

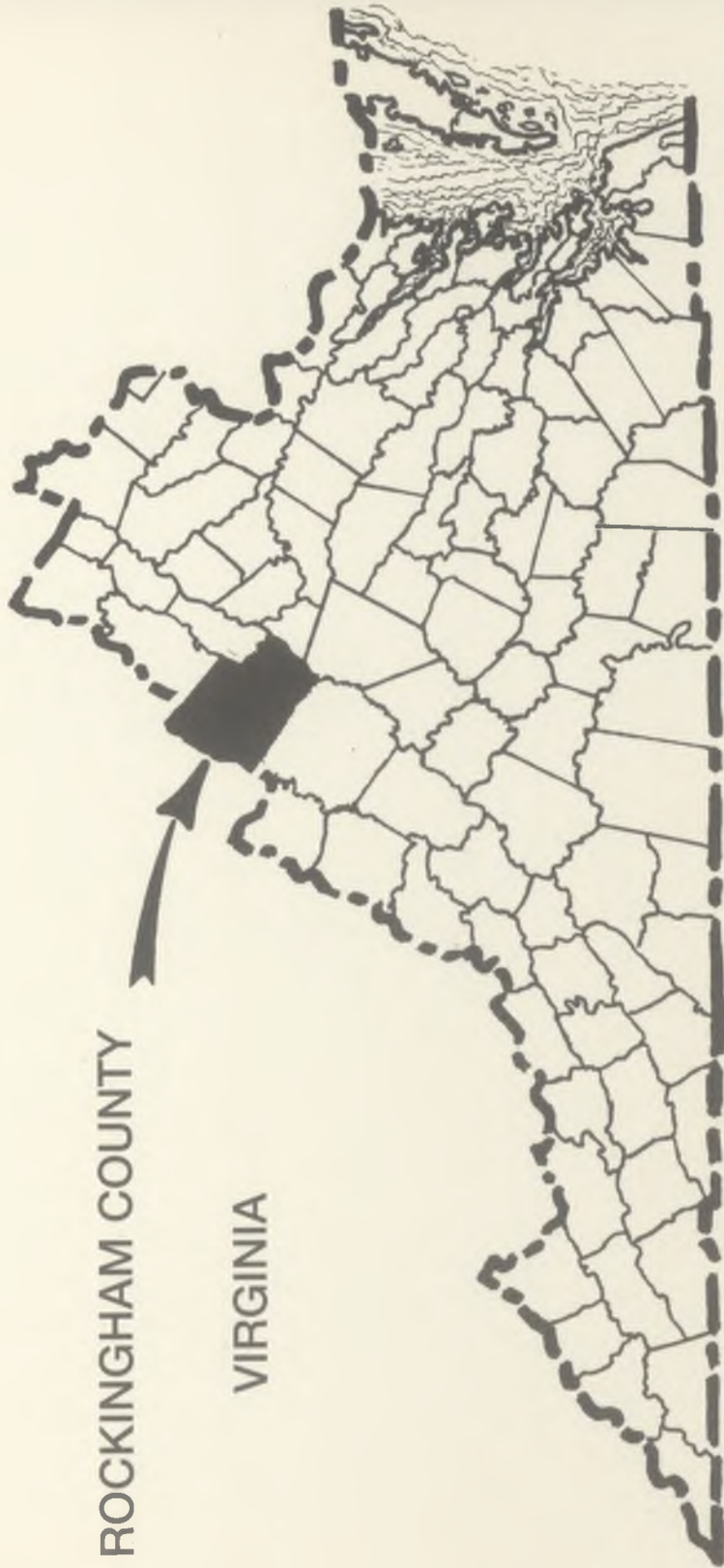
**BIRDS**  
**OF**  
**ROCKINGHAM**  
**COUNTY**  
**VIRGINIA**



Clair Mellinger, Editor  
Rockingham Bird Club

ROCKINGHAM COUNTY

VIRGINIA

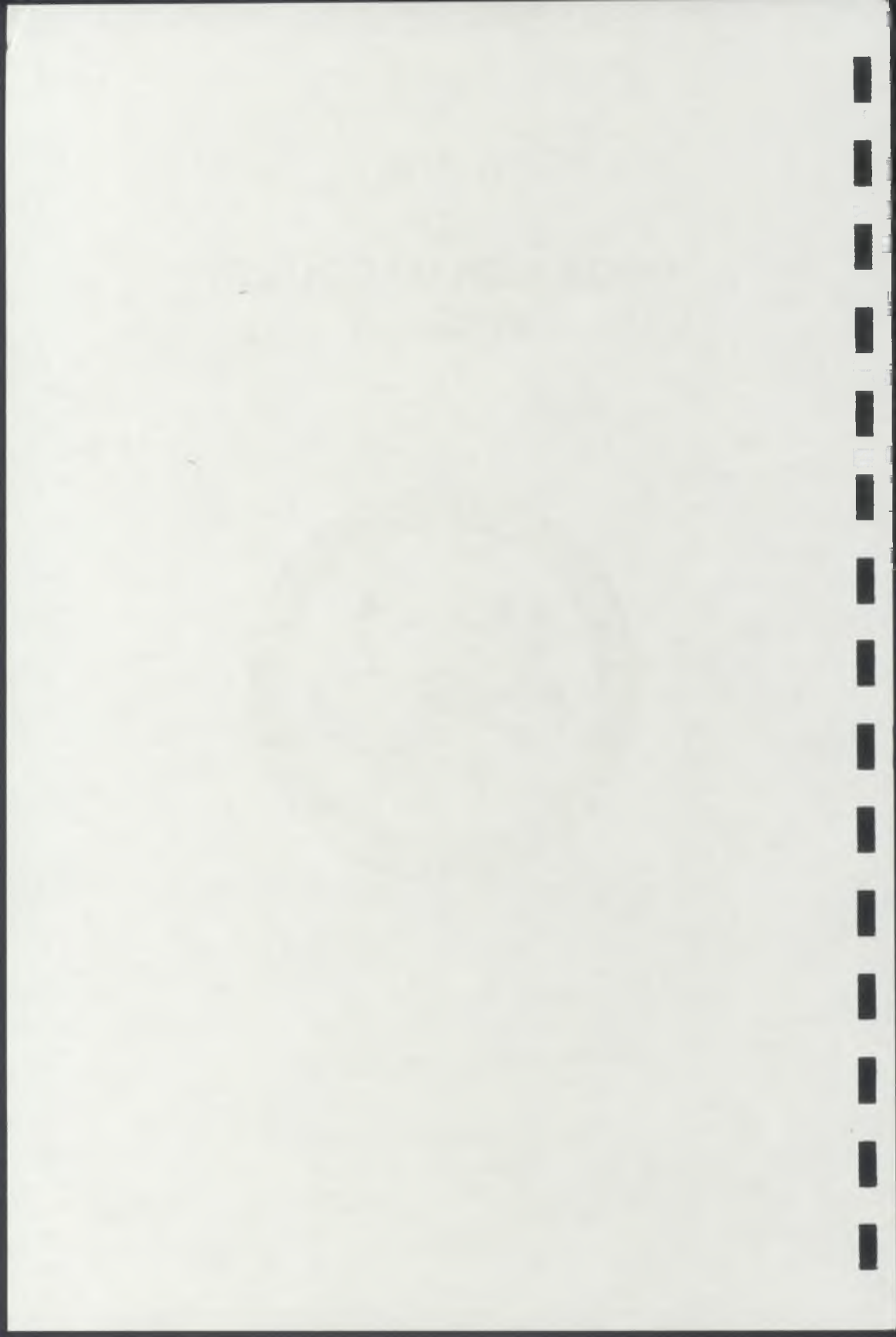


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November 1998**



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PHOTOGRAPHS OF THE AMERICAN GOLDFINCHES ON  
THE FRONT AND BACK COVER WERE GENEROUSLY  
PROVIDED BY JOHN TROTT.

The American Goldfinch has been used as the emblem for the  
Rockingham Bird Club since the club's establishment in 1973.

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November 1998



## FOREWORD AND ACKNOWLEDGMENTS

This book is the product and a publication of the Rockingham Bird Club. It is a compilation of many historical and more recent records of bird sightings in Rockingham County. The primary purpose of the book is to publish Rockingham County bird records that may otherwise be unavailable to the general public. We hope that these records will serve a variety of useful purposes. For example, we hope that it will be useful to new (and experienced) birders as a guide to when and where to look for certain species. Researchers may find records or leads to records of which they were unaware. The records may support or counterbalance ideas about the change in species distribution and abundance. It is primarily a reference book, but fifty years from now some persons may even find the book interesting to read.

In the Records section we have listed some of the persons who contributed to this book. There are many persons whose names are not listed with their records. We are not ungrateful or unappreciative of your contributions. We decided that, even though we could not list all the contributors, it was useful to list persons who made some of the more unusual sightings or some of the major contributions to our records.

Even at the risk of missing important persons who should have been identified, I would like to single out the following persons for special thanks. Barry Kinzie and YuLee Lerner, with their regional bird books stimulated us to think about producing our own book. Within our club, Kathleen and Michael Finnegan are the parents of the book. When it was put up for adoption, I simply took it in. Various persons at different times served on the informal committees that conceived this book and helped to compile it. They include: the Finnegans, Charles Ziegenfus, John Irvine, Leonard Teuber, Fred Crowley, Diane Holsinger, Craig Tumer, and Ken Hinkle. Numerous persons read part or all of this text at various stages of its production. I would especially like to thank Cricket Barlow, John Irvine, Richard Smith, Leonard Teuber, and Max Carpenter for their helpful comments. John Rossheim contributed in a variety of helpful ways. Roger Clapp's contributions and advice were invaluable.

He shared with us many Rockingham County references from his unpublished annotated bibliography of Virginia birds. He gave us F. M. Jones' notes and a copy of Bailey's article that includes many county records from the early 1900s. He continually pointed me in directions that provided useful records. Many nest and egg records that we include were compiled by Roger Clapp (Clapp 1997). Sue Ridd compiled many nest records during her research for the Virginia Breeding Bird Atlas Project and made them available to us. David Johnston sent me D. Ralph Hostetter's banding records and the John Wayland bird references. Mamie, Ryan, and Celia Mellinger also contributed generously to this book by involuntarily donating their husband's and father's time to this project. I thank all of you for your help and ask for your forbearance if the product does not do justice to your excellent contributions.

Although the primary goal of this book is simply to compile and publish records in some coherent order, there are also places where we attempted some interpretation of the data. These attempts at analysis represent only the ruminations of the editor and should not be construed as the official position of the Rockingham Bird Club. We hope that they will stimulate further thinking, research, and, at the least, friendly discussion.

One of the dangers of publishing a book of compilations is in omitting important records. Let me apologize immediately for this sin. We hope there will be enough interest in the book to justify a second edition sometime in the future. One of the contributions that a compilation of this sort may make is to stimulate more systematic and careful record keeping. Please record your observations and forward them to someone or some organization that can compile them in a way that can be useful to others. Whether a second edition takes the format of a book or exists only in cyberspace, you and I will still need to make the observations. Please send us your Roseate Spoonbill ... and your Downy Woodpecker ... records for Rockingham County. Thank you.

Clair Mellinger, Editor



## **THE ENVIRONMENT:**

### **Aspects of the ecology, geology, and climate**

Rockingham County has a rich variety of habitats for breeding, migrating and wintering birds. Most of the county lies in the Ridge and Valley Province of the Appalachian Mountains, a region of alternating ridges and valleys extending from the Gaspe Peninsula to northern Georgia and Alabama. The county can be further subdivided into three or four topographic regions. The center of the county, figuratively and literally, is the Shenandoah Valley subtended by mountain ranges in the east and the west. The crest of the Blue Ridge Mountains forms the eastern county boundary. Shenandoah Mountain, the first ridge of the Appalachian Mountains, forms the west county boundary. The narrow Massanutten Range splits the Shenandoah Valley into an eastern section, drained by the South Fork of the Shenandoah River, and the wider western section carved out by the North Fork of the Shenandoah River and its tributaries.

There are three major river systems in the county, the North Fork of the Shenandoah River, the South Fork of the Shenandoah, and the North River. These major waterways are fed by dozens of smaller streams, many arising in the eastern and western mountains. Several strong spring-fed creeks arising in the valley itself augment these mountain sources. One such spring, dammed near its mouth, is located in the town of Dayton and results in a small lake named Silver Lake. Lake Shenandoah is a 37-acre artificial lake located four miles southeast of Harrisonburg on Mill Creek. Another important lake for waterfowl is Lake Campbell, located on the grounds of the Massanetta Springs Conference Center very near to Lake Shenandoah. In 1972 the city of Harrisonburg, in cooperation with the US Soil Conservation Service, created a 119-acre reservoir, Switzer Lake, by damming the Skidmore Fork near the base of Shenandoah Mountain. Many smaller lakes produced by Soil Conservation Service dams and dozens of smaller farm ponds throughout the county are also important habitats for many bird species.

Productivity is higher in the valley floor streams and lakes because of the higher dissolved nutrient content of the water.

Limestone bedrock of the valley adds calcium and magnesium and raises the pH of the water. Phosphates, nitrates, and other nutrients are added as effluents from sewage treatment plants and leachates from agricultural fields, lawns, golf courses, etc. Mountain waters tend to be more acidic and lower in nutrient content. Consequently they are usually less productive. Silver Lake and Lake Shenandoah have significant areas of shallow water that encourage the growth of vascular aquatic plants at water depths within the reach of waterfowl. As a result these two lakes have become the most important overwintering and stopover locations for waterfowl in the county. However, the current decrease of plant life in Lake Shenandoah illustrates the problems borne by all aquatic systems in the heavily populated Valley. Lake Shenandoah is suffering from excessive inputs of silt, fertilizers, and pesticides from the farms, homes, golf courses, and industries located upstream from the lake. This overload of effluents is threatening to destroy its usefulness for fish, waterfowl, and other biota. Similar problems are occurring on a greater or lesser scale for all aquatic systems, especially impoundments.

Level land (less than 7% slope) in Rockingham County lies almost entirely along the Shenandoah and North Rivers. Most of the mountain areas have slopes over 25%. The remainder of the county falls into the imprecise but descriptive category of "gently rolling" topography.

More important to bird distribution is the topographic relief or elevation. The valley floor ranges from 1000 to 1500 feet above sea level. The lowest point in the county, 900 feet, occurs on the South Fork of the Shenandoah River where it enters Page County. Peaks of the Blue Ridge and Massanutten Mountains range from 3000-3500 feet, whereas some peaks in the Appalachians rise to over 4000 feet. Flagpole Knob, 4381 feet above sea level, is the highest point in Rockingham County. Elevation becomes important to birds as it influences such factors as temperature, precipitation, and evaporation which in turn affect the vegetation that provides food and shelter.

## **GEOLOGY AND SOILS**

Farmland of the Shenandoah Valley is underlain with a variety of types of limestone and dolomitic rocks. Conspicuous outcroppings of these rocks occur in fields and pastures throughout the county. These shallow-soiled areas are used largely for pastures and huge poultry houses. This thriving poultry industry with crop production on the deeper, richer soils of the river floodplains has made Rockingham a leading agriculture county in the state.

The mountains are composed largely of various formations of sedimentary rocks. Most of these sedimentary rocks are types of sandstone or shale. The only igneous or metamorphic rock formations are in the Blue Ridge province, where granite-like Precambrian rock strata are partially overlaid with the basaltic Catoclin greenstone and younger sedimentary rocks. On the lower Blue Ridge slopes and foothills, sandstones and shales again become the dominant rock types. Mole Hill, several miles west of Harrisonburg, is usually described as a volcanic plug or pipe. This unusual geologic formation is one of the few igneous intrusions in the county. A few other dikes and sills exist but do not produce discernible topographic effects.

Rockingham County possesses very few geological anomalies or variations that affect bird communities. Variations in bedrock composition and the soils derived from them, undoubtedly affect the vegetation in subtle ways. However most of the documented bird community differences appear to arise from topographic and other ecological factors. For example, Mole Hill, despite its unique geology, supports a forest community indistinguishable from those on other isolated valley floor peaks that are underlain with sedimentary rocks. Our breeding bird censuses have shown no unusual distributions or concentrations of bird species on Mole Hill when compared to other habitats of similar size and elevation within the county.

## **LAND USE**

In 1975 a land use report from the Rockingham County Planning Commission (RCAPC, 1975) classified 56% of the county as forested, 40% as agricultural (including both cropland and

pasture), and 4% developed. Some may dispute the accuracy of those figures or perhaps the definition of the categories. Undoubtedly the "developed" acreage has grown since 1975 at the expense of the other categories. There are 138,000 acres of the George Washington National Forest in Rockingham County (about 25% of the county area) and 46,625 acres of the Shenandoah National Park (approximately 7% of the county). One of the very few Virginia State Forests, Paul State Forest, lies within the county. The remainder of the forested land is privately owned areas in the mountains, and wood lots on farms on the valley floor. These smaller fragments of forest are becoming increasingly interesting to biologists as they attempt to learn the minimum habitat size required by various species for successful reproduction and survival.

The 40 percent of the county classified as agricultural is divided between pasture (17%) and cropland (23%). Since the dominant type of agriculture in the county is poultry and livestock production, grain and forage for livestock are the most common crops. Hay fields cover 30% of the cropland, including about 10% in alfalfa that appears to have special attraction for many bird species. Most of the remaining acreage is planted in corn, barley, or wheat for grain, silage, or forage. Obviously, many of our birds will be those species that have adapted successfully to typical eastern US farming practices. Continual adaptation is necessary. For example, studies have shown that most of the decline in the Northern Bobwhite population is a result of habitat destruction needed for feeding, nesting, or overwintering (Almy 1993). The clearing of fence rows appears to have had a decidedly negative impact on bobwhites and several other species.

Braun (1964) classified much of the area, especially the Blue Ridge, as chestnut-oak forest. Today the chestnuts are gone and the oaks dominate the mountain forests. Classifiers today generally refer to Rockingham County forests as part of the eastern oak-hickory forest. However only infrequently are hickories numerous enough to be considered co-dominant with the ubiquitous oak species. Parts of the Massanutten Range and the lower slopes of the Appalachians and the Blue Ridge can be categorized as oak-pine forest. Higher densities of pines are

found especially on south-facing ridges with shallow, infertile soil. Besides these species one can find a great variety of deciduous trees, including tulip trees, red maples, black birches, black walnuts, white ash and black locusts, mixed with the oaks depending on elevation or other site-specific environmental conditions.

## FOREST PLANT COMMUNITIES

Bird species' distribution in our area cannot be correlated with mathematical precision to discrete plant communities. Some ecologists would argue that no sharp discontinuities between plant communities exist. Others produce long lists of subtle variations in forest communities. It may be useful to describe briefly a few of the plant communities that occur in the county, and their relationship to some bird species' distributions.

### Oak-hickory Forests

This phrase describes most of the county's forests. However, this category represents such a great variety of species and combinations of species that it is often divided into several subgroups. We will consider only two of the subgroups.

On the drier south-facing slopes, chestnut oaks (*Quercus prinus*), black oaks (*Q. velutina*), and scarlet oaks (*Q. coccinea*) dominate along with occasional hickories and a shrub layer of mountain laurel (*Kalmia latifolia*). At higher elevations, scrub oak (*Q. ilicifolia*) is often found. Three species of pines are commonly associated with this forest type. At the lowest mountain elevations and in wood lots on the valley floor, Scrub pine (*Pinus virginiana*) is the most common pine species. Pitch pine (*P. rigida*) occupies middle and upper elevations of the mountain forests with Table Mountain pine (*P. pungens*) usually at the highest elevations.

On the cooler, moister slopes, ravines, and coves, red oak (*Q. rubra*), white oak (*Q. alba*), red maple (*Acer rubrum*), pignut hickory (*Carya glabra*), tulip tree (*Liriodendron tulipifera*), hemlock (*Tsuga canadensis*), white pine (*Pinus strobus*) and a collection of other deciduous trees share community dominance. Rhododendron (*Rhododendron maximum*) occasionally is found

in the shrub layer of this community but more commonly mountain laurel is found here and in the drier, warmer community described above. This community is sometimes described as a mixed mesophytic community or cove hardwoods.

Very few bird species are restricted to only one of these two plant communities. The variance in bird species' distribution between these two habitats is usually a difference in density rather than an exclusive use of one community or the other. For example, Scarlet Tanagers nest in both of the above habitats, but their density is likely to be higher in the more productive cove hardwood community than the warmer-drier oak-hickory community.

Wood Thrushes, Red-eyed Vireos, Eastern Wood-pewees, Scarlet Tanagers, Ovenbirds, Acadian Flycatchers, White-breasted Nuthatches, and Pileated Woodpeckers are characteristic species of these two forest communities.

### **Northern Hardwood Forests**

On a few peaks, such as Flagpole and Bother Knob, a few spruce (*Picea rubens*) and fir (*Abies balsamea*) survive. However, most of these high ridges are characterized by hemlock and white pine (*Pinus serotina*), and a series of hardwoods more typical of northern latitudes: sugar maple (*Acer saccharum*), red maple (*A. rubrum*), black birch (*Betula lenta*), yellow birch (*Betula lutea*), and beech (*Fagus grandifolia*). Rhododendron and mountain fetterbush (*Pieris floribunda*) are more common here. This habitat is home to Veeries, Golden-crowned Kinglets, Blackburnian Warblers, Canada Warblers, Black-throated Blue Warblers, Rose-breasted Grosbeaks, Dark-eyed Juncos, Least Flycatchers, and Winter Wrens.

In Rockingham County an elevation gradient will usually result in a progression from the oak-hickory to the cove hardwood or northern hardwood community type. The elevation, temperature, moisture, and vegetation changes usually result in the following species displacements: Red-eyed Vireos are replaced by Solitary Vireos, Wood Thrushes are replaced by Veeries,

Ovenbirds by Canada or Black-throated Blue Warblers, Scarlet Tanagers by Rose-breasted Grosbeaks, and Acadian Flycatchers and Eastern Wood-pewees by Least Flycatchers.

### **River Floodplain Forests**

Although valley wood lots are not distinctly different from the low elevation mountain communities, there is a distinctive habitat along the Valley's rivers and larger streams. This flood plain community is squeezed by agriculture and development into a narrow band of trees along rivers. Nevertheless, it provides an important breeding habitat for several species and a sanctuary for many migrants. Sycamores (*Platanus occidentalis*), box elders (*Acer negundo*), silver maples (*A. saccharinum*), black willows (*Salix nigra*), white ashes (*Fraxinus americana*), and trees-of-heaven (*Ailanthus altissima*) characterize this habitat. Warbling Vireos, Green Herons, Baltimore Orioles, Wood Ducks, and Belted Kingfishers are typical birds of this habitat. Bank Swallows, Willow Flycatchers, White-eyed Vireos, and Black-crowned Night-Herons are less common but usually found in this habitat. Nonbreeding Great Blue Herons (spring, fall, and winter), and Osprey (primarily spring) also prefer this habitat.

Given an environment of 40% cropland or pasture and 56% forests, it is not difficult to see that the county provides adequate habitats for a large bird species diversity. Adding rivers, streams, lakes, and ponds, one finds all the major habitats needed for almost any of the species normally found in this climatological inland region.

The only major habitats not well represented in Rockingham County are marshes and swamps. The larger lakes have some small marshy areas around their edges but most small farm ponds are built to Soil Conservation Service standards that prescribe steeply sloping banks on all sides of the pond. Most of the migrating shorebirds listed in county records have been found at the few ponds that have very shallow water at one end producing periodic mud flats. Many other shorebird records come from fields flooded by unusually heavy rains during the migration period.

## CLIMATE

Rockingham County has been characterized as having moderately cold winters and mild summers (RCAPC, 1975). Recent winters have been unusually mild (excluding the "storm of the century" in 1993 and the blizzard of 1996). Summers have been hot, humid, and dry. The average January and July temperatures are 33.2°F and 73.4°F respectively. The county suffers from a rain shadow effect produced by the high mountains to our west. Annual precipitation for the Allegheny Front to our west is greater than 60 inches. The average county precipitation is 34.01 inches per year, including an average snow accumulation figure of 26.3 inches (RCAPC, 1975). Prevailing winds are from the south and the southwest at an average of 10 mph. Temperatures and precipitation vary throughout the county especially with altitude. However, since most recording stations are located in the valley, the variances in altitudinal temperature and rainfall are difficult to determine. Summer temperatures may be more than ten degrees cooler on Flagpole Knob than they are in Harrisonburg. Precipitation is undoubtedly higher. Clearly plants and animals respond to these gradients.



## THE PEOPLE AND THE RECORDS: How and by whom the records were made

The observations and data in the Species Accounts originate from a variety of sources. The earliest records for the county may be those referred to in John W. Wayland's (1972) "A History of Rockingham County Virginia." Although the references to birds are very few and not always precise, we can glean some information about the species that are mentioned.

In a paper entitled "Notes on Birds Breeding in the Mountains of Virginia," H. B. Bailey (1912) describes a trip he made to the "mountains of Virginia in July and August." On previous trips he "was struck by the large number of young birds seen daily on my tramps, and as many species were supposed to raise only one brood in our hot climate, I decided this season [1910] to find as many evidences of actual second and third broods as possible." The bases from which his forays were made were Massanetta Springs (in Rockingham County) as well as Goshen, Hot Springs, and Old Sweet Springs ("one mile over the border in West Virginia"). By using the dates and notes given in this paper we were able to identify the birds that he found in Rockingham County. He apparently visited Massanetta Springs Conference Grounds on a number of occasions since we found other data in the Bailey egg collection notes from this locality in other years.

F. M. Jones was a highway engineer and builder. He was also an egg and nest collector. An early member of the Virginia Society of Ornithology, he contributed several articles to the early issues of the *Raven*. In 1934 he directed the construction of a new bridge across Dry River on Route 33 west of Rawley Springs. During his stay there he did regular collecting and kept systematic notes about when, where, and how he obtained his collection. For example, the following is a note describing a Hairy Woodpecker's nest that he found.

"April, 19, 1934. Shenandoah Mtns. Dixon Ridge.  
Nest in dead post oak tree standing by fire trail along  
the top of the ridge. I saw the birds in the entrance hole  
on several previous occasions so climbed the tree

thinking there were eggs in the nest but found none.  
Nesting hole about 35 feet up."

His records range from February to late June 1934. These records provide us a splendid catalog of species from well-identified locations and at least some idea of the abundance of these species. It serves as a reminder to us of the value of well-kept notes. We cite his notes frequently in the Species Accounts and the complete notes are available in the Rockingham Bird Club archives.

D. Ralph Hostetter arrived at Eastern Mennonite School (later Eastern Mennonite College and now Eastern Mennonite University) in 1919. He taught ornithology classes, ran the first area Christmas Bird Count, banded birds, and began a collection of mounted specimens, study skins, nests, and eggs. This collection became the D. Ralph Hostetter Museum of Natural History and contains many specimens from the county. He also joined the Virginia Society of Ornithology soon after its formation in 1930 and contributed regularly to the *Raven* with articles and reports about birds from this area.

The next sets of systematic ornithological records for the county belong primarily to Max Carpenter and Dr. Harry G. M. Jopson. Before recently retiring, Max was this region's wildlife biologist for the Virginia Department of Game and Inland Fisheries. Max banded many game birds, collected and mounted specimens, and kept excellent records of his observations. Doc Jopson is Professor Emeritus of Biology at Bridgewater College. His field records and publications in the *Raven* and *Auk* add additional depth to our early records. Homer Mumaw, an Eastern Mennonite University (EMU) biology department professor, assisted D. Ralph Hostetter in ornithology classes and other field activities for many years. His artistic skills as a taxidermist are illustrated in many of the specimens in the D. Ralph Hostetter Museum of Natural History. Dr. Daniel B. Suter, Richard Weaver, Dr. Richard Smith, Dr. Hollen Helbert, Dr. Elwood Fisher, Dr. Robert Eggleston, and others also helped with Christmas Bird Counts and contributed many records. We gleaned other early Rockingham records by J. J. Murray, Charles E. Stevens, and others, from early editions of the

*Raven* and the *Auk*. In the spring and summer of 1968 Charles Stevens conducted an extensive survey of the high elevation habitats along Shenandoah Mountain, both north and south of Route 33. His visits took him to the Slate Springs, Bother Knob, Flagpole Knob, Meadow Knob, Dunkel Hollow, and Block Hollow (all areas south of Route 33), as well as Rader Mountain and Laurel Fork (areas north of Route 33). He visited some or all of these locations on 24 March, 12 June, 29 June, 4 July, and 3 August. His observations (see especially Stevens, 1968) give us a number of new breeding records and other invaluable records from those locations and that period.

In 1974 the Rockingham Bird Club (RBC) was organized. The RBC then became the focal point and stimulus for record collection. Also about this time Michael and Kathleen Finnegan returned to the county. Kathleen, a native of Rockingham County, began keeping records of their own extensive field work and assembling the data of others. She was appointed chair of the RBC Records Committee in 1977. Kathleen saw the need for a survey of the county's birds to serve as a baseline for future comparison. From 1977 to 1983 she assembled extensive seasonal reports of the birds seen in the county. She distributed this report in a format similar to *American Birds* seasonal reports and parts of those reports appear in that journal under the name of the RBC. These records consisted of sightings reported at the monthly RBC meetings, the Finnegans' field work, and records from other county birders from whom she could elicit information. (Do not infer that these birders did not wish to contribute their records, simply that they never got around to doing it without Kathleen's friendly persuasion.) Two birders, Leonard Teuber and Craig Tumer, provided particularly valuable records. Leonard Teuber, a veteran birder was in the field almost every day regularly visiting the best birding areas in the county as well as the broader area. Craig Tumer, then a high school student, made himself into one of our best birders through many hours of field work and study. Mike Smith contributed many sightings and nest records from the Blue Ridge - Shenandoah National Park portion of the county. Charles Ziegenfus and Elwood Fisher contributed the findings of their James Madison University ornithology classes and their personal field work. Clair Mellinger similarly contributed the

findings of the ornithology classes at Eastern Mennonite University and personal observations. Charles Ziegenfus and Clair Mellinger also contributed banding records. Chris Bolgiano made detailed lists of her observations in the Fulks Run area. Dozens of other birders also contributed records to the growing data bank. Marie Pettit transferred and preserved these records in a card file maintained by the club. Today most of these records have been transferred to a computerized database. We continue to add significant new records to this database.

These seven years of extensive field work and record-keeping, 1977-83, form the backbone of the data in Species Accounts section of this book. You will see many more records cited from this period than from years before or after 1977-83. No one has systematically collected and collated county observations in this detail since then. We hope this data will form a baseline for future comparisons and analyses of our birds. These seasonal reports are available in the RBC archives.

The species accounts consist largely of nonsystematic observations. There are a few exceptions. Leonard Teuber returns to specific locations throughout the region with almost clock-like regularity. For several years Craig Tumer visited Lake Shenandoah almost daily. Charles Ziegenfus and Elwood Fisher had their ornithology classes in the field twice a week during the spring semester. However, most of the other data resulted from more sporadic forays into the field. We believe that these data, while unsystematic, are important for bird finding and as starting points for future research. We have supplemented these general observations with the following types of more quantitative data.

