

ISSN: 0034-2165

The REDSTART

VOLUME 69, NUMBER 3

JULY, 2002



PUBLISHED BY THE BROOKS BIRD CLUB

2002 - The Brooks Bird Club, Inc.

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

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The Redstart is published quarterly in January, April, July, and October at P.O. Box 4077, 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 P.O. Box 4077, 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

Eastern Screech-Owl Studies

William H. Beatty

This article describing my research on the Eastern Screech-Owl is divided into three sections (Survey Studies, Trapping Studies, and Nest Box Studies) because of the different methods I used.

Survey Studies

Many stories could be told regarding my work or fun (each word is equally applicable) done over the past 29 years investigating the life of the Eastern Screech-Owl. This article will only examine the research-related highlights of this work, valuable to others who would like to pursue similar studies. I seriously began to consider the study of the screech owl in 1973. During this year, an annual screech owl survey was initiated, and several people were recruited to help. Few did the actual vocal imitations of the owl, and we were not yet using taped recordings of owl calls. Some went along with one of the two survey teams because it was entertaining, and also it was an opportunity to get a close look at a bird that is ordinarily quite difficult to see. The two survey territories were both located in Ohio County, West Virginia. The teams met at the Brooks Nature Center in Oglebay Park and ran the surveys from midnight until the sun came up that morning, approximately six or seven hours later. Route 88 was our dividing line. One group would survey as much of the area as possible east of Route 88; the other team would stay to the west. Afterward we would meet at the Nature Center to compare results. The results, as well as "Criteria for Determining Where to Call Owls" and "Observations" on how to run a screech owl survey, can be found in Beatty (1977). One correction to that article: Observation No. 3 should read, "A few of the owls were observed flying overhead but were not heard calling." Since 1973, almost 200 people have participated in one of the BBC Headquarters Chapter's owl counts.

In 1980, the annual owl count changed dramatically. I divided the survey area into 12 distinct routes, all within the Wheeling Christmas Bird Count area. In 1989, the routes were further divided into 24 distinct routes. So many people wanted to participate that, in 1980, I also initiated a survey rule that limited the number of participants. Each route leader had to commit to running the entire assigned route, to recording required data, and to recruiting the volunteers for that particular route. Some vehicles were filled to capacity, while others had only one or two people (this was at the leader's discretion). Although the research is important, equally important is exposing as many people as possible to the world of birds. One other effect this change had on surveys is that it reduced the amount of time it required to finish the route. These changes aided me in making future comparisons and standards. For the

majority of participants and interested observers, the goal of each year's survey was to locate as many different screech owls as possible. Most years, we had the highest screech owl count in North America, according to the published Christmas Bird Counts in *American Birds*. My goal was to learn as much about this bird as possible. Low number years were equally important to me, for these years provided valuable comparison data. Following is a list of highlights and observations.

Survey Data Highlights

1. All surveys to date have been run during cold weather months.
2. The highest number of participants on one survey was 29 in 1990.
3. The lowest number of participants on a survey was two in 1974.
4. The coldest temperature was -5 degrees in 1989. There were 18 participants and 137 screech owls counted that year. The normal, daylight Christmas Bird count was cancelled due to extreme weather conditions.
5. The warmest recorded low temperature was 41 degrees in 1990.
6. The highest number of screech owls recorded in one night was 170 in 1990.
7. The lowest number of screech owls recorded in one night was one in 1979. There were two survey teams running the east and west sides of Rt. 88 that night.
8. The highest number of screech owls on one survey route was 59 in 1987. The second highest number was 58 on another route that same year.
9. Other owls encountered include the Great-horned, Barred, and Barn Owls. Keep in mind that although all of the survey participants were familiar with the screech owl call, few could distinguish other owl calls.

Survey Results and Observations

The following observations are based upon 25 years of data. I can now roughly predict the results of the owl counts before they are run based on prevailing weather conditions and the number of routes surveyed.

1. The most important factor limiting screech owl population in our area is snow. The population trend of the 1970s was many owls early in the decade and hardly any in 1979. The trend in the 1980s was few owls early in the decade, gradually rising to our highest total in 1990. Comparison of winter weather conditions over the years of 1973 through 1998 with screech owl populations shows a correlation of high owl populations with open winters and low populations with winters where a significant amount of snow remained on the ground. During the late 1970s, we had significant snowfalls every year beginning about January 10. There was no major melt off during the winter and early spring, and deep snow continually covered the ground until late March or early April (almost three months of deep snow). Beginning in 1980, weather trends changed to occasional large snowfalls that melted away in a few days or, at most, remained covering the ground for two weeks. This weather pattern continues today. The snow cover of the 1970s limited the availability of screech owl prey, either

by reducing prey populations, or making the prey unattainable. This trend also applies to the local white-tailed deer population. During much of my time working at Oglebay as the naturalist, I was the clearing house for all manner of questions and problem solving relating to local wildlife (The Good Zoo did not open until 1978). In the 1970s, not one call was received concerning deer being a problem. The first call regarding deer destroying a garden or browsing shrubbery came in the early 1980s. When I left Oglebay in 1990, deer-related problems were the most common calls I received.

2. The Eastern Screech-Owl is the most common raptor in our area and in perhaps all of its range. Due to its cavity nesting and roosting and its nocturnal behavior, this owl is difficult to study. The territory is quite small (about one quarter square mile), a result contrary to early investigations, which were carried out in different habitats out west (Craighead & Craighead, 1956). For a more detailed account of screech owl territory size in northern West Virginia, see Beatty, J. (1988).

3. This bird loves the darkest nights. Our lowest count totals occurred on nights with full moons. On several occasions, after low counts during full moons, I reran my route a week or so later on dark nights and saw the number of screech owls triple.

4. Advancing weather fronts produce low numbers. In 1998, what began as a productive count with a clear sky and no wind, quickly changed to cloudy, windy conditions. All nine of the screech owls on my route that evening were encountered during the first half of the survey.

5. Different weather conditions favor one color phase or the other. During the 1970s we rarely located a red phase owl during a survey. In the 1980s there was a gradual rise in the number of red phase owls. Even though the grays still outnumber the reds, I do not consider it unusual to locate a red phase owl. This result corresponds to the color phase cline that exists from north to south in the United States. The relative frequency of red phase screech owls follows a pattern from north to south with about a quarter or less of the northern population being composed of red phase birds and up to three quarters or more of the southern population consisting of red phase birds. However, red phase screech owls make up as low a proportion of the population along the Gulf Coast as they do in the northern limits of their range, a confusing exception to the north-south distribution of red and gray phase owls in the rest of the North American population. (Owen, 1963)

Trapping Studies

The initial idea for trapping screech owls came from articles I read about using noose traps to trap American Kestrels (Mersereau, 1975). After constructing the first trap, I decided to test it before tying the nooses on the trap. During surveys, we had great success calling Eastern Screech-Owls into close proximity—sometimes closer than 10 feet away. The plan was to call in an owl, set a noose trap (with a mouse inside) in plain view, and wait. My first attempt at catching an owl on the trap with no nooses

and observing it from approximately 10 feet away was so successful that it was decided to park the car so the headlights would temporarily blind the owl long enough to throw a coat over it. It didn't work, and we used traps with nooses from then on. Screech owls aren't smart birds, but they were apparently smarter than I was that evening. When I began the trapping, a trap would be set out along a roadway. Hiding behind my nearby car, I would begin calling, hoping to attract an owl located on a previous survey. Before long an owl was on the trap. It soon became apparent that hiding from the owl was unnecessary. After calling a screech owl to a nearby tree, the trap would be carried and set below the owl. (The owl is watching the whole time.) On several occasions, owls hit the trap while it was still in hand—now that will make your heart stop!

