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Paul R. Cabe



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NEST SITES USED BY BROWN-HEADED NUTHATCHES IN THE VIRGINIA COASTAL PLAIN

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INTRODUCTION

The Brown-headed Nuthatch (*Sitta pusilla*), a cavity-nesting bird endemic to the southeastern United States, appears to be experiencing population declines. Breeding Bird Survey data gathered between 1966 and 1995 show a range-wide annual population decrease of 1.8% (Withgott and Smith 1998). The objective of this study was to determine if there is evidence of Brown-headed Nuthatch declines in Virginia and if there is evidence suggesting that the remaining birds are limited by a scarcity of desirable nest sites. This second objective was approached in three ways: (1) determining whether Brown-headed Nuthatches are selective in choosing nest sites, (2) determining whether nest sites used today differ from those favored historically and (3) determining whether an abundance of competitors for tree cavities is lowering the quality of nest sites.

Brown-headed Nuthatch habitat has been broadly defined as mature pine woodland with an open understory (Morris 1982, Haney 1981, Withgott and Smith 1998), though published details of habitat requirements are somewhat contradictory. While some studies characterize Brown-headed Nuthatches as a species that is restricted to mature pine woods (Conner et al. 1983, Johnston and Odum 1956), others describe populations of Brown-headed Nuthatches in cypress swamps and mixed pine-hardwood forests (Haney 1981, Slater 1997). Historical data suggest that Brown-headed Nuthatches tend to nest in highly decayed snags (standing dead trees) or stumps at low heights (< 3 m, Table 1).

Table 1. Nest heights reported in previous studies of Brown-headed Nuthatches.

	Nests	Location	Source
50	median 1.21 m	Georgia	Norris 1958
57	mean 2.3 m	Lousiana	Morris 1982
7	mean 2.4 m	Texas	O'Halloran and Conner 1987
309	mean 2.09 m	range-wide	McNair 1984

One possible limiting factor for Brown-headed Nuthatch populations is competition with other birds for suitable cavity sites. Many cavity nesters are larger and more aggressive than nuthatches, and some of them (secondary cavity nesters) acquire holes by usurping the excavating species (primary cavity nesters). Nuthatches are considered weak primary cavity nesters: they excavate nest holes but are not as strong as woodpeckers. A significant negative correlation was found between primary cavity-nesting bird (CNB) abundance and weak primary CNB (chickadee and nuthatch) abundance in British Columbia (Martin and Eadie 1999), suggesting that weak primary CNBs suffer from competition with other primary CNBs. CNB population densities have been positively correlated with snag density, suggesting nest site limitation at low snag densities (Land 1986, Zarnowitz and Manuwal 1985). Even with abundant snags, the quality of potential nest sites may vary substantially. Competition with other primary cavity nesters may be forcing Brown-headed Nuthatches to excavate their cavities in sub-optimal locations, leading to greater nest predation and reduced breeding success.

My study tested four specific predictions: (1) Virginia Christmas Bird Counts in Brown-headed Nuthatch habitat will show declining numbers in recent years; (2) nuthatches are selective in choosing cavity locations; (3) Brown-headed Nuthatch nest sites in Virginia will differ from historical descriptions of favored sites in terms of cavity height, cavity tree condition, and immediate nest environment; and (4) nuthatches will be relegated to lower quality nest sites where there are more competitors for nest trees.

METHODS

Brown-headed Nuthatch populations in Virginia. - This study was carried out at five locations in the coastal plain of Virginia: Chincoteague National Wildlife Refuge (Accomack County), Jamestown Island National Historic Park (James City County), Hog Island Wildlife Management Area (Surry County), Guinea (Gloucester County), and Plum Tree Island Wildlife Management Area (Poquoson City). Each study location contained areas of pine-dominated woodlands bordered by marshes, a habitat that is typical of the Brown-headed Nuthatch (Withgott and Smith 1998).

I carried out nest searches from March - June in 1997 and 1998. Nests were located by listening for vocalizations while walking through the forest, and then following birds to the cavity. Nests which were under excavation when found were visited repeatedly until I observed birds making regular feeding visits to the cavity.

Nest site characteristics. - The following characteristics were recorded at each nest: tree condition (alive or dead), number of branches remaining (in five classes: 0, <5, 5-10, 10-20, >20), state of tree top (broken or intact), percent bark cover (0, 25, 50, 75, 100), presence of other cavities, height of the cavity, and degree of vegetative cover around the cavity.

My analysis of nest site characteristics began with the hypothesis that nuthatches were selective in choosing cavity sites. Observed nest site characteristics were tested against a binomial distribution, with the binomial distribution

expected if nuthatches were not selective. Midpoints for the binomial tests were established *a priori*, when possible, based on published statements about Brown-headed Nuthatch nest sites and on published data from other cavity-nesting birds when details specific to Brown-headed Nuthatches were not available.

To evaluate whether Brown-headed Nuthatch nests were being built in less desirable sites, I compared characteristics of the nests I found with those of ideal nest sites based on descriptions in the literature (McNair 1984, Li and Martin 1991). I hypothesized that if nuthatches were unable to find ideal sites, the nests I found would differ significantly in one or more of the following characteristics: cavity height (< 3 m); cavity free of vegetative cover; and nest tree in state of advanced decay as demonstrated by broken top, < 5 branches present, $> 50\%$ bark missing, and multiple cavities present.

Potential competitors for cavities. - If competition with other cavity nesting birds is forcing Brown-headed Nuthatches to nest in low-quality locations, there should be a negative correlation between the number of potential competitors in an area and the quality of the nest site chosen. In other words, nuthatches may be forced into sub-optimal locations when too many competitors are present. In order to test the hypothesis that nest site quality would decrease as the number of local cavity nesting birds increased, I carried out ten-minute, fixed-radius point counts (Bibby et al. 1992) at each of the 23 nest sites located in 1998. Center points for the counts were set at 10 m from the nest tree in a randomly selected direction (to minimize disturbance of active nests). I used a rangefinder to select four reference points each at 25 and 50 m from the nest. After selecting reference points, two minutes were allowed to pass before beginning the count. All individuals of a cavity nesting species, detected by sight or sound, were recorded. Point count sessions began at least 30 minutes after, and were completed within four hours of, sunrise. Each nest area was surveyed twice between June 12 and June 25, with count order within a study location chosen randomly.

I created a scale for evaluating quality of nest-sites, using site characteristics which have been found to be positively correlated with cavity-nesting bird diversity and/or nesting success. These characteristics include: presence of snags in an advanced state of decay (Land 1986), as indicated by broken tops, few remaining branches, and reduced bark cover (Schreiber and deCalesta 1992, Connor et al. 1975); nest height (Li and Martin 1991, Miller and Miller 1980); little foliage cover around the nest (Li and Martin 1991); and lack of a tall understory (Land 1986). A high score indicated a high quality nest site. Nests were ranked in the following ordinal categories: state of tree (live = 1, dead = 0), bark cover (0-25% = 1, 25-75% = 0.5, 75-100% = 0), remaining branches (0-10 = 1, 10-20 = 0.5, > 20 = 0), broken top (yes = 1, no = 0), vegetation around cavity (open = 1, partially occluded = 0.5, occluded = 0), presence of other cavities (yes = 1, no = 0), and cavity height (> 5 m = 1, 3-5 m = 0.5, < 3 m = 0). Thus, the best possible nest site was ranked "7", and the worst "0".

RESULTS

Brown-headed Nuthatch populations in Virginia. - I analyzed twenty-nine years of Christmas Bird Count data (1965 - 1994) from the nine counts in Virginia which regularly reported Brown-headed Nuthatches: Back Bay, Cape Charles, Chincoteague, Danville, Little Creek, Matthews, and Wachapreague. Four other counts in Virginia have reported Brown-headed Nuthatches (J. H. Kerr Reservoir, Martinsville, Philpott Reservoir, and Banister River Wildlife Management Area), but fewer than ten years of data were available for these counts, so they were not included in the analysis. My analysis showed significant declines at two locations (Back Bay: $r^2 = 0.369$ and $p = 0.0005$, Cape Charles: $r^2 = 0.503$ and $p < 0.0001$) and non-significant negative trends at three others (Chincoteague, Danville, and Newport News). Analysis showed a significant increase at Wachapreague ($r^2 = 0.081$, $p = 0.0164$).

Nest site characteristics. - Nest site analysis was carried out on all 29 nests found in 1997 and 1998. Significant departures from the expected binomial distribution were found for cavity height, vegetative cover around cavity entrance, number of branches remaining on the cavity tree, and presence of other cavities (Table 2). In other words, nuthatches appear to be selecting nest sites which are high, free of vegetative cover, and have other cavities present. Nest trees had more branches remaining than were expected. No significant departures from the binomial distribution were found for whether the cavity tree was alive or dead, percent bark cover, or if the cavity tree had a broken top (Table 2), suggesting that these characteristics are not being used by Brown-headed Nuthatch in selecting nest sites.

Potential competitors for cavities. - The mean number of potential competitors at a nest site ranged from 1.8 birds at Jamestown to 5.2 birds at Hog Island. No relationship was found between the mean number of CNBs detected at each nest site and nest quality ($r^2 = 0.03$, $p = 0.37$). I carried out *post hoc* analyses of the point count data in which I evaluated nest site quality with only primary CNB numbers, and repeated the analysis with only secondary CNBs. No relationships were found (primary: $r^2 = .0007$, $p = .90$, secondary: $r^2 = .07$, $p = .21$). Further *post hoc* analysis showed no relationship between nest site quality and the number of small cavity nesting birds ($r^2 = .04$, $p = .34$), medium cavity nesting birds ($r^2 = .03$, $p = .40$), and large cavity nesting birds ($r^2 = .003$, $p = .79$) (See Table 2).

Table 2. Nest site characteristics compared to an expected binomial distribution.

Characteristic	Number of nests in category	Deviates from binomial distribution?	P
cavity height	<3 m = 2, >3 m = 27	yes	< 0.001
# branches	<5 = 9, >5 = 20	yes	0.03
other cavities	yes = 28, no = 1	yes	< 0.001
vegetative cover	open = 28, occluded = 1	yes	< 0.001
bark cover	<50 % = 16, >50% = 13	no	0.36
broken top	yes = 19, no = 10	no	0.07
tree condition	live = 10, dead = 19	no	0.07

DISCUSSION

Nest site characteristics. - Loss of pine habitat has been linked to Brown-headed Nuthatch population declines in southern Florida (Slater 1997) and on Grand Bahama Island (Smith and Smith 1994). Even in areas where large tracts of pine forest remain, changes in forest character due to fire suppression or selective logging may have occurred. Snag density is commonly considered a limiting factor for cavity nesting birds (Conway and Martin 1993, Li and Martin 1991, Zarnowitz and Manuwal 1985). Short timber rotations are likely to lead to a reduction in snags, which could cause a shortage of nest sites. Even with adequate snags or cavity sites, increased deciduous cover resulting from fire suppression has been associated with reduced breeding success of cavity nesting birds in an Oregon study (Li and Martin 1991). The importance of fire to habitat maintenance was demonstrated in an Arkansas study in which the highest density of Brown-headed Nuthatches was found in burned (treatment) plots, while the unburned (control) forest plots had dense hardwood mid-stories, sparse ground cover, and greater canopy cover (Wilson et al. 1995).

The nest characteristics I observed in 1997 and 1998 were quite different than those predicted from data in previous studies. In marked contrast to reports that the majority of Brown-headed Nuthatch nests occur lower than 3 m, only two of the 29 nests I found were below 3 m. The mean height of 10.01 m (range: 2.2 m - 29.3 m) was much closer to a recently reported mean of 10.9 m for southern Florida (Slater 1997). Previous studies depended largely on data from amateur ornithologists who encountered nests haphazardly, rather than on data systematically collected by field researchers. The current understanding of Brown-headed Nuthatch nest site characteristics may be skewed by dependence on casual observations, as low nests in classic snags would be more likely to be spotted than would a nest in a dead branch near the top of a tall tree. In support of this explanation for biased historical records, the mean nest height observed in the field by Morris (1982) was 3.5 m, while the mean height he calculated from museum "nest card" records was 1.5 m (Morris 1982).

It is widely accepted that Brown-headed Nuthatches require snags in an advanced state of decay (McNair 1984). Indicators of such snags include the presence of other cavities, broken tops, few remaining branches, and little bark remaining. I expected to find Brown-headed Nuthatches nesting in low pine snags with few branches and bleached white trunks without bark, but the majority of my nest trees did not fit this search image. Ten of twenty-nine nests were not in snags, but were in dead portions of live trees (with three of these being deciduous trees). Previous accounts of the Brown-headed Nuthatch indicated that the vast majority of nests would occur in snags. The prevalence of live nest trees partially explains the deviation from expected cavity tree characteristics: fewer than expected had broken tops, fewer than expected had < 50% bark cover, and more than expected had more than five branches remaining.

The results support the hypotheses that Brown-headed Nuthatches are being selective in choosing cavity sites and that characteristics of nest sites in Virginia

differ from historical descriptions. Cavity sites were high and predominantly free of vegetative cover, characteristics of a high quality site.

Potential competitors. - Both primary cavity nesters (red-bellied woodpeckers) and secondary cavity nesters (eastern bluebirds) have been reported to usurp Brown-headed Nuthatch nests (Slater 1997). On several occasions I observed aggressive encounters between other cavity-nesting birds and a nuthatch on the nest tree. These encounters were most commonly with red-bellied woodpeckers, but I also observed two conflicts with tree swallows.

No correlation was found between number of cavity nesting birds at a nest site and apparent nest quality, suggesting that nuthatches are not being driven into lower quality nesting habitat by competitors. However, this does not allow a firm conclusion that competition with other cavity-nesting birds has no effect on nest site choice in Brown-headed Nuthatches. It could be that the indicators of a quality nest site which I used are not what the Brown-headed Nuthatch uses to assess quality. Despite failure to find evidence of competition, further evaluation of species abundance of potential competitors could reveal informative patterns. I recommend carrying out point counts throughout the entire breeding season, as my point counts were done once all Brown-headed Nuthatch nests were active. Competitors present only during excavation or later in the breeding season may have been missed.

Many (34%) of the nests in this study were found in dead portions of live trees, suggesting that traditional snags may not be a resource critical to Brown-headed Nuthatches. While snags were available near each of the nest sites in this study, they may not have been chosen because of some shortcoming of snag or location or it may be that Brown-headed Nuthatches do not differentiate between dead wood in a snag or dead wood in a live tree. The small size of Brown-headed Nuthatches (length 105 - 110 mm, Withgott and Smith 1998) may allow them to nest more readily in branches and small diameter snags, in contrast to woodpeckers which require snags with a diameter at breast height of at least 20-30 cm (Conner et al. 1975).

In conclusion, Brown-headed Nuthatches in the coastal plain of Virginia appear to be declining in keeping with the range-wide trend. They are using nest sites that differ from those described in the literature, most notably higher cavities in live trees, including deciduous species. However, I found no empirical support for the hypothesis that these non-traditional nest sites are being used to avoid competitions with more aggressive cavity nesting species such as woodpeckers. Some of the discrepancy between observed and expected nest sites could be due to inaccuracies in the literature, but further study is necessary before the hypothesis that Brown-headed Nuthatches have shifted to sub-optimal nest sites can be rejected.

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APPENDIX

Potential competitor species for Brown-headed Nuthatch breeding sites.

Small species (<15 cm): Tree Swallow (*Tachycineta bicolor*), Carolina Chickadee (*Parus carolinensis*), Carolina Wren (*Thryothorus ludovicianus*), House Wren (*Troglodytes aedon*)

Medium species (15-24 cm) Downy Woodpecker (*Picoides pubescens*), Hairy Woodpecker (*Picoides villosus*), Great Crested Flycatcher (*Myiarchus cinerascens*), Eastern Bluebird (*Sialia sialis*), European Starling (*Sturnus vulgaris*), Tufted Titmouse (*Parus bicolor*), House Finch (*Carpodacus mexicanus*)

Large species (>24 cm): Northern Flicker (*Colaptes auratus*), Pileated Woodpecker (*Dryocopus pileatus*), Red-bellied Woodpecker (*Melanerpes carolinensis*), Red-headed Woodpecker (*Melanerpes erythrocephalus*).

THE STATUS OF SWAINSON'S HAWK (*BUTEO SWAINSONI*) IN VIRGINIA

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INTRODUCTION

Swainson's Hawks (*Buteo swainsoni*) are long-winged, polymorphic soaring raptors that breed in grassland, riparian and agricultural areas primarily west of the Mississippi River and rarely as far north as central Alaska (England et al. 1997, Clark and Wheeler 2001, Ferguson-Lees and Christie 2001). They are highly migratory with the majority of the population vacating North America in autumn to winter in northern and eastern Argentina (Ferguson-Lees and Christie 2001). A small number of birds winter in southern Florida and along the Pacific slope of Mexico each year (Clark and Wheeler 2001, Ferguson-Lees and Christie 2001), as well as in California and rarely Texas. As of 1 January 2002, there have been 37 records of 38 individual Swainson's Hawks in the state of Virginia (Table 1), as well as numerous reports lacking sufficient details to support the identification, although they are likely correct. Considering the large number of records in the last ten years, a reassessment of this bird's status is warranted.

Prior to 1995, there were only eleven reports of Swainson's Hawk in Virginia, two of which were not accepted by the Virginia Avian Records Committee (VARCOM), and six of which were not submitted to VARCOM, but were supported by multiple observers and detailed descriptions. The first record for the state, an adult light-morph, was observed at Chincoteague on 21 August 1978 (Scott 1979). The second state record was a light-morph juvenile caught and banded on Fishermans Island 20 October 1979 (Scott 1980). A sight record exists for the Kiptopeke Hawkwatch of an individual of unknown age and morph on 3 October 1986 (D. Silsby, pers. comm.). Another of unknown age and morph was observed on Fishermans Island on 3 October 1987 (Armistead 1988). A light-morph juvenile was seen at Rockfish Gap Hawkwatch 9 September 1992 (Brenda Tekin, pers. comm.). A juvenile dark-morph was observed at the Kiptopeke Hawkwatch on 10 October 1993 (B. Taber, pers. comm.). On 5 September 1994, 2 light-morph juveniles were counted at the Rockfish Gap Hawkwatch (Brenda Tekin, pers. comm.). The only

other record is of a bird migrating past Snickers Gap on 29 October 1993, with no recorded details on age or color morph (K. Kirkpatrick, pers. comm.).

RECENT RECORDS

Beginning in the fall of 1995, Swainson's Hawks have been observed regularly in Virginia, mainly on the Eastern Shore (80% of sightings), but also with scattered records from inland locales (Fig. 1). Since then 28 individuals have been recorded. The inception of a full-time autumn raptor census by the Coastal Virginia Wildlife Observatory (CVWO) at the Kiptopeke Hawkwatch from 1995 through the present, as well as an increased awareness of this species' plumage variation and identification features, have undoubtedly led to the sharp increase in reports. Records of Swainson's Hawks span the whole of fall migration occurring from 21 August—22 November, with one record for both winter and spring. Swainson's Hawks have two periods of peak occurrence during fall migration in Virginia, with a concentration beginning during the middle ten days of September and again during the second half of October (Fig. 2). Of the 36 fall records of Swainson's Hawks, 19 (53%) occur within these two peak periods.

The first peak, in mid-September, shows 9 records occurring from 11—20 September. Of these, all have been juveniles. There are four records for the first ten days of September and two during the last ten days of the month. The second peak begins nearly a month later with 10 records occurring from 14—26 October (Fig. 2). During this period two second-year light-morphs were recorded, while all oth-

Date	Location	Number	10-Day Period	Age	Color Morph	Observers
21-Aug-1978	Chincoteague, N.W.R.	1	August-3	Adult	Light	R. Norden
20-Oct-1979	Fisherman's Island, N.W.R.	1	October-2	Juvenile	Light	M. Byrd, D. Davis
3-Oct-1986	Kiptopeke Hawkwatch	1	October-1	Unk.	Unk.	D. Sitsby
3-Oct-1987	Fisherman's Island, N.W.R.	1	October-1	Unk.	Unk.	P.S. Baker, T. Armour
9-Sep-1992	Rockfish Gap Hawkwatch	1	September-1	Juvenile	Light	fide Brenda Tekin
10-Oct-1993	Kiptopeke Hawkwatch	1	October-1	Juvenile	Dark	B. Taber et al.
29-Oct-1993	Snickers Gap Hawkwatch	1	October-3	Unk.	Unk.	K. Kirkpatrick, et al.
5-Sep-1994	Rockfish Gap Hawkwatch	2	September-1	Juvenile	Light	fide Brenda Tekin
19-Sep-1994	Eastern Shore of Virginia N.W.R.	1	September-2	Juvenile	Light	J. B. Patteson, E. S. Brinkley
12-Sep-1995	Kiptopeke Hawkwatch	1	September-2	Juvenile	Dark	B. Sullivan, M. Abbott
19-Sep-1995	Kiptopeke Hawkwatch	1	September-2	Juvenile	Light	B. Sullivan, et al.
20-Sep-1995	Kiptopeke Hawkwatch	1	September-2	Juvenile	Light	B. Sullivan, J. B. Patteson, et al.
14-Oct-1995	Kiptopeke Hawkwatch	1	October-2	Juvenile	Dark	B. Taber
15-Oct-1995	Kiptopeke Hawkwatch	1	October-2	Juvenile	Light	E. S. Brinkley, et al.
26-Oct-1995	Beaverdam	1	October-3	Juvenile	Light	D. F. Abbott
22-Nov-1995	Eastern Shore of Virginia N.W.R.	1	November-3	Juvenile	Light	B. Sullivan
10-Sep-1996	Kiptopeke Hawkwatch	1	September-1	Juvenile	Light	B. Sullivan
16-Oct-1996	Kiptopeke Hawkwatch	1	October-2	Juvenile	Light	B. Sullivan, et al.
3-Nov-1996	Kiptopeke Hawkwatch	1	November-1	Basic 1	Light	B. Sullivan, et al.
11-Nov-1996	Kiptopeke Hawkwatch	1	November-2	Juvenile	Light	B. Sullivan, D. Whalen
16-Nov-1996	Snickers Gap Hawkwatch	1	November-2	Unk.	Unk.	William Leigh
14-Sep-1997	Kiptopeke Hawkwatch	1	September-2	Juvenile	Light	B. Sullivan, et al.
15-Nov-1997	Kiptopeke Hawkwatch	1	November-2	Juvenile	Dark	B. Sullivan, D. Whalen
11-Sep-1998	Kiptopeke Hawkwatch	1	September-2	Juvenile	Light	M. Iliff
14-Sep-1998	Kiptopeke Hawkwatch	1	September-2	Juvenile	Dark	J. Cameron, B. Johnson, S. Hopkins
14-Sep-1998	Kiptopeke Hawkwatch	1	September-2	Juvenile	Light	J. Cameron, B. Johnson, S. Hopkins
15-Sep-1998	Snickers Gap Hawkwatch	1	September-2	Unk.	Unk.	Bob Abrams
22-Oct-1998	Kiptopeke Hawkwatch	1	October-3	Juvenile	Dark	M. Iliff, J. Cameron, B. Anderson, T. Harten
23-Oct-1998	Kiptopeke Hawkwatch	1	October-3	Basic 1	Light	J. Cameron, N. Brinkley, L. Davidson, H. Wierenga
26-Oct-1998	Kiptopeke Hawkwatch	1	October-3	Juvenile	Light	M. Iliff, J. Cameron, B. Johnson
26-Oct-1998	Kiptopeke Hawkwatch	1	October-3	Juvenile	Dark	M. Iliff, J. Cameron, B. Johnson
6-Nov-1998	Kiptopeke Hawkwatch	1	November-1	Juvenile	Dark	M. Iliff, J. Cameron, A. Hinde, A. Haines
5-Jan-1999	Cheriton	1	January-1	Basic 1	Light	Ned Brinkley
23-Aug-1999	Kiptopeke Hawkwatch	1	August-3	Juvenile	Light	Brian Taber
29-Sep-2000	Snickers Gap Hawkwatch	1	September-3	Unk.	Unk.	Mike Reymann
22-Apr-2001	College Creek Hawkwatch	1	April-3	SY	Dark	Brian Taber
28-Sep-2001	Kiptopeke Hawkwatch	1	September-3	Juvenile	Light	Calvin Brennan

Table 1. Records of Swainson's Hawk in Virginia. 10-day period refers to Figure 2.

Location of Swainson's Hawk records in Virginia 1979-2001

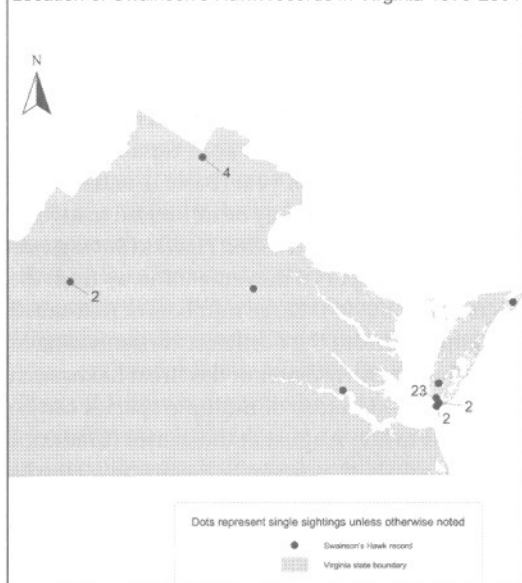


Figure 1. Locations of all Virginia Swainson's Hawk records. Records are of single observations at each location unless otherwise noted.

ers were juveniles. There are three records during the first 10 days of October, 2 juveniles and one unknown. Four records exist for the first twenty days of November, including a second-year light-morph and three juveniles. There is one record of a late juvenile on 22 November. There are only two August records, the aforementioned Chincoteague record, and one at Eastern Shore of Virginia National Wildlife Refuge (ESVNR) 23 August, 1999 (B. Taber, pers. comm.). Not surprisingly, there is but one winter record, 5 January 1999, Cheriton, (Iliff 1999), following a heavy fall movement of the species along the eastern seaboard, from the Canadian Maritimes to Virginia and Florida, along with a spate of very late records as far north as Cape May, New Jersey (Season total of 10 individuals) (Brinkley 1999). There is a single spring record for the state, a second-year dark-morph seen at College Creek Hawkwatch, Williamsburg 22 April 2001 (Taber 2001).

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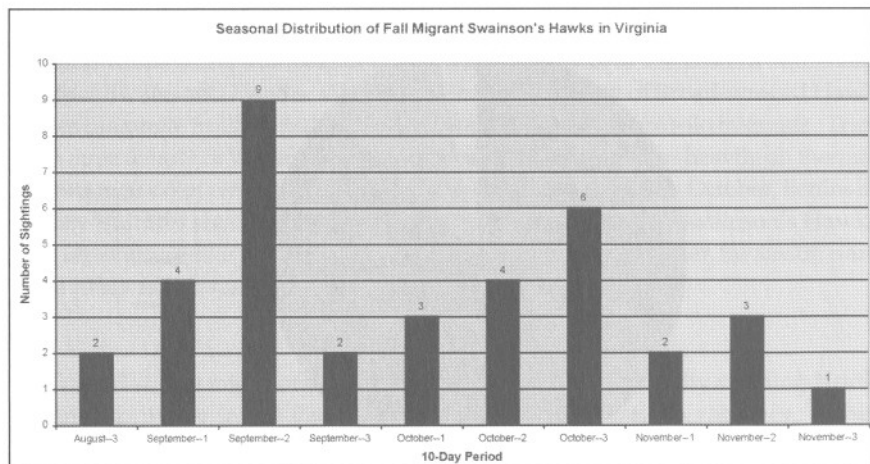


Figure 2. Pattern of seasonal distribution of fall Swainson's Hawk records for Virginia (1978-2001).

Swainson's Hawks typically occur singly on migration in Virginia, however, two have been seen in a single day on three occasions: 2 at Rockfish Gap 5 September 1994; and 2 at the Kiptopeke Hawkwatch 14 September 1998, and 26 October 1998. Individual birds typically do not linger for multiple days at migration sites, however, occasionally a bird will remain in the area for several days.

Age Ratios. - Thirty-one of the 38 state records have been classified to age. Of these, 27 have been juveniles, three have been second-year (Basic I), and one has been an adult (Fig. 3). The large proportion of juveniles may be attributed to several factors. Juvenile buteos of several species, especially Red-tailed Hawks (*Buteo jamaicensis*) undertake long distance post-breeding dispersal movements away from the natal area (Luttich *et al.* 1971, Preston and Beane 1993). Large numbers of Red-tailed Hawks move north annually in late summer across the northeast concentrating at traditional spring migration sites along the southern shores of the Great Lakes such as Braddock Bay, New York. Several thousand buteos of multiple species can be seen in a day dispersing northward in mid to late August at these sites (Braddock Bay Raptor Research unpubl. data). It is likely that juvenile Swainson's Hawks undertake similar movements possibly accounting for the unusually early peak in September. Adult Swainson's Hawks are more experienced migrants, and are not as likely to be blown of course or to wander in general. Second-year individuals are often difficult to identify in the field, and an excellent view of the secondaries is required to assess the presence of molt. This difficulty may be a contributing factor to the lack of records of this age class. The one adult record is also the earliest for the state and may have been a wandering non-breeder.

Color Morphs. - Interestingly, 8 of the 32 (25%) known color-morphs observed in the state have been dark, while 24 have been light. Because juvenile rufous and dark-morphs are virtually inseparable by plumage, we combine them both as

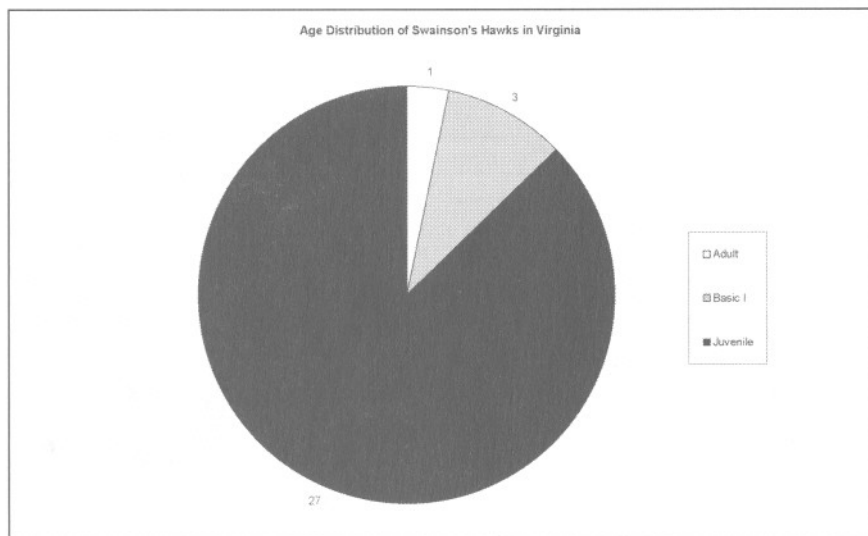


Figure 3. Age distribution of migrant Swainson's Hawks in Virginia.

"dark-morph" here. There is no clear pattern of occurrence of color-morphs in Virginia, with dark and light birds being evenly distributed throughout fall migration. The natal origin of Swainson's Hawks seen in Virginia is not known, however, the nearest nesting grounds are in Kansas and Oklahoma. Only a miniscule proportion of birds nesting in these areas are dark or rufous-morph, probably less than 1% (B.K. Wheeler pers. comm., pers. obs.). In eastern Colorado, light-morph birds predominate, with no records of rufous or dark morph birds breeding farther than 50 miles east of the Rocky Mountains (B.K. Wheeler pers. comm.). This seems to be the general pattern east of the Front Range throughout Canada, and it is not until west of the Continental Divide that breeding rufous and dark birds occur more frequently (B.K. Wheeler, pers. comm.). One might suppose that birds observed in Virginia may be coming from more northerly and westerly populations.

Relationship to Weather Events. - This species' appearance on the Eastern Shore of Virginia seems to be linked to the passage of strong cold fronts followed by northwesterly winds. On a continental scale, the birds may be pushed eastward by prevailing westerly winds, and are subsequently observed at local hawk watches during conditions of strong local raptor movements, such as northeast winds at the Kiptopeke Hawkwatch. Most Swainson's Hawks observed in the state have been found during periods of heavy raptor movement throughout the region (i.e., the northeastern US). Swainson's Hawks are less likely to be found on days considered to be off-wind conditions at local hawk watches, however, that too has occurred. Contrary to popular belief, Swainson's Hawks do not always occur in eastern North America with Broad-winged Hawks (*Buteo platypterus*); in fact, they rarely have been observed in Virginia with Broad-winged. Rather, they are often seen in the company of Turkey Vultures (*Cathartes aura*) or Red-tailed Hawks (*Buteo jamaicensis borealis*) and are often observed in conjunction with Northern Harriers (*Circus cyaneus*) (B. Sullivan, pers. obs., N. Brinkley pers. comm.). Local conditions that produce large flights of these species may also produce Swainson's Hawks. However, during the first period of peak occurrence in mid-September, the same conditions that bring numbers of Broad-winged Hawks to the Eastern Shore also produce Swainson's Hawks. At this time, careful scrutiny of Broad-winged Hawk kettles can prove fruitful, but more often Swainson's Hawks are solo migrants. They often appear early or late in the day, and apparently do not rely as heavily on thermal formation as do other buteos. During the second peak period in October, kettles of Turkey Vultures should be scrutinized closely, as dark-morph Swainson's Hawks are quite vulture-like in appearance. As temperatures grow colder, Swainson's are more likely to be found soaring with these larger birds.

CONCLUSIONS

The long distance migratory nature of this species--almost totally vacating North America to winter in the Pampas of Argentina--lends itself to vagrancy. Other hawk watch sites throughout the East, particularly Cape May, New Jersey, whose geography is superficially similar to the Eastern Shore, also see Swainson's Hawks on a regular basis. Cape May has had up to four individuals in a day on several

occasions, and these outbreaks of Swainson's Hawks farther north often coincide with good numbers observed elsewhere as well as on the Eastern Shore of Virginia. Some of the same birds are almost certainly involved; however, Kiptopeke has had several records of bird preceding those recorded from farther north (Iliff 1998).

Swainson's Hawks should be expected to occur in Virginia annually, predominately at coastal locations that provide good concentrations of migrant raptors. Fluctuations in frequency will likely occur, presumably due to favorable or unfavorable weather during peak migratory periods.

