2.

Bewick's Wren. Thryomanes bewickii bewickii.

Summer resident; uncommon along the foot of the Blue Ridge and in the mountains, scarcer eastward; found nesting as far east as the Hart farm near Slate Hill Church, east of Carter's Mountain.

March 20, 1948 to October 30, 1947

Maximum, 5; normal, 2. Breeding: eggs, April 18 to May 31; young, May 22 to June 7. In 1944 Stevens noted it nesting on a farm in Sugar Hollow, in the pocket of an old scarecrow. At that time there were no House Wrens nesting in the vicinity. The following summer the House Wren appeared, and both species nested in the same immediate area. The next summer only the House Wren was present; this was also true in 1947. Although the Bewick's Wren is becoming scarcer in the last few years this is the only case which we have observed of the House Wren invading an area and dominating that species.

Carolina Wren. Thryothorus ludovicianus subsp.

Common resident. Winter status: maximum, 38; normal, 9. Summer status: maximum, 27; normal, 8. Breeding: eggs, June 7-18; young in nest, June 18 to July 2; young out of nest, May 15 to Aug. 10.

Long-billed Marsh Wren. Telematodytes palustris subsp.

Scarce transient; found in wet meadows and around ponds:

April 20, 1948 to May 23, 1947

August 24, 1949 to October 18, 1947

Maximum, 3 (August 24 and September 24, 1949).

Short-billed Marsh Wren. Cistothorus platensis stellaris.

Formerly regarded as a transient; now believed to be a summer resident. In 1948 a few birds were seen at the wet meadow near Hatton in May and September. In 1949 a colony was discovered there on July 20 and further investigation revealed at least 9 singing males with as many as 12 individuals being seen on August 24. Three "dummy" nests were located on August 3 which male birds were building but which appeared completed. As yet no positive evidence of breeding has been secured. All Albemarle records are from Hatton:

May 1, 1948 to May 21, 1949

July 20, 1949 to September 30, 1948

Eastern Mockingbird. Mimus polyglottos polyglottos.

Common resident. Maximum, 30; normal, 10. Breeding: eggs, April 28 to May 11; young, May 4 to June 3. Rives recorded a second

brood with eggs on July 7. One record of a bird at 2500 ft. in the Blue Ridge in a pasture scattered with hawthorn thickets.

Catbird. Dumetella carolinensis.

Common summer resident:

April 18, 1947 to October 16, 1931 (Curtler and Freer)

Average: April 25 to October 7. Maximum, 32; normal, 12.

Breeding: carrying nesting material, May 7 to June 19; eggs, May 12-23; young, June 2 to August 14.

Brown Thrasher. Toxostoma rufum rufum.

Fairly common summer resident:

March 24, 1948 to October 17, 1946

Average: early April to early October. Maximum, 16; normal, 7.

Breeding: eggs, April 26 to May 10; young, May 20 to July 20.

Eastern Robin. Turdus migratorius migratorius.

Abundant transient; scarce in winter. We include this form (without having collected a specimen) on the basis of the fact that Grey noted in collecting Robins at Raleigh, N. C. that birds taken in the open fields and woods were usually the eastern form. From February to mid-April large flocks are found in fields and pastures, while wintering birds are usually found in deciduous woods. The fall migration is never as pronounced as the spring movement, and it occurs mostly in October. Dr. H. S. Hedges remembers that some boys killed 450 birds in one day before they were protected by the Game Laws.

Southern Robin. Turdus migratorius achrusterus.

Abundant summer resident. Birds appear in yards around Charlottesville in early February and depart in mid-October. Summer status: maximum, 65; normal, 45. Breeding: nest-building, April 15; eggs, April 7 to May 5; young, April 18 to August 16. At least two broods.

Wood Thrush. Hylocichla mustelina.

Common summer resident:

April 13, 1930 to October 16, 1946

Average: April 20 to early October. Maximum, 41; normal, 12.

Breeding: nest-building (1st. brood), May 8-15, (2nd. brood), June 29; eggs, May 14-24; young, June 2 to July 28.

Eastern Hermit Thrush. Hylocichla guttata faxonii.

Somewhat uncommon winter visitor:

October 8, 1949 to May 14, 1944

Average: October 20 to April 29. Maximum, 9; normal, 2.

This species departs about the time the Olive-back arrives, and records for May are rather rare.

Olive-backed Thrush. Hylocichla ustulata ustulata.

Transient; common (more so in spring than in fall):

April 29, 1947 to May 25, 1948

Spring status: maximum, 38 (May 17); normal, 10. The majority of the great multitude of migrating Thrushes heard flying overhead on September nights sounds as if they might be of this species. Stevens saw one on Hawksbill Mountain, Madison County, as late as May 27, 1946.

Gray-cheeked Thrush. Hylocichla minima minima.

Scarce transient:

May 8, 1948 to May 31, 1949

September 23, 1948 to October 8, 1949

Maximum, 3 (May 17, 1947 and September 26, 1948). It may be more common than our records indicate, as we have depended upon sight rather than ear for identification, and when there was any doubt as to whether a bird was a Gray-cheek or an Olive-back, we have called it the latter. The Dwight Collection contains two Albe-marle specimens taken in September 1885, and September 26, 1894.

Veery. Hylocichla fuscescens fuscescens

Transient; scarce in spring:

May 2, 1943 to May 21, 1949

There are 3 fall records: one, August 28, 1946; one, August 31, 1949; and two, September 10, 1947. There is no suitable breeding territory within the county. Stevens has found it outside of the county on Bear Fence Mountain, Greene County, as low as 3050 ft. in summer.

Eastern Bluebird. Sialia sialis sialis.

Common resident; nearly twice as common in winter as in summer. Summer status: maximum, 70; normal, 12. Winter status: maximum, 76; normal, 20. Breeding: 1st. brood - nest-building, February 29 to April 5; eggs, June 23-27; young in nest, April 22 to June 11; young out, June 7. 2nd. brood - young in nest, June 22; young out, July 10. 3rd. brood - eggs, July 14-30; young in nest, July 31 to September 2.

