ISSN: 0034-2165

The REDSTART

VOLUME 62, NUMBER 3 JULY, 1995

PUBLISHED BY THE BROOKS BIRD CLUB

1995 - The Brooks Bird Club, Inc.

Founded September 1932
Named in honor of A. B. Brooks, Naturalist

OFFICERS

President	LeJay Graffious, P.O. Box 69, Bruceton Mills, WV 26525	304-379-4492
Pres. Elect	Thomas R. Fox, Rt. 1, Box 420, Millstone, WV 25261	304-354-7686
Vice Pres.	James Bullard, P.O. Box 137, Ashton, MD 20861	301-421-9108
Imm. Past Pres.	Carl Slater, 57290 Mehlman Rd., Bellaire, OH 43906	614-635-9246
Administrator	Carl Slater, 57290 Mehlman Rd., Bellaire, OH 43906	614-635-9246
Treasurer	Gerald A. Devaul, 17 Mozart Road, Wheeling, WV 26003	304-233-4133
Asst. Treas.	Dolores Devaul, 17 Mozart Road, Wheeling, WV 26003	304-233-4133
Recording Sec.	Virginia Cronenberger, Rt. 1, Box 37, Petroleum, WV 26161	304-628-3382
Membership Sec.	Carolyn Conrad, 423 Warwood Ave., Wheeling, WV 26003	304-277-2036
Editor *The Redstart*	A.R. Buckelew Jr., P.O. Box J, Bethany, WV 26032	304-829-4392
Editor *Mail Bag*	William Murray, P.O. Box 944, New Cumberland, WV 26047	304-564-5071

BOARD OF DIRECTORS

Serve Through:

1995	Reba Hutton, P.O. Box 1305, Elkins, WV 26241	304-636-1598
	Robert M. Rine, 157 Beacon Drive, Weirton, WV 26062	304-723-2205
	Lynn Barnhart, 124 Muskingum Drive, Marietta, OH 45750	614-373-1936
1996	Steven D. Mace, P.O. Box 122, New Haven, WV 25265	304-882-3497
	Polly Matthey, 1241 Penn St., Clarksburg, WV 26301	304-622-7595
	Jane Robbins, 11909 Gordon Ave., Beltsville, MD 20705	
1997	Ivarene Pierce, 211 Evening Lane, Winchester, VA 22601	703-667-3184
	Leon Wilson, Box 105, Ona, WV 25545	304-743-4013
	John Northeimer, P.O. Box 686, Davis, WV 26260	304-259-5377

TRUSTEES

1995	Virginia Johnson, 24 Robinson St., Uniontown, PA 15401	412-438-6038
1996	Greg E. Eddy, 3 Aster Dr., Clinton Hills, Triadelphia, WV 26059	304-242-4774
1997	George Breiding, 540 Elmina Street, Morgantown, WV 26505	304-296-4630

ADVISORS

	Kenneth Anderson, 2042 Weberwood Dr., So. Charleston, WV 25303	304-344-1446
	Ralph K. Bell, R.D. 1, Box 229, Clarksville, PA 15322	412-883-4505
	Elizabeth Noonan, 2 Jayson Drive, Wheeling, WV 26003	304-242-3616

COMMITTEE CHAIRPERSONS

Budget	James Bullard, P.O. Box 137, Ashton, MD 20861	301-421-9108
Research	James Bullard, P.O. Box 137, Ashton, MD 20861	301-421-9108
Foray	Thomas R. Fox, Rt. 1, Box 420, Millstone, WV 25261	304-354-7686
Foray Directors	Carl Slater, 57290 Mehlman Rd., Bellaire, OH 43906	614-635-9246
	Juanita Slater, 57290 Mehlman Rd., Bellaire, OH 43906	614-635-9246
Foray Sites	William Grafton, 456 West Virginia Ave., Morgantown, WV 26505	304-292-0229
Conservation	William Grafton, 456 West Virginia Ave., Morgantown, WV 26505	304-292-0229
Backyard Sanctuary	Dorothy Conrad, 423 Warwood Ave., Wheeling, WV 26003	304-277-2036
Club Library	Dorothy Broemsen, 15 Mozart Rd., Wheeling, WV 26003	304-232-6694
Publicity	William A. Noonan, 2 Jayson Drive, Wheeling, WV 26003	304-242-3613
Legal Advisor	Hugh I. Troth, 429 N. Woodhill Dr., Ashland, OH 44805	419-289-1640
Nest Card Program	Carolyn Conrad, 423 Warwood Ave., Wheeling, WV 26003	304-277-2036
Christmas Count	Leon P. Wilson, Box 105, Ona, WV 25545	304-743-4013

The REDSTART

VOLUME 62, NUMBER 3 JULY, 1995

Contents **Page**

Hoary Redpoll Makes Brief Visit to Feeder in Mason County
—Wendell L. Argabrite 81

North American Migration Count: West Virginia, May 14, 1994
—Paul Shaw and James Stasz 83

1994 Sortie

The Dolly Sods Sortie—June 13-18, 1994: Area Survey
—A. Kyle Bush 93

The Dolly Sods Sortie Bird List
—Judith A. Ward 95

The 1994 Dolly Sods Sortie Singing Male Census
—Greg Eddy 100

1994 Dolly Sods Breeding Birds Survey
—Ann H. Pyle 105

1994 Dolly Sods Sortie Plant List
—Steven D. Mace 109

Butterflies of Dolly Sods Area Sortie, 1994
—Virginia Johnson 112

Field Notes
—James D. Phillips 113

Book Reviews 116

Editorial Staff

Editor • Albert R. Buckelew Jr., Biology Department, Bethany College, Bethany, WV 26032
Associate Editor • Marjorie Keatley, Marshall University, Huntington, WV 24755
Field Notes Editor • James D. Phillips, HC 78, Box 42-C, Pipestem, WV 25979
Banding News Editor • Ralph K. Bell, R.D. 1, Box 229, Clarksville, PA 15322
Advisory Editorial Board • Eleanor Bush, Greg E. Eddy, George A. Hall, George F. Hurley, Nevada Laitsch, Patricia Temple

The Redstart is published quarterly in January, April, July, and October at 707 Warwood Ave., Wheeling, WV 26003. The journal of the Brooks Bird Club, it is mailed to all members in good standing. Nonmember subscription price is $17. Individual copies are $4, except the Foray issue, which is $8. Changes of address and requests for back issues should be mailed to 707 Warwood Ave., Wheeling, WV 26003. Articles for publication and books for review should be mailed to the editor. Printed on recycled paper by PrinTech, Wheeling, WV. ISSN: 0034-2165

A Hoary Redpoll Makes Brief Visit to Feeder in Mason County

Wendell L. Argabrite

On Tuesday, the 21st of December, 1993, I had gone home from work for lunch. As I walked through the door, the phone was ringing. It was Shelly Smith calling to tell me that she believed she had a redpoll at her feeder.

Shelly lives about 20 miles from me on Route 2 in Mason County at Ashton, West Virginia. I grabbed my binoculars, scope, and camera, and headed for Mason County. It was a cold day with snow flurries and strong winds. When I arrived, there was a Common Redpoll (*Carduelis flammea*) on one of Shelly's feeders. As Shelly and I watched the Common Redpoll, another redpoll flew in and lit on the ground.

Hoary Redpoll at Ashton, West Virginia, December 12, 1993. Photo by Wendell L. Argabrite.

I told Shelly that I had better put the scope on this one, because it looked very white. The bird had its back to me, and as soon as I put the scope on it I knew that it was a Hoary Redpoll (*Carduelis hornemanni*). I could plainly see the white rump.

The Hoary Redpoll is usually a little frostier then the Common Redpoll, with unstreaked undertail coverts. Also, it usually has less streaking on the sides, but the Hoary Redpoll's best field mark is its unstreaked white rump.

I quickly set up my camera and started taking pictures. After getting a few quick pictures, I called Mike Griffith and told him that Shelly had a Common and a Hoary redpoll at her feeder. He said that he would be there later in the day. Mike Griffith and Gary Rankin were able to see the Hoary Redpoll that evening, but they could not find the Common Redpoll. The weather was better the next day, and although several people tried to relocate the redpolls, they were not seen again.

I often wonder at how things happen. If Shelly had not been home from school to get some things for a Christmas party; if I had not come home for lunch (something I rarely do); if I had not gone to the upper peninsula of Michigan in 1990 to see a large invasion of Redpolls, where I was able to study several Hoary Redpolls—if these things hadn't happened, the Hoary Redpoll would not have been identified.

References

Hall, G. A. (1983). *West Virginia birds*. Pittsburgh: Carnegie Museum of Natural History, Special Publication No. 7.

Peterson, R. T. (1980). *A field guide to the birds of eastern and central North America*. Boston: Houghton Mifflin Co.