ACKNOWLEDGEMENTS

Many thanks to all those who observed and recorded their observations of Swainson's Hawks in this state. Thanks to Ned Brinkley for the use of his library and editorial advice.

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VIRGINIA CHRISTMAS BIRD COUNTS: 2002-2003 SEASON

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SUMMARY

Bad weather precluded the Dismal Swamp NWR count last year, but it was back in the Virginia Christmas bird count line-up in the 2002-2003 season, bringing the total number of counts to 48. Weather conditions throughout the count period were generally not too severe with temperatures ranging from a low of 8°F at Mount Rogers to a high of 66°F. at Little Creek. Water on most counts was open, with only a handful reporting any significant frozen-over bodies of water. Lynchburg and Warren in the Piedmont had a small amount of snow on the ground, and six of the twenty mountain counts reported from one to four inches. Many sites encountered windy conditions with two reporting over 30-mile-an-hour winds. Skies varied greatly, with several counts experiencing light snow fall.

The total number of species seen on all counts was 211, down somewhat from last year's total of 219. The hope of any birder is to see those off-the-wall rarities, species that just shouldn't be there, but there they are. This year's counts provided many of those special moments. Keep in mind that all rarities on these counts, including those listed below, must be reviewed and approved by the Virginia state avian records committee (VARCOM) before they are officially accepted, a process that is usually not complete by the time this journal is published.

One of the most outstanding finds were two Northern Rough-winged Swallows, photographed and well-documented on the Fort Belvoir count, the first authenticated occurrence on any Virginia Christmas count. There is another record of one seen on the Fort Belvoir count in 1985, but that was before the days of record reviews and the status of the documentation, if any exists, is not known. Another extreme rarity was a Red-eyed Vireo (*Vireo olivaceus*) on the Giles County count. Little Creek was the place to be for rare gulls this season. A Mew Gull (*Larus canus*) was recorded and, if accepted, would be the third record for the species on Virginia counts. For the second year in a row a Black-headed Gull (*L. ridibundus*) appeared there, as did a Thayer's Gull (*L. thayeri*) and a Clark's Grebe (*Aechmophorus clarkii*) appeared for the second year in a row.

A Greater White-fronted Goose (*Anser albifrons*) was a first for Blacksburg and also for Fort Belvoir, while another was found at The Plains, a second for that count. Sightings of this species are slowly climbing upward, but it is still very scarce anywhere in the state. Too, there is always the possibility that some of these geese are escapees from collections, often a hard thing to determine.

Other notable firsts were: a Rufous Hummingbird (*Selasphorus rufus*) at Cape Charles, a Ruby-crowned Kinglet (*Regulus calendula*) and a Pine Warbler (*Dendroica kirtlandii*) at Blackford, another Pine at Bristol, a Redhead (*Aythya americana*) at Dismal Swamp, Great Blue Heron (*Ardea herodias*) at Mount Rogers-Whitetop, Long-billed Dowitchers (*Limnodromus scolopaceus*) at Newport News, Dunlin (*Calidris alpina*) at Washington's Birthplace, Fish Crow (*Corvus ossifragus*) at Walkerton, and Clay-colored Sparrow (*Spizella pallida*) at Nansmond River.

Walkerton and Central Loudoun counts took the honors for the most all-time high counts. Granted, both counts have not been in existence very long, Walkerton for 14 years, and Central Loudoun for seven, but that does not explain the dramatic increase of numbers recorded this year. Central Loudoun chalked up 24 new species high-counts and Walkerton a whopping 46.

Several individual count-highs are also worth mentioning. A total of 34 Brewer's Blackbirds (*Euphagus cyanocephalus*) in one flock at Back Bay tripled the previous high of this species recorded in 1972. All but two of the nine counts reporting Brown Pelican (*Pelecanus occidentalis*) came up with record highs, swelling the state total to 1,553 individuals, a 418% increase over the previous high of 371 set in 2000. Little Creek counters alone found 800.

And then there are those who should have been there, but weren't. This year's absentees were: Pacific Loon (*Gavia pacifica*); Red-necked Grebe (*Podiceps grisegena*); American Avocet (*Recurvirostra americana*); Whimbrel (*Numenius phaeopus*); Red Knot (*Calidris canutus*); Little Gull (*Larus minutus*); Iceland Gull (*L. glaucoideus*); Black-legged Kittiwake (*Rissa tridactyla*); Royal Tern (*Sterna maxima*); Prairie Warbler (*Dendroica discolor*); Dickcissel (*Spiza americana*); Common Redpoll (*Carduelis flammea*); and Evening Grosbeak (*Coccothraustes vespertinus*), the only time since 1964 it has not been recorded on at least one count.

You will find that the 2002-03 Christmas counts on the following pages are formatted differently. This year's layout closely follows that found in National Audubon Society's Christmas Bird Count Book up until 2001. The actual count results posted by the National Audubon Society appear only on the internet. The publication now produced by that organization contains only national and regional summaries of counts.

The format contained herein allows for flexibility in describing more complete field data and comments by the editor, compilers, and various participants. The different format allows clearer highlighting of unusual species and high numbers of individual species, a practice that became difficult to discern in the tables used in previous years. Too, space considerations are among the reasons for change. The new format takes up less space and it also eliminates the necessity of following lines across two pages of tables, a maneuver that is sometimes awkward when type is not lined up precisely across the spread. One other change is that the counts are listed alphabetically, not by region, as in years past. It should also be noted that names of participants are listed for the counts that were not submitted to National Audubon. Comments about this new format are welcome and may be directed to the Christmas count editor at teta@vims.edu.

Abbreviations used in the following accounts are: CW = seen during count week only; °F = degrees Fahrenheit; E = east; mph = miles per hour; N = north; ph = photographed; S = south; sp. = ? species; U = unknown; V = variable; W = west; and WMAs = Wildlife Management Areas.

COUNT SYNOPSES

AUGUSTA COUNTY. Circle Center: Jct. 780 & 781 in Augusta County. 38°12'N 78°59'W.

Field data: Count date: 28 Dec 2002. Times in field: 3:30 a.m. to 5 p.m. Temperatures: 18° to 28° F. Wind W, 0-15 mph. Skies partly cloudy. Still water frozen, moving water open. Field observers: 25 in 9 to 10 parties. Feeder watchers 2. Hours at feeders: 3. Nocturnal birding: 5.5 hours and 52 miles. Total party-hours (excludes feeder and nocturnal hours): 96 (22 on foot, 74 by car). Total party-miles (excludes nocturnal miles): 380 (6.75 on foot, 373.25 by car).

Species: Great Blue Heron (blue form) 10; Black Vulture 61; Turkey Vulture 527; **Ross's Goose 1**; Canada Goose 571; Wood Duck 1; Gadwall 2; American Wigeon 5; American Black Duck 2; Mallard 413; American Green-winged Teal 14; Ruddy Duck 6; Northern Harrier 3; Sharp-shinned Hawk 4; Cooper's Hawk 7; Red-shouldered Hawk 2; Red-tailed Hawk 43; American Kestrel 50; **Merlin 1**; American Coot 1; Killdeer 1; Rock Dove 220; Mourning Dove 684; Eastern Screech-Owl 3; Great Horned Owl 2; Barred Owl 1; Short-eared Owl 1; Belted Kingfisher 7; Red-headed Woodpecker 2; Red-bellied Woodpecker 65; Yellow-bellied Sapsucker 9; Downy Woodpecker 48; Hairy Woodpecker 4; Northern (Yellow-shafted) Flicker 16; Pileated Woodpecker 19; Eastern Phoebe 1; Blue Jay 233; American Crow 1,079; Fish Crow 18; Common Raven 1; Horned Lark 2; Carolina Chickadee 153; Black-capped Chickadee 1; Tufted Titmouse 158; Red-breasted Nuthatch 1; White-breasted Nuthatch 53; Brown Creeper 1; Carolina Wren 75; Winter Wren 3; Golden-crowned Kinglet 7.

Eastern Bluebird 304; Hermit Thrush 1; American Robin **2,988**; Northern Mockingbird 133; European Starling 3,878; Cedar Waxwing 318; Yellow-rumped (Myrtle) Warbler 113; Eastern Towhee 3; American Tree Sparrow 1; Field Sparrow 36; Savannah Sparrow 1; Fox Sparrow 1; Song Sparrow 47; White-throated Sparrow 260; White-crowned Sparrow 225; Dark-eyed (Slate-colored) Junco 266; Northern Cardinal 284; Eastern Meadowlark 5; Brown-headed Cowbird 10; House Finch 358; American Goldfinch 148; House Sparrow 290.

Total species: 72; **Total individuals:** 14,262.

Compiler: John Spahr, 613 Locust Ave., Waynesboro, VA 22980 (jspahr@yahoo.com).

Compiler notes: An average number of species was recorded this year with overall lower numbers of many. American Robins were moving around in sizeable flocks as is reflected in a total that exceeds our previous high count by over 1200 birds. Highlights included four species of owls, all seven "possible" woodpeckers, and the first ever Ross's Goose for this count.

BACK BAY. Circle Center: 1.5 miles east of Back Bay. 36°39'N 76°00'W.

Field data: Count date: 28 Dec 2002. Times in field: 5:30 a.m. to 5:30 p.m. Temperatures: 28° to 55° F. Wind NW, 0-12 mph. Skies clear. Water open. Field observers: 29 in 13 to 20 parties. Nocturnal birding: 3 hours and 18 miles. Total party-hours (excludes nocturnal hours): 99 (86 on foot, 13 by car). Total party-miles (excludes nocturnal miles): 361 (43 on foot, 318 by car).

Species: Red-throated Loon 460; Common Loon 107; Pied-billed Grebe 21; Horned Grebe 1; Northern Gannet 4,650; Brown Pelican **212**; Double-crested Cormorant 302; Great Cormorant 2; Great Blue Heron (blue form) 51; Great Egret 2; **Green Heron 1**; Black-crowned Night-Heron 1; Black Vulture 29; Turkey Vulture 81; Snow Goose (blue form) 6; Snow Goose (white form) 950; Canada Goose 275; Mute Swan 2; Tundra Swan 880; Wood Duck 4; Gadwall 115; American Wigeon 46; American Black Duck 240; Mallard 188; Northern Shoveler 4; Northern Pintail 75; American Green-winged Teal 114; Ring-necked Duck 19; Greater Scaup 1; Lesser Scaup 3; Surf Scoter 314; Black Scoter 900; scoter, sp. 1,080; Long-tailed Duck 2; Bufflehead 8; Hooded Merganser 19; Common Merganser 4; Red-breasted Merganser 258; Ruddy Duck 5; duck, sp. 250; Bald Eagle 5 (3a, 1i, 1u); Northern Harrier 36; Sharp-shinned Hawk 8; Cooper's Hawk 6; Red-shouldered Hawk 7; Red-tailed Hawk 32; American Kestrel 61; Merlin 4; Northern Bobwhite 20; King Rail 3; Virginia Rail 19; Killdeer 37; Lesser Yellowlegs 8.

Sanderling 76; Dunlin 1; Wilson's Snipe 28; American Woodcock 1; Laughing Gull 2; Bonaparte's Gull 324; Ring-billed Gull 2,090; Herring Gull 485; Lesser Black-backed Gull 25; Great Black-backed Gull 181; Forster's Tern 51; **large alcid, sp. 1**; Rock Dove 55; Mourning Dove 511; Barn Owl 1; Eastern Screech-Owl 8; Great Horned Owl 17; Barred Owl 3; **Long-eared Owl 1**; Belted Kingfisher 17; Red-bellied Woodpecker 46; Yellow-bellied Sapsucker 7; Downy Woodpecker 39; Hairy Woodpecker 6; Northern (Yellow-shafted) Flicker 64; Pileated Woodpecker 18; Eastern Phoebe 13; Blue Jay 107; American Crow 172; Fish Crow 21; Horned Lark 1; Carolina Chickadee 143; Tufted Titmouse 32; White-breasted Nuthatch 13; Brown-headed Nuthatch 49; Brown Creeper 4; Carolina Wren 106; House Wren 1; Winter Wren 14; Sedge Wren 3; Marsh Wren 6; Golden-crowned Kinglet 12; Ruby-crowned Kinglet 31; Eastern Bluebird 133; Hermit Thrush 33; American Robin 1,485; Gray Catbird 52; Northern Mockingbird 97; Brown Thrasher 8; European Starling 479.

American Pipit 142; Cedar Waxwing 14; Orange-crowned Warbler 5; Yellow-rumped (Myrtle) Warbler 2,630; Pine Warbler 17; Palm Warbler 9; **Black-and-white Warbler 1**; Common Yellowthroat 8; Eastern Phoebe 31; Chipping Sparrow 92; Field Sparrow 20; Savannah Sparrow 81; Savannah (Ipswich) Sparrow 4; Le Conte's Sparrow 1; Fox Sparrow 16; Song Sparrow 143; Lincoln's Sparrow 1; Swamp Sparrow 64; White-throated Sparrow 261; White-crowned Sparrow 27; Dark-eyed (Slate-colored) Junco 199; Northern Cardinal 96; Red-winged Blackbird 2,425; Eastern Meadowlark 74; Rusty Blackbird 1; **Brewer's Blackbird 34**; Common Grackle 525; Boat-tailed Grackle 194; Brown-headed Cowbird 1; House Finch 84; American Goldfinch 32; House Sparrow 95.

Total species: 131; **Total individuals:** 26,328.

Compiler: Paul Sykes (1080 Forest Rd., Watkinsville, GA 30677 (paul_sykes@usgs.gov)).

BANISTER RIVER WMAs. Circle Center: At Banister River Wildlife Management Areas in Halifax County. 36°43'N 78°48'W.

Field data: Count date: 15 Dec 2002. Times in field: 7 a.m. to 5:30 p.m. Temperatures: 30° to 50° F. Wind NW, 3-5 mph. AM skies clear. PM skies partly cloudy. Still water partly frozen, moving water open. Field observers: 5 in 4 to 5 parties. Nocturnal birding: 1.5 hours and 6 miles. Total party-hours (excludes nocturnal hours): 17.5 (10.75 on foot, 6.75 by car). Total party-miles (excludes nocturnal miles): 91 (6.5 on foot and 84.5 by car).

Species: Pied-billed Grebe 1; Great Blue Heron (blue form) 1; Black Vulture 11; Turkey Vulture 85; Canada Goose (large forms) 179; Wood Duck 1; Mallard 7; Northern Pintail 2; Redhead 1; Bufflehead 11; Hooded Merganser 34; Ruddy Duck 29; Bald Eagle 3 (1i, 2a); Northern Harrier 3; Cooper's Hawk 1; Red-shouldered Hawk 4; Red-tailed Hawk 9; American Kestrel 6; Wild Turkey 1; Northern Bobwhite 11; Killdeer 2; Ring-billed Gull 749; Rock Dove 10; Mourning Dove 54; Eastern Screech-Owl 5; Great Horned Owl 9; Barred Owl 5; Belted Kingfisher 4; Red-headed Woodpecker 14; Red-bellied Woodpecker 13; Yellow-bellied Sapsucker 5; Downy Woodpecker 12; Hairy Woodpecker 1; Northern (Yellow-shafted) Flicker 33; Pileated Woodpecker 4; Eastern Phoebe 2; Blue Jay 26; American Crow 89; Carolina Chickadee 36; Tufted Titmouse 36; White-breasted Nuthatch 11; Brown-headed Nuthatch 6; Brown Creeper 1; Carolina Wren 13; Winter Wren 3; Golden-crowned Kinglet 2; Ruby-crowned Kinglet 10; Eastern Bluebird 90; Hermit Thrush 7; American Robin 48.

Northern Mockingbird 17; Brown Thrasher 1; European Starling 218; Cedar Waxwing 6; Yellow-rumped (Myrtle) Warbler 21; Pine Warbler 1; Eastern Towhee 4; Chipping Sparrow 4; Song Sparrow 18; Swamp Sparrow 6; White-throated Sparrow 72; White-crowned Sparrow 2; Dark-eyed (Slate-colored) Junco 135; Northern Cardinal 17; Red-winged Blackbird 88; Eastern Meadowlark 18; Common Grackle 76; Brown-headed Cowbird 8; House Finch 70; Pine Siskin 2; American Goldfinch 41; House Sparrow 9.

Total species: 72; **Total individuals:** 2,534.

Compiler: Jeffrey Blalock, 103 Elizabeth Court, South Boston, VA 24592 (jcbabirder@gcronline.com).

Compiler notes: Although no snow cover was reported, there were places where snow was left from the winter storm of 4 December. After the snow, it rained for a few days, so along with the melting snow, Banister River WMA was almost completely flooded. Water was up to both sides of Rt. 716. At Staunton River State Park, the water was high and covered up all the mud flats, giving no chance for any shorebirds to be found.

BIG FLAT MOUNTAIN. Circle Center: On Pasture Fence Mountain in Albemarle County. 38°11'N 78°43'W.

Field data: Count date: 31 Dec 2003. Times in field: 6:30 a.m. to 5:15 p.m. Temperatures: 32° to 56° F. Wind W, 0-10 mph. Skies mostly clear. Ground bare except for 1-2 inches of old snow on northern slopes. Water open on reservoir. Field observers: 2 in 2 parties. Nocturnal birding: 1 hour and 2 miles. Total party-hours (excludes nocturnal hours): 20 (all on foot). Total party-miles (excludes nocturnal miles): 28 (all on foot).

Species: Great Blue Heron (blue form) 1; Black Vulture 4; Turkey Vulture 14; Sharp-shinned Hawk 1; Red-tailed Hawk 4; Ruffed Grouse 5; Wild Turkey 4; Eastern Screech-Owl 3; Barred Owl 1; Red-bellied Woodpecker 12; Yellow-bellied Sapsucker 7; Downy Woodpecker 30; Hairy Woodpecker 5; Northern (Yellow-shafted) Flicker 4; Pileated Woodpecker 20; Eastern Phoebe 2; Blue Jay 3; American Crow 14; Common Raven 6; Carolina Chickadee 55; Tufted Titmouse 43; Red-breasted Nuthatch 1; White-breasted Nuthatch 23; Brown Creeper 7; Carolina Wren 18; Winter Wren 4; Golden-crowned Kinglet 8; Eastern Bluebird 3; Hermit Thrush 5; American Robin 25; Northern Mockingbird 4; Yellow-rumped (Myrtle) Warbler 3; Field Sparrow 3; Song Sparrow 3; White-throated Sparrow 44; Dark-eyed (Slate-colored) Junco 63; Northern Cardinal 16; American Goldfinch 3.

Total species: 38; **Total individuals:** 471.

Compiler: Charles Stevens, 615 Preston Pl., Charlottesville, VA 22903.

Participants: Charles Stevens, Tom Wieboldt.

BLACKFORD. Circle Center: Confluence of the Clinch and Little rivers in Russell County. 37°00' N 81°55'W.

Field data: Count date: 28 Dec 2002. Times in field: 6 a.m. to 6:30 p.m. Temperatures: 16° to 43° F. Wind SW, 0-8 mph. AM skies clear. PM skies partly cloudy. Snow depth: 0-2 inches. Water open. Field observers: 8 in 4 parties. Nocturnal birding hours: 3. Nocturnal birding miles: 23. Total party-hours (excludes nocturnal hours): 38 (4 on foot, 34 by car). Total party-miles (excludes nocturnal miles): 224 (9 on foot, 215 by car).

Species: Pied-billed Grebe 2; Great Blue Heron (blue form) 10; Black Vulture 58; Turkey Vulture 10; Canada Goose 56; Wood Duck 5; Gadwall 3; American Black Duck 4; Mallard 126; Ring-necked Duck 1; Lesser Scaup 2; Northern Harrier 1; Sharp-shinned Hawk 4; Cooper's Hawk 5; Red-tailed Hawk 20; Golden Eagle 5 (1a, 4i); American Kestrel 15; Merlin 1; Wild Turkey 20; Killdeer 19; Wilson's Snipe 1; Ring-billed Gull CW; Rock Dove 56; Mourning Dove 378; Eastern Screech-Owl 8; Great Horned Owl 2; owl, sp. 1; Belted Kingfisher 2; Red-bellied Woodpecker 13; Yellow-bellied Sapsucker 2; Downy Woodpecker 28; Hairy Woodpecker 3; Northern (Yellow-shafted) Flicker 12; Pileated Woodpecker 10; Eastern Phoebe 2; Loggerhead Shrike 3; Blue Jay 43; American Crow 321; Common Raven 18; Carolina Chickadee 29; Tufted Titmouse 35; Brown Creeper 17; Carolina Wren 21; Golden-crowned Kinglet 5; **Ruby-crowned Kinglet 1**; Eastern Bluebird 52; American Robin 13; Northern Mockingbird 34; European Starling 2,142; Yellow-rumped (Myrtle) Warbler 34; **Pine Warbler 1**; Eastern Towhee 10.

Chipping Sparrow 2; Field Sparrow 20; Savannah Sparrow 2; Fox Sparrow 3; Song Sparrow 125; White-throated Sparrow 94; White-crowned Sparrow 69; Dark-eyed (Slate-colored) Junco 163; Northern Cardinal 58; Red-winged Blackbird 33; Eastern Meadowlark 12; Rusty Blackbird 2; Brown-headed Cowbird 187; House Finch 24; American Goldfinch 95; House Sparrow 8.

Total species: 66; **Total individuals:** 4,561.

Compiler: Robert Riggs, Rt. 2, Box 27 B, Lebanon, VA 24266 (sheba@mounet.com).

BLACKSBURG. Circle Center: Jct. Merrimac Rd. (657) and Prices Fork Rd. (685) in Montgomery County. 37°12'N 80°28'W.

Field data: Count date: 14 Dec 2002. Times in field: 12:15 a.m. to 12:30 a.m. and 5:30 a.m. to 4:30 p.m. Temperatures: 31° to 37° F. Wind NW, 10-38 mph. AM skies cloudy. PM skies partly clear. Snow depth: 0-4 inches. Still water partly open, moving water open. Field observers: 42 in 21 parties. Feeder watchers: 5. Hours at feeders: 7. Nocturnal birding: 10.25 hours and 50.25 miles. Total party-hours (excludes feeder and nocturnal hours): 119 (80 on foot, 39 by car). Total party-miles (excludes nocturnal hours): 461 (79 on foot, 382 by car).

Species: Pied-billed Grebe 3; Horned Grebe 1; Great Blue Heron (blue form) 22; Black Vulture 315; Turkey Vulture 41; **Greater White-fronted Goose 1**; Canada Goose 894; Wood Duck 3; Gadwall 13; American Wigeon 1; American Black Duck 41; American black duck x mallard hybrid 1; Mallard 493; Northern Pintail 1; Greater Scaup 3; Lesser Scaup 21; Bufflehead 135; Common Goldeneye 1; Hooded Merganser 64; **Red-breasted Merganser 2**; duck, sp. 2; Northern Harrier 2; Sharp-shinned Hawk 3; Cooper's Hawk 11; Northern Goshawk 1; *Accipiter*, sp. 3; Red-shouldered Hawk 1; Red-tailed Hawk 35; American Kestrel 30; Ruffed Grouse 3; Wild Turkey 106; Killdeer 1; Ring-billed Gull 135; Rock Dove 275; Mourning Dove 460; Eastern Screech-Owl 7; Great Horned Owl 1; Barred Owl 2; Belted Kingfisher 24; Red-bellied Woodpecker 64; Yellow-bellied Sapsucker 15; Downy Woodpecker 99; Hairy Woodpecker 21; Northern (Yellow-shafted) Flicker 30; Pileated Woodpecker 24; small woodpecker, sp. 1; Eastern Phoebe 12; Blue Jay 164; American Crow 1,523; Common Raven 9; Horned Lark 98; Carolina Chickadee 266; Black-capped Chickadee 2; chickadee, sp. 101; Tufted Titmouse 267.

Red-breasted Nuthatch 2; White-breasted Nuthatch 137; Brown Creeper 14; Carolina Wren 181; Winter Wren 16; Golden-crowned Kinglet 82; Ruby-crowned Kinglet 4; kinglet, sp. 1; Eastern Bluebird 308; Hermit Thrush 6; American Robin 41; Northern Mockingbird 102; European Starling 2,026; American Pipit 2; Cedar Waxwing 334; Yellow-rumped (Myrtle) Warbler 58; **Palm Warbler 2**; Eastern Towhee 35; Chipping Sparrow 7; Field Sparrow 37; **Savannah Sparrow 14**; Fox Sparrow 7; Song Sparrow 286; Swamp Sparrow 5; White-throated Sparrow 412; White-crowned Sparrow 122; Dark-eyed (Slate-colored) Junco 358; **Lapland Longspur 1**; Northern Cardinal 352; Red-winged Blackbird 3; Eastern Meadowlark 6; Rusty Blackbird 6; Common Grackle 1; Brown-headed Cowbird 126; **Baltimore Oriole 1 (ph)**; Purple Finch 2; House Finch 316; American Goldfinch 254; House Sparrow 100.

Total species: 88; **Total individuals:** 11,621.

Compilers: Patricia A. Polentz, 915 Coal Hollow Rd., Christiansburg, VA 24073 (polentz@vt.edu); and Bruce Grimes, 2306 Terra Bella St., Blacksburg, VA 24060 (bgrimes@bev.net).

BREAKS INTERSTATE PARK. Circle Center: 4.5 miles northeast of Haysi in Buchanan County. 37°15'N 82°13'W.

Field data: Count date: 14 Dec 2002. Times in field: 8 a.m. to 5 p.m. Temperatures: 23° to 35° F. Wind W, 5-10 mph. Skies cloudy. Snow depth: 1 inch. Water open. Field observers: 3 in 2 parties. Feeder watchers: 1. Hours at feeders: 1. Total party-hours (excludes feeder hours): 24 (20 on foot, 4 by car). Total party-miles (excludes nocturnal miles): 35 (12 on foot, 23 by car).

Species: Great Blue Heron (blue form) 1; Mallard 3; **Northern Harrier** 1; Sharp-shinned Hawk 2; Red-shouldered Hawk 2; Red-tailed Hawk 1; Ruffed Grouse 1; Wild Turkey 6; American Coot 1; Rock Dove 75; Mourning Dove 37; Belted Kingfisher 1; Red-bellied Woodpecker 3; Downy Woodpecker 4; Northern (Yellow-shafted) Flicker 4; Pileated Woodpecker 5; Eastern Phoebe 1; Blue Jay 15; American Crow 103; Carolina Chickadee 23; Black-capped Chickadee 5; Tufted Titmouse 37; White-breasted Nuthatch 38; Carolina Wren 12; Golden-crowned Kinglet 7; Hermit Thrush 2; American Robin 1; Yellow-rumped (Myrtle) Warbler 1; Eastern Towhee 5; Field Sparrow 8; Fox Sparrow 1; Song Sparrow 33; Swamp Sparrow 6; White-throated Sparrow 140; White-crowned Sparrow 2; sparrow, sp. 4; Dark-eyed (Slate-colored) Junco 62; Northern Cardinal 28; Red-winged Blackbird 1; Common Grackle 1; Brown-headed Cowbird 4; House Finch 6; American Goldfinch 9.

Total species: 42; **Total individuals:** 702.

Compiler: Terry Owens, PO Box 100, Breaks, VA 24607 (bip@mounet.net).

BRISTOL. Circle Center: Jct. 647 and 654, east of Bristol TN in Washington County, VA. 36°35'N 82°06'W.

Field data: Count date: 29 Dec 2002. Times in field: 7 a.m. to 6 p.m. Temperatures: 25° to 55° F. Wind 0-5 mph. Skies clear. Still water partly frozen, moving water open. Field observers: 18 in 6 parties. Nocturnal birding: 5.25 hours and 33.5 miles. Total party-hours (excludes nocturnal hours): 58.5 (28.5 on foot, 30 by car). Total party-miles (excludes nocturnal miles): 461 (15 on foot, 446 by car).

Species: Common Loon 17; Pied-billed Grebe 36; Horned Grebe 6; Eared Grebe 1; Double-crested Cormorant 2; Great Blue Heron (blue form) 32; Black-crowned Night-Heron 1; Black Vulture 136; Turkey Vulture 253; Canada Goose 752; Gadwall 6; American Wigeon 19; American Black Duck 4; Mallard 312; American Green-winged Teal CW; Ring-necked Duck 55; Greater Scaup 1; Lesser Scaup 9; Bufflehead 283; Common Goldeneye 1; Hooded Merganser 208; Bald Eagle 1 (a); Northern Harrier CW; Sharp-shinned Hawk 4; Cooper's Hawk 7; Red-shouldered Hawk 1; Red-tailed Hawk 20; American Kestrel 39; Merlin 1; Ruffed Grouse 1; American Coot 11; Killdeer 5; Bonaparte's Gull 7; Ring-billed Gull 598; Herring Gull 1; Rock Dove 220; Mourning Dove 508; Barn Owl 1; Eastern Screech-Owl 7; Great

Horned Owl 7; **Rufous Hummingbird 1**; Belted Kingfisher 11; Red-headed Woodpecker 38; Yellow-bellied Sapsucker 5; Downy Woodpecker 37; Hairy Woodpecker 8; Northern (Yellow-shafted) Flicker 18; Pileated Woodpecker 17; Eastern Phoebe 16; Loggerhead Shrike 2; Blue Jay 187; American Crow 676.

Common Raven 3; Carolina Chickadee 158; Tufted Titmouse 121; White-breasted Nuthatch 74; Brown Creeper 7; Carolina Wren 120; Winter Wren 6; Golden-crowned Kinglet 82; Ruby-crowned Kinglet 3; Eastern Bluebird 175; Hermit Thrush 4; American Robin 81; Northern Mockingbird **160**; Brown Thrasher 1; European Starling 2,426; Cedar Waxwing 19; Yellow-rumped (Myrtle) Warbler 29; **Pine Warbler CW**; Palm Warbler 1; Eastern Towhee 35; Field Sparrow 48; Savannah Sparrow 1; Fox Sparrow 2; Song Sparrow 211; Swamp Sparrow 8; White-throated Sparrow 231; White-crowned Sparrow 89; Dark-eyed (Slate-colored) Junco 132; Northern Cardinal 237; Eastern Meadowlark 32; Common Grackle 3; House Finch 195; American Goldfinch 131; House Sparrow 16.

Total species: 83; **Total individuals:** 9430.

Compiler: Richard Lewis, 407 V.I. Ranch Rd., Bristol, TN 37620 (mountainbirds@email.com).

Participants: Rob Biller, Alan Boynton, Ron Carrico, Wallace Coffey, Rick Cross, Bill Grigsby, Bert Hale, Loraine Hale, Ron Harrington, Katherine Higgins, Don Holt, Andy Jones, Richard Knight, Phillip Lewis, Richard Lewis, Janice Martin, Larry McDaniel, Jamie Scott.

BROOKE. Circle Center: At Center Road 3 miles east southeast of Brooke in Stafford County. 38°22'N 77°20'W.

Field data: Count date: 16 Dec 2002. Times in field: 6:30 a.m. to 5 p.m. Temperatures: 44° to 46° F. Wind NW, 15-25 mph. Skies partly cloudy. Still water partly frozen, moving water open. Field observers: 25 in 9 to 10 parties. Nocturnal birding: 1 hour and 20 miles. Total party-hours (excludes nocturnal hours): 85 (44.5 on foot, 40.5 by car). Total party-miles (excludes nocturnal miles): 239.5 (29.5 on foot, 210 by car).

Species: Pied-billed Grebe 56; Double-crested Cormorant 48; Great Blue Heron (blue form) 54; Black Vulture **71**; Turkey Vulture **160**; Canada Goose 1,600; Mute Swan 27; Tundra Swan 45; Gadwall 35; American Black Duck 50; Mallard 750; **Blue-winged Teal 1**; Canvasback 21; Ring-necked Duck 20; Lesser Scaup 180; Long-tailed Duck 2; Bufflehead 135; Common Goldeneye 5; Hooded Merganser 12; Common Merganser 31; Ruddy Duck 250; Bald Eagle **48** (30a, 18i); Northern Harrier 4; Sharp-shinned Hawk 5; Cooper's Hawk 2; Red-shouldered Hawk 11; Red-tailed Hawk 13; American Kestrel 4; **Merlin 2**; Wild Turkey 9; Northern Bobwhite 14; American Coot 80; Killdeer 3; Laughing Gull 132; Ring-billed Gull 5,000; Herring Gull 110; Great Black-backed Gull 64; Rock Dove 20; Mourning Dove 200; Great Horned Owl 2; Barred Owl 1; Belted Kingfisher 19; Red-headed Woodpecker 17; Red-bellied Woodpecker 90; Yellow-bellied Sapsucker 15; Downy Woodpecker 37; Hairy Woodpecker 9; Northern (Yellow-shafted) Flicker 47; Pileated Woodpecker 16; Eastern Phoebe 9.

Blue Jay 161; American Crow 400; Fish Crow 8; Carolina Chickadee 200; Tufted Titmouse 101; White-breasted Nuthatch 31; Brown Creeper 4; Carolina Wren 92; Winter Wren 2; Golden-crowned Kinglet 5; Ruby-crowned Kinglet 20; Eastern Bluebird 318; Hermit Thrush 5; American Robin 1,600; Gray Catbird 2; Northern Mockingbird 88; European Starling 4,000; American Pipit 17; Cedar Waxwing 2,000; Yellow-rumped (Myrtle) Warbler 129; Pine Warbler 1; Eastern Towhee 10; American Tree Sparrow 2; Chipping Sparrow 6; Field Sparrow 20; Savannah Sparrow 14; Fox Sparrow 1; Song Sparrow 180; Swamp Sparrow 7; White-throated Sparrow 300; White-crowned Sparrow 5; Dark-eyed (Slate-colored) Junco 311; Northern Cardinal 114; Red-winged Blackbird 137; Eastern Meadowlark 25; Rusty Blackbird 3; Common Grackle 525; House Finch 136; American Goldfinch 270; House Sparrow 130.

Total species: 90; **Total individuals:** 20,916.

Compiler: David Stewart, 10715 Midsummer Dr., Reston, VA 20191 (o.b.james@worldnet.att.net).

CALMES NECK. Circle Center: Castleman's Ferry Bridge, State Route 7 and the Shenandoah River in Clarke County. 39°07'N 77°54'W.