Although the trapping was successful and reliable, I did not do as much as I had planned. Trapping owls was fun, but family and work commitments were higher priorities. Most trapping was done on nights my children could go along. Worth mentioning is how easy it is to trap a screech owl. Every owl attracted near a trap landed on the trap, and every owl that landed on a trap was caught, banded, and released.

During my trapping years, I became curious about the red and gray color phases of Eastern Screech-Owls. I thought there might be a link to color phase and the screech owl's preference for mammal brains as food. (Years later I found a nesting box with seven dead deer mice, all with the tops of the skulls ripped open and the brains missing.) After receiving permission from the United States Fish and Wildlife Service, I trapped a red phase male and held it in captivity, feeding it nothing but pork brains for a week. (Mouse brains are difficult to obtain.) The bird lost so much weight that I abandoned the project and spent the next week fattening the owl up before releasing it. One snowy night, I released it in the same spot I captured it. It flew to a branch in the same tree from where I had trapped it originally. Moments later, I heard a mournful scream and a splash. Shining my headlamp to where the owl had perched, I saw nothing. Again I heard splashing. Upon investigation, I discovered a screech owl on top of the owl I had just released, trying to hold it under water. Another owl watched from a nearby perch. After rescuing "my" owl, I dried it with the car heater and released it into a survey area with no recent screech owl encounters. During the two weeks I had the owl in captivity, a new screech owl or owls had moved into the previously occupied territory. (Screech owls do not mate for life.) These birds are extremely opportunistic.

Nest Box Studies

In 1988, I received a research grant from the West Virginia Department of Natural Resources, Wildlife Division's Nongame Program, that provided 30 screech owl nest boxes and necessary climbing equipment. Also, a significant event happened in 1990 that enabled me to dedicate more time for the research: I quit my job at Oglebay and

decided to work out of my home. The nest box owl work was much less time consuming, and nest box work could be done during daylight hours. All owl boxes were located within walking distance of my home: in the 14-acre woods behind my home, on properties in the town of West Liberty, on the campus of West Liberty State College, and in the 154-acre West Liberty State College Arboretum. Boxes were placed in trees 15 to 20 feet high, and all lower branches were removed to allow for easy, safer climbing. No attention was given to the direction the boxes faced. Some were placed along streams in wooded ravines, some high on hilltops away from water; others were in town in a solitary tree away from water and woodlands. Two boxes faced large, open, mowed areas. American Kestrels occasionally used these two boxes for nesting. My goals in box placement were to determine the preferred natural habitat of the Eastern Screech-Owl, compare town or campus habitats to natural habitats, and confirm territory size.

During the first year, boxes were checked once every two weeks, except during deer season with rifles. The next year, the nesting or roosting boxes were checked once a month. Then, for the next eight years, the boxes were checked five times a year. Nest boxes with nests were checked more frequently—one to two times per week while the nest and young were in the box.

Results of Nest Box Studies and Important Observations

1. All boxes were used by screech owls. Boxes were determined to be used when an owl was found in the box, or signs of owls occupying a box, such as owl pellets, or other animal remains—feathers, crayfish claws, etc.—were found.

2. I discovered no natural habitat preference for owl roosting. The availability of a suitable nesting or roosting cavity appears to be the most significant limiting factor on Eastern Screech-Owl distribution.

3. Although the in-town boxes were used as frequently for roosting as those in more natural habitats, in-town boxes were used only for roosting by screech owls, not for nesting. It appears that Eastern Screech-Owls may prefer more natural settings for nesting, but they will hunt and roost in town. Two in-town boxes were used as nesting sites by American Kestrels.

4. The small territory size discovered as a result of our nocturnal surveys was confirmed. Screech owl activity records were maintained for each banded bird. Any time a screech owl was encountered, the date and the box location (box #) for that owl were recorded. Most owls continually used the same or two different boxes; however, four owls used three different boxes, and one owl was found in four different boxes. All owls used boxes in close proximity to one another.

Eastern Screech-Owls have small territories by virtue of their feeding efficiency and diversity of prey species and size. They eat any small mammal or bird, and many amphibians and insects. Mourning Doves are not an uncommon prey even though Mourning Dove weights are similar to those of the Eastern Screech-Owl. One box

contained primary feathers from a Sharp-shinned Hawk. These owls do not have to go far to find food. If the nest or roost box is near a stream, the pellets often contain crayfish parts, salamanders, or fish scales. Whatever is most available makes up the bulk of their diet.

5. Screech owls were not the only animals encountered in the boxes. One box had a White-breasted Nuthatch nest during three successive years; one year there were nine hatchlings in the nest. American Kestrel, Carolina Chickadee, Carolina Wren, and European Starling nests were also observed. Red squirrels, eastern fox squirrels, and flying squirrels often used the boxes for nesting in early spring. If I found a squirrel nest, I waited until the young left before I cleaned out the nest material. Deer mice had nests in some boxes. One box had a honeybee hive for four years. Another contained a black rat snake. All had a wide variety of insects: ants, moths, beetles, and others. Finding these animals often reminded me of the dangers encountered by certain owl box residents. A journal entry for May 5, 1989, reads: "Box 29 had one flying squirrel with possible nesting material." Then a journal entry for November 19, 1989 reads: "Box 29 contained four pellets and one partially eaten flying squirrel." The first time I saw an often-used box, I was amazed at how messy the box was: whole pellets, partial pellets, crayfish pincers, and bird feathers were everywhere inside, as if a Blue Jay had exploded with feathers sticking to the walls and ceiling and scattered over the floor. This is a common occurrence, and I now expect it.

6. Other researchers recommend checking the boxes close to dusk to avoid the bird flying off and not returning to the eggs or young until after dark. I checked the boxes in the morning or afternoon, but never close to dusk. Most owls I found were so tired they barely awakened even when being banded. When a bird in hand was agitated, after being returned to the box, it quickly went to a back corner of the box to hide and appeared to go back to sleep.

7. Many sources recommend that the boxes be cleaned of squirrel nesting material in the spring and of all other nesting material at the end of summer. I, too, recommend spring cleaning; however, I did have one nesting owl remove the leaves from one box used by squirrels. I suspect others would do the same if given the opportunity. Boxes with screech owl nests are incredibly foul. They stink! One year I was late in cleaning out the boxes with nests. To my surprise, I discovered that the invertebrate decomposers had cleaned them. In future years, that saved me much time.

8. The only birds recaptured in my boxes were those that were banded as adults (there were 30 of these recaptures). Of the 104 screech owls found and banded in the boxes, 54 were young, born in a box. None of those hatchlings were ever found to use one of the boxes again. These hatchling birds are apparently driven "far" from the territory by the parents before the leaves fall and when use of the boxes is at its peak. The only banded hatchling ever recovered was banded as a 2-week-old nestling on May 11, 1993. It was recovered by Kent Counselman on March 25, 2002, approximately

four miles from the nest box where it was banded. The bird was found dead.