#### **ROCKINGHAM CHRISTMAS BIRD COUNTS (CBC)**

D. Ralph Hostetter, his colleagues, and students from EMS (now EMU) conducted the county's earliest Christmas Bird Counts. They counted as they walked through fields and along back roads between Harrisonburg (Park View) to Tide Springs (about three miles south of Broadway) and back again. The count was taken by one party of 2-4 persons. Persons participating in this count included: Daniel B. Suter, Richard Weaver, Milo Stahl,

Homer Mumaw, David Mumaw and others. This count began in the 1930s and ended in 1959.

In 1954 Max Carpenter and Doc Jopson began a CBC count that continues to the present. It is a standard 15-mile diameter circle with its center at Ottobine. It includes Silver Lake, a stretch of North River, Bridgewater, Dayton, Mole Hill, Rawley Springs, and, now, the outskirts of Harrisonburg. About one-third of the circle is the foothills and lower elevations of Shenandoah Mountain. The remainder is agricultural land, towns, and suburban area under varying degrees of human development. About one-fourth of the circle is in Augusta County but the results are presented here, of necessity, as though they were all recorded in Rockingham County. Max Carpenter served as the compiler of this count until 1996 when he turned it over to Chuck Auckerman. The results of this CBC are published in *Audubon Field Notes* and *The Raven*.

Before 1974, two to twelve persons performed the count. After the formation of the RBC, the number of participants increased quickly to 20-35. This increase in participants significantly increased the total counts for many species. In the Species Accounts we use two methods to make the counts before and after 1974 comparable, or at least to recognize this difference in observer number. Sometimes we present two averages for the abundance of a particular species on the CBC. One mean covers the whole 43-year history of the count and the second mean covers only the post-1974 years. For example, the average number of Northern Mockingbirds found on the CBC is 46.0 when the whole 43-year history is considered. However, the post-1974 average is 66.0. The higher average of Mockingbirds seen since 1974 may be an artifact of the increased number of observers.

The second device used is presenting the count of a species as the number of birds seen per hour rather than the total number seen. For example the average number of Northern Mockingbirds seen on the CBC is 1.13 birds per party-hour. If the number of people or groups of people (called parties) in the field increases, the total number of mockingbirds seen will surely increase, but the rate at which they are seen by each party

should remain the same. The average number of mockingbirds per party-hour before 1974 is 1.04 and after 1974 is 1.20. It seems justifiable to conclude that some, but not all, of the increase in mockingbird numbers is due to the increased number of observers. The post-1974 birders are also seeing more mockingbirds per hour. You will find this method of data presentation mostly on the graphs. We did not adjust the waterfowl counts because most of that data comes from Silver Lake. Since Silver Lake is relatively small, one person will count as many waterfowl on Silver Lake as 24 persons.

Besides the graphs interspersed in the Species Accounts section, we have sometimes used "decade-means" as a tool for showing trends in the CBC data. The decade-mean for the 1950s is the average number of individuals of that species seen on CBCs between 1954 (the first CBC) and 1959. The "1960s mean" includes the years 1960-1969, etc. These means are not corrected for observer numbers.

### **BREEDING BIRD CENSUSES**

In 1978 the RBC began a series of annual breeding bird censuses (BBC), also called singing-male or spot-mapping censuses. In this type of census a grid is superimposed upon a desired habitat. The observer, using a copy of the grid pattern, walks through the survey area and plots the precise location of each singing male. The theory behind the method is that after several days of plotting, the marks on the grid will outline the singing males' territories. An estimate of the number of territories inside the study area can be made. It is possible to use these numbers to estimate the density of each species in that habitat (for example, number of Scarlet Tanagers per hectare or per acre). Density figures are more easily compared with results in other areas than relative counts, such as Breeding Bird Surveys (see below). These density figures provide a baseline for comparison with future population surveys. Considering the current concern for the effects of habitat destruction and fragmentation in North America and the tropics, the continued release of chemicals into our environment, etc., these population studies will surely increase in value.

A committee of ornithologists has standardized the protocol for this type of study (Marshall 1991). The journal, *American Birds*, published the results of these surveys from across North America for many years. Currently these records are stored and computerized for easier access and analysis by the Cornell Laboratory of Ornithology and published in a special supplement of the *Journal of Field Ornithology*. To characterize the type of habitat being surveyed, the BBC committee requires a systematic survey of the vegetation and suggests a standard method of analysis. The protocol requires at least eight visits to the plot during the breeding season. The recommended time for censuses is within 1.5 hours of dawn in most situations. These factors make these surveys much more time consuming than BBS routes or most other types of censuses.

Kathleen and Mike Finnegan introduced these counts to the RBC. They were familiar with these counts through their association with the Brooks Bird Club of West Virginia. In 1977 Glen Phillips, a Brooks Bird Club member, came to Harrisonburg and trained a group of RBC members in this methodology. As a result, we adopted much of their protocol, including plot size (15 acres; 6.07 hectares) and plotting techniques. Between 1978-1982, we conducted BBCs at eleven sites in Rockingham County. Because of the time and energy involved in these censuses, we chose three or four of the most significant habitats to census annually or as often as possible. Since 1987 we have surveyed four plots with some regularity.

Two of these plots are in Shenandoah National Park on the Pocosin Cabin trail. We have characterized them as mixed mesophytic vegetation, dominated by northern red oak (*Quercus rubra*), white ash (*Fraxinus americana*), black birch (*Betula lenta*), and several other well-represented species. Both are at elevations between 2700-3000 feet. The most common species nesting in these plots are: American Redstart, Veery, Ovenbird, Eastern Towhee, Wood Thrush, Scarlet Tanager, Acadian Flycatcher, and Cerulean Warbler. In the Species Accounts section, one is called the Pocosin Cabin plot and the other the Pocosin Mission plot. Elwood Fisher selected and initiated these studies. Mike Smith has faithfully surveyed these two plots for the past nine years.

Another priority habitat was the high ridges of Shenandoah Mountain. We located a plot on a hunter access road, Little Bald Knob Trail, just south of Reddish Knob. The plot is located in Augusta County, but is included here because it is a project of the RBC and represents similar habitats in Rockingham County. The dominant plants in this plot at 3900 feet are Virginia and pitch pines (*Pinus virginiana* and *Pinus rigida*), red maples (*Acer rubrum*), and an almost impenetrable undergrowth of mountain laurel (*Kalmia latifolia*) and fetterbush (*Pieris floribunda*). The dominant bird species in this habitat are the Canada Warbler, Veery, Eastern Towhee, Dark-eyed Junco, Black-throated Blue Warbler, and Black-capped Chickadee. In the Species Accounts we call this the Reddish Knob BBC plot. Charles Ziegenfus, Max Carpenter, Craig Tumer, and Clair Mellinger (six years), have surveyed this plot.

The fourth plot (1860-1940 feet) lies in the Kephart Run ravine just above its junction with Dry River. Eastern hemlocks (*Tsuga canadensis*) dominate this plot, with some white pines (*Pinus strobus*) and black birch (*Betula lenta*). In this habitat the most common breeding birds are the Acadian Flycatcher, Red-eyed Vireo, Wood Thrush, Louisiana Waterthrush, and Scarlet Tanager. We call this plot Kephart Run in the Species Accounts. Ken Hinkle surveyed this plot for six years.

### **BREEDING BIRD SURVEY (BBS) ROUTES**

A third type of quantitative data used in this book is the Breeding Bird Survey route (BBS). The US Fish and Wildlife Service (USFWS) introduced this type of survey in 1956. Today volunteers run these routes annually in all US states and Canadian provinces. These road routes consist of 50 stops at 0.5-mile intervals. The observer stops at each station for three minutes and records all the birds detected by sight or sound. Each route is run once a year in early June. The survey begins just before dawn (5:19 A.M. in our area) each year, so that each station is visited at approximately the same time on the same date each year. Researchers hope to use this data to identify changes in species population numbers from year to year and over longer time periods.



None of the official USFWS routes fall entirely in Rockingham County. However, we decided to use this well-established method to evaluate the status of Rockingham County species populations. In June 1982 and 1983, Kathleen Finnegan and Charles Ziegenfus ran 15 routes in various parts of the county! Some of these were not 25 miles in length and a few included some walking stages. After that survey, they chose the most representative routes and attempted to persuade club members to adopt and run these routes on an annual basis. We have run two routes with some regularity since then.

Richard and Mary Smith have run the Route 613 survey seven times since 1981. This route follows Route 613 from the southern to the northern boundary of the county. It wanders through Rockingham County countryside bordered by cropland, pastures, and small towns (see map inside back cover).

The Route 612 survey runs almost parallel to the 613 route but includes some forested areas in the foothills of Shenandoah Mountain (see map inside back cover). Clair Mellinger has run this route eleven times since 1981, including every year since 1987 except 1990 and 1994.

Several other routes have been run at least twice, but there is insufficient data from them at this point to warrant analysis for this document. Two examples of how we use this data in the species accounts follow:

- the average number of individuals of a species recorded per route.

For example, the average number of Eastern Meadowlarks on the 613 route is 69.7. This means that about 70 meadowlarks are counted each year at the 50 stops on the 613 route. This is an average of more than one meadowlark per stop but, of course, four or five were heard at some stops and none at others.

- the average number of stops at which a certain species is found per route.

This value gives some idea of how common or how widely distributed a given species is throughout the county. For example, on the 613 route we see or hear Chimney Swifts at an average of 1.2 of the 50 stops each year whereas mockingbirds are seen or heard at 11.6 stops.

These data give us quantitative estimates of current densities and frequencies and provide a baseline for evaluating future changes. At this time we have not analyzed this data with more sophisticated trend analysis statistics.

### **VIRGINIA ATLAS PROJECT (VAP)**

From 1983-1989 the Virginia Society of Ornithology, with financial assistance from the Virginia Department of Game and Inland Fisheries (VDGIF) and other groups, conducted a survey of Virginia's breeding bird populations. Breeding bird atlas projects in Great Britain and Europe provided the models for those later done in various states and provinces in North America. In these projects the country, state, or province is divided into areas (blocks) and all the species of birds nesting in that block are identified. In Virginia the sample block size chosen was one-sixth of the area (the southeastern corner) of the 7.5 minute US Geologic Survey maps of Virginia. These 800+ blocks were designated "priority" blocks and were to be exhaustively sampled as representative areas for the whole state. In these blocks VAP volunteers listed all the species present during the breeding season and identified their breeding status as possible, probable, or confirmed. The VAP committee provided each atlaser with a standard list of behavioral criteria defining each of the above categories.

Rockingham County contained seventeen of Virginia's 800+ priority atlas blocks. We sampled all seventeen priority blocks. Some blocks were sampled during only one breeding season but many were visited over a period of several summers during the field work period, 1983-89. In the Species Accounts we refer to the frequency that species occur in these 17 blocks. Since these blocks are spread across the county in a regular checkerboard pattern, these data show how widely distributed a given species is throughout the county. For example, atlasers found Eastern

Towhees in all 17 VAP priority blocks but Vesper Sparrows in only three. Atlas results do not tell us the density of the species in any part of the county. (A Downy Woodpecker is considered a breeding species whether one or seven pairs are found within a block.) Perhaps the greatest importance of the atlas data is as a baseline to compare with similar projects in the future.



## THE LOCATIONS: Where the birds are

We include here brief descriptions and directions to some of the locations referred to in the species accounts. You will find most of these locations indicated on the map inside the back cover. DeLorme's *Virginia Atlas & Gazetteer* is the single best map for finding any of the places discussed in this section. Good city and county road maps are available from the Harrisonburg Chamber of Commerce. The US Forest Service also sells maps of the George Washington National Forest. The best maps of the area are the US Geological Survey maps, but they are expensive and unwieldy. Rockingham County is covered by two of the 15 Minute series maps, Middletown and Wardensville. The following 7.5 Minute maps cover most of Rockingham County: Briery Branch, Reddish Knob, Rawley Springs, Brandywine, Cow Knob, Milam, Swift Run Gap, McGaheysville, Grottoes, Mount Sidney, Elkton East, Elkton West, Harrisonburg, Bridgewater, Tenth Legion, Broadway, Singers Glen, Timberville, Fulks Run, and Bergton.

**Leonard's Pond:** This is a small shallow pond on the Carpenter farm about three miles south of Cross Keys. This pond has been informally and affectionately named Leonard's Pond by RBC birders in honor of Leonard Teuber because of his "discovery" of the pond and his many observations there. To reach the pond travel south on Route 276, from its junction with Route 33 east of Harrisonburg, for about six miles and turn west (right) on Route 678. The pond is on the right about 0.2 miles from Route 276. It is a very shallow pond that varies in size with the frequency and amount of recent rainfall. If it contains any water, it has mud flats. This characteristic makes it one of the few ponds attractive to shorebirds in Rockingham County. For example, on 13 May 1994 John Irvine found a Black-bellied Plover, a Semipalmated Plover, 8 Greater Yellowlegs, 3 Lesser Yellowlegs, 10 Solitary Sandpipers, a Spotted Sandpiper, 3 Semipalmated Sandpipers, and 3 Least Sandpipers on this one very small farm pond. Recent "improvements" to the gravel road may have decreased this pond's attractiveness to shorebirds.

**Mace's Pond:** This pond is located on Route 659 about 0.8 miles east of its intersection with Route 340 in Port Republic. It is a small pond with an extensive cattail (*Typha latifolia*) marsh associated with it. It is one of the few marshy areas in the county and possesses records of Little Blue Herons, American Bitterns, White Ibis, and breeding Pied-billed Grebes. There is little place to park along the road and the private land around the pond must be respected. Please be courteous and discreet about your activities.

**Silver Lake:** Silver Lake is located just north of Dayton along Route 701. A major spring feeds more than 100 gallons of water per minute into Cook's Creek through this lake. Because of this strong flow, Silver Lake never freezes completely and has been a haven for wintering waterfowl in the county for many years. Extending trout season to a year-round activity has greatly decreased the usefulness of this lake to birders.

**Lake Shenandoah:** You will find this 37-acre lake about four miles southeast of Harrisonburg. It is at the end of Route 687, about 2 miles south of its junction with Route 33. Many of our winter waterfowl records come from this lake because of its large size and relative inaccessibility. Most of our records for loons, diving ducks, gulls, and terns come from this lake. Recently a housing development at the west end of the lake has replaced a small pond, marsh, and the old field that were the sites of many Craig Tumer/Shenandoah Lake records listed in this book. This lake is managed by the VDGIF and you are welcome to walk around the north side of the lake but please respect the private property notices on the south side.

**Lake Campbell:** This small lake lies along Route 687 on the Massanetta Springs Conference Center grounds less than a mile north of Lake Shenandoah. Recently it has been the best place to find Ring-necked Ducks. Other regulars are Mallards, Great Blue Herons, Belted Kingfishers, and, of course, Canada Geese. It seems to be a favored stopping place for diving ducks during the late winter and early spring. The Center has also added a pair of Mute Swans.

**Trissel's Pond:** This pond is on Dennis and Beth Trissel's farm about 3 miles west of Harrisonburg on Route 701 between Cook's Creek Presbyterian Church and Route 763. Although this pond lies close to the road, the house, and other farm buildings, it appears to attract more waterfowl and shorebirds than many other farm ponds. Its advantages appear to be its larger size and a section of shallower water at one end. Tundra Swans, Snow Geese, Willets, and flamingos have all visited this pond. Many other more common ducks, geese, and shorebirds also appear here during migration seasons. The fields north of the farm often attract flocks of Horned Larks during the winter. Please ask the Trissels' permission to bird the lake.

**Switzer Lake:** This lake lies in the Skidmore Fork drainage at the base of Shenandoah Mountain. Turn south on a gravel access road from Route 33 about halfway up Shenandoah Mountain to get to this lake. Because it is a comparatively young lake and difficult for birders to get to, we have very few waterfowl records from this lake. A large colony of Northern Rough-winged Swallows breeds in the cliffs along the lake. This is a good spot for spring migrants and some less common breeding species, such as Black-throated Green and Blackburnian Warblers. The Finnegans found our only record of a nesting Brown Creeper in this area.

**BBS Routes 612 and 613:** The RBC created these BBS routes in 1982. The 612 route extends from just north of Route 33 to Tomahawk Pond. The 613 route traverses nearly the whole county in a south to north direction.

**Flagpole Knob-Bother Knob-Slate Springs-Block Hollow-Dunkel Hollow:** All of the above locations are along the east ridge of Shenandoah Mt. To reach these areas, take county road 924 from Briery Branch to the top of the ridge. At this point, Briery Branch Gap, the paved road to the left leads to Reddish Knob and the gravel Forest Service road to the right leads north along the ridge to Bother Knob, Flagpole Knob, Slate Spring, and Block and Dunkel Hollows. (The center road leads down the west side of Shenandoah Mountain into Sugar Grove, WV.) The road to Bother and Flagpole Knobs is rough but passable for most vehicles. Beyond Flagpole Knob a high-clearance four-

wheel drive vehicle is required. These areas provide many of our more northern species records. Winter Wrens, Red-breasted Nuthatches, Canada Warblers, Blackburnian Warblers, Golden-crowned Kinglets, Yellow-rumped Warblers, and other species have been recorded in these areas.

**Laurel Run - Cow Knob - Rader Mountain - Sand Springs:**

These areas along the ridge of Shenandoah Mountain north of Route 33 are best reached by using Long Run Road (Forest Service Road #72) or Forest Service Road #87, which is an extension of Route 818 out of Fulk's Run. These are rough gravel roads that have sections that are best suited to four-wheel drive vehicles especially in bad weather. They are passable to other vehicles with reasonably high clearance in dry weather. Many of the more uncommon species listed above for the Flagpole Knob locations have also been found in these areas.

**Madison Run Fire Road:** If you continue east of Port Republic on Route 659 past Mace's Pond (see above) you will come to a barred gravel road that parallels Madison Run into the Shenandoah National Park. A hike up this road especially during early spring migration will yield some of the first Louisiana Waterthrushes, Pine Warblers, Solitary Vireos, Black-throated Greens, and later many other migrants. One of our few Goshawk records also comes from this area...but look for other species while you wait for the Goshawk.

**Mole Hill:** This is a small igneous intrusion in the limestone of the Shenandoah Valley. Like other wooded areas within the valley it is an oasis for spring and fall migrants and provides breeding sites for some species more common in the mountains, such as, Scarlet Tanagers, Ovenbirds, and Wood Thrushes. Its ecotones with the agricultural fields surrounding it have been one of the most likely places for finding Red-headed Woodpeckers. It is located about four miles west of Harrisonburg on Route 33. At Dale Enterprise turn south (left going west from Harrisonburg) on Route 733 and explore the various roads that run around and over the hill. It is privately owned. Please get permission before walking into the woods.



**Union Springs Lake area:** Take Route 257 west from Dayton to the intersection in Ottobine. Continue northwest on Route 742 for about four miles. Turn left on the Union Springs Road, Route 933. A mile's drive on this road will bring you to the Union Springs Lake. From the dam breast you can hear Whip-poor-wills and Chuck-will's-widows calling on a June evening. Woodcocks have also been observed at this location. Continuing west into George Washington National Forest, you will find many migrating warblers in the spring and the expected mountain breeding birds later in the summer. Several clearcuts provide additional species.

**Rawley Springs - Dry River area:** About 12 miles west of Harrisonburg on Route 33 west lies the small community of Rawley Springs. Beyond this town Route 33 follows Dry River for about five miles before it begins to climb Shenandoah Mountain.

Much of the birding of F. M. Jones (see The People and the Records chapter) in the 1930s was done in this area. Many trails and unimproved roads lead to the river and up onto the ridges on either side of this pleasant valley. This is a very productive area for migrants in the spring and fall. Many warblers and other passerines also nest in this area. The Kephart Run BBC plot data is representative of a number of the breeding species for this valley.

**Hillandale Park:** Hillandale is a relatively undeveloped park within the city of Harrisonburg. It contains walking and exercise trails and picnic shelters, but still possesses a significant forested area within the park. A small lake and grassy areas add habitat diversity and edge effect. The park is an easily accessible area for quick visits before and after work and even over lunch for those who work in Harrisonburg. It is often a very productive birding area, especially during spring and fall migration.



## DEFINITIONS AND EXPLANATIONS: An introduction to the Species Accounts

Many terms, locations, and methods of data collection used in the Species Accounts are defined or explained in the previous sections. Please refer to these sections for a fuller description of the methods used, locations surveyed, and the people involved. An understanding of the following abbreviations, terminology, etc. will also help in reading the Species Accounts.

### ABUNDANCE AND DISTRIBUTION TERMINOLOGY

#### Frequency of occurrence

	A species that:
Regular	is reported annually or nearly so.
Irregular	is reported frequently but not every year.
Occasional	is reported infrequently, perhaps one year out of five.
Accidental	has been seen fewer than 10 times, usually less than five.

#### Abundance

	A species that:
Abundant	is usually present in large numbers.
Common	is usually present in suitable habitat.
Uncommon	is usually present in fewer numbers and usually in a restricted habitat.
Rare	is not usually present or in very small numbers or in restricted habitats.
Accidental	is represented by a single record, or occasional records over many years.
Erratic	is present some years and absent others.

<b>Status</b>	A species that:
Resident	spends one season or the whole year in our area (often modified as summer, winter, or permanent residents).
Visitor	spends only part of one season in our area.
Transient, migrant	simply passes through our area in the spring or fall.

We worked fairly hard to come up with a frequency/abundance classification scheme that is descriptive of reality. Problems remain. Can a "rare" bird be "common" in a restricted habitat? The Canada Warbler is a common species in the mountain laurel - fetterbush thickets of the highest ridges of Shenandoah Mountain. However, there is very little of this habitat in Rockingham County. Therefore, there are few Canada Warblers here. Very few birders would list it as a common species in our county, although it could be argued that it is a common species in that restricted habitat. We have opted for the "uncommon" designation, but in such cases we attempt to describe the bird's status in more than one word.

Perhaps it should be noted that because of the editor's dislike of and unease with the term "accidental" other, hopefully more descriptive, terms are substituted whenever possible.

#### **USE OF PARENTHESES AND BRACKETS**

In the Species Accounts we adopt the usual scientific writing style of using parentheses ( ) to indicate the author and date of a published paper or account which is relevant to that particular statement. The full reference is listed in the back of the book in the Literature Cited section. However, we have also used brackets [ ] to indicate the name of birders who made some of the more unusual observations.

For example, in the Lark Sparrow account you will find the following sentences:

Two years earlier another Lark Sparrow had been reported, 12 May 1935, near Harrisonburg (Murray 1935). Since that time only two birds have been reported, both during fall migration. On 13 Oct 1984, one was seen at Lake Shenandoah [Tumer] and on 14 Oct 1985, a male was seen south of Broadway [T. Showalter].

J. J. Murray published one Lark Sparrow sighting in a 1935 issue of the Raven – as indicated by the parentheses around “Murray 1935.” The full reference can be found in the Literature Cited section. Other unpublished reports of Lark Sparrows were made by Craig Tumer and Thelma Showalter – as indicated by their abbreviated names in brackets. Their full names are found in a list of observers in this section.

### **BREEDING STATUS**

The following symbols following the common name of a species indicate that this species:

- \* is a confirmed breeder in the county
- \*\* is a historical breeder in the county but there is no evidence that they have nested here in the past 20 years
- is a presumed or probable breeder in the county

### **FULL NAMES OF OBSERVERS**

The following persons names are listed in abbreviated form in the Species Accounts section.

Barlow, Cricket	Larner, YuLee
Bodkin, Rod	Lehman, Phil
Carpenter, Max	Leta, Len
Coffman, John	Mellinger, Clair
Doherty, Joe	Mumaw, Homer
Finnegan, Kathleen and Mike	Peake, Richard
Holsinger, Diane	Pettit, Marie
Hostetter, D. Ralph	Ranck, Ken
Houff, Mae	Riddle, Irene
Irvine, John	Rosson, Betty
Jopson, Harry G. M.	Shank, Kevin
	Shank, Randall and Janet

Showalter, Thelma  
Smith, Mike  
Smith, Richard and Mary  
Stanovick, Carrie

Teuber, Leonard  
Turner, Craig  
Ziegenfus, Charles

### **ABBREVIATIONS**

The following abbreviations are used in the Species Accounts section:

- BBC - Breeding Bird Census
- BBS - Breeding Bird Survey
- BC - Bridgewater College
- CBC - Christmas Bird Count
- EMU, EMC, EMS - Eastern Mennonite University
- JMU - James Madison University
- Hostetter Museum - D. Ralph Hostetter Museum of Natural History in the EMU Suter Science Center
- RBC - Rockingham Bird Club
- SNP - Shenandoah National Park
- USFWS - US Fish and Wildlife Service
- VAP - Virginia Breeding Bird Atlas Project
- VDGIF - Virginia Department of Game and Inland Fisheries
- VSO - Virginia Society of Ornithology

### **RECORD ACCURACY AND VERIFICATION**

Records in the following checklist are personal records contributed to the RBC Records Committee or gleaned from the *Raven*, the *Auk*, and other publications. Few of the records, especially the older ones, have been reviewed by anyone beyond the RBC Records Committee. We have included most of the records submitted but have not included any records specifically rejected by VARCOM, the VSO records committee. Hopefully in the future more of our rare sightings will be processed through VARCOM. We have listed the instances in which preserved specimens, photographs and/or written descriptions of the sightings are available. Sometimes we have listed the names of the persons who made the sightings. Our hope is that the advantages of having these records available to a larger audience will outweigh the disadvantages of possibly inaccurate reports.

## SPECIES ACCOUNTS: An annotated checklist

### RED-THROATED LOON

*Gavia stellata*

There are four county records for this accidental visitor. One bird visited Lake Shenandoah from 4-24 Nov 1984. Many birders added this species to their county list between 23 Nov and 3 Dec 1995 when two spent part of the winter on Lake Shenandoah. In 1992 VDGIF personnel released a loon on Lake Shenandoah after it was found grounded in another part of the county. A lone bird in winter plumage was observed swimming among the trout fishers on Silver Lake on 6 Apr 1995 [photos, Mellinger].

### COMMON LOON

*Gavia immer*

Common Loons are rare but regular visitors to the county. They usually come singly, more often as spring transients than in the fall or winter. Most sightings occur on Lake Shenandoah, sometimes as late 1 June. One bird, perhaps injured, was observed 8-12 Jun 1978 on Lake Shenandoah. There are no CBC records of this species. In January 1997, Ken Ranck helped a local farmer rescue a Common Loon grounded on his farm. It was released on Silver Lake.

### PIED-BILLED GREBE\*

*Podilymbus podiceps*

Pied-billed Grebes are our most frequently encountered grebe species. Usually this bird appears on our lakes and larger ponds during the first week of September and remains throughout the winter until the second week in May. During the winter season it becomes more irregular and uncommon. Sighting frequency during the last 20 years has fallen. The decade means for the Rockingham CBC show the following trend: 1950s: 2.7; 1960s: 2.4; 1970s: 2.0; 1980s: 1.0; 1990s: 0.4. A well-documented account of nesting occurred in the summer of 1979 (Larner and Scott 1980b). Seven downy young were observed with one parent on Mace's Pond on 4 Jun 1979. Only the parent and one young grebe remained on 7 July 1979. Our only other summer record is for 14 Jul 1956 on the North River at Bridgewater [Jopson].

### HORNED GREBE

*Podiceps auritus*

Horned Grebes are regular visitors but only in small numbers and usually during migration periods. A few birds appear during the winter season but even those remain in the valley for only a short time. An ice storm on 27 Dec 1980 downed eight grebes in the county and hundreds throughout the valley area (Larner and Scott, 1982a). This event, together with the 27 that appeared on Lake Shenandoah on 29 Nov 1982, and the five that appeared with a flock of 40 Tundra Swans on 3

Nov 1986, suggests that many more of these birds fly through the county than are seen. Most of our records for Horned Grebes come from Lake Shenandoah.

#### **RED-NECKED GREBE**

*Podiceps grisegena*

We have six records for this grebe. Two birds were seen on Silver Lake in March 1948 and two again in March 1979. One was found dead at Lake Shenandoah on 27 Apr 1981. A study skin of this bird is in the EMU collection. On 30 Nov 1991, three individuals were reported on Lake Shenandoah after a strong rain storm passed through the area. During the 1994 east coast invasion, two individuals spent several days, 17-22 Feb, on North River at Bridgewater. One was also on Lake Shenandoah, 23-28 Feb 1994.

#### **EARED GREBE**

*Podiceps nigricollis*

On 27 Apr 1981, one bird in alternate plumage was closely studied and identified by three veteran birdwatchers at Lake Shenandoah (Ziegenfus 1982). On 25 Oct 1984 Diane Holsinger identified another Eared Grebe on a pond near Tenth Legion..

#### **DOUBLE-CRESTED CORMORANT**

*Phalacrocorax auritus*

Our 1984 checklist listed this species as an accidental spring visitor. Since 1985 migration sightings have increased. We now classify cormorants as a rare spring migrants. Two were seen regularly at Lake Shenandoah from 1-12 May 1992. Records for this species go back to May 1948 when it was seen on both the 16th and 30th of May on North River near Bridgewater.

#### **AMERICAN BITTERN**

*Botaurus lentiginosus*

This bittern is an occasionally observed spring and fall migrant through our area. One remained at Mace's Pond near Port Republic from 4 April to 17 May 1989 but no breeding behavior was observed. These dates are outside the "safe dates" (established for the VAP) for breeding in Virginia. Most of our records occur in April and May and span the years 1948-1989. The two fall migration records occurred on 14 Nov 1977 and 22 Oct 1982. The 22 Oct bird was found caught in a fence on Franklin Street in Harrisonburg! It was released at the Mt. Solon marsh where bitterns were seen previously. Our most recent record comes from a wet weather marshy area near Briery Branch. One bittern was seen there for several days after 27 Apr 1998.

#### **LEAST BITTERN**

*Ixobrychus exilis*

Least Bitterns are only occasional visitors to our area. All records are from the months May, June, July, and September. Richard and Kathy Funkhouser found a dead Least Bittern at their home in Broadway on 5



Jun 1981. This specimen is now in the EMU collection. On 9 Jun 1981 Leonard Teuber saw one bird at Lake Shenandoah. We have no reports since that year.

### **GREAT BLUE HERON**

*Ardea herodias*

"Great blues" are common fall-spring migrants and winter residents in Rockingham County. Although there are never large numbers of these birds, they are easily found fall through spring around our lakes, rivers, and even small streams and ponds. The total CBC average is 3.3 but has risen to 6.1 since 1974. However, during the winter of 1981-82 when the CBC total was five, Kathleen Finnegan received 30 reports, although many of these presumably were duplicate reports of the same birds. Between 1-17 Dec 1983, six were seen regularly at the partially drained Lake Shenandoah. Winter conditions sometimes take a toll on our Great Blue Herons. The two specimens in the EMU collection are from birds found dead on icy ponds. The only year that we recorded no Great Blue Herons on the CBC was the harshly cold and snowy winter of 1979 that succeeded several similarly bitter winters. We have irregular summer records. On 14 Jun 1992 two adult birds were seen in the same tree along Runion's Creek [Mellinger] near Route 259. However, no nests or behaviors confirming breeding have been observed.