111 Jefferson Park Drive
Huntington, WV 25705

North American Migration Count: West Virginia, May 14, 1994

Paul Shaw & James Stasz

Species	Wood	Summers	Fayette	Nicholas	Greenbrier	Pocohontas	Tucker	Mineral	Morgan	Total
American White Pelican	1	-	-	-	-	-	-	-	-	1
Double-crested Cormorant	8	1	1	-	-	-	-	1	-	11
Great Blue Heron	13	-	1	-	-	-	-	-	-	14
Great Egret	1	-	-	-	-	-	1	-	-	2
Green Heron	10	3	3	-	3	-	2	1	-	22
Canada Goose	151	51	14	-	32	-	79	23	-	350
Wood Duck	75	3	22	-	12	10	5	4	-	131
Mallard	61	15	18	-	2	-	8	16	-	120
Black Vulture	-	1	1	-	25	-	-	-	-	27
Turkey Vulture	46	38	51	-	20	13	39	23	5	235
Osprey	4	-	-	-	-	-	1	-	-	5
Bald Eagle	-	-	-	-	-	-	-	4	-	4
Northern Harrier	-	-	-	-	1	-	-	1	-	2
Sharp-shinned Hawk	-	-	2	-	1	-	-	-	-	3
Cooper's Hawk	-	-	1	-	-	-	-	4	-	5
accipiter sp.	3	-	-	-	-	-	-	-	-	3
Red-shouldered Hawk	3	-	4	-	2	2	2	3	-	16
Broad-winged Hawk	3	2	2	-	1	1	5	-	1	15
Red-tailed Hawk	19	-	3	-	2	-	6	3	-	33
buteo sp.	3	-	-	-	-	-	1	-	-	4
American Kestrel	6	-	1	-	1	-	1	3	-	12
Ruffed Grouse	-	1	1	-	1	-	4	1	-	8
Wild Turkey	3	2	3	-	9	7	1	5	-	30
Northern Bobwhite	2	-	-	-	-	-	-	-	-	2
Semipalmated Plover	1	-	-	-	-	-	-	-	-	1
Killdeer	56	10	22	-	14	3	10	10	1	126
Spotted Sandpiper	66	3	14	-	5	3	6	-	-	97
Semipalmated Sandpiper	2	-	-	-	-	-	-	-	-	2
Least Sandpiper	5	-	-	-	-	-	-	-	-	5
peep sp.	1	-	2	-	-	-	-	-	-	3
Ring-billed Gull	1	-	5	-	-	-	-	-	-	6
gull sp.	4	-	-	-	-	-	-	-	-	4
Rock Dove	79	6	10	-	4	-	19	48	1	167
Mourning Dove	259	11	113	12	22	1	15	24	6	463
Black-billed Cuckoo	9	3	-	-	-	-	4	4	-	20
Yellow-billed Cuckoo	13	1	2	-	-	1	2	5	2	26
Great Horned Owl	-	-	-	-	-	-	-	2	-	2
Barred Owl	-	-	2	-	-	1	1	1	-	5
Common Nighthawk	5	-	-	-	-	-	-	1	-	6
Whip-poor-will	6	-	3	-	-	1	-	5	-	15
Chimney Swift	198	55	87	1	15	3	6	38	-	403
Ruby-throated Hummingbird	25	4	14	5	3	2	7	3	1	64
Belted Kingfisher	9	-	2	-	3	-	3	-	-	17

Species	Wood	Summers	Fayette	Nicholas	Greenbrier	Pocohontas	Tucker	Mineral	Morgan	Total
Red-headed Woodpecker	-	-	-	-	2	-	-	-	-	2
Red-bellied Woodpecker	54	1	15	-	2	1	1	24	2	100
Downy Woodpecker	27	1	15	-	7	6	3	2	2	63
Hairy Woodpecker	9	-	4	-	-	4	4	2		23
Yellow-shafted Flicker	40	1	30	3	7	1	9	7	3	101
Pileated Woodpecker	19	1	22	3	7	10	5	2	69	
Eastern Wood-Pewee	58	6	26	1	6	6	9	7	3	122
Acadian Flycatcher	26	4	17	-	-	-	17	-	3	67
Alder Flycatcher	-	-	-	-	-	1	-	-	-	1
Willow Flycatcher	2	-	-	-	-	-	-	1	-	3
Least Flycatcher	4	-	-	-	1	2	6	2	-	15
Eastern Phoebe	38	9	29	1	10	12	22	28	5	154
Great Crested Flycatcher	5	11	40		16	2	8	23	4	109
Eastern Kingbird	54	7	22	-	27	1	11	13	2	137
Purple Martin	3	5	-	-	-	-	-	-	-	8
Tree Swallow	32	21	44	-	19	3	22	30	2	173
N. Rough-winged Swallow	101	28	56	-	8	-	6	11	-	210
Bank Swallow	201	-	-	-	-	-	1	7	-	209
Cliff Swallow	60	-	1	-	-	-	45	40	-	146
Barn Swallow	147	26	76	4	10	4	71	80	9	427
Blue Jay	124	15	111	1	18	13	39	30	8	359
American Crow	144	17	162	9	20	23	86	47	9	517
Fish Crow	-	-	-	-	-	-	-	2	-	2
Common Raven	-	1	5	-	5	2	19	4	1	37
Black-capped Chickadee	16	-	5	-	3	20	46	6	-	96
Carolina Chickadee	56	11	38	-	-	-	1	-	7	113
chickadee sp.	27	-	-	-	-	-	-	-	-	27
Tufted Titmouse	117	6	75	-	9	20	19	11	9	266
Red-breasted Nuthatch	-	-	-	-	-	4	5	-	-	9
White-breasted Nuthatch	23	3	16	-	4	8	11	7	3	75
Brown Creeper	1	-	-	-	-	-	-	-	-	1
Carolina Wren	12	9	31	-	10	-	1	1	-	64
House Wren	51	4	24	2	8	-	19	13	1	122
Winter Wren	-	-	1	-	-	8	5	-	-	14
Marsh Wren	2	-	-	-	-	-	-	-	-	2
Golden-crowned Kinglet	-	-	-	-	-	-	9	-	-	9
Ruby-crowned Kinglet	2	1	2	-	-	-	1	-	-	6
Blue-gray Gnatcatcher	61	11	23	1	16	5	5	5	6	133
Eastern Bluebird	92	16	20	2	9	3	19	36	12	209
Veery	-	-	-	-	-	3	3	-	-	6
Swainson's Thrush	2	-	1	-	-	-	-	-	-	3
Hermit Thrush	-	-	-	-	1	3	7	-	-	11
Wood Thrush	84	12	94	3	10	3	43	64	9	322
American Robin	760	74	397	9	40	34	172	151	18	1655
Gray Catbird	130	5	70	-	23	6	37	51	4	326
Northern Mockingbird	107	8	73	-	5	-	4	29	2	228
Brown Thrasher	24	4	18	2	16	1	11	8	3	87
Cedar Waxwing	109	2	28	-	27	-	12	20	3	201

Species	Wood	Summers	Fayette	Nicholas	Greenbrier	Pocohontas	Tucker	Mineral	Morgan	Total
European Starling	375	53	221	8	21	-	78	232	7	995
White-eyed Vireo	55	-	20	-	12	-	5	1	1	94
Solitary Vireo	-	2	14	1	8	13	28	2	-	68
Yellow-throated Vireo	20	5	5	-	-	-	2	2	-	34
Warbling Vireo	35	3	1	-	-	-	1	-	-	40
Red-eyed Vireo	185	35	442	-	23	15	209	96	7	1012
Blue-winged Warbler	44	-	21	-	5	-	-	2	-	72
Golden-winged Warbler	-	2	22	1	2	-	3	1	-	31
Tennessee Warbler	42	-	1	-	-	-	2	-	-	45
Nashville Warbler	-	-	-	-	-	-	4	-	-	4
Northern Parula	3	5	55	-	10	4	23	2	-	102
Yellow Warbler	208	23	78	1	12	-	38	19	1	380
Chestnut-sided Warbler	2	1	45	1	4	11	33	2	-	99
Magnolia Warbler	-	-	1	1	-	11	35	2	-	50
Cape May Warbler	1	1	-	-	-	-	-	-	-	2
Black-thr. Blue Warbler	-	-	27	-	2	15	38	-	-	82
Myrtle Warbler	10	-	8	-	-	2	31	6	-	57
Black-thr. Green Warbler	3	-	16	-	-	14	89	1	-	123
Blackburnian Warbler	-	-	-	-	-	6	13	-	-	19
Yellow-throated Warbler	6	4	17	-	2	-	-	-	-	29
Pine Warbler	4	-	-	-	1	-	-	-	-	5

Prairie Warbler	48	1	6	-	-	-	-	4	3	62
Palm Warbler	-	-	-	-	-	-	1	-	-	1
Bay-breasted Warbler	5	-	-	-	-	-	3	4	-	12
Blackpoll Warbler	10	-	1	-	-	-	1	-	-	12
Cerulean Warbler	12	3	13	-	-	-	2	3	-	33
Black-and-white Warbler	3	9	85	1	4	5	19	2	2	130
American Redstart	42	19	35	-	10	1	39	19	3	168
Prothonotary Warbler	8	-	-	-	-	-	-	-	-	8
Worm-eating Warbler	7	2	26	-	4	2	-	2	-	43
Swainson's Warbler	-	-	2	-	-	-	-	-	-	2
Ovenbird	71	6	129	1	6	9	39	2	1	264
Northern Waterthrush	-	-	2	-	1	3	2	-	-	8
Louisiana Waterthrush	2	3	22	-	3	-	3	1	-	34
Kentucky Warbler	17	3	26	-	-	-	2	1	-	49
Mourning Warbler	-	-	-	-	-	1	2	2	-	5
Common Yellowthroat	142	6	53	3	24	6	72	6	-	312
Hooded Warbler	33	6	155	-	1	2	24	-	-	221
Canada Warbler	-	-	13	-	-	1	7	-	-	21
Yellow-breasted Chat	33	-	3	-	1	-	1	-	-	38
Summer Tanager	30	-	-	-	-	-	-	-	-	30
Scarlet Tanager	50	13	74	-	5	4	42	25	7	220
Northern Cardinal	297	13	110	4	18	21	14	29	13	519
Rose-breasted Grosbeak	2	2	4	-	2	-	34	13	-	57
Indigo Bunting		213	41	107	-	54	8	60	116	2601
Rufous-sided Towhee	83	21	109	1	25	17	64	44	9	373
Chipping Sparrow	83	18	51	6	16	38	52	61	15	340
Field Sparrow	30	9	31	1	5	2	6	7	3	94