References

- Beatty, J. (1988). Eastern Screech-Owl: Population dynamics and potential predation upon the meadow vole. *The Redstart*, 55(4), 98-104.
- Beatty, W. H. (1977). Attracting screech owls. *The Redstart*, 44(4), 102-104.
- Craighead, J. J. & Craighead, F. C., Jr. (1956). *Hawks, owls, and wildlife*. Washington, DC: Wildlife Management Institute, 212.
- Mersereau, G. S. (1975). Modifying small raptor Bal-Chatrri trap. *EBBA News*, 38(2), 88-89.
- Owen, D. F. (1963). Polymorphism in the screech owl in eastern North America. *Wilson Bulletin*, 75(2), 183-190.

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Decline of The Whip-poor-will After 1970 in West Virginia

J. Lawrence Smith

While walking along a path through sapling pines at the forest edge at Southside, Mason County, West Virginia, during summer, 1955, I was startled when a bird sprang from almost underfoot. I realized it was a Whip-poor-will as it fluttered along the ground feigning a broken wing and voicing a call of distress. After I took a few more steps, two fledged young flew away in opposite directions. Nearly a half-century ago, when I encountered these birds at their nesting site, the Whip-poor-will was found widely and even in numbers in some areas of West Virginia. In recent decades, concern has been expressed over the marked decline in Whip-poor-will populations. Even though a reduction in numbers of the bird has been underway in certain areas for many years, the decrease seemed especially evident after 1970.

Observations by two ornithologists offer evidence that Whip-poor-will numbers may have varied widely with location during the nineteenth century. While collecting birds throughout the summer of 1872 at Coalburg, Kanawha County, W. E. D. Scott heard it only once and was able to secure a specimen. By contrast, in 1874, William Brewster found a number near Petroleum, Ritchie County, and noted, "as many as five or six individuals being frequently within hearing at one time." In a list of the birds of Upshur County, published in 1907, Earle A. Brooks noted the species as "very common," and this continued to be the case for many years. Maurice Brooks recorded that many could be heard about his family homestead at French Creek during the early decades of the last century.

During June 1960, I heard Whip-poor-wills with a frequency of five per mile along Poca River Road near Poca, Putnam County. Many houses have been built along the road since that time with the elimination of much of the habitat where birds were found. On evening drives through nearby areas, which had little housing development, during late May, 1999, no birds were heard.

Maturing forest cover has been considered a significant factor in the almost total disappearance of Whip-poor-wills in some areas. Maurice Brooks has written of the number that could be seen and heard at Coopers Rock State Forest during the 1930s and 40s when the forest was in a brushy stage. In 1979, he noted that it had been many years since he had heard one in that area.

Even though the maturing of the forest must be considered, bird numbers have dwindled in areas with little change in forest cover. In 1975, during summer evening drives in the area of Camp Summers on the Greenbrier River near Talcott, Summers County, I failed to hear one. Local residents told me that a number could be heard there several years before. The only bird recorded that summer was near the camping area at Bluestone State Park on June 26.

My observations in Pendleton County in recent years have revealed the complexity of possible factors associated with the bird. In early July, 1999, seven were heard along two miles of road east of Greenawalt Gap near Kline. Most were heard well into the mixed hemlock-hardwood forest with closed canopy and little understory. Here the bird was rather numerous locally, but further observation was to reveal that such numbers may be of short duration.

On returning to this location in late June, 2001, with optimum weather conditions and a difference of only a few days from two years previous, none was heard. What seemed a total absence of birds must have been due to an environmental factor that had changed greatly in two years. Whip-poor-wills depend upon moths and other night-flying insects for food. Perhaps a radical decline in food source accounts for the disappearance of this local population in a relatively short time.

Dr. Linda Butler, an entomologist at West Virginia University, has informed me of field work and research she has undertaken revealing the detrimental effect that widespread spraying for the gypsy moth has on many insect species. In a 6-year study at Fernow Experimental Forest, Tucker County, concluded in 1994, Butler and her associates studied the effect of spraying diflubenzuron on forest canopy insects. One of the results was a significant reduction in lepidoptera larvae. The use of insecticides could lead to a greatly reduced insect food source for birds, especially in those years when insects are at a normally low point in their population cycles because of weather or other natural factors.

Evidence seems to indicate that insecticides may well be a factor in reduced Whip-poor-will numbers in some areas. Factors other than maturing forest cover and insecticides may have had a part in declining numbers, but an exact determination of causes is difficult because the crepuscular nature of the Whip-poor-will makes it difficult to study and observe closely.

At present, I would judge the total Whip-poor-will population at 50 percent, and perhaps as much as 75 percent, below the number of birds present prior to 1970. Even though now much more local in distribution, the bird still exists in larger numbers in some areas in what might be called "pockets." Even so, the time now seems long past when the voice of the Whip-poor-will was one of the universal sounds of the summer night.

References

- Brewster, W. (1876). Some observations on the birds of Ritchie County, West Virginia. *Annals*, 11, 129-146. Lyceum of Natural History of New York.
- Brooks, E. A. (1907). In Cutright, W. B., *History of Upshur County*. Buckhannon, 366.
- Brooks, M. (1973). Some comments on the 1972 Foray bird list. *The Redstart*, 40(1), 14.

Brooks, M. (1979). What happened to them? *The Redstart*, 46(3), 104.

Butler, L., Chrislip, G., Kindo, V., & Townsend, E. (1997). Effect of diflubenzuron on nontarget canopy arthropods in a central Appalachian forest. *Journal of Economic Entomology*, 90(3), 784-794.

Scott, W. E. D. (1872). Partial list of the summer birds of Kanawha County, West Virginia. *Proceedings*, 15, 220-228. Boston Society of Natural History.

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The 2001 Sortie Bird List

Thomas R. Fox

The 2001 Sortie was held on May 26 to June 2, 2001 in the Northern Panhandle of West Virginia, with the study area comprising southern Ohio County south of I-70 and Marshall County north of US 250 and WV 891. Our headquarters were at the New Dawn Farm. Our host was Dr. Arthur Rybeck, who raises mixed organic crops on the farm, including garlic and eggs, which he sells to local markets. The New Dawn Farm is on a hill south of Middle Wheeling Creek. We stayed at the meeting center Art has built on the farm. The center is very nice for small groups to meet and stay. There is an excellent kitchen and other facilities. The BBC is grateful to Dr. Rybeck for allowing us to use his farm for the 2001 Sortie. Until now, my personal experience with this part of West Virginia has been limited to driving up the more or less urban Rt. 2 along the Ohio River, so I was pleasantly surprised to find how rural the study area is once I had traveled a short distance east of the river.

There were a couple of interesting occurrences that I will address. The first was the presence of several birds during the first part of the study period, which were surely migrants, i.e. Red-breasted Nuthatch, Veery, Swainson's Thrush, and the Blackpoll Warbler. The second was a singing male Prothonotary Warbler in what appeared to be perfect habitat; however, on return trips by Greg Eddy, the bird could not be found.

The information used to determine the abundance of each species was gathered from Singing Male Censuses (SMC), Breeding Bird Surveys (BBS), and the various trips made by the group into various nooks and crannies in the area. The SMCs were all conducted on the New Dawn Farm, each sampling a different habitat. BBS routes were run on most of the suitable roads in the area. Near the end of the Sortie, we have a group discussion where each bird species is discussed, the data is evaluated, and a consensus achieved on the abundance of each species.

I would like to thank all of the Sortie participants for their contributions and support in the making of this list.

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.

Great Blue Heron—Common. A heronry was located in the study area on Wheeling Creek.

Green Heron—Rare. One heard and seen on Whet Stone Run.

Turkey Vulture—Common.

Canada Goose—Common.

Wood Duck—Rare. One female was seen with five young on Wheeling Creek.