### **GREAT EGRET**

*Ardea alba*

Most of these birds are seen in April or in late July and August. The number of spring reports is increasing. One was shot near Dayton in 1930 (Murray 1932c). (The shooter was fined when he tried to have the bird mounted. The bird is now in the Hostetter Museum at EMU.) In 1935 D. Ralph Hostetter listed one on 10 April in the category of "unusual" spring migrants (Murray 1935b). We classify them now as rare but regular migrants. They are usually seen singly or in groups of 1-3. However, groups of 10-14 have been reported [P. Lehman].

### **SNOWY EGRET**

*Egretta thula*

On 17,18 May 1986, Ken Ranck found one Snowy Egret along Muddy Creek just west of Hinton. Written details of this sighting, but no photographs, are in the RBC files [Mellinger]. Charles Ziegenfus found a second Snowy Egret on Silver Lake in early May 1992.

### **LITTLE BLUE HERON**

*Egretta caerulea*

Little Blue Herons are rare and infrequent visitors to the county. We have five records that span the months of May-August and the years 1976-1984. One immature remained at Mace's Pond, east of Port Republic, from 3-15 Aug 1980. All our records are of single birds.

### **CATTLE EGRET**

*Bubulcus ibis*

Cattle Egrets have a very brief history in Rockingham County. Our first records are from 1 and 2 May 1962, when twenty-one and fourteen Cattle Egrets, respectively, were seen at Cross Keys by Harry Jopson and Max Carpenter. Photographs of these rapidly dispersing immigrants were taken. Betty Rosson spotted nine birds in breeding plumage at Montevideo on 23 Jun 1982 and Janet Shank recorded one on their farm near Broadway on 23 Oct of the same year. However, none were seen after Oct 1983 until Phil Lehman found one in a field near Greenmount Church on 16 May 1998.

### **GREEN HERON\***

*Butorides striatus*

The "little green heron," which isn't green and not that small, is our most common breeding heron. It arrives between 4-22 Apr and is last seen in October or sometimes November (21 Nov 1981). It was reported in nine VAP priority blocks and confirmed as a breeder in one. An average of 1.1 birds per route is seen on the 612 and 613 BBS routes. John Irvine reports that it nests regularly at Lake Shenandoah. Because it is not a spectacular bird in terms of size, color, or behavior, it may be overlooked and underreported. No population trends are apparent from our data.

### **BLACK-CROWNED NIGHT-HERON\***

*Nycticorax nycticorax*

This species has nested in Rockingham County for many years. In the summer of 1959 Harry Jopson observed a heronry of 20 nests along North River near Bridgewater. Since then we have observed or received reports of heronries in various parts of the county. On 22 Jun 1979 Richard and Mary Smith counted 13 birds on a five-mile canoe trip on North River between Mt. Crawford and Weyer's Cave (Larner and Scott, 1980c). In 1982 a colony with at least twelve birds and five nests was observed along the North Fork of the Shenandoah River near Timberville (Finnegan 1982b). Predators destroyed the eggs in that colony and it was abandoned. Mike Smith (1988) discovered a heronry with seven nests near Elkton. The property owner noted that the birds had already been nesting there for six years. Reproduction at this heronry continues. Other reports in recent years of adults and immatures have come from Bridgewater, Montezuma, Lynnwood, Lake Shenandoah and Linville Creek near Broadway. Typically the first sightings in the spring are between 12-27 Apr and last sightings on 23 Aug-6 Sep. However, in 1961 and 1964 single birds were recorded on the Rockingham CBC.

### **YELLOW-CROWNED NIGHT-HERON\*\***

*Nyctanassa violaceus*

We have no recent records of this species in the county. However, Max Carpenter contributed the following note to the RBC records committee.

These notes are also published in *Auk* (Carpenter, 1949) and the *Raven* (Carpenter, 1951).

"On April 19, 1948, a Yellow-crowned Night-heron, *Nyctanassa violacea*, was seen by the writer along North River below the town of Bridgewater, VA. The specimen was collected on Professor Harry Jopson's scientific collecting permit and the skin was placed in the Bridgewater College collection. Dr. J.J. Murray made the statement that he had been watching for this bird in the valley for 30 years.

One Yellow-crown was seen May 8, 1949, and on April 22, 1950. On April 28, 1951, a pair was found nesting along Dry River below the low-water bridge near Bank Church. The nest was approximately 30 feet up in a Virginia Pine and contained three eggs, one of which was a runt. One egg hatched May 23 and the small egg was removed from the nest on May 24. Only one young was in the nest on June 2nd and the other egg was missing. On June 14 the young bird was found dead in the nest from an unknown cause. The exact date when the adult birds deserted the nest is not known. A study skin was made of the young and placed in the Bridgewater collection. Crayfish remains were found in the stomach of the young bird.

One and sometimes two birds were seen in 1953, 1955, 1956, 1962, 1963, 1964, 1967, and the last time was April 28, 1968. In some years the birds were seen as late as July and August."

#### **WHITE IBIS**

*Eudocimus albus*

We have two late summer and one early fall record of wandering immatures of this species. Driving through the county on 1 Sep 1973, Richard Rowlett (1974) spotted one individual in a small pond along I-81 about 11 miles south of Harrisonburg. On 13 Jul 1977, five immatures were spotted by Randall Shank on their farm south of Broadway. Photographs were taken by Mary Smith. On 16 Aug 1980, two immatures visited Mace's Pond, east of Port Republic. Our records indicate that they had been there for "several days".

#### **GREATER FLAMINGO**

*Phoenicopterus ruber*

One bird was observed for several days including 10, 11 Oct 1986 on Dennis and Beth Trissel's farm pond about two miles west of

Harrisonburg. We assumed that it was an escape. Written documentation and photographs of the bird are available from the RBC. Almost exactly ten years later the Trissels spotted another flamingo on their pond. This bird was seen by John Irvine and photographed by Richard Schiemann.

### **BLACK VULTURE\***

*Coragyps atratus*

Like Turkey Vultures, Black Vultures are seen in Rockingham County throughout the year. In most areas we see many more Turkey Vultures, but south and west of Bridgewater, Black Vultures are often found in approximately equal numbers. Although the CBC totals vary greatly, our peak counts were 224 and 277 in 1980 and 1981, respectively, and have decreased since then. Our only confirmed breeding record is of a nest with eggs found on Onyx Hill near Hinton [Ranck].

### **TURKEY VULTURE\***

*Cathartes aura*

Turkey Vultures are very common to abundant throughout the year. They were observed in all 17 of the VAP blocks. The numbers on the annual CBC vary greatly depending on weather and location of winter roosts. For example, the counts for 1988, 1989, and 1990 were all less than 60 but in 1991 745 were recorded (our third highest count). Mike Smith found a nest with two young and later two downy chicks in the SNP in May 1968. The RBC has an excellent series of photographs, taken by Homer Mumaw, showing a "nest," eggs, and nestlings at various ages.

### **GREATER WHITE-FRONTED GOOSE**

*Anser albifrons*

Leonard Teuber found three individuals at the Wildwood Park pond in Bridgewater on 27 Nov 1995. This is the first county record for this species.

### **SNOW GOOSE**

*Chen caerulescens*

Snow Geese are rare irregular winter visitors. Four of our six Snow Goose records include birds belonging to the "blue" phase of the species. D. Ralph Hostetter (Murray 1953) reported in the *Raven* that a blue goose spent the winter on a small pond east of Dayton. Three of seven found near Elkton on 6 Feb 1979 were blue geese. Two Snow Geese seen on Trissels' Pond west of Harrisonburg on 29 Nov 1991 were both blue phase geese. One snow goose that stayed at a small farm pond with a flock of Canada geese from "late November throughout the winter" in 1984-85 was a blue goose. In December and January, 1994-95, a flock of eight geese, four white and four blue phase, wintered on Trissel's pond and Silver Lake. Most reports for Snow Geese occur between October and December. On 18 Oct 1998 six Snow Geese were found at Lake Shenandoah. (Barlow, et al.)

### **CANADA GOOSE\***

*Branta canadensis*

This is becoming an increasingly difficult species to characterize because of the semi-domesticated nature it has acquired in our area. In the past ten years dozens of breeding records have been reported in our county. There is now a resident population in the county that is composed of introduced geese. During the VAP, Canada Geese were reported in only two of the 17 priority blocks and but were confirmed breeders in other non-priority blocks as well. In winter these residents are joined by short-distance migrants from similarly introduced populations in Pennsylvania and Ohio (Constanzo 1993, 1996). Sometimes they are joined by true migrants from the Canadian tundra. These changes have affected its frequency of occurrence on CBCs. Before 1975 there was only one CBC record for Canada Geese. Since then it has been missed on only one count.

### **MUTE SWAN\***

*Cygnus olor*

We have no evidence that Mute Swans are breeding anywhere in Rockingham County except at locations where they have been introduced. Mute Swans are raised on one farm in Rockingham County and have been purchased and "released" on small ponds by several other persons. These swans occasionally are found at Lake Shenandoah and Silver Lake. Currently a pair live on Lake Campbell at Massanetta Springs. Between 7 Jan and 17 Feb 1995 a lone immature was seen by several observers on Trissel's Pond and Silver Lake, locations where they have not been introduced.

### **TUNDRA SWAN**

*Cygnus columbianus*

Tundra Swans are rare visitors to the county. Most are recorded during fall migration and early winter, especially the month of November. Most of the flocks are small (1-6) and stay only a few days. However, larger groups are irregularly spotted flying through the area. On Lake Shenandoah flocks of 28 and 40 have been recorded. Since most of our records are from Lake Shenandoah, during the months of November and March, they have been recorded on only one CBC, 1977.

### **WOOD DUCK\***

*Aix sponsa*

Our earliest record comes from Bailey (1912). He observed "young about half grown" on July 10, 1910. Wood Ducks were found in six of the 17 Rockingham priority blocks during the VAP field work, and were confirmed breeders in 3 of those 6 blocks. They migrate through the county in large numbers during the spring. Four hundred were banded in spring 1979 [Carpenter]. On 20 Sep 1982, the Finnegans counted 300-400, with an equal number of Mallards in a recently-cut cornfield near McGaheysville. Wood Ducks are rarely seen during the winter. The CBC mean is 0.7.

## GADWALL

*Anas strepera*

The Gadwall is the third most common overwintering duck species in the county. Gadwall numbers, like most waterfowl species, fell between 1960 and 1980. Recently their numbers have improved. CBC decade-means show this trend: 1950s: 16.7; 1960s: 8.3; 1970s: 6.6; 1980s: 11.2; 1990s: 3.6. The CBC numbers for the 1990s again are lower but an encouraging 62 were counted on Silver Lake on 26 Jan 1995. Peak counts on Lake Shenandoah (not included in the CBC circle) range from highs of 50 in 1978, 68 in 1983, and 75 in 1984 to less than 20 in 1987 and succeeding winters until 1995. Counts the past two winters have been higher. These peak counts may include some migrating birds, but all were recorded between December and February.

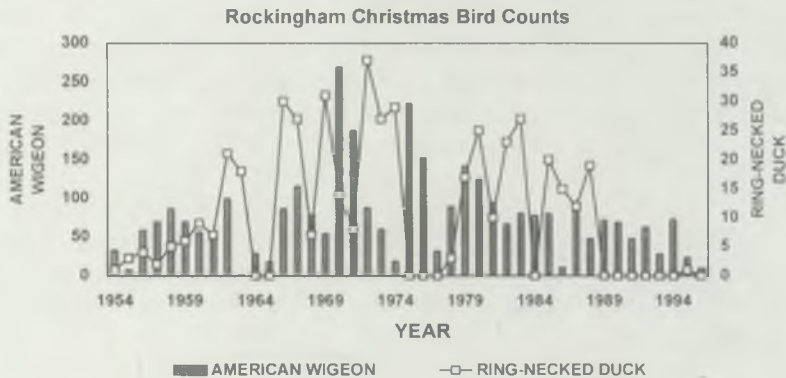
## EURASIAN WIGEON

*Anas penelope*

We had no reports of this species from the beginning of recorded history...until 1996. Then during the winter of 1996-97 we discovered two individuals of this species, a male and a female, on two well separated dates! A rufous phase female was found on Silver Lake by Leonard Teuber on 20 Nov 1996. It was also seen on 21 Nov and again on 29 Nov. Ken Ranck came to Silver Lake on 9 Jan 1997 to verify an Old Squaw report. He found the Old Squaw, 3 Horned Grebes, and a male Eurasian Wigeon. Because of the small size of this lake and its increased year-round use by trout fishers, all of these species were unusual for the lake. Photographs of the male and written documentation of both individuals are in the RBC files.

FIGURE 1

### AMERICAN WIGEON AND RING-NECKED DUCK COUNTS AT SILVER LAKE



### AMERICAN WIGEON

*Anas americana*

Wigeons, along with Mallards, have always been the heart of the Rockingham County winter duck population. Wigeons begin arriving at Silver Lake during the first week in September and the population builds to a peak in November or December. This population usually remains in the area until 1 Apr or the opening of trout season on Silver Lake. The population size grew during the 1960s and 1970s and then began to decline steadily. CBC decade means: 1960s: 59; 1970s: 126; 1980s: 75; 1990s: 45 (Figure 1). Similar declines have occurred on Lake Shenandoah. Since the change to a year-round trout fishing season in 1995, the large congregations of wigeons on Silver Lake occur only during very cold periods when many fishermen and other local lakes are frozen.

### AMERICAN BLACK DUCK

*Anas rubripes*

This species was never common in our area and its numbers, like many waterfowl species, have decreased. We consider it a rare migrant and winter resident. Groups of 1-6 are seen, usually in larger flocks of Mallards or wigeons on Lake Shenandoah or Silver Lake. It is also found occasionally on smaller ponds or on the rivers. Black Ducks are true winter residents with some individuals apparently remaining in our area all winter. The CBC mean is 0.8.

### MALLARD\*

*Anas platyrhynchos*

We characterize this bird as an abundant migrant and winter resident and a common summer resident. It was found in 7 of 17 priority Rockingham Co. priority blocks during the VAP project and confirmed as a nester in 4 of the 7. The decade-means for the CBC show an interesting decline and subsequent increase in numbers: 1950s: 222; 1960s: 87; 1970s: 91; 1980s: 165; 1990s: 252. Some of the recent resurgence may be due to an increase in semi-domestic populations which include many bizarre hybrids with domestic Pekin and other ducks. In 1984 a series of winter visits to Lake Shenandoah produced the following numbers: 6 Dec., 300; 17 Dec., 200; 22 Dec., 250; and 9 Feb., 127. Since then we have rarely reached those numbers. However, in 1995 John Irvine counted 233, 376, and 137 on 14, 15, and 16 Jan, respectively. These latter counts were all made at dusk and may include birds moving onto Lake Shenandoah from smaller ponds where they spent the daylight hours.

### BLUE-WINGED TEAL

*Anas discors*

Blue-winged Teals, like green-wings are uncommon to rare spring-fall migrants and rare winter visitors. A pair was reported at Mace's Pond from 4 Jun - 9 Jul 1979. No nest building or other breeding behavior was recorded. This species is often observed late into the spring with

one pair reported on Lake Shenandoah on 6 Jun 1976. It is most common during spring migration with a total of 75-100 birds often reported, as opposed to 0-30 during the fall period.

**NORTHERN SHOVELER**

*Anas clypeata*

Although CBC numbers for this species fluctuate widely, this is one waterfowl species that shows an increase in numbers over the 43-year period (Figure 2). We now classify this species as an uncommon fall-spring migrant and winter resident. Shovelers usually arrive in November and remain into April. They appear to move around the county from pond to lake to pond making it difficult to ascertain the size of the population. An average of 2.6 birds has been counted on the CBC. It has been recorded on 29 of 43 CBCs since 1954.

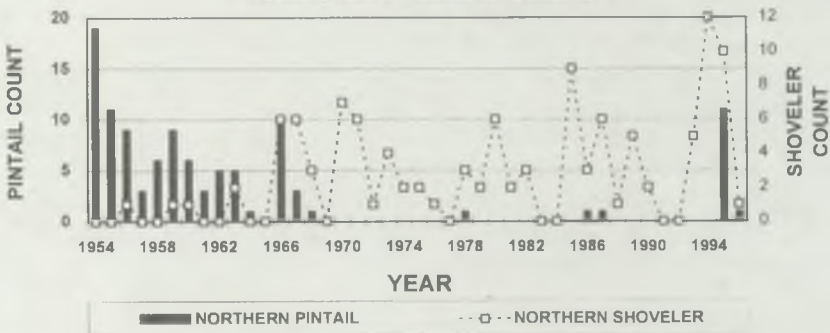
**NORTHERN PINTAIL**

*Anas acuta*

Pintail numbers have declined dramatically in our area since 1948 when the first systematic records in the area were begun. Max Carpenter, in his early records, describes this bird as a common winter resident. Today we categorize it as a rare fall-spring migrant and winter visitor. The CBC decade-means for this species illustrate the trend: 1950s: 9.5; 1960s: 3.4; 1970s: 0.1; 1980s: 0.2; 1990s: 1.7 (Figure 2). Recently there has been a resurgence in numbers. In 1995 John Irvine counted five or more Northern Pintails on Lake Shenandoah on six dates between 7 Jan and 4 Mar, with a peak count of 16 on 15 Jan. The 1995 CBC count of 11 was the second highest count in our 43-year CBC history.

**FIGURE 2**

**OPPOSITE TRENDS IN PINTAILS AND SHOVELERS?**  
Rockingham Christmas Bird Counts





### **GREEN-WINGED TEAL**

*Anas crecca*

Green-winged Teals are primarily fall and spring migrants. Occasionally a few appear for short periods during the winter. We usually see green-wings in groups of 2-6, but sometimes in flocks of 15-30. They have been recorded on 10 CBCs, with a peak count of 13 in 1978. This species can be found on many of the smaller ponds during migration. A small flock has made a small farm pond along Route 773 near Sparkling Springs its winter base during recent winters.

### **CANVASBACK**

*Aythya valisneria*

Groups of 1-6 appear irregularly throughout the fall and winter but are most common in March. Canvasbacks have become increasingly rare in our area. They have been recorded on only three CBCs (out of 43) but are more common in the spring than the winter and more common on Lake Shenandoah (not in the CBC circle) than on Silver Lake.

### **REDHEAD**

*Aythya americana*

This handsome but rare migrant and winter resident is most frequently seen in late winter or early spring. Our records again show that fewer individuals are reported than 10 years ago. Most of these birds are seen in groups of 2-4 but 30 were reported on Lake Shenandoah on 16 Mar 1981. Recently a small group has spent a good portion of the winter on Lake Campbell. They have been reported on only 6 of the 43 Rockingham CBCs.

### **RING-NECKED DUCK**

*Aythya collaris*

Along with Mallards, American Wigeons, Gadwalls, and American Coots, Ring-necks are one of our most regular winter waterfowl residents, especially on Silver Lake. This species' population size parallels that of the American Wigeon (Figure 1, p. 40). No Ring-necks have been recorded on the past six CBCs, largely because they have abandoned Silver Lake for Lake Campbell, which is outside the count circle. The eleven years that no Ring-necks have been recorded on the CBC have been clumped into three periods, 1964-65, 1975-77, and 1989-95 (one was counted on the 1995 CBC). Do these birds desert Silver Lake for several years until some prey-food species recovers?

### **GREATER SCAUP**

*Aythya marila*

We classify this scaup a rare fall-spring visitor. It may be more rare than our records suggest if you suspect that some Lesser Scaups have been misidentified as Greater Scaups. Occasionally both species appear together on our lakes, presumably making identification more precise. Most of our Greater Scaup sightings occur during spring migration, especially March and early April. From 14-26 Mar 1982, 25 birds were

observed regularly on Lake Shenandoah. In Mar 1983 the peak count was 40 on the same lake.

### **LESSER SCAUP**

*Aythya affinis*

Lesser Scaups are more common than Greater Scaups in our area but are still classified as uncommon spring-fall transients and winter residents. Like many other waterfowl, the frequency of sightings and the number of birds counted has decreased over the past 20 years. The total number of birds reported during the spring migratory period in 1978 was 152; 42 in 1979; and 40 in 1982. They have been reported on only eight CBCs, none since 1974.

### **SURF SCOTER**

*Melanitta perspicillata*

Surf Scoters have been recorded four times over a 26-year period and there have been no sightings since 1984. One adult male was reported in 1958. A first-winter male stayed on Lake Shenandoah for five days, 14-18 Nov 1977. One individual was reported on 21 Jan 1982 on Silver Lake. The most recent sighting was 16-17 Jan 1984 on Lake Shenandoah.

### **WHITE-WINGED SCOTER**

*Melanitta fusca*

After a night of rain and strong SW winds, two White-winged Scoters were found on Lake Shenandoah on 5 Apr 1981. A first-winter male was on Lake Shenandoah on 16,17 Jan 1984. Our only other record is from Silver Lake, 14 Jan 1963 (Murray 1963).

### **BLACK SCOTER**

*Melanitta nigra*

There are only three records for this species in the county, and there may be overlap between two of the sightings. On Lake Shenandoah three females were observed on 14 Nov 1977 and four females on 16 Nov 1977 [Pettit, Smiths, et al.]. In Nov 1992, Leonard Teuber recorded six on Lake Shenandoah with six Common Loons.

### **OLDSQUAW**

*Clangula hyemalis*

Oldsquaws are erratic winter visitors and spring migrants in our area. They appear in groups of 1-3 and only for a few days each winter. On 12 Mar 1947, five were observed on Silver Lake and on 7 Jan 1977 one was observed on North River at Bridgewater but most of the records come from Lake Shenandoah, our largest water expanse. Most reports are from the winter months but two birds were reported in breeding plumage at Lake Shenandoah on 16 Apr 1983. In January 1997 one appeared on Silver Lake with the male Eurasian Wigeon and some Horned Grebes.

## **BUFFLEHEAD**

*Bucephala albeola*

Because male Buffleheads are so wonderfully conspicuous, reporting frequency is probably unusually high and identification unusually reliable. Despite these factors, reports appear to be down in the past 10 years. They have been seen on 13 of 43 CBCs, but only twice since 1974. The CBC average before 1974 was 2.2; since then, 0.1. In 1979 the peak spring count on Lake Shenandoah was 35, but dropped to 8 in 1982, and 3 in 1983.

## **COMMON GOLDENEYE**

*Bucephala clangula*

The goldeneye is a rare but regular winter visitor and migrant through our area, most often appearing on Lake Shenandoah. Small groups of 1-3 are seen for short periods of time almost every winter. Most of our records fall between December and March.

## **HOODED MERGANSER**

*Lophodytes cucullatus*

Hooded Mergansers are seen irregularly from early November (8-15) through early April. Some remain for short periods of time but we classify them as rare winter visitors. Most are seen during migration. It has been recorded on 8 of 43 CBCs. Females appear to be more common in our area than males; one year Kathleen Finnegan estimated the ratio to be 5:1. In the summer of 1979 a male spent 5 Jun to 7 Jul on Mace's Pond but no female or signs of breeding were recorded (Larner and Scott 1980d).

## **RED-BREASTED MERGANSER**

*Mergus serrator*

Red-breasted Mergansers are seen regularly in Rockingham County during spring migration. We classify them as uncommon during spring but rare during the fall and winter. Usually they appear in small flocks which remain in the area for a few days. On 21 Mar 1983 Craig Tumer counted a flock of 55 on Lake Shenandoah and the 1983 total winter count was 89, an unusually high number.

## **COMMON MERGANSER\*\***

*Mergus merganser*

As in other areas of eastern US, the Common Merganser's classification has changed from an uncommon breeding bird to a rare transient or winter visitor. Harry Jopson and Max Carpenter observed adult mergansers with six young on 26, 27, and 29 May 1954. Observations of females with young were also recorded in 1947 and 1953 on Dry and North Rivers (Jopson, 1956). Jopson spotted a male flying along Dry River near Montezuma again in 1956 (Murray 1956). Max Carpenter reported seeing adult mergansers in this area in 1961 and 1962 but we have no confirmed breeding records since 1954 (Scott 1962). There is one record of this species on the CBC, 1977. A female remained at Lake Shenandoah from 30 Dec 1994 through 27 Mar 1995.

## **RUDDY DUCK**

*Oxyura jamaicensis*

Small flocks of Ruddy Ducks can be seen regularly during spring and fall migration periods. More rare in the middle of the winter, it has been recorded on only six CBCs. On 18 Nov 1978, 120 appeared in a single flock on Lake Shenandoah. After a five-inch snowstorm, 43 were observed on Lake Shenandoah on 25 Nov 1981. Small flocks that appear and disappear make it difficult to determine how many different individuals actually pass through our area.

## **OSPREY**

*Pandion haliaetus*

Small numbers of Ospreys are regular visitors each spring and fall. From early April sometimes to early June, Ospreys are seen along the county rivers, creeks, and lakes. Some individuals appear to remain for several weeks. In the fall they usually migrate through the county without stopping. There is a record of one Osprey on the 1965 CBC. In 1978, one individual was observed at the sewage treatment plant near Mt. Crawford on 11 and 18 Jun.

## **BALD EAGLE**

*Haliaeetus leucocephalus*

John Wayland has the following references to eagles in his "A History of Rockingham County Virginia." "In 1887 J. C. Funkhouser shot a bald eagle near Keezletown. It weighted 9.5 pounds, and measured 6 feet 10 inches from [wing] tip to tip." He also notes that in 1891 "Robt. Higgs shot an eagle, near Lacey Springs, which measured 5 feet 7 from tip to tip of wings." Perhaps eagles were more common before the turn of the century. More recently we upgraded Bald Eagles from accidental to rare status as plausible records increased. Most sightings occur in winter or spring and several have been seen during fall migration. Between January and April 1980, at least four different immature and perhaps three different adult bald eagles were observed and photographed west of Montezuma feeding on butchering waste. We are receiving more reports of immatures and adults making summer visits. A second-year bird approached within 50 yards of Frank Rohrer's farmhouse near Dayton to feed on a turkey carcass, 15-23 Jun 1995. In 1996 an adult was seen in June and again in August at the Briery Branch Lake at the base of Shenandoah Mountain. In 1997 Bald Eagles were seen circling over Lake Shenandoah on two separate occasions [Tumer, Mellinger].

## **NORTHERN HARRIER**

*Circus cyaneus*

Since there is no raptor migration station in Rockingham County, we have as many winter as fall records for Northern Harriers. However, its winter appearances are only occasional and the species is classified as rare. Yet, in February 1994 many observers watched an amazing 10-14 individuals hunt every evening in an old field near Cross Keys. During

the winter one or more individuals are often seen in the fields east and west of Kratzer Road north of Harrisonburg. It has been recorded on nine of the 43 CBCs since 1954.

#### **SHARP-SHINNED HAWK\*\***

*Accipiter striatus*

Sharp-shins are most common in this area during fall migration. Having no hawk migration station, we list the species as uncommon in fall, winter, and spring but rare during the summer. Bailey (1912) found a nest with "young ready to fly" on 10 July 1910, but we have no confirmed breeding records since then. Charles Stevens and Bruce Davenport noted a pair of agitated sharp-shins on Rader Mountain on 18 Jul 1970 (Stevens 1976) but they could discover no nest. Sharp-shins are seen irregularly in the summer and were classified as "probable breeders" in the Brandywine SE block of the VAP project. It is becoming an increasingly familiar winter bird around feeders. Before 1974 only two CBCs included sharp-shins. Since 1974 it has been missed on the count only three times.

#### **COOPER'S HAWK\***

*Accipiter cooperii*

Cooper's Hawks are uncommon winter and rare summer residents. Since we have no systematic counts for the fall most of our reports come from the winter months. Like the sharp-shin it is becoming easier to find in the winter. Before 1974 we recorded an average of 0.4 Cooper's Hawks per CBC, but 1.3 since then. It was found in four of the 17 priority VAP blocks, but nesting could not be confirmed. Clair Mellinger found a nest, an incubating female, and attendant male in Hillandale Park during June 1997. During the summer of 1998 a pair began nesting within the Harrisonburg city limits [Barlow]. Identifying Cooper's and Sharp-shinned Hawks will always be a problem but there is strong evidence that this is a more common species in our area, in all seasons, than the sharp-shin.

#### **NORTHERN GOSHAWK**

*Accipiter gentilis*

We have five records for this species. Four of the records occur during fall migration and the other is from March. An immature female, killed in the county in 1976, was mounted by Homer Mumaw and is displayed in the EMU Hostetter Museum. In February 1994 Chris Bolgiano watched one around her feeder for about a week.

#### **RED-SHOULDERED HAWK**

*Buteo lineatus*

We consider this hawk to be rare in all seasons. H. B. Bailey (1912) noted that red-shoulder "breeds sparingly" in this area. There had been no summer sightings for many years until Mike Smith reported them in 1984-85 as possible breeders in two VAP blocks on the Blue Ridge. For the past several winters one individual has wintered in the woods and

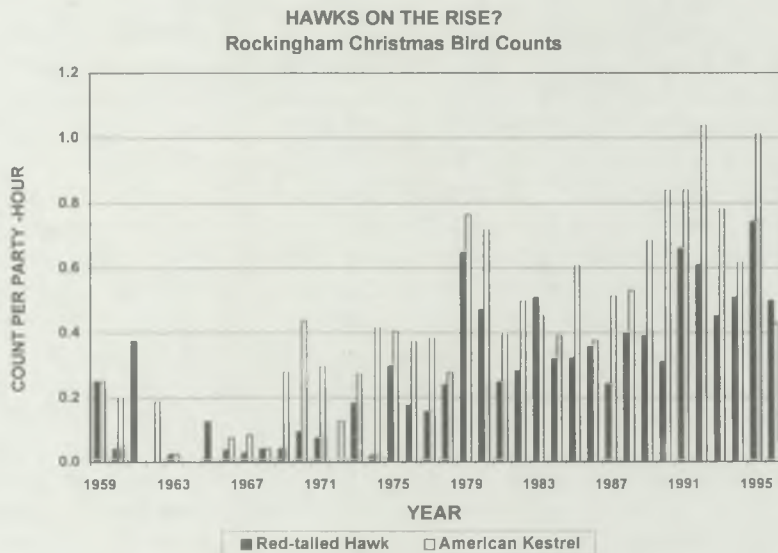
marshy area around the Mt. Solon dam [Ziegenfus, Mellinger]. It has been recorded on only four CBCs.

**BROAD-WINGED HAWK<sup>o</sup>**

*Buteo platypterus*

Broad-wings are most impressive during their fall mass migrations. Small migrating groups are also seen occasionally in the spring. Clair Mellinger observed a flock of 60 near Singers Glen on 22 Apr 1979. It is a relatively uncommon breeding bird in our area but was observed in 10 of the 17 VAP priority blocks in Rockingham County. We have no confirmed breeding records for this species. This hawk is another interesting omission from Bailey's 1910 list (Bailey 1912), along with the Red-tailed Hawk (see Red-tailed Hawk note below). A hawk of deciduous mountain habitats, it is less familiar to most of us than the red-tail and kestrel. Look for it in the Bother Knob- Flagpole Knob area or the mountains in the Berpton area.