Species	Wood	Summers	Fayette	Nicholas	Greenbrier	Pocohontas	Tucker	Mineral	Morgan	Total
Vesper Sparrow	-	2	1	-	-	-	-	-	-	3
Savannah Sparrow	-	-	-	-	1	-	1	-	-	2
Grasshopper Sparrow	-	-	-	-	-	-	-	4	-	4
Song Sparrow	241	29	82	1	10	2	50	25	-	440
Swamp Sparrow	-	-	-	-	-	-	-	3	-	3
White-throated Sparrow	3	-	3	-	-	-	-	2	-	8
White-crowned Sparrow	18	-	8	1	3	-	5	4	-	39
Dark-eyed Junco	-	-	-	-	-	10	41	-	-	51
Bobolink	-	-	-	-	-	-	14	-	-	14
Red-winged Blackbird	263	33	115	-	20	-	57	174	7	669
Eastern Meadowlark	78	16	22	-	9	-	19	14	-	158
Common Grackle	398	42	83	-	25	-	31	103	5	687
Brown-headed Cowbird	97	3	80	15	4	12	32	50	6	299
Orchard Oriole	31	1	12	-	2	-	1	5	1	53
Baltimore Oriole	84	21	40	-	18	-	16	48	1	228
Purple Finch	-	-	4	-	4	-	7	1	1	17
House Finch	268	13	29	-	30	-	6	26	9	381
Pine Siskin	9	-	2	-	1	-	8	4	-	24
American Goldfinch	170	8	86	6	22	19	84	55	11	461
Evening Grosbeak	-	8	-	10	-	-	13	-	-	31
House Sparrow	329	22	150	2	18	-	13	80	-	614

Species	124	88	116	34	93	70	119	105	55	155
Individuals	8178	1037	4763	121	968	508	2566	2307	264	20712
Observers	31	2	20	1	3	5	12	7	3	84
Parties	16	1	9	1	1	1	7	4	1	41
Hours foot	38.5	2	30.5	2	6	28	30.5	11	15.5	164
Hours car	37	9	34.5	0	3	1	19.8	27	0	131.25
Hours boat	5	0	2	0	0	0	0	0	0	7
Hours bike	0	0	3	0	0	0	0	0	0	3
Miles foot	12	2	38	0.5	7	22	17.8	13.5	5	117.75
Miles car	255	120	180	0	25	0	147	220	0	945.9
Miles boat	20	0	5	0	0	0	0	0	0	25
Miles bike	0	0	6	0	0	0	0	0	0	6
Hours Feeder Watch	21	0	0	2	6	0	0	0	2	31
No. Feeder Watchers	12	0	0	1	3	0	0	0	2	18
No. Feeder Stations	12	0	0	1	2	0	0	0	1	16
Hours Stationary	0	1	0	0.5	0	0	0	0	0	1.5
No. Parties Stationary	0	1	0	1	0	0	0	0	0	2
No. Observers Stationary	0	1	0	1	0	0	0	0	0	2
Hours Owling	1.25	0	0	0	0	0	0	0	1	2.25
Miles Owling	8.5	0	0	0	0	0	0	0	1	9.5
No. Parties Owling	1	0	0	0	0	0	0	0	1	2
No. Observers Owling	2	0	0	0	0	0	0	0	1	3

	Wood	Summers	Fayette	Nicholas	Greenbrier	Pocohontas	Tucker	Mineral	Morgan
Time Start	0630	0630	0600	?	0600	?	0700	?	0800
Time Stop	2130	1730	2000	?	1500	?	1915	?	1130
Temp.: Pre-Dawn	41	35	40	-	33	-	30	-	-
Dawn	39	43	45	-	33	-	32	-	-
AM	65	78	55	-	45	-	45	-	-
Noon	72	82	60	-	58	-	65	-	70
PM	75	82	70	-	67	-	75	-	-
Sunset	78	75	70	-	59	-	65	-	-
Night	70	-	-	-	50	-	60	-	-
Wind: Pre-Dawn	5	0	0	-	0	-	0	-	-
Dawn	-	0	0	-	0	-	0	-	-
AM	-	0	Var	-	2	-	0	-	-
Noon	-	0	2	-	2	-	0	-	-
PM	9	W	2	-	5	-	0	-	-
Sunset	-	W	W1	-	0	-	0	-	-
Night	-	-	-	-	0	-	0	-	-

THE REDSTART — JULY, 1995

	Wood	Summers	Fayette	Nicholas	Greenbrier	Pocohontas	Tucker	Mineral	Morgan
%Clouds: Pre-Dawn	0	0	0	-	20	-	0	-	-
Dawn	20	0	0	-	20	-	0	-	-
AM	0	0	20	-	0	-	0	-	-
Noon	20	0	20	-	0	-	0	-	-
PM	30	20	0	-	0	-	0	-	-
Sunset	50	20	30	-	0	-	5	-	-
Night	60	-	-	-	0	-	10	-	-
Precipitation:	0	0	0	-	0	-	0	-	0

Rt. 2, Box 567
Fayetteville, WV 25840

The Dolly Sods Sortie—June 13-18, 1994: Area Survey

A. Kyle Bush

The 1994 Sortie was held at Dolly Sods from June 13-18 based at the Red Creek Cabin in Laneville, Tucker County. The principal bird lists describe those species found in the Red Creek drainage, in the hardwood forests on the slopes, and on the broad plateau known as Dolly Sods. The study area was limited to Dolly Sods and from east of Dolly Sods down to an elevation of 2,600 feet and west of Dolly Sods along County Road 45 and 32/2 to West Virginia Route 32. The area is approximately 25 square miles and includes parts of Tucker, Randolph, and Grant counties.

In recent years the Brooks Bird Club has concentrated its research on population changes of Neotropical migrant bird species. We have been accomplishing this by duplicating previous sortie and foray studies. The 1984 Sortie found good numbers of several migrant species, especially warblers and thrushes, that are not found in very large numbers in many places in West Virginia. For these reasons we returned to Dolly Sods. Results of the 1984 Sortie can be found in *The Redstart* for October, 1985, volume 52, number 4, pages 105-123.

The name Dolly Sods came from John Dahle, a Hessian soldier, who fought for England against the colonials during the Revolutionary War. The King of England gave Dahle a large land grant at the headwaters of the Potomac at Lumber Place, Pendleton County. Livestock raising was an important part of the agriculture of the day. On top of the Allegheny Front are large tracts called "balds" or "sods." During the summer the Dahle family, whose name was changed to Dolly, drove their cattle and sheep to these areas for summer pasture and returned for what was left in the fall after the wolves and bears had taken their share.

The Allegheny Front is a result of many complex forces through successive ages of geological history. The surface consists of stratified layers of sandstone, shale, limestone, and coal. Dolly Sods was once a subaquatic plain. Great arches and troughs occurred due to lateral forces and the land level elevated above the Appalachian Sea. The topography is the result of lateral forces, uplift, and erosion by rain. The rocks are composed of the Allegheny Series of the Pennsylvanian period.

Singing male census plots were laid out on Dolly Sods as described in the report elsewhere in this issue so as to be able to compare the data with that accumulated in 1984. Breeding Bird Survey routes were the same as in 1984.

The finding of a breeding pair of White-eyed Vireos on the top of Dolly Sods was considered unusual. There was a marked increase in the number of breeding Yellow-rumped Warblers.

Those attending were Elizabeth Bullard, James Bullard, A. Kyle Bush, Greg

Eddy, Cynthia Ellis, Dawn Fox, Thomas Fox, Eugene Hutton, Reba Hutton, Virginia Johnson, Marjorie Keatley, Steven Mace, John Northeimer, Ann Pyle, Carl Slater, Juanita Slater, William Smith, Gordon Vujevic, and Judith Ward.

5 Bush Avenue
Phillippi, WV 26416

The Dolly Sods Sortie Bird List

Judith A. Ward

The Dolly Sods Area is a favorite of many sortie participants, the only other sortie held there being 10 years earlier in June 1984. We felt it time to return, study, and compare the results. Table 1 shows Sortie birds found in 1994 but not in 1984 and birds found in 1984 but not 1994. The complete list of Sortie birds is found in tables 2 and 3 below. Table 2 contains the birds of Dolly Sods, the Allegheny Front, and slopes down to the 2,600 foot elevation. Table 3 contains birds found only below 2,600 feet.

Keep in mind these findings are only for a short period. As someone who spends a lot of time in the higher elevations of the Wilderness Area, I can state that some birds, such as Wild Turkey, are there even though we saw only one gobbler during the Sortie.

In the text I use the abbreviation, BBS, meaning Breeding Bird Survey. A study plot is also known as a Singing Male Census plot. The results of both the BBS and Singing Male Census can be found elsewhere in the Sortie report.

The abundance terms used are as follows:

Very common—Seen in large numbers every day in all appropriate habitats.

Common—Seen in appropriate habitat every day without any special effort.

Uncommon—Seen in appropriate habitat only with a lot of effort.

Rare—Only one or two seen in the entire study region during the study period.

The key to the abundance terms is habitat. If a species is common in its habitat but its habitat is limited, it will be classified as common even if not many birds were found.

Table 1

Comparison of Species for 1984 and 1994

New species found in 1994	Species found in 1984, but not 1994
Great Blue Heron	Northern Harrier
Green Heron	Sharp-shinned Hawk
Canada Goose	Cooper's Hawk
Mallard	Red-tailed Hawk
Killdeer	Black-billed Cuckoo
Yellow-billed Cuckoo	Eastern Screech-Owl
Great Horned Owl	Yellow-bellied Sapsucker

New species found in 1994	Species found in 1984, but not 1994
Belted Kingfisher	Northern Rough-winged Swallow
Red-bellied Woodpecker	Blue-winged Warbler
Willow Flycatcher	Prairie Warbler
Swainson's Thrush	Field Sparrow
Northern Mockingbird	Vesper Sparrow
White-eyed Vireo	
Warbling Vireo	
Blackburnian Warbler	
Pine Warbler	
Grasshopper Sparrow	
Orchard Oriole	

Table 2

Sortie Birds Found Above 2,600 Feet Elevation

Turkey Vulture—Common.
Red-shouldered Hawk—Uncommon. Heard from the Spruce Laurel Study Plot.
Broad-winged Hawk—Uncommon. Seen from the Laneville Cabin area.
Ruffed Grouse—Common. Several sightings with young.
Woodcock—Uncommon.
Yellow-billed Cuckoo—Uncommon. Three were reported: two at lower elevations and one near Bear Rocks.
Great Horned Owl—Rare. Heard from Greg Eddy's study plot.
Barred Owl—Uncommon. Found on the Dry Fork BBS run and heard at Laneville cabin.
Common Nighthawk—Rare. One was heard from the marsh on upper Alder Run.
Chimney Swift—Uncommon.
Ruby-throated Hummingbird—Uncommon. Seen every day at camp. Another was seen on Bonner Mountain Road.
Belted Kingfisher—Uncommon.
Downy Woodpecker—Uncommon.
Hairy Woodpecker—Uncommon. Reported from two locations in the Wilderness Area.
Northern Flicker—Uncommon. Mostly in the lower elevations.
Pileated Woodpecker—Common. Six on BBS runs and one at Laneville cabin.
Alder Flycatcher—Rare. Two reported: one at the marsh on upper Alder Run and the other on Laneville Road.