Mallard—Common. Middle Wheeling Creek.

Red-tailed Hawk—Common. Rybeck farm and Wheeling Creek.

American Kestrel—Uncommon. Sand Hill.

Wild Turkey—Common. Rybeck farm.

Killdeer—Uncommon.

Spotted Sandpiper—Rare. One was seen on Wheeling Creek.

Rock Dove—Uncommon.

Mourning Dove—Common.

Yellow-billed Cuckoo—Uncommon.

Barred Owl—Rare. One was heard calling occasionally on the Rybeck farm.

Chimney Swift—Common.

Ruby-throated Hummingbird—Common.

Belted Kingfisher—Rare. One was found on Wheeling Creek.

Red-bellied Woodpecker—Common.

Downy Woodpecker—Common.

Hairy Woodpecker—Rare. One was located on the Rybeck farm.

Northern Flicker—Common.

Pileated Woodpecker—Common.

Eastern Wood-Pewee—Common.

Acadian Flycatcher—Common.

Willow Flycatcher—Common.

Least Flycatcher—Rare. Middle Wheeling Creek near the Pennsylvania state line.

Eastern Phoebe—Uncommon.

Great Crested Flycatcher—Uncommon.

Eastern Kingbird—Common. A nest was found at the Dunkard Creek Dam.

White-eyed Vireo—Common.

Yellow-throated Vireo—Uncommon.

Warbling Vireo—Common. Along Wheeling Creek.

Red-eyed Vireo—Common.

Blue Jay—Common.

American Crow—Common.

Tree Swallow—Uncommon.

Northern Rough-winged Swallow—Common.

Barn Swallow—Common.

Carolina Chickadee—Common.

Tufted Titmouse—Common.

Red-breasted Nuthatch—Rare. One was seen and heard on the Rybeck farm, probably a late migrant.

White-breasted Nuthatch—Common.
Carolina Wren—Common.
House Wren—Common.
Blue-gray Gnatcatcher—Common.
Eastern Bluebird—Common.
Veery—Rare. One was seen and heard on the Rybeck farm. It was probably a late migrant.
Swainson's Thrush—Rare. One was seen and heard on the Rybeck farm. It was probably a late migrant.
Wood Thrush—Common.
American Robin—Very common.
Gray Catbird—Common.
Northern Mockingbird—Uncommon. This species is expanding rapidly in the central part of the State. It will be interesting to see if it does likewise in the Northern Panhandle.
Brown Thrasher—Common.
European Starling—Common.
Cedar Waxwing—Common.
Blue-winged Warbler—Common.
Northern Parula—Common.
Yellow Warbler—Common
Chestnut-sided Warbler. Rare. One on the Rybeck farm was probably a late migrant.
Yellow-throated Warbler—Common.
Prairie Warbler—Rare. Irish Ridge.
Blackpoll Warbler—Rare. One on the Rybeck farm was probably a late migrant.
Cerulean Warbler—Common.
Black-and-white Warbler—Common.
American Redstart—Common.
Prothonotary Warbler—Rare. One singing male was seen and heard singing at the Dunkard Creek Dam. Greg Eddy returned after the Sortie with a boat and attempted to locate the bird and a possible nest, but to no effect.
Worm-eating Warbler—Rare. One was found on the Rybeck farm.
Ovenbird—Common.
Louisiana Waterthrush—Common.
Kentucky Warbler—Common.
Common Yellowthroat—Common.
Hooded Warbler—Common.
Yellow-breasted Chat—Common. It was pleasant to hear so many chats.
Scarlet Tanager—Common.
Eastern Towhee—Common.
Chipping Sparrow—Common.

Field Sparrow—Common.
Savannah Sparrow—Rare.
Grasshopper Sparrow—Rare.
Song Sparrow—Common.
Northern Cardinal—Very common.
Rose-breasted Grosbeak—Common.
Indigo Bunting—Common.
Red-winged Blackbird—Very common.
Eastern Meadowlark—Common.
Common Grackle—Common.
Brown-headed Cowbird—Common.
Orchard Oriole—Common. Most participants felt that they had never seen this species so widely distributed.
Baltimore Oriole—Very common. Most participants felt that they had never seen so many in so small an area.
House Finch—Uncommon.
American Goldfinch.—Uncommon. We had no explanation for the unusually small numbers we found.
House Sparrow—Common.

HC 89, Box 420
 Millstone, WV 25261

The 2001 Sortie Breeding Bird Surveys

Carol McCullough

From May 27 through June 1, six 10-mile Breeding Bird Surveys (BBS) runs were completed, totaling 119 stops. Each run began 30 minutes prior to sunrise. Every one-half mile a 3-minute stop was made, and all birds observed were counted for 20 stops, except for May 27 when the 20th stop could not be completed due to heavy rain. To survey the various habitats of Ohio and Marshall Counties, these stops included farmland, grassland, stream valleys, ridge tops, and forests. The routes can be roughly described as follows: (1) south on County Road 43 beginning at the Rybeck farm, then going west along the southern edge of Ohio County; (2) along Bruce Run through Sand Hill, then going north on County Road 5; (3) along Middle Wheeling Creek, then skirting the edges of Bear Rocks Wildlife Management Area; (4) south from Dallas along Whetstone Run, then north on Number Two Ridge Rd.; (5) along Wheeling Creek to Viola, north on County Road 7, then along County Road 18 near Grandstaff Run; (6) south on County Road 15 through Calis, then on Dry Ridge Rd. and along Howard Run.

On the six runs, 2,255 individuals of 82 species were counted. The weather was chilly, and it rained periodically. The first run was aborted after completing 19 stops due to rain, and an electrical storm delayed the third run for 2½ hours. Early morning temperatures ranged from the low 30s to the low 50s. Participants on these runs included Greg E. Eddy, Thomas R. Fox, Cynthia Luntz, and Carol McCullough.

Table 1
Number of Birds by Species

Species	No. Birds	Stops Present
Great Blue Heron	4	4
Green Heron	1	1
Canada Goose	4	3
Mallard	9	4
Red-tailed Hawk	1	1
American Kestrel	1	1
Wild Turkey	15	10
Killdeer	1	1
Rock Dove	3	2
Mourning Dove	69	43
Yellow-billed Cuckoo	2	2

Species	No. Birds	Stops Present
Chimney Swift	10	5
Ruby-throated Hummingbird	1	1
Belted Kingfisher	1	1
Red-bellied Woodpecker	28	27
Downy Woodpecker	10	9
Hairy Woodpecker	1	1
Northern Flicker	6	6
Pileated Woodpecker	11	9
Eastern Wood-Pewee	29	25
Acadian Flycatcher	24	22
Willow Flycatcher	5	5
Least Flycatcher	1	1
Eastern Phoebe	9	8
Great Crested Flycatcher	6	5
Eastern Kingbird	4	3
White-eyed Vireo	7	7
Yellow-throated Vireo	10	10
Warbling Vireo	10	10
Red-eyed Vireo	97	54
Blue Jay	22	19
American Crow	59	44
Northern Rough-winged Swallow	1	1
Barn Swallow	25	14
Carolina Chickadee	20	15
Tufted Titmouse	43	37
White-breasted Nuthatch	8	8
Carolina Wren	24	21
House Wren	22	19
Blue-gray Gnatcatcher	17	16
Eastern Bluebird	14	12
Wood Thrush	78	53
American Robin	219	85
Gray Catbird	73	59
Northern Mockingbird	3	3
Brown Thrasher	19	15
European Starling	152	37
Cedar Waxwing	28	16
Blue-winged Warbler	4	4
Northern Parula	2	2