**FIGURE 3**



**RED-TAILED HAWK\***

*Buteo jamaicensis*

Most birders would consider red-tails our most common hawk because its size and habitat preference make it the most conspicuous and because it is a permanent resident. We have confirmed nesting reports from a site near Tenth Legion in 1983 [D. Holsinger] and along Mossy Creek in 1979 [Finnegan and Ziegenfus]. Red-tails were observed in 14 of the 17 VAP priority blocks in Rockingham County. They are also common fall migrants (especially in October and November). Christmas Bird Counters find an average of 11.6 red-tails (21.1 since 1974). Figure

3 shows a significant increase in counts of red-tails over the 43-year history of the CBC. H. B. Bailey (1912) has an interesting note in his Auk article, "Notes on Birds Breeding in the Mountains of Virginia." He lists 94 species and estimates their relative abundance during the breeding season in this area. Under the Red-shouldered Hawk he notes, "Breeds sparingly, and probably the Red-tailed Hawk also." Although he indicates his observations are from the "mountains" the locations he lists include Massanetta Springs and Goshen in Rockbridge County as well as more mountainous sites. It would appear that the Red-tailed Hawk was a much less common species at that time than it is today.

#### **ROUGH-LEGGED HAWK**

*Buteo lagopus*

The rough-leg is a rare transient and winter visitor in our area. They may be seen in various parts of the county during the winter, but have never been recorded on a CBC. Many of our records come from the Broadway area. Between December 1983 and February 1984, both a light phase and a dark phase rough-leg were observed on the Lincoln Homestead near Broadway [R. Shank].

#### **GOLDEN EAGLE**

*Aquila chrysaetos*

David Johnston (1994) uncovered 25 records for Golden Eagles in Rockingham County. The three most recent records in our files are listed below. A group of RBC members [Auckerman] reported an immature Golden Eagle at the base of Shenandoah Mountain on 7 February 1987. The Hostetter Museum at EMU has a mounted specimen of an adult bird that was caught in a bobcat trap on Shenandoah Mt. in the 1950s. Leonard Teuber observed one flying near the Bridgewater Airport on 17 Nov 1994.

#### **AMERICAN KESTREL \***

*Falco sparverius*

Perhaps our most common raptor, the kestrel is found easily throughout the county in all seasons of the year. Although it is less common in the summer months, it was observed in 11 of the 17 VAP priority blocks in Rockingham County. Atlasers confirmed nesting in four blocks. There has been a steady increase in the number of kestrels counted on the CBC (Figure 3, p. 48) decade means for this species are: 1950s: 4.2; 1960s: 2.2; 1970s: 16.6; 1980s: 30.1; 1990s: 38.4. Our highest CBC count, 46, was in 1992.

#### **MERLIN**

*Falco columbarius*

Merlins are very rarely seen in Rockingham County. We have only four records since 1983. Our one report prior to that date is from a hawk watch on Cow Knob on 24 Sep 1960 [Carpenter].

## **PEREGRINE FALCON**

*Falco peregrinus*

Peregrines, once more common in the valley, are now listed as accidental or rare transients and winter visitors. F. M. Jones (1934, unpublished) found a peregrine nest on the "rock cliffs on Dixon Ridge facing West toward the Dry River." This location is apparently near the present bridge crossing Dry River west of Rawley Springs. The Hostetter Museum at EMU has a clutch of eggs collected from a peregrine nest on the Massanutten ridge, possibly in Shenandoah County. On April 1936 a young man brought D. Ralph Hostetter four "already pecked" eggs from a "hawk" nest on Massanutten Mountain. The young were dead but Alexander Wetmore identified the eggs as peregrine eggs (Murray 1936). For the past 10 years peregrines have been hacked at several mountain stations in the region, including a site on High Knob in Rockingham County. Birds hacked from these sites may eventually return here to breed. We have not found no nests in the county yet, but the frequency of peregrine sightings in the area has increased. For example, a hacked falcon was injured in a collision with a car near Broadway.

## **GYRFALCON**

*Falco rusticolus*

Unfortunately the first Gyrfalcon record for Rockingham County and the state of Virginia was a bird shot on 29 Jan 1984 near Elkton (Larner 1986). It was taken to the Wildlife Center of Virginia for treatment, but was injured too seriously to be released. On 20 Jan 1994 a bird tentatively identified as a light phase Gyrfalcon was seen briefly as it flew through Harrisonburg [Teuber]. Although many persons searched diligently, we did not see this bird again.

## **RING-NECKED PHEASANT\***

*Phasianus colchicus*

Ring-necks are becoming increasingly rare. As many as 2000 and 1500 birds were released (mostly in Rockingham and Augusta Counties) as recently as 1969 and 1970 respectively (Scott 1969, 1970a). Rockingham had the fourth highest hunting kill in the state in 1974. The peak pheasant kill by hunters was in 1972 and has decreased since then (Scott 1975). During the winter of 1978-79, Kathleen Finnegan received reports of 18 birds, some of them seen at feeders during a very cold, snowy winter. Reports have decreased dramatically since that year. They have been seen on only four CBCs since 1974. Only one of the 17 VAP priority blocks contained pheasants. In 1980 Max Carpenter, our regional wildlife biologist, already described the situation as a "patchy scattering of birds, not a growing population."

## **RUFFED GROUSE\***

*Bonasa umbellus*

We consider grouse a common permanent resident. It is interesting that Bailey (1912) summarizes its abundance as "not rare" in his



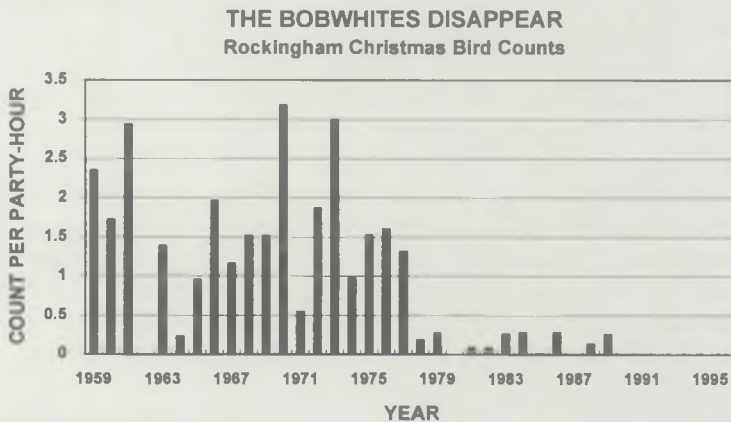
annotated species list but calls it "common" at another place in the article. It is quite possible that this is one species that has increased during this century, but apparently it has never been very abundant this far south (Hewitt 1993). Although population counts fluctuate, there appears to be a long term stability to the population size in our area. C. O. Handley (1932) studied grouse nesting in several western Virginia counties (including Rockingham) and found the average clutch size to be 10.9 and average hatching date to be 22 May. Grouse are found primarily in mountain forests, but even with this restricted habitat it was recorded in seven of the 17 VAP priority blocks in Rockingham County. Most of these seven records were at the "confirmed" breeding level.

**WILD TURKEY\***

*Meleagris gallopavo*

Although this species is not easily observed, we list it as a common permanent resident. Populations fluctuate with weather conditions, hunting pressure, and mast supply but appear to remain fairly stable. In Rockingham County turkeys live primarily in the unfragmented forest areas of the mountains. During the VAP study, it was reported in only six of the 17 priority blocks. In 1912 Bailey noted, "I think that much crossing is done in the wilder parts; many farmers are giving up the bronze variety, owing to their straying propensities" (Bailey 1912).

**FIGURE 4**



**NORTHERN BOBWHITE\***

*Colinus virginianus*

Bobwhite quail populations have declined dramatically in the past 30 years. Bailey (1912) listed them as abundant. The 1933 Harrisonburg CBC, with only one party in the field, found 51 bobwhites in four coveys (Murray 1934a). Figure 4 illustrates the decline since then with CBC data. More encouraging data are found in the relatively stable average of 10.6 counts per route on the two BBS counts along Routes 612 and 613. However this count has also decreased in recent summers.

Bobwhites were found in 13 of the 17 VAP priority blocks. However, many of us believe that destruction of hedgerows, old fields, fallow fields, and other types of brushy habitat have dealt the bobwhite populations in this county a severe blow (Almy 1993).

#### **YELLOW RAIL**

*Coturnicops noveboracensis*

On 15 Oct 1936 J.J. Murray found a dead Yellow Rail on a highway near Harrisonburg (Murray 1936b).

#### **VIRGINIA RAIL**

*Rallus limicola*

We have only four records of Virginia Rails, all of which fall into the spring or fall migration periods. One bird, injured in Rockingham County, was brought to the Wildlife Center of Virginia for treatment.

#### **SORA**

*Porzana carolina*

Soras are rare migrants through the county. Our six records occur in May or October. One specimen was a road kill near Timberville allowing positive identification of the species [D. Holsinger, B. Rosson]. The most recent record was on 12 Sep 1996 in a marshy area a farm pond along Mt. Clinton Pike about two miles west of Park View [Mellinger]. A large marshy area around the pond was created by flooding produced by Hurricane Fran.

#### **PURPLE GALLINULE**

*Porphyryla martinica*

On 5 May 1976 Randall Shank discovered a Purple Gallinule on the small pond beside Bergton Elementary School. The bird remained on the pond for about a week. Excellent photographs of this bird are available.

#### **COMMON MOORHEN**

*Gallinula chloropus*

An occasional visitor to our area, the moorhen appears at various times of the year but more often in the spring (especially May) and fall (October or November). One moorhen accompanied the Purple Gallinule (see above) to the Bergton pond in 1976. There were three records between Jan 1978 and Nov 1979 (Larner and Scott 1981a).

#### **AMERICAN COOT**

*Fulica americana*

On our 1984 county checklist, we listed coots as "abundant" winter residents, especially on Lake Shenandoah and Silver Lake. Although they are still present every year, the number of individuals has decreased greatly in the past ten years. The CBC average for the 1960s was 16; for the 1970s, 33.1; but 11.7 for the 1980s and 3.4 in the 1990s. Since 1986 our highest count is four. However, a flock of 40-50 has wintered at Lake Shenandoah (not in the CBC circle) for the past several years. We have three summer records - two on Silver Lake on

27 Jun 1980 and a pair on North River near Mt. Crawford on 13 Jun 1993 [D. Holsinger]. One individual (probably injured) remained at Silver Lake during the entire summers of 1995, 1996 and 1997.

#### **SANDHILL CRANE**

*Grus canadensis*

John Wayland (1972) in his "A History of Rockingham County Virginia" has the following note. "In 1879 a big crane was killed in the county." We have one other, more specific, record. A Sandhill Crane visited the county for five hours on 20 May 1988. Thelma Showalter found a single crane in a field between their house on Route 784 and Linville Creek, just south of Broadway. The bird was seen by about 10 persons and photographs and written details of the bird [Mellinger] are in the RBC files.

#### **BLACK-BELLIED PLOVER**

*Pluvialis squatarola*

Black-bellied Plovers are rare spring and fall transients in the county. Most of our records are from the past 15 years. This may reflect an increase in the number and skills of our birders rather than a change in the species' migratory behavior. A written description is available for one bird seen on 21 Apr 1989 [Mellinger].

#### **AMERICAN GOLDEN-PLOVER**

*Pluvialis dominica*

Max Carpenter has made most of our observations of this rare fall transient on a farm near Montezuma. All of his records occur between 1-13 Oct in 1949, 1979, and 1983 (Larner and Scott 1981b). The plovers are normally seen in flocks of 15-25. One bird killed on a road near that farm is preserved in the EMU collection. On 17, 18 Oct 98 eight plovers were found on a freshly plowed farm just west of Dayton [written report, J. Irvine].

#### **SEMIPALMATED PLOVER**

*Charadrius semipalmatus*

The Semipalmated Plover is a rare and irregular spring and fall transient. It is much more likely to be seen in the spring. Our records are from scattered ponds, flooded fields, and streams throughout the county. In May 1983 two birds remained at a small pond on the Lincoln Homestead for about a week [R. Shank].

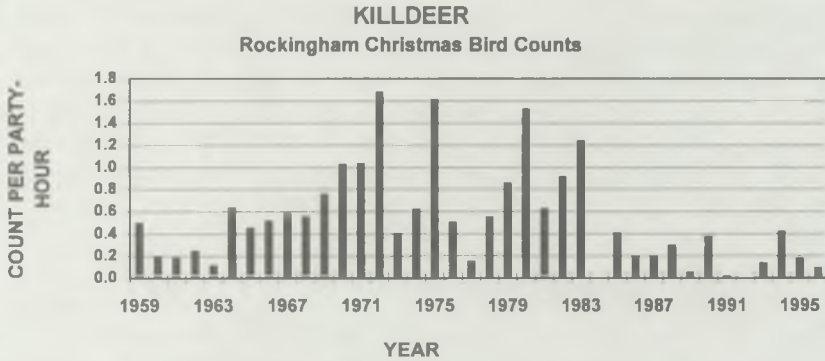
#### **KILLDEER\***

*Charadrius vociferus*

Killdeer are common summer residents and transients but uncommon winter residents. They were found in 15 of the 17 VAP priority blocks. Twelve runs of the Route 612 and 613 BBS routes produced an average of 3.6 birds per 25-mile route. No significant changes in numbers occurred during that period. However, the winter population appears to be decreasing (Figure 5). Between 1954 and 1979 the decade mean increased from 2.5 to 33.8. The average count between

1984-1994 was 10.9. It is somewhat encouraging that in 1994 we reported 24, our highest count since 1983.

FIGURE 5



**AMERICAN AVOCET**

*Recurvirostra americana*

In the fall of 1987, three American Avocets appeared at the Knicely's farm pond in Dale Enterprise. The group remained for several days and was seen and photographed by several persons. When they left, one bird was found dead near the pond. We retained one excellent photo [Kevin Shank] for the RBC files. Joe Doherty found one avocet at Leonard's Pond on 27 Aug 1996. It remained until 30 Aug 1996. An astounding flock of fifty avocets in immaculate breeding plumage spent one day on a sandbar on Mossy Creek on 26 April 1998.

**GREATER YELLOWLEGS**

*Tringa melanoleuca*

Yellowlegs are rare but very regular spring and fall transients in our area. They appear alone or in small groups at various spots throughout the county. Six to twelve appeared regularly on the mud flats of partially drained Lake Shenandoah during the fall of 1979. Typical report dates for this species are from 18 Mar-5 May and 8 Aug-30 Oct.

**LESSER YELLOWLEGS**

*Tringa flavipes*

Like its sister species above, these birds are rare but regular transients whose frequency and numbers are largely determined by the amount of suitable habitat created by the weather. They usually appear in groups of 1-5, with a total of 25-30 birds reported during the spring migration. The best chance of seeing these birds is between 22 Mar-6 Apr and August-October in flooded fields or the few county ponds with mud flats. One early returning migrant appeared at an EMU construction pool on 3 July 1998 [Mellinger].

### **SOLITARY SANDPIPER**

*Tringa solitaria*

Solitary Sandpipers are uncommon to rare spring migrants through the county. Often they live up to their "solitary" name but sometimes are found in groups of 2-5, rarely in larger flocks. A total of 20-40 birds may be reported during spring migration but many fewer in the fall. In spring they are found along streams and ponds throughout the county, but most of our fall reports come from Leonard's Pond on Route 678.

### **WILLET**

*Catoptrophorus semipalmatus*

There are two records for Willets in the county, both in April. Many birders saw the fourteen individuals at Lake Shenandoah on 20 Apr 1981 (Finnegan, 1982a). On 26 April 1989 one Willet was found at Trissel's Pond west of Harrisonburg. Written details, but no pictures, are available for the second sighting [Mellinger].

### **SPOTTED SANDPIPER\*\***

*Actitis macularia*

These are the most common sandpipers in our county. They are classified as common spring migrants, rare fall migrants, and occasional rare summer residents. Most of the records occur between 11 Apr-25 May and 25 Jul-3 Sep. Bailey (1912) reported seeing "old and young together in June, July 14, and in August." Nesting in the county has not been confirmed since then, but four were seen along an eight-mile stretch of the S. Fork of the Shenandoah River on 16 Jul 1978 [Richard and Mary Smith].

### **UPLAND SANDPIPER\***

*Bartramia longicauda*

There are many unwritten records suggesting that this species was much more common in Rockingham County 40-50 years ago (especially Hostetter, Mumaw, personal communication). Today we list it as uncommon. Most of our recent records come from alfalfa hay fields along Route 42 between Harrisonburg and Broadway. More specifically most of these birds are seen by Randall Shank or other birders on the Shank farms about three miles south of Broadway. Some records confirming Upland Plovers as breeding birds in our area are listed below:

20 Jun 1942, two adults with young seen near Bridgewater - Harry Jopson

30 May 1965, a pair of adults with four young - Gordon Shantz  
May 1979, nest with four eggs (photographed), hatched 26 May -  
Randy Shank (Scott and Larner 1980a)

Summer 1980, a flock of 16 including 6-7 immatures in a hay field  
being mowed near Broadway - Randy Shank

In the Hostetter Museum at EMU there is a clutch of eggs taken  
from a county Upland Sandpiper nest.

**WHIMBREL***Numenius phaeopus*

Our only county record is from Leonard's Pond where one bird was present for a short time on 25 May 1992 [Teuber].

**MARbled GODWIT***Limosa fedoa*

Max Carpenter and Leonard Teuber found 10 and 14 birds, respectively, in a flooded field near Montezuma on 24 and 25 Apr 1984.

**RUDDY TURNSTONE***Arenaria interpres*

There are two Ruddy Turnstone records in our files. On 16 May 1959, Max Carpenter saw two individuals at Lake Shenandoah. Another bird was seen west of Spring Creek in 1983 [Teuber].

**SANDERLING***Calidris alba*

We have only one report of Sanderlings in Rockingham County although different numbers of birds were reported over a three-day period. Four were seen at Leonard's Pond on 17 Aug 98. Two were reported on 18 Aug 98 and one remained on 19 Aug 98 [Irvine, Doherty, and Mellinger].

**SEMIPALMATED SANDPIPER***Calidris pusilla*

Semipalmated Sandpipers are rare to uncommon spring and fall transients through the county. Several records are from May and one from July. On 17 May 1959 two were seen at Lake Shenandoah. Between 6-8 May 1978, many birders saw the six, along with a variety of other shorebirds, in a flooded field near Montezuma. One was observed at Leonard's pond as early as 17 Jul (1983) but more are seen in August and early September.

**LEAST SANDPIPER***Calidris minutilla*

We classify Least Sandpipers as rare, but regular, transients. Although they appear in small numbers, they appear every year at small farm ponds, lake margins, and/or flooded fields somewhere in the county. Most records occur between 21 Apr-14 May in the spring and 14 Jul-21 Aug in the fall. In one year, 1983, when the Route 678 Pond near Cross Keys was monitored regularly, Least Sandpipers were recorded (1-5 birds) on 14, 15, 29 Jul and 2-17 Aug. Some are still passing through in early September.

**WHITE-RUMPED SANDPIPER***Calidris fuscicollis*

Both records of this transient are from Leonard's Pond near Cross Keys. The first record is from 2 Sep 1982 [Teuber] and the second is from 6, 9 Jun 1992. In each case two birds were present. A written description of the second record is in the RBC files [Mellinger].

**BAIRD'S SANDPIPER***Calidris bairdii*

Two birds were seen on 4 Oct 1982 and one was seen on 12 Oct 1982 at Leonard's Pond near Cross Keys [Teuber, Finnegan]. However, they were not present on intervening days and therefore may represent different birds.

**PECTORAL SANDPIPER***Calidris melanotos*

No records of Pectoral Sandpipers appear in our files before 1978. However, in the fall of 1979, five to seven birds were reported daily until Oct 25 at the partially drained Lake Shenandoah. These records highlight a problem for all our shorebird records in that there are only a few localities that provide suitable habitat for migrating shorebirds to stopover. Partially drained ponds and lakes, flooded fields, and a very few shallow ponds provide the only available habitats. If these are not monitored closely, many short-term visitors are missed. The increase in records for this species may indicate only better monitoring and an increased ability of our birders to differentiate among the various shorebird species. Pectoral Sandpipers occur more frequently and in larger flocks than many other sandpipers. Flocks of 25-35 were reported in Mar 1978 and 1981 and Oct 1979.

**DUNLIN***Calidris alpina*

The Dunlin is a rare spring and fall transient in our area. One bird in breeding plumage was seen at the shorebird fallout between 3-7 May 1978 at Montezuma. Four were counted at a pond in Mt. Crawford on 14 May 1978. Since 1978, this species has been reported frequently but not every year.

**STILT SANDPIPER***Calidris himantopus*

One bird was seen on 4 Oct 1989 at Leonard's Pond near Cross Keys [Tumer, Mellinger]. This is our only record for the county. A written description is available in the RBC files.

**SHORT-BILLED DOWITCHER***Limnodromus griseus*

Dowitchers are rare spring and fall transients through Rockingham County. The nine records in our files span the years from 1960 to 1990. One record from the Bridgewater College pond is described in the Dec 1963 issue of the *Raven* (Peake, 1963).

**LONG-BILLED DOWITCHER***Limnodromus scolopaceus*

Our one record comes from Lake Shenandoah on 15 Oct 1980 [Teuber]. The identification was based both on the visible field characters and the call.

**COMMON SNIPE***Gallinago gallinago*

Snipe are common spring migrants. They are also regular but more localized fall migrants and winter residents. Sometimes they are found in sizable flocks during the winter. Craig Turner found 40+ in a wet field near Spring Creek on 10 and 25 Nov 1980. Charles Ziegenfus discovered a flock of 40+ in a marshy area below the East Rockingham Recreation Association on Route 689. This flock has been present for the past several winters. We record an average of 9.0 snipe on Rockingham CBCs, 13.3 since 1974. Most observations occur between 1 Sep-30 Apr, but there are three summer records. On 24-25 Jul 1978 two birds were found along Linville Creek [R. Shank] and on 1 Aug 1980 one bird was observed at Leonard's Pond near Cross Keys [Finnegan].

**AMERICAN WOODCOCK\****Scolopax minor*

We classify the woodcock as a rare summer and winter resident and uncommon transient. Bailey (1912) reported one on July 10, 1910 and listed them as rare in the area. They are most conspicuous during their spring evening nuptial flights. Clearings on the Blue Ridge are especially good spots to observe these flights but they occur at various places, including in the city of Harrisonburg [Finnegan] and Union Springs lake [K. Shank]. We have four confirmed breeding records (nests or adults with young) between 1970-1982. Most of these are from the lower slopes of the Massanutten or Shenandoah Mountain (Scott 1970a). It was recorded in two of the 17 priority blocks of the VAP. Mike Smith flushed three from a thicket at Kite's Spring just east of Elkton on 5 Jun 1987. Woodcocks have been found on only two CBCs, 1966 and 1974.

**WILSON'S PHALAROPE***Phalaropus tricolor*

Three Wilson's Phalaropes were identified among the many shorebirds in the flooded field near Montezuma between 5-7 May 1978. An earlier record of one individual comes from a small farm pond west of Harrisonburg in May 1963 [Mumaw, Mellinger].

**RED-NECKED PHALAROPE***Phalaropus lobatus*

On 6-7 May 1990 many members of the RBC (but not the editor of this book) got to see an individual in breeding plumage on James Knicely's farm pond west of Dale Enterprise on 6-7 May 1990.

**LAUGHING GULL***Larus atricilla*

The only county record of this species is of one bird seen on 11 Nov 1977 at Lake Shenandoah [Teuber].



### **FRANKLIN'S GULL**

*Larus pipixcan*

Max Carpenter reports seeing two individuals of this western species on Silver Lake on 25 Mar 1947. He noted that this sighting followed a period of three days of strong winds.

### **BONAPARTE'S GULL**

*Larus philadelphia*

Bonaparte's Gulls are uncommon spring migrants en route between the Atlantic Coast and their Canadian breeding areas. We see these gulls in groups of 1-15 mostly in March and April. Although we see only small numbers of these gulls, we see them regularly, usually on Lake Shenandoah. There are a few December-January records but none has ever been recorded on the Rockingham CBCs.

### **RING-BILLED GULL**

*Larus delawarensis*

Ring-bills in Rockingham County are fairly regular spring transients, sometimes in large flocks. They are also irregular fall and winter visitors, usually in smaller numbers. April is the month of peak migration and large flocks of several hundred birds are sometimes seen, as well as smaller groups (15-50). On 27 Apr 1981 a flock of over 500 was observed in a recently plowed field near Timberville. We have recorded them on only one CBC, 1975.

### **HERRING GULL**

*Larus argentatus*

Herring Gulls are much less common than Ring-bills at all times of the year. On 5 May 1976, forty were counted in a field along Route 259 west of Broadway. On 23 Nov 1977, fifteen were observed in the Cloverleaf Shopping Center parking lot in Harrisonburg. On 29 Jan 1980, 100 were counted on and over Newman Lake on the JMU campus.

### **GLAUCOUS GULL**

*Larus hyperboreus*

Our one record is of a single bird in a larger flock of Herring Gulls feeding in a field near Bridgewater, 22 May 1978. [R. Peake]

### **CASPIAN TERN**

*Sterna caspia*

We have seven records for this occasional transient. Four records occurred between 1983-85. Three birds were sighted on Silver Lake on 24 Apr 1984 [Y. Larner] and three were sighted at the same location on 1 Oct 1984 [Tumer]. Single birds appeared at Lake Shenandoah on 15 Apr 1983 [Stanovick] and 3 Oct 1985 [Mike Smith]. Max Carpenter recorded one on Silver Lake on 14 April 1994. Two records came in the spring of 1997. Charles Ziegenfus found two at Lake Shenandoah on 17 Apr and Phil Lehman reported three on 21 Apr 1997.

### **COMMON TERN**

*Sterna hirundo*

Common Terns are also accidental visitors to Rockingham County. We have six records, two from May, two from July, one from August, and one from October. Nineteen appeared on Lake Shenandoah on 23 Apr 1981 (Larner and Scott 1983). In all but one other case there was only one individual seen.

### **FORSTER'S TERN**

*Sterna forsteri*

Forster's Tern is our most regularly reported tern. It is a rare but regular April visitor to Lake Shenandoah although only in small numbers (1-5) and for short time periods (1-2 days). In the spring of 1981, nine individuals were reported on 20 Apr: one at Lake Shenandoah, four on Newman Lake at JMU, and four on Silver Lake. Four more were reported 24-27 Apr 1981 (Larner and Scott, 1983). We have one fall report, two birds at Lake Shenandoah, 29 Oct-6 Nov 1984.

### **BLACK TERN**

*Chlidonias niger*

This "fly-catching" tern is always an interesting spring visitor for our area. In 1979 Kathleen Finnegan characterized Black Terns as "casual visitors, not regular but seen more than a few times over the years". Although most often these birds are seen singly or in groups of 2-3, eleven were counted at Lake Shenandoah on 16 May 1959. Our records are scattered from 1947 to 1989. Look for it at the larger lakes, but also at farm ponds throughout the county.

### **ROCK DOVE\***

*Columba livia*

Although pigeons are normally associated with barns and the number of barns are decreasing in the Shenandoah Valley, pigeon populations appear to be holding steady. Nests on Interstate highway bridges may offset other losses. Because this species was not counted on CBCs until 1975 and many birders still ignore it, we do not have much data for determining population size trends for this species. We still classify it as an abundant species. Our CBC average is almost 500.

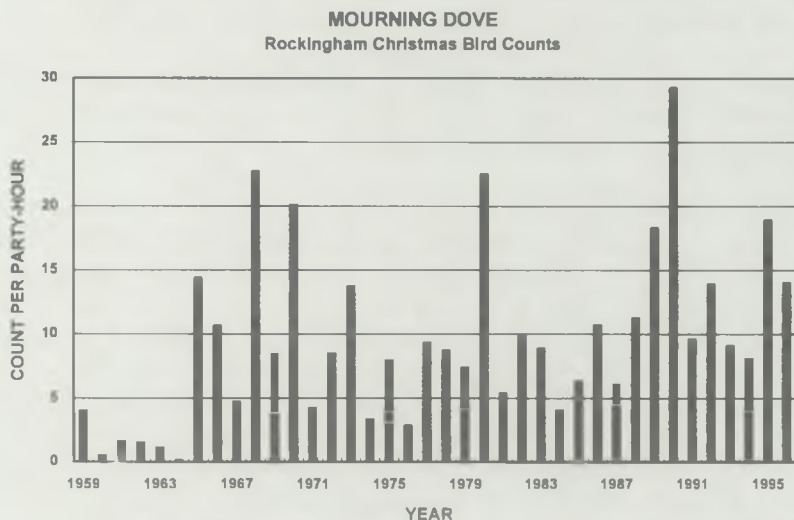
### **MOURNING DOVE\***

*Zenaida macroura*

The Mourning Dove is a very common to abundant permanent resident. The only dramatic change in this species' population status seems to have occurred around 1965. The pre-1965 CBC average is 33; the post-1965 average is 493! This increase occurs in both total number of birds seen and the number of birds counted per party-hour (Figure 6). We have no ready explanation for this increase. Doves nested in 15 of the 17 Rockingham VAP priority blocks. An average of 24.7 birds per route were found on the seventeen BBS surveys (Routes 612 and 613) run between 1981-97. Although Mourning Doves are hunted in

Rockingham County and the population size varies considerably, there appears to be no downward trend in the population size.

FIGURE 6



**BLACK-BILLED CUCKOO<sup>o</sup>**

*Coccyzus erythrophthalmus*

Black-billed Cuckoos were found as possible or probable breeders in four of the 17 priority blocks in the VAP survey. We classify it as a rare transient and summer resident but none of our records confirm breeding in the county. In contrast to its sister species, it is usually found at higher elevations or in more remote, well-developed deciduous forests. A calling male was recorded near Bother Knob in June of 1995, 1996, and 1997 [Mellinger]. Most of our sightings come from the spring migration period when it is sometimes found even in small wood lots throughout the county. Migration appears to extend into early June. Black-bills were found at two stops of the Route 612 BBS route in both 1991 and 1992 whereas none were recorded before or since.

**YELLOW-BILLED CUCKOO\***

*Coccyzus americanus*

The Yellow-billed Cuckoo is a much more common breeding bird in Rockingham County than the Black-billed Cuckoo. It occurs most often along the edges of mountain forests and even in smaller wood lots across the valley floor. It nested in 15 of the 17 VAP priority blocks in Rockingham County. We count an average of 4.7 birds on the Route 612 BBS, but in 1995 an astounding 35 were recorded. Summer population size and spring migration counts vary significantly from year to year. Some argue that their abundance is positively correlated with

the tent caterpillar and perhaps, more recently, gypsy moth infestation. Certainly 1995 was near the peak of the gypsy moth invasion.

#### **GROOVE-BILLED ANI**

*Crotophaga ani*

On a sunny Saturday morning, 24 Oct 1981, Thelma and Clayton Showalter discovered this exotic bird feeding in their backyard with their other feeder birds. During the next several days it was seen and photographed by birders from all over the state (Mellinger, 1982). It was seen intermittently in the area until 18 Nov. This was the third state record for this species.

#### **BARN OWL\***

*Tyto alba*

We have a decreasing record of sightings and nestings of this species. The trend toward more enclosed barns and loss of other nesting sites is a major factor in the decrease of this species. Veterinarian Stuart Porter, when he was with The Wildlife Center of Virginia, also reported that some birds that came to him for rehabilitation possessed significant pesticide residues in their blood (personal communication). Kathy and Richard Funkhouser monitored nesting barn-owls at a church in Timberville for many years. In Feb 1986 two young in that nest represented the third brood at that site in less than 10 months. The VAP project confirmed seven nest sites in the county. We still list it as uncommon but it is becoming more rare.

