

The Raven

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THE CHRISTMAS BIRD CENSUS -

TEN YEARS IN MONTGOMERY COUNTY

by C. O. Handley, Jr. & C. O. Handley, Sr.

Each year when the Christmas season rolls around there's a day which has come to mean almost as much to us as Christmas itself. That day, which is anticipated for weeks and months in advance and reflected upon for weeks afterward, is of course the day of the annual Christmas bird census. We have been avid fcl-lowers of the census institution most of our lives, the senior author since 1935 and the junior author since 1912.

As "The Raven" readers may have gathered from previous reports, Blacks-burg is more or less an ornithologist's heaven as mountainous upland areas go, and taking a census is a real pleasure. Ten years ago when we first came to Blacksburg the census was a mere pastime for us, but since then it has developed year by year into a serious, well-planned annual project, lacking none of its former aspects of pleasure, yet being much more than just another holiday outing. Weeks in advance we gathered together the prospective observers and briefed them on the routes they were to take and the species they were expected to find. Then we made the rounds of the proposed routes, locating the home territories of such solitary birds as the shrike, sapsucker, and screech owl, so that they would not be missed on the census and so that no time would be wasted searching through relatively barren territory for them. Finally, we watched the weather reports and picked near perfect days for the census on five consecutive years!

After ten years of censusing the same general area, we looked back over our records with considerable pride and concluded that there was sufficient interesting information to be gleaned from the censuses to make a worthwhile article for "The Raven" readers.

The territory we have censused is the northwest one-sixth of Montgomery County, in the heart of the western Virginia mountains. These 70 square miles of mountains, valleys, woods, thickets, farms, gardens, marshes, ponds, creeks, and

river bottoms are set off from surrounding regions by sharply defined physical barriers. At Blacksburg the Appalachian backbone, the eastern boundary, rises above the broad Price's Fork plateau which stretches ten miles westward to New River, a four hundred foot expanse of alternately placid and tumultuous water forming the western boundary. Gap Mountain and the low ridge called Price's Mountain form the northern and southern boundaries, seven miles apart. Two streams, Tom's Creek and Strouble's Creek, originate near Blacksburg and follow parallel courses on either side of the Price's Fork plateau to empty into New River at the western edge of the area. Flanking Tom's Creek on the north lies Brush Mountain, separated from its parallel sister ridge, Gap Mountain, by Poverty Hollow. Altitude varies from a maximum of 2800 feet on Brush Mountain, to a minimum of 1600 feet on New River.

The region's habitats are almost as sharply defined as are its physical characters. The park-like campus of Virginia Polytechnic Institute at Blacksburg, with its tall spruces and pines, its mature oaks and maples, and its three lakes; the Price's Fork plateau, with its well-kept farms, frequent marshy bottoms, and numerous groves of mature white oaks; the lower course of Tom's Creek; and the head of Strouble's Creek, comprise the 45% of the census area which we have dubbed "valley farmlands." The lower reaches of Strouble's Creek and adjacent slopes of Price's and Brush Mountains, and Poverty Hollow, all characterized by second-growth oak-chestnut woods, pine thickets, and occasional small abandoned fields, comprise the 45% of the area listed as "mountain and valley woodlands." Finally, fifteen miles of the winding course of New River between Pepper's Ferry, just below Radford, and the Giles County Line, make up the remaining 10% of the census area.

Ideally this area would be covered by six consusing groups operating within the following bounds:

- I. V.P.I. Campus and Blacksburg.
- II. V.P.I. College Farm.
- III. Price's Fork Plateau.
- IV. Brush Mountain, Poverty Hollow, Tom's Creek, and New River from mouth of Tom's Creek to Gap Mountain.
 - V. Price's Mountain, Strouble's Creek, and New River between the mouths of Strouble's and Tom's Creeks.
- VI. New River from Pepper's Ferry to mouth of Strouble's Creek.

Actually, because of the shortage of manpower, we have never employed but five of these groups, combining II and III into one group. Group I and the Group II and III combination have been censused each of the 10 years; Group IV has been censused 6 years; Group V 3 years, and Group VI one year. With the six group system, the strain upon observers is about equal in each group, for although the observers of Groups I and II may walk only one-third as far as those of Group IV, they have to count a bird population perhaps three times as great.

The first four years of the census, or from 1935 through 1938, only Groups I and II were thoroughly covered, with the result that the habitat coverage consisted of about 95% valley farmland and 5% mountain woodland. On the other hand, in the last six years, 1939 through 1944, the coverage was broadened to consist of 45% valley farmland, 45% mountain and valley woodland, and 10% river bottomland.

The effects of the increased habitat coverage are little short of startling. The first four censuses with tophcavy (95%) coverage of farmland averaged 47.3 species per consus, while later censuses with equal (45%) coverago of farm and woodland and with an additional (10%) coverage of river bottomland, averaged 64.3 species per census!

An examination of the composite list of the ten censuses reveals that 55 of the 95 species recorded are found in at least two, and sometimes in all three, of the habitat zones, and all but seven of these have been recorded on at least six censuses and are thus "regular" winter residents. Since only 56 of the 95 species total are regular winter residents, having been seen on at loast six censuses, almost 86% of all the regular winter residents are. therefore, cosmopolitan and may be encountered almost anywhere in the census area, irrespective of habitat.

The average number of species per census increased 18% when a better coverage of habitats was obtained, yet 86% of all the regular winter residents, the backbone of any consus, might be expected in any of the habitats, so it was not they, but the unexpected, the unusual species which made up the difference when the habitat coverage was increased.

Let us take a look at the birds of the composite list which are restricted to a single habitat; they are the ones which accounted for the 18% increase. There are 40 of them, and only eight have been recorded sufficiently often to be designated "regular" winter residents (marked with an asterisk).

Valley Farmland (21 species)

Pied-billed Grebe Great-blue Heron Gadwall

Blue-winged Toal Shoveller

*Black Vulture

Goshawk

Bald Eagle

Pigeon Hawk Ring-necked Pheasant

Coot

Red-headod Woodpecker Savannah Sparrow

Fish Crow House Wren Western Palm Warbler

Cowbird Pipit Towhee

*White-crowned Sparrow

Raven

Mountain and Valley Woodland (9 species)

River Bottomland (10 species)

*Ruffed Grouse

*Rod-breasted Nuthatch

*Winter Wren

*Robin

*Hermit Thrush

Ruby-crowned Kinglet

Codar Waxwing Pino Siskin Red Crossbill Hornod Grobe Wood Duck Canvas-back Golden-eye Bufflo-head

*Hooded Morganser

Phoebe

Bowick's Wren Myrtle Warbler Swamp Sparrow

It might also be interesting to note in passing that of the 26 species seen on every one of the ten censuses, only one, the White-crowned Sparrow, was restricted to a single habitat, while all the rest were cosmopolitan.

The following condensed table of pertinent census data also offers several points of interest:

Year	No. of	No. of	No. of	No. of ob-	Miles	Hours	Mean	Wind	Weather	Snow
	species	groups	obser-	servers	on	in	tem-			on
	seen		vers	per group	foot	field	pera-			ground
							ture			
1935	35	1	4	4	9	10.5	190	0	Snow	2
1936	42	1	5	5	10	10.5	270	1	Clear	2
1937	56	1	5	5	21	10.5	320	1-	P.Cl.	
1938	62	2.	8	4	27	23	300	0	P.Cl.	
Averæ	ge 47.3	1.3	5.5	4.5	16.8	13.6	270			
1939	65	4	8	2	47	44	410	0	Clear	
1940	72	5	12	2.4	53	61	300	0	Clear	
1941	72	4	9	2.2	45	43	330	0	Clear	
1942	63	2	3	1.5	30	23	80	0	Clear	3
1943	59	2	2	1 .	32	20	360	1 +	P.Cl.	
1944	55	1	2	2	12	10	300	1	Cloudy	
Averag	e 64.3	3	6	1.9	36.5	33.5	29.3°			

Notice how the available observers were wasted the first four years. In the later censuses almost the same average number of observers covered more than twice as much ground, spent more than twice as much time in the field, and saw 18% more of the total number of species seen than did the first group. Obviously, then, when more than two observers are grouped together, observers are wasted and the potential total of species seen is lowered. In the latter years we have followed, as far as possible, the policy of grouping a skilled observer with an unskilled in groups of two. Certainly two observers together are better than one, but to place two skilled observers together is largely wasting one of them and cutting down unnecessarily on the amount of habitat that may be covered. It has already been shown that it is habitat coverage which determines the size of the list. Also note from the foregoing table that by wise use of observers the effect of unfavorable weather conditions on the census can be partially overcome. Conditions were unfavorable and practically the same in 1937 and in 1943, yet in the latter year two observers saw 9 more species than did five observers in the former incident. Furthermore, snow and cold weather have little effect, as may be seen by comparing the 1939 and 1942 censuses.

So much then, for the censuses themselves; now let us consider their value. It has always been argued that the real value of a census lies in the index they give of the occurrence and abundance of birds in a region, and this contention is certainly borne out in the Montgomery County censuses. In more than 50 years of almost constant observation, lll species have been observed in the County during the winter months of December and January, and of this number three are late migrants and not really winter birds at all. Thus, on ten days in ten years have been recorded all but 13 species of a total it took fifty years to compile: It is too bad that we don't have such an index for every season of the year. The sixteen species seen in December and January, but not on the census are:

Hoelbell grebe - accidental; l record Canada Goose - late migrant, early December Redhead - rare; several records Old squaw - accidental; 1 record
Rough-legged hawk - accidental; 1 record
Golden eagle - accidental; 2 records
Osprey - accidental; 1 record
Florida gallinule - late migrant; early December
Ring-billed gull - accidental; 2 records
Bonaparte's gull - accidental; 1 record
Barn owl - rare winter resident - this one we should have seen
Saw-whet owl - accidental; 1 record
Bronzed grackle - migrant; early December and late January
White-winged crossbill - accidental; 1 record
Grasshopper sparrow - accidental; 1 record
Snow bunting - accidental; 1 record

In summarizing, we would emphasize the following points that the ten Montgomery County Christmas censuses have brought out:

- 1. To get the most useful results it is necessary to divide the census area into more or less equal groups and to use the same group system each year.
- 2. Coverage of habitat zones should be governed by the potential number of species restricted to each zone. Top-heavy coverage of any one zone will reduce the average total of any census.
- 3. Almost 86% of all regular winter resident species of Montgomery County are rather general in distribution and are not restricted to any particular habitat zone.
- 4. Ninety-six percent of the species seen on every one of the censuses were unrestricted in habitat preference; only the White-crowned sparrow was an exception.
- 5. It is the rare and infrequent visitors and winter residents which cause the sharpest increase in census totals when habitat coverage is increased.
- 6. Observers are wasted and the average census total reduced when more than two are grouped together.
- 7. Windy and cloudy weather do not seriously reduce the average consus total when good habitat coverage is maintained, and snow and cold have practically no effect.
- 8. Ten censuses recorded 88% of all the winter species recorded in 50 years of continuous observation.

We believe that the last point is the most important of all for it definitely proves what a valuable "pastime" a Christmas census can be if only it is properly conducted. We are hearty advocates of a census for every season.

COMPOSITE LIST - CHRISTMAS BIRD CENSUS * Ten Year Period - 1935 to 1944, inclusive. Montgomery County, Virginia.

by Charles O. Handley Sr. & C. O. Handley Jr.

Species				s.:Total in-::Species				:No.yrs.:Total in-		
	:record-:divi							:record-:divi		
Horned Grebe	:ed	-		ecorded		:e	d		recorded	
	•	1	:	1	:: Prairie Horned Lark	:			10797	
Pied-billed Grebe	ŧ.	1	:	1	::Blue Jay	:	7	:.		
Great Blue Heron	•	2	•	2	::Raven	:	1	:	1,	
Mallard	•	6	;	54	::Crow	:	10	:	4470+	
Black Duck	:	7	•	195	:: Fish Crow	:	1	:	. 1	
Gadwall	:	4	:	6	::Carolina Chickadee	:	10	:	545	
Baldpate	:	78	:	36	:: Tufted Titmouse	:	10	:	408	
Pintail	:	8	;	23	:: White-breasted Nuthatch	100	10	:		
Green-winged Teal	:	6	:	24	:: Red-breasted Nuthatch	;	6	:	108	
Blue-winged Teal	:	2 3 1	;	2	:: Brown Creeper	:	9	:	30	
Shoveller	:	3	;	7	:: House Wron	:	1	:	1	
Wood Duck	:	1	:	1	:: Winter Wren	:	8	:	74	
Ring-necked Duck	:	3	:	12	:: Bowick's Wron	:	1	:	2	
Canvas-back	:	1	:	1	:: Carolina Mron	:	7	:	100	
Lesser Scaup Duck	:	6	1.	124	:: Mockingbird	:	10	:	68	
American Golden-eye	: .	4	:	53	::Cowbird	:	3		18	
Bufflehead	:	4	:	65	::Robin	:	6	:	27	
Hooded Merganser		6	:	81	:: Hormit Thrush	:	6	:	28	
Turkey Vulture		0.	;	526	::Bluebird	:	9	:	273	
Black Vulture		8	•	43	:: Golden-crowned Kinglet		9	:	561	
Goshawk		1	:	1	:: Ruby-crowned Kinglet	:	2	:	3	
Cooper's Hawk		0	:	22	:: American Pipit	:	1	:	12	
Red-tailed Hawk Red-shouldered Hawk		0.	:	31 10	:: Codar Waxwing	:	2	:	3 22	
Bald Eagle	:	6	:	1	:: Migrant Shrike	•	10	• • •		
Marsh Hawk		4	:	9	Starling Hyrtle Warbler	:	10	:1	17652/	
Pigeon Hawk	:	1	:	í	:: Western Palm Warbler	:	2	:	6	
Sparrow Hawk		.0	:	44	::English Sparrow	:	10	:	9077	
Ruffed Grouse		8	:	12	:: Meadowlark	•	10	:	657	
Bob-white	: 1	Ç	:	585	::Red-wing		3		118	
Ring-necked Pheasant		4	:	4	Rusty Blackbird	:	4	:	39	
Coot Killdeer	i	1	:	1	Purple Grackle	:	4		17	
Wilson's Snipe	: 7	9	:	63 141	Cardinal	:	10		847	
Domestic Pigeon		7	:	177	Goldfinch	:	9		788	
Mourning Dove	: 1			865/	Purple Finch	:	5		53	
Screech Owl				13	Pine Siskin	:	3	:	23	
Great Horned Owl	:	7	:	11	:: Red Crossbill	:	3 2	:	3	
Barred Owl	:	6	:	6	:: Towhoo	:	2	:	4	
Belted Kingfisher	:	9	:	24	::Savannah Sparrow	:	2	:	4	
Flicker		0	:	82	::Junco	:	10	:	2978/	
Pileated Woodpecker		8	:	28	:: Tree Sparrow	:	10	:	15344	
Red-bellied Woodpecker	: 1	0	:	31	:: Field Sparrow	:	8	:	517	
Red-headed Woodpecker Yellow-bellied Sapsuck	·	3	:	21 c 17	: hite-crowned Sparrow	:	10	:	464/	
Hairy Woodpecker	: 1		;	43	White-throated Sparrow	:	8	:	112	
Downy Woodpecker	: 1		:	163	Fox Sparrow	:	4	:	14	
Phoebe	:	1	:	5	Swamp Sparrow Song Sparrow	: .	3	• :	21	
					::Unidentified birds	:	10	:	100	
POTAL INDIVIDUALS:	40165					•			100	

TOTAL SPECIES:

95

Blacksburg, Virginia.

^{*} Based on information published in Bird-Lore and Audubon Magazine.

THE 1945 VIRGINIA CHRISTMAS CENSUS

- 0 -

BACK BAY, VIRGINIA. (causeway to Knott's Island, N. C., on Route 615, to brook marsh on Route 623, Virginia, to Sands Bridge; Ocean Beach to Back Bay Fish and Wildlife Refuge; on bay in boat; return by beach to Sands Bridge; fresh water marsh 21%, fields 7%, woods 14%, on bay 23%, beach 35%) .-- Dec. 29; dawn to dusk. Rain or heavy drizzle in morning, cloudy in afternoon; temp. 38 to 41; wind n to nw, 11-20 m.p.h. Five observers, three in morning, one additional at noon, all five together afternoon. Total hours, 9 (4 on foot, 2 by boat, 3 by truck and car); total miles 48 (6 on foot, 12 in boat, 30 by truck and car). Common loon, 5; Holbooll's grebe, 1 (near shore--Mrs.A.C.R.); horned grobe, 1; pied-billed grobe, 1; great blue heron, 8; Am. bittern, 1; whistling swan, 2250 (partly est.); Canada goose, 3000 (est.); greater snow goose, 15,000 (est.); blue goose, 2 (J.E.P.); mallard, 2; black duck, 24; baldpate, 2024 (partly est.); pintail, 3000 (est.); green-winged teal, 3; ring-necked duck, 1 (freshly killed by hunters, reasonably certain within census area); canvas-back, 27; lesser scaup, 20; bufflehead, 3; old-squaw, 1; white-winged scoter, 2; Am. scoter, 62; ruddy duck, 3; hooded merganser, 1 (freshly killed by hunters, reasonably cortain within census area); turkey vulture, 8; black vulture, 2; Cooper's hawk, 1; bald eagle, 3; marsh hawk, 12; duck hawk, 1 (Mrs.A.C.R. and V.R.B.P.); sparrow hawk, 3; king rail, 1; coot, 1140 (partly est.); Wilson's snipe, 2; sanderling, 6; great black-backed gull, 1; herring gull, 212; ring-billed gull, 90; mourning dove, 4; flicker, 1; redbellied woodpecker, 2; hairy woodpecker, 1; downy woodpecker, 2; crow, 74; fish crow, 7; Carolina chickadeo, 2; tufted titmouse, 2; brown creeper, 1; Carolina wren, 5; mockingbird, 7; brown thrasher, 1; robin, 6; hermit thrush, 2; bluebird, 21; ruby-crowned kinglet, 1; starling, 100; myrtle warbler, 9; English sparrow, 91; moudowlark, 50; red-wing, 1473 (partly est.); boat-tailed gracklo, 3; purple gracklo, 7; cardinal, 15; goldfinch, 11; towhee, 1; Savannah sparrow, 6; chipping sparrow, 1 (E.L.W.); white-throated sparrow, 30; fox sparrow, 14; swamp sparrow, 14; song sparrow, 18. TOTAL: 71 species, about 28,905 individuals .-- Mr. and Mrs. Jack E. Perkins, Miss Virginia R. B. Pickell, Mrs. A. C. Reed, Dr. Earl L. White.

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LITTLE CREEK TO CAPE CHARLES, VIRGINIA. (on ferry, out on breakwater at Cape Charles, return on ferry). Dec. 31, 11 a.m. to 4:30 p.m. Rain or drizzle all day; temp. 45° - 46°; wind w, 17 m.p.h. Two observers. Total hours $5\frac{1}{2}$ ($3\frac{1}{2}$ on ferry, $1\frac{1}{2}$ on foot); total miles 53 (52 on ferry, 1 on foot). Common loon, 5; red-threated loon, 3; horned grebe, 4; gannet, 1; European cormorant, 3; golden-eye, 1; old-squaw, 48; white-winged scoter, 5; surf scoter, 39; Am. scoter, 11; red-breasted merganser, 18; turkey vulture, 6; bald eagle, 2; purple sandpiper, 2; great black-backed gull, 2; herring gull, 38 (which followed the ferry all the way across, riding on air current behind boat; other herring gulls not counted); ring-billed gull, 3; Bonaparte's gull, 5; king-fisher, 1; pipits, 12. TOTAL: 20 species, 209 individuals. Mrs. A. C. Reed, Miss Virginia R. B. Pickell.

European Cormorant. (Phalacrocorax carbo carbo). As the ferry slowly drew near the breakwater at Little Creek, I observed a large cormorant standing on one of the piles. As the ferry came along, this flew up onto the light-tower

on the breakwater, and two other cormorants, which were on the tower, flew away. From their large size I feel sure they were all the European cormorant. The one which alighted on the tower, stood facing the ferry. It was an immature. I noticed at once the conspicuous white breast, white all the way from the upper breast down to between the feet; white also across the breast from side to side all the way down to the feet; that is, the whole body of the bird between the folded wings appeared white as it stood on a railing of the tower. (One would say it was white clean "down to the toes.") I also noticed that the neck of the bird appeared thicker (less snakey) and the head rounder than that of the double-crosted cormorant. When we returned on the ferry in the afternoon, one cormorant was still on the tower. This fall, on several trips to Cape Charles, I watched the double-crested cormorants, which one can see diving, feeding, swimming about, preening, or standing on the piles quite close to the breakwater at Cape Charles, and I even pointed out to others the amount of yellowish or whitish on the breast of the immature double-crested cormorants. Often the whitish seems to extend fully two-thirds down the body, or to the abdomen. In comparison, there is no question in my mind that the large shags we saw on this trip were European cormorants.

Purple Sandpiper. (Arquatella maritima.) Although it was drizzling quite heavily, fogging up oye-glasses and bifocals, Miss Pickell and I decided to go out on the breakwater at Cape Charles. We had not gone far, when I noticed a sandpiper running up the side of a rock, then it poised on top. I knew immediately that it was a purple sandpiper. We then started wildly to clamber as fast as possible over the rocks. If anyone thinks it an easy matter to circumnavigate a breakwater at high tide, in drizzling rain, climbing over slimy, seaweed-covered rocks or stepping into crevices filled with sharp mussels all tilted edge up, I wish they would try it: Every step one wonders whether it will be an ankle or a hip broken, or maybe just a plain skid into the sea!

The sandpiper appeared, even in the rain, a real dark purplish brown on the back. On the breast it seemed to me, not spotted or streaked, but rather marbled with brown. Once it lifted its wings and I saw it was white underneath. The feet, as well as I could make out in the drizzle, appeared short and strong, and yellowish in color. The bill was quite good size for a sandpiper and about as long as the width of the head. I did not get any color on the bill. The actions of the sandpiper were unmistakably that of the purple sandpiper. It would run fleetly up the face of a slimy rock, then just as flootly disappear down the other side; so flootly, in fact, that it seemed as though it just sat on its tail and toboganned down. (Most annoying -- if you can only clamber laboriously over the rocks yourself!) Two or three times I looked up to see a round brown head poering over the top of a rock, alertly watching to see how near we were approaching. Once it stood still for a few minutes on top of a rock. Then I thought how much in its general poise, stocky build, strong feet and bill, it reminded me of a miniature oyster-catcher. I also saw another sandpiper at the far outer end of the breakwater. This, too, ran fleetly up the face of a rock and poised briefly on top. Then it flow away. While I am sure it had a wing stripe, I could only see dimly because of the rain. Finally another sandpiper flow away. Whether there were three sandpipers or not, we do not know, but I am sure there were two.

Unfortunately for me, neither the European cormorant nor purple sandpiperwas a "life" bird for my list. During the winter we spent at Nahant, Mass., I was out along the coast every day, and I saw European cormorants on the islands between Nahant and Gloucester, and the purple sandpiper on the rocky ledges at the outer tip of the peninsula of Nahant,

We saw the pipits probably about half-way across on the ferry. They were flying from the direction of Cape Henry toward Cape Charles. A few passed the ship near enough so that I caught a glimpse of the yellowish on the breast, the white outer tail feathers and heard a faint "tseep" as they flew over. Their flight was the characteristic up and down flight of pipits.

Mrs. A. C. Roed Norfolk, Va.

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RICHMOND, VIRGINIA. (same area as 1944 count; open farmland 40%, pine woodlands 17%, deciduous woodlands 15%, city suburbs 10%, open grassy fields 3%, tidal fresh-water marshes 5%) .--- Dec. 26; 5 a.m. to 5:30 p.m. Cloudy in early morning, clearing about 9 a.m.; wind SW, 6-14 m.p.h.; temp. 340-51°F.; snow and ice on ground in sheltered areas; all standing water frozen except small part of Byrd Park Lake, James River near Richmond clogged with moving ice but clear at Curles Nock. Five observers in one party, breaking up into two parties several times. Total hours, 13 on foot; total miles, 6 on foot. Canada goose, 600 (est.); mallard, 122; black duck, 3; baldpate, 27; redhead, 1; ring-nocked duck, 42; Am. merganser, 40; red-breasted merganser, 6; turkey vulture, 13; marsh hawk, 2; sparrow hawk, 2; bobwhite, 5; coot, 160; killdeer, 6; Wilson's snipe, 1; herring gull, 7; ring-billed gull, 285; mourning dove, 23; great horned owl, 1; kingfisher, 1; flicker, 3; pileated woodpecker, 1; red-bellied woodpecker, 2; red-headed woodpecker, 1; yellow-bellied sapsucker, 1; hairy woodpecker, 1; downy woodpecker, 7; n. horned lark, 1200 (partly est., yellow line over eye seen distinctly--J.R.S., F.R.S.); prairie horned lark, 250 (partly est.); blue jay, 16; crow, 37; Carolina chickadee, 28; tufted titmouse, 30; white-breasted nuthatch, 9; brown creeper, 1; winter wron, 1; Carolina wren, 5; mockingbird, 10; bluebird, 24; golden-crowned kinglet, 21; ruby-crowned kinglet, 3; cedar waxwing, 5; loggerhead shrike, 4; starling, 600 (est.); myrtle warbler, 12; house sparrow, 16; meadowlark, 41; red-wing, 77; rusty blackbird, 189; grackle, 1; cardinal, 22; purple finch, 7; goldfinch, 30; towhoo, 1; savannah spurrow, 3; slate-colored junco, 234; field sparrow, 74; white-throated sparrow, 97; fox sparrow, 3; song sparrow, 28. TOTAL: 60 species and subspecies; about 4,442 individuals. (Seen in area Doc, 28: ruddy duck, 2.) -- J. R. Sydnor, Mr. and Mrs. C. E. Smith, J. B. Loughran, F. R. Scott.