Species	No. Birds	Stops Present
Yellow Warbler	95	73
Yellow-throated Warbler	3	3
Cerulean Warbler	13	12
Black-and-white Warbler	1	1
American Redstart	38	29
Worm-eating Warbler	1	1
Ovenbird	11	9
Northern Waterthrush	1	1
Louisiana Waterthrush	5	5
Kentucky Warbler	6	5
Common Yellowthroat	36	31
Hooded Warbler	6	6
Yellow-breasted Chat	16	13
Scarlet Tanager	27	25
Eastern Towhee	64	53
Chipping Sparrow	67	45
Field Sparrow	35	29
Savannah Sparrow	1	1
Grasshopper Sparrow	2	1
Song Sparrow	116	81
Northern Cardinal	97	77
Rose-breasted Grosbeak	19	14
Indigo Bunting	54	43
Red-winged Blackbird	126	46
Eastern Meadowlark	17	14
Common Grackle	43	29
Brown-headed Cowbird	25	17
Orchard Oriole	16	14
Baltimore Oriole	35	29
House Finch	6	4
American Goldfinch	17	13
House Sparrow	43	16

Table 2
Most Abundant Species

Species	No. Birds	Stops Present	% of Total Birds
American Robin	219	85	9.7%
European Starling	152	37	6.7%
Red-winged Blackbird	126	46	5.6%
Song Sparrow	116	81	5.1%
Red-eyed Vireo	97	54	4.3%
Northern Cardinal	97	77	4.3%
Yellow Warbler	95	73	4.2%
Wood Thrush	78	53	3.5%
Gray Catbird	73	59	3.2%
Mourning Dove	69	43	3.1%
Chipping Sparrow	67	45	3.0%
Eastern Towhee	64	53	2.8%

Table 3
Most Widely Distributed Species

Species	No. Birds	Stops Present	% of Total Stops
American Robin	219	85	71.4%
Song Sparrow	116	81	68.1%
Northern Cardinal	97	77	64.7%
Yellow Warbler	95	73	61.3%
Gray Catbird	73	59	49.6%
Red-eyed Vireo	97	54	45.4%
Wood Thrush	78	53	44.5%
Eastern Towhee	64	53	44.5%
Red-winged Blackbird	126	46	38.7%
Chipping Sparrow	67	45	37.8%
American Crow	59	44	37.0%
Mourning Dove	69	43	36.1%
Indigo Bunting	54	43	36.1%
European Starling	152	37	31.1%
Tufted Titmouse	43	37	31.1%

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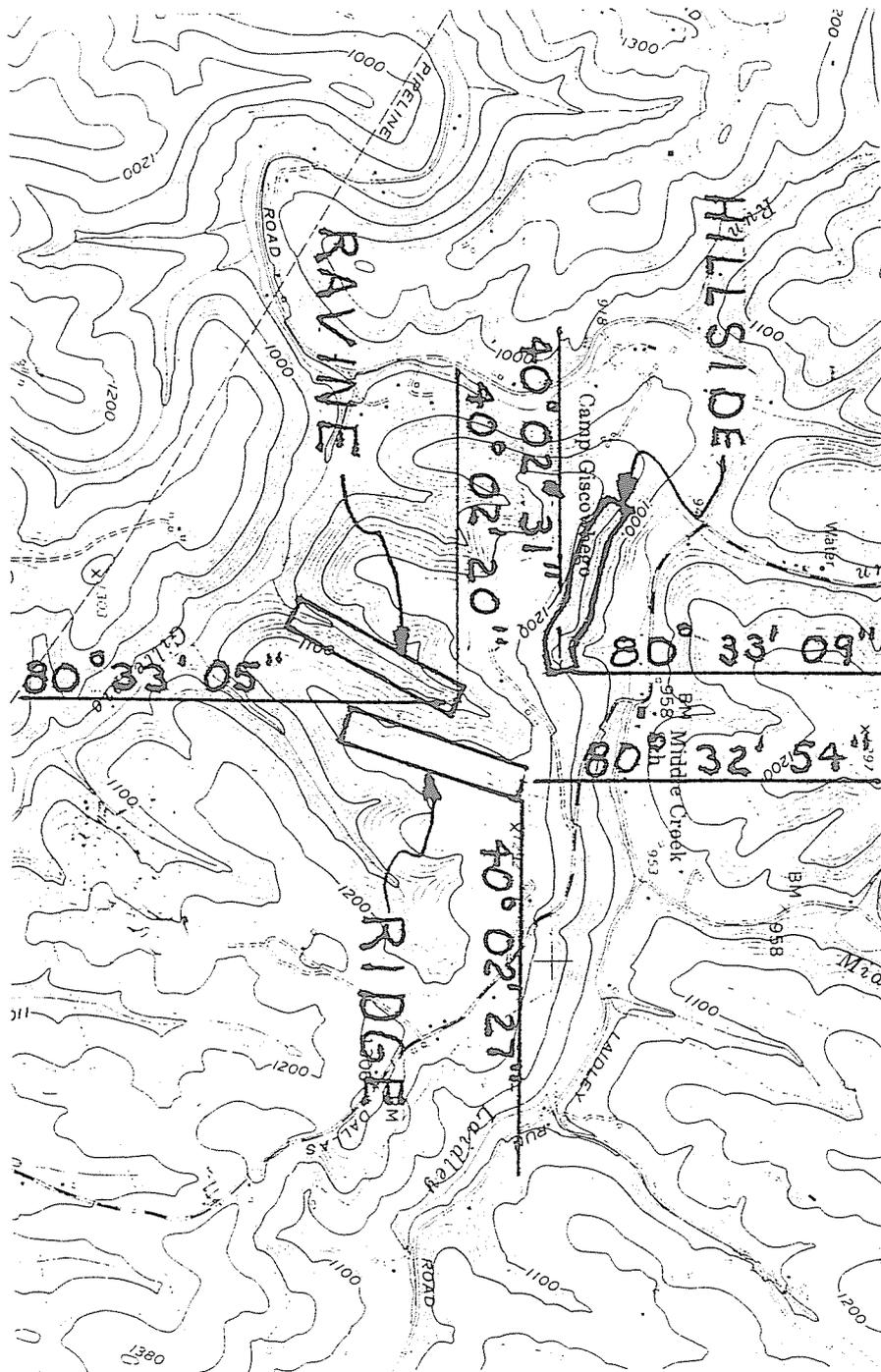
The 2001 Sortie Singing Male Census