Blue-gray Gnatcatcher. Polioptila caerulea caerulea.

Fairly common summer resident:

April 2, 1949 to September 24, 1949

Average: April 11 to September 10. Maximum, 21; normal, 5. Breeding: nest-building, April 25-27; eggs, May 7-17; young in nest, May 28 to June 11. Breeds up to 800 feet in the lower hollows of the Blue Ridge; much more common east of Charlottesville.

Eastern Golden-crowned Kinglet. Regulus satrapa satrapa.

Abundant winter visitor:

October 5, 1946 to April 27, 1944

Average: October 9 to mid-April. Arrives in large numbers in early November. Maximum, 188 (December); normal, 50.

Eastern Ruby-crowned Kinglet. Regulus calendula calendula.

Common transient and uncommon winter visitor; scarce some winters.

September 23, 1948 to May 10, 1947

Average: September 27 to early May. Maximum, 26 (Christmas Count); normal, 4; in migration, 10.

American Pipit. Anthus spinoletta rubescens.

Uncommon transient; usually occurring in fairly large flocks;

October 28, 1948 to November 26, 1948

February 24, 1949 to March 28, 1947

Maximum, 350 (March 18, 1949); normal, 50-100.

Cedar Waxwing. Bombycilla cedrorum.

Resident; scarce breeder, common transient, not uncommon some winters but absent others. Flocks seen as early as September 1 and as late as June 2. Maximum in migration, 144; normal in migration, 20. Breeding: nest-building, May 29; eggs, June 8; feeding young, July 8-17.

Loggerhead Shrike. Lanius ludovicianus ludovicianus.

Calhoun collected a male near Charlottesville on April 12, 1936 and sent it to Oberholser who wrote: "It proves as you suspected to be a loggerhead shrike, and a most interesting record for the interior of Virginia, extending the range of this form a considerable distance northward." Calhoun observed, "It is possible that this was a nesting bird". (Raven VII no. 5-6, p. 11) Scott found two skins of ludovicianus in the American Museum which were taken at Cobham on November 25, 1891 and November 27, 1888. Grey secured two adult females, one on December 18, 1944 and the other on May 23, 1949, which Wetmore identified as ludovicianus.

Migrant Shrike. Lanius ludovicianus migrans.

Uncommon resident. A bird in the Dwight Collection was taken at Cobham on November 21, 1890, and an adult male was taken by Grey on December 9, 1944 and identified by Wetmore. Breeding Shrikes will probably prove to be ludovicianus with migrans as a winter visitor, but until more information is obtained through collecting we shall arbitrarily consider migrans the breeder. Maximum, 12; normal, 2. Breeding: nest-building, June 3; young out of nest, May 7 to June 6. In observing the early post-breeding wandering of Shrikes, Grey noted two birds on the Scottsville Road near Blue Ridge Sanatorium on June 16th., and on the 17th. noted that one of them had moved about one mile southward, and by the 20th. had moved a total of four miles. That individual was not seen during the week following although one bird was still seen at the Sanatorium.

Starling. Sturnus vulgaris vulgaris.

Abundant resident. Juvenile birds begin to flock in late May and early June, and they often roost in town in large flocks with grackles in August, September and early October. After October the flocks are usually seen outside of town. Young in nest April 1 to June 11.

White-eyed Vireo. Vireo griseus griseus.

Summer resident; not uncommon, being more common in the eastern part of the county, but also found up to 900 ft. in mountain hollows of the Blue Ridge.

April 12, 1949 to October 6, 1947

Average: April 15 to late September. Maximum, 14; normal, 4.

Breeding: completed nest, May 21; eggs, June 1; feeding a young Cowbird out of the nest, June 21; young out, July 16 to August 14. One record of a singing bird at Via School on the North Fork Moorman's River at 2100 ft. on July 10, 1947.

Yellow-throated Vireo. Vireo flavifrons.

Uncommon summer resident:

April 11, 1949 (John Irvine and F. R. Scott) to October 4, 1949

Average: April 14 to September 23. Maximum, 11; normal, 4. No breeding records.

Blue-headed Vireo. Vireo solitarius solitarius.

Uncommon transient:

March 29, 1948 to May 10, 1947

September 6, 1947 to October 30, 1947

Average: early April to early May and late September to late October. Several August records (one as early as August 9, 1947) have been made near the foot of the Blue Ridge which probably represent individuals of alticola which have wandered from their breeding grounds not many miles away. No specimens of solitarius have been collected, but we consider the migrants seen away from the mountains to be that form.

Mountain Vireo. Vireo solitarius alticola.

Uncommon summer resident in the Blue Ridge beginning at 1000 ft. Breeding: nest-building May 17 at 2275 ft. at Blackrock Gap; carrying food at 2700 ft. near Brown's Gap on August 14; and feeding young out of nest June 8 at 2500 ft. near Blackrock Leanto.

Red-eyed Vireo. Vireo olivaceus.

Abundant summer resident. Perhaps the most abundant bird in this area.

April 19, 1947 to October 16, 1948

Average: April 25 to early October. Maximum, 120 (May 25); normal, 50. Breeding: nest-building, May 10; eggs, May 17 to June 7; feeding young, June 1-22; feeding young of second brood, July 19 to August 5. Feeding a young Cowbird out of nest July 23.

Philadelphia Vireo. Vireo philadelphicus.

Rare transient; six records of single birds: the only spring record is of a singing bird on Observatory Mts. May 10, 1947 (Lawless); September 18, 1948, Sugar Hollow (Stevens); September 20, 1948, Hatton (Minor and Stevens); September 27, 1947, Observatory Mtn. (Stevens); October 1, 1947, Sugar Hollow (Minor and Stevens). There is the skin of a male in the Am. Museum which was taken in September 1885, at Cobham.

Eastern Warbling Vireo. Vireo gilvus gilvus.