#### **EASTERN SCREECH-OWL\***

*Otus asio*

Screech owls are classified "common" in our area, but they are a species for which we do not have good quantitative data. An average of 1.03 individuals is recorded on CBCs but typically our count includes very few "owling" hours. In 1981 and 1983 when Charles Ziegenfus and Mike and Kathleen Finnegan made a significant effort to survey owls in the CBC circle, nine and eight screech owls were recorded respectively during several hours of pre-dawn owling. During the VAP, screech owls were found in four of the 17 priority blocks but again most of the counts did not include significant amounts of nocturnal surveillance. F. M. Jones (unpublished data, 1934) found a nest with five young about 40' up in a dead beech snag in the Rawley Springs area.

#### **GREAT HORNED OWL\***

*Bubo virginianus*

If not the most common owl in our area, it is at least the most conspicuous. Because of its loud calls and frequent harassment by crows, it is perhaps over-recorded in comparison with our other owls. The VAP project contains five nesting records of this species and confirmed breeding has been observed at many nests throughout the county. One easily observed nest, on the Brock's Gap cliff along Route

259, was recently destroyed to widen the road. This may be our most cosmopolitan bird, nesting from the tops of the highest ridges to sites in within the Harrisonburg city limits.

### **SNOWY OWL**

*Nyctea scandiaca*

We have only five Snowy Owl records in Rockingham County and two of them probably represent the same bird. One bird was seen north of Harrisonburg on 13 Dec 1975. On 31 Dec 1975 the Daily News-Record featured a photograph of a Snowy Owl atop the IMCO building in downtown Harrisonburg. A Snowy Owl was shot in Harrisonburg, 4 Dec 1949, and later mounted by Max Carpenter for a man in Lilly. On 16 Mar 1954 a bird was shot at Bridgewater. This bird, also mounted by Max Carpenter, is displayed in the Hostetter Museum at EMU. Max also found one at Sangerville on 9 March 1975. Between 14-17 Dec 1994 a Snowy Owl in the Mt. Crawford area chose to reveal itself to a small, elite group of RBC members [Teuber, the Smiths, Ranck] although many other equally deserving birders searched diligently but in vain.

### **BARRED OWL<sup>o</sup>**

*Strix varia*

We list this species as a common permanent resident. However, it is another species for which we have very little quantitative data to support our classification. Barred Owls are found primarily in the mountains often near streams, rivers, and other water. They were found in only three of the 17 VAP priority blocks but this may reflect a lack of "owling" time more than a lack of Barred Owls.

### **LONG-EARED OWL**

*Asio otus*

This is a very local, erratic winter visitor. Homer Mumaw reported seeing this bird irregularly near Sparkling Springs at the base of Little North Mountain before 1978. During the winter of 1984-85 calls, but no sightings, of this owl were recorded in a cedar grove near Park View and near Lake Shenandoah [Mellinger, Tumer].

### **SHORT-EARED OWL**

*Asio flammeus*

Although they have been seen with some regularity in counties to the north and south of us, we have only three records of the Short-eared Owl. On 29, 30 Dec and 5 Jan 1978-79, two individuals were observed on Samuel Shank's farm south of Broadway. Randall Shank reported that the birds perched in trees and on the ground, and chased a harrier that also was in the area. In December 1996 Randy found another short-ear in the same general area. One or two Short-eared Owls were seen regularly in fields near Cross Keys during Feb 1994. Here they were accompanied by an unusually high number of harriers. (See the Northern Harrier account.)

### **NORTHERN SAW-WHET OWL**

*Aegolious acadicus*

We have four records of this interesting owl, but more rigorous and appropriate survey methods might change our evaluation of this species. On 1 Dec 1986 Chris Bolgiano watched a flock of chickadees, kinglets, and titmice mob a Saw-whet Owl near her home in Fulk's Run at the base of Little North Mountain. On 7 Jul 1987 in Bridgewater, John Heatwole observed a "sick and weak" bird for several days before capturing and taking it to The Wildlife Center of Virginia where it eventually died. During the early morning of the February blizzard of 1985, Crystal Shank closely observed a Saw-whet at the window of their home in Park View. On 16 Dec 1996 Kevin and Bethany Shank also observed a owl that appeared to be a Saw-whet near their home at Union Springs.

### **COMMON NIGHTHAWK\***

*Chordeiles minor*

The nighthawk is becoming less common and a very local bird in our area. During the VAP field work, it was found in only one priority block as a potential nester. Although none of the priority blocks happened to include Harrisonburg or any of the larger towns, many observers feel that this species' numbers have decreased dramatically. We have recent records of flocks of 50-2000 migrating nighthawks as recently as 1981. However, John Irvine recently noted that even those numbers are small in comparison with flocks he saw in the valley area 50 years ago. In 1930 J.J. Murray, who was a frequent participant in the summer conferences at the Massanetta Springs Conference Center, noted that he regularly saw nighthawks in Rockingham County but not at Lexington only 60 miles south (Murray 1930). In the summer of 1979 two eggs and later fledglings were monitored on the gravel parking lot of a Mack Truck dealership in Harrisonburg (Lamer and Scott 1980e). Interesting pictures, taken by Mary Smith, showing nighthawk fledglings sitting on Mack truck tires are in the RBC photo collection.

### **CHUCK-WILL'S-WIDOW°**

*Caprimulgus carolinensis*

Our first records of this species were probably migrants. During the night of 27 May 1981 Clair Mellinger heard and recorded a bird calling near his home just west of Harrisonburg (Larner and Scott 1982b). On 9 May 1982 another bird was heard calling, with Whip-poor-wills, along the South Fork of the Shenandoah near McGaheysville [Carpenter]. Elwood Fisher also reported hearing this species calling at his home in Harrisonburg during the spring migration period. However, during June 1994, one, and sometimes two, called regularly near Union Springs Lake. In 1995 Kevin and Bethany Shank, who live in that area, kept a nightly record of the calls. They heard from 1-3, possibly four, birds calling almost every evening from 10 May to 23 July. No nests were found. The RBC has recordings that the Shanks made of these birds.

The birds returned to this same area again in the summers of 1997 and 1998.

#### **WHIP-POOR-WILL<sup>o</sup>**

*Caprimulgus vociferus*

Whip-poor-wills are found most commonly in the mountain areas, including the foothills and lower slopes. Many local residents are worried that Whip-poor-wills are decreasing. We now list them as uncommon. Unfortunately we have no systematically acquired baseline data for comparing past and present population sizes of this species. It was found in five of the VAP priority blocks, however, most of the blocks were apparently under-surveyed for this nocturnal species.

#### **CHIMNEY SWIFT\***

*Chaetura pelagica*

H. B. Bailey (1912) listed swifts as "very common" in 1910 and noted that one nested inside an old mill. They are still observed commonly throughout the county but appear to nest almost entirely in urban areas. In the fall spectacular numbers of birds are seen as they enter or leave local roosts. On 2 Sep 1977, a flock estimated at 1000 individuals was observed near the JMU campus. Swifts normally arrive between 5-17 Apr and leave 9-19 Oct. A number of local birders believe that the number of swifts have decreased in the past five years.

#### **RUBY-THROATED HUMMINGBIRD\***

*Archilochus colubris*

We classify ruby-throats as common summer residents and transients. Bailey (1912) used the term "abundant." Normal arrival and departure dates are 15-25 Apr and 26 Sep-6 Oct. Hummingbirds are most common on the valley floor and along the edges of the mountain forests. The increase in hummingbird feeders may be attracting more birds to nest in suburban areas. They were recorded in 15 of 17 VAP priority blocks and an average of 0.25 birds (per route) are seen on the 612 and 613 BBS routes. During fall migration as many as 12 birds have been counted feeding at a single mimosa (*Albizia julibrissin*) tree.

#### **RUFIOUS HUMMINGBIRD**

*Selasphorus rufus*

A male Rufous Hummingbird was observed by several birders at the feeders of Hobart Bodkin, just south of Bridgewater, on 15-18 Aug 1988. Pictures of this bird [H. Bodkin] and a written description [Mellinger] are available in the RBC files. A second record comes from the flower garden of Mike and Evelyn Shank on their farm just west of Dayton on 4 Oct 1994. This bird remained for about nine days allowing many persons excellent views. A description and indefinite pictures (Mellinger) are available for this bird. This second bird could not be positively identified as a Rufous Hummingbird and should be listed only as a *Selasphorus* species.

**BELTED KINGFISHER\****Ceryle alcyon*

Kingfishers are common residents of the valley. Adequate habitat for successful nesting is still found along many of our streams and rivers. They were found in 12 of the 17 VAP priority blocks. We record an average of 1.2 birds per route on the Route 612 and 613 BBS routes each year. The CBC data fluctuates widely (0.04 to 0.45 birds per party-hour) but no long-term trends are apparent. On 15 Jul 1979, a family of five was observed on Mossy Creek (Teuber).

**RED-HEADED WOODPECKER\****Melanerpes erythrocephalus*

Red-headed Woodpeckers are uncommon to rare residents in all seasons. Bailey (1912) found a nest with eggs on July 7, 1910, and denoted the abundance as "very common." D. Ralph Hostetter found three in a woodlot near EMS and commented on their behavior in a note in the Raven (Murray 1933b). He also noted that "although ... common ... from April to August, this is the first time they were observed in the winter." J. J. Murray (1955) directed a friend who wanted to see this species to the "large grove at Massanetta Springs Conference Grounds" in July 1955 because there was "always a pair" in this location. Their absence illustrated an "alarming scarcity" of these birds in his opinion. Today we can generally find 3-5 active nesting sites in the county, but fewer winter locations. They have been recorded at various spots around Mole Hill for over twenty-five years, even though they appear to lose their annual battles with starlings for nest sites. If red-head populations have indeed decreased from "very common" to rare between 1910 and the present, it seems very likely that the increase in starling populations during those years played a large role in their decline. In recent years most of our winter sightings come from feeder reports. No redheads were reported on the first ten CBCs and they have been reported irregularly and in small numbers since then. However, they have not gone unrecorded on three successive counts since 1961.

**RED-BELLIED WOODPECKER\****Melanerpes carolinus*

This common, permanent resident is one of the few species that has increased its population size in the past 30 years. It now occupies a wide range of habitats - from small suburban type wood lots to well-developed forests in the mountains. It was missing from only two priority VAP blocks, the two at the highest elevations. Although the BBS route data shows no steady increase, the trend over the 43-year CBC history has been upward. The decade mean for the 1950s was 1.3; for the 1960s, 4.5; the 1970s, 9.7; the 1980s, 24.1; and the 1990s: 28.4.



**YELLOW-BELLIED SAPSUCKER***Sphyrapicus varius*

Sapsuckers are uncommon to rare winter residents and transients in our area. We have one summer record, 20 July 1986, of a male on Shenandoah Mountain between Flagpole and Reddish Knobs. It is recorded irregularly on CBCs. Before 1974 we counted an average of 1.3 individuals, and 2.0 since then.

**DOWNY WOODPECKER\****Picoides pubescens*

Once considered the most common woodpecker in this area, downies may be declining. In 1981 we counted a total of sixteen birds on the Route 612 and the 613 BBS. None were observed on the 612 route in six of the nine surveys run since 1987. The average count for the two routes is now 2.1. The high CBC counts of 64, 60, and 51 occurred in 1977, 1981, and 1982 respectively. On the brighter side, downies were found in all 17 VAP priority blocks showing its adaptability to many types of habitats throughout the county.

**HAIRY WOODPECKER\****Picoides villosus*

In contrast to its sister species above, Hairy Woodpeckers are most often found in larger expanses of well-developed deciduous forest. However, they were found nesting in 15 of the 17 VAP priority blocks, showing that they can also survive in the larger non-mountainous wood lots. We find an average of 2.6 individuals each year on Rockingham CBCs, 3.3 since 1974. These numbers are almost exactly one-tenth of those of the Downy Woodpecker. We list it as uncommon. In the 1979-80 Winter Report Leonard Teuber was quoted as feeling "that this bird is uncommon, but should not be on the Blue List for our area. [They] prefer the larger tracts of forest and are not too difficult to find if one birds in this habitat. Of course the larger tracts would be in the mountains, but in the lowlands..., they are probably more visible than the Downy."

**NORTHERN (YELLOW-SHAFTED) FLICKER\****Colaptes auratus*

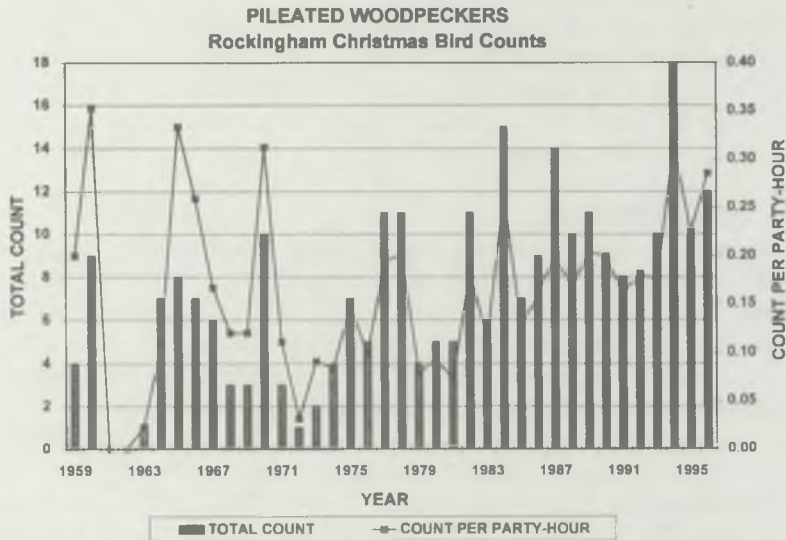
We consider flickers common, permanent residents, but much less common in the winter. This species was found in 16 of the 17 VAP priority blocks. An average of 7.0 birds per route is found on the 612 and 613 BBS routes, an average higher than Downy, Red-bellied, or Pileated Woodpeckers. On CBCs we see an average of 6.7 birds; 9.4 since 1974.

**PILEATED WOODPECKER\****Dryocopus pileatus*

Around 1975 Max Carpenter suggested in his notes that "pileateds are more common in recent years." Our Christmas Bird Counts, when corrected for the differences in number of party-hours show a surprisingly a level graph over the 41-year period (Figure 7).

Nevertheless, many birders share the perception that the number of Pileated Woodpeckers has increased. We currently list them as uncommon in all seasons. They were found in all 17 of the VAP priority blocks although nesting was not confirmed in most of them. Excellent pictures of a nest with young are available [J. Coffman]. F. M. Jones (unpublished data, 1934) reported finding two nests in the Rawley Springs area in 1934. One pair apparently was living amicably with a family of screech owls in the same tree.

FIGURE 7



**OLIVE-SIDED FLYCATCHER**

*Contopus cooperi*

Our three records are all during fall migration. On 23 Aug 1968 Mike Smith observed two birds in the Shenandoah National Park, about 2 miles east of Elkton. In Sep 1974 one bird was seen in Hillandale Park. Leonard Teuber reported an Olive-sided Flycatcher on the Madison Run fire road on 8 Sep 1978.

**EASTERN WOOD-PEWEE\***

*Contopus virens*

Pewees are a common component of oak forest communities that comprise much of our mountain forests and larger wood lots on the valley floor. They are readily found during spring migration but are reported less often in the fall because they are not singing. They were recorded in all 17 priority blocks of the VAP. There are indications that this neotropical migrant is decreasing. Between 1981 and 1992, we counted an average of 6.0 pewees on the Route 612 BBS route (6 years data). The counts for 1995-97 are: 1, 3, and 0.

**YELLOW-BELLIED FLYCATCHER***Empidonax flaviventris*

We have four records of this rare spring and fall transient. One was seen on 25 Aug 1979 on the Madison Run Fire Road. In 1983, two were seen: one on 28 May near Spring Creek and one on 22 Aug near Lake Shenandoah. On 18 May 1985, one was banded and photographed in Park View [Mellinger].

**ACADIAN FLYCATCHER\****Empidonax virescens*

The Acadian Flycatcher is our most common *Empidonax* flycatcher. It is found almost exclusively along mountain streams and moist ravines. It was reported from 10 of the 17 Rockingham County priority blocks of the VAP, missing only from the agricultural and urban-suburban areas of the county. Its distinctive call makes it hard to overlook on surveys. On the 15-acre Kephart Run BBC plot, Ken Hinkle records an average of eight pairs of breeding Acadian Flycatchers. On the less mountainous BBS routes, an average of 0.5 birds per route is found. Like the other *Empidonax* flycatchers, this species is more likely to be identified in spring migration, than the fall, because it is singing.

**WILLOW FLYCATCHER\****Empidonax traillii*

Willow Flycatchers are rare spring migrants and summer residents. Between 1980-85 a pair was regularly observed along Black's Run in the city of Harrisonburg [Finnegans]. They nested in three of the 17 VAP priority blocks. In the Fulk's Run VAP priority block, pairs were found in two different years and at two separate locations [Mellinger].

**LEAST FLYCATCHER°***Empidonax minimus*

Besides many spring migration records we have two summer records that suggest nesting in the county. A male was singing on 2 and 5 Jul 1984 along Mine's Run [Teuber, Tumer]. On 5 Jun 1985, there were two males singing along the east slope of Shenandoah Mountain near Switzer Lake [Tumer]. Mike Smith has found singing males in the Pocosin Cabin BBC plots in 1987 and 1993. F. M. Jones (unpublished notes, 1934) does not mention Least Flycatchers in his notes and Bailey (1912) reports seeing only one and lists them as rare.

**EASTERN PHOEBE\****Sayornis phoebe*

This friendly flycatcher is a common spring migrant and summer resident. It associates freely with humans and often nests in buildings, on porches, and under bridges, making it a well-reported species. Phoebes were reported from all 17 VAP priority blocks and an average of 4.4 birds are found on the 612 and 613 BBS routes each year. Phoebes are also rare winter residents. They have been reported on 13 of the 43 Rockingham CBCs, with a high count of eight in 1992.

### **GREAT-CRESTED FLYCATCHER\***

*Myiarchus crinitus*

This bird's loud, harsh call probably contributes to its classification as a common spring migrant and summer resident. That it nests in a variety of deciduous forest habitats from suburban wood lots to cove hardwoods at 3000' plays a greater role in its "common" classification. It was found in all 17 of the Rockingham VAP priority blocks. Like most of the other flycatchers it is more prominent during spring migration than it is in the fall. This is one neotropical migrant that appears to be holding its own. The highest counts for this species on the Route 612 BBS have come in 1996 and 1997.

### **EASTERN KINGBIRD\***

*Tyrannus tyrannus*

The Eastern Kingbird is still another common flycatcher species for Rockingham County. Although it is usually associated with fence rows along meadows and hay fields, it was found in 15 of 17 of the VAP priority blocks, not all of which contained this "ideal" habitat. We find an average of 1.6 birds on the 612 and 613 BBS routes each year. Kingbirds usually arrive between 12-25 Apr but their departure dates are not so well defined, or at least recorded.

### **LOGGERHEAD SHRIKE\***

*Lanius ludovicianus*

In Virginia the Loggerhead Shrike is an endangered species. Until recently Rockingham County birders would have listed them as uncommon but hardly endangered. The bulk of a study by D. R. Luukkonen and other VPI-SU graduate students of Dr. James Fraser was conducted on shrikes nesting in the Shenandoah Valley (Luukkonen, 1986). Eight of the 37 nests that they studied were found in Rockingham County. Kathleen Finnegan made a significant contribution to this project as an aide to these students. Many detailed records for our shrike population exist because of that study, conducted between 1985-89. Using these data, the VAP listed nine blocks with confirmed breeders in the county but not all these were priority blocks. Follow-up studies reveal that many of these birds have disappeared. An average of 3.9 shrikes is found on Rockingham CBCs. In February 1933, D. Ralph Hostetter noted that a Migrant Shrike has been "seen almost daily on the school campus [EMS, now EMU] for the past two months" (Murray 1933a). He also noted that they are not common but that there is "one here every winter." However, he knew of no summer records. We recorded at least one shrike on every CBC until 1962. We have had no CBC shrike records for the past four years and only one in the 90s. The shrike has become an endangered species in Rockingham County too.

**WHITE-EYED VIREO°***Vireo griseus*

White-eyed Vireos are rare but probable breeders in Rockingham County. Usually they are found in brushy areas along streams or close to other water. This habitat may be under-surveyed in our area. During the VAP they were found in two of 17 of the priority blocks. They have a very low but regular occurrence (0.7 individuals per route) on the Route 612 BBS route. Normally they return between 25 Apr-1 May.

**BLUE-HEADED VIREO\****Vireo solitarius*

Compared to Red-eyed Vireos (see below) Solitary Vireos are uncommon summer residents. In deciduous forests above 3000' they largely replace Red-eyed Vireos, but they can be found at lower elevations as well. Solitary Vireos were found in only six of the 17 VAP priority blocks. The average number of territories found in the four BBC plots is 0.82, about one pair per 15-acre plot. However, three of these plots are at or above 3000'. This vireo is always welcomed as one of the first spring migrants, usually arriving around 1-10 Apr. It is a very rare winter visitor, recorded on one CBC, 1977.

**YELLOW-THROATED VIREO°***Vireo flavifrons*

This vireo prefers mature forest habitats. Part of the nesting requirement may be a nearby mountain stream or other water. However, it is not found uniformly even in this restricted habitat. We list it as an uncommon summer resident, with the uncomfortable feeling that its numbers may be decreasing. It was found in six of the 17 VAP blocks.

**WARBLING VIREO\****Vireo gilvus*

Warbling Vireos are fairly common spring migrants and summer residents especially along the banks of the larger rivers, creeks, and streams of the valley floor. Bailey (1912) considered it rare in 1910 but his article indicates that he was investigating the mountains more than the valley and river habitats. J. J. Murray (1933c) found a singing male near the hotel at the Massanetta Springs Conference Center during his stay there, 11-15 July 1933. He considered it a new record for the region. At that time regional lists were published in the *Raven*. D. Ralph Hostetter's observations comprised the bulk of that regional list. In 1984 we estimated Warbling Vireo counts would be in the 21-50 per day range (common) along the Shenandoah and North Rivers. Because it has disappeared from a number of accessible portions of the rivers, today we list it as uncommon. It was found in six of the 17 VAP blocks. An average of 0.3 individuals per route is found on the two BBS routes within the county but neither of these routes is in good Warbling Vireo habitat.

**PHILADELPHIA VIREO***Vireo philadelphicus*

This species is an occasionally reported migrant for which we have only three records, all in May: 7 May 1978, 4 May 1982, and 17 May 1983 [Teuber, R. Bodkin].

**RED-EYED VIREO\****Vireo olivaceus*

Red-eyed Vireos are very common spring transients and summer residents. They can be found in all types of mountain forests and even in some larger valley wood lots. They are one of our most common forest birds except at the highest elevations where they may be replaced by Solitary Vireos. Red-eyed Vireos were found in 15 of the 17 VAP sample blocks. We record an average of 21.0 on the Route 612 BBS even though not all of this route is in good red-eye habitat. Although some feel that this species, like many other neotropical migrants, has declined in numbers, data from the Route 612 BBS since 1981 does not support that fear. Our highest count on that route was our latest one in 1997. Red-eyes are usually present between 24-30 Apr and 1-10 Oct.

**BLUE JAY\****Cyanocitta cristata*

Blue Jays are very common and ubiquitous permanent residents. In summer they nest from suburban backyards to the Reddish Knob BBC plot at 4000'. They were recorded in all 17 VAP priority blocks and an average of 6.7 birds are found on the 612 and 613 BBS routes each year. The size of our winter population fluctuates considerably but a gradual and significant increase in the CBC total counts has occurred over the years. In the spring and fall we see small flocks of diurnal migrants flying just above the tree tops between 1-15 May and 17 Sep-14 Oct.

**BLACK-BILLED MAGPIE***Pica pica*

On 13 Sep 1959, Max Carpenter observed one bird in the Mill Creek area of Port Republic. This is our only record.

**AMERICAN CROW\****Corvus brachyrhynchos*

There are hardly any comments, notations, or notable records of this species in our files because of its unchanging abundance. It is a permanent resident, confirmed breeder, and appears to have a very stable population. Crows were listed as a breeding or potentially breeding species in all the VAP sample blocks. We record an average of 64.6 crows per BBS breeding route, and 305 (378 since 1974) on the Rockingham CBC.

### **FISH CROW\***

*Corvus ossifragus*

That Fish Crows found their way to the Shenandoah Valley by following the Potomac River is supported by the distribution pattern revealed by the VAP (unpublished data). In 1935 D. Ralph Hostetter collected a Fish Crow near Harrisonburg which may be the first confirmed report of this species in the Ridge and Valley region. Max Carpenter watched a Fish Crow nest near his home for many years. They were first reported on the 1955 CBC and have averaged 19.1 individuals per count since then. This is undoubtedly an underestimation since no "unidentified crows" ever appear on our count. It seems likely that every non-calling crow is labeled an American Crow whereas some of them are surely Fish Crows. It also appears that Fish Crows congregate around cities. Kathleen Finnegan noted in 1981 that "Harrisonburg crows are Fish Crows." However, they have spread throughout the county. Fred Scott was surprised to find one at Hone Quarry on 18 Jun 1960 (Scott 1962). He noted that it was the first time that he seen a Fish Crow and a Common Raven at the same time! At the first stop of the 1992 run of the 612 BBS route (5:20 AM), 68 Fish Crows flew overhead apparently leaving a roost in the Peak area of Little North Mountain. Fish Crows were reported in 10 of the 17 VAP priority blocks between 1984-89. We classify them as common in the county.

### **COMMON RAVEN\***

*Corvus corax*

The raven is an uncommon but easily found permanent resident in Rockingham County. You can add ravens to your list any day of the year with a short visit to Reddish, Flagpole, or Bother Knob. It nests on rocky cliffs of the more remote mountainous areas of the county. However, they wander widely across the county. Slow hawk migration days on Reddish or Flagpole Knobs are often redeemed by the interesting behavior of the ravens which fly by periodically to make sure that you haven't deserted your post to search for fall warblers. Nesting in the county may have been more common in the past. G. H. Hodge (1936) found a nest with young on Church Mountain in Apr 1923. F. M. Jones (unpublished data, 1934) describes in interesting detail a number of nests that he found on Dixon (Dictum?) Ridge along Dry River in the 1930s. "There were two old Ravens' nests on the chimney rock where the Duck Hawks were nesting which made five nesting sites in that locality." At another point he notes, ". . . from the amount of white-wash on the surrounding rocks and the debris from old nests at the foot of the cliff, this place had probably been used by many generations of Ravens." On 17 Mar 1951 Max Carpenter found a nest with young on the cliffs above the Hone Quarry picnic area. More recently Craig Turner and Ned Brinkley found an active nest on the cliffs overlooking North River along Rt. 993 east of Mt. Crawford. Ravens were observed in many of the 17 VAP blocks and listed as "possible" breeders in nine.

No nesting was confirmed during that study and only 4-5 of the blocks (at most) contain realistically potential nest sites.

**HORNED LARK\***

*Eremophila alpestris*

Our records support the classification of Horned Larks as uncommon spring transients and winter residents but rare summer residents and fall transients. Although it is a confirmed breeder, it remains a rare one. At one time it was a more common nester in the county. D. R. Hostetter (1932) found nests on the Eastern Mennonite School (now EMU) campus on 9 Jun 1930 and 7 Mar, 30 Mar, and 27 May 1932. The May nest fledged four young on 14 Jun 1932. During that spring Hostetter noted that larks "are seen and heard daily on the campus" (Murray 1932b). On 4 Jul 1981, Randall Shank found a nest with one egg and two young on his farm south of Broadway. It is possible that because of its preferred breeding habitat (remote grassy meadows and fields), its weak call, and its excellent camouflage, it may be a more common breeder than our records show. It is more common in winter, congregating into flocks of 30-200. An average of 104.4 birds is found on the Rockingham CBCs. Horned Larks have been found on all but two CBCs since 1974; our peak count was 832 on the 1981 CBC.

**PURPLE MARTIN\***

*Progne subis*

Martins are locally common birds because of their colonial nesting behavior but we consider them uncommon in the county as a whole. Although a surplus of nesting facilities appears to be available, there is concern that martin numbers are decreasing. VAP researchers did find martins in 8 priority blocks, but we do not have any earlier counts with which to compare this. One of the area's largest colonies is the Bowmans' colony along Port Republic Road. In 1983 they reported 100% occupancy of the 250 "rooms" in their martin houses. Martin "scouts" generally arrive between 16-27 Mar and the whole colony returns by the last week in March or the first week in April. All birds usually leave before 1 Sep.

**TREE SWALLOW\***

*Tachycineta bicolor*

Tree Swallows were listed as rare summer residents in the "Spring Report" of 1979. Recently we upgraded their status to "uncommon." The increasing number of summer residents has sometimes come at the expense of bluebirds because the Tree Swallows have come to think of "bluebird boxes" as "Tree Swallow boxes." Perhaps better labeling is required. On 6 Jun 1978 Ira Campbell found a Tree Swallow nest with 5 eggs in one of the 100 boxes on his bluebird trail in the Broadway-Timberville area (Larner and Scott 1979b). This is probably the first confirmed Tree Swallow nest in the county. They were found in three of the 17 VAP priority blocks and an average of 0.7 birds are



found on the 612 and 613 BBS routes in the county. In the fall of 1990 and 1991, about 100 Tree Swallows joined the rough-winged swallows at their staging area in Elkton (see below).

#### **NORTHERN ROUGH-WINGED SWALLOW\***

*Stelgidopteryx serripennis*

Rough-wings are scattered widely throughout the county but very locally and are considered an uncommon summer resident. They were found in 12 of the 17 VAP priority blocks. An average of 0.9 birds is seen each year on the 612 and 613 BBS routes. They nest in holes, cracks, and crevices of rocky cliffs but have also learned to use human-produced apertures under bridges and other structures near streams and rivers. A large colony nests at Switzer Lake each summer. In 1990 Mike Smith discovered a migration staging area for this species in the town of Elkton. At the staging area the population builds for several days before they leave as a group to continue their migration south. On 12 Sep Mike counted 950 rough-wings on the wires around the Dean Lumber Co. in Elkton.

#### **BANK SWALLOW\***

*Riparia riparia*

All our recent nesting reports for this rare summer resident are from the South Fork of the Shenandoah River in the Lynnwood and Island Ford areas. In 1988 Mae Houff and Craig Tumer found two colonies along the South Fork near Port Republic. Pictures of the nesting colony are available in the RBC files [Houff]. We have earlier records of nesting on excavated banks at Bridgewater and along the banks of Shoemaker Run [Jopson]. Small numbers of birds are seen during spring migration.