Least Flycatcher—Common. Fourteen found.
Eastern Phoebe—Common, including a nesting pair at the cabin.
Blue Jay—Common.
American Crow—Common.
Common Raven—Common.
Black-capped Chickadee—Common.
Red-breasted Nuthatch—Uncommon. Found on Greg Eddy's study plot and in the wilderness area.
Winter Wren—Common in the higher elevations.
Golden-crowned Kinglet—Common in the higher elevations.
Veery—Common.
Swainson's Thrush—Rare. The only location was from the study plot on Rohrbaugh Trail.
Hermit Thrush—Common in the higher elevations.
Wood Thrush—Common at all elevations.
American Robin—Very common.
Gray Catbird—Common.
Northern Mockingbird—Rare. Seen along Bonner Mountain Road and one was found on Dolly Sods.
Brown Thrasher—Common.
Cedar Waxwing—Very common.
White-eyed Vireo—Rare. Only two reported: one on Dolly Sods and one near Dry Fork.
Solitary Vireo—Common.
Yellow-throated Vireo—Rare. The Laneville Road BBS reported one, and the other was on Cynthia Ellis' study plot.
Red-eyed Vireo—Very common.
Northern Parula—Rare. One found on Dolly Sods and another along Laneville Road.
Chestnut-sided Warbler—Common.
Magnolia Warbler—Common.
Black-throated Blue Warbler—Common.
Yellow-rumped Warbler—Common in the higher elevations. Note: At the 1984 Dolly Sods Sortie, the Sods became the third known location for this species in West Virginia when a female was seen carrying nesting material.
Black-throated Green Warbler—Very common.
Blackburnian Warbler—Uncommon.
Black-and-white Warbler—Uncommon.
American Redstart—Uncommon.
Ovenbird—Common.
Northern Waterthrush—Common in the higher elevations in habitat.

Louisiana Waterthrush—Rare. Only two found.
Common Yellowthroat—Common.
Hooded Warbler—Rare. The only find was not very far below Bear Rocks.
Canada Warbler—Common.
Scarlet Tanager—Common.
Rose-breasted Grosbeak—Common.
Indigo Bunting—Very common in the lower elevations; common in the higher elevations.
Rufous-sided Towhee—Very common.
Chipping Sparrow—Common in lower elevations with one sighting on top of the Sods.
Savannah Sparrow—Uncommon. A male was heard in the grassy areas near Bear Rocks. Other reports were from Laneville Road.
Song Sparrow—Common.
Swamp Sparrow—Common in the bogs on Dolly Sods.
Dark-eyed Junco—Very common in higher elevations.
Purple Finch—Common in the higher elevations.
American Goldfinch—Common.

Table 3

Sortie Birds Found Below 2,600 Feet Elevation

Great Blue Heron—Rare. One was seen on the Dry Fork River.
Green Heron—Rare. One reported seen along Bonner Mountain Road.
Canada Goose—Uncommon. Seen only on Miller's pond on Laneville Road.
Mallard—Uncommon. Only found on two farm ponds.
Wild Turkey—Uncommon. A gobbler was seen in the Jordan Run Road area.
Killdeer—Uncommon. The BBS reported seven on Laneville Road.
Mourning Dove—Uncommon.
Whip-poor-will—Uncommon. Two seen along Jordan Run Rd.
Red-bellied Woodpecker—Rare. One heard near Dry Fork.
Eastern Wood-Pewee—Common.
Acadian Flycatcher—Uncommon.
Willow Flycatcher—Rare. Only one reported (on Dry Fork Road).
Great Crested Flycatcher—Uncommon.
Eastern Kingbird—Uncommon. Two were seen from Red Creek Road.
Tree Swallow—Uncommon. Found on Dry Fork, Laneville, and Bonner Mountain roads.
Barn Swallow—Common.

Tufted Titmouse—Common.
White-breasted Nuthatch—Uncommon.
House Wren—Common.
Blue-gray Gnatcatcher—Common.
Eastern Bluebird—Uncommon.
European Starling—Common.
Warbling Vireo—Rare. The Dry Fork BBS run reported two.
Golden-winged Warbler—Rare. Only found on Laneville Road.
Yellow Warbler—Uncommon.
Pine Warbler—Rare. Found along Jordan Run Road.
Cerulean Warbler—Rare. Two reports: one along Jordan Run Road and the other on Rt. 75, east from Bear Rocks.
Yellow-breasted Chat—Rare.
Northern Cardinal—Rare. One was found on the Dry Fork BBS run.
Field Sparrow—Common.
Grasshopper Sparrow—Rare. Only found in the fields of Miller's farm.
Bobolink—Uncommon. Near Millers Farm and on the Dry Fork BBS run.
Red-winged Blackbird—Common.
Eastern Meadowlark—Common.
Common Grackle—Uncommon.
Brown-headed Cowbird—Uncommon.
Orchard Oriole—Rare. Only reported at the intersection in Laneville.
Northern Oriole—Uncommon.
House Finch—Rare. Only one reported.
House Sparrow—Uncommon.

RD1, Box 1070
Ruffsdale, PA 15679

The 1994 Dolly Sods Sortie Singing Male Census

Greg Eddy

At the 1984 Sortie five 15-acre Singing Male Census plots were studied. In 1994 three of these were studied again, one was replaced, and one was changed to a 30-acre plot. The plot at Bell Knob lookout tower (Maple-Beech-Birch) was not rerun because of its large amount of variable edge. The Rohrbaugh Trail plot with a more consistent habitat was added. The Maple-Birch-Beech plot run in 1984 followed an old forest road. The road caused some edge effect that was responsible for the Common Yellowthroat, Chestnut-sided Warbler, and the Gray Catbird reported at that time. Instead of rerunning the same 15-acre plot, a 30-acre plot, Beech-Maple-Birch, was laid out with one end starting at the old road that had served as the centerline of the original 15-acre plot.

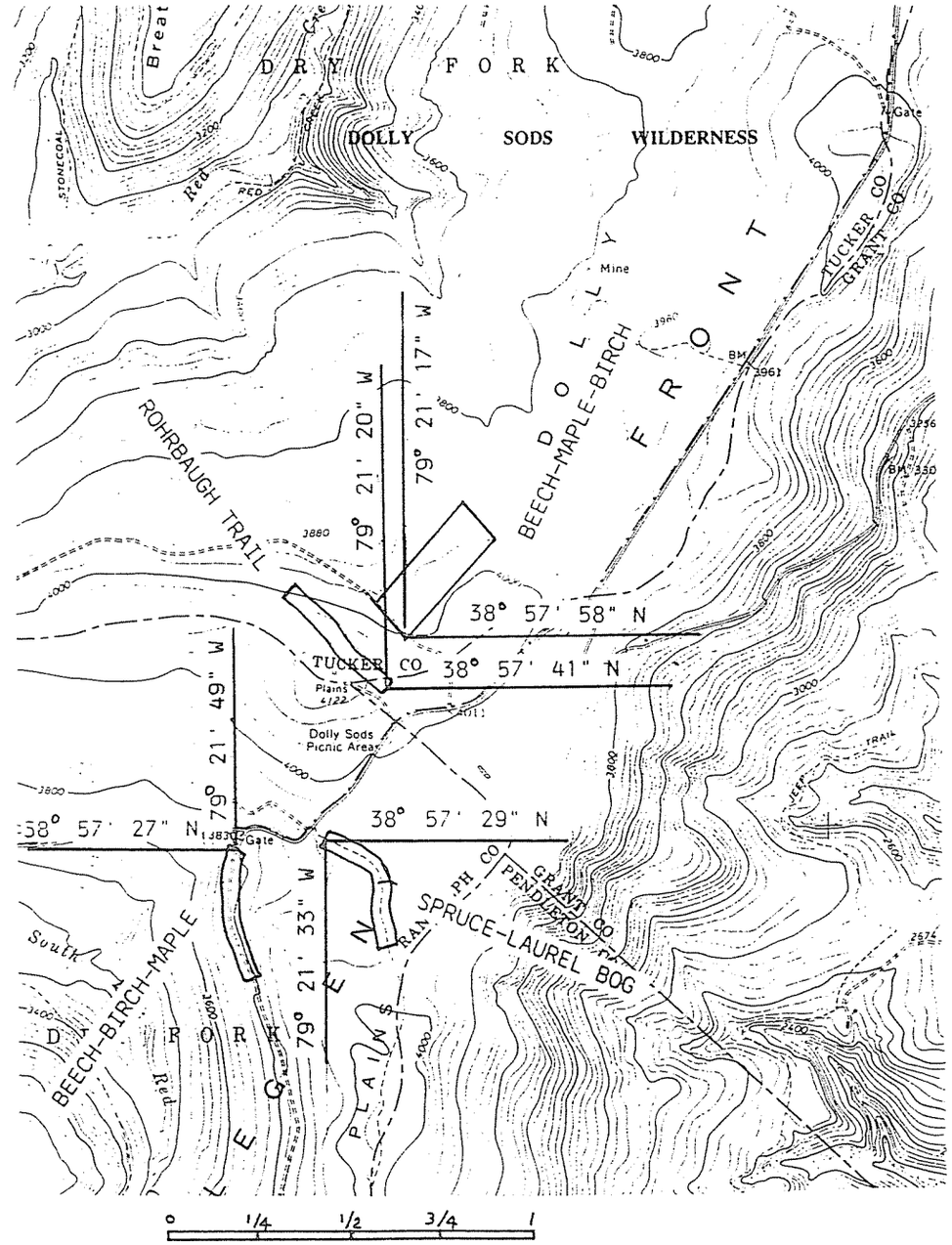
A comparison of results between 1984 and 1994 is rather disturbing. On the three repeated plots the total number of males in 1994 was only 66% of the number found in 1984. Nearly every species decreased, especially warblers and thrushes. Weather does not appear to have been a factor. It was either clear or lightly foggy in the mornings. There was little or no wind and temperatures were between 58° and nearly 80° F. The area was dry for this time of year as could be seen by the little amount of water in the bogs. Another factor could be that our studies were a week later than in 1984. Neither of these factors appears to be enough to explain the changes in bird populations observed.Therefore, these plots may be exhibiting the general decrease in neotropical migrants that has become apparent in other areas. The two new plots had rather good numbers of some warblers and thrushes. It is obvious that these five plots should be studied again to further document these changes.