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LEXINGTON, VIRGINIA. (same area as in former years: cedar woods 40%, farmland $\overline{20\%}$, serub 10%, oak woods 20%, town edge 5%, Big Spring Pond 5%.) - Dec. 26; 9 to 5, hour cut for lunch. Cloudy; temp. 37 to 42; wind N, 20 m.p.h.; three to four inches of old snow, covered by fresh sleet of day before; river mostly frozen. Five observers together in A.M.; eight in two parties in afternoon. Total hours, 10 ($1\frac{1}{2}$ in car, $8\frac{1}{2}$ on foot); total miles, 41 (30 in car, 11 on foot). Mallard, 43; black duck, 9; turkey vulture, 24; black vulture, 4; Cooper's hawk, 1; red-tailed hawk, 2; red-shouldered hawk, 2; sparrow hawk, 4;

bob-white, 14 (one covey); killdeer, 1; rock dove, 33; mourning dove, 12; pileated woodpecker, 4; red-bellied woodpecker, 2; yellow-bellied sapsucker, 2; downy woodpecker, 8; phoebe, 3; prairie horned lark, 36; blue jay, 10; crow, 198; Carolina chickadoe, 12; tufted titmouse, 4; white-breasted nut-hatch, 4; winter wren, 2; Carolina wren, 12; mockingbird, 20; robin, 9; hermit thrush, 1; bluebird, 26; golden-crowned kinglet, 8; migrant shrike, 1; starling, 182; English sparrow, 94; cardinal, 59; goldfinch, 23; junco, 193; tree sparrow, 13; white-crowned sparrow, 2; white-threated sparrow, 43; song sparrow, 11. TOTAL: 40 species; 1121 individuals. - J. J. Murray, Robert P. Carroll, Alice Carroll, Bobby Paxton, Joe Magee, Dickson Vardell Murray, Jimmy Murray, Frank Davidson.

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BLACKSBURG (MONTGOMERY CO.), VIRGINIA. (V.P.I. campus and farm, 7 miles; along Strouble's Creek, 2 miles; Brush Mountain and Tom's Creek, 15 miles; and New River - Whitethorne to Goodwin's Ferry, 9 miles, within 15-mile diameter; 65% farmland, 25% woodland, 10% riverbottom). -- Dec. 24; 7:00 A.M. to 5:15 P.M. Cloudy; temp. 18° start, 24° return; wind E, slight; 3 - 6 inches snow. Four observers working in two groups. Total hours, 20,5 on foot (car used in shifting from point to point); total miles, 31 on foot. American bittern, 1; Canada gooso, 13; mallard, 46; black duck, 48; gadwall, 2; baldpate, 17; pintail, 2; green-winged teal, 25; shovellor, 1; wood duck, 4; redhoad, 1; ringnecked duck, 5; canvas-back, 2; lesser scaup, 2; golden-eye, 13; bufflehoad, 19; hooded merganser, 21; turkey vulture, 45; black vulture, 7; sharp-shinned hawk, 1; red-tailed hawk, 1; sparrow hawk, 8; ruffed grouse, 8 (2 & tracks of 6); bob-white, 19, two coveys (also tracks of some 60 others - 4 coveys); killdeer, 14; Wilson's snipe, 13; domestic pigeon (feral), 13; mourning dove, 45; screech owl, 4; barrod owl, 2; belted kingfisher, 3; flicker, 1; pileated woodpecker, 1; red-bellied woodpecker, 2; yellow-bellied sapsucker, 2; hairy woodpecker, 4; downy woodpecker, 19; prairie horned lark, 165; blue jay, 26; crow, 705 (partly est.); Carolina chickadee, 48; tufted titmouse, 36; whitebreasted nuthatch, 18; red-breasted nuthatch, 20; brown croeper, 3; winter wron, 10; Carolina wron, 5; mockingbird, 14; hermit thrush, 6; bluebird, 6; golden-crowned kinglet, 72; migrant shrike, 1; starling, 201; English sparrow, 111; meadowlark, 142; red-winged blackbird, 4; rusty blackbird, 27; cowbird, 8; cardinal, 158; purple finch, 18; goldfinch, 296; junco, 446; troe sparrow, 229; field sparrow, 45; white-crowned sparrow, 57; white-throated sparrow, 6; song sparrow, 193. TOTAL: 67 species; 3510 individuals. Other birds seen during the period: Lapland longspur, Dec. 19; Cooper's hawk, Dec. 20; great blue heron, Dec. 19 - 21; red-shouldered hawk, Dec. 20 - 22; robin, Dec. 27. -- C. O. Handley Sr. & Jr., John Handley, J. W. Murray.

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EMORY (WASHINGTON CO.), VIRGINIA. (fields and woods north of town in a.m.; H.S. to Middle Fork of Holston River in p.m.; R.B.S. to ponds and residential areas at Saltville in p.m.; about 1700-2300 ft.; 50% deciduous woods, 10% residential areas, 5% evergreen woods (pine and red cedar), 5% cattail marsh, 30% open fields).—Dec. 24; 7:05 a.m. to 12:20 p.m.; 1:00 p.m. to 5:00 p.m. Mostly cloudy, with occasional flurries of fine snow during a.m.; ground covered with about 5 inches of old and new snow; wind NE, 12-20 m.p.h.; temp. 220-34°. Observers separate, but R.B.S. in field only 1½ hours. Total hours, 10 (on foot); total miles, 12. Mallard, 5; turkey vulture, 6; black vulture, 8;

Cooper's hawk, 1; red-tailed hawk, 3; sparrow hawk, 3; killdeer, 6; mourning dove, 15; belted kingfisher, 2; pileated woodpecker, 1; red-bellied woodpecker, 5; yellow-bellied sapsucker, 1; hairy woodpecker, 3; downy woodpecker, 11; phoebe, 1; horned lark, 15; blue jay, 15; crow, 5; Carolina chickadee, 13; tufted titmouse, 19; white-breasted nuthatch, 7; brown croeper, 3; winter wren, 3; Carolina wren, 7; mockingbird, 11; bluebird, 18; golden-crowned kinglet, 5; starling, 135; English sparrow, 50; meadowlark, 9; rusty (?) blackbird, 1 (seen with 8X glasses at dusk, apparently flying to roost; may have been a redwing); cardinal, 43; purple finch, 6; goldfinch, 28; towhee, 4; slate-colored junce, 90; tree sparrow, 12; field sparrow, 50; white-crowned sparrow, 17; white-throated sparrow, 5; song sparrow, 46. TOTAL: 41 species; about 688 individuals. (Seen recently: black duck, sharp-shinned hawk, Wilson's snipe, screech owl, barred owl, cedar waxwing, swamp sparrow.)--Henry and Rosa Belle Stevenson.

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ROANOKE, VIRGINIA. December 30, 1945. (9:00 A.M. to 2:30 P. M.; Route US 11 to Murray's pond thence Routes 628-631 to Salem, Virginia, thence US 11 to Roanoke.) Two to five inches of snow on ground in spots; cloudy, foggy and rain. Temp. about 32°. Total miles, 20 (17 in car and 3 afoot). Bob-white, 15; prairie horned lark, 100; kingfisher, 4; downy woodpecker, 3; phoebe, 2; black vulture, 2; blue jay, 1; crow, 4; black-capped chickadec, 5; tufted tit-mouse, 2; Carolina wren, 1; mockingbird, 3; bluebird, 15; golden-crowned kinglet, 1; starling, 30; English sparrow, 50; cardinal, 15; goldfinch, 10; junco, 5; tree sparrow, 18; field sparrow, 4; white-crowned sparrow, 7; song sparrow, 10. TOTAL: 23 species; 307 individuals.

Note: The prairie horned larks were located in a large pasture on US 11 midway between Salem and Roanoke where, in previous years, they have made erratic appearances in large numbers at this time of the year.

* *

ROANCKE, VIRGINIA. January 1, 1946. (9:00 A.M. to 11:00 A.M.; Vinton, Virginia, to AEP Co.'s dam on Roancke River.) Clear; temperature about 29°; gale winds (NE); total miles: 7, afoot. Black duck, 1; turkey vulture, 20; sparrow hawk, 1; phoebe, 1; winter wren, 1; golden-crowned kinglet, 1; hermit thrush, 1; junco, 6; song sparrow, 3; cardinal, 1. TOTAL: 10 species; 36 individuals.

Note: There was a steady, cold NE wind blasting along at an estimated 25 to 40 m.p.h. The vultures tried all morning to breast, fly around, or soar over the wind, but never succeeded.

* *

REMARKS

While there is no such thing as bad weather, a statement likely to provoke disagreement, it is freely admitted that two worse days for a bird census would have been hard to find. In view of the slim record for December 30, it

was concluded to take the count for another day so as to get a more representa-

On the trip December 30, there was rain and the air so muggy that at times the glasses were of little help. The wind on the January 1 trip kept most of the bird life out of sight.

So, in the opinion of the observers, Almond English and Lee Hawkins, the record is not so remarkable for the number of birds found, or not found, as it is that there were birdmen zealots enough to venture forth to take a census anyway. -- L. E. Hawkins, 724 Virginia Ave., S.R., Roanoke, Va.

THE PRESIDENT'S LETTER

This issue of THE RAVEN marks the beginning of the seventeenth year of its publication. Sixteen years ago in the first meeting of the Society, there was in the minds of some a doubt of the need of an organization of its kind in the State and the question whether it would be long-lived. Subsequent years have seen the membership grow into a well organized body which has carried forward the program laid down in that meeting.

The sixteen volumes of THE RAVEN form a work of invaluable reference on the bird life of Virginia. Through its pages have been published notes and articles from every part of the State by amateur and professional ornithologists. We have become better acquainted with the individual problems of others and the evaluation of our own. For its continued publication without interruption, we are deeply indebted to Dr. J. J. Murray, Editor, who has given freely of his time and effort through the years. He has given to the Society a publication of which we can rightly and justly be proud, and above all, to the State a recognized position high in the field of ornithology.

The normal program of the Society has been interrupted by the period of war. We can feel that the suspension of annual meetings and regional field trips in a measure contributed to the war effort. Many have been disappointed and a few have withdrawn their membership. However, there has been a gradual increase of members and a continued interest shown in the Society.

This year, we can look forward to a renewing of acquaintances and the fellowship enjoyed in the annual meetings and field trips. For the first time, the annual meeting this year will be held in Blacksburg, Virginia, May 3rd and 4th. Plans for the field trip include the Mountain Lake area, well known in name, yet territory new to many. More important perhaps is the consideration of a new program which will embrace: first, a sound plan for increasing the membership of the Society; second, the publishing of THE RAVEN in a better form; third, the forming of a council on conservation; and fourth, the forming of more local chapters in the State. We would do well to give these questions some thought prior to the meeting in May.

Our next meeting promises to be one of the best we have ever held and it is earnestly hoped that each member will make an especial effort to attend.

A. Q. ENGLISH

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PLANS FOR THE ANNUAL MEETING

The first annual meeting for several years will be held at Blacksburg on May 3rd and 4th. We have been fortunate in obtaining the use of the V.P.I. Faculty Center lounge for the program meetings. Registration will take place in the lobby of the Faculty Center at 1:30 p. m. on May 3rd. The afternoon and evening programs will follow in the Faculty Center lounge at 2:30 and 8:00 o'clock, respectively.

May 4th will be devoted to a field trip covering the V.P.I. campus and farm, New River in the vicinity of McCoy (the area covered by the Blacks-burg bird study group on their annual Christmas Bird Count), and the Cascades at Mountain Lake.

The program committee includes our Editor, J. J. Murray, of Lexington (Chairman), C. O. Handley, and Ruskin Freer. Those interested in taking part on either the afternoon or evening program should communicate with Dr. Murray at once giving the title of the paper and the approximate time wanted for its presentation. Facilities will be provided for showing both Kodachrome and regular size lantern slides and motion pictures, either sound or silent, of the 16 mm. width.

The committee on arrangements includes C. O. Handley (Chairman), Ralph M. Brown, and J. W. Murray. Some accommodations may be had at the William Preston Hotel, Blacksburg, and a few tourist homes are also available at Blacksburg. It is suggested that those from out of town who plan to attend the meeting communicate with Mr. Handley at Blacksburg as far in advance of the meeting date as possible, relative to rooming facilities. All possible will be done to secure rooms in Blacksburg for those who apply.

More complete plans for the annual meeting will be carried in the February-March issue of THE R.VEN.

THE VIRGINIA SOCIETY OF ORNITHOLOGY.
Statement of Treasurer, covering receipts and disbursements
from January 1st to December 31st, 1945.

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Rospectfully submitted,

T. L. ENGLEBY, Treasurer.

IN MEMCRIAM: JCSEPH EDWARD GOULD

by A. O. English

Joseph Edward Gould, Honorary Life Associate of the American Ornithologists' Union and charter member of the Virginia Society of Ornithology, died at his home in Norfolk, Virginia, November 3, 1945, after a long illness. Born on the well known Black Bank Plantation on St. Simons Island, Georgia, in 1866, he was the youngest child of Horace Bunch and Deborah Abbott Gould and grandson of James Gould, who moved from Massachusetts to settle on the island one hundred and fifty years ago. Throughout his life, he was a regular visitor to the Island where he was buried.

He was a graduate of a private academy in Utica, New York, and subsequently graduated in mechanical engineering from the Ohio State University. He was engaged in railroad work the greater part of his life, having served with the Pennsylvania Railroad, Cincinnati-Southern, CH&D, Rock Island and the CH&N. Later he became Superintendent of Motive Power for the Norfolk-Southern Railroad at Norfolk, where he retired in 1922.

It was during his student days at Ohio State University that he became actively interested in collecting bird eggs and making trips that were extensive in those times. He had many rich experiences in the field during his days of collecting and was always ready to impart to the younger student any knowledge which would be helpful. With his close friends, he had a quiet manner of relating in detail the habits of breeding birds, often with a bit of humor.

Few of his records appear to have been published. In Cliver Davie's book "Nest and Eggs of North American Birds", there appears a record of the Harris's Sparrow, shot by Mr. Gould near Columbus, Ohio, in April 1889. Davie states he believes this is the first record of its occurrence in Ohio. In 1906, he found the Swainson's Marbler nesting in Chowan County, North Carolina, a record which appears in Brimley's "Pirds of North Carolina".

He was elected an Associate of the American Crnithologists' Union in 1889. Since 1905, he had been a member of St. Brides Episcopal Church, where he served as a member of the building committee and for some time as a vestryman.

Mr. Gould was keenly interested in the changing picture of conservation and closely followed the activities of the various ornithological societies.

His close associates will remember him as a kind and courteous gentleman, who followed his hobby in a quiet manner. He is survived by his widow, Mrs. Jessie Wilcox Gould, and several nephews and nieces.



The Raven

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

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

Vol. XVII

February-March 1946

Nos. 2 & 3

SOUTH-EAST - NORTH-WEST.

by Locke L. Mackenzie, M. D.

No one will deny the lure of the open road, least of all the ornithologist. Therefore, when the Navy Department, in its infinite wisdom, decided to transfer the scene of my activities from Norfolk, Virginia, to Seattle, Washington, and, at the same time, graciously granted me ten days delay in reporting, I found both the time and the inclination to make the trip in an old and many times reconditioned Ford named Susie. But Susie, like a commutation ticket, had one punch left, and she carried me safely nearly 4,000 miles, over mountains and rivers, across deserts, plains, and prairies, and through many a great forest.

On such a journey, even a Wall Street banker would see some birds. Naturally, I watched the road enough to keep on it, but I watched the fields and the trees, the fence posts, the air, and the water, too. In this way I saw a lot of birds traveling through sixteen States. At one point I was a little more than 10,000 feet in the air, and at another I was tooling through typical sage-brush desert. The corn was very green in Iowa, and the wheat was very golden in South Dakota. The South was lush in mid-July; the Middle West was hot; the Great Plains were hotter; New England was rainy; the mountains were gloriously cool on everything except the radiator of poor old Susie, and Seattle is hilly.

Such a trip as this does a lot to give one an overall picture of birds. For instance, I did not think there were so many dickcissels in all the world, while no one could have convinced me of the numbers of lark buntings, a bird I had never seen before. Eastern kingbirds were all over the West, while western kingbirds were common in Iowa. Red-wings are everywhere, but I saw more longspurs. The pheasants and grouse of South Dakota are a delight to the eye, and so are the western hawks. As far as that goes, so are the southern terms and egrets.

Following a well-known road, I left Tidewater Virginia of an early July morn, and crossed the Chesapeake on the "super-dooper" stream-lined ferry. It was here that I saw petrels, terns, and skimmers. Just on the other side

CLO WALL

an adventurous clapper rail stalked out of a mud flat in time for me to see it. Proceeding north, I passed through Maryland and Delaware, and picked up the bob-white and the red-tailed hawk among others. New Jersey was met at dusk, and did not help, although this was not New Jersey's fault. That portion of the State through which I passed was covered by great plants and factories, and 'twas not honeysuckle that perfumed the air.

Going through New York the green heron and the least tern displayed themselves, and brought me to Connecticut. Here I spent a few days of my precious leave time, allowing for some "formal" birding. I was delighted to find the Nutmeg State full of birds, both the usual field and woodland residents, and a few early waders coming back south.

So Connecticut showed me some very fine rose-breasted grosbeaks and Baltimore orioles, and two or three yellow-billed cuckoos. I missed the scarlet tanager, but saw some early dowitchers and semi-palmated sandpipers, and a number of roseate terns among some common terns late one evening.

The old mountains in Pennsylvania were very full of summer. A loud warbler song heard all through the woods turned out to be the magnolia warbler, and here also I began to see the cliff swallows, and the first of a never ending succession of red-headed woodpeckers. These showy borers are inordinately fond of telephone posts, and they meticulously attempt to hide their variegated colors by keeping the post between themselves and you as you drive by; they do this with consummate skill, too. Many flew up from the road, but many lay dead on it.

In Ohio, where I blew the top completely off number one piston in the old car, I began to see bronzed grackles, and wondered once more how anyone could ever mistake them for their purple eastern relatives. The best part of Ohio was a visit to Dr. Oberholser in the Cleveland Museum which I should never have thought I had time to make were it not for the blasted piston. But here he was, alone in his office, answering a succession of disassociated telephone calls to tell people about ancient record players and garden worms, and telling me of a fascinating field trip he had recently made to the south-west, looking for beardless flycatchers and other rare birds, all of which he saw. There, unquestionably, is the life:

Anyway, the mechanics finally fixed Susie so she ran like a high school girl, and Indiana provided a lucky view of a least bittern in a marsh near Hobart, early of a sunny morning. It makes one wonder how many birds one must miss as he drives along. Thirty seconds earlier or later, and I should not have seen this tiny heron. He popped up out of the marsh, made a quick circle, and dropped right in again.

Illinois, my own native State, gave me the first dickcissels, as well as many childhood memories of the prairies. However, instead of things seeming smaller than they used to be, there were multitudes of dickcissels to stagger the imagination, and they lasted for about a thousand miles. Everywhere the prairies rang with their worried, insistent hissing. A fine pigeon hawk flashed across the road, too. But Illinois was hot beyond the dreams of the Inferno, and the Mississippi looked wet and cool. It also looked muddy.

Toward afternoon, I crossed over into Iowa, and soon began to hear the lovely grace notes of the western meadowlark. It must have been raining a good

deal during the past few days out here, as there were little pools of water in the fields. The pectoral sandpiper was standing by most of them, in exactly the habitat one might have expected to find him. At Sioux City I saw my first real western bird, the Arkansas flycatcher. In fact, I saw three of them, an adult feeding two young birds.

South Dakota, a State of which I knew very little, proved a veritable treasure, ornithologically speaking. Bullock's orioles flashed about the farm house trees; red-shafted flickers were here; solitary sandpipers and black terns abounded in the little prairie lakes. The elusive upland plover stretched his long neck up through the grasses of the plains. Many ducks had already come back, and the tiny grasshopper sparrow lisped his ineffective, buzzes from the weed tops. Here, too, were fine congregations of Franklin's gulls, the white pattern on their wings conspicuous after our common laughing gulls of the south-east. South Dakota also gave me the first of seven million looks at the lark bunting, first seen near Kimball. However, probably the most interesting bird angle in this State is its great abundance of grouse, partridge, and quail. The ring-necked pheasant, often accompanied by his whole family, stands calmly on the fence-posts as one drives by. Or, conversely, he dashes madly across the road, all too often to remain there permanently. The prairie chicken is still there to remind you of the days of the covered wagons. I did not see the sharp-tailed grouse, but the farmers told me it was making a nice como-back in certain parts of the State. The infinite vistas of the Great Plains country are fascinating, and tend to put one in a reflective state of mind. There is always a desire to stop the car, and strike out over there to the south-west, just over that hill; it seems that there must be buffalo or antelope or Black Feet there.

There is mystery, too, in South Dakota, when one goes, as I did, through the fabulous Bad Lands. I had expected a desert, and this was there, but so much else, too. In Cedar Pass I found my first mountain bluebirds and Say's phoebes. Here was Cassin's kingbird; here were magpies; and here was a cactus wren. From all that I can learn, this large wren should not be so far from his beloved prickles, but no one had told him so, and here he was, busy chasing a rock wren out of crevices. After all these fine things, I am sure that everyone can understand that I hated to cross the State-line, taking me out of South Dakota.

This was necessary, however, and it brought me into Wyoming. All the western sub-species began to appear, and also a bird I had looked for industriously all my life - the yellow-headed blackbird. I saw one at Moorcroft, and shall forever afterward remember the name of this town. The bird has always remained one of the "unfindables" for me. Now, if I can just get a glimpse of a pyrrhuloxia, life will take on a new meaning; that's another unfindable, but it's also another story. Wyoming also furnished both the ferruginous rough-legged and Swainson's hawks. Just at evening, quite near Wildcat, I spotted an enormous male sage hen a little off the road. Naturally, I chased off into the sage brush after him. He watched me until I was about 30 feet away, and then took off like a B-29. This is another one of those "extra special" birds.

Next morning, the Big Horn Range loomed up, and it was here that I learned the way not to drive up mountains. I learned it at the loss of several hours and all the water in Susic's radiator. That range was tough on her, but, when I had learned how to treat her properly, she reciprocated nicely, and there was no further trouble. Way up top-side of these mountains I found Audubon's warblers, the rufous hummer, and, in the lovely Shoshone Forest, violet-green

swallows tumbled everywhere through the cool mountain air. By the time Yellow-stone was reached, they were an old story to me.

Coming out for the first time upon Yellowstone Lake after entering from the East Gate of the Park is a never-to-be-forgotten thrill. It was doubly beautiful because of the seven white pelicans sailing majestically over its surface in slow formation. The fact that I first mistook them for snow geese ought not to be mentioned, but I did. However, the less about this, the better. Pelicans they were, and pelicans they will remain. I shall turn rapidly to Clarke's nutcracker which I was anxious to see. It happened as it does in a movie. I stopped the car in a likely looking spot, high in the mountains, and, immediately over my head, one began to raise the dickens. It was so directly above me that I was forced to get out to see it. Later a band of ten Rocky Mountain jays responded to my squeaking. They are tough looking customers. Two female goldeneyes tempted me with their possible Barrowish look, but Griscom was not along, and no one will ever know. A magnificent golden eagle was most appropriate, too.