#### **BARN SWALLOW\***

*Hirundo rustica*

Our most common swallow, the Barn Swallow was found in 15 of the 17 VAP priority blocks, absent only in the totally forested mountain plots. On the two Rockingham BBS routes, we average a total of 26.7 birds per year. Although there is some feeling that their numbers are decreasing, no significant trends are apparent in our quantitative data. However, like the Cliff Swallow this species depends on open barns, chicken houses, etc. as nest sites. This behavior may place it in some jeopardy as farming and agriculture practices change.

#### **CLIFF SWALLOW\***

*Petrochelidon pyrrhonota*

Cliff Swallows are regular but rare nesters in Rockingham County. Probably they have always been rare. J. J. Murray and D. Ralph Hostetter found 25-35 young Cliff Swallows being fed by adults at Massanetta Springs in July 1932 (Murray and Hostetter, 1932). However, they could find no nests in the immediate area. In the summer of 1949 Max Carpenter located five active nest locations

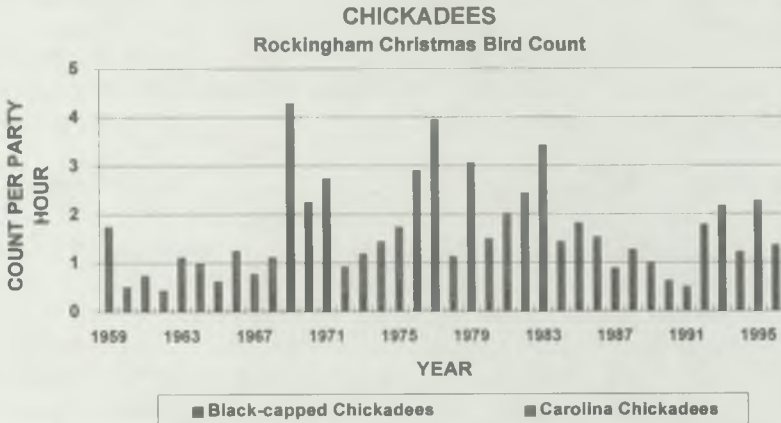
(Murray 1949b). Today we find 3-5 colonies each year. Some colonies have stable locations but others seem to move about within a certain area. In our area they usually build their nests against unpainted wood of eaves and roofs of barns. Some feel that Cliff Swallow populations are decreasing due to the increasing tendency to enclose barns, paint every surface, and drain every mud puddle where swallows can obtain mud to build their nests. They were reported from three of the 17 VAP priority blocks during the 1984-89 field work period. Cliff Swallows normally return between 22-30 Apr and depart 30 Aug-11 Sep.

**CAROLINA CHICKADEE\***

*Poecile carolinensis*

This chickadee is a common permanent resident at the lower elevations of the county. However, since we typically have used the song as the acid test for identifying chickadees, some of our records are questionable (see the discussion under Black-capped Chickadee below). It is probably safe to say that this chickadee is the most common species of the valley floor even in winter. During the 1980s there appeared to be a general decline in the winter populations of both species (Figure 8). However, encouraging counts in 1992-96 have reversed this trend.

**FIGURE 8**



**BLACK-CAPPED CHICKADEE\***

*Poecile atricapillus\**

We consider this chickadee to be a uncommon permanent resident with summer populations sometimes supplemented by migrants from the north during the winter. The identification of our two chickadee species is still undergoing study making many of our records ambiguous. Some years ago we depended on song as the critical test of identification. E. D. Sattler (1996) and others have now confirmed that their songs are not diagnostic. Therefore our breeding bird counts, CBC numbers, etc.,

may be of limited value. However, most persons agree that in the western part of the county a well-established Black-capped Chickadee population exists even at relatively low altitudes. For example, on 18 Jun 1960, F.R. Scott was surprised to find nine black-caps at elevations of 1600'-1900' at Hone Quarry (Scott 1960a). (However, this identification appears also to be based on the song.) The identity of chickadees on the Massanutten Range and the Blue Ridge is still being debated, although most consider these populations to be largely, if not exclusively, Carolina Chickadees. According to Sattler's work, hybrids abound in our area.

#### **TUFTED TITMOUSE\***

*Baeolophus bicolor*

Titmice are such common permanent residents that very few records of this species are found in our files. Both breeding populations and the winter resident populations appear essentially stable. Titmice were recorded in all of the VAP priority blocks. We record an average of 13.9 birds per route on the county BBS routes. Titmouse numbers on CBCs have increased considerably but much of the increase is accounted for by an increase in observers and party-hours.

#### **RED-BREASTED NUTHATCH\***

*Sitta canadensis*

We know Red-breasted Nuthatches best as winter residents or spring-fall migrants. During the winter, Richard and Mary Smith often feed 8-10 at their feeder on Cedar Hill, south of Bridgewater. An average of 2.6 is counted on the Rockingham CBC (4.2 since 1974). Red-breasted Nuthatches have been recorded on 24 of the 43 years of the count, with a high of 16 in 1975 and 11 in 1981. Although there are no confirmed breeding records, this species is an occasional summer resident and probable breeder in the higher parts of Shenandoah Mountain. On 12 and 29 Jun and 3 Aug 1968, C. E. Stevens observed one or two birds in the fir trees near Bother Knob. He also saw four in the Laurel Run spruce on 30 Jun 1968. On Jul 4 of the same year he found four in the virgin hemlock in the Slate Spring area (Stevens, 1968). However, only one bird was detected in these areas during the recent VAP field work.

#### **WHITE-BREASTED NUTHATCH\***

*Sitta carolinensis*

White-breasted Nuthatches are permanent residents that we list as common in all seasons. Many persons think of these birds primarily as winter residents because of their presence at their feeders. However, they were recorded in all 17 VAP priority blocks. They are birds of the deciduous forest but are also found in some smaller wood lots scattered across the valley floor. The average CBC total is 16.5, 26.5 since 1974.

**BROWN-HEADED NUTHATCH***Sitta pusilla*

Mike Smith watched and listened to two birds as they fed at his home, two miles east of Elkton, on 28 May 1967. This is our only recent county record. However, Bailey (1912) reports them as "rare at Massanetta in July; seen at Goshen [Rockbridge County] in June."

**BROWN CREEPER\****Certhia americana*

We know Brown Creepers primarily as uncommon winter residents that occasionally show up at our suet feeders. An average of 3.8 birds is recorded on the Rockingham CBC with highs of 15 and 19 in 1983 and 1984 respectively. However, we have one confirmed breeding record for the county and several other summer records. On 9 Jul 1985, the Finnegans observed an adult feeding a fledgling at Switzer Lake. C.E. Stevens found two pairs and another singing male in the Slate Springs area during visits in Jun, Jul, and Aug 1968. (Stevens, 1968).

**CAROLINA WREN\****Thryothorus ludovicianus*

Although Carolina Wrens are common permanent residents, their numbers vary dramatically with the severity of the preceding winter. The harsh winters of 1977-79 decimated local populations. A population drop between 1985-88 was not so severe and could not be as easily correlated with weather phenomena. Since then winter and summer populations have been on the rise. This is another well-distributed population, recorded in 16 of 17 VAP blocks. Their optimal habitat can be described as the brushy areas along the edges of fields and woodlands. As population density increases, it appears to move closer to human habitations, nesting in garages, sheds, and even hanging flower-baskets. The average count on the 612 and 613 BBS routes is 7.0 individuals per route, and the post-1974 CBC mean is 26.7.

**BEWICK'S WREN<sup>o</sup>***Thryomanes bewickii*

Bewick's Wrens have become increasingly rare during the past 30 years. Our most recent record is 9 Oct 1984. Max Carpenter reported sightings in 1948, 1955, 1962, and 1967. His recollection is that they were never very numerous in the county. In the 1930s D. Ralph Hostetter (Murray 1932a, 1934b, 1935a) lists them in a list of spring arrivals with other common migrants and residents. The arrival dates given are 26 Mar 1932, 18 Apr 1934, and 21 Mar 1935. J.J. Murray (1933c) includes it on his birdlist from Massanetta Springs on 11-15 Jul 1933. Tom Beachy, while a student at EMU, found a nest on Church Mountain in 1967. This is our only confirmed nesting record. Mike Smith observed a singing male in his yard, on the slopes of the Blue Ridge east of Elkton, on 20 May and 12 June 1969.

**HOUSE WREN\****Troglodytes aedon*

"Jenny wrens" are uncommon spring transients and, for the most part, welcome summer residents. Usually they are found in bird houses or natural cavities near human habitations. House Wrens were found in 11 of the 17 VAP priority blocks. We record an average of 4.1 birds per route on the 612 and 613 BBS surveys each year. They were recorded on two CBCs, 1963 and 1983. D. Ralph Hostetter also banded one lingering or wintering House Wren in Park View on 29 Nov 1929.

**WINTER WREN\****Troglodytes troglodytes*

Although the British call this "The Wren", Winter Wren is more descriptive for our county although it is rare even in winter. Two to four birds are found regularly on the CBC, with a high count of 11 in 1984. However, they are present in all seasons. C. E. Stevens (1968) found singing males in the Dunkel Hollow-Block Hollow area on four different dates during the months of June-August. During the VAP field work, Max Carpenter and Leonard Teuber found a pair feeding young in Block Hollow in June 1984. In Jun 1993, a male also sang on one day in the Reddish Knob BBC plot. All of the above summer records are from Shenandoah Mt. but on 3 Jul 1974 Mike Smith reported a singing male at Swift Run Overlook and another just north of the Hensley Hollow Overlook on 21 June 1987 in Shenandoah National Park.

**SEDGE WREN***Cistothorus platensis*

We have only two records of Sedge Wrens, both in the same year, making this bird a true accidental although it might easily have been overlooked in other years. Craig Tumer recorded one bird six miles east of Harrisonburg on 19 Oct 1984 and then two more individuals at Lake Shenandoah on 23 Oct 1984.

**MARSH WREN***Cistothorus palustris*

Most records of this species come from Lake Shenandoah during fall migration. Dates include: 14 Oct and 11 Nov 1982; 2 Oct 1983; 5-9, 11, 14 Oct 1984. These sightings probably reflect Craig Tumer's careful coverage of this area more than it reflects any unique habitat around the lake. Our other two records fall into the summer period but probably represent late spring migration records. Max Carpenter observed single birds at his home west of Dayton on 7 Jun 1951 and 22 Jun 1971.

**GOLDEN-CROWNED KINGLET\****Regulus satrapa*

We know this bird best as an uncommon winter resident. It arrives between 8-16 Oct and remains through the winter until 22 Mar-21 Apr. An average of 10.3 is counted on CBCs, the only significant deviations being a drop in numbers during and after the harsh winters of 1977-79. In 1968, C. E. Stevens established that these kinglets breed in the

Laurel Run and Slate Spring areas of Shenandoah Mountain (Stevens, 1968). In 1987 Craig Turner found two singing males and a female carrying food along the Reddish Knob Road (Rt. 924) at 2000'. The same summer he found two nesting pairs along the Flaggpole Knob road (4000'). Nesting was reconfirmed at the latter location in 1995 [Mellinger] and we have found them at that location every summer since then.

#### **RUBY-CROWNED KINGLET**

*Regulus calendula*

Ruby-crowned Kinglets are uncommon to locally common migrants in the spring and fall. Sometimes we see more individuals of this old-world warbler than any species of our wood warblers. Ruby-crowns move through our area between 6-29 Apr and 18 Sep-25 Oct. They are also rare winter residents, much less common than golden-crowns. The average CBC total is only 1.5 and they have been found on only 16 of the 43 counts. D. Ralph Hostetter's banding records show that he banded one in Harrisonburg on 28 Oct 1932.

#### **BLUE-GRAY GNATCATCHER\***

*Poliophtila caerulea*

One of our early spring arrivals (4-12 Apr), the Blue-gray Gnatcatcher is easiest to find during that first, early wave of spring migrants. However, it is also a common summer resident and was found in 13 of the 17 VAP priority blocks. On the 612 and 613 BBS routes approximately one gnatcatcher is found for every 80 stops made. However, the gnatcatcher's high-pitched fussy calls are easily overlooked by older birders.

#### **EASTERN BLUEBIRD\***

*Sialia sialis*

The CBC records best show the changes in our bluebird population. Only 11 of our 43 CBCs lack bluebirds. Most of the zeroes occurred before 1969. Since 1979 more than 40 birds have been tallied every year with our highest counts, 87, 88 and 107, coming in 1993, 1994, and 1997. Ira Campbell maintained a bluebird route of 100 boxes in the Broadway-Timberville area for many years. He witnessed and documented a dramatic increase in bluebirds in that area during that time. He reports that the number of bluebirds fledged from his boxes has leveled off in recent years. Ira believes that the increased availability of boxes provided by others may explain more of this phenomenon than an actual slowing of the population growth rate. By any reading of the quantitative or anecdotal records, bluebird populations have grown dramatically during the past 30 years.

#### **VEERY\***

*Catharus fuscescens*

We list the Veery as a common spring migrant. Veeries are also locally common nesters, largely restricted to northern hardwood type forests

above 3500'. In the Pocosin Cabin and Reddish Knob BBC plots, they are one of the most common nesters (an average of .52 and .36 territories per acre, respectively). Despite its restriction to high elevation forests, it was reported in five of the 17 VAP sample blocks.

#### **GRAY-CHEEKED THRUSH**

*Catharus minimus*

This thrush is a rare spring-fall migrant in our area. Most of our reports fall between 15-23 May and 23-29 Sep. At this time we have no records of the recently reestablished Bicknell's Thrush species.

#### **SWAINSON'S THRUSH**

*Catharus ustulatus*

Swainson's Thrushes are also rare migrants in our area but usually much easier to find than gray-cheeks. Usual migration dates are 4-20 May and 23 Sep-10 Oct. Our highest counts occurred between 1983-86 and most birders report seeing fewer individuals now than formerly. D. Ralph Hostetter banded two adult males in Harrisonburg on 19 Sep 1928.

#### **HERMIT THRUSH**

*Catharus guttatus*

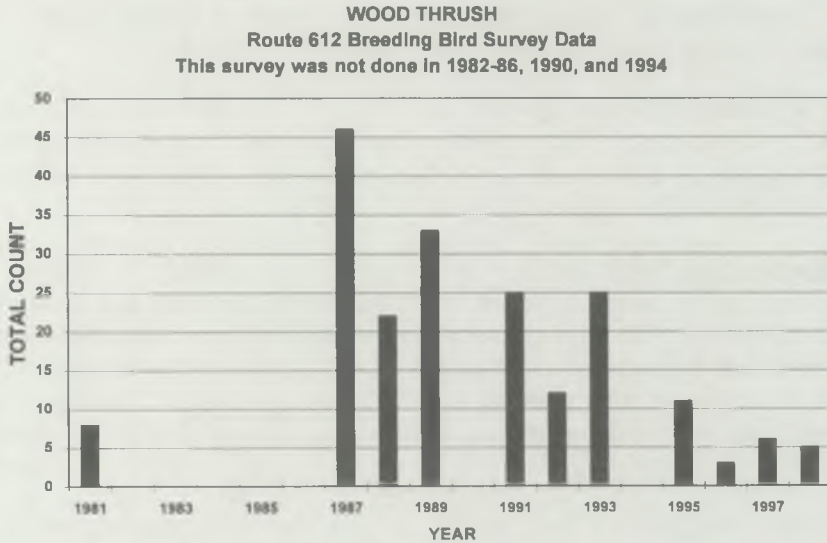
Hermit Thrushes are rare to uncommon migrants through our area and rare winter residents. Spring migrants usually appear between 8-16 Apr but migration periods are hard to delineate because of a small winter resident population. Hermit thrushes are recorded on the CBC about once every three years – about once every two years since 1980. This may reflect more accurately the number, skills, and diligence of the CBC birders than significant variation in the small winter population of Hermit Thrushes.

#### **WOOD THRUSH\***

*Hylocichla mustelina*

The Wood Thrush is a common and well-loved resident breeder and transient. It was recorded in all 17 of the VAP priority blocks. However, VAP data simply shows the presence of at least one pair in that block. The data from our two BBS-type routes better reflects the distribution of this species. On route 613, which runs through mostly agricultural area with scattered wood lots, an average of 2.9 birds per route is recorded. On Route 612, which follows a narrow valley between Little North Mountain and Shenandoah Mountain, we count an average of 19.1 birds. The Wood Thrush range continues into the higher elevations of the mountains until they are replaced by Veeries at about 3500'. Recent data from the Route 612 BBS seems to confirm many other reports and general observations that numbers of this species are declining rapidly. (Figure 9).

FIGURE 9



**AMERICAN ROBIN\***

*Turdus migratorius*

This familiar summer resident is considered one of our "abundant" species. It nests everywhere that people live and most of the places they do not. It was found in 16 of the 17 VAP priority blocks, including one remote, high-elevation block. The 612 and 613 BBS routes produce an average of 36.4 robins per route each year. Robins are also abundant in migration but more uncommon and local during the winter. Mike Smith estimated that about 1000 robins over a 15 minute period flew south over his home around 6:45 AM on 9 Nov 1986. The number of robins reported on CBCs is very variable (ranging from 2 to 138 during the past ten years) but our average count is 16.1 for the entire 43-year period, 29.6 since 1974.

**GRAY CATBIRD\***

*Dumetella carolinensis*

Catbirds are common summer residents and migrants throughout the county. H. B. Bailey (1912) listed them as abundant in 1910. They prefer shrubby areas with low trees or thickets. Their nests are found from the valley floor to the tops of the mountains. Catbirds were recorded in 15 of 17 VAP priority blocks and an average of 6.2 birds is counted per route on the 612 and 613 BBS routes each year. They are very rare winter residents, and have appeared on only one CBC, 1985.

**NORTHERN MOCKINGBIRD\***

*Mimus polyglottus*

This very common permanent resident is most conspicuous during the breeding season when its songfests are long, loud, and sometimes in



the middle of the night. Most often it is found around human habitations but also will nest in old fields with cedars and hedgerows. It was found in 15 of 17 VAP priority blocks. Habitat preference is well illustrated by the differences in abundance reported on the two BBS routes. On the more agricultural-rural 613 route, 27.1 mockingbirds are counted annually. On the more forested 612 route we count an average of 4.6. Mockingbirds have been counted on every CBC with no less than 25 on any count since 1975.

#### **BROWN THRASHER\***

*Toxostoma rufum*

Thrashers occupy similar habitats to their close relatives, mockingbirds and catbirds, but usually choose those farther from human habitation. We consider them common spring transients and summer residents. Although both mockingbirds and thrashers were found in 15 of 17 VAP priority blocks, thrashers are much less abundant than mockingbirds. This is shown clearly by the combined average of 1.9 thrashers per BBS route in contrast to 13.9 mockingbirds. Thrashers are also rare winter residents, having been found on six CBC counts, including two on the 1975 and 1976 counts.

#### **EUROPEAN STARLING\***

*Sturnus vulgaris*

Starlings are abundant permanent residents. No upward or downward trends in their numbers are apparent. Winter roosts of blackbirds in the Harrisonburg area in recent years have included thousands of starlings and made them more conspicuous from late summer to early spring. Starlings prefer agricultural and urban settings and were not recorded in two of the 17 sample blocks of the VAP. An average of 77.6 birds per route is counted on the two BBS routes. Around 3000 are counted each year on the CBC, with a high of 10,000+ in 1978.

#### **AMERICAN PIPIT**

*Anthus rubescens*

Pipits are rare spring-fall migrants and winter residents, usually appearing with flocks of Horned Larks in fields or other open areas. During migration some pipits are recorded in grassy mountain clearings or other openings at high elevations. Pipits are always rare but may occur locally in sizable flocks. Between 29 Oct-8 Nov 1948 a flock of 50-75 were observed in a field near Bridgewater (Murray 1949a). During the spring of 1978, a flock on the Shank farm south of Broadway grew to about 150 by 12 Apr and then dwindled to eight by 8 May. Pipits have been recorded on eight of 43 CBCs with our high count of 110 coming in 1994.

#### **CEDAR WAXWING\***

*Bombycilla cedrorum*

"Local" is an important characterization of this species. During fall, winter, and spring it is usually seen in flocks of 30-200 or it is not seen

at all. We characterize waxwings as common spring-fall transients, uncommon summer residents, and rare winter visitors or residents. In 1984 Kathleen Finnegan summarized their summer status: "For the past few years increasing reports of nesting on the floor of the valley. Twelve nests reported and many pairs seen perched and in flight. Seven nests at Shenandoah Lake and other reports of two and three together." F. M. Jones (unpublished data, 1934) also recorded high densities of nesting waxwings in 1934 at the site of the new bridge across Dry River west of Rawley Springs where he was working.

"About a dozen pair of these birds were nesting in an old pasture field and former house-site in an area of about 2 acres. The nests were from 50 to 100 feet apart and the material entering into the construction of the nests was determined by what was available closest to their nesting trees."

They were recorded as possible breeders in 10 of 17 VAP priority blocks and confirmed in three. An average of 2.3 birds per route is counted each year on the 612 and 613 BBS routes. An average of 14.4 waxwings is seen on the Rockingham CBCs but they appear on only 20 of 43 counts, 14 of the last 20.

#### **BLUE-WINGED WARBLER\***

*Vermivora pinus*

Blue-wings are rare summer residents and migrants in our area. In May and July 1960, C. E. Stevens and Fred Scott found a nesting blue-wing on Big Flat Mt. in the SNP (Scott 1960b). This is our only confirmed nesting record. Singing males were heard on 13 May 1985 at Kite's Spring east of Elkton and on 3 Jul 1988 at a nursery in eastern Rockingham County [M. Smith]. One or two migration sightings are reported each spring and fall but this species is generally considered less common than the Golden-winged Warbler and does not appear to be a competitive threat to it in our area.

#### **GOLDEN-WINGED WARBLER\***

*Vermivora chrysoptera*

We also consider this species to be a rare summer resident. Golden-wings were found as "possible" or "probable" nesters in two of the 17 VAP blocks, both in the northwest corner of the county. Fred Scott found two males singing along Route 257 near Hone Quarry on 18 Jun 1960 (Scott 1960a). One adult male was heard singing on eight different dates between 17 May-4 Jul 1970 at Swift Run Gap [Mike Smith]. In the spring of 1982, Kathleen Finnegan noted in the Spring Report that one male was found where four were singing the previous two years. Although we do not believe that competition with the Blue-winged Warbler is a significant factor in our area, it does appear that breeding Golden-winged Warblers are declining. However, this is difficult to quantify because they constantly change nest sites as the

habitat progresses to a more mature successional stage than the one that they prefer for nesting.

#### **TENNESSEE WARBLER**

*Vermivora peregrina*

Tennessee Warblers are uncommon spring-fall transients. They may be more common migrants than our records show because of the species' nondescript plumage and soft call. However, part of this inconspicuousness may be offset by birders' tendencies to list all unidentifiable unstreaked warbler females and immatures as Tennessee Warblers. Most Tennessee Warblers are seen between 6-23 May and 25 Aug-14 Oct. Late migrants were banded in Harrisonburg on 6 Nov 1984 [Mellinger] and 24 October 1930 [Hostetter].

#### **ORANGE-CROWNED WARBLER**

*Vermivora celata*

This species is a very rare transient through the county. However, it also may be overlooked because of its inconspicuous song and plumage, and its skulking habits. We have six records: one on 17 May 1979 near Broadway [K. Finnegan]; three on Mole Hill, 30 Apr 1983 [L. Leta]; two near Spring Creek on 22 Oct 1983 [Tumer]; one at Island Ford, 8 May 1993 [Mellinger]; one at Lake Shenandoah, 22 Apr 97 [P. Lehman]; and one in Paul State Forest, 14 Oct 1998 [Teuber].

#### **NASHVILLE WARBLER**

*Vermivora ruficapilla*

This is an uncommon to rare spring and fall migrant through the area. Most records occur between 5-30 May and 3-18 September. There are two records of possible nesting birds. On 1 June 1968, C. E. Stevens found four males, singing as though on territory on Rader Mountain. Stevens again found singing males on Rader Mt. on 5 Jun 1971 (Stevens, 1968, 1976). Mike Smith considered the singing male that he found on Hanse Mt. in the SNP on 31 May 1987 to be a late migrant.

#### **NORTHERN PARULA\***

*Parula americana*

We consider this species a fairly common spring transient and summer resident in the "appropriate habitat." Appropriate habitat for the Northern Parula in Rockingham County usually includes hemlocks and a mountain stream or lake. It was recorded as a possible breeding species in eight of the 17 VAP priority blocks. There are several spots throughout the county where singing males have been found without fail for many years. However, it seems very likely that parula nesting in the county is decreasing. F. M. Jones reports in detail on five nests that he found "close to the lower ends of the hollows leading down to the above [Dry] river, a number of nests were located during the nesting season of 1934 at an average elevation of 2000 feet" (unpublished data, 1934). An unusually high migration count of "at least 30" was made by Len

Leta on Mole Hill on 30 Apr 1983. A very late migrant appeared at Mike Smith's home east of Elkton on the Blue Ridge on 8 Nov 1968. It was in the company of an equally late Cape May Warbler.

#### **YELLOW WARBLER\***

*Dendroica petechia*

We now classify the Yellow Warbler as an uncommon spring migrant and summer resident. It is one of the few wood warblers that will nest in urban-suburban backyard habitats. For example, for five years a pair nested beside Harrisonburg Fire House #1 [Finnegan]. In 1910 Bailey (1912) notes that it was then "very common, breeding near houses; still singing August 1." Now we record an average of 1.4 birds per route on the 612 and 613 BBS routes. However, Yellow Warblers were found in only five of the 17 VAP priority blocks. By contrast, In the rest of VAP Region 3 (Augusta, Highland, Bath, and parts of Rockbridge Counties), Yellow Warblers were found in 36 of 50 blocks. Kathleen Finnegan received "more than the usual" number of reports in the spring of 1980, but since then sightings have declined.

#### **CHESTNUT-SIDED WARBLER\***

*Dendroica pensylvanica*

The Chestnut-sided Warbler is a common spring and fall migrant and a fairly common summer resident in certain parts of the county. The typical habitat for this bird is exemplified by the overlook clearings along the Skyline Drive in the SNP, where it is commonly found. It rarely nests below 2000'. An average of 1.3 pairs per 15 acres is found in the Pocosin Cabin BBC Plot and 0.8 pair per 15 acres in the Reddish Knob BBC plot.

#### **MAGNOLIA WARBLER**

*Dendroica magnolia*

Magnolia Warblers are uncommon spring and fall transients. They are typically reported between 1-20 May or 9-21 September. C. E. Stevens (1968) found a singing male in the Slate Springs hemlock forest on 4 July 1968. In 1984 one bird was found in the Brandywine priority block during the VAP field work [Carpenter]. Clair Mellinger found a male in the edge of the fir stand near Bother Knob on 1 Jun 1995 and a singing male on Rader Mt. on 10 June 1997. Some birders in our area feel the number of Magnolia Warblers that we see is declining, but this is hard to quantify for a transient species. As long as any exist, they will justify any springtime hike.

#### **CAPE MAY WARBLER**

*Dendroica tigrina*

This nonresident warbler is a very regularly reported spring and fall migrant. Although technically classified uncommon, it is one of the most regularly seen migrant warblers. In the fall, Cape Mays appear to be more common and remain for longer periods than many other transients. Typical observation dates are 30 Apr-20 May or 17 Sep-5

Oct. There are banding records from Park View for 8, 10, and 16 Oct of various years [Mellinger]. Mike Smith recorded a very late migrant at his home east of Elkton on the lower Blue Ridge on 7, 8 Nov 1968.

**BLACK-THROATED BLUE WARBLER\*** *Dendroica caerulescens*

This warbler is an uncommon spring and fall transient and a confirmed but uncommon breeder in Rockingham County. It usually nests in mature deciduous forests at elevations greater than 3000'. Black-throated Blues are found in all three of the high elevation BEC plots, Pocosin Cabin, Pocosin Mission, and Reddish Knob. Its average density in the three plots is 2.0 pairs per 15 acres. It was found in only three of the 17 VAP priority blocks.

**YELLOW-RUMPED WARBLER\*** *Dendroica coronata*

We propose to assign three abundance designations to this warbler which now can be found in the county during all four seasons. Between 21 Apr-15 May the Yellow-rumped Warbler is a very common transient through Rockingham County. It is also common during fall migration and an increasingly regular but uncommon winter resident. Yellow-rumps were found on only eight CBCs between 1954 and 1976 but on every count since then. The average for all CBCs is 9.6 but 18.8 since 1976. This increase may be explained partially by more observers but the number of birds counted per party-hour shows the same pattern as the total counts. On 13 July 1995, B. K. Schmidt and R. B. Clapp collected a male in breeding condition on the Flagpole Knob Road near Briery Branch Gap. This is the first breeding record for Yellow-rumps in Virginia. This specimen is in the Smithsonian Institution, USNM #600344. During June 1996, Clair Mellinger found singing males on Rader Mountain and on the Flagpole Knob Road and a immature yellow-rump at the latter location. In 1997 singing males were again present at the Flagpole Knob Road location. We now list it as a accidental to rare summer resident.

**BLACK-THROATED GREEN WARBLER\*** *Dendroica virens*

This species nests in Rockingham County but is perceived by most birders only as an uncommon spring and fall transient. It usually nests in mature deciduous forests at elevations above 2500' but sometimes lower in the western part of the county. In F. M. Jones notes from 1934 (unpublished data), he describes 12 different nests that he found in the Dry River area northwest of Rawley Springs. He noted that

"the above warblers seem to nest abundantly in the Shenandoah Mountains and quite a number of nests were found where the hollows flatten out near the lower ends.... The altitude which the nests were found averaged about 2000 [feet]. Various situations were

noted ranging from densely shady situations along streams in hemlocks trees, and the edges of old fields - all close to water. The majority of nests were in hemlock trees but not as high up as those of the Blackburnian Warblers found in the same territory. Any activity around their nests caused them to abandon the nests."

Black-throated Greens were listed in two of the 17 VAP priority blocks as possible nesters. An average of 1.5 pairs per 15 acres nests in the Kephart Run BBC plot and 0.3 pairs per 15 acres in the Pocasin Mission plot. It does not nest in the other plots. We usually can find a substantial breeding population in the Dunkel Hollow-Block Hollow area.

#### **BLACKBURNIAN WARBLER\***

*Dendroica fusca*

Blackburnians are uncommon spring and fall migrants and rare summer residents. Typical migration dates are 3-21 May and 10 Sep-2 Oct. Nesting for this species was confirmed in June 1989 when Craig Tumer watched a parent feeding young near Flagpole Knob at 3700'. Two singing males were observed on Massanutten Mountain (1800-1900') in June 1984. It was also recorded one year on the Pocasin Mission BBC plot [M. Smith]. Blackburnians appear to have been more abundant in the past. In 1934, F. M. Jones (unpublished data) found "a dozen or more old nests occupied this season" in the Dry River area west of Rawley Springs. Using these notes as a guide, Roger Clapp recently found singing Blackburnians in this same area. The only Blackburnian Warblers found during the VAP field work were in the Rawley Springs priority block.

#### **YELLOW-THROATED WARBLER**

*Dendroica dominica*

We have only four records of this spring transient. Two birds were singing at the confluence of Middle and North Rivers near Port Republic on 15 May 1983. One singing bird was found on 6 Apr 1985 halfway up the south slope of Massanutten Peak. Another was seen at Lake Shenandoah on 21 Apr 1983. All the preceding records were by Craig Tumer. Chris Bolgiano observed one near her home in Fulk's Run on 20 Apr 1995.

