

The Raven

JOURNAL OF THE VIRGINIA SOCIETY OF ORNITHOLOGY

Volume 84

Number 2

2013



The Virginia Society of Ornithology, Inc. exists to encourage the systematic study of birds in Virginia, to stimulate interest in birds, and to assist the conservation of wildlife and other natural resources. All persons interested in those objectives are welcome as members. Present membership includes every level of interest, from professional scientific ornithologists to enthusiastic amateurs.

Activities undertaken by the Society include the following:

1. An annual meeting (usually in the spring), held in a different part of the state each year, featuring talks on ornithological subjects and field trips to nearby areas.
2. Other forays or field trips lasting a day or more and scheduled throughout the year so as to include all seasons and to cover the major physiographic regions of the state.
3. A journal, *The Raven*, published twice yearly, containing articles relevant to Virginia ornithology as well as news of the activities of the Society and its chapters.
4. A newsletter, the *VSO Newsletter*, published quarterly, containing current news items of interest to members and information about upcoming events and pertinent conservation issues.
5. Study projects (nesting studies, winter bird population surveys, etc.) aimed at making genuine contributions to ornithological knowledge.

In addition, some local chapters of the Society conduct their own programs of meetings, field trips and other projects.

Those wishing to participate in any of the above activities, or to cooperate in advancing the objectives of the Society, are cordially invited to join and should contact the Membership Secretary. Annual dues are \$20.00 for active members, \$35.00 for sustaining members, \$60.00 or more for contributing members, \$500.00 for life members, and \$25.00 for family members.

Additional Information can be found on the Internet, at www.viriniabirds.net

Queries and comments about *The Raven* or the *VSO Newsletter* should be directed to the respective editors.

OFFICERS OF THE VSO IN 2013

President: Andrew Dolby, 1411 Franklin Street, Fredericksburg, VA 22401 (7/01/11 - 6/30/13)

Joe Coleman, 19499 Yellow Schoolhouse Rd., Round Hill, VA 20141 (7/01/13 - 6/30/14)

Vice President: Joe Coleman, 19499 Yellow Schoolhouse Rd., Round Hill, VA 20141 (7/01/11 - 6/30/13)

Jeff Trollinger, 3728 Old Parrish Trace Gum Spring, VA. 23065 (7/01/13 - 6/30/14)

Past President: Rexanne Bruno, 1012 Harrods Court, Lynchburg, VA 24503 (7/01/11 - 6/30/13)

Andrew Dolby, 1411 Franklin Street, Fredericksburg, VA 22401 (7/01/13 - 6/30/14)

Secretary: Alyce Quinn, 681 Edgewood Farm Lane, Wirtz, VA 24184 (7/01/07- 6/30/13)

Judith Wiegand, PO Box 2403, Staunton VA 24402 (7/01/13 - 6/30/14)

Treasurer: Barbara Thrasher, 120 Woodbine Drive, Lynchburg, VA 24502

Membership Secretary: Shirley Devan, PO Box 5994, Williamsburg VA 23188-5994

Raven Editor: Wesley M. Brown, 21277 Metompkin View Lane, Parksley VA 23421

Newsletter Editors: Linda Fields and Alan Schreck, 1573 21st Ct. N., Arlington, VA 22209

The Raven

JOURNAL OF THE VIRGINIA SOCIETY OF ORNITHOLOGY

Editor
Wesley M. Brown



Volume 84, No. 2

Published by
THE VIRGINIA SOCIETY OF ORNITHOLOGY

2013

Copyright by the Virginia Society of Ornithology, Inc.

ISSN 0034-0146

TABLE OF CONTENTS

THE ROCKBRIDGE COUNTY VSO FORAY OF JUNE 2013 Elisa Enders.	3
AN ORNITHOLOGICAL BIOBLITZ AT BELMEAD IN POWHATAN COUNTY Wendy Ealding and Patty Elton.	16
MINUTES OF 2013 ANNUAL VSO MEETING IN LEESBURG, VA Alyce Quinn	25
BOOK REVIEW: BIRDS OF VIRGINIA: A FALCON FIELD GUIDE by Todd Telander C. Michael Stinson	26
BOOK REVIEW: THE WORLD’S RAREST BIRDS” by Erik Hirschfeld, Andy Swash and Robert Still Susan S. Brown and Wesley M. Brown.	27
BOOK REVIEW: THE WARBLER GUIDE by Tom Stephenson and Scott Whittle Joanne Laskowski	28
BOOK REVIEW: ALEXANDER WILSON: THE SCOT WHO FOUNDED AMERICAN ORNITHOLOGY by Edward H. Burt, Jr. and William E. Davis, Jr. Rexanne Bruno	30

THE ROCKBRIDGE COUNTY FORAY OF JUNE 2013

ELISA ENDERS

Portsmouth VA, <elisaenders@hotmail.com>

INTRODUCTION

The 2013 foray in Rockbridge County, conducted by the Virginia Society of Ornithology (VSO) and the Rockbridge Bird Club, was completed over the period of June 8th to June 16th. Rockbridge County is located in the mountains of Virginia, northeast of Roanoke and south of Staunton, with Lexington being the county seat. Rockbridge County was named for the distinctive geological landmark, Natural Bridge, located in the southern portion. The county is bounded on the west by the Allegheny Mountains and on the east by the crest of the Blue Ridge. It is surrounded by the counties of Augusta, Nelson, Amherst, Bedford, Botetourt, Alleghany, and Bath, and it lies at the headwaters of the James and Maury Rivers. Interstates I-81 and I-64 pass through Rockbridge County. Rocky Mountain, at 1241 meters, is the highest altitude in Rockbridge County and is located on the eastern county border with Amherst County. The lowest altitude within the county seems to be 225 meters in the town of Glasgow.

Mountains are predominant on the eastern and western county boundaries with pastureland being common in the county's interior. The forests of the county are mostly deciduous, with various oak and hickory species being the most common. But the forests also contain conifers, mainly what appears to be Virginia Pine (*Pinus virginiana*). Starting at the northern part of Rockbridge County, the central valley contains few hills and is fairly open. However, once south of Lexington and Buena Vista, hills such as Brushy Hills and Short Hills become more frequent in the valley. Both George Washington and Jefferson National Forests contain land within the county borders. Unfortunately, little access to the gated forest service roads of these national forests was granted. Even so, some of these areas were able to be covered on foot. One area that was not visited was the new Short Hills Wildlife Management Area (WMA) in the southern part of the county. Access to this place is difficult without use of an all-wheel drive, high-clearance vehicle. This is one location in the county that, about 20 years ago, had reports of Golden-winged Warblers (Kinzie and Rowe, personal communication).

While there have been no prior group efforts to document the breeding birds of Rockbridge County, the sightings of many local individuals has been compiled by Richard Rowe and made available online (Rowe, website). Murray (1957) wrote in his publication that, "Unfortunately the writer has had to be responsible for most of the data, which accounts for the meagerness of the information at

certain points, since no man can properly cover a county." However, Murray acknowledges the assistance of several other individuals as well.

The first two days of the foray period were dry. Temperatures ranged from approximately 18 to 29 degrees Celsius, with little wind. Starting on the 10th, weather conditions became variable. Isolated rain, sometimes heavy, occurred throughout the county. Temperatures remained in the range of 17 to 29 degrees Celsius over the course of a day, with little wind on most days. On some days the rain was heavy enough to prevent any surveys for birds, but by June 13th the precipitation had become minimal.

Trees and plants identified during the foray included: Eastern White Pine (*Pinus strobus*), Striped Maple (*Acer pensylvanicum*), Sassafras (*Sassafras albidum*), Tulip-Poplar (*Liriodendron tulipifera*), Tree of heaven (*Ailanthus altissima*), Chestnut Oak (*Quercus prinus*), Bear Oak (*Quercus ilicifolia*), New Jersey Tea (*Ceanothus americanus*), Goat's Rue (*Galega officinalis*), Spicebush (*Lindera* sp.), Turkey beard (*Xerophyllum asphodeloides*), and Witch-hazel (*Hamamelis* sp.)

Eastern Tiger Swallowtail (*Papilio glaucus*), Great Spangled Fritillary (*Speyeria cybele*), Hackberry Emperor (*Asterocampa celtis*), Little Wood-Satyr (*Megisto cymela*), Mourning Cloak (*Nymphalis antiopa*), Eastern Tailed-Blue (*Everes comyntas*), azure sp. (*Celastrina* sp.), and anglewings (*Polygonia* sp.) were butterfly species observed during the foray.

The knowledge and help provided by members of the Rockbridge Bird Club was instrumental in completion of the foray. The goal of the VSO forays is to survey the bird species and populations in the county as thoroughly as possible. Ideally, counting every individual of every species within the county boundaries would be done. Realistically, that is impossible, due to inaccessible areas and availability of volunteers to count birds. Also, because birds move around, there is always the risk of double counting individuals. But, presumably, because the forays are completed in the breeding season, birds are on territory and unlikely to move.

With early morning starts, foray planning, and occasional heavy rain, there was no dedicated effort to search for birds at night. However, several participants heard owls in their backyards and found a few owls and nightjars early in the morning and during daylight hours.

METHODS

The methods used to count birds were similar to those used in Christmas Bird Counts and many of the previous VSO forays. For this foray, the county was split into nine sectors divided by major highways or by rivers in order to ensure coverage of the county and minimize duplicate efforts. Foray participants were assigned sectors or portions of sectors and tracked route or area covered, mileage, time, and total individuals for each species. One hundred and fifteen species were observed during the course of the foray, with five unexpected species found (Northern Harrier, Black-billed Cuckoo, Red-breasted Nuthatch, Savannah Sparrow, and Pine Siskin). Thirty-three participants split into 23 different parties (some individuals were in different parties on different days) over the course of foray period. Over 300 kilometers were traveled during the foray, both walking and driving. From totaling the time spent in the field by all parties, over 180 hours was spent counting birds during the foray. The individual checklists are available on eBird under the username "VSOforay2013" (password provided upon request).

RESULTS AND DISCUSSION

Listed below by species order in the American Ornithologists' Union checklist are the bird species observed during the foray, with a discussion of their presence in Rockbridge County during the foray and their historical county presence. Richard Rowe's website (Rowe, website) was used to determine the historical population of each species. Also, the results of VSO forays in Highland (Spahr 2003), Bath (Spahr 2003), and Alleghany (Brown 2011) counties are compared with the results of this foray. For the 2003 foray, the Highland County portion lasted 4.5 days and had 49 observers. For the 2003 foray, the Bath County portion lasted 4.5 days and had 21 observers. Less time was spent surveying each of these counties in comparison to the current foray of Rockbridge County, but Highland County had more observers and Bath County had fewer observers. Even with these differences, the efforts for the forays in these counties were fairly comparable to this year's foray efforts. Alleghany County had 31 observers over the 9 days of the foray, which is comparable to this foray. When the discussion refers to adjacent counties, Alleghany, Highland, and Bath Counties are the counties included. No county-wide forays have been performed in Augusta, Nelson, Amherst, Bedford, or Botetourt Counties by the VSO. See Table 1, (pp. 13-15) for numerical totals of all individuals of each species observed during this and three prior forays of adjacent counties.

Canada Geese were found locally throughout the county away from water, but mainly near bodies of water. Willow Lake, Chessie Trail, and Lake Robertson were places where this species was found (about fifteen different locations). They are considered abundant in the county and are residents (Rowe, website). When compared to VSO

forays in Highland, Bath, and Alleghany Counties, numbers of Canada Geese found in Rockbridge were much higher than Highland and Alleghany, but similar to Bath.

Wood Ducks were seen on six different foray routes. Two of the sightings came from the northeast section of the county, three were from the northwest section, and the other report came from the southwest part of the county. This is an interesting distribution of reports, but may be inaccurate. Rowe notes that this species can be found across the county in general. This species is noted as uncommon, with most records from March to November (Rowe, website). Numbers of Wood Duck were comparable to the numbers found on forays of adjacent counties.

Mallards were observed on six different foray routes, all from the northern section of the county, with most from the northeast part. They are considered a common resident of the county, with an increasing population (Rowe, website). Numbers of Mallard were comparable, although slightly higher, to the numbers found on forays of adjacent counties.

Ruffed Grouse was only reported by Spahr, Biersack, Besal, and Ake from one location, a single bird along the Guys Run Access Road, in Goshen-Little Mountain WMA, which is one of the areas within Rockbridge County where they are more frequently observed (Rowe, website). Grouse are typically elusive and require a great deal of time and effort to see, but are considered common in Rockbridge County. Forays of adjacent counties reported higher numbers of Ruffed Grouse. Indeed, Highland County, in 2003, had 13 grouse during the foray period (Brown 2011). Breeding bird survey data indicate that this species is declining across the state of Virginia (Rottenborn and Brinkley 2007).

Wild Turkeys were reported from eleven different locations across the county. Most reports were of small groups (fewer than five birds), but there were several observations of eleven individuals in a flock. The population of Wild Turkeys in Rockbridge County is faring well. Turkeys were rarely reported on Christmas Bird Counts (CBCs) before the mid-1970's, but are now common residents of Rockbridge County (Rowe, website). Observations of turkeys were about three times the numbers found during forays of adjacent counties. This observation contrasts with a recent article published in Audubon Magazine (Nickens 2013) that reports a decrease in southeastern portions of the turkey population.

Great Blue Herons were found singly at seven different locations adjacent to the Maury and James Rivers. Great Blue Herons are common residents of the county (Rowe, website) and were more common on this foray than during forays of adjacent counties.

Green Herons were found at seven different locations, most adjacent to the Maury and James Rivers, and were found as frequently as Great Blue Herons. They are a common summer resident of Rockbridge County, seen from April to October (Rowe, website).