The piece de resistance of my entire trip was, however, the trumpeter swan. Hundreds of miles I drove around that Park, asking the Rangers where one might be. It was this lake, or that lake. Sometimes the swans were not there, and sometimes the lake wasn't. Finally, just before leaving the Park in sorrow at missing this bird, I took one more look at the map, and found a place called Swan Lake. It was not too far from the north-west gate, so I turned back to find it. Here I found not only the Lake, but also a pair of swans. I did not wish to approach too close, as I understood that most of these swans had cygnets, but I started through a marsh toward them. Both were on a tiny islet near the north end, and they were very wary. One got up, and, as it flew, gave its wild cry. To one who is used to the gentle yodeling of the whistling swan, this cry comes as a surprise and a thrill. The Rangers say that this great bird is more than holding its own in Yellowstone, and I devoutly hope so. Here they are just where they should be - in a remote lake in a setting which is so very beautiful that it is not to be described.

I cannot leave Yellowstone without mentioning the <u>highest</u> bird I saw on the entire trip. At an altitude of slightly over 10,000 feet I saw the tamest possible Cassin's purple finch. Both the finch and I were looking down on the snow, far below us, and this was July.

That night I drove away from Yellowstone, and passed over into Montana, and Montana will always remind me of longspurs. The high plains were literally alive with thousands of them. I found both the Alaska and McCown's, most of them in winter, but a few still in summer dress. Probably the chestnut-collared was there also, but I drove on, impelled by a desire not to be absent without leave, and not to spend the next several years of my life studying the birds of the Portsmouth Naval Prison.

It was only a small segment of Idaho that I went through, and I went through it fast. But I did stop once in answer to an unknown call. It turned out to be a western wood pewee. If looks were all, he is a dead ringer for the eastern race, but the call notes are entirely dissimilar.

By the time I hit the State of Washington, I felt that my trip was almost over. I was still not due in Seattle for two days, so I came in by way of

Yakima, and over Chinook Pass. On the eastern slope of the Cascades I found a pair of Calaveras warblers. Chickadees and juncos were everywhere as I began to climb. Away up where the glorious Mount Rainier rose out of the clouds to melt its many glaciers in the bright sun, juncos were singing merrily, and the chickadees were calling from depths of fir and hemlock. Here, too, were robins. Robins are everywhere in the north-west.

Seattle was not now far off, and I made it with colors flying, and a day ahead of my dead-line. But I hated to finish this ornithological marathon, even though the lure of the Alcids was strong within me, and I figured they ought to be on Puget Sound. By the way, I later found out that they were. I shall always believe that if I had had more time I might have found an Eskimo curlew dropping into the plains late one afternoon. Some birds flying at a great distance from me looked for all the world like whooping cranes, and I might even have been able to conjure up a scarlet ibis in some of the inviting swamps by which I sped. Time is the most precious thing in the world - especially when you don't have it.

For the record, there follows a list of the birds I saw. Sub-species are put in partly for completeness, partly to irritate my western ornithological friends who are all "lumpers" of subspecies, and partly to please my eastern colleagues who, like myself, verge a bit on the "splitter" side. Anyway, it was the middle of summer, and it is most likely that most of these birds were still on their broeding ranges. Moreover, I am reasonably positive that most of the crows I saw in Montana were not eastern. For that matter, the yellowthroats of Virginia were not of the Tule race. Only the lowly English sparrow goes from coast to coast, never changing, never varying, and crying "cheep" at the top of its lungs to all and sundry.

... 903 Park Ave., Apt. D, Now York City.

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ORNITHOLOGICAL FIELD TRIP TO THE EASTERN SHORE OF VIRGINIA

by G. S. Robbins and R. E. Stewart

Personnel: J. W. Aldrich, I. R. Barnes, Mr. Camp, Mr. Fast, G. S. Robbins, R. E. Stewart, D. Thatcher, W. B. Tyrrell (Audubon Society of the District of Columbia, and U. S. Fish and Wildlife Service).

Dates: September 29 and 30, 1945.

Area covered:

September 29: Silva to Chincoteague, 3:45 p.m. to 4:15 p.m. Chincoteague Marshes and Chincoteague Island (briefly), 4:15 to 5:15 p.m. Chincoteague to Cape Charles, 5:15 to dusk.

September 30: Kiptopeke (within one mile of end of cape), 6:00 a.m. to 1:00 p.m.

Weather: September 29, fair and warm, light south wind. September 30, heavily overcast with occasional light rain and drizzle accompanied to 20 mph. northeast wind. Visibility about one mile.

Annotated list:

Double-crested Cormorant. 310 at Kiptopeke.

Great Blue Heron. 1 Chincoteague Marshes. 5 Kiptopeke.

American Egret. 1 Chincoteague Marshes.

Little Blue Heron. 10 Chincoteague Marshes, all in immature plumage.

Green Heron. 1 Chincoteague Marshes. 35-40 Kiptopeke.

Black-crawned Night Heron. 24 roosting in pines at Kiptopeke.

American Bittern. 3 flushed from bayberry bushes at Kiptopeke.

Pintail. 22 (1 flock) flew past end of cape at Kiptopeke.

Surf Scoter. 1 male very close to shore at Chincoteague Island.

Turkey Vulture. 30 Silva to Chincoteague.

17 Chincoteague to Cape Charles.

100 Cape Charles to Kiptopeke.

Sharp-shinned Hawk. 55 Kiptopeke.

Cooper's Hawk. 15 Kiptopeke.

Red-shouldered Hawk. 1 Kiptopeke.

Bald Eagle. 2 Kiptopeke.

Marsh Hawk. 11 Kiptopeke.

Osprey. 1 Chincoteague. 1 Cape Charles. 45 Kiptopeke.

Duck Hawk. 10 Kiptopeke.

Pigeon Hawk. Approximately 90 Kiptopeke. Impossible to count accurately. Since the weather was unsuitable for crossing the bay these birds had collected at the tip of the cape. They were constantly in sight, and gave chase to dozens of small birds which we flushed from the bayberry bushes.

Sparrow Hawk. 110 at Kiptopeke. The majority of these were perched on telephone wires a mile or more back

from the tip of the point. 26 individuals were perched on a single stretch of wire between 4 poles.

Virginia Rail. I flushed from a bayberry bush, and one from beach grass at the very tip of the cape, Kiptopeke.

Sora. I flushed from a bayberry bush at the tip of the cape, Kiptopeke.

Semipalmated Plover. 2 Chincoteague Marshes.
25 heard migrating over Cape Charles at 3:15 a.m.,
Sept. 30.

Woodcock. 1 flushed, Kiptopeke.

Wilson's Snipe. I flushed from beach grass, and
l seen and heard flying 300' above the water, both
at Kiptopeke.

Spotted Sandpiper. 1 Chincoteague Island.

Greater Yellow-legs. 27 Chincoteague Marshes. 50 Kiptopeke.

Lesser Yellow-legs. 60 Chincoteague Marshes. 13 Kiptopeke.

Pectoral Sandpiper. 1 Chincoteague Marshes.

White-rumped Sandpiper. 1 Chincoteague Marshes.

Least Sandpiper. 10 (at least) with semipalmated sandpipers in Chincoteague Marshes.

Dowitcher. 7 flying past tip of cape, Kiptopeke.

Semipalmated Sandpiper. 200 Chincoteague.

Sanderling. 4 Kiptopeke.

Herring Gull. 20 Chincoteague Marshes. 150 Kiptopeke.

Laughing Gull. 25 Chincoteague. 50 Cape Charles. 40 Kiptopeke.

Forster's Tern. 1 Chincoteague Marshes. 10 Kiptopeke.

Common Tern. 2 Kiptopeke.

Royal Tern. 5 Kiptopeke.

Caspian Tern. 2 Chincoteague Marshes. 2 Kiptopeke. Black Skimmer. 30 Chincoteague Marshes. 1 Kiptopeke.

Mourning Dove. 1 near Oak Hall. 5 Kiptopeke.

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Yellow-billed Cuckoo. 21 with 30 black-billed cuckoos taking refuge in thickets and bayberry bushes at Kiptopeke.

Black-billed Cuckoo. 30 with 21 yellow-billed cuckoos taking refuge in thickets and bayberry bushes at Kiptopeke.

Nighthawk. 1 Kiptopeke. (seen)

Chimney Swift. 40 Kiptopeke.

Belted Kingfisher. 3 Chincoteague. 7 Kiptopeke.

Flicker. l near Chincoteague. 4 Kiptopeke.

Eastern Kingbird. 1 Oak Hall. 3 Kiptopeke.

Tree Swallow. 750 Kiptopeke.

Crow. 100 Chincoteague to Cape Charles. 25 Kiptopeke.

Carolina Chickadee. 8 Kiptopeke.

Red-breasted Nuthatch. 14 Kiptopeke.

Brown-headed Nuthatch. Flock of 8, Kiptopeke.

Brown Creeper. 4 Kiptopeke.

Carolina Wren. 3 Kiptopeke.

Long-billed Marsh Wren. 3 Kiptopeke. (1 in beach grass, 1 in bayberry bush, and 1 in salt marsh.)

Mockingbird. 1 Cheriton.
1 near Kiptopeke.

Catbird. 6 Kiptopeke.

Brown Thrasher. 5 Kiptopeke.

Robin. 3 Kiptopeke.

Olive-backed Thrush. 2 Kiptopeke.

Gray-cheeked Thrush. 12 heard migrating over Cape Charles, 3:15 a.m. Sept. 30.

Veery. I in bayberry thicket surrounded by salt marsh, Kiptopeke.

Eastern Bluebird. 2 Kiptopeke.

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Golden-crowned Kinglet. 1 Kiptopeke.

Cedar Waxwing. 3 Kiptopeke.

Migrant Shrike. l Painter, Sept. 29. Another individual seen Sept. 30 north of Cape Charles, but exact location was not noted.

Starling. 400 Chincoteague to Cape Charles. 300 Cape Charles to Kiptopeke.

Red-eyed Vireo. 1 Kiptopeke.

Parula Warbler. 1 Kiptopeke.

Cape May Warbler. 5 Kiptopeke.

Black-throated Blue Warbler. 1 Kiptopeke.

Black-poll Warbler. 5 Kiptopeke.

Pine Warbler. 1 Kiptopeke.

Northern Water-Thrush. 1 Kiptopeke.

Md. (?) Yellow-throat. 25 Kiptopeke.

American Redstart. 18 Kiptopeke.

Boat-tailed Grackle. 18 Chincoteague Marshes. 8 Kiptopeke.

English Sparrow. 5 Chincoteague (also recorded at Cape Charles).

Bobolink. 20 Kiptopeke.

E. Meadowlark. 1 Kiptopeke.

E. Red-wing. 19 Kiptopeke.

Purple Grackle. 1 Kiptopeke.

Cardinal. 4 Kiptopeke.

Indigo Bunting. 9 Kiptopeke.

Red-eyed Towhee. 6 Kiptopeke.

Savannah Sparrow. 5 Kiptopeke. (57 seen in vicinity of Ocean City, Md., Sept. 29 - 98 miles north.)

Seaside Sparrow. 1 Kiptopeke Marshes.

Field Sparrow. 3 Kiptopeke.

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Song Sparrow. 1 Kiptopeke.

..... Washington, D. C.

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THE LAPLAND LONGSPUR IN MONTGOMERY COUNTY

by Charles O. Handley, Jr.

By a stroke of rare good fortune I was lucky enough to draw a furlough for Christmas, 1945, and leaving care and worry behind, spent the holiday season at home among all the pleasures of being a temporary civilian once again. As I had been holding down a desk job for three months, most of the week before Christmas was well spent in restoring to my legs the art of walking and in locating birds for the Christmas census.

On the morning of December 19th I was cut enjoying a tramp through five inches of new snow which had fallen the day before, when I noticed a flock of about 150 horned larks in a stubble-field just off the V.P.I. campus. (Incidentally, the temperature was in the low 'teens.) As I scanned the flock for a possible stray pipit, I noticed a bird which immediately aroused my curiosity. It was sparrow-like and darker than the larks, with a noticeably shorter tail and more prominent striping on the back. Stripes extended along the sides of the breast to the lower flanks, but the middle of the throat and breast were clear white. Since the bird walked and did not wag its tail, the possibilities of its being a sparrow or a pipit were of course eliminated, and there was nothing else it could be except a longspur.

When the flock of larks was in flight the peculiar rasping call-note of the longspur immediately betrayed its presence, and it was easily picked out by its smaller size. Also, the lack of white in its tail, except on the outer feathers, distinguished it as a Lapland Longspur. The horned larks were quite inimical toward it and were continually disturbing its peaceful search for weed seeds, even though the longspur appeared to be completely inoffensive and not at all distasteful of the larks' company.

In the afternoon the birds had moved to another field, where they had joined another flock of similar size, but despite an hour's efforts I was unable to approach this combined flock closely enough to pick out the longspur. All the flocks of horned larks in the vicinity were watched for several days, but the longspur was neither seen nor heard again.

Although it is apparently quite rare in western Virginia, this was not the first record of the longspur for Montgomery County, as Mr. Ralph M. Brown had seen a flock on the V.P.I. Campus on May 1, 1928.

.... Blacksburg, Va.

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WINTER NOTES FROM SHENANDOAH NATIONAL PARK

By Frederic R. Scott

Realizing that winter notes from the higher mountains of Virginia were few or completely lacking, Dr. John H. Grey, Jr. and Gordon Lewis of Charlottes-ville and I decided to spend a day on the Skyline Drive in Shenandoah National Park on a more or less exploratory trip. Early the morning of January 12, we entered the drive at Swift Run Gap and drove northward to Big Meadows. The weather was extremely good with the sun out most of the day. The temperature stayed about 40°, but a strong west wind made it seem decidedly colder.

At Big Meadows we were working over a marsh when Dr. Grey called our attention to a flock of eight small birds that he was unable to immediately identify. They were about the size of tree sparrows and were moving around through some low growths of birch (?) and Crataegus. They wouldn't allow a close approach and took flight when we pursued them. As they flew low overhead, Dr. Grey distinctly saw the characteristic crossed mandibles of crossbills. They were olive-green in color with a grayish tinge and showed a large amount of white in their wings both in flight and at rest. From these field marks we concluded that they must be white-winged crossbills, Loxia leucoptera Gmelin, mainly females and immatures. Nearby was a small grove of white pines, but these birds appeared to prefer the vicinity of the marsh. We followed them for about a half hour but were unable to obtain a better view of them. Their characteristic cheeping notes were given continuously.

Later in the day we drove up to Hawksbill Mountain (4049 feet), the highest peak in the park. On the summit is a small grove of balsam or Fraser firs, which we thought might harbor a few wintering species. A climb to this point failed to produce a single bird. There were, however, a great deal of droppings under several of the firs, which might indicate that an owl was using the grove for a roost.

Our list for the day embraces twelve species, all of which were seen at Big Meadows at an altitude of approximately 3500 feet. The list follows:

Turkey Vulture, 11 - soaring over Big Meadows and adjacent parts of the drive, flapping their wings quite frequently to buck the strong wind.

Red-tailed Hawk, 1 - perched on a chestnut stub near the lodge.

Marsh Hawk, 1 - flying low over the fields.

Downy Woodpecker, 1 - hammering on a lone pine in the marsh.

Blue Jay, 3 - flying over a wooded ravine.

Raven, 2 - identified by their harsh croaks as they flew overhead.

Crow, 2 - flying overhead.

Black-capped Chickadee, 4 - identified by their larger size and white-edged wing-coverts.

Bluebird, 8 - in the open and among the dead chestnuts.

Cardinal, 3 - feeding in the marsh.

Goldfinch, 47 - feeding on weeds along the edge of a wooded ravine on the eastern slope of Big Meadows.

White-winged Crossbill, 8 - explained above.

Junco, 35 - in small flocks, probably a mixture of the subspecies hyemalis and carolinensis.

Tree Sparrow, 17 - feeding in the marsh.

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We do not think that this list is a good representation of the birds present in the area, but in future trips we will have a better knowledge of the territory.

.....Richmond, Va.

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ANOTHER BALD-HEADED CARDINAL

THE RAVEN is always of much interest to me, and the September-October, 1945, number was especially so. The account of the molting cardinal by W. Edwin Miller of Richmond brings to mind some observations on a bald-headed male cardinal that was a regular visitor at our feeding tray while living in Amelia. Early in the winter this cardinal began shedding the feathers on the top of his head and was soon absolutely bald. Otherwise he seemed in perfect condition. This occurred in two consecutive winters.

John B. Lewis Seward Forest Triplett, Va.

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NOTES ON THE FALL MIGRATION AT EMORY

By H. M. Stevenson

The earliest of the fall migrants were noted in July and August. On July 14 a prairie warbler was heard singing. As I know of no definite records for the species here in late May or June, the question of whether this individual was breeding here or was migrating southward remains unsettled.

The mud flats around the ponds at Saltville proved an excellent place for shore-birds and certain other species. Of the following records, all of those referring to sandpipers and plovers were made in this area. Other species recorded there are so indicated by an "S" in parentheses following the name of the species. (Lack of opportunity to visit this area in July undoubtedly resulted in failure to learn the true arrival dates for the earlier fall migrants.)

The following arrival dates seem noteworthy; Aug. 11, semipalmated plover, pectoral and least sandpipers; Aug. 30, Canada warbler; Sept. 8, Tennessee warbler; Sept. 13, Nashville and magnolia warblers, redstart (unrecorded since late July); Sept. 15, pied-billed grebe (S), blue-winged teal (S), duck hawk (Boeger), golden plover, sanderling, northern phalarope, black tern (S), tree swallow (S), olive-backed thrush, migrant shrike (S) (also on Oct. 17, at Abingdon), blue-headed vireo, Cape May, black-throated green, Blackburnian, chestnut-sided, and bay-breasted warblers, bobolink, and rose-breasted grosbeak; Sept. 23, palm warbler; Sept. 25, Wilson's warbler; Sept. 29, black-throated blue warbler; Oct. 5, golden-crowned kinglet; Oct. 6, Wilson's snipe, short-billed marsh wren (S), Myrtle warbler (S); Oct. 12, white-throated sparrow; Oct. 13, yellow-bellied sapsucker, red-breasted nuthatch (also on Oct. 17, at Abingdon), brown creeper, winter wren, hermit thrush, slate-colored junco, white-

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crowned sparrow; Oct. 17, swamp sparrow, purple finch; Oct. 19, Savannah sparrow, vesper sparrow (a few breed here); Oct. 30, horned lark; Nov. 3, red-breasted merganser (carefully studied with 8X glasses) and ring-necked duck (S); Nov. 30, fox sparrow; Dec. 24, tree sparrow.

The following latest dates of occurrence may be of significance: Aug. 28, orchard oriole; Aug. 30, cerulean warbler; Sept. 8, Kentucky warbler; Sept. 15, kingbird (Boeger), yellow-throated vireo; Sept. 22, wood thrush; Sept. 23, nighthawk; Oct. 1, ruby-throated hummingbird, rose-breasted grosbeak; Oct. 6, spotted, solitary, pectoral, white-rumped, red-backed, and semipalmated sandpipers, lesser yellow-legs, chimney swift (S), barn swallow (S), parula, Blackburnian and Canada warblers (S), yellow-throat; Oct. 13, wood powee, catbird, olive-backed thrush, white-eyed and red-eyed vireos, Tennessee, magnolia, and black-throated blue warblers, indigo bunting; Oct. 19, blue-headed vireo, Nashville warbler, ovenbird; Oct. 24, Cape May and black-throated green warblers; Nov. 3, pied-billed grebe (S), swamp sparrow (S); Nov. 4, Myrtle warbler, chipping sparrow; Nov. 10, ruby-crowned kinglet; Dec. 5, robin, hermit thrush, fox sparrow.

For the most part both the arrival dates and departure dates were later this fall than in 1944. The high temperatures of the late summer and early fall may have been a factor of importance in this delayed migration. It is also surprising to note that many species apparently arrived here later in the fall migration on both years than they appear in northern Alabama, where the writer has worked at this season of the year at several different localities.

Among the most unusual records for the period are those of the golden plover, sanderling, and northern phalarope. One individual of each of these species was carefully studied with 8X glasses at Saltville on September 15. Light conditions were good at the time, and all diagnostic markings of these species could be seen.

Emory and Henry College Emory, Virginia.

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FALL BIRD CENSUS AT EMORY

Emory, Va., Sept. 15 -- Woods and fields near Emory; ponds near Salt-ville; to Middle Fork of Holston River and return. Two parties working 14½ hours and covering about 20 miles on foot. Cloudy to partly cloudy; wind west, 10-18 m.p.h.; temp. 620-750. Pied-billed grebe, 2; great blue heron, 1; green heron, 1; blue-winged teal, 1; turkey vulture, 9; black vulture, 10; duck hawk, 1; sparrow hawk, 3; killdeer, 30; golden plover, 1; spotted sandpiper, 1; solitary sandpiper, 3; lesser yellow-legs, 10; pectoral sandpiper, 4; least sandpiper, 8; semipalmated sandpiper, 8; sanderling, 1; northern phalarope, 1; black tern, 1; mourning dove, 7; screech owl, 1; whip-poor-will, 1; chimney swift, 37; ruby-throated hummingbird, 7; flicker, 20; pileated woodpecker, 1; red-bellied woodpecker, 6; hairy woodpecker, 3; downy woodpecker, 7; kingbird, 1; phoebe, 16; wood pewee, 16; tree swallow, 1; barn swallow, 7; blue jay, 28; crow, 27; Carolina chickadee, 12; tufted titmouse, 19; white-breasted nuthatch, 7; Bewick's wren, 5; Carolina wren, 8; mockingbird, 7; catbird, 13; brown thrasher, 3; robin, 15;

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olive-backed thrush, 1; bluebird, 14; blue-gray gnatcatcher, 3; cedar waxwing, 32; migrant shrike, 1; starling, 92; yellow-throated vireo, 8; blue-headed vireo, 3 (these two species of vireos were in full song); red-eyed vireo, 4; black-and-white warbler, 2; Tennessee warbler, 1; magnolia warbler, 4; Cape May warbler, 1; black-throated green warbler, 2; Blackburnian warbler, 3; yellow-throated (subsp.?) warbler, 1; chestnut-sided warbler, 3; bay-breasted warbler, 1; ovenbird, 2; yellow-throat, 5; hooded warbler, 6 (some in song); Canada warbler, 1 (singing); red-start, 7; English sparrow, 35; bobolink, 15; meadowlark, 10; red-wing, 300; grackle, 22; cowbird, 7; cardinal, 18; rose-breasted grosbeak, 1; indigo bunting, 4; goldfinch, 55 (also one nest containing three eggs); towhee, 5; field sparrow, 10; song sparrow, 12. Total: 81 species, about 1062 individuals. -- Kyle Boeger, H. M. Stevenson (also other members of the Emory Bird Club were present for short periods during the day).

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ANNUAL MEETING

Attention is called to the last issue (January) of THE RAVEN for information relative to the 12th annual meeting of the V.S.O. at Blacksburg on May 3rd and 4th. Those desiring a place on the formal program are urged to communicate with Dr. J. J. Murray, Lexington, Virginia, without delay. Anyone interested in bird study, whether a member of the V.S.O. or not, is invited to attend the meeting.

For the information of those who may plan to travel by train, taxi service is available both day and night from Christiansburg to Blacksburg, a distance of eight miles. Taxis from Blacksburg meet all trains.

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SAGA OF A MOCKINGBIRD

by Mrs. A. C. Reed

When we came to Norfolk and moved into our present home in 1937, I longed to have a mockingbird in my garden. Images of mockingbirds, singing in lovely camellia-azalea-magnolia moonlit gardens filled my mind. Was the mocking-bird of the South really equal in beauty to the hermit thrush, singing his sequestered phrases in the arbutus-pincy-fragrant woods of the White Mountains where, at my family's summer home by Squam Lake, I had known and loved him from childhood? So it was with disappointment that I observed from our bungalow how mockingbirds chose the highest pinnacles of houses from which to do their singing and from which they made their fancy flights into the air. The homes about me were mostly 3-storied buildings. For 4 years I was destined to know mocking-birds unrelatedly, enjoying their singing about the vines, perches, gables, of my neighbors, never having one of my own.

On February 24, 1942, I heard a mockingbird singing softly from the shrubs in front of our study window. Tiptoeing into the room, I beheld him through the window. Again on February 27 he sang softly. This time I was prepared. Opening the front door, I furtively laid chopped raisins on the step. Every day thereafter when I heard him singing, or giving his loud "check-check", I opened the door and put down the raisins, then stepped back and watched through the curtains of the door. Nothing happened that I could see (although the raisins were disappearing) until March 9. Then hearing him call, when I opened the door I spied him in the maple tree. He watched me put down the raisins, then as I closed the door he sailed from tree to steps, white wingpatches flaring, and daintily pocked at the raisins.