Formerly a rare and local summer resident; found in summer up till the 1930's.

April 24, 1932 to September 23, 1931 (Freer and Curtler)

Grey and Stevens found a singing bird in the tall sycamores where Route 29 crosses the Rivanna River on June 6, 1946, which constitutes the only summer record in recent years. Since 1944 it has been a rare transient seen from May 1, 1948 to May 15, 1948 and on September 7, 1947.

Black and White Warbler. Mniotilta varia.

Common summer resident:

April 4, 1946 to October 4, 1947

Average: April 12 to September 26. Maximum, 30 (June); normal, 9. Breeding: feeding young out of nest, June 1 to July 12.

Prothonotary Warbler. Protonotaria citrea.

One record. On May 7, 1949, Lawless, Stevens, and R. J. Watson saw a singing male on a small pond beside Highway 613, about two miles northwest of Scottsville. Apparently a transient, it was not found on subsequent visits to the vicinity. This is the farthest inland record for Virginia.

Worm-eating Warbler. Helminthos vermivora.

Uncommon summer resident:

April 15, 1948 to September 10, 1947

Average: 3rd. week of April to the 1st. week of September. Maximum, 13; normal, 5. Fall migration has been observed as early as July 24. This species is most common as a breeder in the Ragged Mts., Carter's Mtn., and the Southwest Mts., all of which are small mountain groups east of the Blue Ridge. The only birds which we have found in summer in the Blue Ridge have been up to 2200 ft. in Sugar Hollow. Breeding: eggs, May 19-28 (Rives); feeding young, June 6-26.

Golden-winged Warbler. Vermivora chrysoptera.

Very scarce transient; ten records. There are 4 spring records from April 28, 1944 to May 10, 1948 and 6 fall dates from August 16, 1947 to September 9, 1946. Two birds were seen on this last date; all other records are of single birds.

Blue-winged Warbler. Vermivora pinus.

Rare transient. Griscom recorded it as "uncommon" during summer school sessions at the University in 1915-16. Other records: June 4, 1944, one in Sugar Hollow (Minor and Stevens); August 16, 1947 (Stevens); August 21, 1944 (Stevens); and August 28, 1946 (Stevens).

Tennessee Warbler. Vermivora perigrina.

Transient; scarce in spring; common to abundant in fall, particularly in the Blue Ridge.

May 1, 1948 to May 19, 1948

September 1, 1946 and 1949 to October 27, 1946

On September 16, 1944, while driving along the Skyline Drive, Grey found them abundant, with six or more at every place he stopped between Rockfish Gap and Blackrock. Spring maximum, 9 (May 17, 1947).

Nashville Warbler. Vermivora ruficapilla ruficapilla.

Scarce transient; much more common in fall than in spring.

April 22, 1948 to May 10, 1947

September 12, 1948 to October 20, 1948

Barger and Curtler saw 8 birds on April 30, 1933. Stevens has seen it in fall as early as August 27, 1944, on the Page County side of Hawksbill Mountain.

Southern Parula Warbler. Compsothlypis parula americana.

Fairly common summer resident:

April 13, 1948 to October 19, 1946

Average: mid-April to early October. Maximum, 25; normal, 10. Rives in the Cobham list said, "Abundant in spring from April 19 to May 12. It is doubtful if any remain to breed." We have found them breeding over all the county, but have found them most common in the hollows of the Blue Ridge where there are hemlocks. Breeding: eggs, May 18; carrying food, June 7; young out, June 8.

Eastern Yellow Warbler. Dendroica petechia aestiva.

Fairly common summer resident:

April 20, 1947 to August 30, 1949

Average: April 23 to late July (there are only 4 records for August). Stevens saw one in his front yard in Charlottesville on the very late date of October 12, 1946 (Raven XVII:84). Lawless has an extremely early record of a bird on the University Grounds on April 12, 1949. Maximum, 22; normal, 4. Breeding: nest-building, May 7-24; young in nest, June 6-7; feeding young out of nest, June 7 to July 2.

Magnolia Warbler. Dendroica magnolia.

Transient; rather uncommon in spring; common in fall:

May 2, 1930 (Curtler) to May 28, 1949

August 26, 1947 to October 14, 1947
Spring maximum, 7; fall maximum, 21.

Cape May Warbler. Dendroica tigrina.

Transient; not uncommon in spring; fairly common in fall, especially in town:

April 23, 1947 to May 17, 1947
August 27, 1946 to November 4, 1947
Spring maximum, 7; fall maximum, 15.

Black-throated Blue Warbler. Dendroica caerulescens caerulescens.

Transient; common in spring; less common in fall:

April 22, 1948 to May 22, 1948
August 31, 1946 to October 21, 1948

Average: April 27 to May 20 and mid-September to mid-October.
Maximum in spring, 24; in fall, 9. A male captured September 22, 1944, and examined, conformed to the description of this form.

Cairns's Warbler. Dendroica caerulescens cairnsi.

Uncommon summer resident. Breeds in the Blue Ridge beginning at 2100 ft. This bird is somewhat locally distributed due to the lack of mature woodlands in the higher parts of the mountains. Breeding: two nest with 3 and 4 young, June 12, near Loft Mtn. at 2800 ft.; feeding young out of nest, July 10, at 3000 ft. on Cedar Mtn.

Myrtle Warbler. Dendroica coronata coronata.

Winter visitor; abundant transient from 3rd. week of April to 2nd. week of May and from 3rd. week of October to 2nd. week of November. Uncommon as a winter visitor, being most common in the eastern and southern parts of the county.

October 2, 1946 to May 18, 1948
Maximum in migration, 222 (May 1, 1948); in winter, 25.

Black-throated Green Warbler. Dendroica virens virens.

Common transient and scarce summer resident.

April 11, 1949 (Irvine and Scott) to May 22, 1948
August 24, 1949 to October 20, 1946

Average: mid-April to 3rd. week in May and late August to mid-October. As in the case of the Blue-headed Vireo there are records of Black-throated Greens seen near the foot of the Blue Ridge as early as August 8 which probably breed in the mountains. Maximum in migration, 26 (May 6, 1948).