Black Vultures were seen across the county in good numbers. Downy young were seen in an old house (a known breeding pair) on Laura Neale's property, near Fairfield, VA. Several double-digit observations of Black Vultures were made by Teri Holland, just southeast of Lexington. Rowe (2009) notes the presence of several large flocks near Lexington and Glasgow and considers the population stable. Observed numbers were many times above the numbers observed during forays of adjacent counties.

Turkey Vultures were common across the county. Like Black Vultures, these vultures were mostly observed soaring over urban and rural areas and were seen in comparable numbers to that observed during forays of adjacent counties. Their population is large and stable as well (Rowe, website).

Osprey was reported twice in the county. One was observed at Willow Lake, one of the larger water bodies in Rockbridge County. Another was seen over the Maury River, near Goshen Wildlife Management Area. Osprey are expected in the county from April to May and September to October, but there has been a summer record (July 30, 2009) from the Maury River (Rowe, website) and, in the mountains of Virginia, this species is considered a rare summer visitor (Rottenborn and Brinkley 2007). Perhaps the observed birds were unsuccessful breeders or wandering birds that never were part of a breeding pair. Forays of Highland and Bath Counties also had observations of several Ospreys, while the foray of Alleghany County did not report any.

One **Northern Harrier** was observed during the foray (observed by Warren, Richards, and Holsinger). It was observed in the southwest part of the county and is unexpected for this time of year. This species is a winter resident and migrant in Rockbridge County, and is not expected after March and before September of each year (Rowe, website).

A single **Sharp-shinned Hawk** was observed during the foray. This bird was observed on the southeastern section of the county by Dolby and Lott. This species is a county resident, although it is not numerous (Rowe, website). In recent years, across Virginia, Sharp-shinned Hawks have become less common while their larger cousin, the Cooper's Hawk, has become more common. Consistent with these findings are single digit reports of Sharp-shinned Hawks during forays of adjacent counties. During the Virginia Breeding Bird Atlas project in the latter part of the 1980's, a breeding confirmation of Sharp-shinned Hawk was made in adjacent Alleghany County (Rottenborn and Brinkley 2007), and there were only two breeding confirmations of this hawk, in the state, during the atlas project.

Cooper's Hawks were reported by four different parties. One was reported along Highway 11, in the northeastern part of the county (seen by the Browns). Another was reported by Enders from just southwest of Lexington. A third bird was reported by Rowe from the

Willow Lake area. The fourth bird was reported by Holland from the Maury Park area. This species is similar to the Sharp-shinned Hawk in being a resident of the county, but not numerous (Rowe, website). Also, forays of adjacent counties have reported almost exactly the same numbers of Cooper's Hawks.

Bald Eagles were only observed at a nesting location along the Chessie Trail (Rowe, website). A first-year bird was observed by Holland, southeast of Lexington. Perhaps this individual was this year's offspring from the Chessie Trail breeding pair. One to two breeding pairs are probably in the county, and Bald Eagles are considered uncommon in the county (Rowe, website). Forays of adjacent counties resulted in finding higher numbers of Bald Eagles than this year's foray.

Nine **Red-shouldered Hawks** were seen during the foray from eight different foray routes. Four of the hawks were seen in the northeastern part of the county, east of I-81. One was observed along the scenic drive that travels along the western boundary of Rockbridge County. Another was seen in the southwestern part of the county, along the Bluegrass Trail. The other observations were from the northwestern part of the county. Numbers of observations from forays of adjacent counties were similar to this foray.

Broad-winged Hawks were observed at seven different locations throughout the county. In the southern part of the county, singles were seen in the southwest corner of the county, one was heard at Gunter Ridge, and another was observed at Natural Bridge. In the northern part of the county, a Broad-winged Hawk was observed at Old Farm Road Pond, one was found at House Mountain, one was observed southeast of Lexington and another was heard along the Whetstone Ridge Trail. Fewer Broad-winged Hawks were observed on this foray than during forays of adjacent counties.

Red-tailed Hawks were found in good numbers across the county, and, as expected, they were the most common raptor. Forays in Bath and Alleghany counties had lower numbers of this species while the foray in Highland County had about an equal number of Red-tailed Hawks to this foray.

Killdeer were seen in low numbers across Rockbridge County and were seen in similar numbers to those seen during forays of Highland, Bath, and Alleghany counties. Killdeer are a common year-round resident and are more common in the spring and summer (Rowe, website).

Rock Pigeons (Feral Pigeons) were seen throughout the county in fair numbers. This species is doing well in the county and needs no encouragement. In fact, the number observed well exceeded numbers observed in Highland, Bath, and Alleghany counties during forays in those counties.

Mourning Doves were abundant across the county. This is a species with a healthy population, and Mourning Doves were seen in greater numbers than during forays in adjacent counties.

Yellow-billed Cuckoos were found throughout the county during the foray. They were not found on every route covered during the foray, although they were regularly found, if a large enough area was covered. The most interesting finding about the distribution of this species during the foray was that it was found only once in the Natural Bridge area. Yellow-billed Cuckoos are a common summer breeder in Rockbridge County (Rowe, website) and the number of individuals found was generally similar the numbers found during forays of adjacent counties.

One **Black-billed Cuckoo** was found, by George Tolley, during the foray. This individual was located about six miles north of Lexington on private property. This species is considered a summer resident, but recent nesting has been difficult to confirm due to the secretive and unpredictable behavior of this species. There are recent summer records, but no recent confirmed breeding (Rowe, website). A few Black-billed Cuckoos have been found during the forays of adjacent counties. Bath and Highland Counties have a higher than average elevation compared to Rockbridge County. Higher elevations hold a better chance for finding this species (Rowe, website).

A single **Barn Owl** was found by George Tolley during the foray period. This bird was located about six miles north of Lexington on private property. After completion of the foray, Laura Neale reported that a nest of owlets was taken in by the Wildlife Center of Virginia. The nest was discovered in a silo on a farm near Walkers Creek on June 8th, and the six owlets had to be removed due to silo usage for farm operations. However, after care at the Wildlife Center of Virginia, all six owlets were released in Albemarle County (Leighann Cline, personal communication, October, 2013). While J. J. Murray considered Barn Owls common in 1957, they have become scarcer in the county and are not expected to be seen regularly (Rowe, website). Forays of adjacent counties failed to find Barn Owls.

Extensive time was not dedicated to owling, so the overall numbers of owls was low. Other forays of the adjacent counties typically do not find numbers of owls. This is due in part to the secretive behavior of owls, but also because searches for them have to be completed during non-typical hours (late night or early morning). In fact, no Great Horned Owls were found during this foray, and they are considered an uncommon resident of Rockbridge County (Rowe, website).

With this in mind, there were three observations of **Eastern Screech-Owl** during the foray. All were from the northern part of Rockbridge County. This species is common in the county and, when sought out, can be found frequently (Rowe, website).

Barred Owls were observed four times during the foray. One was at the property of Roberta Wiener and James Arnold (south-central Rockbridge County), while another was heard on the property of Wendy and Steve Richards (southwest Rockbridge County). The other two reports came from the northwest part of Rockbridge County. Barred Owls are unusual permanent residents of the county (Rowe, website).

Like owls, nighttime searches for nightjars were not extensively performed. However, there were four observations of **Whip-poor-wills** during the foray. One was heard in the northwest portion of the county, at John Pancake's house. Another was heard at the residence of Laura Neale and Chris Wise, near Fairfield. A third was heard by Mike Lott and Andrew Dolby, at the overlook off the Blue Ridge Parkway, adjacent to Highway 60. A family (an adult with two young) of Whip-poor-wills was observed by Elisa Enders and Laura Neale along a trail from the Blue Ridge Parkway to Jordan Road. This species is an uncommon summer resident in the county, but recently is more likely to be found in forested areas, mainly near North Mountain and Goshen Pass (Rowe, website). Single digits of this species were found during forays of Highland and Augusta Counties, but nineteen were found during the Alleghany County foray.

Chimney Swifts were frequently found across the county during the foray. With this species nesting preference and dependence in many areas on human-made structures, it is not surprising that most of the swifts were seen over or adjacent to towns. Good numbers were seen in Lexington. This is a common summer resident in Rockbridge County (Rowe, website), and was commonly found during forays of adjacent counties.

Ruby-throated Hummingbirds were seen in low numbers across Rockbridge County, although the foray distribution favored the northern half of the county. In fact, there was only a single bird reported from the county's southwest corner. This species can be difficult to observe, due to its small size, quick flight, and quiet disposition. According to Rowe, Ruby-throats are a common summer resident throughout the county. The total of this species found was greater than the number found during past forays of adjacent counties.

While only nine **Belted Kingfishers** were found during this foray, the reports came from across the county. With this species requiring water to be nearby (streams, creeks, and ponds), this finding is not unexpected. In the proper habitat, they will be found in Rockbridge County and are common (Rowe, website). More Belted Kingfishers were found during forays of the adjacent counties.

Red-bellied Woodpeckers were found across the county in very good numbers, and, based upon the findings of forays completed in adjacent counties, are more common

in Rockbridge County than Highland, Bath, and Alleghany counties. They are abundant county residents (Rowe, website).

Downy Woodpeckers were found in very good numbers across the county. They are abundant in the county (Rowe, website) and were one of the more commonly observed woodpeckers during the foray. Similar numbers were found during forays of adjacent counties. Interesting is the finding that, during this foray, Downy and Hairy Woodpeckers were found separately (not in the company of the other species) about four times as often as being found nearby one another.

Hairy Woodpeckers were common during the foray, agreeing with past findings (Rowe, website), but were less common than Downy Woodpeckers. This also agrees with the numbers found during forays of adjacent counties.

Northern Flickers were very frequently found across the county during the foray. This finding matches the historically observed distribution (Rowe, website) and numbers found during forays of adjacent counties.

Pileated Woodpeckers were the most common woodpecker found during this foray and were distributed across the county. They are common residents of the county (Rowe, website). While the number of Pileated Woodpeckers found on this foray was lower than the number found during the Alleghany County foray, the total number was greater than the totals of the Bath or Highland County forays.

American Kestrels were observed on ten different foray routes across the county. One pair was observed chasing a pair of Red-tailed Hawks. Kestrels are common and are normally expected to be seen (Rowe, website). This species was observed in similar numbers to those seen during forays of adjacent counties.

Eastern Wood-Pewees were found in good numbers across the county and were the second most common flycatcher encountered, although searching forested areas at higher elevations has more reports of this species. The frequency of sightings agrees with the historically observed distribution as well as the totals found during forays of adjacent counties.

Acadian Flycatchers were found across the county, but in low numbers, with a preference for moist forested areas. They are common and expected in forested areas adjacent to streams (Rowe, website). When comparing foray results, this species is far less common in Rockbridge County than in Highland, Bath, or Alleghany Counties.

Willow Flycatcher was the least frequently found flycatcher found during the foray. This species was only found in the north-central part of the county, at Willow Lake. This is an unusual species for the county, but was found in similar numbers during past forays of adjacent counties.

Eastern Phoebes were the most common flycatcher found during the foray and were found across the county. It is a common summer resident (Rowe, website). The total number observed during this foray was much higher than the totals observed during forays of Bath and Highland Counties and was also greater than the number seen in Alleghany County.

While not the most common flycatcher during the foray, **Great-crested Flycatchers** were seen in very good numbers across the county. The total number was lower than the total found during forays of Bath and Highland Counties, but comparable to the total found during the foray of Alleghany County. This is a common and expected species in Rockbridge County (Rowe, website).

Eastern Kingbirds were also seen in good numbers across the county and were more common on this foray than forays of adjacent counties. This is not an unexpected finding; as this species is considered to be a common summer resident of Rockbridge County (Rowe, website).

White-eyed Vireos were found in low numbers during the foray and were the most uncommonly found vireo. About half of the White-eyed Vireos were observed in the northwest part of the county (Walker's Creek, Little North Mountain, and Goshen Pass areas). Several reports came from southwest of Lexington and one White-eyed Vireo was found along the Natural Bridge Hayride Trail (found by Wes Teets). The foray distribution agrees with the historical distribution (Rowe, website). While the total number of White-eyed Vireos found during this forays exceeded the total found during past forays of Highland and Alleghany Counties, it was much lower than the total found during the Bath County foray.

Yellow-throated Vireos were seen in good numbers across the county, but were infrequently found in the northeast part of the county. This differs slightly from the historical distribution, which lists them as most often being found along the Blue Ridge Parkway, north of milepost 45 (Rowe, website). During this foray, Yellow-throated Vireos were found in comparable numbers to that found during forays of adjacent counties.

Blue-headed Vireos were seen during the foray in good numbers, but were not encountered throughout the county in an even distribution. This species was most frequently found at high elevation forests, such as the Blue Ridge Parkway and Goshen Pass and Goshen-Little Mountain WMA. So, with the higher elevations occurring on the eastern and western edges of the county, this is where Blue-headed Vireos were found. Not surprisingly, more Blue-headed Vireos were found on the Highland County foray, but comparable numbers were seen during forays of Bath and Alleghany Counties.

Warbling Vireos were found across the county, but were localized to rivers and streams, frequently in sycamore

trees. The historical distribution matches this finding. Also, comparing foray results, Warbling Vireos are more common in Rockbridge County than in Bath, Highland, or Alleghany Counties.

Red-eyed Vireo was by far the most abundant vireo during the foray. As is expected for this species, it was found across the county. Surprising is the discovery that, while on the same order of magnitude, greater total numbers were seen during forays of adjacent counties.