Oak-Maple-Basswood—Location: West Virginia; Randolph County; 2 miles ESE of Laneville; 38° 57' 31" N, 79° 23' 01" W, Laneville Quadrangle, USGS, extends east. Continuity: Established 1984. Size: 6.07 ha. = 15 acres (rectangular, 110 x 660 yards, measured longitudinally and estimated laterally). Description of plot: See *The Redstart*, *52*(4), 110-111. Coverage: June 12 to June 19, 1994. All trips between dawn and 0700 hours, or 1800 and 1923 hours EDT. Total party hours: 12. Census: Red-eyed Vireo, 6 (99, 40); Black-throated Blue Warbler, 1.5; Scarlet Tanager, 1.5; Black-throated Green Warbler, 1; Veery, 0.5; Eastern Wood-Pewee, +; Solitary Vireo, +; Rose-breasted Grosbeak, +. Total: 8 species; 10.5 territorial males (173/sq. km., 70/100 acres). Visitors: Ruffed Grouse, Blue Jay, Common Raven, Black-capped Chickadee, Yellow-throated Vireo. Remarks: The center line of the study area follows a logging road that was regraded and used for a logging operation in the

early 1990s. The entire study area was selectively cut at that time, which opened up the canopy considerably. An adult Ruffed Grouse with several chicks was observed on the plot. Census participants: Cynthia Ellis, David Ellis, Dawn Fox (compiler),Thomas Fox, William Smith, Gordon Vujevic.

Rohrbaugh Trail (Red Spruce-Yellow Birch)—Location: West Virginia; Grant and Tucker counties; three miles east of Laneville; 38° 57' 41" N, 79° 21' 20" W, Hopeville Quadrangle, USS, extends NW. Continuity: New. Size: 6.07 ha. = 15 acres (rectangular, 110 x 660 yards, measured longitudinally and estimated laterally). Description of plot: The centerline of the plot starts 400 feet from Forest Route 19 and follows Rohrbaugh Trail. The dominant canopy trees are Red Spruce (*Picea rubens*) and Yellow Birch (*Betula alleghaniensis*). Most prominent in the understory are *Rhododendron* sp. and seedlings of canopy trees. The ground cover is primarily mosses and a liverwort. A quantitative survey of the vegetation gave the following results: Trees 3-inches diameter and over, based on five 0.1-acre circular samples: 496/acre; total basal area 194.4 sq. ft./acre. Species comprising 92.6% of the total number of trees: Red Spruce, 150, 30.2, 43.8, 100; Yellow Birch, 206, 41.5, 28.7, 100; Mountain Maple (*Acer spicatum*), 20, 4, 1.2, 20; American Beech (*Fagus grandifolia*), 14, 2.8, 0.9, 40; Dead, 64, 12.9, 18.6, 100. Trees by diameter class: A (3-6 in.) 264, 53.2, 26.4, 13.6; B (6-9 in.) 104, 20.9, 31.2, 16; C (9-15 in.) 104, 20.9, 83.2, 42.8; D (15-21 in.)16, 3.2, 28.8, 14.8; E (21-27 in.) 8, 1.6, 24.8, 12.7. Shrub stems/acre 3,080; ground cover 69%; canopy cover 86%; average canopy height 53 ft. (range 42.2 - 60.2). Edge: Similar forest continues in all directions. Topography: Somewhat level, then descending and turning at the far end. Elevation: 4,000-4,090 feet. Coverage: June 13 to June 19, 1994. All trips between dawn and 0715 hours, or 1550 and 1920 hours EDT. Total party hours: 13.5. Census: Black-throated Blue Warbler, 6 (99, 40); Magnolia Warbler, 5 (82, 33); Winter Wren, 2; Golden-crowned Kinglet, 1.5; Dark-eyed Junco, 1.5; Veery, 0.5; Swainson's Thrush, +; Hermit Thrush, +; Black-throated Green Warbler, +; Canada Warbler, +. Total: 10 species; 16.5 territorial males (272/sq.km., 110/100 acres). Visitors: Mourning Dove, Blue Jay, Red-breasted Nuthatch. Remarks: A Northern Flying Squirrel box was found on the plot. Census participants: Virginia Johnson, Steven Mace. Vegetation surveyors: Elizabeth Bullard, James Bullard, Dawn Fox, Thomas Fox, Virginia Johnson, Marjorie Keatley, Steven Mace, Carl Slater.

Spruce-Laurel Bog—Location: West Virginia; Randolph County; 3 miles east of Laneville; 38° 57' 29" N, 79° 21' 33" W, Hopeville Quadrangle, USGS, extends southeast along the Forest Service South Prong Trail. Continuity; Established 1984. Size: 6.07 ha. = 15 acres (rectangular, 110 x 660 yards, measured longitudinally and estimated laterally). Description of plot: See *The Redstart, 52*(4), 113. A vegetative survey in 1994 gave the following results. The dominant canopy trees are Red Spruce



HOPEVILLE -- W VA
7 1/2 ' QUADRANGLE

(*Picea rubens*), Red Maple (*Acer rubrum*), and Eastern Hemlock (*Tsugo canadensis*). Most prominent in the understory are Mountain Laurel (*Kalmia latifolia*) and Serviceberry (*Amelanchier* sp.). The ground cover is primarily sphagnum moss and Cranberries (*Vaccinium oxycoccos*). A quantitative survey of the vegetation gave the following results: Trees 3-inches diameter and over, based on five 0.1-acre circular samples:256/acre; total basal area 71.2 sq. ft./acre. Species comprising 100% of the total number of trees: Red Spruce, 206, 80.4, 89.3, 100; Red Maple, 26, 10.1, 3.6, 80; Eastern Hemlock, 8, 3.1, 1.7, 20; Dead, 16, 6.2, 5.3, 80. Trees by diameter class; A (3-6 in.) 148, 57.8, 14.8, 20.8; B (6-9 in.) 64, 25, 19.2, 27; C (9-15 in.) 42, 16.4, 33.6, 47.2; D (15-21 in.) 2, 0.8, 3.6, 5. Shrub stems/acre 2,670; ground cover 88%; canopy cover 21%; average canopy height 33 ft. (range 18-47). Edge: As described in 1984. Topography: Relatively level at 3,940 ft. with slight drop where small stream cuts through plot. Coverage: June 13 to June 19, 1994. Most trips between dawn and 0800 hours. Total party hours: 20. Census: Common Yellowthroat, 4 (66, 27); Rufous-sided Towhee, 4 (66, 27); Magnolia Warbler, 3.5 (57, 23); Dark-eyed Junco, 2.5; Veery, 2; Chestnut-sided Warbler, 2; Northern Waterthrush, 1.5; Golden-crowned Kinglet, 1; American Robin, 1; Yellow-rumped Warbler, 1; Black-capped Chickadee, +; Winter Wren, +; Hermit Thrush, +; Cedar Waxwing, +; Black-throated Green Warbler, +; Purple Finch, +. Total: 16 species; 22.5 territorial males (371/sq. km., 150/100 acres). Visitors: Red-shouldered Hawk, Chimney Swift, Hairy Woodpecker, Blue Jay, Ovenbird, American Goldfinch. Census participants: Elizabeth Bullard (compiler), James Bullard, Greg Eddy, Dawn Fox, Thomas Fox (compiler), Marjorie Keatley, Ann Pyle, Carl Slater, Gordon Vujevic. Vegetation surveyors: Elizabeth Bullard, James Bullard, Thomas Fox, Virginia Johnson, Marjorie Keatley, Steven Mace, Carl Slater.

Beech-Birch-Maple—Location: West Virginia; Randolph County; three miles east of Laneville; 38° 57' 27" N, 79° 21' 49" W. Hopeville Quadrangle, USGS. Continuity: Established 1984. Size: 6.07 ha. = 15 acres (rectangular, 110 x 660 yards, measured longitudinally and estimated laterally), extends south. Description of plot: See *The Redstart*, *52*(4), 112. Coverage: June 13 to June 19, 1994. All trips between dawn and 1450 hours or 1815 and 1922 hours. Total party hours; 9.8. Census: Dark-eyed Junco, 3.5 (58, 23); Hermit Thrush, 2.5; Black-capped Chickadee, 2; Black-throated Blue Warbler, 1.5; Black-throated Green Warbler, 1; Solitary Vireo, 0.5; American Robin, +; Canada Warbler, +; Scarlet Tanager, +; Rose-breasted Grosbeak, +. Total: 10 species; 11 territorial males (181/sq. km., 73/100 acres). Census participants: James Bullard, Greg Eddy, Dawn Fox, Helen Graffious, Marjorie Keatley (compiler), Carl Slater, Toshi Shimazala, Gordon Vujevic.