Found as a summer resident in the Blue Ridge: in Sugar Hollow from 900-1500 ft.; around Blackrock Gap at 2300 ft.; and on the west slope of Cedar Mtn. at 2800 ft. Also found in summer in the small mountains east of the Blue Ridge; on the west slope of Heard's Mtn. at 1600 and 1800 ft.; on Mill Mtn. at 1500 and 1700 ft.; on Chalk Mtn. at 1200 ft.; Wolfpit Mtn. at 1300 ft.; Broadhead Mtn. at 1300

ft.; and Peter's Mtn. at 1100 and 1500 ft. on the east side. These last three mountains are in the Southwest range which lies east of Charlottesville, Peter's Mtn. being in the northeast corner of Albemarle near the Orange County boundary. The Black-throated Green Warbler is the only bird of the Alleghanian Zone which we have found in summer east of the Blue Ridge. Breeding: feeding young out of nest, May 30 to July 10.

Cerulean Warbler. Dendroica cerulea.

Summer resident; uncommon and local.

April 13, 1948 to September 8, 1947

Average: late April to early August. Maximum, 28 (June 25, 1948). Found mostly in the mountains east of the Blue Ridge and is most common in the Southwest Mts. and on Castle Rock and Mill Mtn. It has not yet been found in the Blue Ridge in summer. Breeding: feeding young out of nest, June 6-26.

Blackburnian Warbler. Dendroica fusca.

Uncommon transient; rare summer resident in the Blue Ridge.

April 26, 1947 to May 28, 1948 and 1949

August 3, 1947 to October 11, 1947

Average: April 30 to May 21 and mid-August to late September. Summer birds have been found in Sugar Hollow as low as 1400 ft., in the Brown's Gap vicinity, and in the Loft Mtn. vicinity. No breeding record.

Yellow-throated Warbler. Dendroica dominica dominica.

Summer resident; scarce and localized.

March 27, 1948 to September 20, 1948

Maximum, 7. Found in summer in the southern and eastern parts of the county and near Charlottesville at the City Reservoir and Observatory Mtn.; occurs over much of the county in migration. There are 3 specimens of this form in the American Museum which were taken at Cobham in 1888 and 1894. Breeding: nest-building, May 10 (Lawless).

Chestnut-sided Warbler. Dendroica pensylvanica.

Uncommon summer resident in the Blue Ridge beginning at 2100 ft.; common as a transient, especially in fall.

April 26, 1932 to May 21, 1947 and 1949

August 3, 1947 to September 30, 1948

Average: April 30 to May 15 and August 18 to September 25. Maximum in migration, 14; in summer, 31. Breeding: feeding young out of nest, June 12 to July 10, from 2100-3100 ft. A male Chestnut-sided seen feeding a young Black and White Warbler out of the nest on June 4, 1949, near Loft Mtn.

Bay-breasted Warbler. Dendroica castanea.

Transient; uncommon in spring; fairly common in fall:

May 3, 1947 to May 28, 1948
September 3, 1948 to October 11, 1946
Maximum, 26 (September 14, 1949).

Black-poll Warbler. Dendroica striata.

Transient; abundant in spring; fairly common in fall:
May 2, 1933 to June 4, 1948 and 1949
September 4, 1948 to October 31, 1946
Average: May 4 to May 30 and mid-September to October 23.
Maximum, 31 (May 21, 1948); normal, in spring, 20; in fall, 8.

Northern Pine Warbler. Dendroica pinus pinus.

Common summer resident:
February 22, 1949 to October 19, 1946
Average: March 12 to October 10. Maximum, 38; normal, 9.
One record of a bird at Albemarle Lake on December 7, 1947. Breeding: nest-building, March 23 to April 15; feeding young out of nest, May 12 to June 26. Feeding a young Cowbird, June 26.

Northern Prairie Warbler. Dendroica discolor discolor.

Abundant summer resident:
April 15, 1948 to September 23, 1948
Average: April 23 to September 13. Maximum, 28; normal, 15.
Rives in the Cobham list recorded this species as "Transient, rather rare, April 23. A few remain to breed. Have seen a pair, apparently mates, on the 19th. of May." Griscom recorded it as "local" in 1915 and 1916. Evidently it had begun to increase by the time of Griscom's observations. Breeding: eggs, May 14-21; feeding young, June 15 to August 10.

Western Palm Warbler. Dendroica palmarum palmarum.

Uncommon transient; almost a winter visitor.
September 20, 1948 to January 8, 1948
February 15, 1947 to May 17, 1947 and 1949
Winter birds have been found in the vicinity of Henley's Lake.
Maximum, 4 (May, October, December).

Yellow Palm Warbler. Dendroica palmarum hypochrysea.

Uncommon transient; almost a winter visitor.
October 6, 1946 to December 30, 1947
February 20, 1947 to May 15, 1932 (Freer)
On December 7, 1947, six Yellow Palms were seen in a flock with four Western Palms at Henley's.

Oven-bird. Seiurus aurocapillus subsp.

Abundant summer resident:
April 14, 1949 to October 14, 1947

Average: April 21 to 2nd. week of October. Maximum, 72 (June); normal, 30. Breeding: eggs, May 13-25; feeding young, June 8 to July 27. A Cowbird egg in each of 2 nests on May 13 and May 22.

Grinnell's Water-thrush. Seiurus noveboracensis notabilis.

Scarce transient; least common in fall.

April 21, 1884 (Rives) to May 31, 1949

August 31, 1946 to October 20, 1935 (Calhoun, Raven VII:7)

Average in spring: May 1 to late May. Maximum, 3 (May 15, 18, 25). Wetmore identified a bird collected by Grey on May 28, 1949, as Grinnell's.