The next steps were as follows. On March 11, after giving his call, he awaited, in my neighbor's syringa bush, for me to open the door. I took much time as I quietly deposited the raisins, so that my listening ears heard the flutter of wings as he flew from the syringa into our shrubs. Next time, I caught the glimpse of a form stealthily slipping nearer through the branches. On March 12, as I cautiously raised my head, a white-irised eye peered inquisitively from the leaves. We gazed at each other closely, eye level with eye. The understanding was perfect. The pact of friendship made.

Of course it was not long before mocker would hop down from our ligustrum to the step as soon as I had withdrawn my hand. I now sat on the step beside him while he ate, talking to him in a quiet monotonous tone. He scarcely took more than 3 or 4 bits of fruit, about 1 raisin, then with a quick flirt of his tail and uttering his loud note, by way of saying "thank you", he would fly away.

I named him "Dusky." He seemed to be a very dark mockingbird and definitely small in size. One white tail feather on the left-hand side was always unruly. Apparently it did not grow in line with the other tail feathers, but was raised a little above them. This was not noticeable unless the tail was somewhat spread. Always he had this defect. Even after a molt, that tail feather grew back in, raised a little higher than the others, and standing out at a slight angle from the body. Therefore, I presumed there was some permanent injury to the cell from which the feather grew.

It was not long before Dusky learned that after the postman came to the front door, I would open the door. Did Dusky watch the postman make his

rounds? When I would open the door for the mail, there he would be, hovering and flapping his wings in front of the door, and flapping them as if to show the white patches on the primaries as conspicuously as possible. Sometimes, hearing the postman, I would open the door to find him standing with Dusky hovering above him.

From this it was only a step further, in confidence in people, for mocker to perform the same way when visitors came to my home. I would be amused on opening my door, to see callers pivoting on their heels, heads craning upward, watching a little mockingbird flapping above. To show him off, I would feed him raisins. If he expressed fear, I had only to talk to him as I always did when we were alone and he would eat unafraid.

In an article published in Nature Magazine, February, 1943, Dr. E. Laurence Palmer tells of experiments made on the hearing of birds. ("Auditory Response of Starlings, English Sparrows, and Domostic Pigeons," by Albert R. Brand and P. Paul Kellogg, The Wilson Bulletin, March, 1939). Dr. Palmer says that the lowest pitch at which a canary can hear a sound is C-2, which has 1024 vibrations per second. This is the highest C a soprano can reach, and Dr. Palmer states that a canary probably cannot hear our speaking voice, and that doubtless few of our birds except possibly the domestic pigeon can hear our speaking voices. When talking to my mockingbird, my speaking voice ranged within the octave from middle C (256 vibrations per second) to C-1 (512 vibrations per second). In accordance with Dr. Palmer's article, I would assume that my mockingbird could not hear my voice at that pitch. If he could not, I do not know how to explain his responses.

After eating his raisins, Dusky liked to drink water. If it had been raining, he drank the waterdrops which hung like big pearls from the branches of trees. He would lean forward and drink the drops directly beneath him; or lean sideways and drink the drops on either side, or he would hop from branch to branch drinking large drops which had gathered to the full and were about to fall. I never saw him reach up to drink a drop hanging from a branch above. At other times, Dusky would hunt a puddle on the ground, or fly to the waterpipes along the roofs of houses where I suppose a little rainwater lingered in the hollows.

Curiously enough, after not having any mocker around my home for four years, on April 6 a pair started to make their nest in the rose vine by the kitchen window. On April 7, I saw Dusky and the male of this pair in a fight to determine to which of them the garden belonged. Now, Dusky was much smaller than the other male. After furious chasing, I saw them clinch each other with their feet in mid-air, then tumble over and over. Finally they broke apart, and Dusky fled to the front of the house, a beaten bird. He did not venture into the back garden again this spring.

From April 6 to May 3, my notes are about the nest of this other pair. On May 3 this nest with eggs was deserted. Climbing up on a step-ladder, I failed to understand why the nest was deserted. It was left, I know now, because the rambler grew so fast around the nest that the birds became locked out from their nest, a situation which often happens, I have learned, when birds nest in the rambler type of vine, which grows very fast in this climate; but this was a fact I had to learn only the hard way later.

Because of my interest in this nest, it was not until April 28 that I discovered Dusky had a mate and a nest in my neighbor's syringa. That day

I observed him singing from the telephone pole across the street. From this he sailed down to the stone steps for his raisins, and I saw his mate stretch up her neck to watch him. She was quite a bit bigger than he.

There were four babies in this first brood. As they grew, Dusky began to attack every dog and cat that traversed the sidewalk. A fine chow, lead on a leash by a lady, was frequently attacked, much to the lady's amazement, and even fear for her dog. There was, however, a bob-tailed cat which aroused Dusky's especial fury. He would fly down and stab the cat on each side of the stubby tail. The cat would snarl, then walk stiff-leggedly pretending not to feel the blows, until in self-defense it had to sit down on the sidewalk to protect its haunches. It would now twist its head sideways and spit green fire from its eyes at Dusky. After a few minutes it would commence walking again, only to have mocker once more deal out the blows. Perhaps it is not surprising that all the cats around my home came to know where Dusky's nest was.

One night I was awakened, when it was still dark, by Dusky's alarm notes given directly outside my bedroom window. The urgency of the sound conveyed to me unmistakably the idea of cat. But how did Dusky know enough to come to my window? Had he observed that at night, lights were always only at the back of the house, or windows opened there, etc? Wondering, I dressed and went out, first equipping myself with two blocks of wood which I always kept handy for such emergencies. Not one cat, but two, were on my neighbor's piazza, one stretched out on the top railing and one on the piazza floor, and both as close to the syringa as they could get. The nest was on the outside of the bush, away from the piazza. Dusky's mate had chosen wisely! I chased the cats well down the street, then returned home and to bed. I had no more than composed myself for sleep, when Dusky came to the window and called again. I dressed and went out. Walking past the nest, I could not see any cat. I even knelt on the ground in order to see beneath the shrubs, for it was still dark. There was no cat. Admonishing Dusky not to call, "Wolf:" too often, I returned to the house, Dusky following me. As I climbed the steps, he leaned down from the piazza roof and opened his bill wide with such harsh "checks", it seemed as though he would bar my entrance into the house. I stopped and pondered. Could I be mistakened? This time, I not only knelt on the ground, but I crawled on hands and knees among the bushes. Sure enough, squeezed in between the base of the syringa and a corner of the piazza, entirely concealed, was a cat, a third cat. Well, I dispatched that one and returned to bed. To sleep? No! Again Dusky came to the window and called. I thought, "It simply can't be another cat! I will just let him call." Yet the alarm notes kept up and finally I dressed and went out. There it was, the fourth, this time on the roof of the piazza, above the nest. What to do? How could I get it down without awakening my neighbors? If I threw my missile and it missed, I might hit my neighbors' screens and awaken them. With care, I thought, surely I could avoid hitting anything so big as a window, and I did wish to get that cat away. I knew it to be positively the meanest cat in the neighborhood. I slung...bing!....couldn't have hit the screen better: The cat now started running along the roof. Then I realized that the only way the cat could get onto the roof was from a tree growing by the back of the house. Could I reach that tree first? I grabbed my missile, - apologies would have to be made in the morning (they were unnecessary for my neighbors never heard anything), and started on the run. Yet not alone. Little Dusky accompanied me. He flew close beside me, about on a level with my shoulder. In order, perhaps, not to go faster than I did, his wings flapped up and down slowly, and he made little dips up and down, while he opened his bill wide and let out raucous notes. Strange: -- but as I ran heavily over the ground, I had an othereal sensation that I was growing lovely wings! In this fashion, Dusky and

I reached the tree. The cat got to the end of the roof almost simultaneously and leaped for the tree. I slung...missed...the cat dropped to the ground and fled, with Dusky swooping down on its back. Slowly and meditatively, I walked home. Dusky got there first, flying over my neighbor's roof, and as I entered my door, from the elm tree I heard a happy refrain, not quite a song.

Dusky's babies were all out of the nest by May 27. With loud warning notes, he now kept them in the very tip-top branches of the elms across the street, where he fed them, and he did not allow them to come down to the ground. As they constantly exercised their wings, I could tell where they were by the movement of their wings, like little flags waving in the trees. Here they stayed for a week. Once I saw Dusky teaching a baby to fly. He held food in front of the baby, then hopped higher and higher in the tree, the baby following. When up quite high, Dusky set sail to another tree. The baby hesitated, then launched after him, making the tree safely, but losing altitude. Again Dusky brought food, coaxed the baby higher in the tree, then sailed to another tree. The baby followed. This time it was a real struggle to reach the tree. The baby weakened in flight and the last wing flaps appeared so hard to make! I thought he must feel the way I do when I set for myself a goal in swimming, to reach which the last few feet require every effort I can make, and with arms so heavily weighted!

In the meantime, mother bird had built a second nest, conspicuously bedecked with cleansing papers, in the <u>ligustrum</u> under the study windows, and was incubating her eggs. There were only two eggs. On June 7 I saw her turning the eggs. The young were out of the nest by June 26. The reason there were only two eggs, I believe, was because that year we suffered a dreadful drought from the end of May through June and July. Birds, and plants, and the very earth, suffered. Mother bird, as well as Dusky, ate raisins and fed them to the young. Once I paid ten points for a box of raisins. On July 19 I wrote in my notebook: "The drought is terrible! Dusky's babies are grown up. Of all bird babies, mockingbirds' are the prettiest, I think. Their breasts are almost white, with gray streaks, and the constant lifting of their wings with the large white areas has an aspect so gently curious and trusting, so delicately airy and fleetingly ethereal, that it gives one an evanescent glimpse into a world not quite real, or not quite earthly. I think it would require a poet like Thomas Traherne to express it."

I did not write anything more in my notebook about Dusky during 1942; however, I feel quite sure I was feeding him regularly. 1943 came to be the year of our greatest intimacy.

January 17, 1943, was very warm, and that night, a moonlight night, Dusky gave two or three calls in the night. On January 19 he sang softly from his syringa bush where the sunlight fell warmly on him. His mate did not winter with us.

Beginning at this time, Dusky would not only come and call for his food, but when I stepped outdoors, even though he were nowhere in sight as far as I could see, he would come when I called. On January 27 I called him thus three times to the front door. He would come flying down the street sometimes from one direction, sometimes from another. Of course, it is very possible he came because he saw me, not because he heard me. When I called him in this way, I would really sing out, and my voice would soar as high as G-1. Not, however, as a soprano sings: G-1 has 768 vibrations per second.

On January 28 I fed him twice in the morning. The weather had turned very cold. Late in the afternoon when I opened the front door, apparently he had been waiting for his food and was most hungry. So afraid was he that I would not see him, that he hovered in front of the screen door, scraping his wings against it; then he flew over the shrubs along the piazza, back and forth, flapping his wings slowly as if to show the white areas, and scraping his wings again against the screens. On January 29 he acted in the same way, only he was careful to avoid the screens.

I now began feeding Dusky on a small stool in the garden, wishing to break him of the habit of feeding in front of the house. Soon after he had learned to eat there, he evinced a new trick. Although I had never once fed him except on the stool, or the front door steps, apparently he had taken cognizance of the fact that whenever Mr. Reed and I left the house, we always went out and returned by the side door, never by the front or back door. On February 4 Dusky began the trick of calling me from the side door. As soon as I opened the door, he would hop around excitedly on the beams overhead, just as though it were a joke to have me come out that door. This was all very well, but I had no intention of feeding him at the side door, and I would go to the back and put his raisins on his stool. This led to a further development in this feat. He would call at the side door. I would appear at the side door, only to be greeted by a loud, chortled note, and to catch the glimpse of a tail vanishing around the corner of the house. Going to the back door, I would find him in the mulberry tree, hopping around, and I would say, "Mocker, I see you!" I would then fetch his sweets. Of course, I am aware food was the incentive for this little drama. Yet there was an element of play in his actions. Was it something of a game, such as "hide-and-seck," or "catch-meif-you-can," or "I-see-you-and-you-see-me?"

Considering this action, possibly Dusky's next stunt will not appear as exaggerated as it otherwise might. Mr. Reed and I always park our car at the side door. Dusky must have observed it there countless times. On March 11 I had been in town all day. When I came home in the late afternoon, as I was approaching our house, I was startled by a bird which tumbled down in front of the windshield. So startled was I that I let out a cry and, for a second, let the car swerve to one side. I thought the bird would strike the top of the hood of the car; instead, it straightened out from its tumble and began flapping its wings up and down in front of the windshield, flying straight ahead and keeping right above the hood of the car. Behold, it was Dusky! I leaned out the window and told him to get out of the way, for I could not see where I was going. He continued to fly this way, up and down in little dips, and directly over the hood of the car. I wondered what he would do when I made the sharpleft-angled turn from the street into our driveway. If I was in doubt, Dusky was not. When I slowed down for the turn, Dusky gaily set his wings and made an obviously sharp left-turn, still keeping in position above the hood of the car. The act appeared deliberately and gleefully performed. When I stepped on the accelerator to make the little rise up the driveway, Dusky left the car and speeded ahead, alighting in the cherry tree where he turned, and peering eagerly down, awaited my halt at the side door; - and also, of course, for the raisins which he had missed while I was gone all day. That evening when I related the incident to Mr. Reed, he lifted an eyebrow and remarked, "Now don't tell me that bird has learned to recognize the car?" Dusky repeated this little performance twice thereafter, though never it seemed to me with quite the eclat of the first time.

I do not know whether or not a bird can distinguish between the color of one large moving object and that of another. I do wonder if two factors,

which might have aided Dusky in recognizing our car, were these: The street on which we live being narrow, I invariably slow down as I enter it. Also, there are usually neighbors' cars parked opposite our home. Sometimes it requires considerable manoeuvering to get into our driveway, which is likewise narrow. Therefore, the better to see, I commonly put my head out the window as I approach the house. Perhaps one, or both, of these movements were an aid to Dusky.

On February 11 Dusky sang for half an hour, standing in the middle of his last year's nest in the syringa bush. It was a cute sight. On February 18 I departed for the hospital and was gone five days. In the late afternoon of February 23 when I returned home, Dusky was singing gloriously from beyond my neighbor's house. I stepped outdoors and called, "Mocker - Mocker." The singing abruptly ceased. I called two more times. Then he came flying to me. It is difficult to put into words how much joy appeared to be expressed in his flight. He rowed hard with his wings, his body tense all over. Straight as an arrow he came toward me, till I thought he was going to strike my face. A little in front of me, he dipped down, then up and over my head, and alighted in the mulberry tree. Could any greeting have been more spontaneous or more expressive of joy?

One day I was working in the garden, when something caused me to suddenly look up. A boy was standing by my hedge with his cheek pressed against the stock of his shotgun, and aiming ... at what? Following the direction of his aim, I saw Dusky perched near the top of the tree where he stood out boldly against the sky. The tree had not yet leafed out. Contentment and calm were expressed in his poise. Of course I let out a scream. The boy put down the gun somewhat shamefacedly. I told him it was against the law to shoot song birds at any time. Also, it was against the law to shoot in the city. In addition to these infractions, it was my pet mockingbird he was aiming at, and if he killed it. I would feel as badly as he would if I went to his house and shot his dog. The boy remonstrated, "But, that bird is a wild bird!" "True," I said, "but he is also a pet. I feed him, and he comes when I call!" The boy looked skeptical. So I went into the house, got my raisins, and put them on the stool, lingering about the act. Dusky flew down, fanning my hair with his wings as he hovered above me. Next he alighted on the ground and circled around with running steps, waiting for me to withdraw. I talked to him as I usually did. I had never tried to really tame mocker or to feed him from my hand, feeling that it would make him too tame and less alert in a neighborhood infested with cats. Now I wished that I had done so. As it was, the boy watched all this soberly, then went away, having been given something of a lesson I believed.

However, I was scarcely prepared for the denouement of this episode. The next morning my doorbell rang. Going to the door, I was faced with a little group of neighborhood children. Their faces were all turned up to mine. In a chorus they asked, "You have a wild bird?" "You feed him?" "He comes when you call?" I told them that was true. "Call him!" they imperiously ordered. Here was a situation! I looked about at all of Dusky's favorite perches, the peak of a house, a telephone pole, a flagpole, a sycamore tree. Nowhere was he to be seen. I explained to the children that I was sure he would come if he saw or heard me, but that I could not see him anywhere, and I had no way of knowing whether he was within calling distance. With misgivings, I went for the raisins. "It would be bad to fail," I thought. Outside again, I looked in all directions. No Dusky! If they had asked me to be a conjurer and to pull a rabbit from a pant's pocket, the legerdemain would scarcely have caused me more apprehension. So, lifting my hands high, with palms up holding the raisins, I sang out at the top of my voice, "Mocker - Mocker - Mocker!"

From out of the blue, he came: From high up, he flew down the street.
"Look, here he comes!" I cried. The children had plenty of time to behold
Dusky's approach. Swinging low over our heads, he alighted on the piazza roof.
The rest was easy. In order to make the most of this little drama, I grandiose—
ly waved my arms like batons, metioning the children back so that they would not
crowd too closely about him. I put the raisins on the step. Dusky flew down,
ate his bits, then with a loud note (of thanks) flew away. There was silence for
a moment, an expression of wonderment, likewise conviction. Then as if actuated
by the same impulse, the children turned and left. As the little troop moved
off, I heard them say in low voices, "She has a tame, wild, bird!" "He comes
when she calls!"

On April 4 I fed Dusky twice in the morning. It was then that I noted for the first time that he tilted his head, looking at me peculiarly. Also he was all puffed up. His appearance was similar to that of a canary which has caught a cold. According to my notebook, for the past two weeks I had been feeding him from four to six times a day. At various times, since I first began feeding Dusky, I had tried to get him to eat other food than bits of raisins. yet from whatever food I put down, he would usually pick out the raisins. Now I tried a different device. I rubbed pieces of toasted whole-wheat bread together until I had very fine crumbs. In this I rolled the bits of raisins. Also, I dipped pieces in orange juice, or rolled them in the pulverized yolks of hardboiled eggs, or in nut-meats crushed fine, or stuck them with bits of minced meat, suet, etc. Dusky would look the food over, and eat those pices which showed the dark raisin beneath. On April 5 I fed him at 7, 9, 11, 12, 3, 5, and 7 o'clock. That evening I heard him singing most sweetly in the mulberry tree. Going to look, I saw two mockingbirds close together. On April 6 he was still sick and his actions sluggish. On April 7 he remained in the mulberry tree almost all day calling frequently for food. All during this illness he drank a good deal of water.

On April 8 when I took Dusky's food out to him on hearing him call, I again saw two mockingbirds. Dusky came to the stool, ate, and called to his mate. She would not come. So I scattered food on the cement walk and to this she came, and ate. She did not appear to be afraid of me as I stood close by. In fact, I decided the place was familiar to her. As she was larger than he, I thought doubtless she was his wife of the last year. During the day, she began putting sticks into the rose vine. Frequently this day and the next I heard Dusky's wooing song. It was a sweet tooting, all on one note, given rapidly and tenderly.

April 10: While I was feeding Dusky and talking to him, his mate watched motionless from the rose vine. After that I did not see her again; she disappeared. Did she leave him because she thought that a husband who depended so greatly upon proffered food would not make a good provider for his family? Did she distrust the familiarity between Dusky and me, his calling for food so often, my talking to him? Due to his illness, was he not as ardent a wooer as he should have been? Whatever the réason, she disappeared.

April 11, 12, 13, 14. Dusky now sang constantly, announcing his territory, looking for a mate. On April 14 I was still feeding him at 7, 9, 11, 12, 1, 2, and 4 o'clock. April 15: All day he sang from across the street in front of our house. He did not come for food until the late afternoon, when as I stepped into the garden he suddenly dipped down in front of me, flashing his wings. He ate hungrily. I now realized Dusky was courting another female. And he had a rival. Around and round a neighbor's flagpole, which was heavily draped

with vines, the three mockingbirds flew. Would he win her? Dusky would come to our ligustrum and the syringa, and from there sing with all his heart and with all his power, pouring his music across the street. Sometimes I thought he just screamed from the syringa. Next I saw him dancing along the railing of my neighbor's piazza; and how he danced, back and forth on the tips of his toes, singing so loudly, neglecting no skill or phrase of his repertoire (which was always limited for a mockingbird). This continued until April 23, when he appeared in our garden with a little mate. She was smaller than he, a dainty lady.

Determined not to spoil things a second time, I surreptitiously put raisins on the stool. Sometimes Dusky would eat, then toot softly for her to come and eat. Of course, as she built her nest, he kept guard and he would call when the coast was clear, then she would come with a stick. Sometimes he sang softly from the top of the wren house close beside the nest. All went well until May 10. However, I had noticed before this that at times both Dusky and his mate seemed to be having difficulty getting into the nest in the vines. On May 10, 11, and 12 there was only quiet in my garden. On May 13 I climbed up on the stepladder. There was the nest with four eggs in it, but completely covered over with small twigs so that it was impossible for a bird to get into it. Bitterly I rued my stupidity and ignorance. I cut away the branches, a useless performance, since it was too late. Later this day, Dusky came back into the garden. He looked at the nest from which I had removed the twigs and gave a harsh note. After that he came no more until late summer.

(Since this happened to Dusky, I have cut down all the rambler type of rose vines in my garden, and have planted climbing roses instead. They do not grow as fast, or as densely. When brown thrashers came to nest in the rambler, after Dusky and his mate were gone, I waited until the eggs were laid. Then I climbed up and cut away all twigs around the nest. After the eggs were hatched, I repeated this. Brown thrasher raised her brood without mishap.)

On August 18 I heard Dusky give his call note and saw him in the syringa bush. I went and put chopped raisins on the stool in the garden, calling him. First he flew into the blue blossoms of the morning-glories, then down onto the stool. He was molting, and how peaked he looked! Little feathers stuck out from his plumage. His breast was a very pale gray. I fed him three times that day and the next. Now he began calling for his raisins again, and sometimes when I stepped out into the garden, he would dip down to show that he was there.

On August 22 Dusky brought three babies into the garden. From August 22 to 28 he did not fly down to eat his raisins, although sometimes he called. I think he was being wary and watchful for the safety of his young; also, of course, he was molting. His babies bathed in the bird bath. He allowed them to bathe, but ever his warning note came from the mulberry tree. All day long, too, I heard the reedy notes of the young; then they left.

On September 1 Dusky came to feed alone in the garden. His molt was now complete. And into what a beautiful mocker he had grown - the loveliest mockingbird I have ever seen! He was pearl gray on the head. His iris showed vividly white. His breast was almost white with the slightest wash of yellow. The small white spots of the middle and greater wing-coverts formed two rows of perfectly round, white dots. Otherwise he appeared a very pale gray with large white areas on the primaries. No longer was he "Dusky." How similar this metamorphosis to that of the ugly duckling which turned into a swan! Could his diet of raisins for so long have had anything to do with the unusual whiteness of this plumage? From September 1 to 5 Dusky came regularly to eat. He was so

lovely it took my breath away: And I feared lest something would happen to him. After eating he would run over the ground to drink at the bird bath. As he ran he held his head high and his tail slightly raised. Ho was so exquisite, so princely, and so pearly white:

I have no notes about Dusky again until the last week of September, when he began singing gloriously, as mockers do in the fall, from across the street. His plumage had now become a darker gray, the delicate white edgings of the new feathers having worn off. He sang from all his old perches across the street. At various times while he was singing, I would put his raisins on the front steps. He would stop singing, and look down on me. Nevertheless, he did not eat that I know of. Once, on October 9, an airplane flew low over the top of the telephone pole on which he was perched and singing. Terrified, he flew fast and furiously to our house, alighting on the roof near the garden. I like to remember this high, bright, autumnal singing of Dusky's. I did not record anything about Dusky during November and December.

Here in Norfolk, our winters are usually mild until Christmas. In January 1944 I put raisins on the front steps, hoping to entice Dusky who I thought had come to make his home in my neighbor's garden. Dusky did come, I believe, but also a pair of mockingbirds who came from beyond our garden at the rear of the house. There was much snarling, fighting and chasing among three birds at the front of the house. On February 25 I saw Dusky singing softly in his syringa bush. I was still feeding three birds in March, when, it is my belief, Dusky was driven away by the male of this pair as nesting time drew near. At any rate, observing that I was feeding only two alien mockers, which in no wise I desired nesting about my house, I stopped putting out raisins.