Field data: Count date: 5 Jan 2003. Times in field: 7 a.m. to 6 p.m. Temperatures: 22° to 34° F. Wind NE, 3-10 mph. Skies cloudy, light snow. Snow depth: 1-2 inches. Still water partly frozen, moving water open. Field observers: 37 in 16 to 17 parties. Feeder watchers: 5. Hours at feeders: 18. Nocturnal birding: 3 hours and 6.5 miles. Total party-hours (excludes feeder and nocturnal hours): 82 (21 on foot, 61 by car). Total party-miles (excludes nocturnal miles): 603 (23.5 on foot, 580 by car).

Species: Pied-billed Grebe 1; Great Blue Heron (blue form) 22; Turkey Vulture 36; Canada Goose 3,756; Tundra Swan 2; Gadwall 3; American Black Duck 60; Mallard 218; Ring-necked Duck 61; Lesser Scaup 10; Bufflehead 2; Hooded Merganser 16; Common Merganser 74; Red-breasted Merganser 5; Ruddy Duck 2; Bald Eagle 1 (a); Northern Harrier 2; Sharp-shinned Hawk 2; Cooper's Hawk 7; Red-shouldered Hawk 18; Red-tailed Hawk 55; American Kestrel 21; Ruffed Grouse 1; Wild Turkey 2; Northern Bobwhite 15; American Coot 18; Killdeer 3; Wilson's Snipe 11; Ring-billed Gull 1; Rock Dove 470; Mourning Dove 554; Eastern Screech-Owl 5; Great Horned Owl 5; Barred Owl 5; Belted Kingfisher 17; Red-headed Woodpecker 13; Red-bellied Woodpecker 193; Yellow-bellied Sapsucker 40; Downy Woodpecker 127; Hairy Woodpecker 17; Northern (Yellow-shafted) Flicker 88; Pileated Woodpecker 42; Eastern Phoebe 1; Loggerhead Shrike 1; Blue Jay 382; American Crow 531; Fish Crow 5; Common Raven 14; Horned Lark 96; Carolina Chickadee 318.

Tufted Titmouse 306; Red-breasted Nuthatch 1; White-breasted Nuthatch 162; Brown-headed Nuthatch 34; Carolina Wren 106; Winter Wren 2; Golden-crowned Kinglet 56; Ruby-crowned Kinglet 6; Eastern Bluebird 301; Hermit Thrush 4; American Robin 128; Northern Mockingbird 126; European Starling 3,325; Cedar Waxwing 110; Yellow-rumped (Myrtle) Warbler 10; Eastern Towhee 1; American Tree Sparrow 11; Field Sparrow 51; Fox Sparrow 3; Song Sparrow 170; Swamp Sparrow 2; White-throated Sparrow 475; White-crowned Sparrow 85; Dark-eyed

(Slate-colored) Junco 597; Snow Bunting 4; Northern Cardinal 339; Red-winged Blackbird 45; Eastern Meadowlark 5; Rusty Blackbird 12; Common Grackle 2,275; Brown-headed Cowbird 29; Purple Finch 2; House Finch 168; American Goldfinch 243; House Sparrow 115.

Total species: 85; **Total individuals:** 16,658.

Compilers: Frances Endicott, 3355 Calmes Neck Lane, Boyce, VA 22620; Linda Thomas, 111 Chapel Road, Middletown, VA 22654 (lthomas@crosslink.net); and Margaret Wester, 181 Little River Lane, Boyce, VA 22620 (margaretwester@hotmail.com).

CAPE CHARLES. Circle Center: 1.5 miles southeast of Capeville Post Office in Northampton County. 37°12'N 75°56'W.

Field data: Count date: 27 Dec 2002. Times in field: 5:30 a.m. to 6 p.m. Temperatures: 28° to 40° F. Wind NW, 5-15 mph. Skies clear. Still water partly frozen, moving water open. Field observers: 43 in 9 to 20 parties. Nocturnal birding: 2 hours and 8 miles. Total party-hours (excludes nocturnal hours): 144 (114 on foot, 27 by car, 3 by boat). Total party-miles (excludes nocturnal miles): 346 (80 on foot, 256 by car, 10 by boat).

Species: Red-throated Loon 1,135; Common Loon 208; Pied-billed Grebe 27; Horned Grebe 178; Northern Gannet 4,648; Brown Pelican 234; Double-crested Cormorant 178; Great Cormorant 70; Great Blue Heron (blue form) 74; Great Egret 3; Snowy Egret 2; Little Blue Heron 7; Tricolored Heron 6; Black-crowned Night-Heron 1; White Ibis 82; Black Vulture 88; Turkey Vulture 474; Snow Goose (blue form) 3; Snow Goose (white form) 486; Hutchins's Goose 1; Canada Goose 2,326; Brant 678; Tundra Swan 54; Wood Duck 9; Gadwall 560; American Wigeon 428; American Black Duck 400; Mallard 220; American black duck x mallard hybrid 2; Northern Shoveler 52; Northern Pintail 2; American Green-winged Teal 39; Red-head 1; Ring-necked Duck 42; Greater Scaup 5; Lesser Scaup 23; scaup, sp. 2; Surf Scoter 3,510; White-winged Scoter 36; Black Scoter 1,241; scoter, sp. 486; Long-tailed Duck 146; Bufflehead 820; Common Goldeneye 15; Hooded Merganser 321; Common Merganser 4; Red-breasted Merganser 6,648; Ruddy Duck 14; Bald Eagle 35; Northern Harrier 52; Sharp-shinned Hawk 36; Cooper's Hawk 20; Red-shouldered Hawk 13; Red-tailed Hawk 57; American Kestrel 45.

Merlin 4; Ruffed Grouse 4; Wild Turkey 17; Northern Bobwhite 37; Clapper Rail 53; Virginia Rail 9; Sora 1; American Coot 9; Black-bellied Plover 655; Semipalmated Plover 49; Piping Plover 1; Killdeer 75; American Oystercatcher 193; Greater Yellowlegs 107; Lesser Yellowlegs 6; Willet 217; Marbled Godwit 28; Ruddy Turnstone 115; Sanderling 785; Western Sandpiper 81; Least Sandpiper 14; Dunlin 8,084; peep, sp. 70; Short-billed Dowitcher 92; Wilson's Snipe 3; American Woodcock 37; Laughing Gull 2; Bonaparte's Gull 363; Ring-billed Gull 3,456; Herring Gull 2,418; Lesser Black-backed Gull 2; Great Black-backed Gull 1,039; Forster's Tern 2; Rock Dove 424; Mourning Dove 641; Eastern Screech-Owl 17; Great Horned Owl 19; **Long-eared Owl 1**; Short-eared Owl 1; **Rufous Hummingbird 1**; Belted Kingfisher 35; Red-bellied Woodpecker 79; Yellow-bellied Sapsucker 24; Downy Woodpecker

60; Hairy Woodpecker 8; Northern (Yellow-shafted) Flicker 91; Pileated Woodpecker 8; Eastern Phoebe 20; Blue-headed Vireo 2; Blue Jay 133; American Crow 573.

Fish Crow 6; Horned Lark 100; Tree Swallow 457; Carolina Chickadee 170; Tufted Titmouse 65; Brown-headed Nuthatch 1; Brown Creeper 11; Carolina Wren 322; House Wren 12; Winter Wren 21; Sedge Wren 5; Marsh Wren 3; Golden-crowned Kinglet 54; Ruby-crowned Kinglet 55; Eastern Bluebird 264; Hermit Thrush 122; American Robin 934; Gray Catbird 38; Northern Mockingbird 116; Brown Thrasher 26; European Starling 2,389; American Pipit 164; Cedar Waxwing 135; Orange-crowned Warbler 3; Yellow-rumped (Myrtle) Warbler 3,690; Pine Warbler 24; Palm Warbler 47; Common Yellowthroat 1; Eastern Towhee 107; American Tree Sparrow 1; Chipping Sparrow 89; Field Sparrow 265; Vesper Sparrow 1; Savannah Sparrow 201; Savannah (Ipswich) Sparrow 10; Nelson's Sharp-tailed Sparrow 3; Saltmarsh Sharp-tailed Sparrow 1; sharp-tailed sparrow, sp. 6; Seaside Sparrow 12; Fox Sparrow 258; Song Sparrow 501; Swamp Sparrow 181; White-throated Sparrow 808; White-crowned Sparrow 2; Dark-eyed (Slate-colored) Junco 265; Northern Cardinal 396; Red-winged Blackbird 13,160; Eastern Meadowlark 105; Rusty Blackbird 15; **Brewer's Blackbird 2**; Common Grackle 9,611; Boat-tailed Grackle 243.

Brown-headed Cowbird 545; Baltimore Oriole 1; House Finch 143; American Goldfinch 386; House Sparrow 60.

Total species: 155; **Total individuals:** 83,025.

Compiler: Henry Armistead, 523 E. Durham St., Philadelphia, PA 19119 (harryarmistead@hotmail.com).

CENTRAL LOUDOUN. Circle Center: Near jct. of 704 and 769 in Loudoun County. 39°06'N 77°38'W.

Field data: Count date: 29 Dec 2002. Times in field: 5:30 a.m. to 5:30 p.m. Temperatures: 24° to 48° F. Wind: variable, 0-8 mph. Skies clear. Snow depth: 0-3 inches. Still water partly frozen, moving water open. Field observers: 72 in 18 to 25 parties. Nocturnal birding: 6.75 hours and 44 miles. Total party-hours (excludes nocturnal hours): 151 (100.75 on foot, 50.25 by car). Total party-miles (excludes nocturnal miles): 524.25 (81.75 on foot, 442.5 by car).

Species: Pied-billed Grebe 1; **Horned Grebe 1**; Great Blue Heron (blue form) 19; Black Vulture 128; Turkey Vulture 437; **Snow Goose (white form) 2**; Canada Goose 9,171; **Mute Swan 1**; Tundra Swan 2; Wood Duck 2; Gadwall 25; American Wigeon 12; American Black Duck 162; Mallard 606; American Green-winged Teal 8; Canvasback 1; Ring-necked Duck 78; Lesser Scaup 1; Bufflehead 2; Hooded Merganser 29; Common Merganser 23; Bald Eagle 5 (2a, 3i); Northern Harrier 15; Sharp-shinned Hawk 14; Cooper's Hawk 11; Red-shouldered Hawk 56; Red-tailed Hawk 129; Rough-legged Hawk CW; American Kestrel 33; Merlin 1; Wild Turkey 2; Northern Bobwhite 2; Killdeer 2; Wilson's Snipe 1; Ring-billed Gull 872; Herring Gull 16; **Great Black-backed Gull 5**; Rock Dove 244; Mourning Dove 534; Eastern Screech-Owl 4; Great Horned Owl 7; Barred Owl 9; Belted Kingfisher 25; Red-headed Woodpecker 12; Red-bellied Woodpecker 203; Yellow-bellied Sapsucker 50; Downy Woodpecker 172; Hairy Woodpecker 26; Northern (Yellow-shafted) Flicker 125;

Pileated Woodpecker 40; Eastern Phoebe 3.

Blue Jay 433; American Crow 958; Fish Crow 17; crow, sp. 236; Common Raven 3; Horned Lark 18; Carolina Chickadee 479; Tufted Titmouse 382; White-breasted Nuthatch 184; Brown Creeper 36; Carolina Wren 205; Winter Wren 21; Golden-crowned Kinglet 66; Ruby-crowned Kinglet 18; Eastern Bluebird 385; Hermit Thrush 7; American Robin 2,066; Gray Catbird 2; Northern Mockingbird 309; Brown Thrasher 2; European Starling 1,949; Cedar Waxwing 276; Yellow-rumped (Myrtle) Warbler 184; Eastern Towhee 19; American Tree Sparrow 59; Field Sparrow 154; Savannah Sparrow 6; Fox Sparrow 4; Song Sparrow 256; Swamp Sparrow 5; White-throated Sparrow 692; White-crowned Sparrow 58; Dark-eyed (Slate-colored) Junco 1,051; Lapland Longspur 1; Northern Cardinal 635; Red-winged Blackbird 15; Eastern Meadowlark 7; Rusty Blackbird 1; Common Grackle 15; blackbird, sp. 1; House Finch 142; American Goldfinch 262; House Sparrow 191.

Total species: 91; **Total individuals:** 25,139

Compiler: Joseph Coleman, 19499 Yellow Schoolhouse Road, Round Hill, VA 20141 (jandkcoleman@erols.com).

CHANCELLORSVILLE. Circle Center: Chancellorsville Battlefield, 10 miles west of Fredericksburg in Spotsylvania County. 38°16'N 77°40'W.

Field data: Count date: 5 Jan 2003. Times in field: 5:30 a.m. to 5 p.m. and 5:30 p.m. to 7:30 p.m. Temperatures: 23° to 36° F. Wind calm. Skies cloudy. Light snow. Water open. Field observers: 16 in 6 parties. Nocturnal birding: 5 hours and 29.5 miles. Total party-hours (excludes nocturnal hours): 54.5 (24.5 on foot, 30 by car). Total party-miles (excludes nocturnal miles): 290.5 (15.5 on foot, 275 by car).

Species: Pied-billed Grebe 3; Double-crested Cormorant 1; Great Blue Heron (blue form) 5; Black Vulture 16; Turkey Vulture 108; Canada Goose 808; Mute Swan 10; Wood Duck 3; American Black Duck 4; Mallard 110; Ring-necked Duck 147; Lesser Scaup 9; Bufflehead 100; Hooded Merganser 22; **Common Merganser** 43; Ruddy Duck 37; Bald Eagle 9 (8a, 1i); Sharp-shinned Hawk 3; Cooper's Hawk 3; Red-shouldered Hawk 7; Red-tailed Hawk 13; large hawk, sp. 2; American Kestrel 4; Wild Turkey 1; American Coot 130; Ring-billed Gull 120; Rock Dove 31; Mourning Dove 168; Eastern Screech-Owl 4; Great Horned Owl 4; Barred Owl 2; Belted Kingfisher 4; Red-headed Woodpecker 1; Red-bellied Woodpecker 57; Yellow-bellied Sapsucker 7; Downy Woodpecker 30; Hairy Woodpecker 2; Northern (Yellow-shafted) Flicker 31; Pileated Woodpecker 15; Eastern Phoebe 1; Blue Jay 130; American Crow 236; Carolina Chickadee 81; Tufted Titmouse 71; White-breasted Nuthatch 32; Brown Creeper 15; Carolina Wren 39; Golden-crowned Kinglet 16; Ruby-crowned Kinglet 2; Eastern Bluebird 161; Hermit Thrush 2.

American Robin 916; Northern Mockingbird 25; Brown Thrasher 1; European Starling 1,255; Cedar Waxwing 569; Yellow-rumped (Myrtle) Warbler 29; Eastern Towhee 19; Field Sparrow 38; Fox Sparrow 2; Song Sparrow 55; White-throated Sparrow 200; White-crowned Sparrow 1; Dark-eyed (Slate-colored) Junco 518; Northern Cardinal 64; Red-winged Blackbird 1; Eastern Meadowlark 19; Common Grackle 10; House Finch 56; American Goldfinch 75; House Sparrow 25.

Total species: 70; **Total individuals:** 6,738.

Compiler: Joella Killian, Dept. Of Biology, Mary Washington College, Fredericksburg, VA 22401 (jkillian@mwc.edu).

CHARLOTTESVILLE. Circle Center: Near Ivy in Albemarle County. 38°04'N 78°34'W.

Field data: Count date: 29 Dec 2002. Times in field: 6 a.m. to 5:45 p.m. Temperatures: 26° to 52° F. No wind. Water open. Field observers: 33 in 19 parties. Nocturnal birding: 2.5 hours and 13 miles. Total party-hours (excludes nocturnal hours): 162 (120.5 on foot, 36 by car, 5.5 by canoe). Total party-miles (excludes nocturnal miles): 333 (103 on foot, 226 by car, 4 by canoe).

Species: Great Blue Heron (blue form) 13; Black Vulture 284; Turkey Vulture 230; Canada Goose 1,380; Mute Swan 5; Wood Duck 2; American Black Duck 9; Mallard 111; American Green-winged Teal 3; Ring-necked Duck 1; Hooded Merganser 12; Common Merganser 3; Northern Harrier 1; Sharp-shinned Hawk 6; Cooper's Hawk 7; *Accipiter*, sp. 1; Red-shouldered Hawk 24; Red-tailed Hawk 33; American Kestrel 5; Wild Turkey 10; Northern Bobwhite 8; Wilson's Snipe 2; Rock Dove 281; Mourning Dove 224; Eastern Screech-Owl 7; Great Horned Owl 6; Barred Owl 2; Belted Kingfisher 22; Red-headed Woodpecker 1; Red-bellied Woodpecker 171; Yellow-bellied Sapsucker 74; Downy Woodpecker 120; Hairy Woodpecker 19; Northern (Yellow-shafted) Flicker 163; Pileated Woodpecker 74; Eastern Phoebe 7; Blue Jay 430; American Crow 1,128; Fish Crow 267; Common Raven 4; Carolina Chickadee 388; Tufted Titmouse 285; White-breasted Nuthatch 141; Brown-headed Nuthatch 5; Carolina Wren 262; Winter Wren 14; Golden-crowned Kinglet 60; Ruby-crowned Kinglet 28; Eastern Bluebird 343; Hermit Thrush 53; American Robin 4,433.

Gray Catbird 1; Northern Mockingbird 242; Brown Thrasher 1; European Starling 803; Cedar Waxwing 141; Yellow-rumped (Myrtle) Warbler 384; Eastern Towhee 33; American Tree Sparrow 2; Chipping Sparrow 31; Field Sparrow 242; Fox Sparrow 7; Song Sparrow 497; Swamp Sparrow 8; White-throated Sparrow 1,242; White-crowned Sparrow 34; Dark-eyed (Slate-colored) Junco 666; Northern Cardinal 415; Eastern Meadowlark 3; Common Grackle 2; Purple Finch 16; House Finch 303; American Goldfinch 201; House Sparrow 169.

Total species: 73; **Total individuals:** 16,605.

Compiler: Charles Stevens, 615 Preston Place, Charlottesville, VA 22903. (pringdaven@aol.com).

Participants: Dan Bieker, Paul Blair, Jim Childress, Bruce Davenport; Kit Davenport, Nan Davenport, Pring Davenport, Tom Dierauf, Boo Dulaney, Francis Fife, Barbara Fiske, Ned Foss, Jennifer Gaden, Mike Griffin, Allen Hale, David Hannah, Elizabeth Harvard, Dee Henderson, David Hogg, Ken Lawless, Peter Mehrling, Hewson Michie, Bill Minor, Barbara Payne, Amoret Powers, Mo Stevens, Brenda Tekin, David West, David White, Ali Wieboldt; Elsa Wieboldt, Tom Wieboldt, John Zimmerman.

CHESAPEAKE BAY. Circle Center: The northern three islands of the bridge-tunnel complex and adjacent waters out to one mile. 37°05'N 76°08'W.

Field data: Count date: 26 Dec 2002. Times in field: 7 a.m. to 5 p.m. Temperatures: 34° to 48° F. Wind SW, 15-33 mph. AM skies partly cloudy. PM skies clear. Water open. Field observers: 13 in 1 party. Total party-hours: 10 (9.5 on foot, 0.5 by car). Total party-miles: 11 (1 on foot, 10 by car).

Species: Red-throated Loon 54; Common Loon 17; Horned Grebe 5; Northern Gannet 860; Brown Pelican 34; Double-crested Cormorant 3; Great Cormorant 28; Great Blue Heron (blue form) 3; Mallard 3; **Northern Pintail 5**; American Green-winged Teal 4; Greater Scaup 1; Lesser Scaup 9; scaup, sp. 5; King Eider 1; Common Eider 1; Harlequin Duck 1; Surf Scoter 2,120; White-winged Scoter 38; Black Scoter 1,975; Long-tailed Duck 14; Bufflehead 7; Common Goldeneye 1; Red-breasted Merganser 690; Merlin 1; Peregrine Falcon 1; American Oystercatcher 1; Ruddy Turnstone 8; Sanderling 4; Purple Sandpiper 41; Laughing Gull 65; Bonaparte's Gull 5; Ring-billed Gull 2,600; California Gull CW; Herring Gull 2,200; Thayer's Gull CW; Lesser Black-backed Gull 12; Great Black-backed Gull 350; glaucous gull x herring gull hybrid CW; Forster's Tern 1; American Pipit 2; Cedar Waxwing 1; Song Sparrow 1; White-throated Sparrow 1; Red-winged Blackbird 6; Brown-headed Cowbird 15.

Total species: 42; **Total individuals:** 11,194.

Compiler: Ned Brinkley, 9 Randolph Ave., Cape Charles, VA 23310 (phoebetria@aol.com).

Compiler notes: A marvelous thing to have the return of King Eider to the (CBBT) CBC, which has had the species only twice before (only one other King was seen here in 2002, that being in April, a hen). The CBC's bird this year was a subadult male, found by Todd Day and seen by the entire party at 0930. Another treat this year was the hour-long observation of a large, actively feeding Harbor Seal in the channel between the northern islands of the span.

CHINCOTEAGUE. Circle Center: Two miles north of center of Chincoteague in Accomack County. 37°58'N 75°22'W.

Field data: Count date: 28 Dec 2002. Times in field: 4 a.m. to 6 p.m. Temperatures: 25° to 45° F. Wind variable, 0-10 mph. AM skies clear. PM skies partly cloudy. Field observers: 21 in 13 parties. Nocturnal birding: 4.5 hours and 15 miles. Total party-hours (excludes nocturnal hours): 85 (52 on foot, 33 by car). Total party-miles (excludes nocturnal miles): 243 (43 on foot, 200 by car).

Species: Red-throated Loon 8; Common Loon 49; Pied-billed Grebe 2; Horned Grebe 215; **Brown Pelican 4**; Double-crested Cormorant 4; Great Blue Heron (blue form) 121; Great Egret 59; Snowy Egret 5; Little Blue Heron 2; Tricolored Heron 13; Green Heron 1; Black-crowned Night-Heron 5; Yellow-crowned Night-Heron 1; Glossy Ibis 1; Black Vulture 27; Turkey Vulture 326; Snow Goose (blue form) 6; Snow Goose (white form) 2,679; Canada Goose 1,431; Brant 1,730; Tundra Swan 109; Wood Duck 5; Gadwall 461; American Wigeon 72; American Black Duck 1,168; Mallard 503; Northern Shoveler 333; Northern Pintail 444; American Green-winged

Teal 16; Redhead 2; Ring-necked Duck 7; Greater Scaup 3; Lesser Scaup 2; scaup, sp. 1; Surf Scoter 178; Black Scoter 38; Long-tailed Duck 6; Bufflehead 1,088; Common Goldeneye 3; Hooded Merganser 155; Common Merganser 69; Red-breasted Merganser 153; Ruddy Duck 53; Bald Eagle 19 (15a, 4i); Northern Harrier 30; Sharp-shinned Hawk 17; Cooper's Hawk 4; Red-shouldered Hawk 3; Red-tailed Hawk 37; American Kestrel 21; Merlin 1.

Peregrine Falcon 2; Northern Bobwhite 10; Clapper Rail 1; Black-bellied Plover 34; Semipalmated Plover 9; Killdeer 54; American Oystercatcher 13; Greater Yellowlegs 41; Lesser Yellowlegs 22; Willet 17; Ruddy Turnstone 7; Sanderling 281; Dunlin 970; peep, sp. 250; Short-billed Dowitcher 613; Long-billed Dowitcher 4; dowitcher, sp. 8; Wilson's Snipe 5; American Woodcock 13; Bonaparte's Gull 4; Ring-billed Gull 637; Herring Gull 737; Great Black-backed Gull 110; gull, sp. 500; Forster's Tern 30; Rock Dove 117; Mourning Dove 273; Barn Owl 1; Eastern Screech-Owl 19; Great Horned Owl 24; **Long-eared Owl 2**; Short-eared Owl 3; Belted Kingfisher 22; Red-bellied Woodpecker 44; Yellow-bellied Sapsucker 8; Downy Woodpecker 35; Hairy Woodpecker 12; Northern (Yellow-shafted) Flicker 112; Pileated Woodpecker 15; Eastern Phoebe 12; **Blue-headed Vireo 2**; Blue Jay 135; American Crow 274; Fish Crow 10; Horned Lark 129; Tree Swallow 17; Carolina Chickadee 154; Tufted Titmouse 15; White-breasted Nuthatch 3; Brown-headed Nuthatch 19; Brown Creeper 15; Carolina Wren 33; House Wren 3.

Winter Wren 17; Sedge Wren 2; Golden-crowned Kinglet 27; Ruby-crowned Kinglet 11; Eastern Bluebird 183; Hermit Thrush 37; American Robin 598; Gray Catbird 31; Northern Mockingbird 59; Brown Thrasher 22; European Starling 2,624; American Pipit 334; Cedar Waxwing 55; Yellow-rumped (Myrtle) Warbler 1,716; Pine Warbler 65; Palm Warbler 2; Common Yellowthroat 1; Eastern Towhee 52; American Tree Sparrow 3; Chipping Sparrow 83; Field Sparrow 49; Savannah Sparrow 283; Savannah (Ipswich) Sparrow 6; Nelson's Sharp-tailed Sparrow 3; Saltmarsh Sharp-tailed Sparrow 1; Seaside Sparrow 1; Fox Sparrow 29; Song Sparrow 307; Swamp Sparrow 123; White-throated Sparrow 706; White-crowned Sparrow 2; Dark-eyed (Slate-colored) Junco 379; Dark-eyed (Oregon) Junco 1; Snow Bunting 1; Northern Cardinal 153; Red-winged Blackbird 1,737; Eastern Meadowlark 243; Rusty Blackbird 46; Common Grackle 3,164; Boat-tailed Grackle 398; Brown-headed Cowbird 10; blackbird, sp. 5,158; Purple Finch 2; House Finch 126; Red Crossbill 2; American Goldfinch 104; House Sparrow 129.

Total species: 144; **Total individuals:** 36,655.

Compiler: Richard Roberts, 7212 Fiddler Bay Lane, Chincoteague, VA 23336 (bandbird@intercom.net) and Nancy Roberts, 7212 Fiddler Bay Lane, Chincoteague, VA 23336 (nroberts@intercom.net).

Compiler notes: We had only twenty participants this year, the lowest in many years. This meant that two sectors were only partially covered, and most sectors that were covered had only two people. Numbers of ducks and rails overall were very low, while the number of birds like the Common Merganser and Short-billed Dowitcher were above average. Greater Black-backed Gull was also hard to find this year.

DANVILLE. Circle Center: Ballou Park in Danville. 36°34'N 79°25'W.

Field data: Count date: 28 Dec 2002. Times in field: 8 a.m. to 5:15 p.m. Temperatures: low 30s to upper 30s °F. Windy. Skies clear. Water open. Field observers: 15 in 7 parties. Feeder watchers: 11. Hours at feeders: Unknown. Total party-hours (includes feeder hours): 41 (on foot unknown, by car unknown). Total party-miles: 218 (22.5 on foot, 195.5 by car).

Species: Great Blue Heron (blue form) 8; Black Vulture 49; Turkey Vulture 84; Canada Goose 228; Wood Duck 1; Mallard 175; Hooded Merganser 2; Sharp-shinned Hawk 1; Cooper's Hawk 6; Red-shouldered Hawk 7; Red-tailed Hawk 11; American Kestrel 3; Wild Turkey 10; Killdeer 7; Rock Dove 67; Mourning Dove 309; Great Horned Owl 3; Belted Kingfisher 2; Red-headed Woodpecker 8; Red-bellied Woodpecker 32; Yellow-bellied Sapsucker 14; Downy Woodpecker 17; Hairy Woodpecker 8; Northern (Yellow-shafted) Flicker 22; Pileated Woodpecker 5; Blue Jay 75; American Crow 482; Fish Crow 1; Carolina Chickadee 81; Tufted Titmouse 72; Red-breasted Nuthatch 2; White-breasted Nuthatch 12; Brown Creeper 2; Carolina Wren 39; Winter Wren 2; wren, sp. 11; Golden-crowned Kinglet 18; Ruby-crowned Kinglet 3; Eastern Bluebird 133; Hermit Thrush 5; American Robin 418; Northern Mockingbird 65; Brown Thrasher 2; European Starling 312; Cedar Waxwing 34; Yellow-rumped (Myrtle) Warbler 24; Eastern Towhee 8; Field Sparrow 20; Fox Sparrow 2; Song Sparrow 22.

White-throated Sparrow 66; White-crowned Sparrow 8; Dark-eyed (Slate-colored) Junco 200; Northern Cardinal 169; Purple Finch 32; House Finch 110; American Goldfinch 104; House Sparrow 68.

Total species: 57; **Total individuals:** 3,681.

Compiler: Laura D. Meder, Dept. of Biology, Averett College, 420 W. Main, Danville, VA 24541 (laura.meder@averett.edu).

Participants: Mrs. Eddie Nell Canter, Edward Fisher, Patt Fisher, Mary Foster, Sarah Foster, Marybelle Fries, Ann Garbett, Gary Grant, Eunice Griffith, Faye Huppert, Frank Huppert, Ina Ingram, James Ingram, Elaine Lea, Pat Maurakis, Travis McLaughlin, Fred Meder, Laura Meder, Lee Robertson, Geoffrey Smith, C.B. Strange, Cynthia Ward, Carolyn Williams, Gordon Woody, and Hugh Wyatt.

DARLINGTON HEIGHTS. Circle Center: Jct. of 665 and 660 in Darlington Heights in Prince Edward County. 37°12'N 78°36'W.

Field data: Count date: 5 Jan 2003. Times in field: 5:15 a.m. to 5:15 p.m. Temperatures: 26° to 42° F. Wind WSW to WNW, 0-5 mph in am, 10-15 mph in pm. AM skies cloudy. PM skies partly clear, then snow from 1:15 to 2:30 p.m., followed by clearing and sunny. Water open. Field observers: 15 in 4 parties. Nocturnal birding: 2 hours and 26 miles. Total party-hours (excludes nocturnal hours): 29 (10 on foot, 18 by car 1 hour by canoe). Total party-miles (excludes nocturnal miles): 260 (6 on foot, 249 by car, 2 by canoe).

Species: Great Blue Heron (blue form) 5; Black-crowned Night-Heron 58; Turkey Vulture 54; Canada Goose 230; **Wood Duck** 3; Hooded Merganser 7; Northern Harrier 6; Sharp-shinned Hawk 1; Cooper's Hawk 1; Red-shouldered Hawk 7; Red-tailed Hawk 23; American Kestrel 6; Wild Turkey 2; Northern Bobwhite 5;

American Woodcock 2; Rock Dove 78; Mourning Dove 176; Eastern Screech-Owl 5; Belted Kingfisher 5; Red-headed Woodpecker 1; Red-bellied Woodpecker 17; Yellow-bellied Sapsucker 15; Downy Woodpecker 29; Hairy Woodpecker 1; Northern (Yellow-shafted) Flicker 26; Pileated Woodpecker 26; Loggerhead Shrike 1; Blue Jay 140; American Crow 373; Horned Lark 32; Carolina Chickadee 54; Tufted Titmouse 26; White-breasted Nuthatch 12; Brown Creeper 3; Carolina Wren 27; Golden-crowned Kinglet 13; Ruby-crowned Kinglet 2; Eastern Bluebird 210; Hermit Thrush 1; American Robin 707; Northern Mockingbird 55; Brown Thrasher 1; European Starling 72; Cedar Waxwing 100; Yellow-rumped (Myrtle) Warbler 65; Eastern Towhee 14; Chipping Sparrow 8; Field Sparrow 30; Savannah Sparrow 3; Fox Sparrow 1.

Song Sparrow 72; Swamp Sparrow 4; White-throated Sparrow 198; White-crowned Sparrow 15; Dark-eyed (Slate-colored) Junco 542; Northern Cardinal 98; Red-winged Blackbird 25; Eastern Meadowlark 54; Brown-headed Cowbird 77; House Finch 72; American Goldfinch 98; House Sparrow 5.

Total species: 62; **Total individuals:** 3,999.

Compiler: Carolyn Wells, 204 Fayette St, Farmville, VA 23901 (bbsmith@hovac.com).

Participants: Sandra Breil, John Dalmas, Thelma Dalmas, Jimmy Gates, Ann Ingram, Jane Jobe, Dana Johnson, Chris Register, Katie Register, Brent Slaughter, Laura Slaughter, David Spears, Randy Thrasher, Sue Thrasher, and Lisa Wilkins.

DISMAL SWAMP NWR. Circle Center: Intersections of Middle and Jericho Ditches in Dismal Swamp National Wildlife Refuge. 36°40'N 76°29'W.

Field data: Count date: 4 Jan 2003. Times in field: 6:30 a.m. to 5:30 p.m. Temperatures: 30° to 36° F. Wind calm. Skies cloudy. Still water partly frozen, moving water open. Field observers: 17 in 7 parties. Total party-hours: 64.75 (43.25 on foot, 21.5 by car). Total party-miles: 164 (33 on foot, 131 by car).

Species: Pied-billed Grebe 2; Double-crested Cormorant 4; Great Blue Heron (blue form) 1; **Green Heron** 1; Black-crowned Night-Heron 40; Turkey Vulture 194; Snow Goose (white form) 1; Canada Goose 72; Tundra Swan 605; Wood Duck 19; **Gadwall** 2; American Wigeon 1; American Black Duck 2; Mallard 18; **Redhead** 2; Ring-necked Duck 595; Bufflehead 1; Hooded Merganser 16; Ruddy Duck 6; Bald Eagle 13 (6a, 7i); Northern Harrier 2; Sharp-shinned Hawk 4; Cooper's Hawk 1; Red-shouldered Hawk 7; Red-tailed Hawk 6; American Kestrel 24; Merlin 1; Killdeer 311; American Woodcock 7; Ring-billed Gull 2,288; Herring Gull 18; Rock Dove 1; Mourning Dove 214; Eastern Screech-Owl 29; Barred Owl 6; Belted Kingfisher 4; Red-bellied Woodpecker 109; Yellow-bellied Sapsucker 24; Downy Woodpecker 101; Hairy Woodpecker 47; Northern (Yellow-shafted) Flicker 109; Pileated Woodpecker 61; Eastern Phoebe 11; White-eyed Vireo 2; Blue-headed Vireo 3; Blue Jay 68; American Crow 90; Fish Crow 1; Carolina Chickadee 255; Tufted Titmouse 92.