Beech-Maple-Birch—Location: West Virginia; Tucker County; Three miles east of Laneville; 38° 57' 58" N, 79° 21' 17" W; Hopeville Quadrangle, USGS, extends 660

yards N42E. Continuity: New. Size: 12.14 ha. = 30 acres. The plot is a parallelogram with the northwest and southeast sides extending 660 yards N42E and the southwest and northeast sides 220 yards approximately N25W. The southwest edge follows an old forest road that served as the center line of the Maple-Birch-Beech plot studied in 1984 (see *The Redstart, 52*(4), 111). Description of plot: A vegetative survey gave the following results: The dominant canopy trees are American Beech (*Fagus grandifolia*), Red Maple (*Acer Rubrum*) and Yellow Birch(*Betula alleghaniensis*). Most prominent in the understory are seedlings of canopy trees. The ground cover is primarily fern species. Trees 3-inches diameter and over, based on 10, 0.1 circular samples: 1,098/acre; total basal area 329 sq. ft./acre. Species comprising 97% of the total number of trees: American Beech, 566, 51.5, 43.5, 90; Red Maple, 176, 16, 24.7, 80; Yellow Birch, 158, 14.3, 51.5, 43.5, 90; Red Spruce (*Picea rubens*), 68, 6.2, 3.7, 70; Dead, 102, 9.2, 9.5, 100. Trees by diameter class: A (3-6 in.) 562, 51.1, 56.2, 17; B (6-9 in.) 364, 33.1, 109. 2, 33.1; C (9-15 in.) 146, 13.2,116.8, 35.5; D (15-21 in.) 26, 2.3, 46.8, 14.2. Shrub stems/acre 725; ground cover 50%; canopy cover 99%; average canopy height 51.45 ft. (range 34.1-58.3). Edge: An old road borders the southwestern edge. Forest continues in all other directions. Topography: A small valley cuts across one end and the whole plot slopes slightly to the west. Elevation: 4,000 feet. Coverage: June 14 to June 19, 1994. All trips between 0525 and 0740 hours except two between 1845 and 2025. Total party hours: 24.75. Census: Black-throated Green Warbler, 7(57, 23); Hermit Thrush, 6(49, 20); Red-eyed Vireo, 5(41, 16); Magnolia Warbler, 4(33, 13); Ovenbird, 3.5(29, 11); Dark-eyed Junco, 2; Golden Crowned Kinglet, 1; American Robin, 1; Black-throated Blue Warbler, 1; Winter Wren, 0.5; Solitary Vireo, 0.5; Canada Warbler, 0.5; Scarlet Tanager, 0.5; Rose-breasted Grosbeak, 0.5; Hairy Woodpecker, +; Red-breasted Nuthatch, +. Total: 16 species; 33 territorial males (272/sq. km., 110/100 acres). Visitors: Great Horned Owl, Acadian Flycatcher, Blue Jay, American Crow, Common Raven, Black-capped Chickadee, White-breasted Nuthatch, Cedar Waxwing, Purple Finch. Remarks: This 30-acre plot replaces the 15-acre Maple-Birch-Beech plot run in 1984 (see *The Redstart, 52*(4): 113). The southwest 220-yard edge of the plot follows the center line of the previous plot. The location was partly chosen to eliminate edge effect. Census participants: Greg Eddy (compiler), Dawn Fox, Thomas Fox, LeJay Graffious, Marjorie Keatley, John Northeimer, Juanita Slater, Gordon Vujevic, Judith Ward. Vegetation surveyors: Greg Eddy, Cynthia Ellis, John Northeimer, Juanita Slater, Gordon Vujevic, Judith Ward.

3 Aster Drive, Clinton Hills
Triadelphia, WV 26059

1994 Dolly Sods Breeding Birds Survey

Ann H. Pyle

The second Dolly Sods Breeding Bird Survey (BBS) was held June 14-17, 1994. Beginning by 5:30 each morning, three-minute stops were made by our driver at about each half mile along our survey routes. We listed each bird heard or seen during the three-minute stops at 78 locations in our Sortie territory.

On the first run to Dry Fork, 55 species were found; on the second on Jordan Run Road, 39 species were called; on the third to Bear Rocks, 42 species were heard or seen; and on the fourth on East Lanesville Road, 51 species were identified. The BBS runs are numbered 1-4 in Table 2. Twenty stops were made on the first three runs, but only 18 on the fourth.

The territory was expanded slightly on the Allegheny Front Mountain to about 2,600-feet elevation on the two roads from headquarters at Lanesville Wildlife Cabin. This allowed us to pick up a few different species: the Whip-poor-will, Cerulean Warbler, and Hooded Warbler. The weather was satisfactory on all runs.

Our total of birds this Sortie was 83 species, and our number of individuals was 990. Our total 10 years ago was 75 species with 1,108 individual birds. The seven most abundant bird species in 1994 are listed in Table 1. This year the Red-wing Blackbird and Wood Thrush replaced the Dark-eyed Junco and American Goldfinch on the 1984 list of most abundant species.

Table 1

The Seven Most Abundant Species Observed on the 1994 Sortie BBS

Red-eyed Vireo	99
American Robin	76
Indigo Bunting	54
Rufous-sided Towhee	48
American Crow	42
Red-wing Blackbird	41
Wood Thrush	41

In the lower areas, Bobolinks and Savannah Sparrows were found in most lush meadows where stops were made. In 1984 we found as many birds but in only two locations. We noted more birds in 1984 than in 1994 of the following species: Winter Wren, Veery, Grey Catbird, Chestnut-sided Warbler, Northern Cardinal, Dark-eyed Junco and American Goldfinch. We did, however, find a greater number of species in 1994.

Reported from this area on the Sortie BBS for the first time were Yellow-billed Cuckoo, Killdeer, Red-bellied Woodpecker, Willow Flycatcher, White-eyed Vireo, Warbling Vireo, Pine Warbler, Grasshopper Sparrow, and Orchard Oriole.

Several additional houses have been built on the lower elevation roads in the 10-year period between the two sorties, and all roadways have been improved by better grading and somewhat by better surfaces, particularly the road to Dry Fork. Generally speaking, the flavor and appearance of Dolly Sods have not been greatly altered. The habitat for breeding birds is still most favorable.

We identified more Yellow-rumped Warblers on the Bear Rocks Run. They were not found nesting there 10 years ago. Their numbers continue to increase on Dolly Sods, as on other West Virginia mountains.

Participants in the 1994 surveys were James Bullard, Kyle Bush, Dawn Fox, Eugene E. Hutton, Jr., Reba Hutton, Ann Pyle, and Judith Ward.

Table 2

Number of Birds by Species: 1984 and 1994 Sortie Breeding Bird Surveys

Species	Run 1	Run 2	Run 3	Run 4	1994	1984
Mallard	-	-	-	1	1	-
Turkey Vulture	-	3	-	-	3	-
Cooper's Hawk	-	-	-	-	-	1
American Kestrel	-	-	-	-	-	1
Ruffed Grouse	-	-	-	-	-	1
Wild Turkey	-	1	-	-	1	-
Killdeer	-	-	-	7	7	-
Mourning Dove	1	-	-	-	1	7
Yellow-billed Cuckoo	1	-	1	1	3	-
Eastern Screech-Owl	-	-	-	-	-	1
Barred Owl	1	-	-	-	1	7
Whip-poor-will	-	2	-	-	2	-
Red-bellied Woodpecker	1	-	-	-	1	-
Downy Woodpecker	-	-	-	-	-	1
Hairy Woodpecker	-	-	-	-	-	2
Pileated Woodpecker	2	1	-	3	6	3
Yellow-shafted Flicker	1	-	-	-	1	3
Eastern Wood-Pewee	5	1	1	6	13	15
Acadian Flycatcher	2	1	-	1	4	7
Alder Flycatcher	-	-	1	-	1	1
Willow Flycatcher	1	-	-	-	1	-
Least Flycatcher	7	1	4	2	14	12

Species	Run 1	Run 2	Run 3	Run 4	1994	1984
Great Crested Flycatcher	3	1	-	1	5	2
Eastern Phoebe	7	1	-	3	11	15
Eastern Kingbird	-	-	-	1	1	2
Tree Swallow	1	-	-	1	2	-
N. Rough-winged Swallow	-	-	-	-	-	2
Barn Swallow	10	-	-	13	23	12
Blue Jay	-	-	2	1	3	6
American Crow	18	10	1	13	42	60
Common Raven	-	5	2	1	8	10
Black-capped Chickadee	5	1	2	2	10	14
Tufted Titmouse	4	-	-	7	11	11
White-breasted Nuthatch	1	-	-	3	4	3
House Wren	9	-	-	14	23	28
Winter Wren	-	2	9	-	11	2
Golden-crowned Kinglet	-	-	4	-	4	-
Blue-gray Gnatcatcher	6	1	-	1	8	11
Eastern Bluebird	4	6	-	1	11	9
Veery	2	-	5	-	7	24
Hermit Thrush	-	-	8	-	8	10
Wood Thrush	19	13	4	5	41	33
American Robin	20	6	21	29	76	89
Gray Catbird	6	2	9	5	22	44
Brown Thrasher	2	-	3	2	7	6
Cedar Waxwing	2	-	13	3	18	36
European Starling	5	-	-	5	10	7
White-eyed Vireo	-	-	1	-	1	-
Solitary Vireo	4	1	5	-	10	5
Yellow-throated Vireo	-	-	-	1	1	3
Warbling Vireo	2	-	-	-	2	-
Red-eyed Vireo	36	36	16	11	99	97
Golden-winged Warbler	-	-	-	-	-	3
Northern Parula	-	-	1	1	2	3
Yellow Warbler	5	-	-	1	6	10
Chestnut-sided Warbler	1	1	13	1	16	4
Magnolia Warbler	3	3	12	-	18	13
Black-throated Blue Warbler	-	-	2	-	2	3
Yellow-rumped Warbler	-	-	6	-	6	-
Black-throated Green Warbler	-	7	6	-	13	15
Pine Warbler	-	1	-	-	1	-