Thomas D. Burleigh collected 55 birds at Asheville, N. C., and found that 50 were the western form, notabilis, and only 5 could be referred to the Northern Water-thrush, Seiurus n. noveboracensis. John W. Aldrich suggests that there may be a split migration in that Grinnell's may migrate along the mountains and the Northern along the coastal plain. The collecting of these birds at points throughout the state would be a valuable addition to our information.

Louisiana Water-thrush. Seiurus motacilla.

Somewhat common summer resident:

March 23, 1946 to September 13, 1948

Average: late March to early August. This species and the Yellow Warbler are the first breeding Warblers to depart in the fall. Maximum, 12; normal, 5. Found in the Blue Ridge as high as 2800 ft. at the headwaters of Ivy Creek. Breeding: eggs, April 27 to May 21; feeding young, May 16 to June 22.

Kentucky Warbler. Oporonis formosus.

Summer resident; rare and local.

April 29, 1944 to August 5, 1948

All summer birds have been found in Sugar Hollow in the vicinity of the dam except a singing male on Goodloe Mtn., in the Southwest Mts., at 1200 ft. June 6, 1949. Most transients are seen in May. Breeding: 4 eggs, May 6; a young bird out of the nest, June 22, at 1000 ft.

Connecticut Warbler. Oporonis agilis.

Rare transient in fall; 5 records: September 12, 1948, one on Big Flat Mtn. (Stevens); September 27, 1948, one at Charlottesville (Minor); October 1, 1947, one in Sugar Hollow (Minor and Stevens); October 3, 1889, a specimen taken at Cobham, now in the American Museum; and October 4, 1947, one at Burnt Mills (Stevens). Seen in shrub and vine tangles, thickets, and other such places.

Mourning Warbler. Oporonis philadelphia.

Rare transient; 4 records: May 12, 1947, one on the edge of Charlottesville (Minor); May 14, 1890 (Rives); May 23, 1948, one at Farmington Pond (Lawless); October 4, 1947, one at Burnt Mills (Stevens).

Maryland Yellow-throat. Geothlypis trichas trichas.

Very common summer resident:

April 11, 1945 to October 20, 1946

Average: mid-April to October 18. Maximum, 88 (July); normal,

20. Found on the tops of mountains in the Blue Ridge where there are suitable briar patches. Wetmore identified as trichas a male collected by Stevens on September 18, 1946. Breeding: 1st. brood-nest-building, May 14 to June 5; feeding young, May 31 to June 27. 2nd. brood-nest-building, July 5; feeding young, July 10 to August 18. Feeding a young Cowbird August 3 (Minor).

Yellow-breasted Chat. Icteria virens virens.

Common summer resident:

April 26, 1945 to September 10, 1947

Average: April 30 to August 31. Maximum, 26; normal, 15.

Breeding: nest-building, May 21; 4 eggs, May 31; feeding young, June 5 to August 4.

Hooded Warbler. Wilsonia citrina.

Common summer resident:

April 16, 1948 to September 27, 1947

Average: April 21 to September 9. Maximum, 35; normal, 15.

Breeding: eggs, May 22 to June 11; feeding young, June 8 to July 24. Most nests have been found in laurel thickets. Feeding young Cowbird out of nest, June 26.

Wilson's Warbler. Wilsonia pusilla pusilla.

Uncommon transient:

May 4, 1948 to May 28, 1949

August 25, 1948 to October 6, 1948

Usually found in low bushy growths near water.

Canada Warbler. Wilsonia canadensis.

Uncommon transient; most common in fall.

April 30, 1933 to May 28, 1948

July 24, 1948 to September 28, 1947

Average: May 3-23 and August 14 to September 25. This is one of the first Warblers to appear in any numbers in the fall migration. Maximum in spring, 14 (May 17, 1947); in fall, 8 (August 18 and 20, 1946); normal in spring, 4-5; in fall, 6. This species has not been recorded in the county as a breeder due to the fact that there are not many suitable woodlands or laurel thickets at a sufficiently high altitude. The only summer record is a pair on June 4, 1949, at 3200 ft., near the headwaters of Ivy Creek (Lawless and Stevens).

American Redstart. Setophaga ruticilla ruticilla.

Very common summer resident:

April 13, 1948 to October 12, 1949

Average: April 22 to September 29. Maximum, 42; normal, 18. Nests up to 2200 ft. in the Blue Ridge. Breeding: nest-building, May 7-8; eggs, May 26 to June 17; feeding young, June 7 to July 25.

English Sparrow. Passer domesticus domesticus.

Abundant resident. Many people here comment that it was more abundant prior to the advent of the automobile than it is now.

Bobolink. Dolichonyx oryzivorus.

Uncommon transient; most common in spring.

April 29, 1947 to May 28, 1948

August 23, 1949 to September 30, 1948

Found mostly at Henley's and Hatton. Maximum in spring, 37 (May 3, 1948); in fall, 93 (August 31, 1949). This is one of the birds that can be identified by its note while flying overhead at night during the spring and fall migrations.

Eastern Meadowlark. Sturnella magna magna.

Resident; common, though irregular in winter. Winter status: Maximum, 56; normal, 8. Summer status: maximum, 28; normal, 10. Breeding: nest and 4 young, May 10 (Camman Duke); feeding young, May 26 to August 3. Wetmore identified as magna a bird collected by Grey on May 28, 1949, and commented, "This bird is somewhat intermediate toward the southern form; it is large in size like the true eastern meadowlark but the color above and below is intermediate, merging toward the southern race."

Eastern Red-wing. Agelaius phoeniceus phoeniceus.

Resident; fairly common in summer, common in migration, scarce and irregular in winter. Many birds seem to disappear from late August to mid-October. A winter flock may usually be found in the vicinity of the Indian Graves Lowgrounds on the North Rivanna. Summer status: maximum, 129 (July 27); normal, 8-10. Our largest nesting group is a colony of about 60 pairs at the Hatton wet meadow. Maximum in winter, 400. Breeding: eggs, May 1-26; feeding young, June 5 to July 29. A young Cowbird with young Red-wings, July 25.