Red-breasted Nuthatch 1; White-breasted Nuthatch 75; Brown-headed Nuthatch 1; Brown Creeper 16; Carolina Wren 176; House Wren 3; Winter Wren 36; Golden-crowned Kinglet 81; Ruby-crowned Kinglet 120; Eastern Bluebird 103; Hermit Thrush 276; American Robin 1,588; Gray Catbird 114; Northern Mockingbird

15; Brown Thrasher 12; European Starling 808; Cedar Waxwing 164; Orange-crowned Warbler 5; Yellow-rumped (Myrtle) Warbler 47; Pine Warbler 16; Palm Warbler 1; Common Yellowthroat 9; Eastern Towhee 146; Chipping Sparrow 121; Field Sparrow 2; Savannah Sparrow 2; Fox Sparrow 144; Song Sparrow 127; Swamp Sparrow 63; White-throated Sparrow 663; Dark-eyed (Slate-colored) Junco 519; Northern Cardinal 84; Red-winged Blackbird 175; Eastern Meadowlark 38; Rusty Blackbird 3; Common Grackle 210; House Finch 4; American Goldfinch 103; House Sparrow 25.

Total species: 90; **Total individuals:** 11,587.

Compiler: Thomas Gwynn III, 1640 Morris Ave., Norfolk, VA 23509
(tommgwynn@cox.net).

FINCASTLE. Circle Center: North of Fincastle near Jct. 220 and 679 in Botetourt County. 37°31'N 79°52'W.

Field data: Count date: 15 Dec 2002. Times in field: 6 a.m. to 4 p.m. Temperatures: 29° to 48° F. Wind W, 3-10 mph. Skies clear. Still water partly open, moving water open. Field observers: 20 in 10 parties. Feeder watchers: 1. Hours at feeders: 2. Nocturnal birding: 2 hours and 2 miles. Total party-hours (excludes feeder and nocturnal hours): 48 (24 on foot, 24 by car). Total party-miles (excludes nocturnal miles): 114 (23 on foot, 91 by car).

Species: Great Blue Heron (blue form) 10; Black Vulture 39; Turkey Vulture 144; Canada Goose 313; Mallard 2; Hooded Merganser 2; Northern Harrier 1; Sharp-shinned Hawk 5; Cooper's Hawk 4; Red-shouldered Hawk 2; Red-tailed Hawk 34; American Kestrel 13; Wild Turkey 14; Northern Bobwhite 3; Rock Dove 320; Mourning Dove 176; Eastern Screech-Owl 1; Great Horned Owl 1; *Selasphorus*, sp. 1 (ph); Belted Kingfisher 8; Red-bellied Woodpecker 30; Yellow-bellied Sapsucker 16; Downy Woodpecker 31; Hairy Woodpecker 5; Northern (Yellow-shafted) Flicker 49; Pileated Woodpecker 15; Eastern Phoebe 7; Blue Jay 122; American Crow 734; Common Raven 3; Horned Lark 55; Carolina Chickadee 85; Tufted Titmouse 58; White-breasted Nuthatch 23; Brown Creeper 1; Carolina Wren 79; Golden-crowned Kinglet 8; Ruby-crowned Kinglet 5; Eastern Bluebird 315; Hermit Thrush 7; American Robin 329; Northern Mockingbird 125; European Starling 941; Cedar Waxwing 281; Yellow-rumped (Myrtle) Warbler 127; Eastern Towhee 13; Chipping Sparrow 1; Field Sparrow 24; Fox Sparrow 6; Song Sparrow 93.

Swamp Sparrow 1; White-throated Sparrow 350; White-crowned Sparrow 62; Dark-eyed (Slate-colored) Junco 136; Northern Cardinal 147; Eastern Meadowlark 1; Common Grackle 1; Purple Finch 1; House Finch 131; American Goldfinch 64; House Sparrow 9.

Total species: 61; **Total individuals:** 5,584.

Compiler: Barry Kinzie, P.O. Box 446, Troutville, VA 24175
(ksummers@infi.net).

FORT BELVOIR. Circle Center: Pohick Episcopal Church, Fort Belvoir, in eastern Fairfax County. 38°41'N 77°12'W.

Temperatures: 40° to 55° F. Wind W-NW, 19-24 mph. Skies partly cloudy. Water open. Field observers: 12 in 5 parties. Feeder watchers: 6. Hours at feeders: 3. Nocturnal birding: 1.5 hours and 5 miles. Total party-hours (excludes feeder and nocturnal hours): 39.75 (29 on foot, 10.75 by car). Total party-miles (excludes nocturnal miles): 130 (12.5 on foot, 117.5 by car).

Species: Pied-billed Grebe 1; **Double-crested Cormorant 1**; Great Blue Heron (blue form) 6; Black Vulture 54; Turkey Vulture 9; Canada Goose 90; Mallard 19; Bufflehead 6; Hooded Merganser 34; Sharp-shinned Hawk 3; Cooper's Hawk 3; **Northern Goshawk 1**; **Red-shouldered Hawk 3**; Red-tailed Hawk 16; *Buteo*, sp. 1; **Golden Eagle 1**; American Kestrel 2; Ruffed Grouse 1; Wild Turkey 10; Northern Bobwhite 3; Ring-billed Gull 1; Rock Dove 80; Mourning Dove 35; Eastern Screech-Owl 2; Great Horned Owl 1; Barred Owl 1; Belted Kingfisher 8; Red-bellied Woodpecker 15; Yellow-bellied Sapsucker 4; Downy Woodpecker 29; Hairy Woodpecker 11; Northern (Yellow-shafted) Flicker 7; Pileated Woodpecker 10; Eastern Phoebe 2; **Red-eyed Vireo 1**; Blue Jay 83; American Crow 169; Common Raven 11; Carolina Chickadee 81; Black-capped Chickadee 33; chickadee, sp. 4; Tufted Titmouse 71; White-breasted Nuthatch 34; Brown Creeper 4; Carolina Wren 44; Winter Wren 1; Golden-crowned Kinglet 32; Ruby-crowned Kinglet 12; Eastern Bluebird 130; Hermit Thrush 4; American Robin 5; Northern Mockingbird 40; European Starling 339.

Cedar Waxwing 85; Yellow-rumped (Myrtle) Warbler 9; Pine Warbler 5; Eastern Towhee 5; Field Sparrow 41; Fox Sparrow 3; Song Sparrow 90; Swamp Sparrow 2; White-throated Sparrow 57; White-crowned Sparrow 19; Dark-eyed (Slate-colored) Junco 214; Northern Cardinal 105; **Red-winged Blackbird 3**; Common Grackle 1; *Icterid*, sp. 30; House Finch 33; American Goldfinch 93; House Sparrow 59.

Total species: 67; **Total individuals:** 2,421.

Compiler: Peggy Spiegel, Rt. 1, Box 329, Pearisburg, VA 4134-2424 (gramby@swva.net).

Participants: David Brady, Tom Brobsom, Bruce Grimes, James Hartley, Heilig Jennings, Alan Kessler, Clyde Kessler, Debbie Lineweaver, (Mr. & Mrs. Miller and 4 other family members - feeder watchers) Bill Opengari, Peggy Spiegel, John Swift, and Jason Wilson.

GLADE SPRING. Circle Center: Jct. 750 and 609 in Glade Spring. 36°47'N 81°47'W.

Field data: Count date: 4 Jan 2003. Times in field: 6 a.m. to 5:30 p.m. Temperatures: 26° to 36° F. Wind W, 5-15 mph. AM skies cloudy, light snow. PM skies clear. Still water partly frozen, moving water open. Field observers: 21 in 6 parties. Nocturnal birding: 2.5 hours and 10 miles. Total party-hours (excludes nocturnal hours): 56 (36.5 on foot, 19.5 by car). Total party-miles (excludes nocturnal miles): 422.5 (11.5 on foot, 411 by car).

Species: Pied-billed Grebe 1; Great Blue Heron (blue form) 21; Black Vulture 48; Turkey Vulture 28; Canada Goose 157; Gadwall 11; American Wigeon 4; American Black Duck 65; Mallard 750; Northern Shoveler 2; American Green-winged Teal 1;

Redhead 1; Sharp-shinned Hawk 5; Cooper's Hawk 1; Red-tailed Hawk 33; American Kestrel 34; Ruffed Grouse 1; Wild Turkey 1; American Coot 8; Killdeer 33; Wilson's Snipe 6; Rock Dove 390; Mourning Dove 970; Eastern Screech-Owl 5; Great Horned Owl 3; Belted Kingfisher 8; Red-bellied Woodpecker 23; Yellow-bellied Sapsucker 6; Downy Woodpecker 48; Hairy Woodpecker 1; Northern (Yellow-shafted) Flicker 25; Pileated Woodpecker 9; Eastern Phoebe 11; Blue Jay 96; American Crow 818; Common Raven 8; Horned Lark 160; Carolina Chickadee 99; Black-capped Chickadee 1; Tufted Titmouse 102; White-breasted Nuthatch 48; Brown Creeper 1; Carolina Wren 54; Winter Wren 1; Golden-crowned Kinglet 15; Eastern Bluebird 130; Hermit Thrush 1; American Robin 14; Northern Mockingbird 85; Brown Thrasher 1.

European Starling 4,059; Cedar Waxwing 20; Yellow-rumped (Myrtle) Warbler 16; Eastern Towhee 14; Chipping Sparrow 2; Field Sparrow 24; Fox Sparrow 1; Song Sparrow 132; Swamp Sparrow 2; White-throated Sparrow 162; White-crowned Sparrow 164; Dark-eyed (Slate-colored) Junco 181; Northern Cardinal 253; Eastern Meadowlark 9; House Finch 138; Pine Siskin 1; American Goldfinch 246; House Sparrow 116.

Total species: 68; **Total individuals:** 9,884.

Compiler: Ron Harrington, 20435 Carson Ln., Bristol, VA 24202 (roneharrin@aol.com).

GORDONSVILLE. Circle Center: Jct. of 15 and 33 north of the town of Gordonsville in Orange County. 38°09'N 78°12'W.

Field data: Count date: 29 Dec 2002. Times in field: 7 a.m. to 5 p.m. Temperatures: 31° to 50° F. Wind calm. Skies clear. Still water partly open, moving water open. Field observers: 9 in 6 parties. Feeder watchers: 2. Hours at feeders: 2. Nocturnal birding: 0.5 hours and 5 miles. Total party-hours (excludes feeder and nocturnal hours): 43 (22 on foot, 21 by car). Total party-miles (excludes nocturnal miles): 221 (11 on foot, 210 by car).

Species: Pied-billed Grebe 2; Great Blue Heron (blue form) 11; Black Vulture 19; Turkey Vulture 63; Canada Goose 3,256; American Black Duck 2; Mallard 36; Ring-necked Duck 104; **Lesser Scaup** 12; Bufflehead 8; Hooded Merganser 36; Ruddy Duck 6; Bald Eagle CW; Cooper's Hawk 1; Red-shouldered Hawk 6; Red-tailed Hawk 11; *Buteo*, sp. 2; American Kestrel 10; Wild Turkey 1; Northern Bobwhite 4; Wilson's Snipe 4; Ring-billed Gull 2; Rock Dove 36; Mourning Dove 35; Barred Owl 1; Belted Kingfisher 4; Red-headed Woodpecker 7; Red-bellied Woodpecker 29; Yellow-bellied Sapsucker 17; Downy Woodpecker 9; Hairy Woodpecker 4; Northern (Yellow-shafted) Flicker 42; Pileated Woodpecker 16; Blue Jay 110; American Crow 265; Carolina Chickadee 46; Black-capped Chickadee 3; Tufted Titmouse 59; White-breasted Nuthatch 4; Carolina Wren 35; Golden-crowned Kinglet 7; Ruby-crowned Kinglet 6; Eastern Bluebird 166; Hermit Thrush 1; American Robin 325; Northern Mockingbird 67; European Starling 2,594; Cedar Waxwing 32; Yellow-rumped (Myrtle) Warbler 86; Pine Warbler 2; Eastern Towhee 2; Chipping Sparrow 13.

Field Sparrow 7; Fox Sparrow 1; Song Sparrow 54; White-throated Sparrow 159; White-crowned Sparrow 25; Dark-eyed (Slate-colored) Junco 271; Northern

Cardinal 71; Red-winged Blackbird 55; Common Grackle 1,953; Brown-headed Cowbird 502; Purple Finch 30; House Finch 147; American Goldfinch 26; House Sparrow 35.

Total species: 64; **Total individuals:** 10,955.

Compiler: Donald Ober, P.O. Box 6, Orange, VA 22960 (ober@ns.gemlink.com).

HOPEWELL. Circle Center: Curles Neck in Henrico County. 37°23'N 77°17'W.

Field data: Count date: 15 Dec 2002. Times in field: 5:15 a.m. to 5:30 a.m. Temperatures: 32° to 40° F. Wind calm. Skies clear. Water open. Field observers: 35 in 14 parties. Feeder watchers: 1. Hours at feeders: 0.75. Nocturnal birding: 6.25 hours and 5.25 miles. Total party-hours (excludes feeder and nocturnal hours): 115 (71.25 on foot, 42.75 by car, 1 by boat). Total party-miles (excludes nocturnal miles): 284.5 (34 on foot, 249.5 by car, 1 by boat).

Species: Common Loon 2; Pied-billed Grebe 4; Horned Grebe 1; Double-crested Cormorant 730; Great Blue Heron (blue form) 181; Black Vulture 110; Turkey Vulture 108; Snow Goose (blue form) 1,200; Snow Goose (white form) 200; Canada Goose 7,035; Tundra Swan 1; Wood Duck 30; Gadwall 184; American Wigeon 77; American wigeon x Eurasian wigeon hybrid 1; American Black Duck 45; Mallard 86; Northern Shoveler 60; Northern Pintail 3; American Green-winged Teal 5; Ring-necked Duck 297; Lesser Scaup 6; Bufflehead 53; Hooded Merganser 125; Common Merganser 145; Red-breasted Merganser 11; Ruddy Duck 26; Osprey 2; Bald Eagle 68 (31a, 37i); Northern Harrier 27; Sharp-shinned Hawk 10; Cooper's Hawk 6; Red-shouldered Hawk 15; Red-tailed Hawk 47; American Kestrel 20; Peregrine Falcon 1; Ring-necked Pheasant 8; Wild Turkey 1; American Coot 40; Killdeer 168; Lesser Yellowlegs 16; **Dunlin 16**; Wilson's Snipe 16; American Woodcock 42; Laughing Gull 561; Bonaparte's Gull 9; Ring-billed Gull 12,675; Herring Gull 241; Great Black-backed Gull 9; Forster's Tern 5; Rock Dove 65; Mourning Dove 726.

Barn Owl 1; Eastern Screech-Owl 1; Great Horned Owl 9; Barred Owl 3; Short-eared Owl 3; Belted Kingfisher 30; Red-headed Woodpecker 5; Red-bellied Woodpecker 124; Yellow-bellied Sapsucker 48; Downy Woodpecker 47; Hairy Woodpecker 9; Northern (Yellow-shafted) Flicker 220; Pileated Woodpecker 27; Eastern Phoebe 28; Blue Jay 165; American Crow 188; Fish Crow 3; crow, sp. 23; Horned Lark 142; Carolina Chickadee 195; Tufted Titmouse 98; White-breasted Nuthatch 67; Brown Creeper 3; Carolina Wren 236; House Wren 2; Winter Wren 30; Golden-crowned Kinglet 19; Ruby-crowned Kinglet 72; Eastern Bluebird 333; Hermit Thrush 54; American Robin 2,960; Gray Catbird 14; Northern Mockingbird 164; Brown Thrasher 17; European Starling 2,509; American Pipit 378; Cedar Waxwing 3,808; Yellow-rumped (Myrtle) Warbler 220; Pine Warbler 4; Palm Warbler 2; Eastern Towhee 29; Chipping Sparrow 17; Field Sparrow 70; Savannah Sparrow 101; Fox Sparrow 7; Song Sparrow 478; Swamp Sparrow 60; White-throated Sparrow 816; White-crowned Sparrow 25; Dark-eyed (Slate-colored) Junco 464; **Lapland Longspur 12**.

Snow Bunting 358; Red-winged Blackbird 4,881; Eastern Meadowlark 119; Common Grackle 4,039; Brown-headed Cowbird 432; Baltimore Oriole 1; House

Finch 131; American Goldfinch 224; House Sparrow 18.

Total species: 109; **Total individuals:** 50,063.

Compiler: Sherrie Siers, 10313 Glen Oaks Dr., Chester, VA 23831 (bruja95@aol.com).

LAKE ANNA. Circle Center: Center of Route 208 bridge over Lake Anna. 38° 05'N 77° 49'W.

Field data: Count date: 4 Jan 2003. Times in field: 4:30 a.m. to 5:30 p.m. Temperatures: 30° to 40° F. AM skies partly cloudy. PM skies clear. Water open. Field observers: 10 in 7 parties. Nocturnal birding: 2 hours and 6 miles. Total party-hours (excludes nocturnal hours): 66 (6 on foot, 60 by car). Total party-miles (excludes nocturnal miles): 220.5 (60 on foot, 214 by car).

Species: Common Loon 18; Pied-billed Grebe 8; Horned Grebe 2; Great Blue Heron (blue form) 26; Black Vulture 50; Turkey Vulture 81; Canada Goose 650; Wood Duck 4; Gadwall 5; American Black Duck 2; Mallard 149; Ring-necked Duck 9; Bufflehead 23; Hooded Merganser 43; Common Merganser 5; duck, sp. 2; Bald Eagle 6 (3a, 3i); Northern Harrier 2; Sharp-shinned Hawk 4; Cooper's Hawk 1; Red-shouldered Hawk 6; Red-tailed Hawk 10; American Kestrel 4; **Ruffed Grouse 1**; Wild Turkey 12; American Coot 25; Killdeer 8; Bonaparte's Gull 112; Ring-billed Gull 6,400; Herring Gull 1,200; Great Black-backed Gull 35; Rock Dove 22; Mourning Dove 46; Eastern Screech-Owl 1; Great Horned Owl 4; Barred Owl 1; Belted Kingfisher 9; Red-bellied Woodpecker 36; Yellow-bellied Sapsucker 4; Downy Woodpecker 30; Hairy Woodpecker 3; Northern (Yellow-shafted) Flicker 25; Pileated Woodpecker 8; Eastern Phoebe 5; Loggerhead Shrike 1; Blue Jay 144; American Crow 250; Fish Crow 4; **Common Raven 1**; Horned Lark 6; Carolina Chickadee 130; Tufted Titmouse 48; White-breasted Nuthatch 26.

Brown Creeper 5; Carolina Wren 45; Winter Wren 10; Golden-crowned Kinglet 30; Ruby-crowned Kinglet 15; Eastern Bluebird 140; Hermit Thrush 3; American Robin 351; Northern Mockingbird 85; Brown Thrasher 2; European Starling 556; American Pipit 6; Cedar Waxwing 320; Yellow-rumped (Myrtle) Warbler 175; Pine Warbler 2; Common Yellowthroat 2; Eastern Towhee 15; American Tree Sparrow 1; Chipping Sparrow 10; Field Sparrow 39; Savannah Sparrow 3; Fox Sparrow 1; Song Sparrow 89; Swamp Sparrow 2; White-throated Sparrow 154; White-crowned Sparrow 4; Dark-eyed (Slate-colored) Junco 241; Northern Cardinal 56; Red-winged Blackbird 2; Eastern Meadowlark 7; Common Grackle 4; Purple Finch 3; House Finch 222; American Goldfinch 90; House Sparrow 75.

Total species: 85; **Total individuals:** 12,470.

Compiler: Betty Floyd, 7300 Lookout Dr., Richmond, VA 23225 (hfloyd@vcu.org).

Observer's note: (David Powers) It is not unusual to see Hooded Mergansers on a Christmas Bird Count. What is unusual is to see them with young in December. This area had no rain for three months, months during which the bird would normally breed. I saw 28 Hooded Mergansers in a protected cove, just in front of grassy cover. There were 20 adults and 8 young. The young were small dark

birds with a little white spot on the crown. They were swimming with the adults. There appeared to be three pairs with young. There were no other ducks near the group. They also all displayed diving behavior.

LEXINGTON. Circle Center: Big Spring Pond in Rockbridge County. 37°51'N 79°29'W.

Field data: Count date: 26 Dec 2002. Times in field: 5:30 a.m. to 5:30 p.m. Temperatures: 25° to 42° F. Wind NW, 0-25 mph. AM skies partly cloudy. PM skies clear. Water open. Field observers: 18 in 4 to 9 parties. Feeder watchers: 3. Hours at feeders: 5. Nocturnal birding: 2 hours and 15 miles. Total party-hours (excludes feeder and nocturnal hours): 50 (29 on foot, 21 by car). Total party-miles (excludes nocturnal miles): 197 (21 on foot, 176 by car).

Species: Horned Grebe 1; Great Blue Heron (blue form) 10; Black Vulture 220; Turkey Vulture 268; Canada Goose 174; American Black Duck 17; Mallard 230; American Green-winged Teal 7; Hooded Merganser 9; Sharp-shinned Hawk 3; Cooper's Hawk 1; Red-shouldered Hawk 5; Red-tailed Hawk 20; **Golden Eagle 1** (a); American Kestrel 17; Ruffed Grouse 1; Wild Turkey 3; Rock Dove 265; Mourning Dove 147; Eastern Screech-Owl 2; Great Horned Owl 2; Barred Owl 1; Belted Kingfisher 14; Red-bellied Woodpecker 41; Yellow-bellied Sapsucker 12; Downy Woodpecker 44; Hairy Woodpecker 8; Northern (Yellow-shafted) Flicker 23; Pileated Woodpecker 17; Eastern Phoebe 8; Blue Jay 158; American Crow 1,127; Common Raven 4; Horned Lark 1; Carolina Chickadee 118; Black-capped Chickadee 25; chickadee, sp. 21; Tufted Titmouse 145; Red-breasted Nuthatch 1; White-breasted Nuthatch 45; Brown Creeper 3; Carolina Wren 64; Winter Wren 2; Golden-crowned Kinglet 50; Ruby-crowned Kinglet 8; Eastern Bluebird 219; Hermit Thrush 21; American Robin 982; Northern Mockingbird 60; European Starling 3,225; Cedar Waxwing 103.

Yellow-rumped (Myrtle) Warbler 215; Eastern Towhee 3; American Tree Sparrow 5; Field Sparrow 33; Fox Sparrow 3; Song Sparrow 75; White-throated Sparrow 360; White-crowned Sparrow 34; Dark-eyed (Slate-colored) Junco 314; Northern Cardinal 185; Red-winged Blackbird 7; Eastern Meadowlark 8; Rusty Blackbird 2; Common Grackle CW; Brown-headed Cowbird 205; blackbird, sp. 80; Purple Finch 7; House Finch 168; Pine Siskin 10; American Goldfinch 159; House Sparrow 37.

Total species: 69; **Total individuals:** 9,863.

Compilers: Bob Paxton, 460 Riverside Dr. #72, New York, NY 10027 (rop1@columbia.edu); and George Tolley, 494 Smokey Row Rd., Lexington, VA 24450 (gtolley@rockbridge.net).

LITTLE CREEK. Circle Center: 3.8 miles northeast of Kempsville in Virginia Beach. 36°51'N 76°06'W.

Field data: Count date: 31 Dec 2002. Times in field: 5:15 to 5:30 p.m. Temperatures: 44° to 66° F. Wind SW, 0-15 mph. Skies partly cloudy. Water open. Field observers: 24 in 12 to 16 parties. Nocturnal birding: 6 hours and 24 miles. Total

party-hours (excludes nocturnal hours): 87 (75 on foot, 12 by car). Total party-miles (excludes nocturnal miles): 295 (39 on foot, 256 by car).

Red-throated Loon 102; Common Loon 25; Pied-billed Grebe 20; Horned Grebe 1; **Clark's Grebe 1**; Northern Gannet 4,300; Brown Pelican **800**; Double-crested Cormorant **8,000**; Great Cormorant 10; Great Blue Heron (blue form) 88; Great Egret 58; Black-crowned Night-Heron 3; Black Vulture **158**; Turkey Vulture 33; Snow Goose (white form) 31; Canada Goose 516; Tundra Swan 112; Wood Duck 44; Gadwall 172; American Wigeon 81; American Black Duck 73; Mallard 581; Northern Shoveler 151; American Green-winged Teal 33; Redhead 1; Ring-necked Duck 83; Lesser Scaup 1; Common Eider 4; Surf Scoter 468; White-winged Scoter 2; Black Scoter 113; Long-tailed Duck 46; Bufflehead 413; Common Goldeneye 1; Hooded Merganser 363; Red-breasted Merganser 746; Ruddy Duck 133; Osprey 3; Bald Eagle 4 (i); Northern Harrier 2; Sharp-shinned Hawk 3; Cooper's Hawk 2; Red-shouldered Hawk 1; Red-tailed Hawk 18; American Kestrel 19; Merlin CW; Clapper Rail 16; American Coot 26; Black-bellied Plover CW; Killdeer 8; American Oystercatcher 44; Greater Yellowlegs 2.

Ruddy Turnstone 55; Sanderling 173; Western Sandpiper 1; Purple Sandpiper 54; Dunlin 18; American Woodcock 1; Laughing Gull 11; **Black-headed Gull 1**; Bonaparte's Gull 4,900; **Mew Gull 1**; Ring-billed Gull 12,350; Herring Gull 1,615; **Thayer's Gull 1**; Lesser Black-backed Gull **28**; Great Black-backed Gull 840; Forster's Tern 481; Black Skimmer 2; Rock Dove 595; Mourning Dove 444; Eastern Screech-Owl 27; Great Horned Owl 10; Belted Kingfisher 29; Red-bellied Woodpecker 39; Yellow-bellied Sapsucker 5; Downy Woodpecker 25; Hairy Woodpecker 2;

Northern (Yellow-shafted) Flicker 33; Pileated Woodpecker 13; Eastern Phoebe 5; Blue-headed Vireo 1; Blue Jay 92; American Crow 2,060; Fish Crow 203; Horned Lark 2; Carolina Chickadee 118; Black-capped Chickadee 25; White-breasted Nuthatch 2; Brown-headed Nuthatch 16; Brown Creeper 3; Carolina Wren 139; House Wren 2; Winter Wren 13; Sedge Wren 1; Marsh Wren 2; Golden-crowned Kinglet 33; Ruby-crowned Kinglet 15; Eastern Bluebird 11; Hermit Thrush 33; American Robin 1,220; Gray Catbird 8.

Northern Mockingbird 58; Brown Thrasher 7; European Starling 1,445; American Pipit 28; Cedar Waxwing 132; Orange-crowned Warbler 3; Yellow-rumped (Myrtle) Warbler 328; Pine Warbler 5; Palm Warbler 11; **Black-and-white Warbler 1**; Common Yellowthroat 1; Eastern Towhee 26; Chipping Sparrow 1; Savannah Sparrow 59; Savannah (Ipswich) Sparrow 1; Seaside Sparrow 1; Fox Sparrow 10; Song Sparrow 84; Swamp Sparrow 7; White-throated Sparrow 595; Dark-eyed (Slate-colored) Junco 124; Northern Cardinal 51; **Painted Bunting 2**; Red-winged Blackbird 770; Eastern Meadowlark 2; Common Grackle 608; Boat-tailed Grackle 283; Brown-headed Cowbird 25; House Finch 93; American Goldfinch 79; House Sparrow 78.

Total species: 130; **Total individuals:** 48,591.

Compiler: Paul Sykes, 1080 Forest Rd., Watkinsville, GA 30677 (paul_sykes@usgs.gov).



MANASSAS-BULL RUN. Circle Center: Centreville in western Fairfax County. 38°50'N 77°26'W.

Field data: Count date: 22 Dec 2002. Times in field: 5 a.m. to 6 p.m. Temperatures: 35° to 50° F. Wind variable, 0-5 mph. Skies clear. Water open. Field observers: 116 in 12 to 37 parties. Nocturnal birding: 7 hours and 15 miles. Total party-hours (excludes nocturnal hours): 177 (172 on foot, 5 by car). Total party-miles (excludes nocturnal miles): 189 (135 on foot, 54 by car).

Species: Great Blue Heron (blue form) 17; **Black-crowned Night-Heron** 1; Black Vulture 89; Turkey Vulture 354; Snow Goose (blue form) 1; Canada Goose 4,801; Mute Swan 2; Tundra Swan 1; Wood Duck 4; American Black Duck 9; Mallard 355; Northern Shoveler 1; Ring-necked Duck 1; Bufflehead 1; Hooded Merganser 82; Common Merganser 27; Bald Eagle 5 (3a, 2i); Northern Harrier 10; Sharp-shinned Hawk 10; Cooper's Hawk 1; *Accipiter*, sp. 18; Red-shouldered Hawk 67; Red-tailed Hawk 54; American Kestrel 5; Merlin 1; Wild Turkey 4; Northern Bobwhite 6; Killdeer 10; American Woodcock 2; Ring-billed Gull 905; Herring Gull 8; gull, sp. 7; Rock Dove 419; Mourning Dove 559; Eastern Screech-Owl 3; Great Horned Owl 9; Barred Owl 5; Long-eared Owl CW; Short-eared Owl 1; Northern Saw-whet Owl 1; Belted Kingfisher 22; Red-bellied Woodpecker 222; Yellow-bellied Sapsucker 22; Downy Woodpecker 194; Hairy Woodpecker 43; Northern (Yellow-shafted) Flicker 181; Pileated Woodpecker 45; Eastern Phoebe 1; **Blue-headed Vireo** 1; Blue Jay 483; American Crow 1,188; Fish Crow 281; crow, sp. 560; Common Raven 3; Carolina Chickadee 622; Tufted Titmouse 350; White-breasted Nuthatch 184; Brown Creeper 14; Carolina Wren 332; Winter Wren 2; Golden-crowned Kinglet 52; Ruby-crowned Kinglet 20; Eastern Bluebird 387; Hermit Thrush 14.

American Robin 4,714; Gray Catbird 2; Northern Mockingbird 211; European Starling 2,666; American Pipit CW; Cedar Waxwing 1,210; Yellow-rumped (Myrtle) Warbler 418; Eastern Towhee 25; American Tree Sparrow 8; Chipping Sparrow 3; Field Sparrow 178; Savannah Sparrow 11; Fox Sparrow 3; Song Sparrow 385; Swamp Sparrow 11; White-throated Sparrow 497; sparrow, sp. 10; Dark-eyed (Slate-colored) Junco 995; Lapland Longspur CW; Northern Cardinal 530; Red-winged Blackbird 81; Eastern Meadowlark 1; Common Grackle 523; House Finch 325; Pine Siskin 36; American Goldfinch 255; House Sparrow 232.

Total species: 84; **Total individuals:** 26,409.

Compiler: John Dent, 6804 Langley Springs Court, McLean, VA 22101 (jdent@erols.com).

MATHEWS COUNTY. Circle Center: 0.5 mile east of Beaverlett Post Office in Mathews County. 37°25'N 76°18'W.

Field data: Count date: 5 Jan 2003. Times in field: 4 a.m. to 5 p.m. Temperatures: 30° to 45° F. Wind SW, 0-8 mph. AM skies cloudy. PM skies partly cloudy. Water open. Field observers: 48 in 11 to 12 parties. Nocturnal birding: 4.5 hours and 15.5 miles. Total party-hours (excludes nocturnal hours): 102.5 (52.5 on foot, 49 by car, 1 by boat). Total party-miles (excludes nocturnal miles): 431 (34.5 on foot, 395.5 by car, 1 by boat).

Species: Red-throated Loon 11; Common Loon 224; Horned Grebe 31; Northern Gannet 35; Brown Pelican 37; Double-crested Cormorant 10; Great Blue Heron (blue form) 65; Black Vulture 23; Turkey Vulture 115; Snow Goose (white form) 625; Canada Goose 1,084; Brant 18; Mute Swan 2; Tundra Swan 714; American Black Duck 30; Mallard 184; Ring-necked Duck CW; Lesser Scaup 318; scaup, sp. 220; Surf Scoter 390; White-winged Scoter 21; Black Scoter 36; Long-tailed Duck 24; Bufflehead 1,905; Common Goldeneye 135; Hooded Merganser 107; Common Merganser 2; Red-breasted Merganser 382; merganser, sp.178; Ruddy Duck 27; Bald Eagle 13 (9a, 4i); Northern Harrier 8; Sharp-shinned Hawk 1; Cooper's Hawk 2; Red-shouldered Hawk 12; Red-tailed Hawk 20; American Kestrel 4; Wild Turkey 8; Clapper Rail 3; Black-bellied Plover CW; Killdeer 9; American Oystercatcher 2; Greater Yellowlegs 16; Ruddy Turnstone 1; Sanderling 180; Dunlin 418; peep, sp. 40; Wilson's Snipe 2; Bonaparte's Gull 75; Ring-billed Gull 1,131; Herring Gull 349; Lesser Black-backed Gull 1; Great Black-backed Gull 95; Forster's Tern 56.

Rock Dove 44; Mourning Dove 324; Great Horned Owl 21; Belted Kingfisher 40; Red-headed Woodpecker 1; Red-bellied Woodpecker 62; Yellow-bellied Sapsucker 8; Downy Woodpecker 21; Hairy Woodpecker 4; Northern (Yellow-shafted) Flicker 116; Pileated Woodpecker 12; Eastern Phoebe 4; Blue Jay 152; American Crow 473; Carolina Chickadee 116; Tufted Titmouse 87; Red-breasted Nuthatch 1; White-breasted Nuthatch 1; Brown-headed Nuthatch 42; Brown Creeper 4; Carolina Wren 154; House Wren CW; Winter Wren 2; Golden-crowned Kinglet 4; Ruby-crowned Kinglet 9; kinglet, sp.1; Eastern Bluebird 968; Hermit Thrush 10; American Robin 2,076; Gray Catbird 6; Northern Mockingbird 112; Brown Thrasher 17; European Starling 817; Cedar Waxwing 1,441; Yellow-rumped (Myrtle) Warbler 1,162; Pine Warbler 7; Palm Warbler 1; Eastern Towhee 48; American Tree Sparrow 1; Chipping Sparrow 129; Field Sparrow 7; Fox Sparrow 27; Song Sparrow 128; Swamp Sparrow 2; White-throated Sparrow 277; Dark-eyed (Slate-colored) Junco 922; Northern Cardinal 351; Red-winged Blackbird 989; Eastern Meadowlark 40; Common Grackle 113; Boat-tailed Grackle 45; Brown-headed Cowbird 25; blackbird, sp. 200.