Blue Jays were another abundant species, occurring widely across the county. The numbers found are comparable to historical expectations and adjacent county forays.

While Blue Jays were abundantly seen during the foray, about twice as many **American Crows** were found. American Crows were found in a fairly even distribution across the county in numbers comparable to forays of adjacent counties.

Fish Crows were found in low numbers during the foray. A few solitary individuals were seen in the north-central part of the county (Dick Rowe), and single birds were seen in the Natural Bridge area (Wes Teets), along the James River (Barry Kinzie), and near Fairfield, VA. But, most of the birds were seen in two groups, one in downtown Lexington and one along Poor House Road (northwest county boundary). This species is uncommon in Rockbridge County (Rowe, website). During forays of adjacent counties, only one Fish Crow was found in Bath County.

Common Ravens were encountered as often as Fish Crows, but were found at higher elevations across the county, such as House Mountain and Whetstone Ridge Trail. This species is common in the county and has been seen, in the past, over Lexington (Rowe, website). During this foray, total number of ravens seen was lower than during forays of adjacent counties.

Northern Rough-winged Swallows were found across the county, but were typically seen at water bodies, such as the James River and Willow Lake. It is common in the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Purple Martins were found only at three locations. There is currently only one known colony in the county, in the Fairfield area. Dick Rowe found that these birds were still nesting this year and saw two Purple Martins nearby at Willow Lake. Another report was of a heard only Purple Martin, flying high overhead, by Elisa Enders, from southwest of Lexington. Purple Martins seem to be a recent addition to the bird life of Rockbridge County and are a very local breeder (Rowe, website). Forays of adjacent counties did not find martins.

Tree Swallows were seen in good numbers, distributed across the county. This species has undergone a distribution change. Murray, in 1957, considered it a transient, but now

is a common breeder (Rowe, website). Perhaps addition of bluebird boxes has most helped bring Tree Swallows to Rockbridge County. This species frequently uses them as nesting holes. Forays of adjacent counties found comparable total numbers of this species.

Barn Swallows were the most abundant swallow species, occurring across the county. Walker's Creek and Maury Park held some of the larger colonies, but this species was found at many streams and other water bodies across Rockbridge County. Forays of adjacent counties found comparable total numbers of this species.

Cliff Swallows were found at only a few locations during the foray. They are a very localized breeder, nesting under high bridges over rivers or streams. Walker Creek, Turkey Hill, and the James River, near Natural Bridge, were where this species was found during the foray. Except for Alleghany County, forays of adjacent counties found comparable total numbers of this species.

Carolina Chickadees were found across the county, typically at lower elevations than where Black-capped Chickadees were found, but can be found at high and low elevations. They are a common species in the county (Rowe, website), much more common than Black-capped Chickadees.

Black-capped Chickadees were found mainly on the northwestern county boundary at high elevations, but several reports came from the south-central part of the county. This species can be hard to distinguish from the Carolina Chickadee. The song of these species is typically used to separate them, but hybridization occurs between the species, and is more frequent in this part of the state. In fact, during forays in the region, these two species are lumped together because of the difficulty in distinguishing between them.

Tufted Titmouse was an abundant species during this foray, across the county. This was not unexpected and totals were comparable to forays of adjacent counties.

A pair of **Red-breasted Nuthatches** was found along the Whetstone Ridge Trail, at one location, in a large stand of Virginia Pine at about 760 meters in elevation, south of Adams Peak. This species is not expected in the summer in Rockbridge County, but has been found nesting in the state of Virginia at high elevation (~1200 meters) coniferous forests in counties like Grayson, Rockingham, and Highland. However, there are breeding records from the 1970's and 1980's in Augusta County, at lower elevations (Fenton Day, personal communication in August, 2013 and Stevens 1975). In 2011, a Red-breasted Nuthatch was found at a similar elevation during the Alleghany County foray. As previously mentioned, Highland County regularly has summering Red-breasted Nuthatches and eight were found during the foray of that county. Rowe lists the status of this species as an unusual winter resident and migrant.

White-breasted Nuthatches were found across Rockbridge County in good numbers. This is a species that prefers deciduous over coniferous woods. Rockbridge County has a good amount of oak woods, some mixed with pines. This species has a common historical distribution and is a county resident (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

House Wrens were found in very low numbers across the county, but mostly in the northern parts of the county. This differs from historical numbers, and this species is considered a common summer resident (Rowe, website). Forays of adjacent counties found higher totals of this species.

Carolina Wrens were abundantly found across the county during the foray, agreeing with historical findings. Forays of adjacent counties had lower totals for this species.

Blue-gray Gnatcatchers were found in good numbers across the county. This species is a common summer resident (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Eastern Bluebirds were very common across the county. This species is a common summer resident (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Veeries were reported from two areas during the foray. The northern section of the Blue Ridge Parkway held a few and the Thunder Ridge area (southeast Rockbridge County) was the other area where they were found. This is a high elevation species, being a locally common bird at elevations about 1000 meters (Rowe, website). Bath and Highland Counties, during forays, had higher numbers of this species.

Wood Thrush was fairly common during the foray and could be found across the county in well wooded areas. The Blue Ridge Parkway is a good area to find this species, which is considered common in the county (Rowe, website). Except for Highland County, forays of adjacent counties have found slightly more Wood Thrush.

American Robins were abundant, seeming to be found in any kind of habitat. Forays of adjacent counties found comparable total numbers of this species.

Gray Catbird was found across the county in fair numbers. Lexington was a reliable spot for finding them, but they were reported in rural areas as well. They are historically considered a common summer resident throughout the county at all elevations (Rowe, website). Forays of adjacent counties had higher totals for this species.

Brown Thrashers were found in fair numbers and are considered a common resident (Rowe, website). Forays of adjacent counties had similar totals for this species, except for Bath, which had a higher total number.

Northern Mockingbird was very common across the county, and by far, the most common mimid. Typically, they

are more common at lower elevations in open areas (Rowe, website). Forays of adjacent counties had lower totals for this species.

European Starlings were abundant during the foray, matching historical findings and forays of adjacent counties.

Cedar Waxwings were seen in very good numbers across the county, usually in pairs, but single birds and small flocks were observed as well. Numbers were comparable to historical records and forays of adjacent counties.

Ovenbird was the most common warbler species found during the foray. This species is considered an abundant summer resident of the higher elevations (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species (Alleghany County had more).

Worm-eating Warbler was the second most frequently encountered warbler during the foray. Wooded slopes near creeks seemed a preferred habitat, with the Blue Ridge Parkway area being an excellent place to find this species. This species is considered a common summer resident (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species (Alleghany County had more).

Louisiana Waterthrush was an uncommon species during the foray, found along creeks and streams at lower elevations. This species is considered a common summer resident (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species.

Four **Blue-winged Warblers** were found at the Natural Bridge Hayride Trail by Wes Teets. Historically, this species is considered a possible breeder in the county (Rowe, website), but there are few summer records. This species was reported in the spring from this same location. Forays of adjacent counties found comparable total numbers of this species.

Black-and-white Warblers were one of the more commonly found warblers. High elevation deciduous woods seemed to be the most used habitat by this species. They were found along the Blue Ridge Parkway and Goshen-Little Mountain WMA, among other places. This species is considered a common summer resident (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species.

Kentucky Warbler, one of the more infrequently found warblers, was only located at two places: Natural Bridge Hayride Trail (Wes Teets found three) and Moores Creek State Forest (a singing individual). This species is considered a migrant and possible breeder (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species.

Common Yellowthroats were not very common during the foray. One was found along Route 601 to North Mountain (by Pancake, Kinzie, and Opengari), three were

found near Walker's Creek (by Pancake, Kinzie, and Opengari), and two along Irish Creek (by the Browns). This species is considered a common summer resident (Rowe, website). Forays of adjacent counties found larger total numbers of this species.

Hooded Warbler was one of the more commonly found warblers. Mid-elevation deciduous woods seemed to be the most used habitat by this species. They were found along the Blue Ridge Parkway, Moores Creek State Forest, Natural Bridge area, and Goshen-Little Mountain WMA, among other places. This species is considered a common summer resident (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species.

American Redstart was another commonly found warbler. Deciduous woods seemed to be the most used habitat by this species. They were found in the Natural Bridge area, at House Mountain, along the Blue Ridge Parkway and in Goshen-Little Mountain WMA, among other places. This species is considered an abundant summer resident (Rowe, website). Forays of adjacent counties found fairly comparable (Bath County had about three times more) total numbers of this species.

Cerulean Warblers were found at Thunder Ridge, House Mountain, Forest Service Road 164 (near the Punchbowl Shelter), and the northern section of the Blue Ridge Parkway. This species is considered a common breeder in the proper habitat, with a loss of habitat at lower elevations (Rowe, website). Forays of adjacent counties found comparable total numbers of this species, but Bath County's foray found about three times as many.

Northern Parula was found at only a few locations (Chessie Trail, Natural Bridge Hayride Trail, near Irish Creek, and south-central Rockbridge County). While low numbers were observed during the foray, this species is considered a common summer resident (Rowe, website) near rivers and streams. Forays of adjacent counties had higher totals (much higher in Bath and Highland Counties) for this species.

Blackburnian Warblers were only recorded twice during the foray. Both were heard on the northern section of the Blue Ridge Parkway. This typically high elevation species is locally common in the Yankee Horse Ridge area (Rowe, website). Forays of adjacent counties had higher totals for this species.

Yellow Warbler was found at only a few locations (Walker's Creek, Fairfield area, Irish Creek, and southwest Rockbridge County) near streams. While low numbers were observed during the foray, this species is considered a locally common summer resident (Rowe, website) near rivers and streams. Forays of Bath and Highland Counties had much higher numbers, but Alleghany only had a single bird.

Chestnut-sided Warbler was found localized in high elevations during the foray. Brattons Run, Thunder Ridge, and the Blue Ridge Parkway were the reporting locations. This species is expected to be found at elevations over 1000 meters (Rowe, website). As expected, adjacent counties (Bath and Highland) with higher elevations reported higher numbers of Chestnut-sided Warblers during their forays.

Black-throated Blue Warblers were reported from only two areas during the foray: Thunder Ridge and the northern section of the Blue Ridge Parkway. This is considered a common species in the county at elevations over 600 meters (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Pine Warblers were one of the more commonly found warblers during the foray. Most reports came from the Blue Ridge Parkway and Goshen-Little Mountain WMA areas, but several were reported in the Natural Bridge area as well. Sixteen were found along the Whetstone Ridge Trail, in stands of Virginia Pines. This species is considered a common summer resident (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Yellow-throated Warblers were found at three locations during the foray. Single birds were found along the James River, in the Natural Bridge area, by Wes Teets. Elisa Enders found two birds east of Lexington, along the Maury River. All locations have had this species recorded in the past few years, but the reports come from the spring and fall. This species has historically been a migrant in the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Prairie Warblers were found in low numbers, across the county. Natural Bridge Hayride Trail, Guys Run, Laurel Run, and Possum Hollow are locations where this species was found. This species is considered a common summer resident (Rowe, website). Forays of adjacent counties found slightly lower total numbers of this species.

Black-throated Green Warblers were uncommon during the foray. This species was found on the mountain ridges on the eastern and western county boundaries. Goshen-Little Mountain WMA, Whetstone Ridge, the Scenic Drive on the west county line, Moores Creek State Forest, Natural Bridge area, and the Blue Ridge Parkway are a few of the places where this species was found. This species is considered a common summer resident (Rowe, website). Forays of adjacent counties had higher totals (much higher in Bath and Highland Counties) for this species.

Canada Warblers were found at only two locations: Thunder Ridge (by Kinzie) and the northern section of the Blue Ridge Parkway (by Rowe). This species is considered a locally common summer resident (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species (Highland County had more).

Yellow-breasted Chat was found in low numbers across the county. Their preferred habitat is typically brushy areas and very young, scrubby woods. This species is considered an uncommon summer resident (Rowe, website). Forays of adjacent counties found fairly comparable total numbers of this species.

Eastern Towhee was an abundant species during the foray. They are found throughout the county and at all elevations (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Chipping Sparrow was another abundant species during the foray. They are found in open areas throughout the county and at all elevations (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Field Sparrow was almost as common as Chipping Sparrow during the foray. They are found throughout the county and at all elevations (Rowe, website). Forays of adjacent counties found slightly lower total numbers of this species.

Savannah Sparrow was reported from one location near Fairfield. This bird was observed on the gravel farm road to Laura Neale's property. This is unexpected as there are few summer records from the county, and this species is considered an uncommon transient through the area (Rowe, website). However, there are summer records in Augusta County, and Laura Neale saw two Savannah Sparrows at her property in July of 2012. This species was recorded during forays of Highland and Bath Counties as well.

Grasshopper Sparrow was found in low numbers during the foray. Given the amount of pastureland in the central areas of Rockbridge County, this species was expected to be more common. This species is considered common in the county, within grassy areas and pastureland (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Song Sparrow was very common during the foray and seen across the county. They are an abundant species in the county (Rowe, website). Forays of adjacent counties found slightly lower total numbers of this species.

Dark-eyed Junco was reported from only a few locations: Guys Run Access Road in Goshen-Little Mountain WMA, Scenic Drive on the western county boundary, the north section of the Blue Ridge Parkway, and Thunder Ridge. This species is considered a common breeder at about 1000 meters (Rowe, website). Forays of adjacent counties found higher total numbers of this species, probably due to the lower average elevation in Rockbridge County.

Scarlet Tanagers were very common during the foray across the county. They are a common summer species in the county (Rowe, website). Forays of adjacent counties found slightly higher, but comparable total numbers of this species.