#### **PINE WARBLER\***

*Dendroica pinus*

Pine Warblers are true harbingers of spring, arriving as early as 10 Mar. They are classified as a common spring migrants and uncommon summer residents. They nest in pine stands or dry deciduous forests mixed with at least some pines. Identification is sometimes difficult because their preferred habitat overlaps that of Chipping Sparrows and Worm-eating Warblers, which have similar songs. Pine Warblers were recorded in 10 of the 17 VAP priority blocks. An average of 1.4 is

reported from the Route 612 BBS run. We have never recorded Pine Warblers on a CBC but there is one winter record, 27 Feb 1974.

**PRAIRIE WARBLER\***

*Dendroica discolor*

Prairie Warblers are uncommon spring migrants and summer residents. In fall they are even more uncommon migrants. They prefer brushy ecotone areas between fields and forests and especially early successional stages of clear-cut forests. Prairie Warblers are sometimes locally common in these areas. In 1982 Ellen Goetz Campbell found 6.5 pairs in a 15-acre clear-cut BBC plot.

**PALM WARBLER**

*Dendroica palmarum*

Palm Warblers are uncommon in both fall and spring. However this is one warbler migrant that is found as easily in fall as in spring. Typical migration dates are 23 Apr-7 May and 23 Sep-23 Oct. There are four CBC records, 1954, 1970, 1984, and 1996. Our other winter record was on 28 Jan 1976.

**BAY-BREASTED WARBLER**

*Dendroica castanea*

This Canada-nesting warbler is an uncommon migrant but seen in greater numbers some years than others. On 14 May 1980, more than 20 were counted in the Sparkling Spring area. It is found in various habitats during migration, not restricted to the conifers it prefers for nesting. It is a "late" spring migrant typically seen 8-25 May and 3 Sep-10 Oct in the fall.

**BLACKPOLL WARBLER**

*Dendroica striata*

Blackpolls are close relatives of the Bay-breasted Warbler and have similar migration patterns and numbers. They are considered uncommon migrants but many may be overlooked because of their "late" spring migration and their "weak" song. Typical spring migration dates are 10-24 May but five were counted in Grottoes on 30 Apr 1983 [Teuber].

**CERULEAN WARBLER\***

*Dendroica cerulea*

This species is a rare transient and summer resident. The Shenandoah National Park (South River Falls Trail, for example) is the best place to find them nesting. During the VAP Mike Smith found a Cerulean Warbler nest on 3 Jul 1984 in the Hensley Hollow Subdivision, east of Elkton in the foothills of the Blue Ridge. He averages 2.5 pairs per 15 acres in the Pocosin Cabin BBC and 3.8 pairs in the Pocosin Mission plot. In the western part of the county fewer are reported but several were heard singing in the Bennett's Run-Cow Knob area, 1-6 Jun 1980. Great care must be taken with voice-only identifications. Variations of

the Black-throated Blue Warbler's song often approaches that of the Cerulean in our area.

**BLACK-AND-WHITE WARBLER\***

*Mniotilta varia*

This species can be found fairly easily during spring migration and can be found nesting in our mountain forests but never in large numbers. It seems to prefer mature deciduous forests but can be found at lower elevations than many warbler species. Black-and-white Warblers were found in seven of 17 VAP priority blocks. It arrives early in the spring, typically 5-10 Apr. It leaves in late September but we have few fall records. We list it as uncommon during the spring, summer, and fall seasons.

**AMERICAN REDSTART\***

*Setophaga ruticilla*

Redstarts are one of our most common warblers both in migration and during the breeding season. They were found in only six of the 17 VAP priority blocks (fewer than the number for the Black-and-white Warbler, for example) but at higher densities. An amazing density of 14 pairs per 15 acres is recorded regularly for both the Pocosin Cabin and the Pocosin Mission BBC plots in the SNP. These are significantly higher densities than are found in the western mountains (it has never nested at all in the Reddish Knob BBC plot) but it can be found in mature forests especially at elevations above 2000'. Even Bailey (1912) listed this species as "rather rare" but his area of observation did not include any of the Blue Ridge.

**PROTHONOTARY WARBLER**

*Protonotaria citrea*

There are only three records of this non-resident species: one singing male was recorded from Lambert's Woods on 8 May 1964 [G. Shantz]; one was observed east of Elkton in 1968 [M. Smith]; and one was seen south of Broadway on 7 May 1978 [R. Shank].

**WORM-EATING WARBLER\***

*Helmitheros vermivorus*

The Worm-eating Warbler can be characterized as an uncommon spring-fall transient and summer resident. It is found in mature deciduous forests but sometimes at lower elevations and drier habitats than many warblers. It was found in nine (one less than the Pine Warbler) of the 17 priority blocks of the VAP and was encountered one year on the Kephart Run BBC. Despite our lack of quantitative counts for this species, it is a regular summer resident that can be found relatively easily in all the mountain forests. In 1976 Robert Eggleston reported that one sang "every year from April through June" near his home at 1500' on the west slope of the Massanutten Ridge. Perhaps this species was never more common than it is now. F. M. Jones (unpublished data, 1934) describes only one nest that he found of this



species. He further notes "as this was the first nest of this warbler I had ever found I was not certain of the identity but coming back down the ridge [probably Dictum Ridge] an hour later, I found the bird on the nest."

#### **SWAINSON'S WARBLER**

*Limnothlypis swainsonii*

On 6 May 1977 Richard and Mary Smith observed one bird by a small stream near the entrance to the Massanutten Resort Development. This is our only record.

#### **OVENBIRD\***

*Seiurus aurocapillus*

Ovenbirds are one of our most common transient and summer resident warblers. Typical arrival dates are 20-28 Apr and some of our last reports have been 1-3 Oct. The strength of the Ovenbird's voice offsets its drab colors and skulking behavior. They appear to thrive on mid-elevation Chestnut Oak - Red Oak - Mountain Laurel dominated habitats, a trait that contributes greatly to its familiarity in our county. They were recorded in 12 of the 17 VAP priority blocks and an average of 7.3 birds per year are reported on the 612 BBS route. On 14 May 1977, Richard Smith found a nest in Overly Hollow at 2200'. F. M. Jones (unpublished data, 1934) records this incident along Dry River near Rawley Springs.

"A nest almost completed was found by my dog Snipe and partly unroofed by her sticking her nose in the nest. It was about completed at the time and I felt sure that the bird would desert it, but such was not the case and the nest contained five eggs on the 21st [of May]."

The three Ovenbird nests that Jones describes were all found by his dog Snipe.

#### **NORTHERN WATERTHRUSH**

*Seiurus noveboracensis*

Northern Waterthrushes are rare transients according to our records. A few individuals are seen each year, usually during the spring migration...but never by the editor of this volume. Between 24 Apr-8 May 1980, eleven individuals were reported, all from the North River at Bridgewater.

#### **LOUISIANA WATERTHRUSH\***

*Seiurus motacilla*

The Louisiana Waterthrush is another of our most common warblers. It is an early migrant arriving during the first week in April and leaving in late September. Its clear, ringing song can be heard above the rushing springtime waters of the mountain streams that are its preferred nesting habitat. Because of its preference for these stream habitats, it is usually found at lower or middle elevations. Atlas volunteers found Louisiana Waterthrushes in 11 of the 17 VAP priority blocks in the county. It is

rarely encountered on the 612 and 613 BBS routes because it is restricted to mountain streams (rather than rivers or even dependable spring-fed valley creeks). Also its most vigorous singing is done before these June counts.

#### **KENTUCKY WARBLER\***

*Oporornis formosus*

Opinion varies on whether this species should be classified rare or uncommon in our area. Our original county checklist listed it as rare, in 1984 it was upgraded to uncommon, but in 1995 it was again downgraded to rare. Usually we find it in low to middle elevation stream valleys that possess a dense subcanopy and shrub layer. Much of this habitat is in private land in Rockingham County and therefore less accessible to birders. Our first confirmed nesting record for Kentucky Warblers was along the South Fork of the Shenandoah River near McGaheysville on 22 May 1978 [Finnegan]. During fall migration, 14 Aug 1982, one visited the George Washington National Forest offices in Harrisonburg by flying through an open window. After a tour of the facilities it was released outside. In Jun 1988, a singing male was found on Chestnut Ridge, Shenandoah Mountain, at 3900', an unusually high elevation for this species [Tumer]. It was recorded in nine of the 17 VAP priority blocks.

#### **CONNECTICUT WARBLER**

*Oporornis agilis*

Because of its circular migration route, the Connecticut Warbler is only seen here in the fall and rarely seen at all. The first confirmed record for this species was a dead bird found beside the Walker manufacturing plant in Harrisonburg on 24 Oct 1981. Our other two records are from 9 and 16 Oct 1983 when individual birds were seen near Lake Shenandoah and Spring Creek [Tumer].

#### **MOURNING WARBLER**

*Oporornis philadelphia*

There are no nesting records for this species in the county and only a few migration records, most of them from the spring. Our only fall record is of a bird killed when it crashed into Schewel's Furniture store in downtown Harrisonburg on 28 Aug 1978. Our first record was from North River near Bridgewater earlier that same year on 19 May [Teuber]. There are three other records from the county, one on 20 May 1981 and two in May 1983.

#### **COMMON YELLOWTHROAT°**

*Geothlypis trichas*

Yellowthroats are a common spring migrant and summer resident throughout the county. Their preferred breeding habitat is forest-field ecotone with dense shrub cover or brambles, usually located near a stream or marshy area. They were found in 12 of the 17 VAP priority

blocks. We average about one yellowthroat per BBS route each year. Typically they arrive between 19-23 Apr and leave between 3-10 Oct.

**HOODED WARBLER°**

*Wilsonia citrina*

We do not classify the Hooded Warbler as common but with little effort it can be found each spring migrating through or nesting in the mountain forests. It nests in deciduous forests from the valley floor to all but the highest ridges. However, it was found in only five of the 17 VAP priority blocks. An average of 2.5 and 1.4 pairs nests in the Pocosin Cabin and Pocosin Mission 15-acre BBC plots, respectively. It appears only irregularly in the Reddish Knob BBC plot.

**WILSON'S WARBLER**

*Wilsonia pusilla*

This nonresident is a rare spring-fall transient. The highest number of spring reports in the county was five, in 1978. Typical migration dates include 10-21 May and 2 Sep-1 Oct. On 3 Sep 1965 a dead bird was found in Harrisonburg and identified by Max Carpenter. Unlike many migrant warblers, our records for Wilson's Warbler are almost evenly divided between spring and fall.

**CANADA WARBLER\***

*Wilsonia canadensis*

In spite of its name, this warbler nests in Rockingham County. It also passes through here on its way to and from "Canada." It could be classified as locally common at high elevations of Shenandoah Mountain but we classify it as uncommon because it is restricted to a very uncommon habitat, viz. mixed conifer-deciduous forests above 3500', preferably with a dense shrub layer of mountain laurel or fetterbush. On 29 May 1977, Robert Eggleston found a nest with three eggs and one cowbird egg along Hall Spring Road on Shenandoah Mountain. Canada Warblers were recorded in two of the 17 VAP priority blocks. In the Reddish Knob BBC plot, an average of 5.3 pairs is found. They nest irregularly in the Pocosin Cabin and Mission plots.

**YELLOW-BREADED CHAT\***

*Icteria virens*

Chats are found in brushy fields, brambles, and thickets, especially in field-forest ecotones or along old overgrown hedgerows. We classify them as uncommon spring transients and summer residents. Chats arrive in the county between 29 Apr-8 May, but we have very few "last dates" and fall migration records. They were found in eight of the 17 VAP priority blocks. Chats are apparently less common now than they were in 1910 when Bailey reported them as common. Over the years there are notes in our files suggesting that chats are increasing and decreasing. These fluctuations in density may be partially explained by the chats preference for habitats that are in an early stage of succession. As the habitat changes they move to other locations and

are no longer present where we found them last year. It is not clear whether this optimum habitat for chats is increasing or decreasing or simply fluctuating.

### **SUMMER Tanager**

*Piranga rubra*

H. B. Bailey (1912) noted that "several [were] seen in oak woods, in June and July." We have only three recent records of this species. We classify it as a spring or summer accidental. The first county record came on 15 Sep 1968 east of Elkton. Mike Smith observed and heard a bird giving the "ki-tuck" call on the lower slope of the Blue Ridge. Diane Holsinger observed a second year male for several days in early May 1983 near Tenth Legion. Another male was seen for several days in June of 1983 on Round Hill near Singer's Glen.

### **SCARLET Tanager\***

*Piranga olivacea*

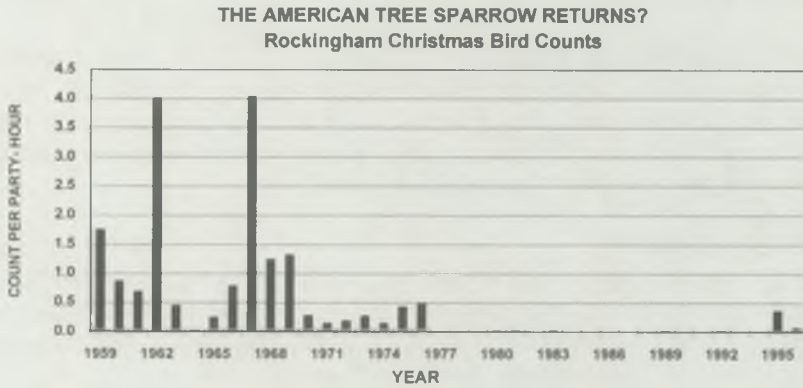
It is sometimes hard to convince someone who has seen a sunlit Scarlet Tanager for the first time that this splendid creature is a common summer resident of the county. Unfortunately (for us) they nest in the upper canopy of mature deciduous forests making them more easily heard than seen. Although they are primarily found in mountain forests, they nest occasionally in larger valley wood lots such as Paul State Forest or Mole Hill. Support for this statement also comes from the fact that atlasers found it in 16 of 17 VAP priority blocks. However, the highest densities are found in the mountain areas. On a 22-mile BBS-type route along the Skyline Drive, an average of 23 tanagers was reported. In contrast, on the valley floor, the Route 613 BBS route counters average less than one bird per survey.

### **EASTERN TOWHEE\***

*Pipilo erythrophthalmus*

The towhee is one of the few species that has an expanding breeding habitat in Rockingham County. It prefers to nest in the shrubby undergrowth of clearings and forest edges. Although it does not nest in suburban lawns, it will use the edges of even small wood lots. In the mountains, it prefers clearcuts, road edges, and other natural or human-initiated disturbances. Illustrating its nesting status, towhees were found in every VAP priority block. An average of 10.2 birds per route is recorded on the valley BBS routes. In addition to being a common breeding bird, it is found easily in both fall and spring migrations and is a rare winter visitor. The average CBC count is 0.8 (high count of 5) indicating that it is not seen every year but with some regularity. We see no trend for the frequency of its appearance on the CBC although we have recorded it on six of the past ten Counts.

FIGURE 10



**AMERICAN TREE SPARROW**

*Spizella arborea*

Tree sparrows are best described as formerly uncommon transients and winter residents. D. Ralph Hostetter banded two on 19, 20 Feb 1936. On the "Harrisonburg" CBCs headed by Hostetter between 1934-1959, tree sparrows were reported on every count except one. They are also recorded on every Rockingham County CBC between 1954-1976 except one (Figure 10). The average CBC count between 1959-1969 was 35.3, with a high of 145 in 1967! From 1976 to 1994, tree sparrows were reported in only four years with a cumulative total of six individuals in those 18 years. However, the major influx of tree sparrows into our area is often between January and March, after the CBC. In the winter of 1978 the first report came on Jan 12. After that date birders reported more "than they had ever seen before", with many feeders having 5-15 daily. Since 1978 the "ones" and "zeros" on the CBCs reflect our all-winter counts rather accurately. However, in 1995 we found a bountiful 16 tree sparrows on the CBC and a token three on the 1996 CBC. Is the trend changing or is this simply an example of those "erratic northern finches" for which trend analysis is meaningless?

**CHIPPING SPARROW\***

*Spizella passerina*

The Chipping Sparrow is one of our more common sparrows in spring, summer, and fall. It is easily found because of its apparent lack of fear of humans and its preference of lawns for nest sites. However, it can also be found around clearings and disturbed areas in the mountains, e.g., along the Flagpole Knob road at approximately 4000'. It was found in 16 of 17 of the VAP priority blocks and about 12 are recorded per route on the valley floor BBS routes. It arrives early in the spring, usually during the first week in April but sometimes on the last days of March. In winter it is harder to identify in its basic plumage but

occasionally remains in the area. It was recorded on the 1964 and 1971 CBCs, both times with a count of 15.

**CLAY-COLORED SPARROW**

*Spizella pallida*

We have two fall migration records for this species. On 30 Sep 1982, one was banded and photographed at Eastern Mennonite University [Mellinger]. Diane Holsinger closely observed and studied another individual the next fall, 9 Oct 1983, at Tenth Legion.

**FIELD SPARROW\***

*Spizella pusilla*

Field Sparrows are common summer residents in the countryside of Rockingham County. They nest primarily in pastures and old fields that provide some small trees or shrubs for nest sites. They were found in 15 of the 17 VAP priority blocks and an average count of 19.4 is recorded on the more-rural 613 BBS route. They become less common during the winter but at least one bird has been recorded on every CBC since 1968, with a high count of 37 in 1981. Our overall CBC average is 8.5. They appear to be decreasing in all seasons, most probably due to a change to "more efficient" farming practices which no longer allows for weedy fields with bushes and hedgerows.

**VESPER SPARROW\***

*Poocetes gramineus*

We classify Vesper Sparrows as uncommon summer residents and transients, and very rare winter visitors. However, they appear to have been much more common in the early 1900s. H.B. Bailey collected two Vesper Sparrow nests with three and four eggs at Massanetta Springs in July 1919. In an *Auk* article Bailey (1912) listed them as very common in this region. D. Ralph Hostetter also banded two immatures in Harrisonburg on 6, 7 Jun 1932. Vesper Sparrows nest in hay fields and pastures, giving them the same problems that other ground nesting species have with the increased frequency of mowing and the decreasing acreage of fallow farmland or less intensively used pasture. Singing males and courtship behavior are observed each spring in fields at the base of Mole Hill but nesting has not been confirmed there. On 25 Jun 1986, four different singing males were heard by Mike Smith along a bluebird trail he was monitoring in the Keezletown area. Two were first heard along that route on 25 April. Vesper Sparrows were recorded as possible breeders in 3 of the 17 VAP priority blocks, but have been reported only one time on the 612 and 613 BBS routes. Four birds were counted on the 1975 CBC and one in 1989 - two of the very few winter records that we have.

**LARK SPARROW\*\***

*Chondestes grammacus*

We have four records of this species including one breeding record. On 17 May 1937, Homer Mumaw and D. Ralph Hostetter (Hostetter 1938)

flushed a female from a nest near Singer's Glen. In an appended note to this *Raven* report, J. J. Murray confirmed that this was the first breeding record for this species in Virginia. Two years earlier another Lark Sparrow had been reported, 12 May 1935, near Harrisonburg (Murray 1935). Since that time only two birds have been reported, both during fall migration. On 13 Oct 1984, one was seen at Lake Shenandoah [Turner] and on 14 Oct 1985, a male was seen south of Broadway [T. Showalter].

#### **SAVANNAH SPARROW\***

*Passerculus sandwichensis*

Savannah Sparrows are uncommon but very regular spring and fall migrants through our area. Because of their inconspicuous coloring, secretive behavior, and weak voice, they are probably under-reported at all times of the year. On 2 Jul 1980 a male was singing on Route 729 between Bridgewater and Sangerville [Teuber]. During the first week of June, a male also sang regularly in a hayfield on the slopes of Mole Hill [Mellinger]. However, unlike birders in the neighboring counties of Augusta, Shenandoah, and Highland, we have been unable to confirm breeding in this species. Savannah Sparrows are also rare winter residents or visitors. Two Savannah Sparrows were recorded on the 1981, eight on the 1990, and three on the 1996 CBCs.

#### **GRASSHOPPER SPARROW\***

*Ammodramus savannarum\**

This is another inconspicuous sparrow which may be under-reported in our records. Nevertheless, it has been established as an uncommon nester and transient in Rockingham County. On 6 and 7 Aug 1912 H. B. Bailey collected two nests, each with three eggs, at Massanetta Springs. It was found in nine of the 17 VAP priority blocks in the county.

We count an average of 10.6 on the Route 613 BBS route. However, both BBS routes are run by observers over 40 years old (perhaps even older than that) and the best counts come from younger persons with sharper hearing. Perhaps "locally common" would be a better designation for this species since Craig Turner counted 62 singing males on a farm near Spring Creek on 17 Jun 1984!

#### **HENSLOW'S SPARROW\*\***

*Ammodramus henslowii*

In 1910 H. B. Bailey's analysis of the breeding status of this species in our area is as follows. "Very common at Massanetta; young abundant July and August; 3 eggs, July 16" (Bailey 1912). Today this sparrow is a true accidental in our county. On 14 May 1969 one male was observed singing in a field near Dayton [Carpenter]. Leonard Teuber found one along the Flagpole Knob road near Bother Knob on 21 Oct 1982. On 19 Oct 1983 a fellow student gave Craig Turner a bird found dead at a school bus stop. It was a Henslow's Sparrow. The fourth record comes

from Lake Shenandoah on 21 Oct 1984. (Both of the last two sites are within a mile of Massanetta Springs.)

#### **LECONTE'S SPARROW**

*Ammodramus leconteii*

We have two records for this very infrequent migrant. On 11 Oct 1986 one was identified in a group of other species of migrating sparrows near Spring Creek [Tumer]. Mae Houff discovered another individual in a hayfield along the South Fork of the Shenandoah River near McGaheysville on 16 May 1989.

#### **FOX SPARROW**

*Passerella iliaca*

The Fox Sparrow is an uncommon but regular migrant through the county. Unlike many migrants from breeding areas to the north, Fox Sparrows seem to stay for a period of time but rarely become winter residents. They are most common during the months of November and March. On 12 Mar 1970, twelve birds were counted in a pine woods east of Elkton at the edge of SNP. However the CBC totals are very irregular and low. The 43-year average is 0.4 and the high counts have been three, in 1972 and 1988. We have one late spring record of a bird singing regularly between 10-15 Jun in a woods at 1200' elevation on the west slope of the Blue Ridge [M. Smith].

#### **SONG SPARROW\***

*Melospiza melodia*

The Song Sparrow is a common permanent resident and a very common migrant in the spring and the fall. Although it prefers brushy, marshy areas as nest sites, it was found in 16 of the 17 VAP priority blocks indicating that it will be found wherever there are hedgerows, brambles, or other shrubby areas including suburban habitats. On the two valley BBS routes, an average of 14.3 birds per route are recorded. Large flocks of local and migrating birds are especially obvious in the fall. Between 30 Sep-21 Oct 1982, 49 Song Sparrows were banded during 87 net-hours in Park View [Mellinger]. In a marshy area by a pond near Broadway, 26 were banded in nine net-hours. Craig Tumer counted a total of 528 Song Sparrows between 2-30 Oct 1983 in fields near Spring Creek and Lake Shenandoah.

#### **LINCOLN'S SPARROW**

*Melospiza lincolnii*

Because of their skulking behavior and inconspicuous field marks, Lincoln Sparrows may be more common than most of us realize. Undoubtedly they still deserve their classification as rare transients. We have more fall than spring records. In 1982, four were banded at Eastern Mennonite University during 87 net-hours. In comparison, 49 Song Sparrows and eight Swamp Sparrows were banded during the same period. Between 3 Sep-25 Oct 1984, Leonard Teuber and Craig Tumer reported a total of 25 Lincoln's Sparrows in our area.



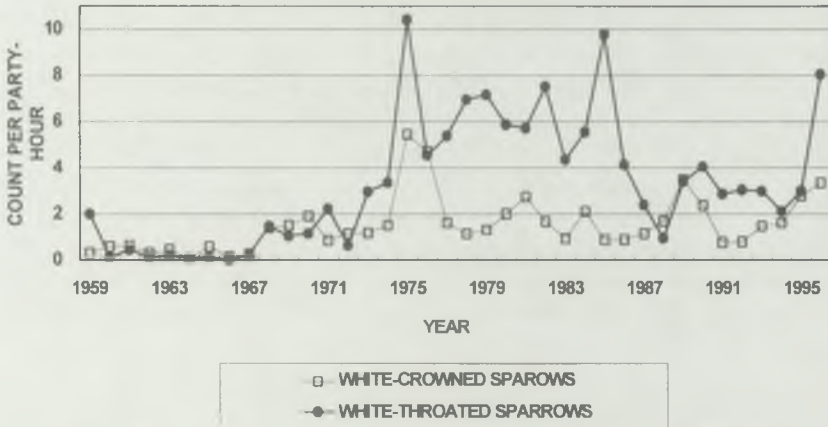
## SWAMP SPARROW

*Melospiza georgiana*

The Swamp Sparrow is an uncommon spring and fall transient and a rare winter resident. In the fall, large groups are sometimes found, but small numbers of swamp sparrows mixed in with other sparrow species are more common. Craig Tumer counted a total of 117 in a weedy field near Lake Shenandoah during the period 11 Oct-3 Nov 1984. During the 1983 fall migration, all reports totaled about 160 birds, "more than ever reported before". It has been found on only nine of the 41 CBCs, but on five of the last fifteen. Again this may reflect a greater increase in birders and birders' skills than an increase in birds. In a swampy area near Spring Creek, Tumer regularly found 2-6 Swamp Sparrows between 11 Dec 1982 and 29 Jan 1983.

FIGURE 11

### HOUSE FINCH EFFECTS ON WINTERING SPARROWS? Rockingham Christmas Bird Counts



## WHITE-THROATED SPARROW

*Zonotrichia albicollis*

White-throats are common winter residents and feeder birds. They are also common during fall migration and remain well into the spring, sometimes as late as 23 May (1983). The peak of fall migration is usually during the first two weeks of October. On 16 Oct 1983, 254 were counted near Spring Creek. Between 30 Sep-21 Oct 1982, 33 were banded at EMU during 87 net-hours. CBC numbers for this species show a dramatic increase between 1972 (20 birds) and 1975 (490 birds) (Figure 11). Between 1975 and 1986 counts fluctuated between 230 and 548. After 1986 white-throat numbers declined significantly and appeared to be fluctuating around a new mean, lower than the 1970s numbers but higher than 1950-1970 counts. Figure 11 show the data as the number of birds counted per party-hour which should be relatively unaffected by the differences in the number of

observers over the years. The fluctuations over the past 15 years may also be associated with the growth of the House Finch population, which may provide competition for white-throats at feeders.

#### **HARRIS' SPARROW**

*Zonotrichia querula*

Between 5-11 May 1978 a Harris' Sparrow was observed and studied by a number of birders [R. Bodkin, Jopson, Carpenter, Finnegan] at the home of Rod Bodkin in Bridgewater. Photographs of the bird and a written description are available.

#### **WHITE-CROWNED SPARROW**

*Zonotrichia leucophrys*

The White-crowned Sparrow is now a less common winter resident and transient than the White-throated Sparrow (Figure 11). Before 1975 CBCs of these two species were about equal, with White-crowned Sparrow counts often being higher. After the abrupt rise in CBC totals for both these species, in the late 1970s, the number of white-crowns reported has been significantly lower. Notes in the Seasonal Reports seem to indicate that this species is not uniformly distributed throughout the county. Few White-crowned Sparrows show up in Harrisonburg. The Rapp farm near Weyer's Cave always has more white-crowns than white-throats. The farmlands south of Broadway also seem to have an abundance of white-crowns. Some birders feel that in the past few winters, White-crowned Sparrows have increased in number relative to White-crowned Sparrows. The interactions between these two species and House Finches also may merit study (Figure 11). During the years of constant increase of House Finch populations, white-throat numbers decreased. The past few years, as House Finch numbers steadily decreased, white-throat and white-crown counts went up.

#### **DARK-EYED JUNCO\***

*Junco hyemalis*

Juncos are very common winter residents in our area and therefore common migrants as well. Nesting juncos are also relatively common (officially uncommon) on the highest ridges of Shenandoah Mountain and the Blue Ridge. These nesting birds are the subspecies *J.h. carolinensis* and are not the birds that visit our feeders in the winter, *J.h. hyemalis*, which breed farther north. Some winters the junco population has been classified as abundant, using the definition that 201-1000 might be encountered daily in the appropriate habitat. At one "typical" feeder in 1984, 37 juncos were banded but only about one out of four of the birds in the feeder area were wearing bands. CBC data suggests that the winter population of Dark-eyed Juncos has remained relatively stable.

## LAPLAND LONGSPUR

*Calcarius lapponicus*

We have only two records for longspurs. Eight birds were counted on the Lakeview Golf Course on 7 Feb 1985. One male was also spotted by Craig Tumer in a flock of 50 Horned Larks at Lake Shenandoah on 2 Jan 1987.

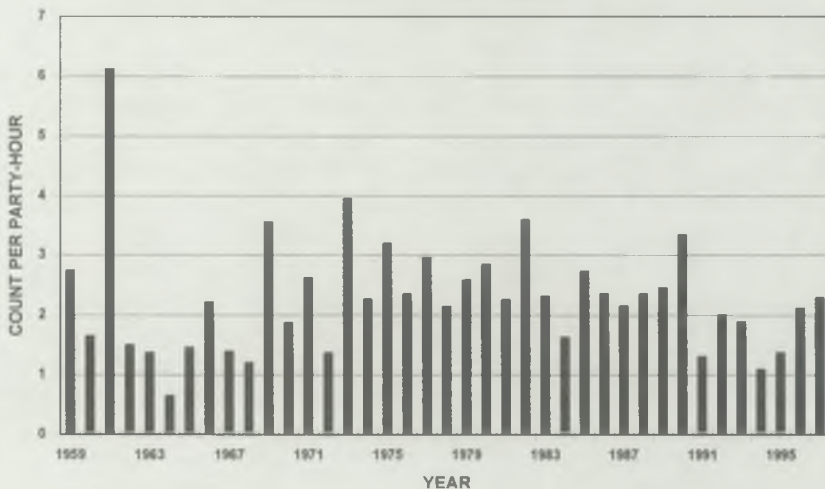
## SNOW BUNTING

*Plectrophenax nivalis*

There are six records of this very infrequent winter visitor in our area. D. Ralph Hostetter found a single Snow Bunting on the 1933 CBC (Murray 1934a). One was collected near Cootes Store on 18 Jan 1962 by Max Carpenter. A flock of 14 was found near Bridgewater on 24 Dec 1961 (Jopson and Peake, 1962). Another small flock was found south of Bridgewater on 30 Jan 1963 (Jopson, 1963). A lone bird was found at Lake Shenandoah on 24 Nov 1974, one of the first official field trips of the newly established RBC. Our most recent record is of three flocks of 8-10 reported on a farm south of Broadway on 22 Jan 1978.