In the fall of 1944 we had our house (which we had bought because of war conditions) rebuilt both outside and inside. All the impedimenta of building lay about the house and in the garden. During October I had dug up my flowers around the home and for three months they had lain piled up in the yard wrapped in paper or burlap. When work ceased on the house, we bought a ton of top soil and began the task of rebuilding flower beds. When Mr. Reed came home he would screen the soil, working until long after dark with the aid of the garage light. During the day, I would mix the soil with peet moss and deposit it about the house. We worked hard, lest a sudden freeze should set in before the plants were back in the ground. So it was that on December 15, as I was turning the new soil, I noticed a little mockingbird three feet behind me, pecking at the soil. He was not well. His feathers were puffed out. Both wings drooped so that they almost touched the ground. He kept his tail tilted up. He could not fly higher than five or six feet above the ground. At times he trembled all over. I ran and got some raisins and threw them out. He was very shy and wild, and would not touch them. Once as I tried to get close to him, he turned and ran a few feet away, spreading the tail slightly and showing an unruly white thil-feather on the left-hand side which was raised at a slight angle from the body. How pitifully torn it was: All day Dusky fod close beside me, gleaning something from the soil as I worked and turned it. When Mr. Reed screened the soil in the evening, he stayed close to him also, finding something to eat invisible to our eyes.

On December 16 he had been feeding close to me all day, but happened to move off and to be feeding a little away. Suddenly a big mockingbird, the one which I think chased him away in spring, pounced down on him. Dusky fell over backwards, then tried to rise, but could not. Bully (the big mocker)

pinned him down, clutching him on both sides of his breast, and beating Dusky terrific blows with his bill about the head and breast. I ran screaming toward them. Bully flew off. Dusky got up and slipped away, but I feared his waning strength had been reduced by this encounter.

All the next week, Dusky was about the house. I kept throwing out food, crumbs of cornmeal muffins, other food, and put suet by the dirt pile. I tried to catch him two or three times. Each time, however, it terrified him so and he tried so frantically to escape, using up what slim strength he had, that I gave up trying to catch him. Besides in my heart I said, would it not be best for Dusky to go the way all sweet, wild birds must go; brave, struggling, and wild, to the end?

On December 23 Dusky and I had been together all day. In the late afternoon as it grew dark he came to the front of the house where he stood watching me. His head was bent over as if resting on his right shoulder. His wings were very drooping. We stood and gazed at each other a long time it seemed to me. Then he ran a few steps toward the sidewalk. Again he turned and looked at me in the same way, a forlorn little figure: Night was closing in. It had turned bitter cold. I pulled my sweater tighter for I was loath to leave him. At last becoming chilled, it was necessary to go into the house.

The next day he was in our garden, then moved into my neighbor's. Suddenly I saw him fly as though terribly frightened. He flew all the way across the yard, but now he could not fly higher than a foot above the ground. I could not see any cat around. On Christmas day I did not see him, nor ever again, though I hunted for him among my neighbors' gardens.

I would like to end this small life story by paraphrasing the words of Gene Fowler, in his farewell to John Barrymore (actor without peer, great lover, enchanting companion, even clown), and say to my little Dusky: - gay Pierrot, hilarious singer, devoted lover and parent, and my precious companion throughout two weary and soul-disturbing war years -

Goodnight, sweet bird.

......Norfolk, Virginia.

BIRD NOTES FROM GUAM

by Robert J. Watson

The following notes were compiled between March 1 and September 13, 1945, when I was stationed on the island of Guam, in the Marianas group. As Guam is a rather small island (about 30 miles long by 7 miles wide), the number of birds found there is not large. Mayr's Birds of the Southwest Pacific, the bird students' "Bible" for this region, lists 21 native and 5 introduced species for the Marianas group; several of these are rare or nearly extinct.

which is difficult to penetrate. At the time I was on the island, these jungles sheltered a number of armed Japanese soldiers who had fled into the jungle when the island was retaken by American troops. Because of this hazard, military regulations forbade entering the jungle alone; this was, of course, a handicap to bird study.

- March 1. Micronesian Starling (Aplonis opacus guami Momyiama). Before I had been on Guam more than a few hours I had made the acquaintance of this, the commonest bird on the island. In appearance it suggests a small blackbird, rather than the familiar European starling. Numbers of them lived around the camp where I was stationed, and could be seen daily.
- March 1. Chinese Least Bittern. (Ixobrychus sinensis Gmelin). In the late evening of my first day here, I noticed what seemed to be a large shore-bird moving about in the tops of the coconut trees surrounding the camp - an incongruous sight. Later I identified it as this species. This little bittern could often be seen around camp, frequently in the coconut trees; perhaps it was feeding on the land snails which abounded in these trees. There was no water in camp; apparently this species is less aquatic in its habits than most herons.
- March l. Philippine Turtlo Dove. (Streptopelia bitorquata dusumieri Temminck). This is one of the introduced species. It occurred abundantly in open country.
- March 1. Edible Nest Swiftlet (Collocalia inexpectata bartschi Mearns). Seen flying in and out among the trees and shrubbery at the edge of the jungle.
- March 4, Guam Crow (Corvus kubaryi Reichenow). This small crow was often observed flying above the surrounding jungle, or could be seen perched in the trees along the roadside, perhaps pecking at the hard, nutlike fruits of the pandanus. Not infrequently a group of starlings would "gang up" on one of these birds, like grackles here at home. On May 8 I saw what appeared to be a young bird of this species clamoring to be fed.
- March 5. Cardinal Honey-eater (Myzomela cardinalis subsp.). Though this bird is probably common enough in the wooded parts of the island, I glimpsed it only rarely. Its brilliant coloration-bright red with black wings and tail, like a miniature scarlet tanager-made it a sight worth waiting for, as it flashed about in the tree-tops.
- March 7. White-throated Ground Dove (Gallicolumba xanthonura xanthonura Temminck). Seen flying above the tree-tops some little distance off; its head and throat are white, contrasting sharply with its dark brownish body and forming a conspicuous field mark at considerable distances.
- March 10. Guam Rail (Rallus owstoni Rothschild). It was a common sight, especially in the early morning, to see one or two of these rails dart across the road in front of our jeep. Usually they would vanish into the surrounding undergrowth, but occasionally one would lurk among the brush at the side of the road as we passed, allowing us an excellent view of it.
- March 18. Micronesian Kingfisher (Halcyon cinnamomina cinnamomina Swainson). This is a very beautiful little kingfisher; the male has blue-green upperparts, with the head, nape, throat, breast, and belly light orange-brown. The female lacks the orange on the breast and belly. These birds were often seen, frequently in pairs, perched conspicuously on limbs in the vicinity of

our camp; evidently they feed principally on insects rather than on fish. Once or twice I observed they seemed to be hawking for flies like a fly-catcher. For some weeks a pair of these birds took up their abode in a little patch of vegetation just below the camp mess hall, where I often saw them.

- March 24. Marianas Fruit-dove (Ptilinopus roseicapillus Lesson). A common inhabitant of the trees about the camp, though rather difficult to observe closely, from its habit of lurking among the higher tree-tops. Its colorais attractive-a beautiful uniform leaf-green on the upperparts and throat, with contrasting orange-buff underparts.
- April 4. Wandering Tattler (Heteroscelus incanus subsp.). I saw this bird only once, a single individual, on a flat sandy stretch of coast along a sheltered little wooded lagoon.
- May 16. Rufous-fronted Fantail (Rhipidura rufifrons uraniae Oustalet). On the few occasions when I ventured a short distance into the heavy jungles, a few minutes' squeaking would usually produce one of these birds. I readily recognized it as a Rhipidura from my acquaintance with the latter in New Caledonia. It is a friendly and inquisitive little bird, with the nervous, active movements common to the members of this group.

........Blacksburg, Virginia.

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BIRD STUDY AT SEA

by Robert J. Watson

More than once, while making a tedious voyage on the Pacific Ocean, I have had occasion to be thankful for my hobby of bird study for providing a few moments of diversion from the otherwise unbroken monotony of the trip. One need not leave behind his interest in birds when he puts to sea; on the contrary, an ocean voyage may offer invaluable opportunities to add to one's life list and to make some acquaintance, however slight, with the vast domain of sea-bird life, so fascinating and unusual to one who has spent all his life studying birds on land.

The bird student at sea, is, of course, under a considerable handicap. He cannot go plunging off through wood, swamp or field to seek out his quarry and track it down until identified; he must perforce sit quietly on shipboard, waiting until by chance some winged wayfarer of the ocean strays into view over the horizon to reward his patience. Needless to say, there will be many hours or days at a time without even so much as a glimpse of a bird; and many of those seen must be written off as unknown because the distance is too great to permit identification. For the true bird-lover, however, even the few fleeting glimpses of ocean-going bird life which he may obtain are worth waiting for.

One of the first ocean birds to be met with, in sailing from the West Coast, is the Black-footed Albatross (Diomedea nigripes). This bird usually appears within several days after leaving the coast, when the crowd of gulls

which follow the ship out has begun to melt away. Usually several of these large, dark-bodied birds can be seen astern of the ship, sweeping back and forth just above the surface of the water in long, easy glides with wings spread taut, their effortless flight typifying that of sea-birds in general—the most gifted of all flyers. Especially noticeable is the relatively enormous spread of their wings, much larger proportionately than that of gulls. Another albatross, the Laysan (Diomedea immutabilis), is white-bodied species with a dark mantle, is less often seen; it has a more restricted range.

Boobies, seen in the warmer parts of the central Pacific, are readily recognized by their stout, conical bills. Like the albatross, they usually fly quite low, skimming the surface of the waves. The one most commonly seen is the Brown Booby (Sula leucogastra). In Hawaiian waters the Red-legged Booby (Sula piscatrix) is frequently seen, a white-bodied bird with contrasting black primaries, which shows up conspicuously at considerable distances against the dark water.

Frigate-birds are huge, dark water birds with predatory habits which have given them their name. These birds are usually seen flying at a considerable height, where, seen silhouetted against the sky, they present an unforgettable appearance. With their slender, stream-lined bodies, their tremendously long, narrow, sharply-angled wings, their long, deeply forked swallow-tails and hooked bills, they must surely be among the distinctive birds of the world in appearance. It is not easy to imagine how these birds could be mistaken for anything else.

Tropic-birds are among the most attractive of all birds to be seen at sea. In general appearance they are somewhat suggestive of gulls, with plumage almost pure white in color. The two central tail-feathers, however, are tremendously elongated and project well beyond the rest of the tail, like long streamers of ribbon. Two species occur commonly in the Pacific, the red-tailed (Phaethon rubricaudus) and the white-tailed (Phaethon lepturus), named from the colors of the elongated tail-feathers.

The above are only a few of the commoner and more often seen ocean birds, but may serve to give some idea of what may be looked for in the way of bird life at sea.

..... Blacksburg, Virginia

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NOTES ON UNUSUAL WINTER BIRDS AT EMORY, VIRGINIA

by Henry M. Stevenson

Prior to the fall of 1944 little had been published regarding the bird life of extreme southwestern Virginia. During the winters of 1944-45 and 1945-46 the writer has frequently taken field trips and feels that a summary of such field work at this time might prove useful to others.

A study of the climatological data, provided by the U.S. Weather Bureau, reveals that December of each winter averaged several degrees colder

than normal at Emory, the mean temperature for the two months being 31.4° and 30.0°, respectively. The heaviest snowfall (12 inches) was recorded in December 1944, but snow lay on the ground for a greater number of days during December 1945. Such unfavorable conditions at the outset of each winter undoubtedly had an adverse influence on the semi-hardy species which might rarely winter here. Later investigators, therefore, may possibly find robins, hermit thrushes, etc., throughout the winter, but such has not been the writer's experience.

It should be emphasized that this report does not embrace all of the winter residents of this region, but only certain of the less common species. Migrants which remain into November or appear before March are likewise usually excluded from the report, unless there are records indicative of their wintering.

Some of the records listed below have appeared in previous issues of THE RAVEN, but are nevertheless included here in order to consolidate all of my winter data on these species.

Great Blue Heron (Ardea herodias). One seen on the Middle Fork of the Holston River, December 30, 1944. An individual seen in late February may have been an early migrant.

Mallard (Anas platyrhynchos). A few were seen on the Middle Fork of the Holston River on December 24, 1945, and February 2, 1946. According to hunters, considerable numbers of this species and the next remain here in winter.

Black Duck (Anas rubripes). Two were seen flying over the Middle Fork of the Holston River, December 30, 1944, by Lt. E. P. Edwards.

Hooded Merganser (Lophodytes cucullatus). Four individuals seen on the Middle Fork, Holston River, on November 30, 1945, may have wintered in the vicinity.

American Merganser (Mergus merganser). Three were recorded on the Middle Fork of the Holston River, December 30, 1944.

Red-shouldered Hawk (<u>Buteo lineatus</u>). The only record for this region appears to be that of a bird seen near the Middle Fork of the Holston River, February 2, 1946. Conditions for observation were excellent, and the bird was easily distinguished from the other large hawks.

Killdeer (Charadrius vociferus). Apparently absent during the winter of 1944-45, but recorded in fairly good numbers in 1945-46.

Wilson's Snipe (Capella delicata). Single individuals were seen on January 26, 1945, near Emory, and January 26, 1946, at Abingdon.

Flicker (Colaptes auratus). Rather uncommon in the winter of 1944-45, but decidedly rare in 1945-46.

Phoebe (Sayornis phoebe). Small numbers recorded throughout each winter. Somewhat more numerous at Saltville.

Raven (Corvus corax). One seen flying over Saltville, February 9, 1945.

Brown Creeper (Certhia familiaris). Rare in the winter of 1944-45, uncommon in 1945-46.

Bewick's Wren (Thryomanes bewickii). A bird seen at Emory, November 10, 1945, six weeks later than any previous record, may have attempted to winter. Two individuals seen on February 26, 1946, probably were early spring arrivals.

Brown Thrasher (Toxostoma rufum). One seen on November 26, 1944, but not on subsequent trips to the same spot.

Robin (Turdus migratorius). Although migrants remained well into December each year, and spring arrivals appeared by mid-January, it appears that the robin was absent for about one month each winter.

Ruby-crowned Kinglet (Regulus calendula). An individual seen on November 25, 1944, apparently was a belated migrant. A wintering example was seen at the Middle Fork of the Holston River, February 2, 1946.

Shrike (Lanius ludovicianus). One seen just east of Bristol, January 12, 1945; another at Emory, January 6, 1946. An individual seen several miles north of Emory on February 26, 1946, may have been an early migrant.

Myrtle Warbler (<u>Dendroica coronata</u>.) Small numbers spent each winter in the red cedar glades near the Middle Fork of the Holston River. Only one individual was seen elsewhere: at Abingdon, January 26, 1946.

Western Palm Warbler (<u>Dendroica p. palmarum</u>). A very late individual seen at Emory, November 13, 1945, probably was attempting to spend the winter, although it was not recorded on later trips.

Rusty (?) Blackbird (Euphagus carolinus). A medium-sized blackbird, seen flying across the Middle Fork of the Holston River, December 24, 1945, appeared to be of this species. Due to the lateness of the afternoon and the failing light, however, identification was not positive.

Grackle (Quiscalus quiscula). Although migrants are here in January, there is no evidence that this species remains throughout the winter.

Evening Grosbeak (Hesperiphona vespertina). A flock of 8 of these northern birds was discovered in a sugar maple on a lawn in Abingdon, January 26, 1946.

Purple Finch (Carpodacus purpureus). Rather rare in the winter of 1944-45, but frequently recorded in moderate numbers in 1945-46.

Towhee (Pipilo erythrophthalmus). Present in small numbers throughout the winter of 1944-45. The only winter record for 1945-46 is that of 4 individuals found in a small weedy valley on December 24. These could not be found on two subsequent trips to the spot.

Tree Sparrow (Spizella arborea). Common both in 1944-45 and in 1945-46. As Emory is near the southern limit of its range at this longitude, it is suspected that the species is less common here in milder winters.

Fox Sparrow (Passerella iliaca). Three individuals present in a weedy field, January 19, 1946, constitute my only definite winter record. It is strange that no others have been recorded in this oft-visited pasture, either before or since this date. Migrants of this species pass through here about the last of November and the last of February.

Swamp Sparrow (Melospiza georgiana), All winter records are referable to 1945-46. An individual was seen north of Emory on December 23, and, presumably the same bird, on February 26. Two were recorded in cattail marshes near Abingdon, January 26.

..... Emory and Henry College Emory, Virginia

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NOTES ON THE SPRING MIGRATION AT EMORY, JANUARY THROUGH MARCH

by Henry M. Stevenson

The earliest arrivals in 1946 were ahead of schedule, but there was some retardation during the latter half of March.

A lone grackle was seen on January 5, another the next day, and a flock of 70 or 80 on the 7th. The first robin appeared on the campus of Emory and Henry College on January 10.

Two species seen on February 26 may have been very early migrants or may have wintered in the area where discovered, as the writer had not been there since October. These were a shrike (subsp.?) and two Bewick's wrens.

The following species were recorded earlier in 1946 than in 1945: baldpate, February 19 (Saltville); fox sparrow, February 26 (also on January 19, wintering?); Wilson's snipe, March 9; pied-billed grebe and Savannah sparrow, March 11; hooded and red-breasted mergansers, coot, pectoral sand-piper (most of the preceding at Saltville), cowbird, and pine siskin, March 17; ring-necked duck, lesser scaup, lesser yellowlegs and hermit thrush (all at Saltville), March 25; Bachman's sparrow, March 30. The pine siskin, heard in a large flock of purple finches, constitutes my only record for the Emory region.

.....Emory and Henry College Emory, Virginia



The Raven

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THE 1946 ANNUAL MEETING

by Florence S. Hague

The 1946 Annual Meeting of the V. S. O. opened in the Lounge of the V.P.I. Faculty Center in Blacksburg at 2:30 p. m. on May 3rd, with President English presiding. A welcome to this its first meeting in Blacksburg was extended by Professor Handley. Mr. English responded and mentioned the regrets of Mrs. Darden and Mrs. Granath, Professors Freer and Hostetter, and Dr. McIlwaine that they could not join us as on previous occasions. The Nominating Committee, consisting of Dr. Murray, Chairman, Miss Hague and Mrs. Shaw was appointed by the President.

The sequence of papers on the afternoon program was changed for the convenience of some of those in attendance who had to attend another meeting. William McIntosh showed slides of many European birds, most of which he had seen while in Army service. The commercial film "German Birds," shown by C. O. Handley, Jr., included species which he had found in the field in some parts of Europe. Between the showing of these reels there was a brief exchange of comments on field experiences by Messrs. McIntosh, Handley, and R. J. Watson, who had been in the Pacific area.

Many data concerning records for migrating warblers were presented by Rev. John H. Grey in discussing migration routes for warblers which pass along, or east of the Alleghenies. While warblers are fewer both in numbers and species along the coast, his data indicate that there are not such definite routes (Gulf along Mississippi River, and across Alleghenies or from West Indies along coast) for warblers as for shore-birds until the birds pass north of Washington.

Dr. Murray presented one of his Junior bird enthusiasts, Robert Owen Paxton, who read a paper about the unusual occurrence of evening grosbeaks in Lexington and other parts of Virginia and neighboring states during the past winter. Professor Handley illustrated his Visual Method of Keeping Bird Records by showing a card which gave the summarized data concerning a species in any one locality.

In discussing Breeding Bird Censuses, Dr. Murray spoke of the beginning of the movement by the National Audubon Society in 1937, of its growth and value. There have been only six breeding censuses taken in Virginia: the first at Sweet Briar in 1937 by Miss Martha Clark (THE RAVEN, Vol. 8, p. 51); three at Pamplin by H. Morton Marshall, and two by Dr. Murray. Mention was made of field trips for two weeks' duration for the purpose of breeding censuses in certain parts of West Virginia.

After announcement of plans for dinner and the Saturday field trip, the afternoon session was adjourned.

At the business neeting which was opened at 7:00 o'clock, Dr. Murray reported that THE RAVEN, which was almost the sole activity of the V.S.O. during the war years, remained about the same number of pages per volume but had appeared in fewer numbers. Rev. Grey spoke of his cooperation for the V.S.O. with the University of Virginia Library, which is building up a collection of

publications dealing with ornithology east of the Mississippi. Members of the V.S.O. may use this collection.

Because of the outstanding success of the Roanoke Bird Club, the organization of other local clubs was urged as a means of increasing interest in birds in the State and of increasing the membership of the V.S.O. In reporting for the Nominating Committee, Dr. Murray took the chair for a few minutes while he nominated Mr. English for President, called for nominations from the floor (of which there were none), and then for the vote, which was unanimous. The other nominations follow: for vice-president, Rev. John H. Grey; for secretary, Dr. Florence Hague; for treasurer, Mr. T. L. Engleby; for the executive committee, Professor Handley and Mrs. Darden, to serve until 1947; Dr. H. M. Stevenson and Mrs. A. C. Reed, 1948, and Mr. Lee Hawkins and Professor James R. Sydnor, 1949. There being no nominations from the floor, the above-named were elected by one and the same vote.

A short discussion of V.S.O. meetings, regional and annual, followed. Rev. Grey invited the Society to hold its 1947 Annual Meeting in Charlottesville.

Because of the number who had gathered for the evening program of pictures of bird life, the meeting was moved to the dining hall of the Faculty Center. There we enjoyed the Audubon films: "Common Birds At Home," "Beautiful Birds of the Northeast Coast," and "Audubon Nature Camp in Maine." The Clymer bird feeder was exhibited at both the afternoon and evening meetings. The meeting adjourned about 9:00 o'clock.

(The thanks of all members of the V.S.O. are due the people in Blacks-burg who did so much to make the Annual Meeting a success. The Committee on Arrangements took the lead, with Professor Handley, Chairman, guiding everything along; Ralph M. Brown active in planning until he had to go to the hospital; and Dr. J. W. Murray handling the local publicity, which brought out the good evening attendance. To Mrs. Charles O. Handley we owe the delightful lunch arrangements, assisted by Miss Virginia Brooks, Mrs. Charles Shaffer, Mrs. Charles Mease, and Mrs. Bruce Prouty. Miss Brooks took care of room arrangements. The V.P.I. Biology Department provided the opaque projector and screen; the A.A.A. furnished the 16 mm. motion picture equipment; and the Virginia Cooperative Wildlife Research Unit the 32 mm. projector, as well as stenographic assistance. In fact, everybody cooperated except the weather man. EDITOR.)

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V.S.O. FIELD TRIP

by Charles O. Handley

Montgomery and Giles Counties: Blacksburg (V.P.I. Campus and Farm), New River (Lovers' Leap and McCoy to Goodwin's Ferry), Hoge's Store, Mountain Lake, and return to Blacksburg.—May 4, 7:00 a.m. to 2:00 p.m.; cloudy with cold drizzle at times; moderate wind; temp. 36° start, 40° return. 42 observers in 9 cars;

distance 60 miles. Green heron; mallard; black duck; baldpate; blue-winged teal; lesser scaup duck; turkey vulture; black vulture; Cooper's hawk; osprey; duck hawk; sparrow hawk; bobwhite; Florida gallinule; coot; killdeer; Wilson's snipe; upland plover; spotted sandpiper; solitary sandpiper; lesser yellow-legs; rock dove; mourning dove; black-billed cuckoo; chimney swift; belted kingfisher; flicker; pileated woodpecker; red-bellied woodpecker; red-headed woodpecker; hairy woodpecker; downy woodpecker; eastern kingbird; crested flycatcher; phoebe; wood pewee; tree swallow; bank swallow; rough-winged swallow; barn swallow; blue jay; crow; Carolina chickadee; tufted titmouse; white-breasted nuthatch; brown creeper; house wren; Bewick's wren; Carolina wren; mockingbird; catbird; brown thrasher; robin; wood thrush; olive-backed thrush; veery; bluebird; blue-gray gnatcatcher; ruby-crowned kinglet; cedar waxwing; starling; white-eyed vireo; yellow-throated vireo; red-eyed vireo; black and white warbler; parula warbler; yellow warbler; magnolia warbler; Cape May warbler; black-throated blue warbler; myrtle warbler; chestnut-sided warbler; black poll warbler; ovenbird; northern water-thrush; yellow-throat; yellow-breasted chat; redstart; English sparrow; bobolink; meadowlark; red-wing; orchard oriole; Baltimore oriole; purple grackle; cowbird; scarlet tanager; cardinal; rose-breasted grosbeak; indigo bunting; purple finch; goldfinch; towhee; Savannah sparrow; vesper sparrow; Carolina junco; chipping sparrow; field sparrow; white-crowned sparrow; white-throated sparrow; swamp sparrow; song sparrow. (Three species, black poll warbler, redbellied woodpecker; and vesper sparrow, were observed on the V.P.I. Farm by Dr. J. W. Murray on his way home after the luncheon.) Total: 102 species. (Eight other species, pigeon hawk, herring gull, raven, golden-crowned kinglet, mountain vireo, black-throated green warbler, Cairns's warbler, and pine siskin were observed on the way up to Mountain Lake by Maurice Brooks.)

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MOUNTAIN LAKE BIRD NOTES

by Maurice Brooks

On Saturday, May 4, 1946, I was scheduled to meet other members of the Virginia Society of Ornithology for a field trip on Saltpond Mountain, Giles County, Virginia, in the vicinity of Mountain Lake. Since I was driving from West Virginia, and since the remainder of the party failed to show up (at least while I was on the mountain), I may be pardoned for poking a little good-natured fun by telling of the bird observations made during the stay there.