Northern Cardinal was abundant during the foray and seen across the county. They are an abundant species in the county (Rowe, website). Forays of adjacent counties found slightly lower total numbers of this species.

Rose-breasted Grosbeak was localized in low numbers during the foray. The northern section of the Blue Ridge Parkway, House Mountain, Guys Run Access Road in Goshen-Little Mountain, Thunder Ridge, and Brushy Hills were the reporting locations. This species is common in the county at higher elevations. Forays of adjacent counties found higher total numbers of this species, probably due to the lower average elevation in Rockbridge County.

Blue Grosbeak was found across the county, but in very low numbers. This species is uncommon in Rockbridge County, but can be found in shrubby growth in open areas (Rowe, website). The total number of Blue Grosbeaks was very low in comparison to total number of Indigo Buntings. Also, forays of adjacent counties found slightly lower total numbers of this species.

Indigo Bunting was abundant throughout the county in open areas and wood edges during the foray. This is not unexpected, as historically this has been an abundant species in the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Red-winged Blackbird was abundant during the foray. This species is common in the county in wet areas at lower elevations (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Eastern Meadowlark was common in grassy areas and pasturelands across the county. This species is common in the county (Rowe, website). With Eastern Meadowlarks being common in the county, other species with similar habitat preferences were expected to be more common than they were during the foray. Forays of adjacent counties found comparable total numbers of this species.

Common Grackle was abundant during the foray. This species is abundant in the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Brown-headed Cowbird was uncommon during the foray. This is an adaptable species and a fledgling was observed along Whetstone Ridge, being fed by a pair of Blue-headed Vireos. This species is common and can be expected at any elevation (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Orchard Orioles were common during the foray in wooded edges, typically adjacent to water. This species is considered locally common in the summer (Rowe, website). Surprising is that this species was encountered more frequently during the foray than Baltimore Oriole, which is considered common in this county. Forays of adjacent counties found lower total numbers of this species.

Baltimore Oriole was found in low numbers along waterways during the foray. This is considered a common species in the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

House Finch was uncommon during the foray. This species was found across the county, but mainly in open and developed areas at low elevations. This is considered an abundant species in the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Reports of **Pine Siskin** during the foray consisted of three single birds at three different locations. Wes Teets found one along the Natural Bridge Hayride Trail. Another bird was found by Wendy Richards at her property in the south west part of the county. The third bird was observed in the Jacobs Ladder area by Kieran Kilday. No other published records of Pine Siskin, during the month of June in Rockbridge County, were found. This species comes south, in large numbers, in the winter during eruptive years, but is not a regular wintering species. However, there was a large presence of this species in Virginia the winter before this foray. Bath County had one report of a Pine Siskin during the foray of that county.

American Goldfinch was abundant during the foray. This species was found across the county. This is considered an abundant species in the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

House Sparrow was common in localized populations during the foray. This species can be found in developed areas and is considered an abundant resident of the county (Rowe, website). Forays of adjacent counties found comparable total numbers of this species.

Species missed that have been recorded in Rockbridge County during the summer months included: Northern Bobwhite, Pied-billed Grebe, Great Egret, Golden Eagle, Great Horned Owl, Least Flycatcher, Horned Lark, Golden-winged Warbler, Mourning Warbler, and Dickcissel.

ACKNOWLEDGEMENTS

Many thanks go to the folks who participated in the foray: Bob Ake, James Arnold, Betty Besal, Bob Biersack, Susan Brown, Wes Brown, Andrew Dolby, Wendy Ealding, Jim Elder, Sandra Elder, Mary Elfner, Elisa Enders, John Ford, Mary Foster, Teri Holland, Diane Holsinger, Clyde Kessler, Kieran Kilday, Barry Kinzie, Mike Lott, Tom Moser, Laura Neale, Bill Opengari, John Pancake, Wendy Richards, Lucy Rowe, Richard (Dick) Rowe, Alexia Smith, John Spahr, Wes Teets, George Tolley, Penny Warren, Roberta Wiener. Also, many of these individuals contributed to the foray by providing food during the cookout and gatherings, and providing lodging to those who came from outside the county. Additional people who helped with providing

food and good company included: Bonnie Bernstein, Beverly Bruck, Henry Eichelberger, Phyllis Fevrier, Anne Henderson, Marilyn (Beeb) Jackson, Kathy Morikawa, Steve Richards, Marty Rockett, Jan Smith, Faith Vosburgh, and Anne Riffey-Buckner.

REFERENCES

- Brown, Susan. 2011. VSO Foray in Alleghany County. *The Raven*. 82(2): 3-12.
- Murray, Joseph James. 1957. *The Birds of Rockbridge County, Virginia*.
- Nickens, T. Edward. "Wild Turkey on the Rocks?". *Audubon*, November-December 2013: 32-37.
- Rowe, Richard. Website: "The Birds of the Greater Rockbridge County, Virginia, Area". <http://www.vmi.edu/fswebs.aspx?tid=41325&id=4294972715>
- Rottenborn, Stephen C. and Edward S. Brinkley (editors). 2007. *Virginia's Birdlife: An Annotated Checklist*. Virginia Society of Ornithology. Virginia Avifauna No. 7. 330 pp.
- Spahr, John. 2003. The Bath and Highland County Foray of June 2003. *The Raven*. 74:28-52.
- Stevens, Charles M. 1975. A summer population of Red-breasted Nuthatches in Augusta County. *The Raven*. 46:87-88.

TABLE 1: FORAY RESULTS FOR ROCKBRIDGE AND THREE ADJACENT COUNTIES

SPECIES	HIGHLAND, 2003	BATH, 2003	ALLEGHENY, 2011	ROCKBRIDGE, 2013
Canada Goose	16	300	42	268
Wood Duck	7	9	5	15
Mallard	6	~20	6	27
Northern Shoveler	1			
Lesser Scaup		2		
Hooded Merganser		3		
Ruffed Grouse	13	5	2	1
Wild Turkey	~20	~20	28	68
Northern Bobwhite		2		
Great Blue Heron		4		11
Green Heron	4	13		10
Black Vulture	10	8	15	130
Turkey Vulture	~200	~200	116	223
Osprey	2	3		2
Northern Harrier				1
Sharp-shinned Hawk	6	1	1	1
Cooper's Hawk	3	3	3	4
Bald Eagle	~10	~8	5	3
Red-shouldered Hawk	14	10	4	10
Broad-winged Hawk	11	13	9	8
Red-tailed Hawk	28	13	12	34
Killdeer	16	10	7	19
Spotted Sandpiper			2	
Ring-billed Gull	1	1		
Forster's Tern			1	
Rock Pigeon	43	6	32	78
Mourning Dove	~100	~100	111	377
Yellow-billed Cuckoo	~30	~40	73	40
Black-billed Cuckoo	5	8	3	1
Barn Owl				1
Eastern Screech-Owl	2		1	3
Great Horned Owl		1		
Barred Owl	7	3	3	5
Northern Saw-whet Owl	~1			
Eastern Whip-poor-will	2	7	19	6
Chimney Swift	common	common	41	146
Ruby-throated Hummingbird	~10	~20	20	36
Belted Kingfisher	~30	~10	7	10
Red-bellied Woodpecker	24	~40	57	76
Yellow-bellied Sapsucker	34			
Downy Woodpecker	~30	~30	57	67
Hairy Woodpecker	~20	~7	25	22
Northern Flicker	~75	~75	30	54
Pileated Woodpecker	~50	~50	119	85
American Kestrel	14	5	2	15
Eastern Wood-Pewee	60	90	79	93
Acadian Flycatcher	65	100	70	36
Willow Flycatcher	4	9	4	3
Least Flycatcher	51	30	2	
Eastern Phoebe	~19	~22	83	141
Great Crested Flycatcher	~90	~90	46	54
Eastern Kingbird	~30	~30	8	63

TABLE 1 (continued): FORAY RESULTS FOR ROCKBRIDGE AND THREE ADJACENT COUNTIES

SPECIES	HIGHLAND, 2003	BATH, 2003	ALLEGHENY, 2011	ROCKBRIDGE, 2013
Loggerhead Shrike	3	1		
White-eyed Vireo	3	38	9	12
Yellow-throated Vireo	16	34	28	33
Blue-headed Vireo	80	45	34	45
Warbling Vireo		9	1	30
Red-eyed Vireo	~500	~500	799	432
Blue Jay	~100	~100	114	233
American Crow	~300	~300	266	488
Fish Crow		1		24
Common Raven	~66	~33	52	24
Horned Lark	4			
No. Rough-winged Swallow				70
Purple Martin				21
Tree Swallow	common	common	121	224
Barn Swallow	~300	~300	128	525
Cliff Swallow	40	21		33
Chickadee species	~100	~100	148	
Carolina Chickadee	summed as chickadee species			161
Black-capped Chickadee	summed as chickadee species			22
Tufted Titmouse	71	182	210	289
Red-breasted Nuthatch	8	1	1	2
White-breasted Nuthatch	40	~50	101	72
Brown Creeper	8	5		
House Wren	56	17	6	14
Carolina Wren	~30	~80	91	300
Blue-gray Gnatcatcher	47	141	143	95
Golden-crowned Kinglet	40			
Eastern Bluebird	common	common	82	221
Veery	68	17		7
Hermit Thrush	24	5	2	
Wood Thrush	~60	~120	123	103
American Robin	abundant	abundant	326	333
Gray Catbird	common	common	60	46
Brown Thrasher	66	112	47	70
Northern Mockingbird	~15	46	54	175
European Starling	abundant	abundant	246	834
Cedar Waxwing	~250	~250	54	126
Ovenbird	89	~180	304	227
Worm-eating Warbler	23	~160	236	112
Louisiana Waterthrush	~20	~40	43	26
Blue-winged Warbler	hybrid	3	2	4
Golden-winged Warbler	6	10		
Black-and-white Warbler	~35	~100	79	51
Kentucky Warbler		2	3	4
Mourning Warbler	~5	~5		
Common Yellowthroat	~35	~50	3	6
Hooded Warbler	5	~70	43	47
American Redstart	~50	~150	46	46
Cerulean Warbler	4	~40	11	11
Northern Parula	49	122	24	14
Blackburnian Warbler	~30		31	2
Yellow Warbler	80	43	1	11

TABLE 1 (continued): FORAY RESULTS FOR ROCKBRIDGE AND THREE ADJACENT COUNTIES				
SPECIES	HIGHLAND, 2003	BATH, 2003	ALLEGHENY, 2011	ROCKBRIDGE, 2013
Chestnut-sided Warbler	68	50	13	18
Magnolia Warbler	~100	2		
Black-throated Blue Warbler	~7	~6	1	3
Pine Warbler	3	37	38	45
Yellow-rumped Warbler	16			
Yellow-throated Warbler	~4	~10	1	4
Prairie Warbler	7	9	12	18
Black-throated Green Warbler	~140	~50	37	21
Canada Warbler	~18	few	1	5
Yellow-breasted Chat	5	~16	6	24
Eastern Towhee	~250	~250	248	265
Chipping Sparrow	~300	~300	257	265
Field Sparrow	~100	~100	36	217
Vesper Sparrow	14			
Savannah Sparrow	16	4		1
Grasshopper Sparrow	4	18	1	23
Song Sparrow	135	87	114	167
Dark-eyed Junco	195	~77	13	14
Scarlet Tanager	144	~300	327	196
Northern Cardinal	51	132	159	362
Rose-breasted Grosbeak	49	26	32	17
Blue Grosbeak		6	6	21
Indigo Bunting	very common	very common	389	476
Dickcissel	2			
Bobolink	~70			
Red-winged Blackbird	abundant	common	110	500
Eastern Meadowlark	abundant	common	20	187
Common Grackle	~300	~150	216	479
Brown-headed Cowbird	common	common	54	80
Orchard Oriole	20	40	14	105
Baltimore Oriole	59	47	22	46
Purple Finch	9			
House Finch	51	8	29	57
Pine Siskin		1		3
American Goldfinch	very common	common	141	293
House Sparrow	common	common	42	61
Total Number of Species	123	124	108	115
Total Number of Birds	~7000	~8000	7537	11845

AN ORNITHOLOGICAL BIOBLITZ AT BELMEAD IN POWHATAN COUNTY

WENDY EALDING¹ and PATTY ELTON²

¹*VARCOM Secretary; 11638 Belvedere Vista Lane #202, North Chesterfield VA 23235; wealding@aol.com*

²*Certified Virginia Master Naturalist; 2016 Highland Drive, Powhatan VA 23139; joeandpattyelton@gmail.com*

INTRODUCTION

Belmead, and its sister property, St. Francis, has considerable historic significance, and consists of 1052 hectares of land located on the south bank of the James in Powhatan County, about 45 km west of Richmond. It is owned by the Sisters of the Blessed Sacrament, who have established a non-profit corporation, FrancisEmma Inc., to promote and preserve the historic and environmental value of the property. Details of the history and current status of the property can be found at the FrancisEmma web site. The property has 4 km of riverfront and includes 404 hectares of riparian lowlands under conservation easement. The property also includes an equestrian facility with associated pastures and hay meadows, upland pine forest which is harvested periodically to provide income, and agricultural fields leased to a local farmer to grow cash crops.

Powhatan County is located in the Central Piedmont, which is an underbirded region of the state. The easternmost portion of the Central Piedmont Important Bird Area (IBA) is located to the west in neighboring Cumberland County. A survey of the state owned land in the Central Piedmont IBA was conducted in May 2010 (Bryan, 2010).