Orchard Oriole. Icterus spurius.

Summer resident; uncommon, but more common than the Baltimore.

April 24, 1949 to August 3, 1949

Average: April 26 to August 2. There are two late dates of single birds on August 16, 1948 and August 25, 1948, the latter observed in a flock of Starlings and Cowbirds. There seems to be a light concentration of the yellow-plumaged birds in large weed-patches just before their fall departure, such as 7 on July 27, 1946 on the North Rivanna, and 12 on August 3, 1949 at Hatton. Normal, 2. Breeding: young in nest, May 31 to June 14; young out, June 25.

Baltimore Oriole. Icterus galbula.

Rather uncommon summer resident:

April 22, 1945 and 1948 to September 25, 1946 (Grey)

Average: April 26 to September 7. Maximum, 4; normal, 1. Breeding: nest-building, May 6-9; young in nest, June 6-9; young out, June 30.

Rusty Blackbird. Euphagus carolinus.

Uncommon transient; rare winter visitor.

October 18, 1947 to May 6, 1947

Average: October 30 to November 4 and March 15 to late April.

Most common in late March and early April. 190 were counted in a roost with Grackles and Starlings on April 7, 1947, at Thraves' Pond.

Stone's Purple Grackle. Quiscalus quiscula stonei.

Abundant summer resident:

January 14, 1946 (Grey) to November 13, 1944; one, December 11, 1948 (Stevens)

Our arrival dates, varying from January 14 to March 15, are so irregular that an average date is of little significance. Maximum in migration, 600. Normal in summer, 25-30. Breeding: young, May 8 to June 5. Immature birds begin flocking by mid-June. On May 21, 1949, Wetmore collected 3 stonei near Scottsville.

Eastern Cowbird. Molothrus ater ater.

Somewhat uncommon summer resident; irregular in winter; abundant in migration. Apparently a heavy migration in February with a flock of 400, February 11, 1947, and 1500, February 15, 1947. Breeding: eggs, May 13-22; young being fed, June 21 to August 3. In this county we have found 11 species parasitized by the Cowbird: Acadian Flycatcher, White-eyed Vireo, Red-eyed Vireo, Cerulean Warbler, Pine Warbler, Oven-bird, Yellow-throat, Hooded Warbler, Red-wing, Indigo Bunting, and Song Sparrow.

Scarlet Tanager. Piranga olivacea.

Summer resident; common in the Blue Ridge, Ragged and Southwest Mountains; uncommon elsewhere though it breeds throughout the county even as low as 450 ft. near Esmont. It is most scarce in the eastern and southern portions of the county. Its status in Albemarle differs somewhat with Murray's findings in Rockbridge County, west of us.

(Raven XV p.80)

April 20, 1948 to October 11, 1947

Average: April 24 to October 6. Maximum, 24; normal, 8-10.

Latest date for males in breeding plumage, August 8; earliest date for males in post-nuptial plumage, August 18. Breeding: feeding young, June 6 to July 19.

Summer Tanager. Piranga rubra rubra.

Fairly common summer resident:

April 23, 1947 to October 1, 1948 (R. J. Watson).

Average: April 26 to mid-September. Maximum, 14; normal, 5. Breeds to the foot of the Blue Ridge at 1000 ft. but is found in the Ragged Mts. as high as 1400 ft. Breeding: nest-building, May 12; eggs, May 26; feeding young, June 13-24.

Eastern Cardinal. Richmondia cardinalis cardinalis.

Abundant resident. Summer status: Maximum, 62; normal, 25. Winter status: maximum, 186; normal, 50. In winter this bird congregates in flocks along weedy creek and river bottoms. The fact that it is less common on hillsides and decidedly more abundant in the bottomland ragweed patches at this season points to some sort of migration which is probably local. Breeding: 1st. brood - eggs, April 18 to May 22; young, May 2 to July 1. 2nd. brood - young, July 20 to August 5.

Rose-breasted Grosbeak. Pheucticus ludovicianus.

Uncommon transient:

April 26, 1932 to May 22, 1948

September 9, 1948 to October 2, 1933 (Curtler)

Average: April 29 to May 17 and September 17-25. Maximum, 6 (April 29, 1944). Our only summer record is of 4 singing males from 2900-3100 ft. near the headwaters of Ivy Creek on June 4, 1949. As this bird does not require mature woodland for its breeding area and there are a number of mountains in the county over 3000 ft. in height it is difficult to explain its rarity here in summer.

Eastern Blue Grosbeak. Guiraca caerulea caerulea.

Somewhat uncommon summer resident:

April 28, 1937 (Curtler) to October 6, 1946

There is a remarkably late record of a bird seen at Hatton on October 22, 1949 (Stevens), which seems to be the latest for Virginia or North Carolina, not to mention the well-covered New York City region. Average: May 3 to late September. In 1947 during the May migration an individual was seen on a wooded mountainside in the Blue Ridge at 1000 ft. Maximum, 15; normal, 5. Breeding: 3 eggs, June 3 (Rives); feeding young, July 15 to August 11.

Indigo Bunting. Passerina cyanea.

Abundant summer resident:

April 28, 1932 to October 18, 1949

Average: May 2 to October 11. Maximum, 133; normal, 40-50. Breeding: 2 broods - feeding young, June 21 to August 18.

Dickcissel. Spiza americana.

One record. John B. Calhoun recorded one on October 6, 1935. (Raven VII no. 7)

Eastern Evening Grosbeak. Hesperiphona vespertina vespertina.

Accidental winter visitor. On February 16, 1946, Grey observed 15 birds in the yard of Mrs. J. H. Whiteman in Charlottesville - a flock of 4 adult males and 11 females or immatures. Mrs. Whiteman said that the birds had been there previously in mid-January. On December 26, 1945, Noel and Elmo Stevens saw 3 birds which, from their descriptions, may have been these. The last observation was made on March 5, 1946, when Grey found 10 birds near the Whiteman's.