House Finch 237; American Goldfinch 196; House Sparrow 63.

Total species: 103; **Total individuals:** 21,519.

Compilers: John Bazuin, Jr., 7451 Little River Tnpk, #202, Annandale, VA 22003 (bazuin.john@epa.gov) and Mary Pulley, HC 75, Box 2750, Hudgins, VA 23076.

MOUNT ROGERS-WHITE TOP MOUNTAIN. Circle Center: Jct. 600 and 603. 36° 39' N 81° 35' W.

Field data: Count date: 4 Jan 2003. Times in field: 8 a.m. to 5:30 p.m. Temperatures: 8° to 30° F. Wind NW, 5-20 mph. AM skies cloudy, light to no snow. PM skies clear. Snow depth: 0-3 inches. Still water partly open, moving water partly frozen. Field observers: 16 in 6 parties. Total party-hours: 44.5 (22.25 on foot, 22.25 by car). Total party-miles: 277.5 (23.5 on foot, 254 by car).

Species: Great Blue Heron (blue form) 2; Turkey Vulture 1; Canada Goose 39; Mallard 17; Sharp-shinned Hawk 1; Red-tailed Hawk 7; American Kestrel 14;

Ruffed Grouse 3; Wild Turkey 47; Rock Dove 20; Mourning Dove 101; **Belted Kingfisher** 3; Red-bellied Woodpecker 4; Yellow-bellied Sapsucker 2; Downy Woodpecker 18; Hairy Woodpecker 6; Northern (Yellow-shafted) Flicker 4; Pileated Woodpecker 2; Eastern Phoebe 4; **Loggerhead Shrike** 1; Blue Jay 16; American Crow 301; Common Raven 26; Carolina Chickadee 53; Black-capped Chickadee 10; chickadee, sp. 2; Tufted Titmouse 41; White-breasted Nuthatch 25; Brown Creeper 2; Carolina Wren 21; Winter Wren 1; Golden-crowned Kinglet 13; Eastern Bluebird 63; Northern Mockingbird 19; European Starling 287; Yellow-rumped (Myrtle) Warbler 8; Eastern Towhee 2; Field Sparrow 4; Song Sparrow 96; Swamp Sparrow 2; White-throated Sparrow 18; White-crowned Sparrow 32; Dark-eyed (Slate-colored) Junco 317; Northern Cardinal 48; House Finch 38; American Goldfinch 38; House Sparrow 18.

Total species: 46; **Total individuals:** 1,797.

Compiler: Allen Boynton, P.O. Box 241, Marion, VA 24354 (allenboynton@adelphia.net).

NANSEMOND RIVER. Circle Center: Jct. 17 and 626 in Pughsville, Suffolk. 36°52'N 76°26'W.

Field data: Count date: 5 Jan 2003. Times in field: 5 a.m. to 5 p.m. Temperatures: 29° to 46° F. Wind SW, 0-15 mph. Skies partly cloudy. Water open. Field observers: 11 in 7 parties. Nocturnal birding: 3.75 hours and 5.5 miles. Total party-hours (excludes nocturnal hours): 64.5 (30.5 on foot, 32.5 by car, 1.5 hours by boat). Total party-miles (excludes nocturnal miles): 226 (15 on foot, 209.75 by car, 1.25 by boat).

Species: Red-throated Loon 6; Common Loon 23; Pied-billed Grebe 7; Horned Grebe 77; Northern Gannet 1; Brown Pelican 78; Double-crested Cormorant 6,436; Great Cormorant 1; Great Blue Heron (blue form) 34; Great Egret 3; **Snowy Egret** 1; **Black-crowned Night-Heron** 2; Black Vulture 63; Turkey Vulture 117; Canada Goose 2,142; Tundra Swan 89; Wood Duck 3; Gadwall 65; American Wigeon 45; American Black Duck 69; Mallard 162; Northern Shoveler 16; Northern Pintail 16; American Green-winged Teal 35; Canvasback 1,034; Redhead 5; Ring-necked Duck 91; Lesser Scaup 150; scaup, sp. 25; Surf Scoter 8; Black Scoter 2; Bufflehead 837; Common Goldeneye 33; Hooded Merganser 63; Red-breasted Merganser 200; Ruddy Duck 1,591; Osprey 5; Bald Eagle 11 (8a, 3i); Northern Harrier 13; Sharpshinned Hawk 6; Cooper's Hawk 6; Northern Goshawk 1; Red-shouldered Hawk 1; Red-tailed Hawk 42; American Kestrel 22; Merlin 1; Peregrine Falcon 4; Northern Bobwhite 22; Clapper Rail 14; **Virginia Rail** 3; **Common Moorhen** 1.

Black-bellied Plover 2; Killdeer 80; Greater Yellowlegs 1; **Ruddy Turnstone** 2; Sanderling 94; Least Sandpiper 30; Dunlin 69; American Woodcock 1; Laughing Gull 2; Ring-billed Gull 44,834; Herring Gull 17,943; Lesser Black-backed Gull 37; Great Black-backed Gull 1,930; Rock Dove 628; Mourning Dove 484; Barn Owl 1; Eastern Screech-Owl 3; Great Horned Owl 5; Short-eared Owl 3; Belted Kingfisher 22; Red-bellied Woodpecker 64; Yellow-bellied Sapsucker 7; Downy Woodpecker 33; Hairy Woodpecker 4; Northern (Yellow-shafted) Flicker 72; Pileated Woodpecker 14; Eastern Phoebe 4; Blue Jay 202; American Crow 250; Fish Crow 570; Horned

Lark 2; Carolina Chickadee 132; Tufted Titmouse 75; White-breasted Nuthatch 6; Brown-headed Nuthatch 2; Brown Creeper 1; Carolina Wren 121; House Wren 3; Winter Wren 10; Sedge Wren 1; Marsh Wren 5; Golden-crowned Kinglet 43; Ruby-crowned Kinglet 43; Eastern Bluebird 195; Hermit Thrush 37; American Robin 324; Gray Catbird 1; Northern Mockingbird 66; Brown Thrasher 7; European Starling 1,405.

American Pipit 12; Cedar Waxwing 717; Orange-crowned Warbler 3; Yellow-rumped (Myrtle) Warbler 704; Pine Warbler 15; Palm Warbler 4; **Black-and-white Warbler 1**; Common Yellowthroat 3; Eastern Towhee 67; Chipping Sparrow 156; **Clay-colored Sparrow 1**; Field Sparrow 32; Savannah Sparrow 67; Nelson's Sharp-tailed Sparrow 1; Seaside Sparrow 4; Fox Sparrow 51; Song Sparrow 339; **Lincoln's Sparrow 1**; Swamp Sparrow 121; White-throated Sparrow 498; White-crowned Sparrow 2; Dark-eyed (Slate-colored) Junco 397; Northern Cardinal 127; Red-winged Blackbird 12,815; Eastern Meadowlark 64; Rusty Blackbird 1; Common Grackle 4,258; Boat-tailed Grackle 71; Brown-headed Cowbird 12; blackbird, sp. 2,000; Baltimore Oriole 1; Purple Finch 8; House Finch 38; American Goldfinch 104; House Sparrow 83.

Total species: 134; **Total individuals:** 106,330.

Compiler: Les Willis, P.O. Box 6063, Suffolk, VA 23433 (leswillis@clwillis.com).

NEWPORT NEWS. Circle Center: Northern corner of Magruder & Cmdr. Shepard boulevards in Hampton. 37°05'N 76°25'W.

Field data: Count date: 14 Dec 2002. Times in field: 5:30 a.m. to 4:30 p.m. Temperatures: 46° to 54° F. Wind W, 10-20 mph. AM skies clear. PM skies partly cloudy. Water open. Field observers: 39 in 13 parties. Nocturnal birding: 1 hours and 2 miles. Total party-hours (excludes nocturnal hours): 106.25 (52.75 on foot, 53.5 by car). Total party-miles (excludes nocturnal miles): 501 (48 on foot, 453 by car).

Species: Red-throated Loon 11; Common Loon 65; Pied-billed Grebe 30; Horned Grebe 7; Northern Gannet 163; Brown Pelican 144; Double-crested Cormorant 1,871; Great Blue Heron (blue form) 65; Great Egret 11; Black-crowned Night-Heron 5; Black Vulture 9; Turkey Vulture 40; Snow Goose (white form) CW; Canada Goose 730; Tundra Swan 21; Wood Duck 1; Gadwall 143; American Wigeon 300; American Black Duck 80; Mallard 869; Northern Shoveler 11; American Green-winged Teal 1; Redhead 140; Ring-necked Duck 141; Lesser Scaup 70; Surf Scoter 28; White-winged Scoter 1; Black Scoter 3; Long-tailed Duck 4; Bufflehead 510; Common Goldeneye 11; Hooded Merganser 110; Red-breasted Merganser 143; Ruddy Duck 1,125; duck, sp. 17; Bald Eagle 10 (9a, 1i); Northern Harrier 13; Sharp-shinned Hawk 10; Cooper's Hawk 6; Red-shouldered Hawk 3; Red-tailed Hawk 22; American Kestrel 9; Merlin 1; Wild Turkey 25; Clapper Rail 2; American Coot 34; Black-bellied Plover 10; Killdeer 65; Greater Yellowlegs 23; Lesser Yellowlegs 6; Spotted Sandpiper 2; Ruddy Turnstone 14. Sanderling 286; Western Sandpiper 21; Dunlin 112; Short-billed Dowitcher 46; **Long-billed Dowitcher 2**; dowitcher, sp. 18; sandpiper, sp. 5; Wilson's Snipe 1; American Woodcock 1; Laughing Gull 24;

Bonaparte's Gull 26; Ring-billed Gull 4,239; Herring Gull 407; Great Black-backed Gull 210; gull, sp. 99.

Forster's Tern 2; Rock Dove 1,557; Mourning Dove 938; Great Horned Owl 5; Belted Kingfisher 30; Red-headed Woodpecker CW; Red-bellied Woodpecker 37; Yellow-bellied Sapsucker 8; Downy Woodpecker 28; Northern (Yellow-shafted) Flicker 79; Pileated Woodpecker 5; woodpecker, sp. 2; Eastern Phoebe 1; Blue Jay 122; American Crow 603; Fish Crow 13; Carolina Chickadee 230; Tufted Titmouse 71; White-breasted Nuthatch 6; Brown Creeper 2; Carolina Wren 69; House Wren 1; Winter Wren 2; Golden-crowned Kinglet 31; Ruby-crowned Kinglet 17; Eastern Bluebird 103; Hermit Thrush 4; American Robin 415; Northern Mockingbird 73; Brown Thrasher 15; European Starling 3,707; Cedar Waxwing 161; Yellow-rumped (Myrtle) Warbler 697; Pine Warbler 6; Eastern Towhee 33; Chipping Sparrow 16; Field Sparrow 25; Savannah Sparrow 6; Fox Sparrow 1; Song Sparrow 66.

Swamp Sparrow 8; White-throated Sparrow 405; sparrow, sp. 2; Dark-eyed (Slate-colored) Junco 291; Snow Bunting 8; Northern Cardinal 145; Red-winged Blackbird 172; Eastern Meadowlark 33; Common Grackle 6,343; Boat-tailed Grackle 121; Brown-headed Cowbird 10; House Finch 160; American Goldfinch 135; House Sparrow 175.

Total species: 113; **Total individuals:** 29,827.

Compiler: Hayes Williams, P.O. Box 95, White Marsh, VA 23183-0095 (joycewms@inna.net).

NORTHERN SHENANDOAH VALLEY. Circle Center: Jct. Crooked Run and Rt. 606 in Frederick County. 39°03'N 78°10'W.

Field data: Count date: 14 Dec 2002. Times in field: 4 a.m. to 11:45 p.m. Temperatures: 27° to 38° F. Wind NW, 7-20 mph. Skies cloudy. Still water partly open, moving water open. Field observers: 50 in 23 parties. Feeder watchers: 1. Hours at feeders: 10. Nocturnal birding: 12 hours and 20 miles. Total party-hours (excludes feeder and nocturnal hours): 228 (53 on foot, 163 by car, 12 by boat). Total party-miles (excludes nocturnal miles): 1,159 (57 on foot, 1,088 by car, 14 by boat).

Species: Pied-billed Grebe 4; Great Blue Heron (blue form) 54; Black Vulture 66; Turkey Vulture 431; **Canada Goose** 3,387; Wood Duck 37; Gadwall 3; American Wigeon 15; American Black Duck 41; Mallard 905; Northern Pintail 3; American Green-winged Teal 27; Redhead 1; Ring-necked Duck 6; Hooded Merganser 1; **Common Merganser** 19; Ruddy Duck 1; Bald Eagle 6 (5a, 1i); Northern Harrier 16; Sharp-shinned Hawk 27; Cooper's Hawk 17; Red-shouldered Hawk 15; Red-tailed Hawk 110; Rough-legged Hawk 3; Golden Eagle CW; American Kestrel 79; Wild Turkey 51; Northern Bobwhite 21; American Coot 2; Killdeer 3; Wilson's Snipe 4; Ring-billed Gull 4; Rock Dove 1,338; Mourning Dove 1,693; Eastern Screech-Owl 16; Great Horned Owl 2; Northern Saw-whet Owl 1; Belted Kingfisher 29; Red-headed Woodpecker 21; Red-bellied Woodpecker 145; Yellow-bellied Sapsucker 26; Downy Woodpecker 142; Hairy Woodpecker 20; Northern (Yellow-shafted) Flicker 152; Pileated Woodpecker 35; Eastern Phoebe 1; Loggerhead Shrike 6; **Northern Shrike** CW; Blue Jay 803; American Crow 2,016; Fish Crow 7; Common Raven 16.

Horned Lark 50; Carolina Chickadee 704; Black-capped Chickadee 1; Tufted Titmouse 475; White-breasted Nuthatch 184; Brown Creeper 27; Carolina Wren 200; House Wren 1; Winter Wren 5; **Marsh Wren 2**; Golden-crowned Kinglet 65; Ruby-crowned Kinglet 23; Eastern Bluebird **698**; Hermit Thrush 10; American Robin 1,378; Gray Catbird 1; Northern Mockingbird 234; **Brown Thrasher 3**; European Starling 10,675; Cedar Waxwing 481; Yellow-rumped (Myrtle) Warbler 293; Eastern Towhee 3; American Tree Sparrow 14; Field Sparrow 147; Savannah Sparrow 4; Fox Sparrow 9; Song Sparrow 177; Swamp Sparrow 8; White-throated Sparrow 841; White-crowned Sparrow 110; Dark-eyed (Slate-colored) Junco 1,611; Northern Cardinal 765; Red-winged Blackbird 425; Eastern Meadowlark 20; Rusty Blackbird 41; Common Grackle 20; Brown-headed Cowbird 2,311; Purple Finch 6; House Finch 458; American Goldfinch 349; House Sparrow 120.

Total species: 91; **Total individuals:** 34,777.

Compilers: Rob and Ann Simpson, 1932 E. Refuge Church Rd., Stephens City, VA 22655 (snphotos@adelphia.com).

PEAKS OF OTTER. Circle Center: Peaks of Otter Visitor Center in Bedford County. 37°27'N 79°36'W.

Field data: Count date: 17 Dec 2003. Times in field: 6 a.m. to 3 p.m. Temperatures: 28° to 44° F. Wind SW, 0-5 mph. Skies partly cloudy. Still water frozen, moving water open. Field observers: 14 in 5 parties. Nocturnal birding: 1 hour and 5 miles. Total party-hours (excludes nocturnal hours): 25 (13 on foot, 12 by car). Total party-miles (excludes nocturnal miles): 49 (16 on foot, 33 by car).

Species: Black Vulture 1; Turkey Vulture 13; Red-tailed Hawk 5; Ruffed Grouse 1; Wild Turkey 4; **Rock Dove 1**; Eastern Screech-Owl 9; Red-bellied Woodpecker **25**; Yellow-bellied Sapsucker 22; Downy Woodpecker 39; Hairy Woodpecker 6; Northern (Yellow-shafted) Flicker **21**; Pileated Woodpecker 21; Eastern Phoebe 5; Blue Jay 12; American Crow 83; Common Raven 4; Carolina Chickadee 92; Black-capped Chickadee 2; Tufted Titmouse 72; White-breasted Nuthatch 41; Brown Creeper 1; Carolina Wren **48**; Winter Wren 2; Golden-crowned Kinglet 22; Ruby-crowned Kinglet 4; Eastern Bluebird 46; Hermit Thrush 10; American Robin 259; Northern Mockingbird 11; European Starling 8; Yellow-rumped (Myrtle) Warbler 4; Field Sparrow 7; Song Sparrow 10; White-throated Sparrow 28; Dark-eyed (Slate-colored) Junco 157; Northern Cardinal **66**; American Goldfinch 20.

Total species: 38; **Total individuals:** 1,182.

Compiler: Barry Kinzie, P.O. Box 446, Troutville, VA 24175 (woodpeckerridge@mindspring.com).

Participants: Seth Gallagher, Teresa Hanley, Charles Hansrote, Melva Hansrote, Eunice Hudgins, John Hudgins, Barry Kinzie, Katrina Knight, D. Miller, R. Miller, Kathy Summers, Gretchen Vantassel, Marnie Wheeler, Liz Williams.

ROANOKE. Circle Center: Oakland Blvd. And Williamson Rd. in Roanoke. 37°18'N 79°56'W.

Field data: Count date: 14 Dec 2002. Times in field: 6 a.m. to 5 p.m. Temperatures: 35° to 44° F. Wind 10-25 mph, with 30 mph gusts. Skies mostly cloudy. Some snow on the ground, 30-40% covered. Most large bodies of water open. Field observers: 21, number of field parties not reported. Feeder watchers: 4. Hours at feeders: 6. Total party-hours (excludes feeder hours): 70.5 (38 on foot, 26.5 by car). Total party-miles: 265 (41 on foot, 224 by car).

Species: Pied-billed Grebe 3; Great Blue Heron (blue form) 12; Black Vulture 136; Turkey Vulture 298; Canada Goose 271; Wood Duck 14; Gadwall 47; American Wigeon 7; American Black Duck 56; Mallard 654; Northern Pintail 2; American Green-winged Teal 8; Ring-necked Duck 1; Bufflehead 3; Hooded Merganser 55; Northern Harrier 1; Sharp-shinned Hawk 5; Cooper's Hawk 3; Red-shouldered Hawk 2; Red-tailed Hawk 32; American Kestrel 10; Wild Turkey 7; American Coot 2; Killdeer 11; Wilson's Snipe 4; Ring-billed Gull 234; Rock Dove 572; Mourning Dove 469; Barn Owl 2; Great Horned Owl 1; Belted Kingfisher 11; Red-bellied Woodpecker 46; Yellow-bellied Sapsucker 15; Downy Woodpecker 44; Hairy Woodpecker 34; Northern (Yellow-shafted) Flicker 17; Pileated Woodpecker 11; Eastern Phoebe 5; Blue Jay 101; American Crow 521; Horned Lark 11; Carolina Chickadee 186; Black-capped Chickadee 2; Tufted Titmouse 152; Red-breasted Nuthatch 1; White-breasted Nuthatch 49; Brown Creeper 2; Carolina Wren 86; Golden-crowned Kinglet 14; Ruby-crowned Kinglet 8.

Eastern Bluebird 91; Hermit Thrush 2; American Robin 57; Northern Mockingbird 58; European Starling 2,252; Cedar Waxwing 4; Yellow-rumped (Myrtle) Warbler 4; Eastern Towhee 9; Chipping Sparrow 7; Field Sparrow 9; Fox Sparrow 1; Song Sparrow 104; Swamp Sparrow 5; White-throated Sparrow 253; White-crowned Sparrow 14; Dark-eyed (Slate-colored) Junco 1,458; Northern Cardinal 138; Eastern Meadowlark 1; Purple Finch 3; House Finch 141; American Goldfinch 72; House Sparrow 25.

Total species: 72; **Total individuals:** 8,946.

Compiler: Michael Donahue, 4814 Bandy Rd. SE, Apt 4, Roanoke, VA 24014 (hdonahu1@earthlink.net).

Participants: Mary Lou Barritt, Sid Barritt, Andy Biggs, John Cutler, Marshall Daniels, Tad Finnell, John Hudgins, Eunice Hudgins, Mike Donahue, Sarah Donahue, David Holt, Joyce Holt, Bill Hunley, Katie James, Tom Johnson, Barry Kinzie, Connie Marsh, Katrina Knight, Mike Purdy, Kathy Summers, and Holly Woodson.

ROCKINGHAM COUNTY. Circle Center: Ottobine in Rockingham County. 38°26'N 79°02'W.

Field data: Count date: 21 Dec 2002. Times in field: 7 a.m. to 3 p.m. Temperatures: 35° to 52° F. Wind W, 5-15. Skies clear. Water open. Field observers: 36 in 1 to 10 parties. Feeder watchers: 1. Hours at feeders: 2. Total party-hours: (excludes feeder hours): 50.5 (18.5 on foot, 32 by car). Total party-miles: 359 (14 on foot, 345 by car).

Species: Pied-billed Grebe 1; Great Blue Heron (blue form) 7; Black Vulture 46; Turkey Vulture 1,020; Canada Goose 137; Mute Swan 2; Gadwall 3; American Wigeon 21; Mallard 163; Northern Shoveler 2; American Green-winged Teal 7; dabbling duck, sp. 8; Redhead 2; **Bald Eagle 2 (a)**; Sharp-shinned Hawk 3; Cooper's Hawk 4; Red-tailed Hawk 27; *Buteo*, sp. 3; American Kestrel 36; Ruffed Grouse 2; Wild Turkey 2; Northern Bobwhite 1; Wilson's Snipe 1; Rock Dove 461; Mourning Dove 239; Eastern Screech-Owl 1; Belted Kingfisher 7; Red-headed Woodpecker 4; Red-bellied Woodpecker 23; Yellow-bellied Sapsucker 2; Downy Woodpecker 22; Hairy Woodpecker 3; Northern (Yellow-shafted) Flicker 11; Pileated Woodpecker 2; Eastern Phoebe 3; Blue Jay 55; American Crow 427; Fish Crow 7; Common Raven 9; Horned Lark 208; Carolina Chickadee 84; Black-capped Chickadee 4; Tufted Titmouse 72; White-breasted Nuthatch 32; Carolina Wren 27; Winter Wren 2; Golden-crowned Kinglet 12; Ruby-crowned Kinglet 1; Eastern Bluebird 341; Hermit Thrush 1; American Robin 210; Gray Catbird 1.

Northern Mockingbird 46; European Starling 6,084; American Pipit 6; Cedar Waxwing 18; Yellow-rumped (Myrtle) Warbler 42; **Pine Warbler 1**; Eastern Towhee 2; American Tree Sparrow 1; Field Sparrow 3; Song Sparrow 25; Swamp Sparrow 2; White-throated Sparrow 95; White-crowned Sparrow 71; Dark-eyed (Slate-colored) Junco 68; Northern Cardinal 83; Eastern Meadowlark 10; Common Grackle 7; Brown-headed Cowbird 1; House Finch 200; American Goldfinch 100; House Sparrow 173.

Total species: 71; **Total individuals:** 10,809.

Compiler: Chuck Aukerman, 222 West Bank St., Bridgewater, VA 22812 (aucker@aol.com).

SHENANDOAH NATIONAL PARK-LURAY. Circle Center: Hershberger Hill near Stanley in Page County. 38°35'N 78°28'W.

Field data: Count date: 15 Dec 2002. Times in field: 6 a.m. to 5 p.m. Temperatures: 25° to 48° F. Wind W, 5-10 mph. AM skies partly cloudy. PM skies cloudy. Snow depth: 0-3 inches. Still water partly open, moving water open. Field observers: 27 in 12 to 13 parties.. Feeder watchers: 5. Hours at feeders: 9.5 hours. Nocturnal birding: 2.25 hours and 5.5 miles. Total party-hours (excludes feeder and nocturnal hours): 94 (43 on foot, 51 by car). Total party-miles (excludes nocturnal miles): 484.5 (39.5 on foot, 445 by car).

Species: Great Blue Heron (blue form) 14; **Black-crowned Night-Heron 3 (ph)**; Black Vulture 226; Turkey Vulture 385; Canada Goose 432; Gadwall 8; American Black Duck 10; Mallard 243; **Northern Shoveler 4**; Hooded Merganser 2; Ruddy Duck 8; Sharp-shinned Hawk 8; Cooper's Hawk 3; Red-shouldered Hawk 7; Red-tailed Hawk 62; Rough-legged Hawk 2; American Kestrel 48; **Merlin 1**; Wild Turkey 24; American Coot 45; Killdeer 7; Rock Dove 290; Mourning Dove 776; Eastern Screech-Owl 9; Great Horned Owl 4; Belted Kingfisher 16; Red-bellied Woodpecker 57; Yellow-bellied Sapsucker 31; Downy Woodpecker 77; Hairy Woodpecker 9; Northern (Yellow-shafted) Flicker 46; Pileated Woodpecker 31; Eastern Phoebe 7; Blue Jay 216; American Crow 1,005; Fish Crow 17; Common Raven 44; Horned

Lark 30; Carolina Chickadee 281; Black-capped Chickadee 2; Tufted Titmouse 241; Red-breasted Nuthatch 4; White-breasted Nuthatch 125; Brown Creeper 15; Carolina Wren 68; Winter Wren 2; Golden-crowned Kinglet 46; Ruby-crowned Kinglet 9; Eastern Bluebird 376; Hermit Thrush 13.

American Robin 349; Northern Mockingbird 105; European Starling 11,948; Cedar Waxwing 211; Yellow-rumped (Myrtle) Warbler 105; American Tree Sparrow 1; Field Sparrow 13; Fox Sparrow 6; Song Sparrow 106; Swamp Sparrow 1; White-throated Sparrow 228; White-crowned Sparrow 91; Dark-eyed (Slate-colored) Junco 248; Northern Cardinal 201; Red-winged Blackbird 452; Eastern Meadowlark 12; Rusty Blackbird 21; Common Grackle 5,852; Brown-headed Cowbird 241; Purple Finch 14; House Finch 250; American Goldfinch 93; House Sparrow 41.

Total species: 94; **Total individuals:** 25,978.

Compiler: Mara Meisel, 304 Trenton Ave., Shenandoah, VA 22849 (mara_meisel@nps.gov).

TAZEWELL. Circle Center: Fourway in Tazewell County. 37°08'N 81°30'W.

Field data: Count date: 30 Dec 2002. Times in field: 7 a.m. to 5 p.m. Temperatures: 21° to 38° F. Wind variable, 5-7 mph. Skies partly cloudy. Water open. Field observers: 10 in 5 parties. Feeder watchers: 1. Hours at feeders: 6. Total party-hours (excludes feeder): 49 (4 on foot, 45 by car). Total party-miles (excludes nocturnal miles): 224 (12 on foot, 212 by car).

Species: Pied-billed Grebe 4; Great Blue Heron (blue form) 9; Canada Goose 163; Wood Duck 2; American Wigeon 6; Mallard 233; Lesser Scaup 12; Sharp-shinned Hawk 2; Cooper's Hawk 2; Red-shouldered Hawk 3; Red-tailed Hawk 12; American Kestrel 7; Rock Dove 287; Mourning Dove 154; Belted Kingfisher 11; Red-bellied Woodpecker 8; Yellow-bellied Sapsucker 4; Downy Woodpecker 15; Hairy Woodpecker 1; Northern (Yellow-shafted) Flicker 3; Pileated Woodpecker 5; Blue Jay 64; American Crow 488; Common Raven 7; Horned lark 2; Carolina Chickadee 43; Tufted Titmouse 44; Red-breasted Nuthatch 4; White-breasted Nuthatch 18; Brown Creeper 1; Carolina Wren 38; Winter Wren 2; Golden-crowned Kinglet 15; Ruby-crowned Kinglet 38; Hermit Thrush 1; American Robin 4; Northern Mockingbird 7; European Starling 1,219; Cedar Waxwing 5; Eastern Towhee 4; Field Sparrow 6; Fox Sparrow 2; Song Sparrow 104; Swamp Sparrow 2; White-throated Sparrow 33; White-crowned Sparrow 11; Dark-eyed (Slate-colored) Junco 22; Northern Cardinal 72; Eastern Meadowlark 2; Common Grackle 2.

Brown-headed Cowbird 5; House Finch 12; American Goldfinch 36; House Sparrow 199.

Total species: 54; **Total individuals:** 3,455.

Compiler: Sarah Cromer, P.O. Box 98, North Tazewell, VA 24630 (scromer@netscope.net).

THE PLAINS. Circle Center: 7 miles northwest of Warrenton on the west side of Watery Mountain along Carter Creek in Fauquier County. 38°48'N 77°52'W.

Field data: Count date: 15 Dec 2002. Times in field: 3 a.m. to 6 p.m. Tem-

peratures: 32° to 53° F. Wind variable, 0-8 mph. Skies partly cloudy. Still water partly frozen, moving water open. Field observers: 57 in 16 to 22 parties. Nocturnal birding: 10.5 hours and 84 miles. Total party-hours (excludes nocturnal hours): 156.5 (78 on foot, 78.5 by car). Total party-miles (excludes nocturnal miles): 622 (71 on foot, 551 by car).

Common Loon CW; Pied-billed Grebe 8; Double-crested Cormorant 2; Great Blue Heron (blue form) 17; Black Vulture 247; Turkey Vulture 453; **Greater White-fronted Goose 1; Snow Goose (white form) 1;** Canada Goose **12,995;** Mute Swan 4; Tundra Swan 11; Wood Duck 6; Gadwall 136; **Eurasian Wigeon 1;** American Wigeon 65; American Black Duck 56; Mallard **472;** Northern Shoveler 7; American Green-winged Teal 19; Canvasback 5; Redhead 2; Ring-necked Duck 1,059; Lesser Scaup 11; Bufflehead 114; Hooded Merganser **142;** Common Merganser **453;** Red-breasted Merganser CW; Ruddy Duck 60; Bald Eagle 14 (8a, 6i); Northern Harrier 12; Sharp-shinned Hawk 22; Cooper's Hawk 8; Red-shouldered Hawk **81;** Red-tailed Hawk 98; American Kestrel 24; Merlin 1; Wild Turkey 17; Northern Bobwhite 8; Killdeer 1; American Woodcock 1; Ring-billed Gull 1,137; Herring Gull 292; **Lesser Black-backed Gull 8;** Great Black-backed Gull **58;** Rock Dove 284; Mourning Dove 568; Eastern Screech-Owl 8; Great Horned Owl 4; Barred Owl 5; **Northern Saw-whet Owl 2;** Belted Kingfisher 15; Red-headed Woodpecker 6.

Red-bellied Woodpecker 250; Yellow-bellied Sapsucker 80; Downy Woodpecker 179; Hairy Woodpecker 25; Northern (Yellow-shafted) Flicker 229; Pileated Woodpecker 38; Eastern Phoebe 7; Blue Jay 667; American Crow 1,448; Fish Crow **125;** crow, sp. 163; Common Raven 7; Horned Lark 20; Carolina Chickadee 534; Tufted Titmouse 358; White-breasted Nuthatch 178; Brown Creeper 19; Carolina Wren 259; Winter Wren 7; Golden-crowned Kinglet 79; Ruby-crowned Kinglet 15; Eastern Bluebird **855;** Hermit Thrush **71;** American Robin **4,353;** Gray Catbird 3; Northern Mockingbird 335; Brown Thrasher 1; European Starling 4,361; American Pipit 66; Cedar Waxwing **2,633;** Yellow-rumped (Myrtle) Warbler 363; Eastern Towhee 16; American Tree Sparrow 5; Field Sparrow **191;** Savannah Sparrow 22; Fox Sparrow 7; Song Sparrow 437; Swamp Sparrow 39; White-throated Sparrow 1,199; White-crowned Sparrow 29; Dark-eyed (Slate-colored) Junco 1,301; **Lapland Longspur 1;** Northern Cardinal 675; Red-winged Blackbird 51; Eastern Meadowlark 54; Rusty Blackbird 2; Common Grackle 97; Brown-headed Cowbird 156; Purple Finch 3; House Finch 367; American Goldfinch 393; House Sparrow **148.**

Total species: 101; **Total individuals:** 41,942.

Compiler: Todd Day, 5118 Beaver Dam Rd., Jeffersonton, VA 22724 (blkvulture@aol.com).

Compiler notes: The Eurasian Wigeon seen on the count has been observed in the area for nine consecutive winters in Fauquier County. The Lesser black-backed Gulls were found at the Fauquier Landfill. The Snow Goose, observed by Craig Tumer was present most of the winter, and is new to the count, as is the Lapland Longspur, also counted by Tumer.

WACHAPREAGUE. Circle Center: Jct. 789 and 715 in Accomack County. 37°40'N 75°42'W.

Field data: Count date: 14 Dec 2002. Times in field: 7 a.m. to 5 p.m. Temperatures: 48° to 50° F. Wind SW, 10-25 mph. AM skies cloudy, light rain. PM skies partly cloudy. Field observers: 23 in 5 to 7 parties. Feeder watchers: 3. Hours at feeders: 1. Nocturnal birding: 1 hour and 0.5 miles. Total party-hours (excludes feeder and nocturnal hours): 85 (50 on foot, 28 by car, 7 by boat). Total party-miles (excludes nocturnal miles): 319.5 (37.5 on foot, 264 by car, 18 by boat).

Species: Red-throated Loon 18; Common Loon 17; Pied-billed Grebe 4; Horned Grebe 7; Double-crested Cormorant 7; American Bittern 3; Great Blue Heron (blue form) 35; Great Egret 2; Tricolored Heron 1; Black Vulture 29; Turkey Vulture 270; Snow Goose (blue form) 1; Snow Goose (white form) 3,571; Canada Goose 1,560; Brant 395; Wood Duck 14; Gadwall 33; American Black Duck 391; Mallard 282; Northern Shoveler 2; American Green-winged Teal 87; Ring-necked Duck 1; Greater Scaup 3; Lesser Scaup 1; scaup, sp. 5; Surf Scoter 465; White-winged Scoter 1; Black Scoter 45; scoter, sp. 500; Long-tailed Duck 1; Bufflehead 232; Common Goldeneye 5; Hooded Merganser 317; Red-breasted Merganser 37; Bald Eagle 17 (12a, 5i); Northern Harrier 38; Sharp-shinned Hawk 6; Cooper's Hawk 5; Red-shouldered Hawk 1; Red-tailed Hawk 17; American Kestrel 52; Merlin 2; Peregrine Falcon 1; Northern Bobwhite 5; Clapper Rail 3; Black-bellied Plover 270; Semipalmated Plover 10; Killdeer 12; American Oystercatcher 30; Greater Yellowlegs 78; Willet 73; Ruddy Turnstone 18; Sanderling 70.