Species	Run 1	Run 2	Run 3	Run 4	1994	1984
Prairie Warbler	-	-	-	-	-	1
Cerulean Warbler	-	1	1	-	2	-
Black-and-white Warbler	1	2	-	-	3	4
Hooded Warbler	-	-	1	-	1	1
Canada Warbler	-	-	2	-	2	-
American Redstart	2	3	1	-	6	9
Ovenbird	1	6	7	-	14	1
Louisiana Waterthrush	-	1	-	1	2	-
Common Yellowthroat	11	-	13	10	34	24
Yellow-breasted Chat	-	-	-	-	-	4
Scarlet Tanager	5	10	2	2	19	9
Northern Cardinal	1	-	-	-	1	8
Rose-breasted Grosbeak	1	2	1	4	8	7
Indigo Bunting	23	9	3	19	54	58
Rufous-sided Towhee	3	5	35	5	48	50
Chipping Sparrow	5	4	1	18	28	15
Field Sparrow	5	2	-	9	16	17
Vesper Sparrow	-	-	-	-	-	2
Savannah Sparrow	-	-	1	4	5	2
Grasshopper Sparrow	-	1	-	1	2	-
Song Sparrow	6	-	3	9	18	24
Dark-eyed Junco	-	1	18	-	19	59
Bobolink	7	-	-	2	9	13
Red-winged Blackbird	13	-	-	28	41	17
Eastern Meadowlark	3	-	-	5	8	11
Common Grackle	7	-	-	2	9	24
Brown-headed Cowbird	-	1	-	9	10	19
Orchard Oriole	1	-	-	-	1	-
Northern Oriole	2	-	-	2	4	4
Purple Finch	-	-	5	-	5	5
House Finch	1	-	-	-	1	1
American Goldfinch	3	1	5	4	13	54
House Sparrow	3	-	-	1	4	11

1111 Lakeview Drive
Parkersburg, WV 26104-1613

1994 Dolly Sods Sortie Plant List

Steven D. Mace

The following is a list of the plants seen during the 1994 Sortie on Dolly Sods that were not seen on the June, 1984 Sortie. The list is in phylogenetic order as in the *Flora of West Virginia*. Contributors to the plant list included Elizabeth Bullard, James Bullard, Kyle Bush, Greg Eddy, Cynthia Ellis, Dawn Fox, Thomas Fox, Eugene Hutton, Reba Hutton, Virginia Johnson, Marjorie Keatley, John Northeimer, Ann Pyle, Carl Slater, Juanita Slater, William Smith, Gordon Vujevic, and Judith Ward.

ARACEAE	ARUM FAMILY
Arisaema triphyllum	Jack-in-the-Pulpit
LILIACEAE	LILY FAMILY
Smilacina racemosa	Plumelily
Convallaria montana	American Lily-of-the-Valley
Medeola virginiana	Indian Cucumber Root
Polygonatum biflorum	Common Solomon's Seal
Trillium erectum	Ill-scented Trillium
Trillium grandiflorum	Large Flowered Trillium
Smilax herbacea	Carrion Flower
Smilax glauca	Saw Brier
DIOSCOREACEAE	YAM FAMILY
Discorea quaternata	Four-leaved Wild Yam
AMARYLLIDACEAE	AMARYLLIS FAMILY
Hypoxis hirsuta	Yellow Stargrass
IRIDACEAE	IRIS FAMILY
Sisyrinchium angustifolium	Blue-eyed Grass
ORCHIDACEAE	ORCHID FAMILY
Habenaria orbiculata	Large Round-leaved Orchid
ARISTOLOCHIACEAE	BIRTHWORT FAMILY
Asarum canadense	Wild Ginger
Asarum virginicum	Small Wild Ginger

Aristolochia macrophylla	Pipevine
CARYOPHYLLACEAE	PINK FAMILY
Silene cucubalus	Bladder Campion
Dianthus armeria	Deptford Pink
RANUNCULACEAE	CROWFOOT FAMILY
Ranunculus septentrionalis	Northern Swamp Buttercup
Ranunculus acris	Meadow Buttercup
Anemone virginia	Thimbleweed
Clematis verticillaris	Purple Virgin's Bower
Helleborus viridis	Green Hellebore
Aquilegia canadensis	Columbine
CRUCIFERAE	MUSTARD FAMILY
Thlaspi arvense	Field Pennycress
Alliaria officinalis	Garlic Mustard
Hesperis matronalis	Dame's Rocket
Barbarea vulgaris	Winter Cress
ROSACEAE	ROSE FAMILY
Gillenia trifoliata	Bowman's Root
Potentilla tridentata	Three-toothed Cinquefoil
Geum canadense	White Avens
Dalibarda repens	Starviolet
LEGUMINOSAE	PULSE FAMILY
Medicago lupulina	Black Medic
POLYGALACEAE	MILKWORT FAMILY
Polygala paucifolia	Gay Wings
VIOLACEAE	VIOLET FAMILY
Viola macloskeyi	Northern White Violet
Viola blanda	Sweet White Violet
Viola rotundifolia	Roundleaf Violet
Viola hastata	Halberd-leaf Yellow Violet
ONAGRACEAE	EVENING-PRIMROSE FAMILY
Oenothera tetragona	Common Sundrops
Circaea quadrisulcata	Enchanter's Nightshade

UMBELLIFERAE	CARROT FAMILY
Heracleum maximum	Cow Parsnip
PRIMULACEA	PRIMROSE FAMILY
Trientalis borealis	Star Flower
APOCYNACEAE	DOGBANE FAMILY
Apocynum androsaemifolium	Spreading Dogbane
ASCLEPIADACEAE	MILKWEED FAMILY
Asclepias quadrifolia	Four-leaved Milkweed
LABIATAE	MINT FAMILY
Nepeta cataria	Catnip
Prunella vulgarisq	European Selfheal
SCROPHULARIACEAE	FIGWORT FAMILY
Penstemon digitalis	Foxglove
RUBIACEAE	MADDER FAMILY
Houstonia caerulea	Bluets
Houstonia serpyllifolia	Thyme-leaved Bluets
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY
Triosteum aurantiacum	Horsegentian
DIPSACACEAE	TEASEL FAMILY
Dispsacus sylvestris	Common Teasel
COMPOSITAE	COMPOSITE FAMILY
Solidago caesia	Wreath Goldenrod
Matricaria matricarioides	Pineapple Weed
Tussilago farfara	Coltsfoot
Senecio aureus	Golden Ragwort
Carduus nutans	Must Thistle
Hieracium pilosella	Mouse-ear Hawkweed
Hieracium aurantiacum	Orange Hawkweed
Hieracium venosum	Rattlesnake-weed

P.O. Box 122
New Haven, WV 25265

Butterflies of Dolly Sods Area Sortie, 1994

Virginia Johnson

Papilio glaucus	Tiger Swallowtail
Colias interior	Pink-edged Sulphur
Celastrina argiolus	Spring Azure
Chlosyne harrisii	Harris Checkerspot
Phyciodes tharos	Pearl Crescent
Nymphalis antiopa	Mourning Cloak
Vanessa atalanta	Red Admiral
Limenitis arthemis astyanax	Red-spotted Purple
Danaus plexippus	Monarch
Epargyreus clarus	Silver-spotted Skipper
Erynnis icelus	Dreamy Dusky Wing

24 Robinson St.
Uniontown, PA 15401

Field Notes
Winter Season
December, 1994-February, 1995

James D. Phillips, Editor

The beginning of the season was very mild with warmer than normal temperatures. The second half of the season was more like winter with colder temperatures and some ice and snow. Waterfowl seemed in very good numbers and there was quite a bit of variety. The number of eagle sightings continues to increase. Invaders from the north were noticeable by their absence. Unusual birds for the season included **Sandhill Crane, Osprey,** and **Eastern Kingbird**.

Loons through falcons—Common Loons were noted in December in Summers(JP) and Tucker(JN) counties. **Double-crested Cormorants** were found along the New River, Summers County(JP) and nearly 50 were seen on the lower Kanawha River by Allegheny Vistas staff. **Pied-billed Grebes** were seen in Summers(JP) and Kanawha(HG) counties and along the Ohio River(MBC). **Horned Grebes** could be found in Tucker County(JN) in early December and most of the winter in Summers(JP) County. Two were on the Ohio River, Ohio County(BBC) in late February. **Great Blue Herons** spent the winter in southern West Virginia(JP) and along the Ohio River(MBC) all the way north to Ohio County(BBC). Tom Fox reported the species present but in low numbers along the West Fork of the Little Kanawha River in Calhoun County.

A **Mute Swan** was seen in Mason County for a couple of days in late February(WA). As usual there was no shortage of **Canada Geese** in the region. Allegheny Vistas reports nearly 4,000 counted by state wildlife personnel in early January along the lower Kanawha and nearby Ohio rivers. Also included in that report were 3,200 **Mallards** and 600 **American Black Ducks**. **Wood Ducks** were seen in Calhoun(TF) and Upshur(VH) counties in December and Lewis(AV), Upshur(VH), and Summers(JP) counties in January. They had returned to most areas by late February. A few **Green-winged Teal** could be found on the New River, Summers County during the season. More than the usual numbers of **Gadwall** were reported for the New(JP) and Ohio(WA,MBC) rivers. More **Canvasbacks, Redheads, Ring-necked Ducks,** and **Lesser Scaup** were found this winter along the New(JP), Kanawha(HG,AV), and Ohio(WA,MBC) rivers. **American Wigeon** were reported for Wood(MBC) and Summers(JP) counties. **Common Goldeneyes, Bufflheads,** and **Hooded Mergansers** continue to be the common winter residents along the New, Kanawha, and Ohio rivers. A few **Common Mergansers** were noted. **Ruddy Ducks** were found only in Wood(MBC), Ohio(BBC), and Mineral(JN) counties in late December and early January.

The mild weather may have caused the vultures to wander into the western part of the region. **Turkey Vultures** were noted from Mason(AV) and Kanawha(HG) counties. There were more reports than usual from Mercer, Summers(JP), Raleigh(DS), Tucker(JN), and Hardy(JW) counties. **Black Vultures** were seen in Hardy(JW), Mercer, and Summers(JP) counties. Unusual was the **Osprey** flying over the Bethany College Campus, Brooke County(JB) on January 23. **Bald Eagle** sightings increase each year. The following is a breakdown of the sightings: at least one adult and one immature in Mason County(WA,AV); adults in Kanawha, Randolph, Pendleton(AV), and Wood(MBC) counties; immature birds in Summers(JP), Pleasants(BBC, MBC), Wood(MBC), and Wetzel(BBC) counties; and undesignated age birds in Hardy(JW) and Upshur(VH) counties. One of the immature birds in Wood County had green wing tags and was present for over a month(MBC).