## FIGURE 12

NORTHERN CARDINAL WINTER POPULATION FLUCTUATIONS  
Rockingham Christmas Bird Counts



## NORTHERN CARDINAL\*

*Cardinalis cardinalis*

One could hardly ask more of a state bird than to be spectacularly beautiful, a common permanent resident, and have a preference for nesting and wintering close to people's houses. Despite some fluctuations, the average CBC cardinal count has remained remarkably steady, especially when corrected for the difference in the number of observers in the field (Figure 12). Recent decreases may be of some

cause for concern. The CBC average is 89, but 126 since 1974. The average count per route on the 612 and 613 BBS routes is 24.9.

#### **ROSE-BREADED GROSBEAK\***

*Pheucticus ludovicianus*

Like the Scarlet Tanager this beautiful songbird lives in the rich deciduous forests of our mountains. It is less common as a summer resident (officially uncommon) than the tanager but is regularly seen during spring migration. In the spring of 1978, Kathleen Finnegan noted: "Heavy migration. Many observers...at least 100 birds reported in threes and fours.... I stopped recording them." Rose-breasted Grosbeaks breed above 2500' on Shenandoah Mountain and the Blue Ridge, but sometimes at lower elevations especially in the western part of the county. One bird was observed feeding young at 1400' just west of Bergton. Rose-breasted Grosbeaks appeared in eight VAP priority blocks and was confirmed as a breeder in two. An average of 1.4, 1.8, and 1.4 pairs per 15-acre plot is found in the Pocosin Cabin, Pocosin Mission, and Reddish Knob BBC plots respectively. They are also regular fall migrants and rare winter visitors. A flock of 23 was counted in Harrisonburg on 16 Sep 1977. There were two reports of grosbeaks in the winter of 1978: one male was at a Broadway feeder for several days, and two appeared at a Park View feeder in mid-January.

#### **BLUE GROSBEAK\***

*Guiraca caerulea*

To find the uncommon to rare Blue Grosbeak in Rockingham County, search out a gravel county road, drive slowly, and listen for its distinctive warbling song. It seems to prefer trees or bushes bordering remote pastures, hay fields, and other agricultural fields. It was found in eight of 17 VAP priority blocks, but a more sensitive measure of the abundance are the BBS route counts, on which we average about one bird every other year. Leonard Teuber suggests that one reason they are so hard to find is that they show little year-to-year nest site fidelity. He also notes that many nest in July when fewer birders are in the field. Bailey (1912) makes no comment on the abundance of this species but noted that he found young in a nest, 10 Jul - 2 Aug 1910.

#### **INDIGO BUNTING\***

*Passerina cyanea*

Many non-birders are surprised to hear birders refer to this strikingly beautiful bird as "common." We classify the Indigo Bunting as a very common spring migrant and summer resident. It is not a bird of suburban backyards, but is very common along country roads, forest edges, and the many clearings or disturbed areas within the forests themselves. Indigo Buntings were found in 16 of the 17 of the VAP priority blocks and an average of 28.6 buntings per route is counted on the two BBS routes. During fall migration, they are not as conspicuous, as the males molt to their brown basic plumage. It is interesting that

F. M. Jones (unpublished data, 1934) describes only one Indigo Bunting nest in 1934 among the profusion of nests he investigated in the Rawley Springs - Dry River area that year.

#### **DICKCISSEL°**

*Spiza americana*

Dickcissels are erratic summer and winter visitors in our county. We have no confirmed breeding records for this species although singing males were recorded in a number of years, most recently 1988. During Jun 1988, Craig Turner found a singing male near Cross Keys and Thelma Showalter reported singing birds south of Broadway. Interestingly Fred Swartz reported singing Dickcissels from the Cross Keys area in 1957 (Murray 1957). Other spring-summer sightings were on 17 May 1951, 31 May 1983, and 20 Jun 1984. One female was reported at a feeder near Dayton on 19 Feb 1978 and another Dickcissel was reported at a feeder south of Broadway on 9-11 Nov 1987.

#### **BOBOLINK**

*Dolichonyx oryzivorus*

Bobolinks are regular but uncommon spring and rare fall migrants. In the spring they are usually found in hay fields or pastures. Typical dates are 15 Apr to 16 May. Flocks of 10-20 are common and in 1980, a total of 235 birds were reported during the migration period. This included flocks of 30 and 70 birds. Because of their circular migration pattern, they are much less common in the fall. There is one very late record, 4 Nov 1983. We have three summer records: Max Carpenter found one bird on 25 Jun 1974; and Randall Shank observed five males on his farm near Broadway on 5 Jul 1993. In June 1997 singing birds were found on two different dates just west of Singer's Glen on Route 776. No evidence of breeding other than presence on these dates has been noted.

#### **RED-WINGED BLACKBIRD\***

*Agelaius phoeniceus*

Red-wings are a common summer resident and an early spring transient. The first males arrive and begin to sing and set up territories between 20 Feb-7 Mar - a very welcome promise of spring. They are best described as locally common birds since they much prefer the few marshy areas that we have in the county. They will also nest in hay fields and lightly-grazed pastures. Red-wings were recorded in all but three of the VAP priority blocks. An average of 19.4 per route is reported from the 612 and 613 BBS routes. Recently it has become an increasingly common winter resident. Red-wings were not recorded on any CBC before 1967. Since then we have recorded them on eighteen counts, with flocks of more than 700 registered in 1978 and 1991.

### **EASTERN MEADOWLARK\***

*Sturnella magna*

The meadowlark is a common summer resident. Its "spring-of-the-year" song can be heard in almost any meadow, hay field, or other type of cropland throughout the county. Although it is restricted to agricultural type lands, it was absent from only three of the 17 VAP priority blocks. An average of 69.7 is counted on the Route 613 BBS route whereas only 9.7 are found on the more forested 612 route. It is much less common during the winter, although it is not clear how many of our summer residents migrate out of the area. In winter it is usually found in flocks in sheltered fields throughout the county. CBC totals over the past twenty years range from one bird (1988) to 189 (1975) with an total CBC average of 65.

### **YELLOW-HEADED BLACKBIRD** *Xanthocephalus xanthocephalus*

On 17 Feb 1979, Elizabeth Shantz and her family enjoyed watching a male at her feeder in Park View. Randall Shank found a single male on their Lincoln Homestead farm south of Broadway on 7 May 1985 [written details, Mellinger].

### **RUSTY BLACKBIRD**

*Euphagus carolinus*

The Rusty Blackbird is a rare winter resident but, like many blackbirds, becoming more common. The CBC decade-means for this species are: zero in the 1950s, 2.8 in the 1960s, 5.2 in the 1970s, 71.6 in the 1980s, and 151.9 in the 1990s. (Also see Figure 13.) A count of 610 in 1989 greatly skews the 1980s mean. However, it does not include the count of 677 recorded in 1991. Will the 1990s be the decade of the blackbirds? We have few migration records but the Rusty Blackbird is most likely to be seen between late October and early April. Two late migrants were seen along Dry River on 24 Apr 1980.

### **BREWER'S BLACKBIRD**

*Euphagus cyanocephalus*

We have very few records of this difficult-to-identify species. Most of the records are within the past ten years and there is some feeling that they are becoming more frequent. They are usually found in large flocks of grackles that are becoming increasingly common in fall, winter, and spring (Figure 13). Diane Holsinger found one bird at her home near Tenth Legion on 8 Feb 1984. She identified a second individual at her feeder on 9 Jan 1988. On the 1989 CBC, Charles Ziegenfus and others found three Brewer's Blackbirds mixed in with a large flock of other blackbirds.

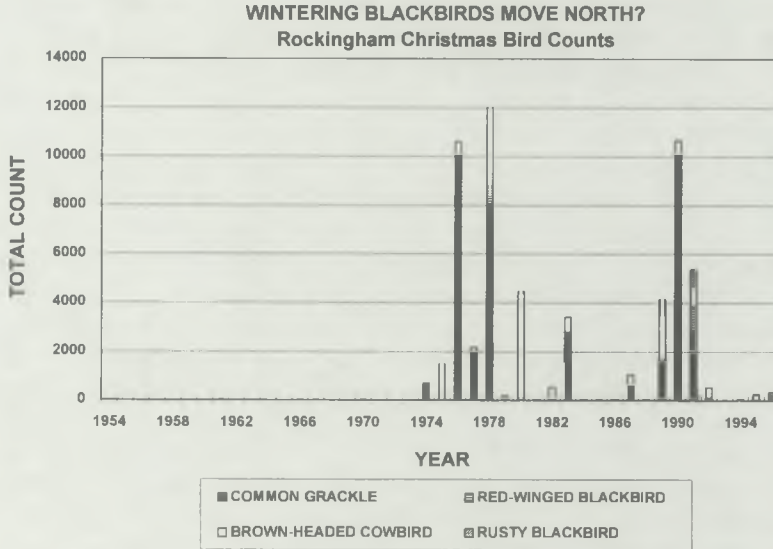
### **COMMON GRACKLE\***

*Quiscalus quiscula*

This is perhaps the most abundant breeding bird in Rockingham County. It was a confirmed breeder in all but three of the 17 VAP priority blocks. The average number of grackles on the valley BBS routes is

134 on Route 613 the more agricultural, non-forested route and 69 on Route 612. Grackles are becoming increasingly abundant, during the winter (Figure 13). No grackle was recorded on a CBC before 1972. At that time the return of the grackles during spring migration was usually placed between 11-25 Mar. However, in the past several years large roosts of more than 100,000 have remained in the area all winter. This is partially reflected in the CBC totals of 1519, 10,017, and 2838 in 1989, 1990, and 1991 respectively. Whether this is a temporary phenomenon or a change in the overwintering behavior of this species remains to be seen.

**FIGURE 13**



**BROWN-HEADED COWBIRD\***

*Molothrus ater*

Cowbirds are now considered common in all seasons of the year. Already in 1910 Bailey (1912) found "young birds common July 7; but I have never found their eggs in late settings." They were recorded as possible breeders in all but one VAP priority block. We see only 3.1 birds per route on the two BBS surveys but cowbirds remain fairly inconspicuous at that time of year. Their presence during winters has changed considerably over the past 20 years. No cowbirds were recorded on the CBC until 1966. After 1966 none were recorded again until 1973. Since then they have been reported every year. Counts topped fifteen hundred in 1975, 1978, 1980, and 1989. The peak count of 4327 was recorded in 1980 (Figure 13).

### ORCHARD ORIOLE\*

*Icterus spurius*

The Orchard Oriole is another country road species in Rockingham County. It seems to prefer large oaks and other deciduous trees that border farmland, not too near human activity. Because the males have a real talent for remaining hidden even while singing, they may be overlooked unless the song is well memorized. It was found in six of the VAP priority blocks but has been reported only once on the valley 612 and 613 BBS routes. We list it as uncommon in spring and summer. In 1910 H. B. Bailey (1912) found this species to be common and the Baltimore Oriole rare (see below).

### BALTIMORE ORIOLE\*

*Icterus galbula*

We list the Baltimore Oriole as a common summer resident but the "appropriate habitat" qualification of this classification should be not be ignored. Northern Orioles were found in 12 of the 17 VAP priority blocks, but an average of only 1.4 birds per route is seen on the 612 and 613 BBS routes. For nesting, this oriole species prefers large deciduous trees, near or overhanging a stream or other water. These conditions are not uniformly distributed throughout the county or the BBS routes. Interestingly, Jones (unpublished data, 1932-1940) does not mention Baltimore Orioles and Bailey (1912) lists them as rare. They are also rare winter residents, lingerers, or lost souls in our area. We have at least four winter records of orioles at feeders: one in Nov 1977 [Pettit, Harrisonburg]; Dec-Feb 1979 [Riddle, Broadway]; Feb 1979 [R. Bodkin, Bridgewater]; and Jan-Mar 1980 [Bridgewater].

### PINE GROSBEAK

*Pinicola enucleator*

We have three records for this species that has become exceedingly rare in Virginia. All our sightings occurred before 1963. On 7 Dec 1957, Dr. Harry Jopson saw one bird on Shenandoah Mountain at the head of Mine's Run (Murray 1958). Max Carpenter found six birds at Briery Branch Gap on 9 Dec 1961 and four birds on Second Mountain west of Rawley Springs on 27 Jan 1962.

### PURPLE FINCH

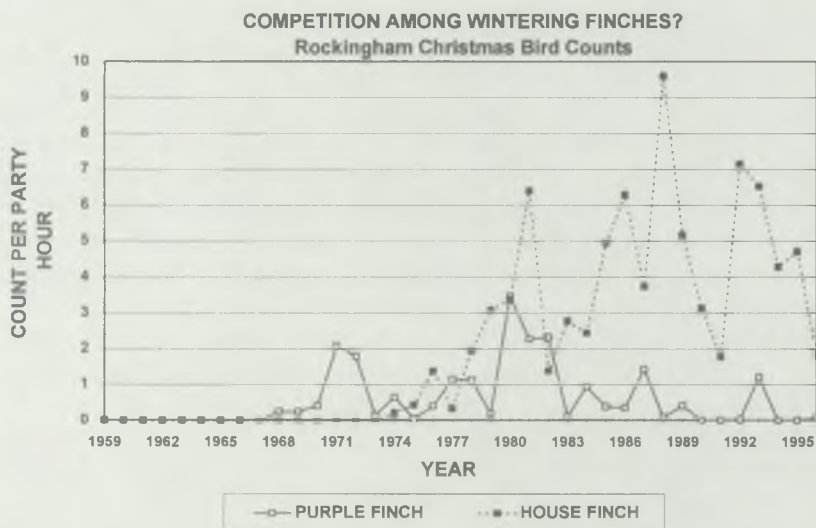
*Carpodacus purpureus*

Purple Finches are usually considered a "northern finch invader" species that shows erratic records of abundance during our winters. Our CBC data does not fit this description (Figure 14). Undoubtedly there were occasional invasions in the past (witness the 1980 and 1990 counts), however the overall pattern on our CBCs is hardly erratic. We have no CBC records of Purple Finches before 1968. (Max Carpenter's count of 200 at Timberville on 21 Mar 1960 is the only pre-1968 record of Purple Finches in our files.) Between 1968 and 1990 we recorded at least a few on every CBC until 1990. In 1990, 1991, and 1994 we found no Purple Finches on the CBC. The Purple Finch's humpbacked graph



seems to support the theory that our counts are correlated with the rise of feeders in eastern US and are now declining with the rise of feeders in Canada. Our data may also support some persons' suspicions that competition from House Finches has driven Purple Finches from their feeders. CBC data may not be the best indicator of this bird's abundance in the area. Although Purple Finches have almost disappeared from the CBC in the past five years, we still find them in small numbers at other times during the year, especially in the early winter and late spring. In our files the extreme dates for this species are 30 Sep and 21 May. Late April and May are especially propitious times to find Purple Finches in Rockingham County.

FIGURE 14



### HOUSE FINCH\*

*Carpodacus mexicanus*

Our first report of this species is December 1973. It first appears on a CBC in 1974 (Figure 14). On 11 Sep 1977, Marie Pettit observed a female with a fledgling in her Harrisonburg yard. The county's first nest was found in Harrisonburg, on 10 May 1978. Since then this transplanted species has become a common breeder and permanent resident. As its name implies, it is usually found around houses and seems to prefer backyard conifers and hanging flower baskets as nest sites. It was found in 11 of the 17 VAP priority blocks, missing only in the more remote, forested blocks. The average count on the BBS routes is also low, 2.9 per route, because both of these routes pass through farmland and forest where the House Finch does not nest.

Pennsylvania and other points northeast of the valley. On 31 Dec 1981 Clair Mellinger retrapped a House Finch that was banded by Merrill Wood in State College, PA, on 8 June of that year. In 1985 Wood retrapped a House Finch on 11 May that Mellinger had banded on 9 March. At that time Wood noted that he had banded over 13,000 House Finches, two of which had been recovered as far north as Ontario. Since the appearance of the conjunctivitis disease which affects their sight, House Finch numbers have dropped dramatically at county feeders.

#### **RED CROSSBILL\***

*Loxia curvirostra*

Red Crossbills are rare but apparently permanent residents of Shenandoah Mountain. We have scattered earlier records but since 1976 Red Crossbills have been seen regularly on Shenandoah Mountain. We find them most often along Route 33 at the top of Shenandoah Mountain. John Derby, USFS, found the crossbills at this location for several years before the RBC members began checking it regularly (Scott 1970b). During the 1963-64 invasion documented by Fred Scott (1964) Red Crossbills were discovered at three places in Rockingham County: C. E. Stevens found a small flock at Brown's Gap on the Blue Ridge; Gordon Shantz reported eight from Harrisonburg; and Gordon Souder found eight at Runion's Gap along with two White-winged Crossbills. Other sightings have been made at Briery Branch Lake, Bother Knob, along the Flagpole Knob road, and in the Slate Springs area. Robert Eggleston reported a small flock in Penn Laird in 1970. Sightings from the Blue Ridge have been mostly from Swift Run Gap area, including Mike Smith's count of 11 birds on 30 Dec 1969 near the Swift Run Pool, 2 miles east of Elkton. On 8 May 1980, Max Carpenter and Ellen Goetz Campbell discovered a Red Crossbill nest in a Table Mt. pine along the Reddish Knob Road (Route 924). This was the first confirmed nesting of Red Crossbills in Virginia. Pictures of the four nestlings were taken [Finnegan] and the nest is preserved in the Hostetter Museum at EMU. Since then we have observed adults with immatures several times but no other nests have been found. The frequency of sightings at the locations listed above has decreased dramatically in the past several years. They may still be present in greater numbers in the less accessible, higher elevation areas such as Slate Springs where C. E. Stevens found 28 on 12 Jun 1968.

#### **WHITE-WINGED CROSSBILL**

*Loxia leucoptera*

We have four records of these very infrequent winter visitors. In 1964, during a minor crossbill invasion in Virginia, there were two reports: two birds at Runion's Creek and two at Marshall Run, near Broadway, both observations by Gordon Souder (Scott 1964). The other two reports were from 1978. On 27 Jan 1978 Dr. Harry Jopson spotted two in

conifers outside his office on the Bridgewater College campus. On 14 Feb 1978 Charles Ziegenfus found three White-winged Crossbills in Harrisonburg (Larner 1979).

#### **COMMON REDPOLL**

*Carduelis flammea*

Redpolls are the most erratic of the "northern finch invaders." We have recorded them only in 1965, 1978, 1981, 1987, and 1994. In 1978 there was a major invasion of redpolls in our area (Larner and Scott 1979a). Fifteen flocks, of 5-40 birds each, were identified at feeders throughout the county. (One notable exception being the feeder of this volume's editor.) In 1987 we estimate that there were at least three different flocks in the area but they did not generate nearly so many reports as the 1978 invasion.

#### **PINE SISKIN**

*Carduelis pinus*

We once classified Pine Siskins as erratic; but now at least a few are seen every winter or during migration. Although they are seen regularly, their numbers are still highly erratic. During invasion years, hundreds and even thousands of siskins visit the county. Some larger counts in the recent past have been during the winters of 1977-78, 1981-82, and 1987-88. Between Jan-Apr 1982, 145 siskins were banded at one feeder alone. Some siskins that we see travel long distances. One siskin banded by Clair Mellinger on 25 Feb 1986 was retrapped in July 1986 on the Gaspé Peninsula of Quebec. We have one summer record for siskins. On 12 Jun 1968, C. E. Stevens found a group of twelve calling (but not singing) siskins in the fir stand below Bother Knob. He noted that this group may have been a remnant of the flock of 50 that he found there on 24 Mar 1968.

#### **AMERICAN GOLDFINCH\***

*Carduelis tristis*

The goldfinch, symbol of the Rockingham Bird Club, is a common permanent resident of the county and an easily located bird in all seasons. It was found in all 17 of the VAP priority blocks. An average of 17.4 is seen on each of the 612 and 613 BBS routes. Since goldfinches nest later in the summer, these numbers may underestimate the population. In winter, despite the loss of their breeding plumage, goldfinches bring enthusiasm and gracefulness to any feeder serving sunflower or niger seed. Since 1974 the average CBC total is 91.2.

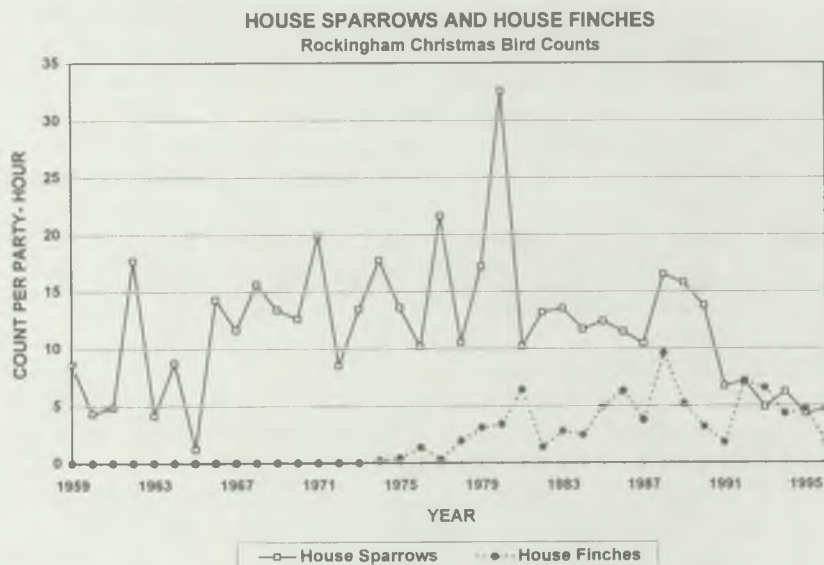
#### **EVENING GROSBEAK**

*Coccothraustes vespertinus*

Some Evening Grosbeaks appear in the county each year, sometimes only for a few days during the fall or spring migration. At the other extreme they sometimes become common winter residents dominating almost every sunflower feeder in the valley. Evening Grosbeaks are

relatively new visitors to the Valley. J. J. Murray's 1944 Raven article entitled "A Rare Visitor from the North" reports only the second record of the species in Virginia (Murray 1944). Since then invasion years have included 1951-52 (Paxton 1952) and 1957-58 (Paxton 1958). During the 1951-52 invasion, C. N. Priode of Harrisonburg reported that grosbeaks were at his feeders daily after 10 January, with counts peaking at 48-60 by mid-February. Max Carpenter reported that 1960 also was an invasion year in the valley. Mike Smith counted 75 around his feeder on 16 May 1969 and Charles Ziegenfus counted 135 in Harrisonburg on 29 Jan 1979 but large flocks of grosbeaks have appeared throughout the county only in 1977-78 and 1983-84. We have found no Evening Grosbeaks on six of the past nine CBCs. In 1996 Charles Blem found that "detectable declines in the statewide grosbeak and siskin counts over the study period [1965-1993]." He concluded that these are real decreases probably due to habitat destruction and fragmentation rather than shifts of wintering grounds (Blem 1996).

**FIGURE 15**



**HOUSE SPARROW\***

*Passer domesticus*

We now classify House Sparrows as common rather than abundant permanent residents. They are never found far from human homes or farm buildings but were recorded in 14 of the 17 VAP priority blocks. Some believe that the increase in House Finch populations has caused a drop in House Sparrow numbers. Our CBC data shows that after a peak of 1724 House Sparrows in 1980, the numbers did fall but only to a level that was common during the late 1960s and 1970s (Figure 15).

There has been a significant decline in the past five years but these population fluctuations do not seem closely correlated with changes in the House Finch populations.



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Species	Page	Date, location, notes
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Grebe, Red-necked .....	34	_____
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Grosbeak, Evening .....	109	_____
Grosbeak, Pine .....	106	_____
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Gull, Bonaparte's .....	59	_____
Gull, Franklin .....	59	_____
Gull, Glaucous .....	59	_____
Gull, Herring .....	59	_____
Gull, Laughing .....	58	_____
Gull, Ring-billed .....	59	_____
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Harrier, Northern.....	46	_____
Hawk, Broad-winged.....	48	_____
Hawk, Cooper's .....	47	_____
Hawk, Red-shouldered .....	47	_____
Hawk, Red-tailed .....	48	_____
Hawk, Rough-legged .....	49	_____
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Heron, Green.....	36	_____
Heron, Little Blue .....	35	_____
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Hummingbird, Rufous .....	65	_____



Species	Page	Date, location, notes
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Kingfisher, Belted .....	66	_____
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Kinglet, Ruby-crowned.....	80	_____
Lark, Horned.....	74	_____
Longspur, Lapland.....	101	_____
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Magpie, Black-billed.....	72	_____
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Merganser, Hooded.....	45	_____
Merganser, Red-breasted.....	45	_____
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Species	Page	Date, location, notes
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Phalarope, Wilson's .....	58	_____
Pheasant, Ring-necked .....	50	_____
Phoebe, Eastern.....	69	_____
Pintail, Northern.....	42	_____
Pipit, American .....	83	_____
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Species	Page	Date, location, notes
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Raven, Common.....	73	_____
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Sandpiper, Least .....	56	_____
Sandpiper, Pectoral .....	57	_____
Sandpiper, Semipalmated .....	56	_____
Sandpiper, Solitary .....	55	_____
Sandpiper, Spotted.....	55	_____
Sandpiper, Stilt .....	57	_____
Sandpiper, Upland.....	55	_____
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Scoter, Black .....	44	_____
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Species	Page	Date, location, notes
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Shrike, Loggerhead .....	70	_____
Siskin, Pine.....	109	_____
Snipe, Common.....	58	_____
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Sparrow, Field .....	96	_____
Sparrow, Fox .....	98	_____
Sparrow, Grasshopper.....	97	_____
Sparrow, Harris' .....	100	_____
Sparrow, Henslow's .....	97	_____
Sparrow, House.....	112	_____
Sparrow, Lark .....	96	_____
Sparrow, Leconte's.....	98	_____
Sparrow, Lincoln's .....	98	_____
Sparrow, Savannah .....	97	_____
Sparrow, Song.....	98	_____
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Sparrow, Vesper.....	96	_____
Sparrow, White-crowned .....	100	_____
Sparrow, White-throated.....	98	_____
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Swallow, Barn.....	75	_____

Species	Page	Date, location, notes
Swallow, Cliff .....	75	_____
Swallow, Northern Rough-winged.....	75	_____
Swallow, Tree .....	74	_____
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Tern, Common.....	60	_____
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Species	Page	Date, location, notes
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Vireo, Warbling.....	71	_____
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Warbler, Canada.....	93	_____
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Warbler, Mourning.....	92	_____
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Species	Page	Date, location, notes
Warbler, Pine .....	88	_____
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Warbler, Prothonotary .....	90	_____
Warbler, Swainson's .....	91	_____
Warbler, Tennessee .....	85	_____
Warbler, Wilson's.....	93	_____
Warbler, Worm-eating .....	90	_____
Warbler, Yellow .....	86	_____
Warbler, Yellow-rumped (Myrtle's).....	87	_____
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Woodpecker, Downy.....	67	_____
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Species	Page	Date, location, notes
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Yellowlegs, Lesser.....	54	_____
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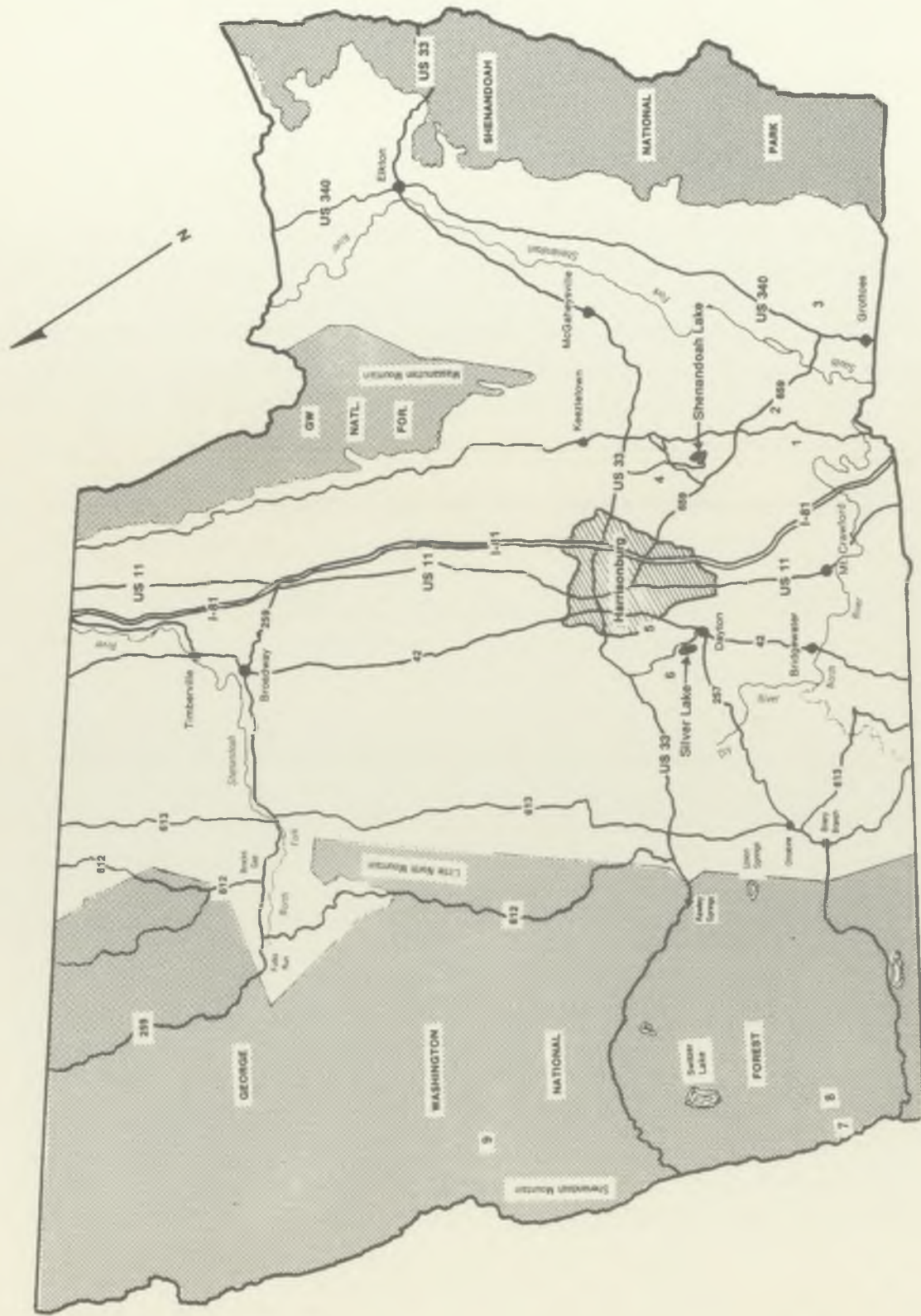




## ROCKINGHAM COUNTY BIRDING SITES

In addition to the places named on the map, the numbers indicate approximate locations of other areas referred to in the Species Accounts. More precise directions to these places are given in the Locations chapter of the text.

- 1 – Leonard's Pond
- 2 Mace's Pond
- 3 Madison Run fire road
- 4 Lake Campbell (Massanetta Springs Lake)
- 5 Hillandale Park
- 6 Mole Hill area
- 7 Bother Knob
- 8 Flagpole Knob
- 9 Laurel Run - Rader Mt. - Sand Springs area



ROCKINGHAM COUNTY

**BIRDS OF ROCKINGHAM COUNTY VIRGINIA**