Western Sandpiper 71; Least Sandpiper 1; Dunlin 1,884; peep, sp. 40; Short-billed Dowitcher 10; American Woodcock 1; Bonaparte's Gull 4; Ring-billed Gull 789; Herring Gull 1,741; Lesser Black-backed Gull 1; Great Black-backed Gull 130; gull, sp. 140; **Black Skimmer** 1; Rock Dove 42; Mourning Dove 660; Eastern Screech-Owl 1; Great Horned Owl 3; Belted Kingfisher 8; Red-bellied Woodpecker 8; Yellow-bellied Sapsucker 2; Downy Woodpecker 9; Hairy Woodpecker 2; Northern (Yellow-shafted) Flicker 40; Pileated Woodpecker 1; Eastern Phoebe 3; Blue Jay 42; American Crow 443; Horned Lark 116; Tree Swallow 1; Carolina Chickadee 66; Tufted Titmouse 30; Brown-headed Nuthatch 11; Brown Creeper 2; Carolina Wren 56; Winter Wren 2; Golden-crowned Kinglet 35; Ruby-crowned Kinglet 10; Eastern Bluebird 458; Hermit Thrush 1; American Robin 716; Gray Catbird 4; Northern Mockingbird 69; Brown Thrasher 1; European Starling 1,886; American Pipit 1; Cedar Waxwing 117; Yellow-rumped (Myrtle) Warbler 755; Pine Warbler 31; Palm Warbler 7; Chipping Sparrow 7; Field Sparrow 14; Savannah Sparrow 34; Savannah (Ipswich) Sparrow 14.

Nelson's Sharp-tailed Sparrow 1; Saltmarsh Sharp-tailed Sparrow 1; Song Sparrow 73; Swamp Sparrow 1; White-throated Sparrow 146; Dark-eyed (Slate-colored) Junco 258; Snow Bunting 1; Northern Cardinal 85; Red-winged Blackbird 4,202; Eastern Meadowlark 118; Rusty Blackbird 2; Common Grackle 1,042; Boat-tailed Grackle 9; Brown-headed Cowbird 301; blackbird, sp. 502; House Finch 20; American Goldfinch 73; House Sparrow 41.

Total species: 117; **Total individuals:** 26,634.

Compilers: Irvin and Marilyn Ailes, 6479 Myrtle Lane, Chincoteague, VA 23336-3825 (imales@intercom.net).

WALKERTON. Circle Center: 1.5 miles southwest of Walkerton bridge, just west of Whitebank. 37°46'N 77°02'W.

Field data: Count date: 5 Jan 2003. Times in field: 5 a.m. to 5:30 p.m. Temperatures: 24° to 37° F. AM skies clear. PM skies cloudy, none to light rain. Still water partly frozen, moving water open. Field observers: 35 in 7 to 10 parties. Nocturnal birding: 5 hours and 24 miles. Total party-hours (excludes nocturnal hours): 95.5 (47 on foot, 37 by car, 10 by boat). Total party-miles (excludes nocturnal miles): 425 (37 on foot, 338 by car, 50 by boat).

Species: Pied-billed Grebe 8; Double-crested Cormorant 1; Great Blue Heron (blue form) 54; Black Vulture 56; Turkey Vulture 147; **Snow Goose (white form) 1**; Canada Goose 6,032; Tundra Swan 93; Wood Duck 8; Gadwall 23; American Wigeon 6; American Black Duck 198; Mallard 468; Blue-winged Teal 2; Northern Shoveler 4; Northern Pintail 68; American Green-winged Teal 6; Ring-necked Duck 60; Lesser Scaup 4; Bufflehead 54; Common Goldeneye 4; Hooded Merganser 89; Common Merganser 34; **Red-breasted Merganser 16**; Ruddy Duck 6; Bald Eagle 26 (16a, 10i); Northern Harrier 5; Sharp-shinned Hawk 11; Cooper's Hawk 1; Red-shouldered Hawk 24; Red-tailed Hawk 32; **Golden Eagle 1 (i)**; American Kestrel 17; **Merlin 2**; Wild Turkey 59; Northern Bobwhite 23; American Coot 12; Killdeer 80; Lesser Yellowlegs 12; peep, sp. 40; Wilson's Snipe 76; American Woodcock 3; Ring-billed Gull 167; Herring Gull 2; Rock Dove 12; Mourning Dove 956; Eastern Screech-Owl 2; Great Horned Owl 10; Barred Owl 15; Belted Kingfisher 35.

Red-headed Woodpecker 33; Red-bellied Woodpecker 145; Yellow-bellied Sapsucker 40; Downy Woodpecker 90; Hairy Woodpecker 19; Northern (Yellow-shafted) Flicker 234; Pileated Woodpecker 59; Eastern Phoebe 24; Blue Jay 78; American Crow 549; **Fish Crow 1**; crow, sp. 55; Horned Lark 78; Carolina Chickadee 102; Tufted Titmouse 101; White-breasted Nuthatch 46; Brown Creeper 4; Carolina Wren 146; Winter Wren 16; Golden-crowned Kinglet 42; Ruby-crowned Kinglet 27; Eastern Bluebird 482; Hermit Thrush 44; American Robin 2,235; Gray Catbird 1; Northern Mockingbird 110; Brown Thrasher 19; European Starling 1,071; American Pipit 333; Cedar Waxwing 842; Yellow-rumped (Myrtle) Warbler 90; Pine Warbler 2; Eastern Towhee 71; Chipping Sparrow 59; Field Sparrow 77; Savannah Sparrow 33; Fox Sparrow 12; Song Sparrow 267; Swamp Sparrow 39; White-throated Sparrow 1,417; White-crowned Sparrow 33; Dark-eyed (Slate-colored) Junco 1,307; Northern Cardinal 295; Red-winged Blackbird 1,965; Eastern Meadowlark 176; Common Grackle 195; Brown-headed Cowbird 6; blackbird, sp. 848; **Purple Finch 1**; House Finch 188; American Goldfinch 118; House Sparrow 29.

Total species: 110; **Total individuals:** 23,319.

Compiler: Fred Atwood, Flint Hill School, 10409 Academic Dr., Oakton, VA 22124 (fredatwood@yahoo.com).

Compiler notes: The count circle location was moved less than ½ mile SE in order to include a sector that is easier to cover in New Kent County south of the Pamunkey River. The new location is likely to stay as the permanent circle location as it now includes a wide diversity of habitats in all sectors and most of the best birding spots in the area. It was sad to lose Zoah State Forest, but we did so in order

to gain parts of the Pamunkey and Mattaponi Indian Reservations, as well as "The Pocket" (Powhatan's gravesite) and the private wildlife reserve of Elsing Green. The latter two sites probably have the highest concentrations of waterfowl in the region. The remarkable number of species high-counts and our highest ever total species count this year are undoubtedly due to our better coverage of the count circle. This better coverage is due to more access to large plots of land granted to us by landowners, more birders with more experience and with more familiarity with their sectors, and the division of the area south of the Pamunkey into two sectors, one of which included some time on the Pamunkey River in a boat. Also this year, there was coverage of the Mattaponi River by boat which contributed most of the snipes as the tide rose, a large percentage of the huge number of bluebirds, and a few other species not seen elsewhere on the count. Can the incredible increase of bluebirds, towhees, mourning doves, woodpeckers, and hermit thrushes this year be accounted for solely by our improved coverage or is there another explanation? We also thought the low numbers of kinglets, some ducks (especially ring-necked, wood, and gadwall) and of yellow-rumped warblers were notable.

Editor's note: Only the most significant increases of the 50 all-time high records of this count are highlighted above.

WARREN. Circle Center: At Keene in Albemarle County. 37°51'N 78°33'W.

Field data: Count date: 5 Jan 2003. Times in field: 6:15 a.m. to 5:15 p.m. Temperatures: 24° to 35° F. No wind. AM skies cloudy. PM skies cloudy. Snow in afternoon, no accumulation in southern part of circle, but about 1.5 inches in northern part. Snow depth: 0-1.5 inches. Small ponds frozen, James River high with floating ice. Field observers: 26 in 14 parties. Nocturnal birding: 1.75 hours and 7 miles. Total party-hours (excludes nocturnal hours): 97.5 (75 on foot, 22.5 by car). Total party-miles (excludes nocturnal miles): 250.5 (72.5 on foot, 178 by car).

Species: Great Blue Heron (blue form) 9; Black Vulture 38; Turkey Vulture 67; Canada Goose 895; Mute Swan 14; American Black Duck 9; Mallard 15; Northern Harrier 2; Sharp-shinned Hawk 3; Cooper's Hawk 1; Red-shouldered Hawk 9; Red-tailed Hawk 33; American Kestrel 10; **Merlin** 1; Wild Turkey 29; Northern Bobwhite 8; Wilson's Snipe 1; American Woodcock 2; Ring-billed Gull 1; Rock Dove 94; Mourning Dove 316; Eastern Screech-Owl 3; Great Horned Owl 2; Belted Kingfisher 8; Red-headed Woodpecker 1; Red-bellied Woodpecker 109; Yellow-bellied Sapsucker 56; Downy Woodpecker 87; Hairy Woodpecker 6; Northern (Yellow-shafted) Flicker 74; Pileated Woodpecker 41; Eastern Phoebe 7; Blue Jay 231; American Crow 958; Common Raven 4; Horned Lark 30; Carolina Chickadee 175; Tufted Titmouse 114; Red-breasted Nuthatch 2; White-breasted Nuthatch 53; Brown Creeper 8; Carolina Wren 125; Winter Wren 8; Golden-crowned Kinglet 32; Ruby-crowned Kinglet 9; Eastern Bluebird 312; Hermit Thrush 18; American Robin 903; Northern Mockingbird 115; Brown Thrasher 1.

European Starling 3,998; Cedar Waxwing 148; Yellow-rumped (Myrtle) Warbler 298; Eastern Towhee 23; Chipping Sparrow 10; Field Sparrow 140; Savannah Sparrow 7; Fox Sparrow 10; Song Sparrow 449; Swamp Sparrow 36; White-

throated Sparrow 954; White-crowned Sparrow 29; Dark-eyed (Slate-colored) Junco 581; Northern Cardinal 274; Red-winged Blackbird 100; Eastern Meadowlark 71; Brown-headed Cowbird 13; Purple Finch 25; House Finch 219; American Goldfinch 259; House Sparrow 23.

Total species: 71; **Total individuals:** 12,716.

Compiler: Charles Stevens, 615 Preston Place, Charlottesville, VA 22903.

Participants: Dan Bieker, Peter Brask, Jim Childress, Bruce Davenport, Boo Dulaney, Peter Dutnell, William Eichelkraut, Francis Fife, Allen Hale, Elizabeth Harvard, Ruth Klippstein, Tom Klippstein, Ken Lawless, Peter Mehring, Hewson Michie, Bill Minor, Maureen Minor, Amoret Powers, Sonja Runquist, Donna Shaunesy, Mo Stevens, Lew Tanner, Dave West, David White, Jan Zimmerman and John Zimmerman.

WASHINGTON'S BIRTHPLACE. Circle Center: Horners in Westmoreland County. 38°07'N 76°57'W.

Field data: Count date: 21 Dec 2002. Times in field: 5:30 a.m. to 5:30 p.m. Temperatures: 29° to 40°F. Wind W, 5-15 mph. AM skies clear. PM skies partly cloudy. Still water partly frozen, moving water open. Field observers: 17 in 7 to 9 parties. Nocturnal birding: 2.75 hours and 12 miles. Total party-hours (excludes nocturnal hours): 68.25 (31.75 on foot, 32 by car, 4.5 by boat). Total party-miles (excludes nocturnal miles): 338 (16.5 on foot, 286.5 by car, 35 by boat).

Species: Red-throated Loon 4; Common Loon 9; Pied-billed Grebe 2; Horned Grebe 5; Double-crested Cormorant 164; Great Blue Heron (blue form) 34; Black Vulture 74; Turkey Vulture 306; Snow Goose (blue form) 2; Snow Goose (white form) 2; Canada Goose 15,500; Mute Swan 3; Tundra Swan 811; Wood Duck 1; Gadwall 109; American Wigeon 4; American Black Duck 130; Mallard 281; Northern Pintail 9; American Green-winged Teal 2; Canvasback 17; Ring-necked Duck 9; Greater Scaup 5; Lesser Scaup 496; scaup, sp. 800; Surf Scoter 11; Long-tailed Duck 4; Bufflehead 203; Common Goldeneye 79; Hooded Merganser 108; Common Merganser 148; Red-breasted Merganser 6; Ruddy Duck 504; Bald Eagle 172 (81a, 90i, 1u); Northern Harrier 6; Sharp-shinned Hawk 7; Cooper's Hawk 5; Red-shouldered Hawk 5; Red-tailed Hawk 29; American Kestrel 8; Merlin 1; Wild Turkey 4; Northern Bobwhite 6; Killdeer 1; **Dunlin 18**; Wilson's Snipe 3; Ring-billed Gull 1,853; Herring Gull 40; Great Black-backed Gull 10; Rock Dove 18; Mourning Dove 115; Eastern Screech-Owl 5.

Great Horned Owl 3; Barred Owl 3; Belted Kingfisher 12; Red-headed Woodpecker 7; Red-bellied Woodpecker 42; Yellow-bellied Sapsucker 17; Downy Woodpecker 16; Hairy Woodpecker 9; Northern (Yellow-shafted) Flicker 67; Pileated Woodpecker 11; Eastern Phoebe 9; Blue Jay 45; American Crow 722; Horned lark 68; Carolina Chickadee 53; Tufted Titmouse 46; White-breasted Nuthatch 10; Brown Creeper 3; Carolina Wren 34; Winter Wren 8; Golden-crowned Kinglet 12; Ruby-crowned Kinglet 10; Eastern Bluebird 252; Hermit Thrush 11; American Robin 961; Northern Mockingbird 52; Brown Thrasher 1; European Starling 717; American Pipit 15; Cedar Waxwing 1,310; Yellow-rumped (Myrtle) Warbler 181; Pine Warbler

6; Eastern Towhee 20; **Clay-colored Sparrow 1**; Field Sparrow 73; Savannah Sparrow 46; Fox Sparrow 1; Song Sparrow 217; Swamp Sparrow 14; White-throated Sparrow 396; White-crowned Sparrow 8; Dark-eyed (Slate-colored) Junco 482; **Lapland Longspur 2**; Northern Cardinal 84; Red-winged Blackbird 385; Eastern Meadowlark 55; Common Grackle 667; Brown-headed Cowbird 3; House Finch 79; American Goldfinch 125; House Sparrow 6.

Total species: 101; **Total individuals:** 290,525.

Compiler: William Portlock, 23195 Mt. Cloud Rd., Bowling Green, VA 22427 (portlock@bealenet.com).

WAYNESBORO. Circle Center: Sherando at Jct. 610 and 664 in Augusta County. 37°59'N 78°57'W.

Field data: Count date: 4 Jan 2003. Times in field: 4:30 a.m. to 5:15 p.m. Temperatures: 20° to 44° F. Wind SW, 3-25 mph. AM skies clear. PM skies partly cloudy. Still water partly open, moving water partly frozen. Field observers: 37 in 10 parties. Feeder watchers: 1. Hours at feeders: 2.5. Nocturnal birding: 2.75 hours and 1 mile. Total party-hours (excludes feeder and nocturnal hours): 67.5 (21.5 on foot, 46 by car). Total party-miles (excludes nocturnal miles): 425.5 (16 on foot, 409.5 by car).

Species: Pied-billed Grebe 4; Great Blue Heron (blue form) 8; **Black-crowned Night-Heron 2**; Black Vulture 71; Turkey Vulture 289; Canada Goose 643; Mallard 228; American **Green-winged Teal 24**; Ring-necked Duck 1; **Lesser Scaup 2**; Bufflehead 1; Hooded Merganser 2; Northern Harrier 2; Sharp-shinned Hawk 5; Cooper's Hawk 3; Red-shouldered Hawk 5; Red-tailed Hawk 37; American Kestrel 19; Wild Turkey 3; American Coot 6; Killdeer 6; Wilson's Snipe 1; Rock Dove 627; Mourning Dove 234; Eastern Screech-Owl 1; Belted Kingfisher 5; Red-headed Woodpecker 2; Red-bellied Woodpecker 43; Yellow-bellied Sapsucker 7; Downy Woodpecker 38; Hairy Woodpecker 5; Northern (Yellow-shafted) Flicker 30; Pileated Woodpecker 14; Eastern Phoebe 3; Blue Jay 126; American Crow 773; Fish Crow 1; Common Raven 22; Horned Lark 223; Carolina Chickadee 175; Tufted Titmouse 128; White-breasted Nuthatch 42; Brown Creeper 3; Carolina Wren 43; Golden-crowned Kinglet 10; Ruby-crowned Kinglet 2; Eastern Bluebird 243; Hermit Thrush 5; American Robin 267.

Northern Mockingbird 98; European Starling 844; Cedar Waxwing 135; Yellow-rumped (Myrtle) Warbler 125; Eastern Towhee 8; American Tree Sparrow 6; Chipping Sparrow 1; Field Sparrow 49; Savannah Sparrow 4; Fox Sparrow 4; Song Sparrow 80; Swamp Sparrow 4; White-throated Sparrow 125; White-crowned Sparrow 176; Dark-eyed (Slate-colored) Junco 384; Northern Cardinal 163; Eastern Meadowlark 63; Purple Finch 1; House Finch 131; American Goldfinch 106; House Sparrow 138.

Total species: 70; **Total individuals:** 7,079.

Compiler: Crista Cabe, 404 DuPont Ave., Staunton, VA 24401 (ccabe@mbc.edu).

WILLIAMSBURG. Circle Center: Colonial Williamsburg Information Center in Williamsburg, 37°17'N 76°42'W.

Field data: Count date: 15 Dec 2002. Times in field: 7 a.m. to 4 p.m. Temperatures: 40° to 60° F. Wind SW, 5-12 mph. Skies partly cloudy. Water open. Field observers: 25 in 9 parties. Nocturnal birding: 4 hours and 2 miles. Total party-hours: 81.25 (28.75 on foot, 51.5 by car, 1 by boat). Total party-miles: 284 (23 on foot, 259 by car, 2 by boat).

Species: Common Loon 4; Pied-billed Grebe 23; Horned Grebe 16; Brown Pelican 10; Double-crested Cormorant 1,067; Great Blue Heron (blue form) 83; Great Egret 1; Black Vulture 61; Turkey Vulture 124; Canada Goose 2,228; Mute Swan 18; Tundra Swan 67; Wood Duck 18; Gadwall 187; American Wigeon 32; American Black Duck 37; Mallard 205; Blue-winged Teal 2; Northern Pintail 12; American Green-winged Teal 120; Canvasback 7,153; Redhead 13; Ring-necked Duck 1,116; Lesser Scaup 263; Bufflehead 360; Common Goldeneye 17; Hooded Merganser 300; Red-breasted Merganser 350; Ruddy Duck 16,244; Osprey 1; Bald Eagle 43 (22a, 21i); Northern Harrier 3; Sharp-shinned Hawk 6; Cooper's Hawk 4; Red-shouldered Hawk 14; Red-tailed Hawk 23; American Kestrel 2; Merlin 1; Peregrine Falcon 1; Wild Turkey 124; Clapper Rail 4; American Coot 11; Killdeer 75; Greater Yellowlegs 8; Wilson's Snipe 1; American Woodcock 4; Laughing Gull 22; Bonaparte's Gull 1; Ring-billed Gull 1,774; Herring Gull 103.

Lesser Black-backed Gull 1; Great Black-backed Gull 78; Forster's Tern 4; Rock Dove 23; Mourning Dove 68; Eastern Screech-Owl 8; Great Horned Owl 10; Barred Owl 3; **Rufous Hummingbird 1**; Belted Kingfisher 26; Red-headed Woodpecker 30; Red-bellied Woodpecker 117; Yellow-bellied Sapsucker 36; Downy Woodpecker 29; Hairy Woodpecker 11; Northern (Yellow-shafted) Flicker 112; Pileated Woodpecker 31; Eastern Phoebe 9; Blue Jay 218; American Crow 253; Carolina Chickadee 131; Tufted Titmouse 82; White-breasted Nuthatch 49; Brown-headed Nuthatch 8; Brown Creeper 11; Carolina Wren 108; House Wren 2; Winter Wren 10; Marsh Wren 1; Golden-crowned Kinglet 28; Ruby-crowned Kinglet 81; Eastern Bluebird 250; Hermit Thrush 17; American Robin 410; Gray Catbird 1; Northern Mockingbird 83; Brown Thrasher 18; European Starling 1,362; American Pipit 5; Cedar Waxwing 716; Yellow-rumped (Myrtle) Warbler 472; Pine Warbler 7; Eastern Towhee 61; Chipping Sparrow 19; Field Sparrow 75; Savannah Sparrow 61; Fox Sparrow 20; Song Sparrow 301; Swamp Sparrow 85; White-throated Sparrow 762.

Dark-eyed (Slate-colored) Junco 494; Northern Cardinal 118; Red-winged Blackbird 2,084; Eastern Meadowlark 24; Common Grackle 2,601; Brown-headed Cowbird 439; Baltimore Oriole 1; House Finch 119; American Goldfinch 132; House Sparrow 32.

Total species: 110; Total individuals: 44,704.

Compiler: Bill Holcombe, 4705 Lady Slipper Path, Williamsburg, VA 23188 (bowljack@aol.com).

WISE COUNTY. Circle Center: At Dorchester in Norton City. 36°57'N 82°39'W.

Field data: Count date: 14 Dec 2002. Times in field: 7 a.m. to 4:15 p.m.

Temperatures: 33° to 36° F. Wind variable, 5-20 mph. AM skies cloudy, light snow. PM skies cloudy. Water open. Field observers: 12 in 6 parties. Total party-hours: (excludes feeder hours): 43.5 (20.25 on foot, 23.25 by car). Total party-miles: 152.5 (7.5 on foot, 145 by car).

Species: Great Blue Heron (blue form) 2; Sharp-shinned Hawk 2; Red-shouldered Hawk 1; Red-tailed Hawk 2; American Kestrel 1; Wild Turkey 1; Northern Bobwhite 9; Rock Dove 24; Mourning Dove 96; Eastern Screech-Owl 2; Barred Owl 1; Red-bellied Woodpecker 8; Yellow-bellied Sapsucker 1; Downy Woodpecker 19; Hairy Woodpecker 4; Northern (Yellow-shafted) Flicker 7; Pileated Woodpecker 6; Eastern Phoebe 1; Blue Jay 50; American Crow 911; Common Raven 3; Horned Lark 20; Carolina Chickadee 99; Tufted Titmouse 70; Red-breasted Nuthatch 2; White-breasted Nuthatch 26; Carolina Wren 61; Winter Wren 4; Golden-crowned Kinglet 11; Eastern Bluebird 11; American Robin 10; Gray Catbird 1; Northern Mockingbird 5; Brown Thrasher 1; European Starling 436; Cedar Waxwing 9; Eastern Towhee 14; Field Sparrow 15; Song Sparrow 93; Swamp Sparrow 2; White-throated Sparrow 26; White-crowned Sparrow 4; Dark-eyed (Slate-colored) Junco 84; Northern Cardinal 93; Red-winged Blackbird 34; Eastern Meadowlark 4; Common Grackle 46; Brown-headed Cowbird 1; House Finch 7; Pine Siskin 1.

American Goldfinch 103; House Sparrow 70.

Total species: 52; **Total individuals:** 2,514.

Compiler: Randy Stanley, 2432 Egan Rd., Big Stone Gap, VA 24219 (randyst@compunet.net).

COMBINED TOTALS. All counts above included. **Total number of counts:** 48. Bold face indicates Christmas count record high counts.

Field data: Field observers: 1,399. Field parties: minimum 471, maximum 564. Feeder watchers: 59. Hours at feeders: 107.75. Nocturnal birding: 176.25 hours and 745 miles. Total party-hours (excludes feeder and nocturnal hours): 3,994.25 (2,282 on foot, 1,623.50 by car, 47.50 by boat). Total party-miles (excludes nocturnal miles): 15,038.5 (1,759 on foot, 13,141.25 by car, 138.25 by boat).

Species: Red-throated Loon 1,809; Common Loon 785; Pied-billed Grebe 298; Horned Grebe 555; Eared Grebe 1; Clark's Grebe 1; Northern Gannet 14,657; Brown Pelican **1,553**; Double-crested Cormorant **18,852**; Great Cormorant 111; American Bittern 3; Great Blue Heron (blue form) 1,627; Great Egret 141; Snowy Egret 8; Little Blue Heron 9; Tricolored Heron 20; Green Heron 3; Black-crowned Night-Heron 24; Yellow-crowned Night-Heron 1; White Ibis 82; Glossy Ibis 1; Black Vulture **3,703**; Turkey Vulture **8,798**; Greater White-fronted Goose 3; Snow Goose (blue form) 1,220; Snow Goose (white form) 8,548; Ross's Goose 1; Hutchins's Goose 1; Canada Goose **100,825**; Brant 2,821; Mute Swan 90; Tundra Swan 4,651; Wood Duck 254; Gadwall 3,395; Eurasian Wigeon 1; American Wigeon 2,215; American wigeon x Eurasian wigeon hybrid 1; American Black Duck 4,166; Mallard 16,255; American black duck x mallard hybrid 3; Blue-winged Teal 12; Northern Shoveler 695; Northern Pintail 948; American Green-winged Teal 883; dabbling duck, sp. 8; Canvasback 8,696; Redhead 185; Ring-necked Duck 4,704; Greater Scaup 116; Lesser

Scaup 8,554; scaup, sp. 2,148; King Eider 1; Common Eider 5; Harlequin Duck 1; Surf Scoter 7,492; White-winged Scoter 99.

Black Scoter 4,353; scoter, sp. 2,066; Long-tailed Duck 251; Bufflehead 7,855; Common Goldeneye 565; Hooded Merganser 3,291; Common Merganser 2,378; Red-breasted Merganser 9,674; merganser, sp. 183; Ruddy Duck 29,085; duck, sp. 271; Osprey 11; Bald Eagle **661**; Bald Eagle (by age) 355a, 265i, 41u; Northern Harrier 326; Sharp-shinned Hawk **306**; Cooper's Hawk **205**; Northern Goshawk 3; *Accipiter*, sp. **26**; Red-shouldered Hawk **525**; Red-tailed Hawk 1,513; Rough-legged Hawk 5; *Buteo*, sp. 8; large hawk, sp. 2; Golden Eagle 8; Golden Eagle (by age) 2a, 5i, 1u; American Kestrel 870; Merlin **29**; Peregrine Falcon 14; Ring-necked Pheasant 8; Ruffed Grouse 20; Wild Turkey **709**; Northern Bobwhite 245; Clapper Rail 96; King Rail 3; Virginia Rail 31; Sora 1; Common Moorhen 1; American Coot 1,064; Black-bellied Plover 971; Semipalmated Plover 68; Piping Plover 1; Killdeer 1,219; American Oystercatcher 283; Greater Yellowlegs 306; Lesser Yellowlegs 56; yellowlegs, sp. 1; Willet 307; Spotted Sandpiper 2; Marbled Godwit 28; Ruddy Turnstone 220; Sanderling 1,949; Western Sandpiper 174; Least Sandpiper 61; Purple Sandpiper 95; Dunlin 11,590; peep, sp. 440; sandpiper, sp. 5; Short-billed Dowitcher **761**; Long-billed Dowitcher 24; dowitcher, sp. 8; Wilson's Snipe 225.

American Woodcock 122; Laughing Gull 846; Black-headed Gull 1; Bonaparte's Gull 5,834; Mew Gull **1**; Ring-billed Gull **112,446**; California Gull CW; Herring Gull 30,713; Thayer's Gull 1; Lesser Black-backed Gull **118**; Great Black-backed Gull 5,361; glaucous gull x herring gull 1; gull, sp. 2,467; Forster's Tern 632; Black Skimmer 3; large *alcid*, sp. 1; Rock Dove 11,681; Mourning Dove 18,387; Monk Parakeet 1; Barn Owl 6; Eastern Screech-Owl 270; Great Horned Owl 233; Barred Owl 94; Long-eared Owl 4; Short-eared Owl 12; Northern Saw-whet Owl 4; owl, sp. 1; Rufous Hummingbird **2**; *Selasphorus*, sp. 2; Belted Kingfisher 695; Red-headed Woodpecker 188; Red-bellied Woodpecker **3,539**; Yellow-bellied Sapsucker 887; Downy Woodpecker 2,823; Hairy Woodpecker **539**; Northern (Yellow-shafted) Flicker 3,326; Pileated Woodpecker 1,079; woodpecker, sp. 2; small woodpecker, sp. 1; Eastern Phoebe 306; Loggerhead Shrike 15; Northern Shrike CW; White-eyed Vireo 2; Blue-headed Vireo 9; Red-eyed Vireo 1; Blue Jay 8,268; American Crow 30,683; Fish Crow 2,222; crow, sp. 3,313; Common Raven 237; Horned lark 1,701; Tree Swallow 475; Northern Rough-winged Swallow 2; Carolina Chickadee 9,280; Black-capped Chickadee 116; chickadee, sp. 128; Tufted Titmouse 6,463; Red-breasted Nuthatch 38; White-breasted Nuthatch 2,739; Brown-headed Nuthatch 155; Brown Creeper 375; Carolina Wren 5,340.

House Wren 30; Winter Wren 353; Sedge Wren 12; Marsh Wren 23; wren, sp. 11, Golden-crowned Kinglet 1,472; Ruby-crowned Kinglet 816; kinglet, sp. 2; Eastern Bluebird **11,895**; Hermit Thrush 1,033; American Robin 48,680; Gray Catbird 283; Northern Mockingbird 4,520; Brown Thrasher 195; European Starling 107,250; American Pipit 1,517; Cedar Waxwing 20,462; Orange-crowned Warbler 19; Yellow-rumped (Myrtle) Warbler 16,322; Pine Warbler 220; Palm Warbler 89; Black-and-white Warbler 3; Common Yellowthroat 25; Eastern Towhee 1,126; American Tree Sparrow 138; Chipping Sparrow 908; Clay-colored Sparrow **2**; Field Sparrow

2,478; Vesper Sparrow 1; Savannah Sparrow 1,091; Savannah (Ipswich) Sparrow 35; Le Conte's Sparrow 1; Nelson's Sharp-tailed Sparrow 8; Saltmarsh Sharp-tailed Sparrow 3; sharp-tailed sparrow, sp. 6; Seaside Sparrow 18; Fox Sparrow 688; Song Sparrow 8,987; Lincoln's Sparrow 2; Swamp Sparrow 1,170; White-throated Sparrow 19,677; White-crowned Sparrow 1,701; sparrow, sp. 16; Dark-eyed (Slate-colored) Junco 21,596; Dark-eyed (Oregon) Junco 1; Lapland Longspur 17; Snow Bunting 14; Northern Cardinal 10,258; Painted Bunting 2; Red-winged Blackbird 48,605; Eastern Meadowlark 1,589; Rusty Blackbird 169; Brewer's Blackbird 36; Common Grackle 44,902; Boat-tailed Grackle 1,364; *Icterid*, sp. 30; Brown-headed Cowbird 5,754; blackbird, sp. 8,909.

Baltimore Oriole 5; Purple Finch 157; House Finch 7,246; Red Crossbill 2; Pine Siskin 51; American Goldfinch 7,056; House Sparrow 4,171.

Total species: 208; **Total individuals:** 1,006,904.

FIRST RECORD OF HEERMANN'S GULL IN VIRGINIA

DAVID A. CLARK
5715 Carillo Avenue
Norfolk, VA 23508

The summer of 2002 was an unusually dry one in southeastern Virginia. As a result, the impoundments at the Craney Island Dredged Material Management Area in Portsmouth, normally a reliable location for migrating shorebirds, held little water and very few birds by the end of summer. Two days of fairly steady rain at the end of August were therefore quite welcome. On the morning of August 30, 2002, I decided to take a quick look around Craney Island to see if any new birds had shown up to take advantage of the newly available moisture.

The skies were overcast that morning, with an off-and-on drizzle. I drove the perimeter of Craney, starting at the southwest corner near the U. S. Army Corps of Engineers' office. As I approached the southern end at approximately 8:00am, I noticed a mixed group of approximately 20 to 30 gulls standing on the sandy beach at the base of the rock jetty which extends eastward into the Elizabeth River. Immediately my attention was focused on an unusually dark gull in the group.

I viewed the bird from my car at a distance of perhaps 30 to 40 meters, using Eagle Ranger 10 X 50 binoculars. The bird was obviously different from the usual assortment of gulls found at Craney Island, prompting me to reach for my camera to record the sighting. The dark gull flew perhaps 20 meters along the beach and landed near a dead fish. It arrived at the carcass at the same time as a Ring-billed Gull (*Larus delawarensis*) and contested possession of the fish, lowering its head and charging at the Ring-billed Gull, encouraging it to move off. I was able to take a couple of photographs before the birds took flight.

Fortunately, the two birds did not go far. A short distance away, the Corps of Engineers was actively pumping dredge material into the south impoundment, creating a "lake" of dredge spoils. Near the site of the discharge pipe workers had created a series of dirt mounds which provided convenient vantage points from which gulls could watch for edible morsels pumped from below. I drove up to this area and found the dark gull perched upon one of the dirt piles accompanied by other gulls, mostly Herring Gulls (*Larus argentatus*) of various ages. By remaining in my vehicle, I was able to approach quite close to the bird, coming within about 5 meters as it stood on the dirt mound. From my "blind" in the car, I took a number of photographs, using a Canon EOS Rebel 35mm camera with a Canon 75mm-300mm zoom lens alone or in combination with a 2X teleconverter. After taking photographs, I made notes on the bird's appearance and refrained from consulting field guides.