The day was cold and rainy, with a very high wind. Much of the time the mountaintop, and much of the slope as well, was covered with cloud. In short, conditions were not good for bird observation. Nevertheless, we did find some things which interested us.

As we drove up the mountain a small falcon flew from the fence in front of us, and we followed it as it coursed beside the highway for a hundred yards or so. Its solid blue-gray back and banded tail served for identification - it was a male pigeon hawk, a bird which I seldom see in spring migration. Perhaps there is a place in the Alleghenies where pigeon hawks occur in numbers in

spring, but I have not found it. Hawks are so localized in their migrations through mountain country that someone is likely to happen on to such a place sooner or later.

Despite the date, the top of the mountain was in the condition of very early spring, with little green foliage, very few flowers, and not too many birds. Most of the species we observed were permanent or summer residents. Here and there through the fog came the notes of black-throated green and Cairns's warblers, and mountain vireos were calling everywhere. Juncos were abundant, and we noted a few brown creepers and golden-crowned kinglets. As has so frequently been my experience in the West Virginia mountains, we found no migrant warblers at the top of the mountain. Seldom have I seen any of these northern species at the tops of the high mountains; apparently they move northward at lower elevations.

In the hemlocks near the lake there were scattered groups of pine siskins giving their wiry notes. I imagine that they occasionally nest in the locality, and their presence is always a matter of interest.

One of my companions on the trip was M. Graham Netting, curator of herpetology at Carnegie Museum, Pittsburgh, and we spent some time collecting salamanders. Despite the cold, all of the common species at the top of the mountain had emerged, save the Carolina salamander (Desmognathus ochrophaeus carolinensis), a species which is abundant later in the season. We did not find a single individual at this time.

Perhaps the most interesting ornithological event of the day was the sight of a flock of herring gulls which were trying to beat across the mountain against the strong wind. Their presence was highly unexpected, and first began noting them just below the hotel. They were moving, or attempting it, in a north-easterly direction, and were having tough going. For long periods they would stand almost motionless in the air. As they worked their way along to the slopes of the ravines which abound they would be carried skyward by the upward-deflected air currents. Very often they would ascend to 200 or 300 feet, then begin the long slide downward and forward. In a half-hour they advanced only a quarter-mile or so.

Bonaparte's gulls are not infrequently found coursing along the Allegheny Plateau, many miles from any considerable body of water, but herring gulls are usually restricted to the vicinities of lakes, or the broader river valleys. As with pigeon hawks, there may be a limited region where they cross over the mountains in good numbers.

It was a great pleasure, as always, to hear the hoarse notes of ravens on several occasions.

........West Virginia University
Morgantown, West Virginia

CARDINAL NOT ALWAYS SEDENTARY

by C. O. Handley

The following information is taken from an article under the above heading by Dr. May Thatcher Cooke of the U. S. Fish and Wildlife Service, appearing in Vol. 17, No. 2, of BIRD BANDING, April 1946:

"One of the many surprises that have come to light as a result of bird-banding is that species that have been supposed to be entirely sedentary in their habits sometimes make fairly long journeys. The following records for the cardinal are an example. In all probability most of the individuals of this species live out their entire existence within a mile or two of the nest, but banding has demonstrated that a few of them have been really adventuresome."

Miss Cooke gives data on nine cardinals banded in various parts of the United States which were later recovered 35, 80, 85, 95, 105, 110, 145, and 200 miles, respectively, from the points where banded and released. One of the birds, "41-202287, banded at Elberton, Elbert Co., Georgia, April 4, 1944, by P. B. Smith, was 'found' on January 18, 1945, about 105 miles away in Dickenson County, Virginia."

While none of the many cardinals banded at our station in Blacksburg have been recovered at any distant point, the banding has shown quite a movement of birds into our region in the fall and a dispersal of the birds in the spring. Furthermore, many of the cardinals that nest at Blacksburg do not winter in the vicinity of the banding stations.

..... Blacksburg, Virginia.

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NORFOLK - CAPE CHARLES NOTES

by Mrs. A. C. Reed

August 17, 1945: Leach's petrels, 3. These were observed when about halfway across the channel. The tails appeared very distinctly forked to me. The white at the base of tail gleamed vividly. Then I lost them over the sea.

Barred owl. As it was almost dark, a good sized owl flew across the highway in front of our car. We were then a little ways south of the "Whispering Pines" which is some 40 miles north of Cape Charles. I did not think the owl as large as the great horned owl. Also, it did not have the big squarish appearance of the forepart of the body which the great horned has when flying. Instead, the head seemed very distinctly round and large.

September 1: When returning on the ferry from Cape Charles, we watched barn swallows, and lesser numbers of chimney swifts, migrating across the Bay. All the way across the 26 miles of the inlet, we saw them circling, apparently feeding as they migrated.

September 20: Pomarine jaeger. Returning from Cape Charles, Miss Virginia Pickell and I were watching the laughing gulls when suddenly a jaeger darted down upon them. It was colored a rich brown above; the top of head, which was dark, contrasted sharply with white collar which was much tinged with yellow on the sides of the head. The white areas on primaries were distinct. I did not see the feathers which extended beyond the tail; however, Miss Pickell had a good look at them. She said they certainly appeared blunt to her, not sharply pointed at all. Her bifocals are Zeiss 8 x 40.

September 28: Pigeon hawk. This flew close to the ferry as we were crossing to Cape Charles.

Mourning dove. This appeared to come from a freighter which we passed. It flew uncertainly about the deck of the ferry and finally disappeared flying in the direction of Cape Charles.

March 21, 1946: Old squaws, in summer plumage. These were near the Cape Charles side. There was one large flock of about 150; and many little groups scattered over the sea which I did not attempt to count. There were only a few males anywhere with dazzling white crowns and napes. Others appeared to have crowns and napes which were patchy brown and white. Others definitely had all brown necks and napes. When flying the outer tail feathers showed conspicuously whitish. The flock on the whole appeared to be composed of all chocolate brown ducks; so much so, that after seeing them in winter, one exclaims, "What ducks are those?" I have wondered if the unusually warm weather during all of March could not have caused an early molt? Kortright states that old squaws molt during April and May. Some temperatures in March were as follows:

March A	4 -	80	March	14	-	74
March !	5 -	79	March	15	-	75
March 6	6 -	75	March	26	-	79
March '	7 -	73	March	27	-	75
March 8	8 -	76	March	28	-	77
March :	13 -	73	March	29	-	75

Other species observed when crossing were: common loon, 16; horned grebe, 1; gannets, 196; golden-eyes, 7; surf scoter, 1; American scoter, 4; double-crested cormorant, 3; red-breasted merganser, 10; herring gulls.

Yellow palm warbler, 2 or 3. These were first observed on golf links, then they flew into thickets. They were among juncos and myrtle warblers.

Norfolk Notes

September 23, 1945: Northern water-thrush, in my garden. My first record of this specie.

November 20: Golden eagle. As I was sitting on the beach at Sand Bridge I saw two birds coming down over the land toward me from the north. Idly I thought one was an osprey and the dark one an immature bald eagle. The weather had been warm all through November. (A cold wave had been reported over the middle western part of the country, and this cold wave was later to sweep down the Mississippi Valley and to reach us finally via Florida.)

I now observed that the bird with the narrower wings seemed to be harrying the other bird, as if trying to slap its wings against it. The two birds were side by side. I then realized, because of the shape of the wings, that the bird with the narrower wings could not be an osprey, and I started to run up the beach to where I could have a better view. This bird proved to be an immature bald eagle, not quite in adult plumage. The head was white, but the tail was not entirely white, and there were patches of white beneath. I now focused on the darker bird, and soon came to realize it must be a golden eagle. The wings were definitely broader and I thought the wing beats deeper. By this time, the bald eagle had manoevered until it was above the golden eagle, and I saw it make four attacks on the golden eagle, plunging down and striking with all its might on the other's back. At first the golden eagle paid no attention to the bald eagle, but under its attacks, it turned out to sea and began to circle and wheel to gain altitude. Twice as it circled the sunflight fell beautifully upon it. Then I saw the gold of crown, nape and sides of head. The bird also appeared golden brown on the back and the whole region of the scapulars on both sides glowed a red-gold-brown. In fact, the bird shone like a brooch of jewels in the sky. Finally the golden eagle turned toward the north and disappeared in that direction. The bald eagle flew back to land and alighted in the woods at Sand Bridge. Here, when I stood out from my car beneath it, it paid no attention to me. Instead it stood alertly on its toes, with head and neck craning upward, and with eyes gazing far out to sea in the direction the golden eagle had disappeared. (I have seen six golden eagles at Hawk Mountain, Pennsylvania.)

February 20, 1946: Prairie horned larks, 100 counted, and there were more. This is the first flock of prairie horned larks which I have seen here. I studied them carefully from the car, and there did not seem to be any northern horned larks with them.

April 7: Bonaparte's gulls in summer plumage, 70 were counted, and about half of these were in breeding plumage. Laughing gulls were also present, and it was my first experience in seeing laughing gulls and Bonaparte's gulls, both with black heads, mingled together. The dainty Bonaparte's gulls could easily be picked out because of their small size, white primaries beaded with black on the outer edge, and brilliant red feet. These were observed at the Navy Base and crossing on the ferry to Newport News.

........Norfolk, Virginia

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The Raven

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(NOTE: Audubon Christmas Census dates this year are December 21-29, inclusive. The same rules in taking the census are to be followed as in 1945; and the same form in making the report is to be used.....EDITOR.)

DISMAL SWAMP NOTES

by Charles E. Stevens, Jr.

Being interested in the possibilities which the Dismal Swamp might offer, William F. Minor and I made a trip there on May 16, 1946. Leaving from the Inland Waterway canal at Wallaceton, Virginia, we walked in alongside the feeder ditch to the spillway, which is the outlet for Lake Drummond. Then, following a footpath, we went northward through the woods which, apparently, encircle the lake. These woods consist of some fairly large-sized timber. We were particularly impressed by the largeness in girth of the trees at their base - similar in shape to a cypress. However, the majority of the trees were red maple, the remainder being mostly sweet gum, red gum, and ash. There was a profuse amount of undergrowth, weeds, and fallen logs throughout the woods, and the ground was very damp and spongy. The lake in many places did not have a distinct shoreline, but reached back among the trees for about twenty feet. Here and there, scattered out into the lake, were large moss-draped cypresses, separate from the rest of the trees. The woods were full of singing birds. In all we covered several miles of the woodland on the northeast edge of Lake Drummond.

The following list covers only the birds seen in the previously described woodland:

Double-crested cormorant, 1, perched on a cypress knee out in the lake. Great blue heron, 1, on an inlet extending into the woods from the lake. Osprey, 1, flying over the lake.

Pileated woodpecker, 1.

Red-bellied woodpecker, 1.

Downy woodpecker, 2,

Crested flycatcher, 9.

Acadian flycatcher, 14.

Wood pewee, 7.

Carolina chickadee, 6.

Tufted titmouse, 4.

Carolina wren, 9.

Wood thrush, 4.

Olive-backed thrush, 3, in the undergrowth, singing in rather subdued voice.

White-eyed vireo, 7.

Red-eyed vireo, 31, apparently the most abundant bird there.

Prothonotary warbler, 10.

Swainson's warbler, 2, in the woods about two miles north of the spillway. Two birds flew up from the ground in a tricket of vines and weeds (no came brakes). They perched a short distance from the ground, and were only about a foot apart. Showing very much excitement, they uttered loud chips, similar to those of the hooded warbler and the Louisiana water-thrush. Being only a short distance from us, they afforded a

good view. We were using 6x and 8x glasses. The birds displayed a pale-colored or whitish stripe over the eye (no head striping), olive-brown backs (a little more brownish than olive), and whitish-gray underparts. Their behavior at first led us to believe that they might have had a nest nearby, but when we tried to get closer they both flew away and were not heard any more. We could not differentiate their sex; they looked alike. These birds were not heard singing, and although we listened throughout the remainder of the day, we did not hear a Swainson's song.

Parula warbler, 1, singing near the spillway.

Black-throated blue warbler, 3.

Wayne's warbler, 12, two young birds, one of which could fly, were being fed at different places in the woods. The parent bird would feed the young one about once every 45 seconds, regardless of our presence. We assumed all the black-throated greens in the area covered to be Wayne's. However, there could have been some transient birds.

Yellow-throated warbler, 1, singing near the spillway. It is strange that such a common bird in the Tidewater section of the country should be so lacking in the particular woods we covered, unless it is due to the absence of pines. There were some pines near the spillway.

Black poll warbler, 5.

Yellow-throat, 2.

Hooded warbler, 22, commonest warbler there.

Redstart, 14.

Summer tanager, 1.

Cardinal, 5.

The Kentucky warbler, which occurs in damp weedy woodlands elsewhere in Coastal Virginia, was notably absent in all parts of the swamp we covered.

Between the canal at Wallaceton and the Lake Drummond spillway there is a broad expanse of burnt-out or cut-over land. Most of this is bushy and weed-covered; the other part is coming up in second-growth trees, mostly pine. The following is a list of species seen here that were not recorded at the lake:

Turkey vulture, black vulture, bald eagle (1), bobwhite, semipalmated sandpiper (1), dove, hummingbird, kingbird, rough-winged swallow, crow, house wren, catbird, gnatcatcher, pine warbler, prairie warbler (42), chat, red-wing, indigo bunting, towhee, chipping sparrow, and field sparrow.

The territory around Lake Drummond appears to be rich ornithologically, and should doubtless yield some interesting facts when a comprehensive observation is made there.

..... Charlottesville, Virginia.

NOTES ON THE SPRING MIGRATION AT EMORY: APRIL AND MAY

by Henry M. Stevenson

The average temperature since April 1st has not deviated greatly from the normal, but the rainfall was excessive during May. The migration of small land birds appears to have been earlier than it was during the colder spring of 1945. This is well exemplified by a comparison of the species (and numbers of each) recorded on the two spring field days, inasmuch as these were taken on the same data (May 12) each year. Late migrants appearing on the 1946 census (e.g., black-billed cuckoo; magnolia, Canada, and Wilson's warblers; Lincoln's sparrow) were either unrecorded or found in smaller numbers on the 1945 count. The converse was true of certain migrants which depart earlier in spring (ruby-crowned kinglet; Cape May and prairie warblers; white-throated sparrow).

Noteworthy among the arrivals since April 1st are the following: gadwall, blue-winged teal, shoveller, bufflehead, duck hawk, and rough-winged swallow (all at Saltville), April 8; green heron, osprey, ruby-crowned kinglet, and rusty blackbird (rare), April 13; yellow-throated (subsp.?) warbler, April 16; ovenbird and yellow-throat, April 19; black-throated green, cerulean, prairie, and hooded warblers, and wood thrush, April 21; broad-winged hawk (first record), red-breasted nuthatch, white-eyed and red-eyed vireos, and blackburnian warbler, April 22; warbling vireo (Abingdon), April 25; solitary sandpiper, greater yellowlegs, and tree swallow (all at Saltville), April 27; yellow-billed cuckoo, red-headed woodpecker, and yellow-breasted chat, April 28; indigo bunting, April 30; black poll warbler, May 2; semipalmated plover, woodcock (first record), least and semipalmated sandpipers (all at Saltville, fide Lee R. Herndon, W. F. Pearson, and Fred Behrend), black-billed cuckoo (fide Branch Howe), magnolia and Wilson's warblers, Savannah sparrow, and Lincoln's sparrow (first record), May 12; bank swallow (Saltville, first record), May 18; sanderling (Abingdon), May 25.

Most of the following species were recorded later in spring than was the case in 1945: fox sparrow, March 11; tree sparrow, March 17; evening grosbeak, March 20 (second local record, two seen on Emory and Henry campus; first recorded in Abingdon, January 26); golden-crowned kinglet, April 2; hooded merganser, April 8; hermit thrush and slate-colored junco, April 21; prairie horned lark (singing near Abingdon, where probably breeding), April 25; lesser scaup and pectoral sandpiper (Saltville), May 12; baldpate, Wilson's snipe, greater yellowlegs, olive-backed thrush (all at Saltville), and black-throated green and bay-breasted warblers, May 18; black-billed cuckoo (Abingdon), May 25; nighthawk, May 31; red-breasted merganser, coot, solitary sandpiper, and lesser yellowlegs (all at Saltville), June 1.

The status of two species has differed so markedly from their status in the spring of 1945 that some comment on them seems justifiable. During the entire spring of 1945, only a single purple finch was recorded. This year no less than 115 were recorded on field trips during March and April, exclusive

of other flocks seen on the Emory and Henry campus almost daily in April. In the latter locality the last purple finches were recorded on May 4.

The cedar waxwing, common throughout most of the spring of 1945, has been rare in 1946 since January. Although a very few small flocks have been recorded around Emory at other times, only a single individual was recorded during more than 80 hours spent in actual field work after the month of January. No waxwing was found at any time during the month of February, and only one individual was seen in May.

Another entire migration has passed without a definite record of the least, alder, or yellow-bellied flycatcher. As in previous migrations, a migratory Empidonax was seen this year (May 27). Although in appearance, actions, habitat, etc., this individual most resembled the least flycatcher, its confirmatory song was never given. Without the characteristic notes of these three species, their status here can be settled only by collecting.

..... Department of Biology
Emory and Henry College
Emory, Virginia

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A BIRD TRIP TO BACK BAY REFUGE

by Ray J. Beasley

A visit to Back Bay Refuge, Pungo, Virginia, on May 19, 1946, was richly rewarded by being able to observe a rather large variety of shore birds, for the time of year, in migration to their northern haunts. The list of birds observed, as shown below, also included a good number of land birds, most of which were undoubtedly already nesting in the area. It is likely, too, that most of the marsh-inhabiting birds were regular summer residents. It seems rather improbable that the latter two types would have been in migration at such a late date.

The trip had been previously arranged with Mr. Jack E. Perkins, Superintendent of the Refuge, who had very kindly offered to meet the writer at Virginia Beach, and to transport him to the Refuge. The visit was made doubly enjoyable by the many kindnesses shown by him and Mrs. Perkins throughout the day.

The list of birds seen is divided into two parts, those observed during an early morning walk at Virginia Beach while awaiting Mr. Perkins' arrival, and those observed at the Refuge. The lists follow:

At Virginia Beach: solitary sandpiper, purple grackle, least sandpiper, bobwhite, osprey, brown thrasher, red-breasted merganser, mockingbird, field sparrow, towhee, song sparrow, prairie warbler, tree swallow, mourning dove, barn swallow, yellow warbler, chimney swift, yellow-throat, purple martin, catbird, robin.

At Back Bay Refuge: crested flycatcher, least term, kingbird, royal term, meadowlark, long-billed marsh wren, red-winged blackbird, ring-billed gull, boat-tailed grackle, laughing gull, mockingbird, king rail, yellow warbler, black duck, yellow-throat, mallard, purple martin, great blue heron, chimney swift, little blue heron, barn swallow, osprey, bobwhite, black-bellied plover, bald eagle, herring gull, turkey vulture, ruddy turnstone, bluebird, sanderling, cardinal, semipalmated sandpiper, purple grackle, least sandpiper, Canada goose, Caspian term, semipalmated plover, lesser yellowlegs, American egret, purple gallinule (dead, good condition).

..... Newport News, Virginia.

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SPRING CENSUS 1946

Blacksburg (Montgomery Co.), Virginia. (V.P.I. Campus and Farm; Strouble's Creek and Price's Mountain; Tom's Creek and Brush Mountain; and New River from mouth of Strouble's Creek to Goodwin's Ferry - within 15-mile diameter; 50% woodland, 40% farmland, 10% riverbottom). -- May 5; 0530 - 1900. Partly cloudy and windy in A.M. to clear and still in P.M.; 400 min., 800 max. Five observers working in three groups. Total hours, 39; total miles, 40 on foot. Common loon, 1; great blue heron, 1; green heron, 6; mallard, 100; black duck, 3; baldpate, 3; blue-winged teal, 10; wood duck, 2; lesser scaup duck, 6; hooded merganser, 1; turkey vulture, 23; black vulture, 14; Cooper's hawk, 3; redshouldered hawk, 1; osprey, 2; sparrow hawk, 8; ruffed grouse, 3; bobwhite, 13; sora, 2; coot, 3; killdeer, 17; woodcock, 1; Wilson's snipe, 5; upland plover, 6; spotted sandpiper, 46; solitary sandpiper, 51; greater yellowlegs, 1; lesser yellowlegs, 7; pectoral sandpiper, 1; least sandpiper, 1; ring-billed gull, 2; rock dove, com.; mourning dove, 35; yellow-billed cuckoo, 1; whippoor-will, 1; chimney swift, com.; ruby-throated hummingbird, 2; belted kingfisher, 4; flicker, 32; pileated woodpecker, 2; red-bellied woodpecker, 6; red-headed woodpecker, 26; hairy woodpecker, 3; downy woodpecker, 7; eastern kingbird, 34; crested flycatcher, 29; phoebe, 17; least flycatcher, 1; wood pewee, 11; prairie horned lark, 3; tree swallow, 7; bank swallow, 3; roughwinged swallow, 22; barn swallow, 76; cliff swallow, 12; blue jay, 47; crow, com.; Carolina chickadee, 35; tufted titmouse, 46; white-breasted nuthatch, 5; house wren, 25; Bewick's wren, 2; Carolina wren, 25; long-billed marsh wren, 4; mockingbird, 4; catbird, 51; brown thrasher, 45; robin, com.; wood thrush, 18;

olive-backed thrush, 2; veery, 2; bluebird, 19; blue-gray gnatcatcher, 28; ruby-crowned kinglet, 37; migrant shrike, 1; starling, com.; white-eyed vireo, 2; yellow-throated vireo, 24; blue-headed vireo, 4; red-eyed vireo, 32; warbling vireo, 3; black and white warbler, 48; golden-winged warbler, 3; Nashville warbler, 2; parula warbler, 23; yellow warbler, 22; magnolia warbler, 7; Cape May warbler, 17: black-throated blue warbler, 4; myrtle warbler, 138; blackthroated green warbler, 23; blackburnian warbler, 3; chestnut-sided warbler, 31; black poll warbler, 10; pine warbler, 9; prairie warbler, 12; western palm warbler, 1; ovenbird, 52; Louisiana water-thrush, 17; yellow-throat, 53; yellowbreasted chat, 18; hooded warbler, 17; Canada warbler, 2; redstart, 37; English sparrow, com.; bobolink, 41; meadowlark, com.; red-wing, com.; orchard oriole, 4; Baltimore oricle, 10; purple grackle, com.; cowbird, 8; scarlet tanager, 5; cardinal, 90; rose-breasted grosbeak, 1; indigo bunting, 16; purple finch, 1; goldfinch, 105; towhee, 72; Savannah sparrow, 11; grashopper sparrow, 7; vesper sparrow, 3; chipping sparrow, 25; field sparrow, 65; white-crowned sparrow, 52; white-throated sparrow, 70; swamp sparrow, 11; song sparrow, 110. Total: 128 species. (C. O. Handley, Sr., saw three additional species in the Mt. Lake area: red-tailed hawk, sharp-shinned hawk, and Carolina junco.) -- C. O. Handley, Jr., W. B. McIntosh, R. J. Watson, John Handley (half-day), Mrs. J. B. Lucas (half-day).