The only portion of Powhatan County to be included in a VSO Foray is 633 hectares of nearby state owned land which is now Powhatan State Park (Dolby, 2008) and there is no Audubon Christmas Bird Count coverage. It is unclear whether the property was surveyed as part of the 1985-1989 Virginia Breeding Bird Atlas Project (Trollinger and Reay, 2001, Jeff Trollinger, pers. comm.). Other than a brief survey conducted by the Richmond Audubon Society in April 1997, which identified 50 species, there had been no systematic ornithological inventory of the property. In late 2009, the lead author was contacted by Sister Jean Ryan inquiring about the possibility of developing a bird list for the property. An ongoing survey was started in December 2009, and both authors have continued the survey from April 2010 to the present. As of the end of April 2013, 127 species had been detected on the property. The data is archived in Virginia eBird under the Belmead, Belmead2 and St. Francis hotspots.

In 2011, the James River Master Naturalists (JRMN) Chapter was formed; this chapter is centered on Powhatan and Goochland Counties and uses Belmead as its headquarters for many of its activities. The JRMN has conducted a Great Backyard Bird Count on the property in February 2012 and 2013. In May 2013, FrancisEmma, with the assistance of JRMN, carried out a BioBlitz involving

a number of biological disciplines. This report details the findings of the ornithological portion of the BioBlitz.

METHODS

The ornithological survey used a protocol developed for the 2009 VSO Foray (Ealding, 2009). This involves the use of checklists set up in Microsoft Excel® in a format so that the data can be uploaded into eBird. Participants were asked to keep track of the time that they entered and exited their survey area, and the distance that they covered, as well as entries and counts of species recorded. Evidence of confirmed breeding was also recorded using criteria first used for the Virginia Breeding Bird Atlas (Trollinger and Reay, 2001) and more recently modified for use in the 2012 Loudoun County VSO Foray (Enders, 2012). Only confirmed breeding was recorded because the timing of the BioBlitz was such that migrants were still present and could have been displaying possible or probable breeding behavior without actually staying to breed. The position of nests was recorded using GPS where practical, or a brief description of the location. Emphasis was placed on minimizing disturbance during this activity, following the VSO Principles of Birding Ethics (VSO, 2009)

The property was divided into 25 zones by one of the members of JRMN, based on a number of criteria including predominant habitat type, and accessibility. The zones were not equal in area for practical reasons. The zones are shown in Figure 1 and descriptions of the habitat types found in each zone are presented in Table 1.

The participants were divided into seven teams, each with an experienced leader and at least one recorder who was responsible for collecting the data on to the checklists. In some instances, there was also a co-leader. Because of the limited number of teams, it was necessary for a team to cover more than one zone. Participants were also asked to report their location, the time and the observed direction of flight of Great Blue Herons, Bald Eagles and Red-tailed Hawks, to minimize multiple counting of the same individuals of these wide-ranging species which can often be seen over a considerable area.

In addition, participants surveying from a boundary between zones, such as a road, were asked to only count the bird in the zone where it was first seen, if it crossed into another zone. Participants were also asked to report any incidental sightings if they were traveling through a zone where they were not surveying, with the time of observation.



Figure 1. Aerial Photograph of BioBlitz Area, Showing Zones

Table 1: BioBlitz Zone Habitat Descriptions

Zone	Habitat
A	Mixed deciduous forest, Lick Creek (tributary of Deep Creek), about 15% planted in wheat (presumed cash crop) in northwest portion
B	Mixed pine and deciduous forest, small mowed area (ca. 10%) around St. Francis School
C	Mostly pine forest, some shrub habitat, about 25% planted in wheat (presumed cash crop) in easternmost portion adjacent to road
D	Mixed deciduous forest bounded to west by Deep Creek (Conservation Easement), about 10% planted in wheat (presumed cash crop) in easternmost portion adjacent to road
E	Mixed deciduous forest bounded to east by Deep Creek; part of Conservation Easement
F	Winter wheat cover crop recently treated with herbicide (ca. 50%); mowed area with large Red Cedars around Belmead Cemetery (ca. 25%); shrub habitat (ca. 25%)
G	Pasture and horse boarding area (ca. 50%); mixed forest (ca.50%)
H	>90% recently planted in corn, riparian area along the river (part of Conservation Easement)
I	>90% recently planted in corn, riparian area along the river (part of Conservation Easement)
J	Mixed bottomland forest with wetland, riparian area along the river in Conservation Easement
K	Pasture and hay field, mowed area around the Mansion, ca. 10% mixed forest
L	Mixed forest, shrub land, small pond
M	Winter wheat cover crop recently treated with herbicide
N	Mixed upland forest
O	Pine forest recently logged, some hardwood
P	Mixed pine and deciduous forest with underbrush, wetlands
Q	Mostly pine forest
R	Mixed pine and deciduous forest with natural spring-fed creek
S	Winter wheat cover crop recently treated with herbicide (ca.40%), pasture and horse facility (ca. 20%), mixed forest (ca. 40%)

During the week prior to the BioBlitz, the authors and some of the team leaders visited the property in order to familiarize themselves with their assigned zones, and to test the data collection protocol. In addition, during the following week, a follow-up visit was conducted to reconfirm some of the distances covered, and to reconfirm the presence of the types of crops growing in the agricultural areas.

A dedicated account was created in eBird under the pseudonym BioBlitz 2013 and all the data from the checklists was entered into the predefined format of a Microsoft Excel® spreadsheet and uploaded into this account.

The BioBlitz was conducted during a 24-hour period on May 18, 2013. The temperature during the event was relatively mild with a low of 15°C and a high of 20°C. There was a period of heavy rain and thunderstorms during the early hours of the morning (2.00 – 8.00 AM) which delayed the start of observations, and a second period of heavy rain around noon, which continued into the early afternoon.

Details of the various sightings are reported in the Results section. Observers are identified by last name. The following team designations were used where relevant: Barnett (Lewis Barnett, Diane Butzin, Judy Caspari); Cook (Kim Cook, Julie Kacmarcik, Paula Spevak); Duke (Ben Duke, Liza Kate Walter); Ealding (Wendy Ealding, Bonnie Campbell, Bill Pawelski); Elton (Patty Elton, Suz Frost); McCullough (Kristina McCullough, Kaity McCullough, Rita Shultz, Risa Shultz); Sherrill (Ursula Sherrill, Marianne McKee, Mary Anna Wilcox); incidental observations provided by John Hayden and the Botany Team (Joanne Anderton, Alycia Crawl and Emily Gianfortoni), David Hopler (Fisheries Biologist), Sister Jean Ryan and Mick Knight.

RESULTS

Twenty participants, divided among seven teams, spent a combined total of 34 hours and covered approximately 39 km on foot and by car, during the event. A total of 98 species and one other taxon, not identified as to species, was recorded. A summary, with total counts, is presented in Table 2. Breeding evidence was found for Chuck-will's-widow, Blue-gray Gnatcatcher, Pine Warbler and Chipping Sparrow (details in the following section). A table of all counts by zone is presented as an Appendix.

The highest species count (72) was recorded for Red-eyed Vireo; the most widely distributed species was Indigo Bunting, recorded on 20 out of 25 checklists. The highest number of species (48) was reported from Zone G; the lowest number (3) was reported from Zone E. The latter finding was rather surprising given the nature of the habitat, where good diversity would be expected. It is likely explained by the limited effort given to this location, consisting solely of what could be detected by car from the road, and the fact that this portion of the survey was conducted around 11:30 AM, which is not optimal.

Table 2: Number of Individuals of Each Species in BioBlitz Area

Species	total # recorded
Canada Goose	19
Wood Duck	6
Wild Turkey	2
Northern Bobwhite	7
Double-crested Cormorant	12
Great Blue Heron	7
Green Heron	2
Turkey Vulture	2
Osprey	1
Mississippi Kite	3
Bald Eagle	2
Cooper's Hawk	1
Red-tailed Hawk	3
Killdeer	2
Rock Pigeon	1
Mourning Dove	24
Yellow-billed Cuckoo	26
Black-billed Cuckoo	1
Eastern Screech-Owl	1
Barred Owl	1
Common Nighthawk	1
Chuck-will's-widow	1
Chimney Swift	32
Ruby-throated Hummingbird	9
Belted Kingfisher	1
Red-headed Woodpecker	2
Red-bellied Woodpecker	16
Downy Woodpecker	8
Hairy Woodpecker	1
Northern Flicker	2
Pileated Woodpecker	8
Olive-sided Flycatcher	2
Eastern Wood-Pewee	29
Acadian Flycatcher	16
Empidonax sp.	1
Eastern Phoebe	11
Great Crested Flycatcher	3
Eastern Kingbird	1
White-eyed Vireo	12
Yellow-throated Vireo	9
Red-eyed Vireo	72
Blue Jay	13
American Crow	22
Fish Crow	2
Common Raven	4
Tree Swallow	8
Northern Rough-winged Swallow	2
Barn Swallow	7

Table 2: Number of Individuals of Each Species in BioBlitz Area	
Species	total # recorded
Carolina Chickadee	23
Tufted Titmouse	45
White-breasted Nuthatch	6
Carolina Wren	41
Blue-gray Gnatcatcher	66
Eastern Bluebird	19
Swainson's Thrush	1
Hermit Thrush	1
Wood Thrush	23
American Robin	1
Gray Catbird	3
Northern Mockingbird	3
European Starling	1
Brown Thrasher	2
Cedar Waxwing	16
Ovenbird	22
Worm-eating Warbler	4
Louisiana Waterthrush	1
Black-and-white Warbler	8
Prothonotary Warbler	9
Kentucky Warbler	1
Common Yellowthroat	24
Hooded Warbler	5
American Redstart	2
Northern Parula	21
Yellow Warbler	3
Blackpoll Warbler	2
Black-throated Blue Warbler	1
Pine Warbler	21
Yellow-throated Warbler	5
Prairie Warbler	8
Yellow-breasted Chat	2
Eastern Towhee	7
Chipping Sparrow	38
Field Sparrow	1
Grasshopper Sparrow	6
Song Sparrow	1
Summer Tanager	21
Scarlet Tanager	14
Northern Cardinal	46
Blue Grosbeak	4
Indigo Bunting	66
Red-winged Blackbird	17
Eastern Meadowlark	15
Common Grackle	4
Brown-headed Cowbird	49
Orchard Oriole	6
Baltimore Oriole	1
House Finch	6
American Goldfinch	34
House Sparrow	5

Noteworthy reports are presented in more detail below under Selected Species Accounts; the team leader is identified in parentheses.

Selected Species Accounts:

Northern Bobwhite: Six individuals were recorded in Zones A and B on the St. Francis property (Sherrill), and one was heard calling in Zone J on the Belmead property (Ryan). This is a species which has declined precipitately throughout the state since the mid-1970's (Rottenborn and Brinkley, 2007), and has been identified by the National Audubon Society as the #1 Common Bird in Decline (National Audubon Society, 2007). The ongoing survey has prior reports from the Belmead property in 2012 and on the St. Francis property since 2010. However, Northern Bobwhites have been recorded as far back as 2007 on the Powhatan State Park property which is about 8 km downstream (Dolby, 2008) and more recently since the park opened in July 2013 (Ealding, Elton, Ames and Sherrill, 2013).

Osprey: One individual was seen along the river in Zone J (Barnett). This species is expanding its range and has been reported in the county since 2006 in every month except February (Ealding and Elton 2006-2013). Once rare due to the harmful effects of DDT and other organochlorine pesticides, the species has recovered since the use of DDT was banned in the US and is now breeding on the James upstream of Richmond as far as Goochland and Powhatan (Rottenborn and Brinkley, 2007).

Mississippi Kite: Three individuals first reported in Zone N, close to the boundary of Zone M, around noon (Duke) and subsequently seen by many observers and photographed (Barnett, 2013). It is likely that these birds put down in the midday storm centered just north across the river in Goochland County. They stayed around much of the afternoon, perched in trees and one was seen catching and eating dragonflies in flight. They were not present during a follow-up visit on May 22 (Ealding). There were other reports of this species in the area around this time, with two being reported on May 19 soaring in a northwesterly direction over a yard in Dinwiddie County, 64 km southeast (D'Onofrio, 2013), and as many as seven being reported from a suburban location about 32 km east in Short Pump, Henrico County, June 5-9 (Harding, 2013; Ake, 2013). The species is a first for the property, and may be a county record (Fenton Day, pers. comm.)

Bald Eagle: Two separately identifiable individuals were reported, an immature seen around 9:30 AM flying southeast from Zone G (Cook) and an adult seen around 5:30 PM flying southeast from Zone J (Cook). A pair attempted to nest on the property earlier in the year but the attempt failed when the nest was blown down three times in storms (Ryan, pers. comm.).

Black-billed Cuckoo: One heard calling in Zone N (Ealding) was a first for the property. This is an uncommon migrant in the Piedmont, and may be a county record (Fenton Day, pers. comm.).

Eastern Screech-Owl: A gray morph individual was photographed in Zone L by Cook and Kacmarcik as they were leaving the property after participating in the nocturnal moth survey. Although considered common throughout the state, this was a first for the property.

Common Nighthawk: One was seen flying over the Mansion parking lot in Zone K by Rita Schultz and Mick Knight at 7:30 PM. This is a first for the property.

Chuck-will's-widow: An individual on a nest was found in Zone O by Dr. John Hayden and the Botany team, who showed it to the McCullough team. This is a first for the property.

Olive-sided Flycatcher: Two were found in Zone B on the St. Francis property (Sherrill). This is a rare migrant in the Piedmont and is a likely county record (Fenton Day, pers. comm.) as well as being a first for the property.