In all, I was able to observe the bird for approximately 20 minutes, mostly at close range. Lighting conditions were good for visual observation, but provided

a challenge for photography. Skies were 100% overcast, but were bright enough to produce good views, especially from such a short distance. The overcast conditions virtually eliminated shadows and probably enhanced the brown color of the bird. Based on the uniform chocolate brown coloration, along with its size and shape, the bird appeared to be a good fit for first-year Heermann's Gull (*Larus heermanni*).

Realizing that a sighting of a Heermann's Gull in Virginia would be an extraordinary occurrence, I alerted others to its presence by posting a description on VA-BIRDS, an internet site for bird-related information sponsored by the Virginia Society of Ornithology. In my posting, which was made at 9:05 a. m., I omitted my opinion as to the bird's identification in order to avoid influencing others. VA-BIRDS proved to be an effective tool in communicating to the birding community. Surprisingly, the first response I received was not from a Virginia birder, but from an individual in California who suggested that the description matched immature Heermann's Gulls present in the San Diego area at the time. Responses from birders in Virginia soon followed, nearly all of which proposed the same identification.

Among those who read the posting was Todd Day of Jeffersonton, Virginia. After reading the post, Day contacted Ned Brinkley in Cape Charles via cell phone, informing him of the sighting. Brinkley, accompanied by Bill Williams and Mitchell Byrd then headed for Craney Island to see the gull. This group concurred with the identification, and relayed this to Day, who posted that information to VA-BIRDS. Others who observed the bird that day included Bob Ake who took video, and Les Willis who shot digital still photos of the bird. The photos taken by Willis were posted on the internet and available for viewing at 3:45 p.m. the same day. The bird was seen by many others on the following day (August 31) and was further photographed and video-taped.

DETAILED OBSERVATIONS

Size and coloration. - The bird was a medium-sized gull, approximately the same size as a Ring-billed Gull and noticeably smaller than Herring Gull. Both Herring and Ring-billed Gulls were nearby, allowing direct size comparison. Overall, the bird was a very dark brown in color, much darker and more uniform in color than typical immature Herring Gulls. Its smaller size and uniform dark color made the bird stand out from all other nearby gulls. The primaries and secondaries were darker than the rest of the bird, approaching black. The tail was also very dark, nearly black, and was uniform in color, showing no evidence of banding. The wing coverts and scapulars were very slightly lighter in color than the rest of the bird and had pale edges. These feathers appeared to be rather worn, possibly accentuating the lighter color. In flight, the overall appearance was that of a dark gull, fairly uniform in color from both above and from below. The only readily discernable pattern was the solid blackish tail which was set off from the brown tail coverts, a dark bar along the wing created by the blackish secondaries, and a narrow pale line created by the light fringes of the coverts which contrasted with the dark secondaries.

Bill, legs and feet. - The bill appeared considerably less bulky than Herring Gull, without a particularly pronounced gonydeal angle, and appeared longer and

slimmer than those of similar-sized Ring-billed Gulls. From a distance, the bill appeared dark, but upon closer inspection proved to be bi-colored. This feature is clearly evident in several photos. The distal portion (approximately one-third) of the upper bill was black, while the basal portion was pale with a pinkish cast. The pale color extended from the base of the bill to just past the nasal opening. The lower bill was also bi-colored, with the outer half black and the inner portion pale pinkish. The legs and feet were very dark gray or blackish, with no hint of flesh tones or other pale colors.

Eyes and head. - The eye was dark, with a brown iris and no apparent eye-ring. The head was fairly rounded, not angular as in Herring Gull. In some postures, the neck appeared relatively thin and long. Generally, the head, nape, neck, breast, mantle, belly, and undertail coverts were dark brown, with a pale light brown area at the base of the bill. The area in front of and behind the eye, as well as the sides of the neck appeared somewhat darker and grayer than the rest of the head, with more of a sooty look.

CONCLUSIONS AND COMMENTS

Based on the complete lack of "adult gray" feathers on the mantle or elsewhere, the bird was presumed to be a first year gull. The uniform chocolate brown color combined with the size of the bird, equal to that of nearby Ring-billed Gulls, indicate Heermann's Gull.

Many immature gull species are various shades of brown, but most are patterned in some fashion or are mottled with varying amounts of whitish and do not exhibit the solid dark brown coloring of the subject. No other North American gull normally exhibits the solid chocolate brown coloring of the subject. The most likely candidates for confusion among North American gulls would be a very dark immature Western Gull (*Larus occidentalis*) or Herring Gull, or an aberrant, perhaps melanistic Laughing Gull (*Larus atricilla*). Herring Gull and Western Gull are both easily eliminated based on size and structure. I have no experience with melanistic Laughing Gull, but presume the bi-colored bill would eliminate that possibility, as would the bird's overall structure.

According to Harrison (1991), a couple of juvenile South American Gulls, the Lava Gull (*Larus fuliginosis*) and the Gray Gull (*Larus modestus*), are nearly all dark brownish in color. Juvenile Lava Gull (a Galapagos Islands endemic and not a particularly good candidate for vagrancy) shows whitish uppertail coverts, grayish undertail coverts, and has a black bill. Gray Gull has a black bill, a distinct pale area visible on the closed wing, and buff tips at the end of the tail feathers. Both of these species are far less likely than Heermann's.

Possible confusion between an all-dark gull and dark morph jaegers is possible. However all jaegers are readily eliminated based on bill structure, which in the case of the subject bird is clearly that of a gull and not a jaeger. The subject also lacked light coloring at the base of the primaries, which are typically present in jaegers.

The normal range for Heerman's gull includes the west coast from the Gulf of California to British Columbia (Sibley 2000). They are rarely found inland. I am aware of only a few previous records of Heermann's Gull east of the Mississippi River, all of which are from either the Great Lakes area or the Florida Gulf Coast. These include an adult, February 1980, Lorain County, Ohio (photographed by John Pogacnik); an adult, November 1981, Michigan; a first year bird found November 1999 and present until September, 2000 at Lake Ontario in the vicinity of Toronto, Ontario; a second year bird discovered October 2000 by Glen Wilson at Ft. De Soto Park, Pinellas County, Florida (an individual, likely the same individual in adult plumage, continues to be seen from time to time at various locations along the Gulf Coast, e.g. Choctohatchee Bay near Destin on May 18th and Noriega Point on May 19, 2003 in Okaloosa County, Florida).

Based on written observations and photographic records, the August 30, 2002 sighting at Craney Island has been accepted by the Virginia Avian Records Committee as the first record for Heermann's Gull in Virginia. The bird is also believed to be the first record of this species anywhere along the Atlantic seaboard.

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BLUE-PHASE ROSS' GEESE ON ASSATEAGUE ISLAND, VIRGINIA

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Plumage polymorphism in the Snow Goose (*Chen caerulescens*) and Ross' Goose (*Chen rossii*) is perfectly associated with a point substitution (Val⁸⁵→Met⁸⁵) in the *melanocortin-1 receptor* gene, which is expressed in the melanocytes of developing feather follicles (Mundy et al. 2004). White geese are homozygous for the Val⁸⁵ allele whereas "blue-phase" geese are heterozygous or homozygous for the Met⁸⁵ allele. The blue-phase of Ross' Goose was only recently discovered (McLandress and McLandress 1979) and the prevalence of the blue-phase morph on the primary wintering grounds of the species in California was estimated to be less than 1%. The source of the Met⁸⁵ allele in Ross' Geese is unknown, but it could have entered the gene pool through hybridization with Snow Geese or through recurrent mutation of the *melanocortin-1 receptor* gene. Populations of Ross' Geese have increased dramatically in recent years (Ryder and Alisauskas 1995) and the species has become a rare winter visitor along the Atlantic coast, usually in the company of Snow Geese. Although the total number of blue-phase Ross' Geese wintering in the Atlantic flyway must be very small, none of the few sighting of blue-phase individuals reported on internet websites or anecdotally mentioned in regional ornithological publications has been adequately documented in a peer-reviewed journal.

On 24 November 2001, I observed a probable family of four Ross' Geese on Assateague Island (Chincoteague National Wildlife Refuge), Accomack County, Virginia. The refuge was unusually dry and thousands of geese arrived every afternoon to drink and bathe at the barrow ditch that parallels the road along the southern margin of Snow Goose Pool. I first noticed the foursome about 80-90 m north of the ditch in a large flock of Snow Geese that covered several hectares. Over the next ten minutes the Ross' group meandered toward the road through the milling Snow Geese and finally reached the ditch no more than 20 m in front of me (1540 EST). I watched them with binoculars (Zeiss Victory 10 X 40) in good afternoon light for another 10 minutes until all the geese took flight in an uproar when a Bald Eagle flew over.

The Ross' group included an adult and a juvenile of each color morph. The four were identical in stature, significantly shorter than adjacent Snow Geese, and had rounded heads and proportionally short necks. The adults had diminutive dark pink bills that lacked the black grin stripe present in Snow Geese. I acknowledge,

however, that a very thin or partial grin stripe might not have been visible with binoculars at a distance of 20 m. Feathers at the base of the bill appeared to form a straight line in all four individuals. This combination of characters suggested that the individuals were pure *Chen rossii* rather than hybrids between *C. rossii* and *C. caerulescens*.

I was transfixed by the novel plumage pattern of the blue-phase adult and devoted the bulk of my observation time taking plumage notes. The goose was similar in appearance to the definitive basic plumage of the Type 6 blue-phase Snow Goose (Cooke and Cooch 1968), but with several important distinctions, most notably the intensity and distribution of melanin on its head, neck, and back. The Ross' neck was entirely black anteriorly to the middle of the crown and to the midline of the throat, forming a broadly rounded white facial patch. The upper breast and back were also black, but slightly paler than the neck. The lower breast, sides, and flanks were dark brownish-gray with paler feather margins. The center of the abdomen and the undertail coverts were white. Coverts visible on the folded wing were silvery gray, the tertials and scapulars were similarly colored but with black stripes along the rachises. The gray tail and white rump and lower back were glimpsed only briefly as the goose took flight. Both adults had dark pink legs.

The body plumage of the juvenile blue-phase individual was uniformly brownish-slate with flecks of white on the face whereas the bill and legs were dark gray. The white-phase juvenile was white with pale gray crown and mantle. The white-phase adult exhibited typical definitive basic plumage. None of the Ross' Geese exhibited rusty ferrous staining on their facial plumage.

ACKNOWLEDGEMENTS

I thank Phil Davis, Rob Ringler, Susan Heath, and Ned Brinkley for providing information on Ross' Goose sightings in Maryland and Virginia.

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GOLDEN-CROWNED KINGLET NESTING BEHAVIOR ON WHITETOP MOUNTAIN

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INTRODUCTION

In the southern Appalachian Mountains, the Golden-crowned Kinglet (*Regulus satrapa*) breeds most commonly in red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*) forests at elevations above 1372 m (Simpson 1976). In Virginia, the species is a common summer resident in the spruce-fir zone on Mt. Rogers (1746 m) and Whitetop Mountain (1682 m) in Grayson, Smyth, and Washington counties (Murray 1952, Scott 1966, 1975, 1982) and locally uncommon to rare summer resident at high elevations elsewhere in the state (Kain 1987). Only five Golden-crowned Kinglet nests have been reported in Virginia. The first report of nesting came from Jones (1932), who observed a nest under construction on 1 June 1932 near Bristol. Although the location at which he made the observation is uncertain, it was probably somewhere in Scott County (Clapp 1997). It is also possible that the nest was on Whitetop Mountain, which Jones visited often (Jones 1936). If so, his observation that it was in a "fir" tree may have been a misidentification, as Fraser fir is known to occur only on the summit Mt. Rogers in Virginia (Rheinhardt and Ware 1984). The fact that Jones collected Red-tailed Hawk (*Buteo lineatus*) eggs in Scott County on 2 June 1932 (Jones 1932, Clapp 1997) suggests that he could only have been on accessible Whitetop the day before. On 18 June 1952, J.R. Snyder and F.R. Scott found a pair feeding young in a nest at 1158 m on the southern slope of Sapling Ridge in Highland County; C.E. Stevens found a nest with young the same day at 1189 m on the northern shoulder of Sapling Ridge (Scott 1952). Dr. C. S. Adkisson of VPI&SU, and his ornithology class, reported an adult building a nest on 25 or 26 May 1974 on Whitetop Mountain (Scott 1975). The fifth nest was found by J.W. Coffey and Ron Harrington on 11 June 2003. It was at 1067 m on Iron Mountain in Smyth County and contained at least six young (R.B. Clapp, pers. comm.). The fact that so few nest records exist for Virginia, as well as elsewhere in the southern Appalachians, makes the following record worthy of note.

OBSERVATIONS

On 12 July 2002, I found the nest of a Golden-crowned Kinglet at an elevation of 1673 m, near the summit of Whitetop Mountain in Washington County, Virginia, just inside the county line. The small, cup-shaped nest was between 5.5 and 6 m above ground in a 14-m-tall red spruce (*Picea rubens*) and suspended by its rim in pendant fashion near the end of a horizontal branch facing southwest. It

was placed about 2.5 m from the main trunk of the tree and 0.5 m from the end of the branch among dense foliage. From the ground I could see only part of the well-hidden nest, but its exterior was apparently composed almost entirely of lichens (*Usnea spp.*) and perhaps a few mosses. Only the foliage of the nest limb sheltered it from above, as there were no overhanging branches for several meters, and numerous living twigs were radiating over its top. Just below the nest limb was another branch with equally dense foliage, on which the base of the nest seemed to be resting. Farther below, most of the limbs were long and sloped severely downward. The nest tree was at the edge of a small clearing in which the principle vegetation consisted of Canada blackberry (*Rubus canadensis*), several mountain ashes (*Sorbus americana*), and a tangle of dead branches from a fallen spruce. The clearing was approximately 18 m from the grass bald on the southwestern slope of the mountain. Behind the nest tree and to its north is a dense forest of pure red spruce. Most other red spruces in the vicinity were of heights similar to that of the nest tree. There was also little plant growth at the base of the nest tree.

I was able to locate the nest only through careful observations on the movements of the adult birds. When I first noticed the male, he was foraging in the crowns of spruce trees and carrying food in his bill. He flew to several spruce trees growing close to one another, apparently collecting additional food items, before finally making his way to the nest tree. About two minutes later, one of the adults flew in with food, and I was able to follow its approach to the nest.

Over a 20-minute period, intervals between the male's feeding visits varied from as little as two or three minutes to as long as seven minutes. The female's visits also varied, but she usually appeared several minutes after the male had left and made fewer nest visits during the time I watched. While her mate was gone, the female often would go to the nest with food and stay there until the male returned, at which point she would fly downward from the nest to resume food collecting. The male would then approach the nest, feed the young, and leave a few seconds later. I suspect that the female was brooding the nestlings after feeding them.

The adults never flew directly to the nest, but instead landed in foliage nearby and hopped over to it slowly. Twigs hanging overtop of the nest made it impossible for me to see them while they fed the young. They seemed to carry several food items in their bills on each visit, and once I saw the female carrying a tan moth (possibly a *Noctuid sp.*) with a wingspan of about 1.5 cm, the wings still attached as she hopped behind the foliage. I was unable to tell if the adults carried out fecal sacs, due to the rapidity of their flight as they exited the nest and disappeared, nor could I hear the nestlings' begging calls.

The age of the young in this nest is uncertain, but according to Galati (1991), females brood young for the first three to five days after hatching, spending almost as long on the nest as they do when incubating eggs. Brooding time declines steadily until between days six and nine, when it is finally discontinued and the young are able to thermoregulate effectively (Galati 1991). Galati observed a mean brooding attentiveness for three females of 13.6 minutes (range 0.5-45 min.) at egg-hatching, diminishing to only 4.2 minutes (range 1-11 min.) on the day of

brooding cessation, constituting 74.6% and 1.4% of their time, respectively (Ingold and Galati 1997). The Whitetop female was likely still brooding, but for periods no longer than several minutes, suggesting that the young were probably between six and nine days of age. However, the temperature at the summit on this date was only 14 C, which may have caused the female to brood more than she would have in warmer conditions.

The discovery of the nest so late in the season may indicate that it was a second brood or a second or third nesting attempt, which the species often initiates in other parts of its range (Galati and Galati 1985, Galati 1991). On the same date that I made these observations, I also observed several Golden-crowned Kinglet families around the summit of Whitetop. One such family contained at least three to four recently fledged young.

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MOURNING DOVE NEST WITH YOUNG IN NOVEMBER IN VIRGINIA

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Mourning Doves (*Zenaidura macroura*) nest throughout most of North America, and both nest and overwinter in Virginia. It is the most common game bird in North America (Grue et al. 1983). It is also one of the most common birds in Virginia, ranking seventh in total abundance (United States Geological Survey Patuxent Wildlife Research Center 2002), and sixth among native birds (excluding European Starling (*Sturnus vulgaris* Linnaeus)).

The nesting season is quite long in Virginia, with known nesting dates ranging from eggs present on 19 February (Clapp 1997) to young present on 24 September (Larner 1998). While Larner (1998) does not indicate the age of the young observed, the eggs must have hatched between 10 and 24 September, which means that they were laid between 27 August and 9 September (Tomlinson et al. 1994). Geissler et al. (1987) reported two young in a nest during the second week of October in the eastern United States; however, the state in which the nest occurred was not reported.

On 8 November 2002, a Henrico County, Virginia, resident reported a Mourning Dove nest in her yard with young. The home is located approximately 1.5 miles north of Richmond International Airport, in Sandston, Virginia.

The nest was approximately 2.5 m off the ground and 0.5 m from the home, in an ornamental lilac bush. I noted an adult Mourning Dove perching on a power line adjacent to the home. The nest was constructed entirely of stiff twigs, and was approximately 20 cm in diameter and 8 cm deep. The two young that occupied the nest were nearly adult size, fully feathered, and approximately 12 days old (Mirarchi 1993). Even though I approached closely (0.5 m) and from several angles to photograph them, the young remained in the nest, which suggested that they could not yet fly. However, Mourning Doves may not flush easily from the nest, so it is possible that the young were volant (Bent 1932).

If the chicks were 11-13 days old, then the eggs hatched 27-29 October, and therefore were laid 13-15 October (Sayre and Silvy 1993). It is not clear if this was a new nest. The homeowner was not aware of the nest before this report. However, she may not have seen the nest earlier due to foliage that obscured it. Also, as the shrub containing the nest was at the side of the house (a low traffic area), it is possible that the nest would not have been detected, even if the nest were present all summer. If it was a new nest, it was probably constructed between 10 and 13 October (Blockstein 1986).

DISCUSSION

Geissler et al. (1987) performed what is probably the most intensive Mourning Dove nest survey in the literature. The latest nest reported by Geissler et al. (1987) in the northeastern United States (including Virginia) was present during the second week in October. This nest contained two nestlings. In the southeastern United States, which includes those states east of the Mississippi River and south of Kentucky and Virginia, the latest a nest was found was the third week in October (also with two nestlings). It was not reported in which state(s) any of these nests occurred. These dates are later than the latest nests reported by Larner (1998), Semmes (1907), and Sprunt (1957) in Virginia. Larner's (1998) latest reported nest date was 24 September (with young). Semmes (1907, p.8) reported that several nests occurred among young pines in Albemarle County "from May to September," though the status of the nest and specific dates were omitted. Sprunt (1957) reported that young from the latest nest he observed (in Cumberland County) fledged on 8 October.

Abnormally high temperatures during October may have caused this dove to initiate a nest later than normal. During the likely period of nest and clutch initiation (10-13 October), the average temperature was 19.6°C (National Weather Service Forecast Office 2003). This is a departure of +4°C from the normal temperature for those dates. However, the average temperature of the likely egg-laying period (13-16 October) was 14.2°C, a departure of -0.5°C from normal (13 October remained above average, but 14-16 October were below normal, National Weather Service Forecast Office 2003). Overall October temperatures were above normal (15.6°C versus a normal temperature of 14.6°C, National Weather Service Forecast Office 2003).

The nest reported here, which was active at least three weeks after the latest documented nest in the southeastern U.S. (8 November in this study versus no later than 18 October in Geissler et al. 1987), is the latest report for a Mourning Dove in the eastern United States. Hatch-year females will attempt to nest at ages as young as 90 days (Sayre and Silvy 1993), so it is possible that this nest represents a first nesting attempt by a juvenile bird. However, because adult Mourning Doves have been found to nest as many as six times per year in warmer parts of the U. S. (Sayre and Silvy 1993), this nest may also have been an aberrant adult nest. This seems more likely, since this nest contained two nearly-fledged young and nest success among hatch year Mourning Doves is poor (Sayre and Silvy 1993).

The recruitment contribution of late-nesting doves to the total population seems to be low (Geissler et al. 1987). However, multiple brooding is critical for Mourning Doves due to small individual clutch sizes and relatively high mortality rates.

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ANNUAL REPORT OF THE VIRGINIA AVIAN RECORDS COMMITTEE

Susan A. Heath
VARCOM Secretary

The following decisions were made by the Virginia Avian Records Committee during calendar year 2002.

ACCEPTED RECORDS

Black Scoter (*Melanitta nigra*), one female, Bells Lane, Staunton, 8 December 2001.

Second accepted Mountains and Valleys record in category two [Allen Lerner, III, YuLee Lerner].

California Gull (*Larus californicus*), one individual, Hunting Creek, Alexandria, 21 February 2002. Sixth accepted Coastal Plain record in category two [Erika Wilson].

Gyr Falcon (*Falco rusticolus*), one individual, Kiptopeke State Park, Northampton County, 21 October 2000. First accepted Coastal Plain record in category two [Calvin Brennan, Robert Ake, Robert L. Anderson].

Short-eared Owl (*Asio flammeus*), one adult and two fledglings, Culpeper County, 29 May 2001. Piedmont breeding record accepted in category two [Karen Heatwole, George Harris, Rosemary Harris].

Black-chinned Hummingbird (*Archilochus alexandri*), one female, Virginia Beach, 6 January - 5 February 2002. First accepted state and Coastal Plain record in category one [Andy Tate, Farimae Tate, Mary Gustafson].

Scissor-tailed Flycatcher (*Tyrannus forficatus*), one individual, Mitchells, Culpeper County, 4 May-4 July 2001. Fourth accepted Piedmont record in category one [Karen Heatwole, Larry Lynch, Rich Rieger].

Cave Swallow (*Hirundo fulva*), one individual, Northampton County, 20 November 2000. Fourth accepted state and Coastal Plain record in category two [Calvin Brennan].

Blue-gray Gnatcatcher (*Poliophtila caerulea*), one individual, Danville, 5 December 2001 and 19 February 2002. Extends the winter date. Accepted in category two. [Jeff Blalock].

Yellow Warbler (*Dendroica petechia*), one individual, below Kerr Dam, Mecklenburg County, 01 January 2002. Winter record accepted in category two [Jeff Blalock].

Yellow Warbler (*Dendroica petechia*), one individual, below Kerr Dam, Mecklenburg County, 27 January 2002. Extends the winter date, accepted in category two [John Spahr].

Harris's Sparrow (*Zonotrichia querula*), one individual, Weyers Cave, 5 April-5 May 2002. Mountains and Valleys record accepted in category one. [Matt Orsie, Allen Lerner III, YuLee Lerner].

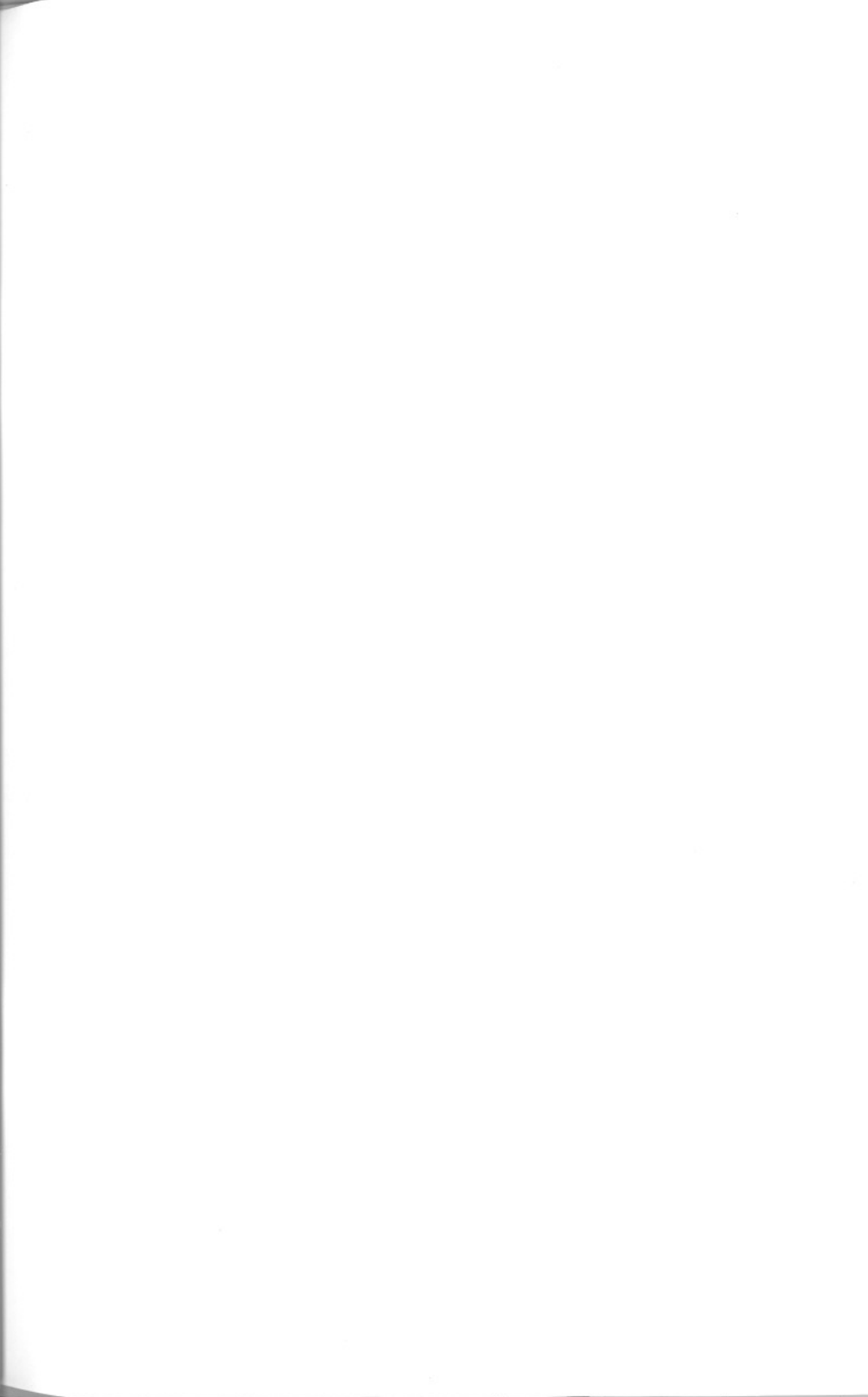
SUBMISSIONS NOT ACCEPTED

- Pacific Loon** (*Gavia pacifica*), one individual, Sandbridge, Virginia Beach, 30 November 2001.
- Greater White-fronted Goose** (*Anser albifrons*), two individuals, Fishersville, 17 November –21 November 1995.
- Greater White-fronted Goose** (*Anser albifrons*), six individuals, Lyndhurst, 7 January 1997 and 20 January 1998.
- Greater White-fronted Goose** (*Anser albifrons*), one individual, Rosedale, Russell County, 24-25 October 2000.
- Lesser Black-backed Gull** (*Larus fuscus*), one individual, Lake Brittle, Fauquier County, 21 January 2001.
- Kirtland's Warbler** (*Dendroica kirtlandii*), one individual, Compton Mt, Buchanan County, 3 September 2001.
- Lark Bunting** (*Calamospiza melanocorys*), one male, Chesapeake Bay Bridge-Tunnel, island #3, 7 June 2000.
- Lark Bunting** (*Calamospiza melanocorys*), one individual, Lincoln, 12 March 2001.

SUBMISSIONS CIRCULATING

- Yellow-billed Loon** (*Gavia adamsii*), one individual, Snickers Gap, 30 September 2002.
- Great Cormorant** (*Phalacrocorax carbo*), one individual, Beaverdam Reservoir, Loudoun County, 19 November 2001.
- Magnificent Frigatebird** (*Fregata magnificens*), one individual, Claytor Lake, 6 October 1998.
- Barnacle Goose** (*Branta leucopsis*), one individual, Alexandria, 6 January-24 February 2002.
- Swallow-tailed Kite** (*Elanoides forficatus*), one individual, Shenandoah County, 14 August 2000.
- Swallow-tailed Kite** (*Elanoides forficatus*), one individual, west of Hume, Fauquier County, 9-11 August 2002.
- Mississippi Kite** (*Ictinia mississippiensis*), one individual, West Augusta, 26 May 2002.
- Black Rail** (*Laterallus jamaicensis*), one individual, Staunton River State Park, Halifax County, 14 October 2001.
- Sandhill Crane** (*Grus canadensis*), one individual, Shenandoah County, 11 May 1987.
- Sandhill Crane** (*Grus canadensis*), two individuals, Rockfish Gap, 3 October 1999.
- Sandhill Crane** (*Grus canadensis*), one individual, Swoope, 15-28 July 2002.
- Sandhill Crane** (*Grus canadensis*), 5 individuals, Rockfish Gap, 6 October 2002.
- Mongolian Plover** (*Charadrius mongolus*), one individual, Chincoteague NWR, Accomack County, 15 September 2001.
- Curlew Sandpiper** (*Calidris ferruginea*), one individual, Chincoteague NWR, Accomack County, 12 June 2002.
- Franklin's Gull** (*Larus pipixcan*), one individual, near Poquoson, York County, Newport News CBC, 15 December 2001.

- Heermann's Gull** (*Larus heermanni*), one individual, Craney Island, 30 August 2002.
- Mew Gull** (*Larus canus*), one individual, Chesapeake Bay Bridge-Tunnel island #3, Chesapeake Bay CBC, 26 December 2001.
- Yellow-legged Gull** (*Larus cachinnans*), one first year bird, Chesapeake Bay Bridge-Tunnel island #3, CBC, 24 December 2001.
- Eurasian Collared- Dove** (*Streptopelia decaocto*), one individual, Sterling, Loudoun County, 10 March 2001 and other dates until 7 April 2001.
- Eurasian Collared- Dove** (*Streptopelia decaocto*), one individual, 26 August 2001, Northampton County.
- White-winged Dove** (*Zenaida asiatica*), one individual, suburban Richmond, 17 November 2002.
- Black-chinned Hummingbird** (*Archilochus alexandri*), one female, Portsmouth, 26 -29 October 2001.
- Western Kingbird** (*Tyrannus verticalis*), one individual, Culpeper and Fauquier Counties, 10 October 2001.
- Gray Kingbird** (*Tyrannus dominicensis*), one individual, near Capeville, Northampton County, 2 June 2002.
- Fork-tailed Flycatcher** (*Tyrannus savana*), one individual, Bath County, 28 September 2002.
- Common Raven** (*Corvus corax*), one individual, Kiptopeke State Park, 26 October 2002.
- Clay-colored Sparrow** (*Spizella pallida*), one individual, Manassas National Battlefield Park, Prince William County, 22 December 2001-18 January 2002.
- Henslow's Sparrow** (*Ammodramus henslowii*), one individual, near Gainesville, Fauquier County, Plains CBC, 16 December 2001.
- Le Conte's Sparrow** (*Ammodramus leconteii*), one individual, Sky Meadows Park, Fauquier County, 21 October 2001. First reported 20 October 2001.
- Bullock's Oriole** (*Icterus bullockii*), one male, Vienna, 17 March 2002- and later.





INFORMATION FOR CONTRIBUTORS

The Raven, the official journal of the Virginia Society of Ornithology (VSO), functions to publish original contributions and review articles in ornithology, not published elsewhere, mostly relating to Virginia birdlife. Manuscripts should be sent to the editor, Paul R. Cabe, Biology Department, Washington & Lee University, Lexington, VA 24450 (cabep@wlu.edu).

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

Format of *The Raven* generally follows guidelines set by the Council for Biology Editors as outlined in the CBE style manual, 6th edition, 1994 (Council of Biology Editors, Inc., 11250 Roger Bacon Dr., Reston, VA 20190). Recent volumes of *The Raven* should be inspected for style. Vernacular and scientific names of birds should be those published in the Seventh Edition of the A.O.U. Check-list of North American Birds and subsequent supplements. All measurements should be reported in metric units.

Preferred submission format for manuscripts is by electronic file, prepared using Microsoft® Word or WordPerfect®. Text files should contain minimal formatting. All graphics (photos, maps, graphs, charts) must be in black and white; original size should not exceed 5 x 7 inches. Files may be submitted by email attachment (preferred) or on floppy disk or CD. Authors are encouraged to consult with the editor on additional matters of content, format or style.



The Raven

JOURNAL OF THE VIRGINIA SOCIETY OF ORNITHOLOGY

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

Activities undertaken by the Society include the following:

1. An annual meeting (usually in the spring), held in a different part of the state each year, featuring talks on ornithological subjects and field trips to nearby areas.

2. Other forays or field trips lasting a day or more and scheduled throughout the year so as to include all seasons and to cover the major physiographic regions of the state.

3. A journal, *The Raven*, published twice yearly, containing articles relevant to Virginia ornithology, as well as news of the activities of the Society and its chapters.

4. A newsletter, published quarterly, containing current news items of interest to members and information about upcoming events and pertinent conservation issues.

5. Study projects (nesting studies, winter bird population surveys, etc.) aimed at making genuine contributions to ornithological knowledge.

In additions, local chapters of the Society, located in some of the larger cities and towns of Virginia, conduct their own programs of meetings, field trips and other projects.

Those wishing to participate in any of the above activities, or to cooperate in advancing the objectives of the Society, are cordially invited to join. Annual dues are \$15.00 for active members, \$25.00 for sustaining members, \$50.00 or more for contributing members, \$400.00 for life members, and \$20.00 for family members (limited to husband, wife and their dependent children).