Greg Eddy

RYBECK HILLSIDE (Slippery Elm-Black Locust-Sugar Maple)—Location: West Virginia, Ohio County, two miles north of Dallas, West Virginia; 40° 02' 31" N, 80° 33' 09" W, Valley Grove Quadrangle, USGS, extends south. Continuity: New. Size: 6.09 ha = 15 acres (110 x 660 yards, measured longitudinally and estimated laterally). Description of plot: A vegetative survey gave the following results. The dominant canopy trees are Slippery Elm (*Ulmus rubra*), Black Locust (*Robinia pseudoacacia*), and Sugar Maple (*Acer saccharum*). Most prominent in the understory are Sugar Maple seedlings. The ground cover is primarily Multiflora Rose (*Rosa multiflora*) and Jewelweed (*Impatiens* sp.). A quantitative survey of the vegetation gave the following results. Trees 3-inches diameter and over, based on three 0.1-acre circular samples: 140/acre, total basal area 63 sq. ft./acre. Species comprising 91% of the total number of trees: Slippery Elm, 45, 32, 40, 100; Black Locust, 13, 9, 17, 100; Sugar Maple, 38, 27, 15, 66; Black Cherry, 13, 9, 7, 66; Dead, 20 14, 8, 100. Figures following each species are number of trees per acre, relative density %, relative dominance %, and relative frequency %. Trees by diameter class: A (3-6 in.) 58, 41, 6, 9; B (6-9 in.) 38, 27, 11, 18; C (9-15 in.) 35, 25, 28, 44; D (15-21 in.) 10, 7, 18, 29. Figures following each class are number of trees per acre, relative density %, basal area per acre, and relative dominance %. Shrub stems/acre 550, ground cover 89%, canopy cover 76%, average canopy height 86 ft. (range 73-98). Elevation of center line: 1,100 feet. Coverage: May 27 to June 1, 2001. All trips between 0524 and 1020 hours. Total party hours: 11.3. Census: Eastern Towhee 3 (49, 20); Wood Thrush 2.5; Northern Cardinal 2; Rose-breasted Grosbeak 1.5; Red-bellied Woodpecker 1; Eastern Wood-Pewee 1; Red-eyed Vireo 1; Carolina Chickadee 1; Tufted Titmouse 1; American Robin 1; Gray Catbird 1; Scarlet Tanager 1; Baltimore Oriole 1; Acadian Flycatcher 0.5; Blue-gray Gnatcatcher 0.5; American Redstart, 0.5; Kentucky Warbler, 0.5; Song Sparrow 0.5; Wild Turkey +; Yellow-billed Cuckoo +; Ruby-throated Hummingbird +; Downy Woodpecker +; Northern Flicker +; Great Crested Flycatcher +; Blue Jay +; American Crow +; White-breasted Nuthatch +; Carolina Wren +; Blue-winged Warbler +; Cerulean Warbler +; Hooded Warbler +. Total: 31 species; 20.5 territorial males (337 sq. km., 136/100 acres). Visitors: Red-breasted Nuthatch, Cedar Waxwing, Louisiana Waterthrush, Common Yellowthroat, and Indigo Bunting. Remarks: Fledglings of Carolina Chickadees and White-breasted Nuthatches were seen. Wild Turkey were seen and heard frequently. A probable migrating Red-breasted Nuthatch was heard once. Census participants: Dawn Fox (compiler), Virginia Johnson, Cynthia Luntz, and Judith Ward. Vegetation surveyors: Greg Eddy, Dawn Fox, Cynthia Luntz, and Judith Ward.

RYBECK RIDGE (Black Cherry-Sugar Maple-Slippery Elm)—Location: West Virginia, Ohio County; two miles north of Dallas, West Virginia; 40° 02' 27" N, 80° 32' 54" W, Valley Grove Quadrangle, USGS, extends south. Continuity: New. Size: 6.07 ha = 15 acres (110 x 660 yards, measured longitudinally and estimated laterally). Description of plot: A vegetative survey gave the following results. The dominant canopy trees are Black Cherry (*Prunus serotina*), Sugar Maple (*Acer saccharum*), and Slippery Elm (*Ulmus rubra*). Most prominent in the understory are Multiflora Rose (*Rosa multiflora*) and Blackberry (*Rubus* sp.). The ground cover is primarily White Snakeroot (*Eupatorium rugosum*) and Garlic Mustard (*Alliaria officinalis*). A quantitative survey of the vegetation gave the following results. Trees 3-inches diameter and over, based on three 0.1-acre circular samples: 200/acre, total basal area 76 sq. ft./acre. Species comprising 90% of the total number of trees: Black Cherry, 28, 14, 32, 100; Sugar Maple, 60, 30, 20, 100; Slippery Elm, 43, 21, 19, 100; Dead, 50, 25, 16, 100. Figures following each species are number of trees per acre, relative density %, relative dominance %, and relative frequency %. Trees by diameter class: A (3-6 in.) 102, 51, 10, 13; B (6-9 in.) 50, 25, 15, 20; C (9-15 in.) 35, 18, 28, 37; D (15-21 in.) 12, 6, 23, 30. Figures following each class are number of trees per acre, relative density %, basal area per acre, and relative dominance %. Shrub stems/acre 2,583, ground cover 70%, canopy cover 96%, average canopy height 78 ft. (range 65-90). Edge: One side of the ridge descends to a ravine, the other side to farm fields. Elevation of center line: 1,240 to 1,220 feet. Coverage: May 27 to June 1, 2001. All trips between dawn and 1030 hours. Total party hours: 12. Census: Eastern Towhee, 5 (82, 33); Northern Cardinal, 3 (49, 20); Red-eyed Vireo, 2; Wood Thrush, 2; American Robin, 2; Gray Catbird, 2; White-eyed Vireo, 1; House Wren, 1; Hooded Warbler, 1; Song Sparrow, 1; Red-bellied Woodpecker, 0.5; Acadian Flycatcher, 0.5; Carolina Chickadee, 0.5; Brown Thrasher, 0.5; Kentucky Warbler, 0.5; Common Yellowthroat, 0.5; Rose-breasted Grosbeak, 0.5; Downy Woodpecker, +; Tufted Titmouse+, Scarlet Tanager, +; Indigo Bunting, +. Total: 21 species; 23.5 territorial males (387/sq. km., 157/100 acres). Flyovers: Blue Jay, American Crow, and Cedar Waxwing. Visitors: Great Crested Flycatcher, Blue-winged Warbler, Ovenbird, Kentucky Warbler. Remarks: Several days of constant rain limited bird song. Robins and Cardinals were seen carrying food, and their call notes were heard more often than their songs. Census participants: Thomas Fox, Virginia Johnson, Carol McCullough, Frederick McCullough (compiler), and Judith Ward. Vegetation surveyors: Cynthia Ellis, Thomas Fox, Virginia Johnson, Carol McCullough, and Frederick McCullough.

RYBECK RAVINE (Sugar Maple-Black Cherry-Dead)—Location: West Virginia, Ohio County; two miles north of Dallas, WV; 40° 02' 20" N, 80° 33' 05" W, Valley Grove Quadrangle, USGS, extends south. Continuity: New. Size: 6.07 ha = 15 acres (110 x 660 yards, measured longitudinally and estimated laterally). Description of plot: A vegetative survey gave the following results. The dominant canopy trees are Sugar