Common Raven: Three were seen in Zone P at 10:20 AM (McCullough) and one was heard calling (Ealding) at 10:45 AM at some distance from the boundary of Zones N and M. The call was heard from the direction of the river west of the Mansion, which would be consistent with the location in Zone P which was approximately 600 meters in a straight line from the observation point at Zone N. On the day before the BioBlitz, the McCullough family found a family party of six Ravens at a very similar location around 4 PM. One of them may have been raiding a nest as it was driven off by "two very angry little brown birds". Common Raven is a species that has expanded its range south and east in recent years from its historical range in the mountains, and is a year round resident just across the river in Goochland County, where they are known to nest at the Luck Stone Quarry about 18 km due northeast.

Blue-gray Gnatcatcher: individuals were observed on nests in Zones B and K.

Swainson's Thrush: One was reported in Zone P (McCullough). Although it is a common spring migrant in the Piedmont, it was a first for the property.

Hermit Thrush: One was found in Zone N (Duke). Although this is a common wintering species on the property, its presence this late in the season is unusual (Rottenborn and Brinkley, 2007; Dalmás et al, 2010).

Cedar Waxwing: A total of 16 was reported: one in Zone A (Sherrill), 12 in Zone G (Cook), two in Zone M (Ealding) and one in Zone N (Duke). The species occurs year round in the county and may well breed in the area. It is known to be a confirmed breeder to the southwest in Charlotte and Prince Edward counties (Dalmás et al, 2010)

Worm-eating Warbler: Four were reported from Zone G (Cook); this is an uncommon migrant in this part of the Piedmont.

Kentucky Warbler: One was heard singing in Zone A in the deep woods on the east side of the entrance road to the St. Francis property (Sherrill); this may well be the same

individual heard at this same location during a scouting trip on May 15 (Elton, 2013). There is no confirmed breeding evidence for this uncommon species on the property although it is known to breed about 26 km southwest at Bear Creek Lake State Park in Cumberland County (Evan Spears, pers. comm.)

Black-throated Blue Warbler: Although a common spring migrant in this part of the state, one found in Zone G (Cook) was a first for the property.

Pine Warbler: An individual carrying food was seen in Zone O.

Chipping Sparrow: An individual carrying food was seen in Zone S.

Field Sparrow: Only one individual was reported, in Zone G (Cook). This was rather surprising as the ongoing survey indicates that the species is present throughout much of the year. This is ranked #9 on the National Audubon list of 20 common North American Birds with the greatest population declines since 1967 (National Audubon Society, 2007)

Grasshopper Sparrow: Six individuals were reported, one in Zone F (Barnett), four in Zone G (Cook) and one in Zone K (Barnett). There are prior records for the property from 2011 and 2012. Recent surveys in July 2013 have found a similar number present within a small, well-defined area at nearby Powhatan State Park. This species is ranked #10 on the National Audubon list of 20 common North American Birds with the greatest population declines since 1967 (National Audubon Society, 2007).

Eastern Meadowlark: Fifteen individuals were reported: two in Zone A (Sherrill), one in Zone F (Sherrill), eight in Zone G (Cook), two in Zone K (Elton) and two in Zone M (Ealding). The ongoing survey has recorded the species as a year round resident on the property. This is encouraging as the species has undergone a significant statewide decline since the 1960's (Rottenborn and Brinkley, 2007) and is #6 on the list of Common Birds in Decline (National Audubon Society, 2007).

DISCUSSION

The intensive effort characteristic of a BioBlitz contributed significantly to the knowledge about the avifauna of the property. Eight species were added to the property list as indicated in the Results section, bringing the property total to 135 species. Despite the fact that the BioBlitz was conducted at a time that is traditionally considered to be past the peak of spring migration, the fact that 98 species were recorded is impressive. In part this may be related to the cold weather earlier in the spring season which led to a delayed spring migration. A Spring Bird Count conducted in Williamsburg on May 7 noted fewer species than expected due to these conditions (Cristol, 2013); in the case of the BioBlitz, this delay proved beneficial in terms of the numbers of species recorded. In addition, it is likely that some of the specific weather conditions immediately before

and during the BioBlitz caused migrants to put down on the property; the inclement weather of the early hours of May 18 may well have caused the migrating Black-billed Cuckoo and Olive-sided Flycatchers to seek brief refuge. Certainly it seems very likely that the midday storm caused the Mississippi Kites, a soaring species, to put down when they ran into the storm centered immediately to the north. On the other hand, the weather conditions were unfavorable for other soaring resident species such as Black Vulture and Red-shouldered Hawk, which are known to be present on the property. The absence of Purple Martins was also surprising, since they occur on the property, although other members of the swallow family were present as expected.

The finding of Common Nighthawk and the confirmation of nesting Chuck-will's-widow was particularly welcome, as a dedicated effort by the authors in June 2012 had failed to locate any nightjar species. Both species have shown significant declines in their populations in recent years, for a number of possible reasons, including a loss of flying insect populations due to pesticide use (Hess, 2013; Musher, 2013). It is noteworthy that the BioBlitz moth team reported what they regarded as good numbers of potential prey species in the form of nocturnal lepidopterans, particularly given the unfavorable rainy conditions (James Reilly, pers.comm.).

The number of confirmed breeding species appears low at around 4%, (4 out of total species count of 98). This may be in part because the timing of the BioBlitz did not coincide with the peak season for detecting confirmation. Breeding bird studies such as the USGS North American Breeding Bird Survey and the VSO Forays are typically conducted about a month later, in mid-June, when all likely migrants have passed through and evidence of confirmed breeding is easier to detect. For instance, during the June 2009 VSO Foray, which was conducted in Greensville and Sussex Counties, 26% of the 99 species detected had confirmed breeding evidence (Ealding, 2009). A more relevant comparison, both in terms of timing and location, can be made with the May 2010 Central Piedmont IBA Survey (Bryan, 2010). This survey, conducted on state owned land in a nine-county area just to the west of Powhatan County, recorded 7 species with evidence of confirmed breeding out of a total of 112 species detected, giving a confirmation rate of around 6%.

The high total species count is a reflection of the high environmental diversity of the property. The Sisters are to be commended for their efforts in maintaining this habitat diversity along an important portion of the James River. The property includes habitat types which are important for species such as Grasshopper Sparrow, a grassland-dependent species which has suffered a significant decline since 1966, and Yellow-breasted Chat, a shrubland-dependent species (Askins, 2002). Maintenance of these specific habitat types by appropriate mowing schedules and preservation of hedgerows (Bakermans and Rodewald, 2002) along with other good management practices (Wolter, Capel, Pashley and Heath, 2008) would be of great benefit.

While the study was impressive in terms of the numbers of species recorded, it by no means represents full coverage of such a large property. One of the limitations of the study was the limited availability of experienced birders to act as team leaders, due to scheduling conflicts with other volunteer ornithological events and personal events such as graduations. This meant that a limited number of teams had to cover multiple zones and were not able to provide maximum coverage. In addition, the area is not perceived as a birding destination, which makes it difficult to recruit leaders from outside the immediate area.

Another limitation of the study was that its timing was not optimal for the detection of confirmed breeding species. There were tantalizing reports of the presence of species such as Cedar Waxwing and Kentucky Warbler, with no evidence of confirmed breeding. With the recent opening of Powhatan State Park (opened July 2013) approximately 8 km downstream, a more detailed investigation of breeding species on the Belmead property and at the park would be a worthwhile service project for the JRMN. Both locations also merit inclusion in any future VSO Breeding Bird Atlas Project.

REFERENCES:

- Ake, R** (2013) <http://ebird.org/ebird/view/checklist?subID=S14379997>
- Askins, R** (2002) Restoring North America's Birds: Lessons from Landscape Ecology Second Edition
- Bakermans, M and A. Rodewald** (2002) Enhancing Wildlife Habitat on Farmlands <http://ohioline.osu.edu/w-fact/0014.html>
- Barnett, L** (2013) <https://plus.google.com/photos/107330221059062556307/albums/5879710057524291009?banner=pwa>
- Bryan, D** (2010) The 2010 Central Piedmont Important Bird Area (IBA) Protected Areas Survey. *The Raven* Vol. 81 No.1: 22-29
- Cristol, D.** (2013) Orioles arrive late. *Virginia Gazette* May 18, 2013, 1C
- Dalmas et al.** (2010) Birds of Virginia's South Central Piedmont: An Annotated Checklist for Prince Edward and Surrounding Counties
- Dolby, A.S.** 2008. The 2007 Virginia Society of Ornithology State Park Breeding Bird Foray. *The Raven*. 78:2-35.
- D'Onofrio, A** (2013) Mississippi Kites – Dinwiddie Co. 5/19. Post to Va-bird list serve May 19, 2013
- Ealding, W & P. Elton:** Osprey records in Powhatan Co. 2006-2013 <http://ebird.org/ebird/va/map/osprey?bmo=01&emo=12&byr=2006&eyr=2013&env.minX=-78.132&env.minY=37.418&env.maxX=-77.656&env.maxY=37.693&gp=true>

Zone	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
Ruby-throated Hummingbird	3									3						1			2	
Belted Kingfisher							1													
Red-headed Woodpecker	1																	1		
Red-bellied Woodpecker	2	1	3				3	2	1	2	1								1	
Downy Woodpecker	2							2		1							2		1	
Hairy Woodpecker														1						
Northern Flicker										1				1						
Pileated Woodpecker	1									4				1		1	1			
Olive-sided Flycatcher		2																		
Eastern Wood-Pewee	5		3	1			2	3	2	3	2	1		1		4			2	
Acadian Flycatcher	2		4				2		1		1			1		4	1			
Eastern Phoebe							4		1											
Great Crested Flycatcher	1		1				2		1		3			1		1		1		
Eastern Kingbird								1			1						1			
Empidonax sp.															1					
White-eyed Vireo	2	4				1				1	1			2					1	
Yellow-throated Vireo	2		1				1	1		1				1		2				
Red-eyed Vireo	5	3	4				9	6	2	14	3	2	1	5	2	4	5	2	5	
Blue Jay							1			6				1		4	1			
American Crow	3		3	1			3	2	1	2	2		1	2		1			1	
Fish Crow								1						1						
Common Raven														1		3				
Barn Swallow						6						1								
Carolina Chickadee	2	2					5	2		3	2			3		3			1	
Tufted Titmouse	2		5				3	2	3	7	1	1		6	2	3	4	3	3	
White-breasted Nuthatch	2		3											1						
Carolina Wren	4	1	4	2			5	3		6	5	1		3	1	2		1	3	
Blue-gray Gnatcatcher	8	2	4				11	5		10	5			1	8	2	5		2	3
Eastern Bluebird						1	11	4			1									2
Swainson's Thrush																			1	
Hermit Thrush															1					
Wood Thrush	5	1	3							2				8		1		1	2	
American Robin														1						
Gray Catbird			2																	1

Appendix (cont'd): Species Counts By Zone:

Zone	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
Northern Mockingbird				1			1				1									
Brown Thrasher															1					
European Starling		2																		
Cedar Waxwing	1							12					2	1						
Ovenbird	2		1				5	2		2			2	2	3	1	2			
Worm-eating Warbler							4													
Louisiana Waterthrush														1						
Black-and-white Warbler									1						1	3	3			
Prothonotary Warbler	1		2					2		3	1									
Kentucky Warbler	1																			
Common Yellowthroat	1						1	2	3	4		9		1		1		2		
Hooded Warbler	2																2		1	
American Redstart	1		1																	
Northern Parula	1		2				3			8	1		5						1	
Yellow Warbler									2										1	
Blackpoll Warbler														1					1	
Black-throated Blue Warbler									1											
Pine Warbler	1		1	1												4	2	9	3	
Yellow-throated Warbler	1		1						2					1						
Prairie Warbler							2						1	3		1			1	
Yellow-breasted Chat												1	1							
Eastern Towhee	2							1								2		2		
Chipping Sparrow	4		3	2					9	2	2		2	2	2				10	
Field Sparrow									1											
Grasshopper Sparrow									1	4				1						
Song Sparrow										1										
Summer Tanager	1			2					2	2			2		4		2	1	3	2
Scarlet Tanager	2	1	2						1	1	1				3		1		1	1
Northern Cardinal	5	1	2						5	1	2	6	5	1	4	7			1	6
Blue Grosbeak	1		1							2										
Indigo Bunting	9	2	5				1	3	11	7	2	4	3	2	2	3	1	5	2	4
Red-winged Blackbird										9	7		1							
Eastern Meadowlark	2							1	8				2	2						

MINUTES OF VSO ANNUAL MEETING

April 26, 2013; Leesburg, VA

Alyce Quinn, VSO Secretary

Friday Night Meeting

Welcome: Andrew Dolby called the meeting to order at 7:05 p.m. and thanked the Loudon Wildlife Conservancy for hosting.

Reports:

Secretary – Jerry Hogansen moved to approve the minutes from the 2012 Annual Meeting, Wes Brown seconded, motion passed.

Treasurer – Our beginning balance was approximately \$43,000 in the general fund and \$139,000 in the restricted fund. Our ending balance was \$42,710.57 in the general fund and \$140,811.04 in the restricted fund.

Nominating Committee – the proposed nominees for officers and board members for 2014 are:

- President – Joe Coleman
- Past President – Andrew Dolby
- Vice President – Jeff Trollinger
- Secretary – Judith Wiegand
- Treasurer – Sue Thrasher
- Membership Secretary – Shirley Devan
- Newsletter Editors – Linda Fields and Alan Schreck
- Raven Editor – Wes Brown
- Board of Directors – Class of 2016: Bill Williams of Williamsburg, Lenny Benkester of Arlington, and Daniel Bieker of North Garden. Bruce Johnson of Lovettsville will step in to fill a vacancy in the Class of 2014.