Argabrite reported **Northern Harrier** numbers "way up" along the Ohio River and one was seen in Summers County(JP). The mild weather and abundance of wild food kept songbirds away from feeders and thus **Sharp-shinned** and **Cooper's hawks** were not seen much until the songbirds moved into the yards. **Red-shouldered** and **Red-tailed hawks** seemed in good numbers. **Rough-legged Hawks** wintered in Cabell(WA), Mason(AV), Wood(MBC), and Tucker(JN) counties. **Golden Eagles** were seen in Randolph(AV) and Summers(JP) counties. **American Kestrels** seemed to winter in very good numbers across the region.

Gamebirds through finches—Little mention was made of **Ruffed Grouse** other than good numbers in Calhoun County(TF). **Wild Turkeys** continue to do well with reports from most all areas of the state. The only report for **Northern Bobwhite** came during December in Wood County(MBC). **American Coots** seemed in good numbers across the region. Five **Sandhill Cranes** were present at Green Bottom, Cabell County for about two weeks in February(WA). **Killdeer** were mentioned by most observers. Hullet Good noted over 200 **Ring-billed Gulls** along the Kanawha River during the winter.

Mourning Doves continue to be very common. A **Common Barn-Owl** was heard in the Hawk Campground on the Hampshire/Hardy County line in February(JW). **Eastern Screech-Owls** and **Barred Owls** were found by most observers, but there were only a few **Great Horned Owls** noted. Charles Hanley, compiler for the Lewisburg, Greenbrier County, Christmas Bird Count, reported that Jerry Davis and Butch Hickman saw an **Eastern Kingbird** on the count. Ten to twenty **Red-headed Woodpeckers** again wintered near Amma, Roane County(HG). At least six were present at Spring Run, Ritchie County(JW) and one on Mt. Zion Ridge, Calhoun County(TF). **Yellow-bellied Sapsuckers** wintered in good numbers across the region. The other woodpeckers seemed in normal numbers.

Eastern Phoebes were seen in Raleigh(DS), Summers(JP), Calhoun(TF), and Kanawha(TF) counties. The birds in Raleigh and Summers counties probably

remained all winter while the other birds were probably early migrants. Small flocks of **Horned Larks** were found in Tucker(JN) and Mason(AV) counties. The Raleigh County roost of **American Crows** contained about 15,000 birds(DS) while the roost in Canaan Valley only had about 2,000 birds(JN). **Common Ravens** were reported in Mercer, Summers(JP), Hardy(JW), Roane(AV), and Tucker(JN) counties. There were only a few reports of **Red-breasted Nuthatches** but **Winter Wrens** seemed to winter well. There were mixed reports for the **Carolina Wren** after the previous winter.

Both **kinglets** seemed in good numbers. Most areas had the usual numbers of **Hermit Thrushes** and **Yellow-rumped Warblers**. Unusual was a **Yellow Warbler** in Washington County, Ohio on January 4(MBC). Five to ten thousand **American Robins** roosted in Wheeling, Ohio County(BBC). Nearly a quarter of a million **European Starlings** were noted in Ohio County(BBC). A female **Lapland Longspur** was seen in Mason County in early February(AV). **American Tree Sparrows** were seen in Wood(MBC) and Tucker(JN) counties. **Dark-eyed (Oregon) Juncos** were seen at feeders in Raleigh(DS) and Summers(JP) counties. A few **Rusty Blackbirds** were seen across the region. A flock of more than 1,000 **Common Grackles** was seen in Kanawha County(HG). A flock of **Common Redpolls** was seen at Maxine Thacker's place in Buckhannon, Upshur County in late January(VH). Two **Pine Siskins** were seen in Wood County(MBC).

Contributors—Wendell Argabrite(WA), Brooks Bird Club Headquarters(BBC), A. R. Buckelew Jr.(JB), Thomas Fox(TF), Hullet Good(HG), Charles Handley(CH), Virginia Bly Hoover(VH), Mountwood Bird Club(MBC), John Northeimer(JN), Dollie Stover(DS), Allegheny Vistas(AV), and Jane Whitaker(JW).

West Virginia Rare Bird Hotline - 304-736-3086

HC 78, Box 42-C
Pipestem, WV 25979

Book Reviews

New World Warblers by Jon Curson, illustrated by David Quinn and David Beadle. 1994. Houghton Mifflin Company, Boston. 252 pp., 36 colorplates, 116 maps. $40 hardcover.

Most readers of *The Redstart* may not be familar with the International Bird Identification series of the Christopher Helm publishing company of England. The series now contains nine books, each of a limited group of birds (waterfowl, shorebirds, etc.) The book at hand, available in an American edition, discusses 116 members of the subfamily Parulinae—the Wood Warblers. Thus it includes not only our familiar North American species but also those of the Caribbean Islands and tropical America.

All of these books have the same general format. After an introductory section discussing the taxonomy, evolution, and conservation of the subfamily, the first part of the book consists of the colorplates. Three or four species are illustrated in each of the 36 plates. Most species are represented by four different plumages, but some have more—the Common Yellowthroat has nine. The facing page identifies plumages represented and often gives identification clues. It also contains a small range map showing summer and winter ranges.

In the second part of the book each species gets about a page of discussion under the topics Identification, Description, Geographical Variation, Voice, Habitat and Habits, Breeding, States and Distribution, Movements, Moult, Skull, and Measurements. A short list of references is given.

The textual material is a competent summary of the known information for these species compiled from the literature. It is evident in some of these accounts that there is a lot we do not know about the natural history of some of our more or less familiar warblers. Some of the identification clues reflect the basic unfamiliarity of the British author with these New World species. The song descriptions are more or less useless.

The real heart of the book is the colorplates. The two artists are Britons and so do not have extensive experience with the living birds. How good then, are these pictures? For the North American species the postures and body shapes are mostly good, although the Ovenbird and waterthrushes all have legs that would not support the bodies shown. The breeding season males and females are quite well done, and will certainly aid in identification. The differences between the breeding male Mourning and MacGillivray's warblers are not shown well. The non-breeding season figures are another matter, however, and many of them are inaccurate. I am not sure if some of the color errors are the fault of the artist or of faulty reproduction. Thus the fall Tennessee Warblers are not green enough. The fall Blackpolls are quite

poor. There is an orange blush of the underparts, and the leg-colors perpetuate the myth that Blackpolls always have yellow tarsi. The Chestnut-sided Warbler is not bright enough. The blues of the Cerulean and Black-throated Blue warblers are a distorted shade and both species are shown with essentially the same vivid unnatural blue color. In common with most field guides it is not recognized that some hatch year (HY) male Cape Mays are as bright as after hatch year (AHY) birds in the fall, and some AHYs are not very bright. On the other hand, the tricky matter of fall Black-throated Greens is pretty well done.

The tropical species are another matter. The artists seem to have taken a generalized bird shape and added the proper colors. As a result the birds do not look as natural as the North American ones, and none seem to really look like the half dozen or so of these species that I am familiar with.

The range maps are quite small, and the outline used is poor. As a result it is difficult to check the limits of the ranges. Unfortunately, the breeding range is represented by light yellow—which does not contrast well with the white page—making it hard to detect the exact limits of the range, as for example, the finger-like projection of the range of some species along the Appalachians. For many species the maps are thus only suggestive.

What then is the final judgment of the book? It is the one book now available that does show reasonably good pictures of all the warblers. Most American readers will find that it does not improve their ability to identify North American Warblers, but it does help with the tropical species. Novice banders should be aware that the fall pictures cannot be used to identify some species and really cannot be used to sex and age fall warblers. A few days at the Allegheny Front Migration Observatory will teach more identification tricks for these forms than any book.

George A. Hall

Birding in Ohio by Tom Thomson. Second Edition, 1995. Indiana University Press, Bloomington. 320 pp. $29.95 hardcover, $13.95 paper.

The first edition of this useful book appeared in 1983. The second edition provides descriptions of 100 new sites to bring the number of birding sites covered to more than 300. Short accounts of each site are accompanied by 40 maps. A great variety of habitats and birding hotspots are included representative of all the regions in Ohio; however, no new sites were added along the Ohio River adjacent to West Virginia. The new birding hotspot in Egypt Valley near St. Clairsville, Ohio (see *The Redstart, 62*(1), 58-61) is not in the book. The second edition also has an up-to-date checklist of Ohio birds. New appendices feature Ohio geography, the introduction of the Peregrine Falcon into the state, an expanded list of birding and natural history

organizations, and a list of telephone numbers for rare bird alerts. *Birding in Ohio* is an important book for any Ohio bird watcher.

Woodpeckers: An Identification Guide to the Woodpeckers of the World by Hans Winkler, David A. Christie, and David Nurney. 1995. Houghton Mifflin Co., Boston. 406 pp. $40 hardcover.

Another book in the Helm International Bird Identification series, this guide presents species descriptions and color illustrations of all 214 species of woodpeckers in the world, including the related wrynecks and piculets. The book begins with discussions of woodpecker taxonomy, distribution, morphology and mechanics, plumage and molt, food and foraging, ecological sexual dimorphism, habitat, behavior, reproduction and sociality, and relations to man. The 64 color plates by David Nurney show all the known species of woodpeckers and many subspecies. It is fascinating to compare the geographical variations in subspecies such as those of the Golden-fronted Woodpecker or the Downy and Hairy woodpeckers. The drawings of species I am familiar with seem to be accurate though drawn with template-like outlines and crowded on the plates. Most of the plumage variations and subspecies discussed in the species accounts are illustrated in the plates. The detailed species accounts consider identification, similar species, distribution, movements, habitat, description of plumage, geographical varieties, measurements, voice, habits, food, breeding, and a list of references. The range maps are small and do not show political boundaries so it is difficult to determine the exact extent of ranges. This book belongs in any serious ornithology library.

A. R. Buckelew Jr.