SPRING BIRD CENSUS

Emory, Virginia; May 12; woods near Emory; fields and woods en route to and along Middle Fork of Holston River; ponds at Saltville; Whitetop Mountain and lower mountains nearby; mostly cloudy, with three heavy showers in lowlands; foggy on Whitetop; wind southwest, 0-18 m.p.h.; temp. 600-700 in lowlands; 3 parties in a.m., 2 in p.m., totaling about 22 hours of field work. Green heron, 2; baldpate, 3; blue-winged teal, 1; lesser scaup, 1; turkey vulture, 26; black vulture, 5; sharp-shinned hawk, 1; Cooper's hawk, 1; red-tailed hawk, 1; sparrow hawk, 10; ruffed grouse, 3; bobwhite, 3; sora, 1; semipalmated plover, 1; killdeer, 16; woodcock, 1; spotted sandpiper, 12; solitary sandpiper, 18; lesser yellow-legs, 8; pectoral sandpiper, 1; least sandpiper, 1; semipalmated sandpiper, 1; mourning dove, 41; yellow-billed cuckoo, 7; black-billed cuckoo, 1; screech owl, 1; horned (?) owl, 1; chimney swift, 56; ruby-throated hummingbird, 5; belted kingfisher, 2; flicker, 23; pileated woodpecker, 1; red-bellied woodpecker, 2; hairy woodpecker, 2; downy woodpecker, 13; kingbird, 12; crested flycatcher, 13; phoebe, 25; Acadian flycatcher, 12; wood pewee, 35; rough-winged swallow, 10; barn swallow, 6; blue jay, 34; raven, 1; crow, 65; Carolina chickadee, 5; tufted titmouse, 35; white-breasted nuthatch, 19; brown creeper, 1; house wren, 10; winter wren, 2; Bewick's wren, 6; Carolina wren, 19; mockingbird, 3; catbird, 36; brown thrasher, 25; robin, 90; wood thrush, 29; olivebacked thrush, 7; veery, 5; bluebird, 16; blue-gray gnatcatcher, 9; goldencrowned kinglet, 6; starling, 113; white-eyed vireo, 4; yellow-throated vireo, 10; blue-headed vireo, 6; red-eyed vireo, 70; warbling vireo, 2; black and

white warbler, 12; parula warbler, 7; yellow warbler, 24; magnolia warbler, 14; Cape May warbler, 1; black-throated blue warbler, 13; myrtle warbler, 14; black-throated green warbler, 22; cerulean warbler, 8; blackburnian warbler, 10; yellow-throated warbler (subsp.?), 1; chestnut-sided warbler, 19; bay-breasted warbler 3; black poll warbler, 13; ovenbird, 19; Louisiana water-thrush, 1; Kentucky warbler, 22; yellow-throat, 24; yellow-breasted chat, 19; hooded warbler, 14; Wilson's warbler, 2; Canada warbler, 18; redstart, 19; English sparrow, 50; meadowlark, 51; red-wing, 60; orchard oriole, 11; Baltimore oriole, 9; grackle, 77; cowbird, 5; scarlet tanager, 16; summer tanager, 1; cardinal, 37; rosebreasted grosbeak, 15; indigo bunting, 70; goldfinch, 62; towhee, 39; Savannah sparrow, 4; grasshopper sparrow, 11; vesper sparrow, 1; Bachman's sparrow, 2; slate-colored junco, 29; chipping sparrow, 15; field sparrow, 51; white-crowned sparrow, 7; white-throated sparrow, 1; Lincoln's sparrow, 1; song sparrow, 82. Totals: 117 species, about 2021 individuals. -- Fred W. Behrend and Lee R. Herndon, Elizabethton, Tennessee; W. F. Pearson, Kingsport, Tennessee; Branch Howe, Decatur, Georgia; and Dorothy DeBusk, Catherine Potts, and H. M. Stevenson, Emory, Virginia.

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PRAIRIE HORNED LARKS AT TASLEY, VIRGINIA, IN JUNE

On June 1, 1946, the undersigned together with Julian W. Hill, of Wilmington, Delaware, and Richard H. Pough, of the staff of the National Audubon Society, discovered two prairie horned larks at Tasley, Virginia, in a fallow field at the northwest corner of the junction of Virginia route 316 and the road crossing the Pennsylvania Railroad at Tasley station from east to west. Both birds were remarkably tame, permitting approach to within six feet. For the twenty minutes the birds were under observation, they would stop and utter melodious twittering notes as they fed in the field where weed growth was just commencing, but which was still too sparse to provide any concealment. The birds engaged in pursuit, following which one appeared to be displaying before the other as they stood on the ground. The day was fair, the temperature about 75 degrees.

..... Henry H. Collins, Jr.
"White Pines"
Lanham, Maryland.

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1946 BREEDING BIRD CENSUS - LEXINGTON, VIRGINIA

Open Mixed Hardwoods. About 20 acres of open, lightly grazed woodlot, with thick undergrowth; two grass openings of $2\frac{1}{2}$ and $1\frac{1}{2}$ acres; three miles north of Lexington, Virginia. Censused first in 1944; fully described in 1945. Undergrowth is growing rapidly. Coverage: 1946: April 3, 14, 22, 29; May 15, 20, 24, 30; no trips in June because of sickness; July 3, 13, 14, 18, 19, 22, 25, 30; August 4, 7. Total hours, 36. Weather, dry. Census: bobwhite, IN; mourning dove, IP; yellow-billed cuckoo, 2N, IP; ruby-throated hummingbird, IP; flicker, IP; red-bellied woodpecker, IP; hairy woodpecker, 1Y; downy woodpecker, 2P; crested flycatcher, 1Y; phoebe, 2N, 1P; Acadian flycatcher, 1N, 1P; wood pewee, 3P; Carolina chickadee, 2Y, 3P; tufted titmouse, 3P; white-breasted nuthatch, 1P; Carolina wren, 3Y, 1P; catbird, 1Y; brown thrasher, IN; robin, IP; wood thrush, IP; bluebird, IN; blue-gray gnatcatcher, 2N, 2Y, 2P; yellow-throated vireo, 2Y, 1P; red-eyed vireo, 2Y; black and white warbler, 2Y; worm-eating warbler, 1P; parula warbler, 1Y; cerulean warbler, 2Y; prairie warbler, 1N; 2Y; ovenbird, 1Y; Louisiana water-thrush, 1Y; yellowbreasted chat, 1N, 2P; redstart, 1P; orchard oriole, 1P; cowbird, 3P; summer tanager, 1P; cardinal, 4N, 4Y, 4P; indigo bunting, 2Y, 3P; goldfinch, 5P; towhee, 1Y; chipping sparrow, 5N, 3Y; field sparrow, 4N, 2Y, 8P. Total: 42 species, 114 pairs. Density: 570 pairs per 100 acres. Frequent visitors: green heron, wood duck, swift, kingfisher, pileated woodpecker, rough-winged swallow, crow, Baltimore oriole (late summer), mockingbird, robin (large flocks in late summer), English sparrow.

..... J. J. Murray
Lexington, Virginia

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CAPE CHARLES - LITTLE CREEK NOTES

by W. F. Minor

On the morning of May 11th, Charles Stevens and I left Cape Charles, Virginia, for Oyster. The preceding day we had been to Cobb Island, and we were hoping for another chance to visit it, but we had no such luck. We traveled along the highway to a point two miles west of Oyster, at which point we covered the mixed woodland bordering the road. At Oyster we were unable to rent a boat. After a disheartening hour on the mud flats we returned to Cape Charles and thence to Little Creek. We spent the remainder of the afternoon in the woods and marshes east of Little Creek.

List of birds noted: (9:00 a.m. to 6:30 p.m.; Cape Charles, Oyster, Chesapeake Bay, and Little Creek. Clear; temperature approximately 55° F.; no wind; ten miles afoot.) great blue heron, 4; green heron, 2; turkey vulture, 14; bald eagle (adults, near Little Creek), 2; osprey, 4; semipalmated sandpiper, 2; killdeer, 2; willet, 2; greater yellow-legs (marsh near Little Creek), 32; least sandpiper, 23; red-backed sandpiper, 1; semipalmated plover, 30; herring gull, 219; laughing gull, 132; common term, 1; least term, 2; royal term, 1; mourning dove, 1; chimney swift, 11; kingfisher, 1; downy woodpecker, 5; kingbird, 2; crested flycatcher, 8; Acadian flycatcher, 4; pewee, 3; rough-winged swallow, 2; barn swallow, 2; purple martin, 4; crow, 4; fish crow, 1; Carolina chickade, 2; titmouse, 4; Carolina wren, 8; mockingbird, 1; catbird, 2; brown thrasher, 2; robin, 6; wood thrush, 3; blue-gray gnatcatcher, 4; starling, 10; white-eyed vireo, 4; red-eyed vireo, 8; black and white warbler, 3; worm-eating warbler (seen in woodland near Oyster), 1; parula warbler, 4; yellow warbler, 1; black-throated blue warbler, 6; yellow-throated warbler, 6; black poll warbler, 1; pine warbler, 4; prairie warbler, 1; ovenbird, 2; Kentucky warbler, 7; yellow-throat, 4; chat, 3; hooded warbler, 3; English sparrow, 20; meadowlark, 4; red-wing, 15; boat-tailed grackle, 6; purple grackle, 3; cowbird, 8; summer tanager, 2; cardinal, 4; indigo bunting, 1; towhee, 5; grasshopper sparrow, 2; sharp-tailed sparrow (marsh near Little Creek), 3; chipping sparrow, 6; field sparrow, 6; song sparrow, 7. Total: 71 species.

..... Charlottesville, Virginia.

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BIRDING AT CAPE CHARLES, VIRGINIA

by Ray J. Beasley

On the evening of August 3, 1946, I boarded the Norfolk-Cape Charles ferry at Little Creek a little before dusk to do some "birding" in the vicinity of Cape Charles the next day.

While waiting for the ferry to get under way, just as darkness was falling, I pointed my binoculars on a group of birds standing and flying overhead about a little stretch of water to the east of the slip. I counted 25 great blue herons, laughing gulls by the dozen, two black skimmers, and at least 12 American egrets.

The next morning bright and early, I was on my way, intending to walk south along the beach from Cape Charles as far as possible. In the air as I left the town laughing gulls were very numerous, most of them appearing to be adults. Ospreys were searching their morning's fish. The day promised to be quite warm and clear.

On the way to the beach through a patch of woods, cardinals seemed to be everywhere. A couple of towhees and some indigo buntings showed themselves for a moment or so. A Carolina wren sang by the wayside, and a yellow-throated warbler flew across the road. A green heron rambled by on his way to another part of the shore.

Then I entered an area near the shore where years ago sand dredged from the ferry basin had been dumped, killing the growing timber. The dead trees, standing like skeletons, made an ideal location for a colony of flickers. Adults and young in various stages of adolescence were everywhere in the area. Even the young, some not yet showing plainly the red crescent or black throat patch, were clinging to the white trunks and branches, looking in their dark brown plumage like bats. Two red-headed woodpeckers perched on a limb nearby for a few moments and then disappeared. Several osprey nests were in sight, some with an owner sitting on a supporting branch, calmly surveying the surrounding territory, and me.

As I reached the shore, a group of about six or eight common terms greeted me, each seeming to take turns flying directly at me until only a few feet away and then veering swiftly away. A couple of least terms darted here and there. Laughing gulls conducted a constant traffic up and down the water, a few ring-billed gulls among them and an occasional Bonaparte gull.

As I progressed down the beach, two least sandpipers appeared, running along the edge of the water. A few fish crows, several turkey vultures and ospreys kept sailing over the water and the adjacent woods. I counted 14 ospreys sitting sedately on the tops of one group of fish stakes.

I discovered a little pond lying a few feet inland from the shore, surrounded by trees and undergrowth. As I approached three American bitterns arose but soon settled down again, also a green heron.

Continuing on along the shore I came upon Old Plantation Inlet which blocked further progress. I had hoped to see some American egrets and little blue herons in the marshes, but was disappointed. But I did see a couple of Virginia rails. Two kingfishers were busy along the banks of the inlet flying about, and sounding their peculiar calls.

By this time mid-day had arrived and with it the heat. So, after a short stay I started the return trip, soon raising up a swamp sparrow and a spotted sandpiper. After a short time I reached a place where I could go inland and follow the rest of the way to town along country lanes and roads through fields and woods. As the heat had become quite intense, bird life became inactive and I was only able to add four hummingbirds, some song sparrows, a small flock of field sparrows, a bobwhite, and a brown thrasher to my list.

..... Newport News, Virginia.



The Raven

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THE ALTITUDINAL DISTRIBUTION OF BIRDS

IN THE VIRGINIA MOUNTAINS

by J. J. Murray

The mountains of the southern states, because of the wide variations of altitude to be found in limited areas, provide an interesting field for the student of altitudinal distribution. The breeding ranges of the birds of this region have been worked out well enough in a general way, but few sections have been studied in sufficient detail to justify exact statements. As a consequence in applying the generally accepted ranges in any particular locality many exceptions must be made. In a similar manner statements as to the boundary lines of the faunal zones of this mountain region must be only approximate. It is not possible from the known altitudes of zonal boundaries at any point to predict with any great accuracy by the use of latitudes and isotherms just where these boundaries will be found at any other point. The places in the Appalachian area where probably the most exact work on altitudinal distribution has been done are in the mountains of Pennsylvania (Dwight), Maryland (Merriam and Preble), and North Carolina (Brewster). The Alleghanian Zone has been found to appear at about 1200 feet in Western Maryland and to end at about 2000 feet in western Pennsylvania, and in North Carolina to appear at about 2500 feet and to end at about 4500 feet. Hence in Rockbridge County, Virginia, which is at latitude 37.50° and about half-way between Pennsylvania and North Carolina, this zone might be expected to appear at about 1800 feet and to end at about 3500 feet. As a matter of fact, the Alleghanian Zone appears considerably lower in Rockbridge County and ends considerably higher. In this region the lower limit of this zone is not much higher than in Maryland, while its higher limit is not much lower than in North Carolina. Furthermore, its lower boundary here is exceedingly irregular and without any very close correlation with altitude.

The purpose of this paper is to present a brief study of altitudinal distribution and zonal boundaries at one point in the Virginia mountains. A considerable amount of time has been spent in gathering data on these points in a section of the mountains of central western Virginia embracing Rockbridge County and the edges of the adjacent counties of Nelson, Amherst, Bedford, Botetourt, Alleghany, Bath and Augusta, including mountains on both sides of the Valley of Virginia. Field trips have been made to the tops of the following mountains: Mt. Pleasant (4198 feet altitude), Rocky Mountain (4010), Thunder Hill (4000) and Apple Orchard (4224), in the Blue Ridge; and North Mountain (3100), House Mountain (3410), White Rock (3300), Dale (3200), Hogback (3400), Jump (3190) and Elliott Knob (4473), among the outlying spurs of the Alleghanies. To some of these mountains many trips have been made. The summits of all of these mountains lie within or on the line of Rockbridge County, with the exception of Mt. Pleasant (Amherst), Apple Orchard (Bedford and Botetourt), and Elliott Knob (Augusta and Bath). This territory is

situated almost entirely between latitudes 37° and 38°. The field trips were made throughout the breeding season from late May to early July. On these trips the altitudes at which all birds were observed were recorded by the use of the large scale contour maps of the Geological Survey. On one trip an aneroid barometer was also used. In some cases the altitudes had to be approximated, but they could be made with a considerable degree of accuracy by locating positions on the streams indicated on the maps. Particularly at the lower and higher altitudes, where accuracy was most important, the altitudes are quite correct.

As a basis for a sketch of the altitudinal distribution of this region there follows an annotated list of some of the birds which are most significant as zonal indicators:

- 1. Empidonax virescens. Acadian Flycatcher. A common breeder along the streams at the valley level and up to 1500 feet. I have found it on Rocky Mountain up to 1700 feet, and on Thunder Hill as high as 1900 feet. Professor Ruskin S. Freer, of Lynchburg, once found it as high as 2900 feet.
- 2. <u>Hylocichla fuscescens fuscescens</u>. Veery. Common on Rocky Mountain, Thunder Hill and Apple Orchard above 3500 feet, and occasionally down to 3000, or even rarely to 2000.
- 3. <u>Vireo solitarius alticola</u>. Mountain Vireo. Uncommon in the mountains from 1800 to 3700 feet. Professor Freer has seen it at 1200 feet.
- 4. Helmitheros vermivorus. Worm-eating Warbler. This warbler, which according to the 1931 A.O.U. Check-List "breeds mainly in the Upper Austral Zone," is an uncommon breeder from the valley level (at 900 feet) up to 2200 feet. I have heard it around 2700 feet on Thunder Hill.
- 5. <u>Dendroica aestiva aestiva</u>. Eastern Yellow Warbler. Abundant, but only in the valleys. I have not met with it higher than 1500 feet.
- 6. Dendroica caerulescens cairnsi. Cairns's Warbler. Abundant from 2000 feet up to the highest points; more infrequently occurs as low as 1500 feet, and rarely down to 1200 feet. This warbler is usually but not always associated with the rhododendron. The distribution of the rhododendron is somewhat erratic in this region. It does not usually occur below 2000 feet on the mountain sides but in ravines is found as low as 1200 feet. The Cairns's Warbler does not always follow it to these lowest places and is sometimes found away from it on the mountain sides. It occurs in the cool recesses of Goshen Pass at river level, at 1200 feet. As is the case with some of the other warblers, this warbler is sometimes missing on certain mountains at altitudes where one would expect to find it.
- 7. Dendroica virens virens. Black-throated Green Warbler. According to the Check-List, this warbler "breeds in the lower Canadian and Transition Zones." It is common here, however, from 1500 up to 2500 feet, and rare in the upper Alleghanian, possibly because there are few streams, and consequently few hemlocks, above 2500 feet. In suitable places it is sometimes common as low as

Sept.-Oct. 1946

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1200 feet, and once I found a pair feeding a young bird that could barely fly at 1100 feet. I have only once found it as high as 2700 feet. It is always associated during the breeding season with hemlocks, and where the forests are heavy and the ravines dark it follows the hemlocks down to the very foot of the mountains. It does not, however, follow them out where they grow along some of the streams in the level country. Because of its association with the hemlocks it is missing on some mountains, such as Rocky Mountain, where this tree is scarce.

- 8. Dendroica fusca. Blackburnian Warbler. This is another warbler that comes surprisingly low for breeding. The Check-List gives its breeding range as "the lower Canadian and upper Transition Zones," yet here it breeds regularly although rather uncommonly down to 1500 feet and occasionally as low as 1200 feet. I found a pair feeding young at this level in Goshen Pass on June 16, 1933. It is usually associated with hemlocks but is not so dependent upon them as is Dendroica virens.
- 9. Dendroica discolor discolor. Northern Prairie Warbler. According to the Check-List this warbler "breeds chiefly in the Upper and Lower Austral Zones." Here, although it is not common anywhere except on Jump Mountain, it occurs from the valley level at 900 feet up to 3000 feet. I have found it at 2800 feet in the scrub on Elliott Knob, and in a burned-over area on the top of North Mountain at 3000 feet. It is more common in suitable places on the mountains in the Alleghanian Zone than down in the valley where it might be expected. In fact, if one had only his experience in this section to go by, he would be led to say that the Prairie Warbler is an Alleghanian rather than an Austral species.
- 10. <u>Seiurus motacilla</u>. Louisiana Water-thrush. Abundant along streams up to 1500 feet; occasional to 1800 feet; once at 2400 feet on Rocky Mountain; and once at 2600 feet on Mt. Pleasant. It seems to go as high as streams of any size are found.
- ll. <u>Icteria virens virens</u>. Yellow-breasted Chat. The greatest surprise I have met with in this study has been the extent of the range of this bird, supposed to be limited mainly to the Lower and Upper Austral Zones. I have learned to expect its grotesque medley of sounds almost anywhere there is an open place, no matter how high in the mountains. It is, of course, abundant in the Carolinian here, but I have also found it on top of North Mountain at 3000 feet, on Rocky Mountain up to 3300 feet, at Camp Kewanzee, between Apple Orchard and the Peaks of Otter, at 3400 feet, on Mt. Pleasant at 3500 feet, and in a high open place on Apple Orchard at 3600 feet.
- 12. <u>Wilsonia citrina</u>. Hooded Warbler. This is still another warbler that occurs here at elevations above what is considered its usual range. It is abundant not only at the valley level but in the mountains up to 2000 feet. To 2500 feet it is common, and occasionally it is found still higher. I have seen it on Mt. Pleasant at 3000 feet and on Rocky Mountain at 3500 feet.

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- .13. Wilsonia canadensis. Canada Warbler. Abundant down to 2800 feet, and occasional as low as 2600 feet.
- 14. Setophaga ruticilla. American Redstart. The range of this warbler is rather lower in Rockbridge County than is indicated in the Check-List range. It is abundant along the streams at the valley level (900 feet) and up to 2500 feet, but it is scarce in the higher Alleghanian. Professor Freer has found it at 2700, 3100, and 3600 feet, once at each of these altitudes.
- 15. Piranga erythromelas. Scarlet Tanager. Occasional on the higher hills in the valley; abundant on the mountains from 1200 feet up to 3500 feet; not so common higher up.
- 16. Richmondena cardinalis cardinalis. Eastern Cardinal. Common up to 1500 feet, and in open places up to 2000 feet; occasional (sometimes common) in open places as high as 2800 feet.
- 17. Hedymeles ludovicianus. Carolina Junco. Abundant from 3200 feet up, and common down to 3000 feet. I have one nesting record at 2800 feet. On two occasions I have found them at 2500 feet, and once on Irish Creek in June I saw three Juncos at about 2000 feet, but these latter records are very exceptional. The line at which they are found is usually rather sharply marked, and they are generally abundant when once they are met with.
- 19. Melospiza melodia euphonca. Mississippi Song Sparrow. Abundant in the valleys and at the foot of the mountains in open places up to 2000 feet; occasional in open places up to 3400 feet, but does not occur in the upper Alleghanian unless the open places are large.

From these facts it will be seen that in this section of Virginia the valley floor lies in the Carolinian Zone and the mountains in general in the Alleghanian. The Carolinian is not quite pure. Being separated from the main body of the Carolinian in the State by the Blue Ridge, some of the characteristic Carolinian birds, such as the White-eyed Vireo and Blue Grosbeak, are rare. The Canadian Zone might be expected to occur here at about 3500 feet "where primeval coniferous forests have not been destroyed." But as none of our mountains have any coniferous forests near their summits and as we have no extensive areas over 3500 feet, there is no Canadian territory here. Up until a trip taken in July 1933 I had not found a single Canadian Zone bird breeding anywhere in this section, even on Apple Orchard, which rises to 4224 feet, or on Elliott Knob, which reaches 4473 feet. On this trip, to Mt. Pleasant, which, strange to say, is not one of the highest mountains of the region and which is the closest of them all to Piedmont territory, Professor Ruskin S. Freer and I found several Yellow-bellied Sapsuckers at about 2500 feet. But since this species is not rigidly confined to the Canadian Zone, this is scarcely a sufficient exception to modify the statement that the Canadian Zone does not occur in this section. Fifty miles farther west, because of proximity to the great

backbone of the Alleghany system, the Canadian does occur at altitudes lower than those reached by our mountain tops. The Alleghanian Zone at its upper limit reaches well up toward 4500 feet.

The most interesting feature of this study has been the realization of the very complex and irregular nature of the boundary between the Alleghanian and the Carolinian Zones. Here altitude does not seem to mean a great deal. These zones interlock in such a fashion that the boundary has little definiteness, the presence of any species being much more dependent upon exposure and type' of plant growth than upon altitude. Fingers of Alleghanian territory stick down into the Carolinian to 1200 feet, while in open places bands of the Carolinian reach up into the Alleghanian as high as 2500 feet, or even higher, It has always, of course, been recognized that other factors than temperature or altitude induce local variations. What is noteworthy here is the irregular and extreme way in which this happens and the great confusion due to the simultaneous occurrence of birds supposedly typical of the two zones. Two species, the ranges of which should fail to meet by several hundred feet of altitude, sometimes overlap in range for many hundreds of feet. It is sufficient indication of the complexity of the distribution in this region to say that the Blackburnian Warbler, which is supposed to breed "in the lower Canadian and upper Transition Zones," has been found feeding young at 1200 feet, while the Yellow-breasted Chat, which breeds "mainly in the Upper and Lower Austral Zones," is common on mountain tops at 3000 feet and occurs as high as 3600 feet; or to say that the Black-throated Green Warbler can be found in the breeding season not many hundred yards from the haunts of the Mockingbird.

It may be said roughly that the Carolinian Zone covers the valley floor up to 1500 feet, but regularly rises to 2000 feet and higher in open places, while the Alleghanian Zone covers the mountain areas from 1500 feet to the tops of the highest peaks, but extends as low as 1200 feet in sheltered places. The territory along the lower reaches of the mountains from 1200 to 2000 feet is a sort of no-man's land where almost any of the birds, except the most high-ranging Alleghanian species, may be met with. This complexity seems to be due to two characteristics of our territory: on the one hand, to the occurrence up to 3500 feet of cleared and inhabited places where crop land, open fields and scrub attract the open-land Carolinian birds; and, on the other, to the occurrence of deep, dark, cool ravines, bordered by conifers, reaching down from the mountains to the borders of the larger lowland streams.

In conclusion, certain remarks in regard to the territory under discussion may be tentatively made. First, that if this territory is at all typical, the ranges in the Check-List can only give a very general idea as to what a field worker may expect in any locality in the southern mountains. They have to be much modified in detail to give a correct picture of local altitudinal distribution. Second, that along zonal boundaries the presence of species is much more dependent upon exposure and plant growth than upon altitude. Other ecological factors than altitude and its consequent temperature must be very largely considered in the detailed plotting of zones. Finally, zones in a

mountain region can only be recognized as rather vague bands with very variable boundaries.

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(The writer has published a number of general discussions of the faunal zones of the Virginia mountains. This paper is presented here because of the detailed data on the altitudinal distribution of certain species that are most pertinent in such discussions. In its original form it was read at the meeting of the American Ornithologists' Union in New York, November 1933. The present form is a revision.)