Jerry Hogansen moved to adopt the selection, Betty Mooney seconded, motion passed.

Program

Identifying Warblers, the Jewels of the Eastern Forest, presented by Mike Bowen, Linda Friedland and Jim Nelson of Maryland's Montgomery County Bird Club.

The meeting adjourned at 7:13.

Saturday Meeting

Saturday morning participants were offered a variety of field trips in the area.

Saturday afternoon the following topics were covered in the Papers Session:

- *Modeling migratory flight routes of Golden Eagles in variable meteorological and topographic landscapes.* Andrew Dennhardt, Division of Forestry and Natural Resources, West Virginia University.
- *Virginia Working Landscapes: a citizen science effort to determine the effects of grassland management practices on bird diversity.* Amy Johnson, Smithsonian Conservation Biology Institute.

- *Breeding pair response to intraspecific territorial intrusion by Bald Eagles in the Chesapeake Bay.* Courtney Turrin, Biology Department and Center for Conservation Biology, College of William and Mary.
- *Depuration of and recovery from methylmercury in European Starlings.* Mary Whitney, Biology Department, College of William and Mary.
- *Comparative analysis of physiological stress indicators in Tufted Titmouse.* Andrew Dolby, Department of Biological Sciences, University of Mary Washington.

Banquet

Joe Coleman thanked Donna Quinn, the original chair of the event up until a year ago when that position was passed on to him, and everyone involved in planning the meeting. Lauren Neal talked about the upcoming Breeding Bird Foray in Rockbridge County. Andrew Dolby announced the award winners listed below. Dolby thanked Shirley Devan for taking over as Membership Secretary and Alyce Quinn for her five years as secretary; he also acknowledged Thelma Dalmas and several past presidents in attendance.

Jackson M. Abbott Conservation Award

The recipient of this year's award is Larry Cartwright, for his work as an educator, survey participant and coordinator, record reporter, and field trip leader.

JJ Murray Research Award

This year's awards went to Vitek Jinirec, M.S. candidate at the College of William and Mary, for "*Wood Thrush habitat selection at the home range scale: implications for local distribution*" and Anna Tucker, M.S. student at Virginia Commonwealth University, for "*Fitness costs and benefits of conspecific brood parasitism in a cavity-nesting warbler,*" focusing on the Prothonotary Warbler.

Mitchel A. Byrd Award

Dr. James Fraser, Professor of Wildlife Sciences at Virginia Polytechnic and State University (Virginia Tech) received this year's award in recognition of his outstanding scientific record and the far-reaching effects of his work on Virginia's birds.

Speaker

The Bluebird Effect: Uncommon Bonds with Common Birds. Guest speaker Julie Zickefoose delighted the crowd with anecdotes about her work both in the field and as a wild bird rehabilitator.

Sunday

A few field trips were again offered on Sunday morning.

**Review of "BIRDS OF VIRGINIA: A FALCON FIELD GUIDE" by Todd Telander
list price \$9.95; FalconGuides, Globe Pequot Press; 2012; 104 pages**

The slim volume reviewed here is one in a series currently produced by FalconGuides, an imprint of Globe Pequot Press. The book does not deliver what the title promises, and is a disappointment for several reasons. It does not cover all the birds known to occur in Virginia, or even a majority of them, but claims to focus on 180 of the state's most common species. Unfortunately the guide shows remarkable confusion about which birds are truly common in Virginia. Black Rail is included in the guide's 180 "common" species, for example, while several that are distinctly more common are missing or treated only briefly. Chuck-will's Widow is included; Whip-poor-will is never mentioned. Golden-winged Warbler is included, but Blue-winged Warbler is not. Swainson's Thrush and Veery are omitted. Hairy Woodpecker is only briefly mentioned in the entry for Downy Woodpecker, with no illustration is given for Hairy Woodpecker, and the information provided on the species is imprecise (how much larger is it, and how long is its "longer bill?"). Perhaps most remarkably, both White-throated and White-crowned sparrows are excluded, though Saltmarsh and Seaside are included.

The book's compact size would make it convenient to carry, but it doesn't meet a need that would lead a birder to take it into the field. While it is labeled as a field guide by its publisher, it fails to meet the expectations today's active birders, or even those who might be casually interested in birds, have for field guides. This applies to the book's illustrations as well as to the species included. Accuracy is a minimal expectation for field guide images, and ideally such images can also showcase the individual style of an artist. David Sibley's illustrations are an example of this, as were Roger Tory Peterson's before him. I was inclined to enjoy Todd Telander's work in this guide based on the first few pictures I saw, but a careful review of the book's illustrations reveals numerous frustrating inaccuracies, especially in the colors of birds shown. Some, such as the bright, nearly lime green of the Acadian Flycatcher's back and its excessively white breast and belly, might be the result of poor color reproduction in the printing process. But too many of the illustrations seem awry: a bright Chimney Swift, the remarkably pale gray back of the Red-shouldered Hawk, a drab American Woodcock, and the excessively orange belly of the Great Crested Flycatcher are other examples, at least in the copies of the book that I examined. No matter whether the artist, the production staff, or both are to blame for this, it is unfortunate.

The volume has other problems as well. Range information for numerous species is brief to the point of confusion. The entry for the Golden-winged Warbler states that it is found "in western Virginia" in summer and as a "spring and fall migrant elsewhere." King Rails are not illustrated, but in the entry for Virginia Rail they are mentioned and said to "summer in eastern Virginia." Such oversimplification can be more misleading than helpful. The short habitat statements given for each species are often too general to be useful as well. Only one plumage is shown for many of the species; for several, the male is shown in profile but only the female's head is illustrated, but even this approach is inconsistent. The orioles show female head profiles; the Brown-headed Cowbird, on the facing page, does not. Only adult males of American Kestrel, Purple Martin, Summer Tanager, and House Finch are shown. Only adults of Double-crested Cormorant, both Night-Herons, and all hawks and gulls are illustrated. More examples could be listed, and I could cite nomenclatural errors as well. Not all of the book's errors are strictly ornithological. In its brief Introduction the guide names the "Peidmont Plateau" [*sic*] as one of Virginia's "three distinct geographic zones." In the next sentence, the Coastal Plain is described as lying "west beyond the Fall Line...."

Given the preceding comments, my greatest concern about a book like this is that it might be given to someone who is just beginning to become interested in birding or ornithology, and that they will be frustrated and misled rather than encouraged. It is not intended to be a comprehensive field guide, so I do not think that experienced birders would use and be misguided by the book, but its many faults could do beginners a disservice. FalconGuides publishes some excellent guides for birding, hiking, climbing, and other activities, so it is disappointing to see this book and similar volumes enter their catalog. This guide is one of a series by the same author on birds of various states; others include *Birds of Colorado*, *Birds of North Carolina*, *Birds of Texas*, and more. I wouldn't recommend *Birds of Virginia* as a guide to the birds of Virginia, nor would I recommend these other volumes, assuming they follow the model of the Virginia guide reviewed here.

C. MICHAEL STINSON
Professor of Biology
Southside Virginia Community College
Kesville, VA

**Review of “THE WORLD’S RAREST BIRDS” by Erik Hirschfeld, Andy Swash, and Robert Still
(2013; Princeton University Press; 360 pp.; list price \$45.00)**

“The World’s Rarest Birds” contains a wealth of information about rare and threatened birds in general, their status as of 2013, and the threats they (and other wildlife) face. The book is lavishly illustrated with hundreds of excellent photographs, including those of each of 515 of the world’s most endangered species, plus illustrations of another 75 species for which no photographs exist. Its size and shape suggest “coffee table book” and, although it could easily serve as one, it is much more than that. You could certainly pick it up when you were in the mood to be wowed by lovely pictures of gorgeous birds. However, it’s also a reference work, containing lists of the world’s extinct, currently threatened and endangered bird species, estimates of their population sizes and details of their locations, habitat preferences and behaviors. It could easily serve as a wish-list and travel planner for birders who enjoy the challenge of looking for rare birds or who, with several thousand birds on their life list, are filling in the blanks that remain. In one sense, the book could even be used as a field guide, since it contains images and information about unphotographed species and species whose photographs have not been previously published. You wouldn’t want to carry this book in the field (heavy!), but relevant sections could be perused prior to a trip, or at your lodging.

The book’s main purpose appears to be to increase the birding public’s awareness of bird conservation issues. It contains information about general threats faced by all birds, and also about the specific threats to each currently-endangered species. The major section of the book (278 pages) is devoted to the 515 critically-endangered species. Four species are listed per page, with a photograph, a range map, and an informative paragraph devoted to each. The authors have divided the globe into seven regions, each with a corresponding division of this section of the book:

- Europe and the Middle east
- Africa and Madagascar
- Asia
- Australasia
- Oceanic Islands
- The Caribbean, North and Central America
- South America

Each division begins with a brief regional description, followed by a general discussion of the conservation challenges in it, and ends with the information and photographs of the critically-endangered species within it. A “quick response” (QR) code, if available, is provided for the species (you can scan the QR code with a smartphone and get the species fact sheet on the BirdLife International website <<http://www.birdlife.org>>). The species within each global division are presented in standard taxonomic order, and Appendix 2 lists all of the globally threatened species by bird family. For conservation-oriented readers interested in a historical perspective, there is some information in the individual species accounts, and Appendix 1 lists the former region and year last recorded for all extinct species.

Finally, there is an 8th division, “Data Deficient Species”, that lists “Sixty species so poorly known that it is not possible to assess their threat status.” Only 21 have accompanying photographs, and the information available is so sparse that often only distribution and a one-line accompanying note are listed. International birders would do well to read this division carefully; a reported sighting of any of these birds, especially if accompanied by notes on time seen, habitat, position, behavior, photographs, etc. would be a significant addition to our knowledge.

SUSAN S. BROWN & WESLEY M. BROWN

*Professors Emeritus, Univ. of Michigan Ann Arbor
VSO members & Virginia Master Naturalists
Parksley VA*

Review of "THE WARBLER GUIDE" by Tom Stephenson and Scott Whittle (2013; Princeton University Press; 548 pp.; list price \$29.95) and the "SONG AND CALL COMPANION GUIDE" (The Cornell Lab of Ornithology Macaulay Library; list price \$5.99)

I am sure by now that if you are an active birder and subscribe to bird list serves and/or organizations, you have seen *The Warbler Guide* by Tom Stephenson and Scott Whittle announced and advertised with accompanying reviews. So, what can I add to these reviews and the authors' own description of their guide located at <http://www.thewarblerguide.com>?

I think I can add the comments of someone who has actually used the guide for the last several months. I was particularly interested to see if the design of *The Warbler Guide* helped me "be as efficient as possible in identifying a warbler" as the authors state in their online introduction.

For my first warbler identification, the features of *The Warbler Guide* that I used were a Quick Finder and the Distinctive View section of a Species Account. The look that I had of this warbler was from the underside only. It then, quickly disappeared into the tree leaves. I used the Underview Quick Finder at the front of *The Warbler Guide* because that is the view of the bird I saw. There I found a photo that exactly matched! The tail, undertail coverts, breast and throat were just as I had seen them.

I next went to the Species Account for this warbler and quickly confirmed that it was a magnolia warbler. What is exceptional about the magnolia's Species Account is that there is a section for brightly colored magnolias (19 photos) and a separate section for drab ones (18 photos). My bird was a poorly marked magnolia and this section showed other looks for drab magnolias.

The Distinctive Views area located in same Species Account showed an enlarged photo of its unique tail pattern that I had clearly seen. The Comparison Species area easily helped eliminate any possible look-alikes (8 photos).

Did *The Warbler Guide* help me be more efficient at identifying this warbler? I used one step to identify the warbler using the specific photo in the Underview Quick Finder. I then confirmed my identification using two other photos located in the Species Account for drab magnolia warblers. The answer is yes! What's more important, I was confident that the bird I had seen for a few seconds was in fact, a magnolia warbler.

The authors also include; "bright/drab" sections for ten other species, including: chestnut-sided and Blackburnian. Which brings me to the second time I used *The Warbler Guide*. Again, I had a very quick look. The bird darted out from a clump of leaves and darted right back. The view would be best described as oblique. Having seen the throat of this bird and the upper side, I knew what it was. Still,

I used the 45° View Quick Finder to see if my view of the bird was there. I found the bird! It was a Blackburnian warbler with its brightly colored throat.

The "Quick Finders" are unique features of *The Warbler Guide*. There are Finders for whatever view of a warbler you may see: face, side, 45°, underview and undertails. There is a "Quick Finder" by geography (East, West) and season (Spring, Fall). Both have full body views. If one can't find a warbler in any of the Quick Finders, I don't think you have seen a warbler! And there is a section in *The Warbler Guide* for just that, the Similar Non-warbler Species section. This section includes vireos, kinglets, verdins, and others.

In each individual warbler's Species Account are included photos of Comparison Species. Since the similar species are shown with the specific warbler being identified, there is no leafing through pages to find them: a feature that is an improvement over field guides.

Individual Species Accounts are in alphabetical order. How nice not to have to worry that taxonomic ordering will relocate a bird in the guide!

Finally, the section "What to Notice on a Warbler" introduces basic field marks such as contrast and color, cheek patches, hooding, eye-rings and eye-arcs, body shape, bill shape and many other identifiable characteristics. By using various photos of warblers with similar field marks, the authors have organized a very good review of diagnostic field marks that could be used to refresh skills prior to warbler migration periods. For novice birders, this section will be invaluable for learning what and where to find field marks on quickly moving tiny warblers.