Maple (*Acer saccharum*), Black Cherry (*Prunus serotina*), and Dead. Most prominent in the understory are Multiflora Rose (*Rosa multiflora*), Spicebush (*Lindera benzoin*), and seedlings of the canopy. The ground cover is primarily White Snakeroot (*Eupatorium rugosum*), Sweet Cicely (*Osmorhiza longistylis*), and Christmas Fern (*Polystichum acrostichoides*). A quantitative survey of the vegetation gave the following results. Trees 3-inches diameter and over, based on three 0.1-acre circular samples: 237/acre, total basal area 134 sq. ft./acre. Species comprising 86% of the total number of trees: Sugar Maple, 117, 49, 23, 100; Black Cherry, 23 10, 14, 100; Red Maple (*Acer rubrum*), 13, 6, 8, 33; White Oak (*Quercus alba*); Slippery Elm (*Ulmus rubra*), 23, 10, 6, 100; Dead, 27, 11, 10, 100. Figures following each species are number of trees per acre, relative density %, relative dominance %, and relative frequency %. Trees by diameter class: A (3-6 in.) 100, 42, 10, 7; B (6-9 in.) 67, 28, 20, 15; C (9-15 in.) 40, 17, 32, 24; D (15-21 in.) 26, 11, 48, 36; F (27-33 in.) 3, 1, 24, 18. Figures following each class are number of trees per acre, relative density %, basal area per acre, and relative dominance %. Shrub stems/acre 2,400, ground cover 69%, canopy cover 99%, average canopy height 97 ft. (range 71-126). Edge: One side descends to a ravine, the other side ascends to farm fields. Elevation of center line: 1,100 to 970 feet. Coverage: May 26 to June 1, 2001. All trips between dawn and 1,000 hours. Total party hours: 9.3. Census: Wood Thrush, 5 (82, 33); Acadian Flycatcher, 4.5 (73, 29); Northern Cardinal, 2.5; Red-eyed Vireo, 2; Louisiana Waterthrush, 2; Scarlet Tanager, 2; Eastern Towhee, 2; Baltimore Oriole, 2; Downy Woodpecker, 1; Eastern Wood-Pewee, 1; American Robin, 1; Tufted Titmouse, 0.5; Rose-breasted Grosbeak, 0.5; Wild Turkey, +; Mourning Dove, +; Red-bellied Woodpecker, +; Northern Flicker, +; Pileated Woodpecker, +; White-eyed Vireo, +; American Crow, +; Blue Jay, +; Carolina Chickadee, +; White-breasted Nuthatch, +; Carolina Wren, +; Gray Catbird, +; Yellow Warbler, +; Hooded Warbler, +; Yellow-breasted Chat, +. Total: 28 species; 26 territorial males (430 sq. km., 174/100 acres). Visitors: Belted Kingfisher, Indigo Bunting. Comments: This plot seemed to be attractive to quite a variety of birds. It also had a variety of habitat including a small stream, two open areas (due to a landslide and to timbering), and forested hillsides some with a profuse growth of multiflora rose. The multiflora occurs in most of the plot, but is thickest at the northeastern edge. That is closest to a portion of old fields. White-tailed deer were noted. Fledglings of Carolina Chickadees and Downy Woodpeckers were seen, as well as the woodpecker nest hole. The weather during the survey, and in the weeks before, was exceptionally wet. It will be interesting to return to this study area in a dryer time. Census participants: Cynthia Ellis (compiler), Thomas Fox, Virginia Johnson, and Cynthia Luntz. Vegetation surveyors: Greg Eddy, Cynthia Ellis, Dawn Fox, Thomas Fox, Virginia Johnson, Carol McCullough, and Frederick McCullough.

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Lepidoptera of the 2001 Sortie

Virginia Johnson

Black Swallowtail	<i>Papilio polyxenes asterius</i>
Spicebush Swallowtail	<i>Papilio troilus troilus</i>
Eastern Tiger Swallowtail	<i>Papilio glaucus</i>
Cabbage White	<i>Pieris rapae</i>
Clouded Sulphur	<i>Colias philodice philodice</i>
Spring Azure	<i>Celastrina ladon</i>
Silvery Checkerspot	<i>Chlosyne nycteis nycteis</i>
Eastern Comma	<i>Polygonia comma</i>
Mourning Cloak	<i>Nymphalis antiopa antiopa</i>
Painted Lady	<i>Vanessa cardui</i>
Red Admiral	<i>Vanessa atalanta rubria</i>
Red-spotted Purple	<i>Limenitis arthemis astyanax</i>
Northern Pearly Eye	<i>Enodia anthedon</i>
Little Wood Satyr	<i>Megisto cymela</i>
Silver-spotted Skipper	<i>Epargyreus clarus</i>

Reference

Allen, T. J. (1997). *The butterflies of West Virginia and their caterpillars*. Pittsburgh, PA: University of Pittsburgh Press.

46 Evergreen Terrace
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Ferns and Fern Allies of the 2001 Sortie

Thomas R. Fox and Dawn A. Fox

The 2001 Sortie was the first Sortie held in the Ohio-Marshall County area, and it was a very interesting area to study ferns. The two most remarkable things learned from our study of the ferns was the absence of any species of Osmundaceae and the discovery of Climbing Fern in Marshall County, which is probably a county record. I would like to thank the entire Sortie crew for their contributions to the list. The names and order of this list are organized as in *Flora of West Virginia* (Strausbaugh & Core, 2nd edition, n.d.).

LYCOPODIACEAE

Lycopodium obscurum var. *dendroideum*
Lycopodium flabelliforme

OPHIOGLOSSACEAE

Botrychium virginianum

SCHIZAEACEAE

Lygodium palmatum

POLYPODIACEAE

Cystopteris fragilis
Cystopteris bulbifera
Onoclea sensibilis
Thelypteris noveboracensis
Dryopteris marginalis
Dryopteris spinulosa
Dryopteris intermedia
Polystichum acrostichoides
Dennstaedtia punctilobula
Athyrium pycnocarpon
Athyrium thelypteroides
Asplenium platyneuron
Adiantum pedatum
Pteridium aquilinum
Polypodium virginianum

CLUBMOSS FAMILY

Tree Clubmoss
Groundpine

ADDER'S TONGUE FAMILY

Rattlesnake Fern

CURLY GRASS FAMILY

Climbing Fern

FERN FAMILY

Brittle Fern
Bulbiferous Bladder Fern
Sensitive Fern
New York Fern
Marginal Shield Fern
Spinulose Shield Fern
Intermediate Wood Fern
Christmas Fern
Hay-scented Fern
Glade Fern
Silvery Athyrium
Ebony Spleenwort
Maidenhair Fern
Bracken Fern
Common Polypody

In keeping with the tradition started at the 2000 Foray, we will list where the ferns were found. The following ferns were found on the Rybeck farm: Groundpine, Tree Clubmoss, Rattlesnake Fern, Sensitive Fern, New York Fern, Marginal Shield Fern, Spinulose Shield Fern, Christmas Fern, Hay-scented Fern, Silvery Athyrium, Ebony Spleenwort, and Maidenhair Fern. The Climbing Fern was found across the road from the McCleary Cemetery where Louis Wetzel is buried. Glade Fern was found along Wheeling Creek. Intermediate Shield Fern was found on the Irish Ridge Road. Common Polypody was found at Bear Rocks Wildlife Management Area. Bracken Fern was found on Williams Run, and Bulbiferous Bladder Fern and Brittle Fern were found at the Middle Wheeling Creek Watershed Dam on the rocks along the stream below the dam.

Reference

Strausbaugh, P. D. & Core, E. L. (n.d.). *Flora of West Virginia*, 2nd Edition. Grantsville, WV: Seneca Books, Inc.

HC 89 Box 420
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Field Notes Winter Season

December, 2001–February, 2002

James D. Phillips, Editor

The winter season was a mild one. Temperatures were warmer than usual and the snowfall was fairly light. Many areas reported a better variety and larger concentration of waterfowl than normal. Some species, usually absent this time of the year, were found with some regularity.