.....Lexington, Virginia.

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BOOK REVIEWS

AUDUBON BIRD GUIDE: EASTERN IAND BIRDS, by Richard H. Pough, Doubleday and Company, New York, 1946, pp. xxxvii & 312, 48 color plates by Don Eckelberry, 3 maps.

One of the questions most frequently faced by any experienced bird student and one of the most difficult to answer is this: "What is the best bird book for a beginner?" The reason for the difficulty is that there has been no book that combined small size, reasonable price, good text, and a color plate of every bird the beginner was likely to meet. Peterson's guides answer a somewhat different and more advanced need, and for their purpose are not likely to be surpassed. Books like <u>Birds of Massachusetts</u>, by Forbush, or <u>Birds of America</u>, edited by Pearson, which provide the needed color plates, are too large for field use. Reed's guides once filled this place fairly well, but the plates were worn out long before their publication ceased. The <u>Audubon Bird Guide</u> is

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just the book that has been needed. Useful for students no matter how advanced, it is the book to put in the hands of a beginner.

The book is of pocket size, with a flexible and water-resistant cover, making it handy for field use. The author is a member of the staff of the National Audubon Society, which has sponsored the book. A research man, with the scientific viewpoint, his work is dependable. The text is admirably done. The twenty-page foreword is a brief but thorough summary of field ornithology, with many practical suggestions to the worker. About a page is given to each species, with short paragraphs on identification, voice, nest, and range, and a longer paragraph on habits. Even in the section on habits the primary aim is assistance in knowing where to look for the particular species and in identifying it. Although the book aims to deal only with the species group, it would have been a help to mention not only in the index but under the discussion of the species group the names of such well-known subspecies as the sycamore warbler or the Bachman's sparrow, since their English names do not indicate their relationship.

Eckelberry's color plates are splendid. The drawing is life-like throughout, with the exception of one or two owls in plate 2. The color printing is remarkably fine. Minor exceptions occur in the coppery tinge on the head of the male prothonotary warbler and the pinkish cap of the Swainson's warbler.

This book meets a real need and can be recommended without any hesitation. It will be followed by a second volume, covering water and game birds and diurnal birds of prey.

...J. J. Murray

THE MAMMALS OF NORTH CAROLINA, and, REPTILES AND AMPHIBIANS OF NORTH CAROLINA, by C. S. Brimley.

Not long before his death, C. S. Brimley published in a series of installments these lists of North Carolina animals. The North Carolina State Museum has clipped together sets of reprints for distribution. Like all of Brimley's work, these publications are accurate and interesting.

....J. J. Murray

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1946 CHRISTMAS CENSUS

Dates: December 21 - 29, inclusive.

Rules: As last year: See November-December, 1945, Audubon Magazine.

In 1945 we had 7 Virginia censuses in <u>Audubon Magazine</u>; in 1944, 9; and in 1943, 10. We should at least strive to regain our highest number this year. Copies should be sent to THE RAVEN, and (by January 1) to Christmas Census Editor, National Audubon Society, 1000 Fifth Avenue, New York, 28, New York.

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NEW BIRDS FOR THE MONTGOMERY COUNTY LIST

1946

by C. O. Handley, Jr.

In a year characterized by peculiar climatic conditions, it is not surprising that the normalcy of bird life should have been somewhat disrupted. Many species arrived earlier than usual in the spring and others departed considerably later than normal in the fall. Several species were observed in the County for the first time.

When the evening grosbeak invasion of epic proportions spread throughout the northeastern United States, it was anticipated that they might also appear at Blacksburg. On January 1 Mrs. L. B. Dietrick phoned that a flock of birds answering to the description of evening grosbeaks were feeding in her yard. C. O. Handley, Sr. made a hasty visit, but found that the birds had already flown away. The flock contained several bright males. No more grosbeaks were reported in the remainder of January or in February, but on several occasions in early March, Dr. M. C. Harrison discovered a flock feeding in box elder bushes on the campus and promptly notified Mr. Ralph Brown on each occasion. However, the elusive birds were not observed by Mr. Brown until March 16. In answer to his call, Dad, my brother John, and I, as well as several students, went to the spot and found the grosbeaks, seven females or immatures and one bright male, feeding about the lawns and shrubbery. They seemed restless, flying aimlessly from tree to tree, and from trees to the ground, but were comparatively tame, allowing approach to within twenty feet, and being apparently unmindful of the waving of hats and clapping of hands beneath trees in which they perched. They called incessantly, the most common note being slightly suggestive of the chirping of the English sparrow, but sufficiently distinct to arouse interest should it be heard unexpectedly. Two other notes were given frequently. One, a low-pitched "click," somewhat similar to the flight notes of the siskin and remotely similar to the alarm notes of the bobwhite, wasusually heard while the birds were in flight. The other, and the least frequent of the three, suggested the call of the crested flycatcher, but was shorter and lower pitched. In flight the grosbeaks bore a strong resemblance to cedar waxwings, and were it not for their somewhat larger size and continuous calling, they might be mistaken for waxwings.

On April 1 a male and a female were observed feeding in hemlocks and maples in another part of the campus, and again on April 3 the whole flock of eight was seen in spruces and ash trees near the same spot. On subsequent days they were frequently observed in these hemlocks and spruces and could always be located from a considerable distance because of their noisiness. They were last seen on April 10 when Bill McIntosh found them feeding in a sweet gum. A third flock was reported at Price's Fork, five miles west of Blacksburg by Mrs, Florence Kinnear.

The next new bird for the County list was a flock of twenty-five greater scaups on the college ponds April 12. They were quite wild and flew each time cars approached the ponds. Besides the conspicuous feature of the long white wing stripe, the bright sunlight made their sides appear very white and their backs very lightly barred. From some angles their heads seemed purplish, from others greenish. As they were accompanied by a pair of old-squaws in beautiful nuptial plumage, it is possible that they may have come in from the coast. This was the third record of the old-squaw for Blacksburg. In the collections of the Virginia Cooperative Wildlife Research Unit there is a specimen of the greater scaup, taken at Blacksburg in the spring of 1938, which has masqueraded until now as a lesser scaup.

Out for its weekly field trip, May 24, the V.P.I. Ornithology class happened on a real rarity when it discovered a <u>ruddy turnstone</u> feeding on a gravel bar in Strouble's Creek just below Blacksburg. It was in bright summer plumage except for a few brown winter feathers on the back and in the crown. It was quite tame and was studied by the group from a distance of fifteen feet, but when it was flushed to show the bizarre color pattern of the wings and back, it flew away in a northwesterly direction and did not return. It's flight call somewhat resembled the note of the pectoral sandpiper, but was a considerably heavier and gruffer "kurch." This is perhaps the first inland Virginia record for the turnstone, a species which is abundant along the coast. It is said to be "rare and irregular in migration" in the Washington, D. C., region, but no Virginia records are cited (Proc. Biol. Soc. Wash., 42:33, 1929).

These additions increase the Montgomery County list to a total of 253 species and subspecies. A similar article in THE RAVEN, Vol. 16, Nov.-Dec. 1945, listed 249 forms, but two birds were inadvertently omitted from that total, and one other has since been dropped.

In "The Auk," 61(4):582, 1944, C. E. Addy recorded the southern flicker Colaptes auratus as a summer resident at Blacksburg on the basis of three specimens collected in April and July, and a more recent July specimen is also of this subspecies. He regarded the northern flicker C. a. luteus as a migrant and winter resident with four specimens taken in April, September, and December; a recent November specimen is likewise of the northern variety. The southern flicker was previously unrecorded for the County.

The <u>ring-necked pheasant</u> has not been previously included in the totals, though it had been counted on the Christmas census and other bird counts since 1935. Repeatedly released in various parts of the County since the early 'thirties, it has been no more successful here than in other parts of Virginia, and has invariably disappeared after a few successful nesting seasons.

The A.O.U. Committee on Classification and Nomenclature has at last ended the long standing black duck argument by recognizing the invalidity of maintaining the red-legged black duck and common black duck as distinct forms, and henceforth the single name Anas rubripes will apply to all black ducks (20th Supplement to the A.O.U. Checklist, Auk 62(3):438, 1945). This reduces the Virginia State list as well as the Montgomery County list by one.



The Raven

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

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

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THE BIRDS ! CAFETERIA

by J. J. Murray

Even sickness need not entirely interfere with nature study. I remember one winter spell of grippe when the activities of the birds which accepted the invitations of our family helped most pleasantly to while away some of the long hours. The days in bed happened to coincide with a hard freeze when snow and ice covered the ground and when it was even easier than usual to attract birds to the neighborhood of the house. All winter we had been keeping suet and chicken feed and crushed peanuts on a window tray and scattering whole peanut kernals on the ground under a bush for the Blue Jays and Cardinals. But this popular cafeteria was not in sight of the bedroom. So now the big wooden box in which the raw peanuts were kept was set on a table on a side porch just outside the bedroom window, where the birds could come and serve themselves and at the same time provide amusement for those within the room. The box was partially covered, making a dinner table and at the same time giving access for the more venturesome birds to the abundant supply of food inside.

Only a few kinds of guests were willing to come into this partially enclosed porch to eat. Cardinals would come freely, and Titmice, Chickadees, Carolina Wrens, and the omnipresent and always daring English Sparrows. Blue Jays and Starlings, which fed regularly at the other shelf, were too cautious to come to this table, although they would come to the edge of the porch to pick up the scraps scattered by the other birds. At first the visits of our guests were very brief. A Titmouse was the first bird to light on the edge of the box. Looking about quickly, he dived into the box for a nut and left with it at once. As the Titmice became more accustomed to the place they stayed for longer intervals, finally even eating several nuts at a visit. One of them stopped to thank us with a bright whistled song, "peter--peter-" The Cardinal is always nervous and restless. He is never still when at a feeding tray. He lights with a sharp "chip" or two and before eating anything stands with tail twitching and head quickly turning from side to side. Even while eating he is always on guard, ready to fly at the slightest hint of danger. At the feeding table one has a good chance to note how highstrung are the personalities of birds and how constantly they are on the watch for danger.

One visitor to the box who always had a place to himself was a fat squirrel. While he was probably indifferent to the birds they were very much afraid of him. Few of them would even light at the table while he was there, and none of them would dare to eat with him. One tiny Chickadee lit at the table before he noticed the squirrel but retired at once. Directly he returned to a perch near the table, chattering excitedly at the squirrel, who ate stolidly on. Again and again he came and waited but without risking a bite, until finally, disgusted, he left to wait a time when he might find the table free. The squirrel made a practice of staying until someone, in order to give the birds a chance, drove him away. Leaning over the edge of the box he picked up one peanut at a time in his mouth. Then, standing on his hind legs, he rolled the peanut around in his paws while his sharp lower teeth peeled the skin away. He was so occupied with his pleasant task that he allowed the children to come to the closed window within a few feet of him without showing any

alarm. At any incautious movements on their part his tail would twitch rapidly up and down, a gesture which appeared rather one of irritation than of fear.

The law of love did not hold at the birds' cafeteria. Rather the rule was, "Look out for number one." If a tiny Chickadee was at the table when a Titmouse came, the Chickadee usually left. If a Cardinal came while the Titmouse was there, the Titmouse always left. In fact, if there was any hesitation about it, the Cardinal was always ready to assist the departure. Attractive as he is in many ways, the Cardinal does not have a generous disposition. Even though there may be plenty of food and plenty of room in which to eat it, he will allow no smaller bird at the table with him. While one bird will not usually drive away another bird of the same species, the Cardinal sometimes does even that. In fact, there is not much guessing what a Cardinal will do at any particular time. During the days of this particular experience a male Cardinal who fed regularly at our table sometimes drove his mate away, sometimes ate amicably with her, and at least once took food to her and put it in her mouth. Apparently he was like some human husbands in their attitudes toward wife and family. The treatment depends upon the mood,

There is no better way to learn the birds and no easier way to enjoy their companionship than to set a table when the days are cold and invite them to dine with you.

....Lexington, Virginia

(This is the first chapter of <u>Wild Wings</u>, a book of nature sketches to be published in March by the John Knox Press, Richmond, Virginia.)

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A FIELD TRIP TO CAPE CHARLES

By I. R. Barnes

(Quoted by permission from The Wood Thrush, periodical of the Audubon Society of Washington, D. C., Vol. 2, No. 3, November 1946, pages 16-17.)

Cape Charles, Va., on October 5 and 6, again provided an exciting spectacle for our second annual fall trip. The weather was warm and sunny, with temperatures rising to 73° and 75°. The winds were NE and ENE, 10 mph on Friday and 15 on Saturday and Sunday, favoring passage of the birds across the mouth of the Bay rather than their concentration at the Cape.

A flight of more than 900 hawks was the most interesting feature on Saturday. Many accipiters were over the area as we drove through Fort Custis.

As we parked at the point, several red-tailed hawks arose from the trees and soon 19 were overhead. Through the early morning hours, hunting accipters dominated the scene, cutting through the woods and flying low over the marshes; a surprisingly large number were Cooper's (60) as the morning wore on, in contrast to the prevalence of sharp-shinneds (92) during the early hours. The first large flight occurred at 9 o'clock when 180 hawks came in high from over the water, moving almost due north into the wind; about 90 were red-tailed hawks, 40 Cooper's, and 50 sharp-shinneds, the accipiters coming in somewhat below the high-flying buteos. An unexpected flight of broad-winged hawks began with 60 at 10 o'clock, then 29 at 10:45, and finally a climax of 450 at 12:30. The last flight came in at a very high altitude from over the mouth of the Bay, moving east-northeast up the Cape in a formation over a mile long. Had they come down the east coast of Chesapeake Bay?

During the afternoon fewer accipiters and fewer buteos were present, but the number of falcons increased sharply with 20 or more to be seen in the air at all times. Our best estimate indicated 30 duck hawks, 40 pigeon hawks, and only 12 sparrow hawks. The ratio of immature to adult birds was high: 5 to 1 for the broad-winged hawks; 6 to 1 or better for Cooper's, sharp-shinned, red-tailed, duck and pigeon hawks. Ospreys (about 20) were under almost constant attack from both accipiters and falcons. Despite the large number of hawks, there was no such slaughter of small birds as was witnessed last year, presumably because there was no large concentration of small birds in the area.

Although Cape Charles afforded no great abundance of small birds, there was a fair diversity of species; among the more interesting were: cormorant (48), yellow-crowned night heron (1), Canada goose (29), flicker (115), tree swallow (390), red-breasted (18) and brown-headed (3) nuthatches, brown creeper (5), winter wren (4), olive-backed (2) and gray-cheeked (24) thrushes, golden-crowned kinglet (25), blue-headed vireo (4), magnolia (6), black-throated blue (3), myrtle (8), black-throated green (8), chestnut-sided (2), bay-breasted (3), and western palm (2) warblers, and junco (2).

On Sunday, a stop was made at the Chincoteague flats where a few shore birds were found: black-bellied plover (33), greater (28) and lesser (24) yellowlegs, and least (15) and semipalmated (70) sandpipers. Forster's and common terns were closely compared, and rusty blackbirds and boat-tailed grackles were seen to good advantage.

A total of 88 species were identified. Ten made the trip with transportation provided by Mrs. Mary W. Goldman and Orville Crowder.

....Washington, D, C.

NOTES ON THE FALL MIGRATION AT CHARLOTTESVILLE

by Charles E. Stevens, Jr.

Albemarle County, in which Charlottesville is located, has not been studied for birds steadily over a period of years as have Blacksburg, Rockbridge County, Lynchburg, Amelia County, and Brunswick County. Dr. William Cabell Rives of Cobham was the first person to do any work on Albemarle birds. He furnished a number of dates, and recorded several birds which we have not since seen. Most of his work was done in the year 1884. Most of the study on the county was done from 1940 to about 1941, by N. R. Barger, Martin Curtler, Ruskin S. Freer, and John B. Calhoun. Barger made the Charlottesville contribution to the 1931 Consolidated List for Virginia (RAVEN II:2).

Relatively little birding was done from 1942 to 1944, but since then, under the combined efforts of Dr. John Grey, Jr., William F. Minor, and myself, some good records have been made. We think that we have covered the 1946 fall migration rather well. This was due mostly to the opportunity we had of spending a great deal of time in the field. The following is a list of arrivals and departures for this fall:

Aug. 5, pied-billed grebe, cerulean warbler (departs). Aug. 12, black duck. Aug. 14, Canada warbler. Aug. 18, chestnut-sided warbler. Aug. 26, marsh hawk, osprey, barn swallow (departs.). Aug. 27, Cape May warbler. Aug. 28, blue-winged warbler, magnolia warbler, veery (departs.). Aug. 30, blackburnian warbler, black-throated green warbler, Wilson's warbler, broad-winged hawk (departs.). Aug. 31, northern waterthrush, black-throated blue warbler, least sandpiper, Louisiana waterthrush (departs.), chat (departs.). Sept. 1, Tennessee warbler, rose-breasted grosbeak. Sept. 5, bay-breasted warbler, worm-eating warbler (departs.). Sept. 7, golden-winged warbler, whip-poor-will (departs.). Sept. 8, American egret (departs.). Sept. 9, yellow-bellied flycatcher, hooded warbler (departs,), Acadian flycatcher (departs.), golden-winged warbler (departs.), kingbird (departs.), little blue heron (departs.). Sept. 17, gnatcatcher (departs.). Sept. 19, prairie warbler (departs.), blackburnian warbler (departs.), yellow-throated vireo (departs.). Sept. 21, olive-backed thrush. Sept. 22, black-poll warbler. Sept. 24, crested flycatcher (departs.). Sept. 25, Nashville warbler, red-breasted nuthatch, Baltimore oriole (departs.), yellow-billed cuckoo (departs.), Canada warbler (departs.), chestnut-sided warbler (departs.), rose-breasted grosbeak (depts.), scarlet tanager (departs.). Sept. 26, western palm warbler, summer tanager (departs.), white-eyed vireo (departs.), black-and-white warbler (departs.), osprey (departs.). Sept. 27, lesser yellowlegs, ruby-crowned kinglet, Wilson's warbler (departs.), western palm warbler (departs.). Sept. 28, white-throated sparrow, red-eyed vireo (departs.), solitary sandpiper (departs.). Sept. 29, hummer (departs.), redstart (departs.). Sept. 30, olivebacked thrush (departs.). Oct. 1, vesper sparrow (may breed in the mts.). Oct. 2, myrtle warbler. Oct. 3, wood pewee (departs.), green heron (departs.). Oct. 5, winter wren, golden-crowned kinglet, house wren (departs.). Oct. 6, yellow palm warbler, blue grosbeak (departs.), indigo bunting (departs.). Oct. 8, magnolia warbler (departs.). Oct. 10, sapsucker. Oct. 11, bay-breasted warbler (departs.). Oct. 12, blue-headed vireo, yellow warbler (departs.), nighthawk (departs.). Oct. 13, pigeon hawk, brown creeper, coot, ovenbird (departs.). Oct. 14, junco, catbird (departs.). Oct. 16, wood thrush (departs.). Oct. 17, thrasher (departs.), black-throated blue warbler (departs.), spotted sandpiper (departs.). Oct. 18, swift (departs.). Oct. 19, tree swallow, swamp sparrow, parula warbler (departs.), pine warbler (departs.). Oct. 20, hermit thrush, purple finch, yellow-throat (departs.), black-throated green warbler (departs.), blue-headed vireo (departs.). Oct. 23, white-crowned sparrow, yellow palm warbler (departs.). Oct. 26, northern horned lark, red-headed woodpecker (departs.). Oct. 27, Tennessee warbler (departs.). Oct. 29, pine siskin. Oct. 30, rusty blackbird. Oct. 31, black-poll warbler (departs.). Nov. 2, Cape May warbler (departs.). Nov. 3, blue-winged teal.

An exceptionally cool August may have had some effect in evoking the early arrival of such birds as the black-throated blue and Wilson's warbler. Of unusual note was the occurrence of a wood thrush in Charlottesville on Oct. 12, and one also in the city on Oct. 16. The normal departure date for this bird was Sept. 24.

Other unusual records were: a thrasher on Oct. 17 (normal departure, Oct. 2); parula warblers seen almost steadily up to Oct. 19; and four tree swallows on Oct. 19 at Albemarle Lake.

.... Charlottesville, Va.

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YELLOW WARBLER AT CHARLOTTESVILLE

by Charles E. Stevens, Jr.

On October 12 while watching some Cape May and Tennessee warblers in my yard, I was astonished to see a yellow warbler also working through the maples. I was able to observe it rather easily for a while with 10 x 50 glasses. Later in the day, at the suggestion of Dr. John Grey, Jr., I tried to collect the bird, but was unable to find it.

At first I was almost hesitant to accept the observation as a record, but after I had looked up some of the late dates for the Gulf and Atlantic seaboard states, I found it was reasonably possible. The following are late fall migration dates for the yellow warbler: Florida, October 27, Florida Bird Life, Howell; Louisiana, October 27, Bird Life of Louisiana, Oberholser; South Carolina, October 29, Birds of South Carolina, Wayne; North Carolina, September 20, Birds of North Carolina; New Jersey, October 12, Birds Around New York City, Cruickshank; New Jersey, October 10, Bird Studies at Old Cape May, Stone.

.... Charlottesville, Va.

VIRGINIA IN THE 1946 LITERATURE

by J. J. Murray

The Auk. In the January issue, in "Occurrence of the Hudsonian Curlew on National Wildlife Refuges along the Atlantic Coast," by Faxon W. Cook, pages 90-92, records are given for 1943, 1944, and 1945 at the Chincoteague Refuge, in Accomac County; and records for the years 1940-1945 for Back Bay Refuge. In the July issue, banding records from Virginia for the whitethroated sparrow are given in an article, "A Cooperative Study of the Whitethroated Sparrow," by Richard B. Fischer and Geoffrey Gill, pages 402-418. John W. Aldrich, "White Eggs of the Long-billed Marsh Wren," pages 442-443, records a set of two eggs, one white and one brown, collected by C. W. Richmond at Alexandria, July 9, 1897. Henry M. Stevenson, page 444, reports "Evening Grosbeaks in Southwestern Virginia," at Abingdon, January 26, 1946. There are a number of Virginia notes in the October issue. In a discussion of "The United States Races of the Bob-white," pages 493-508, John W. Aldrich lists Virginia specimens of the New England bob-white (Colinus virginianus marilandicus) from Arlington, Ashland, Ballston, Campbell County, Essex County, Fairfax County, Falls Church, Newlson County, Prince George County (intergrade), and near Washington, D. C.; also an adult female erythristic specimen collected at Welcome, southern King George County, January 15, 1921, by H. T. Gouldman. This race has not, I believe, been accepted as yet by the committee on revision of the A. O. "Check-List." If it is accepted, it will make an additional bird for the Virginia list. Similarly, W. Earl Godfrey, "A New Carolina Wren," pages 564-568, proposes a revision on this species which would involve two races in Virginia, Thryothorus ludovicianus ludovicianus and Thryothorus 1. carolinianus, as Lowery had previously proposed in The Auk, Vol. 57, 1940, 95-104. This separation of the birds of this species in the eastern states, north of Florida, has not been accepted by the A. O. U. Committee. F. M. Jones, "Duck Hawks of Eastern Virginia," page 592, reports two occupied nests, April 14, 1946, at a place not named but not far from the seacoast. The same writer, "Double-crested Cormorants Caught in Fykes," page 592, reports 92 dead cormorants taken from fykes on the York River during the week ending April 20, 1946.

The Wilson Bulletin. In the June issue, John W. Aldrich reviews the forms of white-cheeked geese ("Speciation in the White-cheeked Geese," pages 94-103). He lists one specimen each from Virginia for the lesser Canada goose (Branta canadensis leucopareia), an unsexed bird from Neabsco; and for the interior Canada goose (Branta canadensis interior), a female from Buckingham County. Both of these are new forms for the Virginia list.

Audubon Magazine. The March-April issue, Section II, lists six Christmas census reports: Back Bay, 71 species, about 28,906 individuals; Blacksburg, 67 species, 3,510 individuals; Emory (Washington County), 41 species, about 688 individuals; Lexington, 40 species, 1,131 individuals, Chincoteague National Wildlife Refuge, Assateague Island, 63 species, about 35,325 individuals; Richmond, 60 species, about 4,442 individuals. The census of the Washington, D. C., region, with 75 species and 20,586 individuals was partly taken in Virginia. The May-June issue, Section II, page 98, has reports from Mrs. A. C. Reed of one (probably 3) European cormorant near Norfolk,

December 31, 1945, and two purple sandpipers at Cape Charles, the same day. The breeding bird census from Lexington, November-December, Section II, page 142, is the only such report from Virginia for this year.

....Lexington, Virginia.

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