The Warbler Guide also comes with a *Song and Call Companion* available at the Macaulay Library online store at The Cornell Lab of Ornithology for a separate price. It comes with a short pdf document that includes instructions for using and downloading the Companion audio vocalizations. The Companion must be downloaded on to a computer and then can be synced with a mobile device, such as an iPod or cell phone.

The 1966 field guide by Robbins, Bruun & Zim (Robbins, C. S., B. Bruun & H. S. Zim. 1966. *Birds of North America, A Guide to Field Identification*. Western Publ. Co., Wisconsin. 340 pp.) introduced sonograms as a visual means for identifying a bird's song. But *The Warbler Guide's* section "How to Listen to Warbler Songs" (21 pp), spells out how a sonogram illustrates song structure by breaking the song into elements, phrases, and sections. It is a marvelous tutorial!

Every vocalization that is covered by *The Warbler Guide* is in the *Companion* which exactly follows *The Guide's* page-by-page order. It is not hard to find a specific vocalization because the page number and identifying number/letter of the song are the title of the vocalization in the playlist on your computer.

Again, the authors have provided alternate songs sung by the same bird as well as similar sounding songs from different species, whether warbler or not! Think trills from pine warblers, worm-eating warblers, and chipping sparrows.

The section on "Learning Chip and Flight Calls" is a challenge to all birders to learn these small, quick vocalizations for our resident and migrating warblers. The authors have organized warbler calls into six different groups. Listening to these calls while viewing the sonogram and trying to hear the pitch rising or falling will help train your ear to identify the slight differences. Possibly, those birders with musical training will find this an easier task than others.

Finally, there is a quiz section in the back of *The Warbler Guide*. Take it if you dare!

The one drawback to *The Warbler Guide* is its size and weight. This is not a field guide! It will not fit into a pocket or fanny pack. If you carry a book bag in your car when birding, this would definitely be in it.

For all birders, *The Warbler Guide* is excellent for identifying all North American warblers. The Species Accounts are rich with easily understood information including icons, range maps, comparison species and excellent photos of actual birds in the field. For the quickly seen and/or confusing fall warblers, this will become a go-to reference. In spring, the *Companion* audio list for warbler songs and calls will develop and strengthen any birder's song identification skills, whatever your skill level.

JOANNE LASKOWSKI

Virginia Master Naturalist, Nelsonia VA

Review of

“ALEXANDER WILSON: THE SCOT WHO FOUNDED AMERICAN ORNITHOLOGY”

by Edward H. Burtt, Jr. and William E. Davis, Jr.; 2013;
Harvard University Press, 444 pp.; \$35.00 (hardcover)

Authors: Burtt is a Professor of Zoology at Ohio Wesleyan University; in 1991 he was the North American author for *A Photographic Guide to Birds of the World*, which was revised in 2005. He is former president of the Association of Field Ornithology, the former editor of its journal, and is currently president of the American Ornithologists' Union. Davis is Professor Emeritus of Natural Sciences and Mathematics at Boston University.

This well researched volume succeeds in giving the reader an appreciation for Alexander Wilson, rather than John James Audubon, as the Father of American Ornithology. It is organized by the themes in Wilson's life, a history of his life, extensive information about each of his remaining illustrations that were used in *American Ornithology*, his pioneering work in the field of ornithology, and his legacy.

Wilson's nine volumes of *American Ornithology* were published from 1808 to 1814, well before Audubon's *The Birds of America* was published from 1827 to 1838. Wilson was the first American to describe and classify the birds of North America within the Linnaean system. By so doing, he resolved misconceptions on many North American species. The authors propose that Audubon may have actually gotten the idea for publishing *The Birds of America* after meeting Wilson in 1810 and seeing the first two volumes of *American Ornithology*.

Wilson made numerous contributions to the study of birds and the knowledge of birds in America. He was the first to try to write about all the species in America. Others had written more regionalized accounts of species, e.g., Mark Catesby's *Natural History of Carolina, Florida, and the Bahama Islands*. In *American Ornithology*, Wilson ultimately described almost eighty percent of the birds that were present in the United States in 1812. This percentage may have been higher if he hadn't died while working on *American Ornithology*. (A friend and fellow ornithologist, George Ord, undertook finishing the work on Volume 9 of *American Ornithology* and publishing it posthumously.) Wilson described 26 of the 96 new North American bird species that were discovered from 1808 to 1813; he discovered more new species than any other single person during this period.

Unlike earlier chroniclers of North American birds, Wilson lived and traveled extensively in the United States. Instead of just studying preserved specimens, as was common practice, he observed live birds in their native habitat. While doing so, he kept meticulous notes. He also captured some live birds to further study them. Throughout

his travels and correspondence, Wilson welcomed and recognized others' observations of birds and the birds' behavior. Thus, he was the first to acknowledge the importance of citizen science.

Despite the lack of formal education, Wilson did something remarkable and revolutionary. Based on his observations, he formed hypotheses about species and then tested them. Despite the thinking at the time that all hawks must consume mammals, or at least birds, to maintain their power and strength, Wilson, upon seeing Mississippi Kites sweeping like swallows in trees full of locusts, hypothesized that the kites were catching the insects on the wing and that they might be their primary source of food. He then tested his theory by shooting and dissecting several kites and proved his theory, writing, “those large beetles ... were the only substances found in their stomachs.” He was the first ornithologist to thus quantify his observations and introduce a scientific method. His approach of observing live birds was new and uniquely American. He attempted to thoroughly study each species he encountered, e.g., its anatomy, flight, diet, nest, clutch size, eggs, habitat, migration, thus expanding ornithology beyond the mere description of a bird's appearance.

There are few references to Virginia in this volume. When Wilson first arrived in America, he “settled briefly in Sheppardstown on the Virginia frontier”. Thomas Jefferson published *Notes on the State of Virginia* which included a list of birds in the state; this was the first known state bird list. Wilson probably saw this as he began corresponding with Jefferson about birds in 1805. Their correspondence continued and Jefferson bought a subscription to *American Ornithology*. In 1808 Wilson delivered the first volume of *American Ornithology* to Jefferson at the White House. Jefferson gave him letters of introduction to several of his cabinet members and the Governor of Virginia. Wilson remained in Virginia, traveling to Georgetown, Alexandria, and Richmond selling subscriptions and observing birds. The only birds of Virginia that are mentioned are a “Sora, as the Virginians call it” and “the lower parts of Virginia, North and South Carolina, and Georgia are the winter residences of these flocks [of grackles].”

This book is as much a compendium of Wilson's illustrations as a biography. About half of the book is the chapter titled, ‘Illustrating *American Ornithology*.’ This chapter includes all of the known sketches, drawings, and paintings used for the plates in *American Ornithology*. Extensive comments are included with each about what species is depicted, background information on where

the original was drawn, the circumstances, where the researchers found the painting, the accuracy of the rendering, how lifelike the pose was (or was not), the depicted surroundings, etc.

A minor flaw in this book is the redundancy. Rather than being arranged chronologically, it is organized by: Wilson's illustrations, his ornithology, his legacy, etc., thus many events in Wilson's life are mentioned repeatedly. For example, Wilson and Audubon's meeting in 1810 and Wilson's correspondence with Thomas Jefferson are each described in at least three different places. Despite this redundancy, the book is very informative about Wilson, his contributions to the study of birds, and his nine volumes of *American Ornithology*.

REXANNE BRUNO
<bruno@lynchburg.edu>

LOCAL CHAPTERS OF THE VIRGINIA SOCIETY OF ORNITHOLOGY

CHAPTER	CONTACT	STREET ADDRESS	CITY	ST	ZIP CODE	EMAIL
Audubon Society of Northern Virginia		11100 Wildlife Ctr Dr., Suite 100	Reston	VA	20190-5361	johnsonbruced@hotmail.com
Augusta Bird Club	c/o Lisa Hamilton	321 York Ave	Staunton	VA	24401-3107	catbird321@gmail.com
Back Bay Birding Club	Atlantic Wildfowl Heritage Museum	1113 Atlantic Ave.	Virginia Beach	VA	23451-3503	
Bath-Highland Co. Bird Club		P.O. Box 234	Warm Springs	VA	24484-0234	pareum@gmail.com
Blue Ridge Birders	c/o Elaine Driggers	P. O. Box 885	Independence	VA	24348-0885	
Blue Ridge Young Birders Club	c/o Gabriel Mapel	P. O. Box 18	New Hope	VA	24469	info@blueridgeyoungbirders.org
Bristol Bird Club	c/o Lois Cox,	PO Box 385	Bluff City	TN	37618-0385	
Buchanan County Bird Club	c/o Roger Mahorn	3343 Compton Mountain Rd.	Pilgrims Knob	VA	24634-0044	rmayhorn@hughes.net
Cape Henry Audubon Society	c/o Tony Wood	P.O. Box 1533	Norfolk	VA	23501-5080	tony@accuratedrafting.com
Eastern Shore Bird Club	c/o Bruce Hoffman	5100 Twilley Dr.	Chincoteague	VA	23336-3523	hoffhyup@verizon.net
Fredericksburg Birding Club		P. O. Box 892	Fredericksburg	VA	22404-0892	fredbirdclub@gmail.com
Hampton Roads Bird Club	c/o David Youker	110 Stone Lake Court	Yorktown	VA	23693-3714	Youkerd@aol.com
Loudoun Wildlife Conservancy	c/o Joe Coleman	P.O. Box 2088	Purcellville	VA	20134-2088	joecoleman@rstarmail.com
Lynchburg Bird Club	c/o Peggy Lyons	P. O. Box 167	Concord	VA	24538-0167	pepherup@aol.com
Margaret H. Watson Bird Club		188 Farmville Lake Rd.	Farmville	VA	23901-2390	dcfehrer@yahoo.com
Middle Peninsula Bird Club	Main Library	PO Box 2380	Gloucester	VA	23061-2380	jericson7@cox.net
Monticello Bird Club	c/o Doug Rogers	P.O. Box 4362	Charlottesville	VA	22905-4362	mbcnews@embarqmail.com
New River Valley Bird Club		P.O. Box 361	Blacksburg	VA	24063-0361	
Northern Neck of Virginia	Audubon Society	P.O. Box 991	Kilmarnock	VA	22482-0991	paula.boundary@va.metrocast.net
Northern Shenandoah Valley	Audubon Society	P. O. Box 2693	Winchester	VA	22604-1893	shenandoahaudubon@yahoo.com
Northern Virginia Bird Club		P.O. Box 5812	Arlington	VA	22205-0812	nvabc@verizon.net
Richmond Audubon Society		P.O. Box 26648	Richmond	VA	23261-6648	treasurer@richmondaudubon.org
Roanoke Valley Bird Club	c/o Kent Davis	10513 Bottom Creek Rd.	Bent Mountain	VA	24059-2311	kedjr@cox.net
Rockbridge Bird Club	c/o Elizabeth Besal	104 Shake Rag Rd.	Lexington	VA	24450-3632	bbesal5@gmail.com
Rockingham Bird Club	c/o Steve White	7738 Sparkling Springs Rd.	Singers Glen	VA	22850-2511	finefile44@gmail.com
Russell Co. Bird Club	c/o Peggy L. Herbert	241 Mountain Spur Dr.	Cedar Bluff	VA	24609-8291	peggyfullmoon@yahoo.com
Southside Bird Club	c/o Mary Foster	5969 Dry Fork Rd.	Dry Fork	VA	24549-4212	southsidebirdclub@hotmail.com
Virginia Bluebird Society		726 William Street	Fredericksburg	VA	22401-5751	vbs@virginiabluebirds.org
Virginia Beach Audubon Soc.	c/o Bob Zabot	PO Box 1066	Virginia Beach	VA	23451	president@vbaudubon.org
Williamsburg Bird Club	c/o Shirley Devan	P.O. Box 1085	Williamsburg	VA	23187-1085	sedevan52@cox.net

INFORMATION FOR CONTRIBUTORS

The Raven, the official journal of the Virginia Society of Ornithology (VSO), functions to publish original contributions and original review articles in ornithology relating to Virginia Birdlife. Electronic files are the required form for manuscript submission. Text files, prepared using a Mac OS-compatible word processing program or Microsoft® Word, should contain minimal formatting. Graphics (photos, maps, graphs, charts) should be sent as high quality EPS or JPEG files. An accompanying “cover letter” file should be emailed to the editor stating (1) article title, (2) author(s) full name(s) and email and home or institutional address(es) and, for multi-authored manuscripts, (3) the name of one author designated to carry out correspondence with the editor. If the manuscript or report is technical, a list of persons who would be appropriate reviewers should also be included in the “cover letter” file. Authors are encouraged to consult with the editor on additional matters of content, format, or style.

Most Manuscripts published in *The Raven* concern the distribution, abundance and migration of birds in Virginia. Manuscripts on other ornithological topics, including Virginia-based historical reviews, bibliographical reviews, life histories, and behavioral observations, are also welcomed. In addition, the journal serves to publish the official proceedings of the VSO and other formal items pertaining to all aspects of the Society’s activities. *The Raven* may also publish articles pertaining to the activities of various public and private organizations engaged in biological and conservation work in Virginia. *The Raven* is a peer-reviewed journal; all feature articles and short communications are reviewed before a decision about acceptance for publication is made.

Format of *The Raven* generally follows guidelines set by the Council for Biology editors as outlined in the CBE style manual, 6th edition, 1994 (Council of Biology Editors, Inc., 11250 Roger Bacon Dr., Reston, VA 20190). Recent volumes of *The Raven* should be inspected for style. Vernacular and scientific names of birds should be those in the most recent edition (and supplement) of the A.O.U.’s Check-list of North American Birds (www.aou.org/checklist/north). Scientific names should be italicized. All size, temperature and other measurements should be in metric units.