Eastern Purple Finch. Carpodacus purpureus purpureus.

Common winter visitor; sometimes irregular; most common as a spring transient.

September 26, 1948 to May 11, 1947

Average: October 20 to April 25. Flocks in winter are often larger than in migration, but the bird is less regular in winter. Maximum in winter, 270 (February 25, 1944).

Common Redpoll. Acanthus flammea flammea.

Accidental winter visitor. On February 9, 1947, one was seen by Mrs. J. K. Pollock of Blue Ridge Road, Charlottesville, in her back yard. It sat in a shrub not far from her window, preened its feathers for some time, and then flew into some pines. She observed that it was the size of a Pine Siskin - of which she saw many that year - and smaller than a Purple Finch. The pink cap was a deeper color than the pink on the breast; there was also some pink on the back, and a faint suggestion of yellow on the flanks. Grey talked to her and thought that she had her identification correct. Mrs. Pollock saw the bird two more times, on February 20 and February 23. These observations were concurrent with the spectacular invasion of Redpolls which flooded the northeastern states in the winter of 1946-47 and which were reported from as far south as western North Carolina. (Audubon Field Notes, Vol. 1, No. 3, May 1947)

Pine Siskin. Spinus pinus pinus.

Irregular transient and winter visitor. It was first recorded by Barger in 1931, and a male collected by Calhoun on April 7, 1939. Grey saw a flock of 30 on February 27, 1946, and Stevens saw a flock of 12 on October 29, 1946. In 1947 it appeared on January 26 and was common, reaching a maximum of 72 on February 1, until March 10. Siskins could be found in any locality in the county between these dates. After disappearing March 10 it reappeared on May 8 and was found in smaller numbers (maximum, 16) until May 16. These two local invasions were a part of the great 1946-47 flight which reached Florida. (Audubon Field Notes, Vol. 1, No. 3, May 1947)

Eastern Goldfinch. Spinus tristis tristis.

Common resident; about twice as common in winter as in summer. Winter status: maximum, 337; normal, 60. Summer status: maximum,

119; normal, 25. It is abundant in April and May. Prior to breeding we have found a flock of 40 as late as June 24. Breeding: feeding young, August 25 to September 6.

Red Crossbill. Loxia curvirostra pusilla.

Casual. In 1941 Martin Curtler observed a flock of 20 about the grounds of the University from April 7 to 22. (Raven XII p.29)

Red-eyed Towhee. Pipilo erythrophthalmus erythrophthalmus.

Common summer resident. Abundant in the Blue Ridge in burnt and cut-over land where scrub oak abounds.

March 5, 1944 and 1946 to October 30, 1947 and 1948

Occasional in winter. Maximum in summer, 81; normal, 15-20.

Breeding: nest-building, May 15 (Rives); eggs, May 29; feeding young May 5 to August 8.

Grey collected a male and female at Charlottesville on May 21, 1945, of which Wetmore makes the following comment, "These two specimens are quite interesting and indicate the desirability of more material from Virginia. They agree with the typical form in the dark shade of brown on the sides and on the back of the female. There is, however, some measure of influence of the Alabama Towhee, P. e. canaster in the small size of the white spot on the outer tail feather. This is smaller than normal in the typical bird and comes within the range of size found in canaster."

Eastern Savannah Sparrow. Passerculus sandwichensis savanna.

Transient; fairly common in fall; common to abundant in spring.

February 16, 1947 to May 21, 1948

September 11, 1948 to December 1, 1947

Average: March 18 to May 17 and mid-September to mid-November. Maximum, 123 (March). It has been our experience to find them in hayfields with short grass and rarely in pastures. In spring we have noticed considerable variation in plumage of different individuals, which suggests the possibility of the presence of labradorius as well as savanna, but we have not yet collected any specimens.

Eastern Grasshopper Sparrow. Ammodramus savannarum australis.

Common summer resident:

March 27, 1948 to October 20, 1935 (Calhoun)

One record of a bird on November 4, 1947 (Stevens). Average: early April to mid-October. It is recorded rather infrequently after the cessation of song about August 18. Maximum, 37; normal, 12. Breeding: carrying nesting material, June 24; young in nest, May 26 to July 22; young out, June 23 to August 24.

Eastern Henslow's Sparrow. Passerherbulus henslowi susurrans.

Uncommon and local summer resident:

April 13, 1949 to October 30, 1948

Most common in the eastern part of the county, occurring generally in colonies in fallow fields, with a few records of scattered pairs. Colonies are located on the Hardware River above Jefferson Mill at "Mt. Pleasant" (maximum of 7 pairs on July 8, 1948), along Mechunk Creek from Campbell to Rugby (maximum of 5 pairs on July 16, 1948), east of Goodloe Mtn. near Gordonsville (maximum of 3 pairs on July 20, 1948), vicinity of Carter's Bridge (maximum of 5 pairs in 1949), Totter Creek Farm (2 pairs in 1949), between Glendower and Scottsville (3 pairs in 1949), and single pairs or singing males have been found at Mt. Air Church on the Hardware, near Lindsay, at Cobham, Hatton, Bellair, Free Bridge, and near Albemarle Lake. Migrants are found elsewhere in April and October.

Nelson's Sharp-tailed Sparrow. Ammodramus caudacuta nelsoni.

Rare. Minor and Stevens had a fine view of a bright-plumaged bird in some tall grass near the Whitehall gravel pits on October 11, 1947. On May 6, 1948, Lawless saw a Sharp-tail at Henley's which was not identified subspecifically.

Eastern Vesper Sparrow. Pooecetes gramineus gramineus.

Summer resident; not uncommon in pastures in the Blue Ridge; scarce around Henley's, Whitehall, and in the north central part of the county.