Common Loons were reported from Cabell(HS), Mason(WA), Monongalia(GF), Monroe(JA), and Wood(MBC) Counties. One, reported stuck in ice in Monongalia County, was later seen swimming free (BK). **Pied billed Grebes** wintered in good numbers. The only report of **Horned Grebes** came from Wood County at the beginning and end of the season(MBC). **Double-crested Cormorants** were seen in Summers(JP), Monroe(JA), and Wood(MBC) Counties and along the Ohio River(JB). **Great Blue Herons** were easily found during the period. A **Green Heron** was unusual for Raleigh County in late December(RC). **Vultures** remained in some areas later than usual. **Black Vultures** were present in Fayette(GE), Summers(JP), Mercer(RC), Hardy(KK), Berkeley(RD), Tucker(GF), and Putnam(CE) Counties during the season. Hullet Good found a new **Turkey Vulture** roost with about 200 birds on Little Sandy Creek, Kanawha County.

A **Greater White-fronted Goose** was seen in Preston County(GF), and as many as six were seen in Mason County(WA). Reports of **Snow Geese** came from Preston(GF), Cabell, Mason(WA), Monroe(JA), and Berkeley(RD) Counties. **Tundra Swans** were found in Cabell(WA), Preston(GF), and Berkeley(RD) Counties. **Gadwalls** were found across the state with good numbers being seen in southern West Virginia(GE1,JP). **American Wigeons**, **Northern Shovelers**, and **Northern Pintails** were scattered through the area. **American Black Ducks** were pretty common along New River(JP). Decent-sized groups of **Green-winged Teals** were reported. Gary Felton reported a possible **Green-winged/Blue-winged Teal hybrid**. A few **Redheads** wintered in the area. Most observers could locate **Ring-necked Ducks**. **Greater Scaups** were seen only in Mason(WA) and Summers(JP) Counties. A few **Lesser Scaups** were found. **Long-tailed Ducks** were present in Pleasants(JB) and Preston(GF) Counties. **Buffle-head** and **Common Goldeneye** reports came from more of the region than usual. All three **mergansers** wintered across the state, with the **Hooded Merganser** being the one most often encountered. Reports of **Ruddy Ducks** were scattered over the state. **Bald Eagle** sightings have increased to the point that we may be able to conduct a winter eagle survey in the near future. Multiple sightings occurred along the Ohio River(BD,WA,JB,MBC,GR), in the northeastern part of the state, and Eastern



White-fronted Geese at the Robert C. Byrd Locks and Dam on February 1, 2002. Photo by Wendell Argabrite.

Panhandle(JN,KS,JNo,KK,RD,CM), and in the southeastern part of the state(JP,JA,ET). **Northern Harriers** were reported from Wood(MBC), Preston(GF), Randolph(RT), and Jefferson(RD) Counties. **Sharp-shinned Hawks** and a few **Cooper's Hawks** could be found visiting bird feeders. Unusual was a **Broad-winged Hawk** on the Inwood Christmas Bird Count(RD). A **Red-tailed Hawk** on the capitol grounds in Charleston received quite a bit of press when local squirrel feeders requested its removal. **Rough-legged Hawks** were seen in Monroe(JP,BW), Summers(ET), Randolph(RT), and Tucker(GF,JNo) Counties. A **Golden Eagle** was seen near Union, Monroe County, in early February(CL). **American Kestrels** seemed to winter well. **Merlins** were seen in Marion(JH) and Wood(MBC) Counties. **Peregrine Falcon** reports came from Hardy(KK) and Mason(WA) Counties.

American Coots were fairly common and widespread. Six **Sandhill Cranes** were seen near Huntington, Cabell County, on December 30(WA). **Common Snipes** were seen in Monroe(JP), Randolph(RT), Tucker(JNo), and Wood(MBC) Counties. **American Woodcocks** had returned to some neighborhoods by the end of January(MBC). **Bonaparte's Gulls** were seen in Summers(JP) and Wood(MBC) Counties. Flocks of hundreds of **Ring-billed Gulls** could be found in the state. A few **Herring Gulls** were

also present. A **Great Black-backed Gull** was identified in Cabell County(WA), and at about the same time, Wilma Jarrell found one to the north. Seven **Caspian Terns** were seen along Cheat River, Preston County, on December 9(GF).

Eastern Screech-Owls, **Great Horned**, and **Barred Owls** were found in their normal haunts. The **Snowy Owl** reported last period was still being seen in Pleasants County from December 14(JB) to December 20(MBC). A **Short-eared Owl** was reported in Berkeley County in late December(RD). A **Northern Saw-whet Owl** was found dead on the road near Princeton, Mercer County, at the end of the year(RC). **Red-headed Woodpeckers** could be found in Summers(JP), Cabell(BD), and Mason(WA) Counties. **Yellow-bellied Sapsuckers** seemed to winter well in the region. **Eastern Phoebes** seemed to be encouraged by the mild weather. More phoebes were reported during the season than in the typical winter, and they were found over more of the state than usual. Three **Loggerhead Shrikes** were seen in Hardy(KK) County and one in Berkeley(RD) County during the season. A **Blue-headed Vireo** was present count week during the Pipestem Area, Christmas Bird Count(JP). Wendell Argabrite observed early **Tree Swallows** in Mason County on February 23.

The West Virginia List-serv entertained some discussion of **American Crow** roosts during the period. Thousands of birds were observed in Raleigh(RC), Ohio(GE), Tucker(JNo), Mercer(AM), and Kanawha(JT) Counties. **Common Ravens** were found in their usual locations in the eastern part of the state. Donny Good observed two of these birds feeding on a deer carcass in Kanawha County. **Red-breasted Nuthatches** wintered in fair numbers across the region. **House Wrens** were reported from Wood(MBC) and Raleigh(RC) Counties in December. **Golden-crowned Kinglets** and a few **Ruby-crowned Kinglets** could be found throughout the period. Fair numbers of **American Robins** wintered in the state. Late December sightings of **Gray Catbirds** were reported by Ann McRae and Robert Dean. **American Pipits** were found in late December(MBC) and early January(BW). Kathy King found 50 **Horned Larks** in Hardy County.

A **Black-and-white Warbler** was seen in Monongalia County on December 2(JC). **Yellow-rumped Warblers** wintered across a good bit of the state. A **Palm Warbler** was found in Summers County on December 3(JP). **American Tree Sparrows** were reported by a number of observers. Hullet Good had a December **Chipping Sparrow** at his feeder, while Bill Beatty had a January **Chipping Sparrow**, and Kermit Stover had them visiting his feeder in Monroe County most of the winter. Eight **Lark Buntings** spent a day at a feeder in Monroe County(BDa), and Jeanette Esker reported one at her son's feeder near Richwood. **Savannah Sparrows** were found in Cabell and Mason Counties(WA) in January, and were also encountered along New River, Mercer County, in late February(JP). **Fox Sparrows** wintered in most of the state. **White-throated Sparrows** seemed to be in usual numbers, while **White-crowned Sparrows** were in very good numbers across the state.

An **Oregon Junco** was present at a feeder in Pipestem State Park, Summers County, from Christmas eve to the end of the period(JP). A **Snow Bunting** was seen in Ritchie County on December 16(GF). **Rusty Blackbirds** were seen in Mercer(AM), Berkeley, and Jefferson(RD) Counties. Mountwood Bird Club reported **Brewer's Blackbirds** in Wood County at the end of the period. **Purple Finches** seemed to be in scattered pockets. The only report for **Common Redpolls** came from Berkeley County(RD). **Pine Siskins** were reported from Jefferson(RD), Tucker(JNo), Fayette(GE), Summers(JP), Ohio(GE), and Wetzel(WJ) Counties. **Evening Grosbeaks** were scattered about the region with concentrations in Randolph(RT) and Tucker(JNo) Counties.

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