March 10, 1949 to November 16, 1947

Abundant transient from March 18 to April 29 and fairly common from mid-October to early November. Maximum, 431 (April 7, 1947). Rives in his Cobham list wrote of the Vesper Sparrow, "Resident, common." We have not found it in summer in the eastern half of the county, nor have we found any birds in winter. In 1915 and 1916 Griscom found it "rare and local". Breeding: young, May 17-31.

Eastern Lark Sparrow. Chondestes grammacus grammacus.

Barger writes of this species, " - which we found breeding in 1925. We have positive evidence of a pair nesting here during June of that year. The brood was also later seen in July learning to fly. ... I have not found the lark sparrow here since, though I have searched the same field." (Raven I: 7, p.3). Our only recent record is a bird seen by Minor on May 1, 1946, near Little Carter's Bridge.

Bachman's Sparrow. Aimophila aestivalis bachmani.

Several records. From May 17-24, 1947, there was a male singing in a hillside field along the road to the City Reservoir. We were not able to find it again. On July 20, 1948, a singing male was seen between Stony Point and Priddy Creek Church in an old field growing up in scrub pine, cedar, sassafras, and sumac (Stevens). Another singing bird was heard on July 27, 1948, in a thin oak-pine woodland bordering an abandoned field near Woodridge.

Slate-colored Junco. Junco hyemalis hyemalis.

Abundant winter visitor:

October 1, 1947 to May 5, 1945

Average: October 11 to April 29. This is our most abundant bird for any season. Maximum, 734 (December 24, 1946); normal, 200. Charles Platt found a late bird near Charlottesville on May 12, 1949, and an apparently crippled bird was seen on the University Grounds near the Geology Building from May 20-30, 1949, by Dr. Ivey Lewis, R. J. Watson, and Stevens.

Carolina Junco. Junco hyemalis carolinensis.

Found as a summer resident at 3 localities in Albemarle County. One colony is situated on the west face of the ridge between Big Flat and Loft Mtn. from 3100-3300 ft. where there is a cliff with talus grown up in oak, hemlock, and sweet birch. As many as 8 singing males have been heard in the vicinity in June. Another colony exists on the north and west slopes of Cedar Mtn. from 2750 ft. at Via Gap to the summit at 3300 ft., which consists of about 9 pairs. The third colony is found about the summit of Buck's Elbow from 3000-3180 ft. and seems to be made up of only several pairs. Our only winter record is of an adult male collected by Grey at 900 ft. in Sugar Hollow on December 9, 1944. Breeding: feeding young in nest at 3100 ft., June 4; feeding young out of nest at 3250 ft., June 12.

Eastern Tree Sparrow. Spizella arborea arborea.

Not uncommon winter visitor:

November 20, 1947 and 1948 to March 31, 1947

Average: November 30 to March 23. More common some winters than others. Maximum, 89 (December).

Eastern Chipping Sparrow. Spizella passerina passerina.

Abundant summer resident:

March 12, 1949 to November 8, 1931

Average: March 25 to November 3. In the winter of 1947-48 a flock wintered on the University Grounds. On November 25 it numbered 30 individuals, but in January and February it dwindled to 10 birds. On December 30, 1948, Lawless saw two at Henley's. Maximum, 111; normal, 25. Breeding: at least two broods with eggs, May 10 to July 10; feeding young, May 15 to August 25.

Eastern Field Sparrow. Spizella pusilla pusilla.

Abundant resident; as common in winter as in summer but more irregular. Summer status: maximum, 125; normal, 30. Winter status: maximum, 101; normal, 25. Maximum in migration, 350 (October 20). Breeding: two broods with eggs, May 14 to July 31; feeding young, May 17 to September 10.

White-crowned Sparrow. Zonotrichia leucophrys leucophrys.

Transient; scarce in spring, uncommon in fall.

October 6, 1948 to November 25, 1947

March 29, 1933 to May 8, 1947

There is one record of a bird near Henley's on January 27, 1948. Calhoun banded a bird at Charlottesville, November 24, 1935, which returned April 14, 1936. Maximum, 12.

White-throated Sparrow. Zonotrichia albicollis.

Very common winter visitor; abundant in October.

September 23, 1944 to May 23, 1947

Average: October 1 to May 18. Maximum, 177; normal, 25. Barger found one in Charlottesville on June 25, 1925, which may have been a cripple. (Raven I No. 7, p. 3)

Eastern Fox Sparrow. Passerella iliaca iliaca.

Uncommon winter visitor:

October 23, 1947 to April 29, 1947

Average: October 30 to late March. Fairly common as a migrant in open woodlands, thickets, and wherever White-throats are found. Winter birds are always found in large ragweed patches along the Rivannas. Maximum, 60. There is an abnormally early record of a single bird seen with other sparrows on Big Flat Mtn. October, 8, 1949.

Lincoln's Sparrow. Melospiza lincolni lincolni.

Fall transient. There are 5 records of birds seen by Grey and Stevens near Thraves Pond in weed patches, honeysuckle tangles, and at the pond's edge: October 7, 1947, one; October 14, 1947, one; October 14, 1948, one; October 16, 1948, two; and October 28, 1948, one, which was singing.

Swamp Sparrow. Melospiza georgiana subsp.

Uncommon transient:

March 3, 1949 to May 8, 1948

October 2, 1948 to November 4, 1944

Maximum, 46 (October 18). Common at Hatton. In recent years a few birds have wintered at Thraves Pond, on the Rivanna near "Dunlora", and near Hatton.

Mississippi Song Sparrow. Melospiza melodia euphonia.

Resident; common in summer; abundant in winter, being 3 times as common at that season as in summer. Collecting may prove many of the wintering birds to be the eastern form, melodia. Specimens of euphonia were collected by Grey on August 11, 1947 at Charlottesville, and by Wetmore on May 21, 1949, at Hatton. Summer status: maximum, 65; normal, 15. Winter status: maximum, 160; normal, 40. Migration in October and March. Maximum in migration, 235 (Oct.18). Breeding: eggs, April 24-26; feeding young, April 30 to May 29; feeding a young Cowbird on July 4.

Charlottesville, Virginia

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