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MODELING THE POTENTIAL IMPACTS OF CLIMATE CHANGE ON THE SUMMER DISTRIBUTIONS OF VIRGINIA'S NONGAME BIRDS

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INTRODUCTION

Imagine returning to your car after birding on a hot summer's day. Opening the door, you stagger back as a wave of superheated air blasts out. The windows of your car acted very much like the glass in a greenhouse, trapping some of the incoming infrared wavelengths of light that then heated up the inside of the car. If the greenhouse effect didn't exist then the temperature inside your car would not be much higher than the maximum outside temperature that day. Water vapor, carbon dioxide (CO₂), methane, and other trace gases in the Earth's atmosphere act much like the glass in a greenhouse (or your car), helping to retain heat by trapping and absorbing infrared radiation. This "greenhouse effect" acts to keep the Earth's surface temperature significantly warmer than it would otherwise be. However, since pre-industrial times, there have been significant increases in the amount of these greenhouse gases in the atmosphere. The current levels of the two primary greenhouse gases are now greater than at any time during at least the past 420,000 years (likely much longer) and are well outside of the bounds of natural variability (IPCC 2001).

Accompanying the increases in greenhouse gases has been an increase in temperature. The 1990s were the warmest decade and the 1900s the warmest century of the last 1000 years. Of the more than 100 years for which instrumental records are available, 1998 was the warmest year on record and 7 of the top 10 years all occurred in the 1990s. The annual global mean temperature is now 1.1°F (0.6°C) above that recorded at the beginning of the century. Limited data from other sources indicates that the global mean temperature for the 20th century is at least as warm as any other period since approximately 1400 AD (IPCC 1996, 2001). And, "there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities" (IPCC 2001). These activities include the burning of fossil fuels, increases in agriculture and other land use changes (such as deforestation). Increases in greenhouse gases (past and projected), coupled with the length of time these gasses remain in the atmosphere are expected to cause a continued increase in global temperatures. Models estimate that the average global temperature, relative to 1990 values, will rise by 2.5°-10.4°F (1.4°-5.8°C) by the year 2100 (IPCC 2001).

Warming due to increases in greenhouse gases is expected to be even greater in some areas, especially Northern Hemisphere land areas. Models based on various scenarios for population growth, economic well being, improvements in technology, and fossil fuel use project annual average temperature increases of 3°-18°F (1.7°C - 10°C) for the United States; 4.9°-9.5°F for the mid-Atlantic region (including Virginia). These temperature changes are projected to be highest in the north (Arctic) and in winter with lesser increases in the south and in summer (NAST 2000).

PREDICTED AND POTENTIAL CHANGES

How might these changes impact the summer distributions of Virginia's Nongame birds? "Recent regional changes in climate, particularly increases in temperature, have already affected hydrological systems and terrestrial and marine ecosystems in many parts of the world" (IPCC 2001). For example, there have been changes in growing season, earlier spring green-up and earlier arrival and breeding in some birds (Root et al. 2003). The global average sea level has risen by 4-8 inches due to a combination of thermal expansion of the oceans and melting of land ice (IPCC 2001). If these changes have been observed with only a small change (1°F) in the global average temperature what might happen if the temperature continues to rise? In addition to rising temperatures, many climate models also project an overall increase in evaporation - leading to increases in precipitation (mostly in storms) but also to overall declines in soil moisture. Shifts in the timing of precipitation are also possible. Even after emissions are reduced, CO₂ concentrations, temperature and sea level will all continue to rise for a period ranging from decades/centuries (CO₂ stabilization, temperature rise) to millennia (sea-level rise). Thus, climate change will likely have a continuing impact on Virginia's birds and their habitats.

Projected Sea-level rise. - Current models project an increase in sea level of 3.5 - 35 inches (0.09 - 0.88 m) by 2100 (IPCC 2001). Some coastal areas in the United States are also subsiding, contributing to loss of coastal wetlands and tidal mudflats. In Virginia, factoring in the range of spring tides, approximately 373 square miles (968 km²), much of it on the Eastern Shore, are considered vulnerable to a sea-level rise of ca. 27 inches (70 cm) (Titus and Richman 2001). The overall amount of potential change in tidal mudflats and coastal estuaries is dependent on many things, such as local subsidence, the amount of temperature change/sea-level rise, and the ability of habitats to migrate inland in the face of barriers to migration such as roads and development.

Projected habitat changes. - Temperature, precipitation and soil moisture are important factors limiting the distribution of both plants and animals. As the climate changes so will plant and animal distributions. In general, the geographic range of North American plants and animals will tend to shift poleward and/or upwards in elevation in response to temperature changes. Range shifts of wildlife populations will be dependent upon factors such as the availability of migration corridors, suitable habitats and the concurrent movement of forage and prey. Range shifts in plants will be dependent upon factors such as soil types, migratory pathways (e.g.,

no cities blocking the way), seed dispersal mechanisms and pollinator availability. It is very unlikely that plant and animal species will respond in the same manner to climate change. The best available evidence from paleoclimatic studies, models and observations suggests that each plant and animal species will move independently. Thus, communities as we now know them will look different in the future. There is sufficient evidence to indicate that many ecosystems have already begun to change in response to observed climatic changes (Root et al. 2003).

Over the next 75-100 years models project possible major changes in the suitable climates of many vegetative communities in Virginia. For example, models estimate that climate suitable for oak-hickory forests will potentially become more suitable for oak-pine forests (NAST 2000). Models of individual species project potential complete loss of sugar maple, yellow birch and American beech; potential major declines in the extent of Virginia pine and northern red oak; and potential gains in species like slash and longleaf pine, water oak and sweet bay (Iverson et al., 1999).

As many tree species are long-lived and migrate slowly it could potentially take decades to centuries for species in some vegetative communities to be replaced by others (Davis and Zabinski 1992). However, as increased temperatures and drought stress plants they become more susceptible to fires and insect outbreaks. These disturbances could play a large role in the conversion of habitats from one type to another. There could very well be instances where existing plant communities are lost to disturbance but climatic conditions and migration rates limits the speed at which they are replaced. Thus, invasive species, grasslands and shrublands may transitionally replace some of these areas.

Projected changes in bird distributions. – Summer bird ranges are often assumed to be tightly linked to particular habitats. This generalization is only partially true. While certain species are usually only found in specific habitats (e.g., Kirtland's Warbler breeding in jack pines), others are more flexible in their habitat use. Species found in a particular habitat type throughout their summer range may not be found in apparently equivalent habitat north or south of their current distribution. Birds are also limited in their distributions by their physiology and food availability. The link between physiology and the winter distributions of many species is well-established (Kendeigh 1934, Root 1988a, 1988b). Recent research shows that physiology plays a role in limiting summer distributions as well (Dawson 1992, T. Martin, pers. comm.). Often, the choice of a specific habitat may be to provide a microclimate suitable for a species' physiology. While habitat selection, food availability, and competition may all play a role in influencing local distributions of a given bird species, looking at a species' overall distribution often yields different results. This study examined the association between summer bird distributions and climate and how these distributions may change with climate change.

METHODS

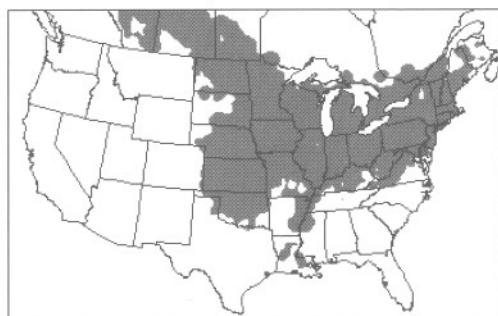
Logistic regression was used to develop models of the association between bird distributions (from Breeding Bird Survey data) and climate - the climate

variables acting as surrogates for the many factors possibly limiting a species distribution (e.g., physiology, habitat, food availability). One way of determining how accurate these models are is to compare how well the predicted species distribution map (fig. 1b) matches a map of the actual distribution (fig. 1a) based on similar bird data (Price et al. 1995). This comparison (and various statistical tests) indicates that at least a portion of the summer distributions of many North American birds can be modeled accurately based on climate alone.

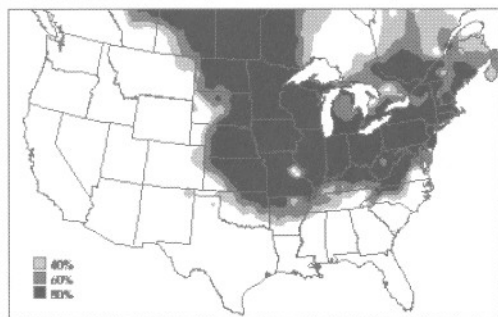
The next step was to examine how bird distributions might change in response to climate change. For this study, climate projections from the Canadian

Baltimore Oriole

A. Actual Distribution (based on BBS data)



B. Model Distribution (1985-1989 climate)



C. Model Distribution (2XCO₂ climate)

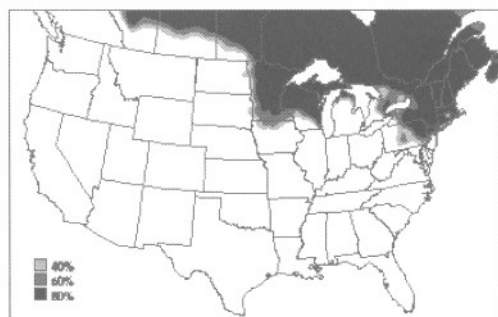


Figure 1. A. Map depicting the distribution of Baltimore Oriole as detected by the Breeding Bird Survey. This map is based on one found in Price et al. (1995). B. Map depicting a model of the distribution of Baltimore Oriole based solely upon the climate of 1985-1989. The scale represents the probability of the species' occurrence with shaded areas depicting the distribution of the species (i.e., areas with suitable climate). C. Map depicting the possible distribution of Baltimore Oriole under the doubled CO₂ climate conditions projected by the CCC. The scale represents the probability of the species' occurrence - shaded areas depicting the distribution of the species (areas with suitable climate for the species).

Climate Center (CCC) were used to determine what the average climate conditions might be once CO₂ has doubled, sometime in the next 75-100 years. For example, for a given point the difference in average summer temperature between the "current" and "future" (both model derived) climate might be +2°C. This value is then added to the actual average summer temperature at that point to estimate what the climate at that point might be with a doubling of CO₂. A more complete explanation of methods used to develop the models and maps has been published elsewhere (Price 1995, Price in press).

These results were then used to create maps of the projected possible future climatic ranges for almost all North American passerine birds (e.g., fig. 1c). What these maps actually show are areas projected to have the proper climate for the species, or climatic range, under conditions derived from the CCC model. While the results of the models cannot be used to look at the fine points of how a given species' distribution might change, they can provide an impression of the possible direction and potential magnitude of the change in the suitable climate for the species. The maps of projected summer climatic ranges of birds was then compared with the information from Kain (1987) to project how Virginia's avifauna might change under this climate change scenario.

RESULTS

Species whose future climatic summer ranges might exclude Virginia (i.e., possibly extirpated as summer residents). – Yellow-bellied Flycatcher, Willow Flycatcher, Alder Flycatcher, Least Flycatcher, Blue-headed Vireo, Warbling Vireo, Tree Swallow, Bank Swallow, Cliff Swallow, Black-capped Chickadee, Red-breasted Nuthatch, Brown Creeper, House Wren, Winter Wren, Golden-crowned Kinglet, Blue-winged Warbler, Golden-winged Warbler, Nashville Warbler, Yellow Warbler, Chestnut-sided Warbler, Magnolia Warbler, Black-throated Blue Warbler, Black-throated Green Warbler (n nominate race only), Blackburnian Warbler, Cerulean Warbler, American Redstart, Ovenbird, Northern Waterthrush, Mourning Warbler, Canada Warbler, Rose-breasted Grosbeak, Vesper Sparrow, Savannah Sparrow, Song Sparrow, Swamp Sparrow, Dark-eyed Junco, Bobolink, Baltimore Oriole and Purple Finch.

Species whose future climatic summer ranges in Virginia might contract. – Acadian Flycatcher, Yellow-throated Vireo, Red-eyed Vireo, White-breasted Nuthatch, Gray Catbird, Northern Parula, Black-and-white Warbler, Louisiana Waterthrush, Kentucky Warbler, Hooded Warbler, Summer Tanager, Scarlet Tanager, Chipping Sparrow, Field Sparrow, Grasshopper Sparrow and American Goldfinch.

Species whose future climatic summer ranges in Virginia might expand. – Loggerhead Shrike, Brown-headed Nuthatch, Bewick's Wren, Prothonotary Warbler and Dickcissel.

Species whose future climatic summer ranges might eventually include Virginia. – Western Kingbird, Scissor-tailed Flycatcher, Painted Bunting, Bachman's Sparrow, Lark Sparrow and Great-tailed Grackle.

DISCUSSION

These lists are not all-inclusive, since results obtained from models of some species were not adequate to assess how their climatic ranges might change. Nor do the lists include those species whose climatic ranges may undergo little change. Finally, these lists are based on output from a single commonly used climate model. Using output from different climate models may therefore yield somewhat different results. In addition, the geographic scale of these models, like those of the underlying climate change model, is relatively coarse. As such, the models are unable to take into account localized topographic changes and the possible existence of suitable microclimates – the tops of mountains and along rivers, for example. Therefore, some of the species whose climatic ranges are projected as shifting out of Virginia may be able to persist in refugia if a suitable microclimate is available. This is much the same situation as currently exists with some more northerly species currently persisting in Virginia in localized areas.

It is helpful to consider how species' ranges may change to know what sorts of changes to look for in the future. As the average temperature (climate) increases, weather will continue to occur with some years cooler and others warmer than otherwise expected. So, colonization will most likely occur in fits and starts before a species can truly be considered to be established as part of Virginia's breeding avifauna. In some cases, a species may start appearing as a vagrant, off and on, for several years before breeding is attempted. In other cases a species may start breeding in an area, then become extirpated, and then resume breeding – possibly in greater numbers than before.

How quickly distributional changes might occur is unknown – the rate of change will largely depend on whether limits to a given species' distribution are more closely linked with climate (especially temperature), vegetation, or some other factor. The rate of change will also likely be tied to the rate of change of the climate itself. If the climate changes relatively slowly, then species may be able to adapt to the new climate. However, many changes could occur (and are occurring) relatively quickly. One pilot study found that the average latitude of occurrence of some species of Neotropical migrants has already shifted significantly farther north in the last 20 years, by an average distance of almost 60 miles (100 km) (Price and Root 2001; Price, unpublished data). In another study, the arrival date of 20 species of migratory birds in Michigan was found to be 21 days earlier in 1994 than in 1965 (Price and Root 2000; Root, unpublished data). Prothonotary Warblers along the James River in Virginia have been found to be both returning and breeding earlier (Line 2003). Many other species have been found to be arriving and breeding earlier, not only in the US but also in Europe and elsewhere (Root et al. 2003).

CONCLUSIONS

Projected future rapid climate change is of major concern, especially when viewed in concert with other population stresses (e.g., habitat conversion, pollution, invasive species). Research and conservation attention needs to be focused not only on each stressor by itself, but also on the synergies of multiple stressors acting

together. These synergistic stresses are likely to prove to be the greatest challenge to wildlife conservation in the 21st Century. Because anticipation of changes improves the capacity to manage, it is important to understand as much as possible about the responses of animals to a changing climate.

Society may ultimately need to adapt not only to changes in ranges but also to the loss of ecological services normally provided by wildlife. For example, it may be necessary to develop adaptations to losses to natural pest control, pollination and seed dispersal. While replacing providers of these services may sometimes be possible, the alternatives may be costly. Finding a replacement for other services, such as contributions to nutrient cycling and ecosystem stability / biodiversity are much harder to imagine. In many cases any attempt at replacement may represent a net loss (e.g., losses of the values of wildlife associated with recreation, subsistence hunting, cultural and religious ceremonies).

In summary, a high probability exists that climate change could lead to changes in bird distributions. Even a relatively small change in average temperature could impact bird distributions within the state. Some of these changes could occur (and may be occurring) relatively quickly. While these changes may have some ecological and, possibly, economic effects, the magnitude of these effects is unknown. Ultimately, the greatest impact on wildlife and vegetation may not come from climate change itself, but rather from the rate of change. Given enough time, many species would likely be able to adapt to climatic shifts, as they have done in the past. However, the current projected rate of warming is thought to be greater than has occurred at any time in the last 10,000 years (IPCC 1996). This rate of change could ultimately lead to many changes in Virginia's nongame avifauna.

Birders can help scientist look for and document changes in bird ranges and populations. Besides participating in regular events like the Breeding Bird Survey or Christmas Bird Count, information is also needed on nesting, arrival and departure. If you, or your club, has 10 or more years of data please contact me at the address listed above.

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BIRD MORTALITY ASSOCIATED WITH HIGHWAY MEDIAN PLANTINGS

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Thorny elaeagnus (*Elaeagnus pungens*) is a plant native to China and Japan that has been used throughout the southeastern United States as a highway median plant for more than 30 years (Radford et al. 1968). The plant is a heat and drought resistant, evergreen shrub that is fast growing. Because it forms a dense, tall hedgerow, it provides an effective divider between opposing lanes of traffic. Thorny elaeagnus generally flowers from October through November and fruits in April and May. The plant is capable of producing dense crops of red fruit that are high in sugar content.

The occurrence of thorny elaeagnus with dense berry crops along high-traffic roadways, appears to represent a hazard to fruit-eating birds. This potential hazard is increased in the mid-Atlantic region by the timing of fruit set relative to the timing of northward migration for many fruit-eating birds. Here, I present observations of a large kill of Cedar Waxwings (*Bombycilla cedrorum*) caused by the association of median plantings and roadway traffic.

In early April of 2001, large numbers (> 1,000) of Cedar Waxwings were observed foraging within a median planting of thorny elaeagnus along Interstate 64 just east of Williamsburg, Virginia. Plants were situated in two segments totaling 1.9 km in length. Between 23 April and 7 May, 2001, six visits were made to the site to search for dead birds. The roadway segments adjacent to median plantings were systematically searched for bird kills by walking along both the median edge and the opposite shoulder of the east and westbound lanes. All carcasses detected were removed from the site to prevent recounting in subsequent visits.

A total of 1,292 Cedar Waxwings and 1 Brown Thrasher (*Taxostoma rufum*) were collected along median shrubs. The majority (73.7%) of these birds were collected in the four-day period between 23 and 26 April. A total of 364 birds were known to have been killed on 24 April. By early May, birds foraging within the site were much reduced. Only 7 birds were collected on 7 May.

The number of birds collected along roadway plantings was an underestimate of the birds actually killed within the site. Birds were known to have been foraging within the site for two weeks prior to the initiation of surveys. Also, it is not clear what proportion of the birds killed during the survey period could be recovered. On 24 April, 18 birds were observed to be killed during a 20-min period. Only 5 of these birds could be recovered. Remaining birds either adhered to automobiles or were powdered by the heavy traffic. Most of the birds that were recovered were likely knocked free of the roadway.

Because Cedar Waxwings move in social groups over large areas to exploit concentrated fruit patches, they appear to be particularly vulnerable to roadway mortality. Birds were observed to roost in the tops of trees lining the roadway throughout the day and repeatedly fly down to feed within median plants. Waxwing flocks flew over traffic to reach shrubs but settled down into shrubs to forage. Most of the birds that were observed to be killed were struck by vehicles as they flew from the base of shrubs across traffic to reach roost trees. Birds did not appear to abandon the site due to roadway mortality. The number of birds observed feeding within the median appeared to decline in concert with the depletion of fruit.

The mortality event reported here is not an isolated incident. During the months of April and May of 1999-2001, 2,194 birds of 17 species have been collected from 4 roadway segments containing median plantings of *Elaeagnus pungens* in coastal Virginia (Watts and Paxton, unpubl. data). Mortality rates may vary year to year depending on the strength of migration and the size of the fruit crop. A similar bird kill was reported from Brazos County, Texas where 301 birds were collected along 275 m of thorny elaeagnus plantings within a high-traffic area (Dowler and Swanson 1982). Collected birds included 298 Cedar Waxwings, 2 Northern Mockingbirds (*Mimus polyglottos*), and 1 Red-winged Blackbird (*Agelaius phoeniceus*). Waxwing flocks were observed feeding on elaeagnus berries and were repeatedly hit as they flew in and out of traffic.

Thorny elaeagnus has been used as a median plant throughout the southeastern United States suggesting that roadway mortality may be a regional problem. However, no statistics on the use of the plant along roadways are currently available. It is estimated that 14.5 km of the shrub are planted within highway medians in coastal Virginia (data from Virginia Department of Transportation). A broader investigation of the distribution and abundance of fruit-bearing plants used as median plantings is needed to assess their impacts on regional bird populations.

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LE CONTE'S SPARROWS (*AMMODRAMUS LECONTEII*) IN VIRGINIA: A REVIEW OF RECORDS, WITH NOTES ON HABITAT USAGE, IDENTIFICATION, AND INTERSPECIFIC ASSOCIATIONS

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ABSTRACT

This paper summarizes the results of approximately 160 hours of searching for Le Conte's Sparrow in southeastern Virginia Beach, Virginia, in the context of the Back Bay Christmas Bird Count (CBC), including the methods used to search a variety of habitats for the species. Between 1990 and 2002, we made 35 observations of this species at Back Bay National Wildlife Refuge. Between 1994 and 2001, observations on the associations of Le Conte's with marsh plant communities and with other wintering passerines were also recorded. Finally, we summarize the 60 published and unpublished records of Le Conte's Sparrow in Virginia between 1954 and 2002 and propose a re-evaluation of the species' status in Virginia, reflecting this species' status as a rare but regular winter visitor in the outer coastal plain.

BACKGROUND AND METHODS

In association with the annual Back Bay Christmas Bird Count (CBC) in Virginia Beach, the authors and fellow participants David F. Abbott, Robert Abbott, Dorian Anderson, Henry T. Armistead, Mel Baughman, James Beard, Gordon Chaplin, Matthew Dufort, Thomas M. Gwynn, III, Peter Hill, Marshall J. Iliff, Karen Kearney, Yann Kolbeinsson, Paul E. Lehman, Eileen Mathers, Randall P. Moore, Evan Obercian, J. Brian Patteson, William C. Russell, Donald J. Schwab, Matthew F. Sharp, James L. Stasz, Brian L. Sullivan, Paul W. Sykes, Jr., and Christopher C. Witt, have been responsible for coverage of the Back Bay National Wildlife Refuge's territory itself, from the beach through the bay. The interior impoundments comprise a subterritory for typically two of the four refuge census parties, both of which travel northward at sun-up from Barbour's Hill in False Cape State Park into the wildlife refuge, one group walking the western side of the interior impoundments, the other generally the eastern side, along with the centers and peripheries of the impoundments, as water levels and time permit.

As with all CBC surveys, the censuses of the refuge vary considerably, some of the more profound variables being the capacities, experience, and interests of the observers; the weather on the day of census (rain and high wind are frequent); the conditions of vegetation and water on the refuge (stemming both from refuge management practices and local weather patterns); and the recent foraging patterns of feral hogs (*Sus scrofa*) and Snow Geese (*Chen caerulescens*), both of which appear to have deleterious effects on the quality and extent of the sparrow's typical habitat at this location.

There was also evolution in the census methods. In the, 1970s, 1980s, and early 1990s, all manner of dry fields and wet marshes were covered in a generally uncoordinated fashion. If observers walked in tandem, it was generally to flush rails and waterfowl and in some areas wrens and sparrows. As observers learned to identify habitats consistently associated with Le Conte's Sparrows, we narrowed somewhat our searches for this species to habitats that seemed to hold promise and began to coordinate census strategies. In doing so, we were aware that the status of Le Conte's Sparrow on the periphery of its wintering grounds was still poorly known, owing largely to the secretive habits of this species and to its little-known habitat requirements as well (Lowther 1996).

Since about 1992, the preferred method for locating Le Conte's Sparrows has been to walk three people abreast, slowly, about 3-4 m apart, through moist marsh grasses with no more than a few cm of standing water in the vicinity. In this way, the sparrows normally flush, fly a short distance, alight, and usually crouch, so that if not conclusively identified in flight, they can usually be studied after having been flushed once. Although this method is certainly intrusive, the census occurs only once per year, and the entire interior of the refuge is closed to people from November through March, thus ensuring that the sparrows and other wildlife are unmolested over the winter months. During other times, visitor access is located to one of two dike roads, and no access to marshes is permitted at any other time.

RESULTS

Discovery and documentation of December Le Conte's Sparrows at Back Bay.

– Participants in this census have had occasion to observe Le Conte's Sparrows on the Refuge in 13 consecutive years, 1990-2002. The first was on 28 December 1990, when Patteson, Sykes, and Brinkley flushed a Le Conte's in a small wet field on the east side of the Refuge's east dike, about two km south of the Refuge headquarters; in the winter 1988-89, at least one Le Conte's had spent the winter in the same area. Another Le Conte's Sparrow was observed on the Count the following year, on 29 December 1991, found by David and Robert Abbott while searching for a Yellow Rail (*Coturnicops noveboracensis*) that had been noted in an area of short marsh grasses and forbs in the interior impoundment south of the B/C crossdike.

In the following years, we intensified and focused the effort to locate Le Conte's Sparrows in this area, though we were mindful of the imperative to continue coverage of the refuge and other species in accordance with earlier CBC surveys. On 28 December 1992, Witt and Sharp succeeded in finding two Le Conte's Sparrows,

and on the same date in 1993, G. Armistead, H. Armistead, Witt, Sharp, and David Abbott found six in the interior dikes of the refuge, with four of those found in the fields only 1 km and less south of the refuge headquarters. On 28 December 1994, Witt, Sharp, and the authors located four Le Conte's in extensive searches of apparently appropriate habitat, predominantly in the southern and central portions of the interior impoundments between the A/B and B/C crossdikes.

On 29 December 1995, G. Armistead, Witt, and Sharp found three Le Conte's in the southernmost portions of the refuge, and likewise on the same date in 1996, the authors and Patteson found four in these areas; none were found in the area just south of refuge headquarters, which had been productive in 1993. On 28 December 1997, three were located here by Stasz, Iliff, Sharp, and G. Armistead, while Russell and H. Armistead found one 0.5 km of refuge headquarters on 28 December 1998. In the following year, on 29 December 1999, Armistead, Moore, Sullivan, and Hill found six in the same southern portions of the refuge (another was located by D. L. Hughes on the western shore of Back Bay at the Whitehurst Tract of Princess Anne Wildlife Management Area), while in 2000, Evan Obercian and Peter Hill located one just south of the visitor center on 29 December. On the same date in 2001, Sharp, James Beard, Karen Kearney, and the writers found four birds, all in the southern and central reaches of the refuge, while in 2002 on 28 December, Yann Kolbeinsson, Paul E. Lehman, Eileen Mathers, G. Armistead, and Sharp found a single bird in the southern portion of the refuge. Kolbeinsson secured an excellent photograph of the latter bird.

In each instance, written documentation on the Le Conte's Sparrows has been tendered by year's end with the CBC compiler Sykes, who forwards materials to National Audubon Society, and from there, documentation is sent on to Teta Kain, regional compiler for the Mid-Atlantic. The descriptions are archived but not reviewed by the Virginia Avian Records Committee (VARCOM) and available for perusal.

Winter habitat use. - Habitat usage by the sparrows in this part of Virginia in the interior impoundments of Back Bay refuge do not appear to be strict, but a strong pattern of usage is discernable in the survey notes. In nearly all records at Back Bay, *Panicum* have been the dominant grasses in the vicinity of the Le Conte's Sparrows. The sparrows appear to favor moist but not flooded (water up to 3 cm deep in scattered areas) fields of panic-grass species including especially Switchgrass (*Panicum virgatum*) but also Fall Panic-Grass (*P. dichotomiflorum*), a *Dicanthelium* (possibly *D. acuminatum*), and Japanese Panic Grass (*Arthraxon hispidus*). Sparrows have also been noted in the vicinity of patches of Prairie Cordgrass (*Spartina pectinata*). In 1997, Stasz estimated that in some areas up to about one third of the apparent Le Conte's habitat was composed of *Panicum virgatum*. Most of the *Spartina* only reaches a height of a 10-30 cm, while the *Panicum* grows from ankle-height, about 8 cm, to about 50 cm. Other vegetation in the near vicinity may reach one m.

Interspersed with these grasses are smaller amounts of other grasses and forbs such as Wild Rye (*Elymus virginicus*), beard-broomsedge sp. (*Erianthus*), Saltmarsh Fleabane (*Pluchea purpurascens* or *odorata*?), Bushy Broomsedge

(*Andropogon glomeratus* [formerly *A. virginicus* L. var. *abbreviatus*]), with other plants such as Swamp Rose-Mallow (*Hibiscus moscheutos*), Slender Fragrant-Goldenrod (*Euthamia minor*), and Marsh Fern (*Thelypteris palustris*), and some small examples of Wax Myrtle (*Myrica cerifera*) and Virginia Live Oak (*Quercus virginianus*). In 1994, a few examples of a foxtail grass (*Setaria* sp.) were noted in the vicinity of one Le Conte's Sparrow, and in 2001, a few blooming Common Marsh-Pinks (*Sebatia stellaris*) were noted.

In some areas, presumably in years when the Back Bay waters used to flood the impoundments are more saline, Salt Grass (*Distichlis spicata*) and American Threesquare (*Scirpus americanus*) have been noted in the vicinity of the sparrows. There is thus some variation in habitats associated with Le Conte's Sparrow at Back Bay, and the species has been seen here once in the vicinity of stands of the relatively high (1 m or more) Big Cordgrass (*Spartina cynosuroides*). Occasionally, small isolated stands of Black Needlerush (*Juncus roemerianus*) provide cover for a Le Conte's Sparrow that has been flushed, but most birds alight back into the *Spartina* or *Panicum*. Sykes (1974) noted that the 1974 Back Bay bird, present at least 7-29 December, inhabited a "wet grass-sedge field near the field headquarters of the refuge. Vegetation in this habitat was 6 to 15 inches high with widely scattered clumps of grasses and Wax Myrtle up to 3 to 3 1/2 feet." This description is consistent with findings in the study area 1988-2001 and with habitat in the vicinity of a Le Conte's Sparrow collected 10 January 1975 around Bodie Island pond, Dare County, North Carolina (Sykes 1978).

Habitat use in migration in Virginia. - In migration, the species, like other *Ammodramus*, is more catholic in its choice of habitats. It has been noted in the very short fescue-type grasses (*Festuca* spp.) on the Chesapeake Bay Bridge-Tunnel islands, in a field of planted millet (*Pennisetum glaucum*) at Dick Cross Wildlife Management Area in Mecklenburg County (Davis, pers. comm.), in a thicket of sumac (*Rhus* sp.) and Japanese Honeysuckle (*Lonicera japonica*; Via 1978), in short-grass and *Salicornia* habitat at Craney Island, Portsmouth (Grant 1974), in a dry field of weeds over 1.5 m high near Jamestown (B. Taber, pers. comm.), and in a moist field supporting Daisy Fleabane (*Erigeron philadelphicus*), Queen Anne's Lace (*Daucus carota*), Chicory (*Cichorium intybus*), Red Clover (*Trifolium pratense*), White Sweet Clover (*Melilotus alba*), Curled Dock (*Rumex crispus*), Common Ragweed (*Ambrosia artemisiifolia*), and Smartweed / Knotweed (*Polygonum* sp.), among others, at Stuarts Draft, Augusta County (S. C. Rottenborn, pers. comm.).

Two birds found in 1999 and 2000 by Sullivan in November at Eastern Shore of Virginia NWR, though, were noted in habitat similar to that in the Back Bay refuge impoundments, with in the case of the 1999 bird, *Panicum virgatum* and a *Sorghum* species dominant, with scattered examples of Bushy Broomsedge and edged in Green Bristlegrass (*Setaria viridis*). The 1999 bird, present along the Butterfly Trail into early January, frequented an area of about 150 m² or roughly all of this habitat type; when flushed, it took refuge in a large, dense thicket of *Rubus* sp. The 2000 bird was found in *Panicum* and other grasses and, when flushed, flew into a stand of Narrow-leaved Cattail (*Typha angustifolia*). Perhaps significantly,

only a single record in Virginia comes from the edge of tidal saltmarsh, with *Juncus* dominant, namely from Lynnhaven Inlet 31 December 1974 (Sykes, pers. comm.).

Association with other bird species at Back Bay. - Le Conte's Sparrow is believed to be a solitary forager with respect to other sparrows wintering in grasslands (Grzybowski 1983), and this appears to be true of Le Conte's wintering in coastal marshes as well. At Back Bay, Savannah Sparrows (*Passerculus sandwichensis* ssp.) are found in most open habitats, including moist areas, and several taxa of Savannah are often numerous in the immediate vicinity of Le Conte's Sparrows. On one occasion, Witt, G. Armistead, and Sharp found a Le Conte's within a large flock of sparrows containing many Savannah and Swamp (*Melospiza georgiana*) Sparrows, with a few Song Sparrows (*Melospiza melodia*) and Field Sparrows (*Spizella pusilla*). Nelson's Sharp-tailed Sparrows (*Ammodramus nelsoni*) have been noted five times in the Le Conte's vicinity as well, in slightly wetter spots. With the first Le Conte's seen in 1994, a short-tailed, large-headed, ruddy-winged sparrow, probably a Henslow's Sparrow (*Ammodramus henslowii*), flushed simultaneously. This was 1.75 km south of the B/C crossdike, just west of the east dike road. Even though it flushed weakly and flew only a few meters, it could not be relocated. Henslow's has been found in winter in Virginia only twice: at Goodes Ferry, on the Roanoke River in Mecklenberg County, on 12 January 1975 by Michael Boatwright and Raymond Chandler (Boatwright 1975) and at Stumpy Lake, Virginia Beach, on 13 December 1970 by Robert Ake (Scott 1971)—but it should be looked for in habitat with Le Conte's, as both species winter in similar areas in the Gulf Coast states, north and east to about South Carolina (McNair and Post 2000) and southeastern North Carolina (Fussell 1997).

Species other than sparrows that have been noted in the areas frequented by Le Conte's are notably few, but Sedge Wren (*Cistothorus platensis*) is often present around Le Conte's Sparrows here. In both instances in which a Yellow Rail has been found on the Back Bay count (by Robert L. Anderson, Jeff Byrd, Sykes, and Brinkley on 31 December 1981, and on 29 December 1991 date by Witt and G. Armistead), relatively uniform, moist *Panicum* field with ca. 1-3 cm of standing water in patches was also the habitat in the immediate vicinity of the rails.

In the case of the 1999-2000 Princess Anne Wildlife Management Area bird, which frequented a moist field with tussocky grass that abutted a hedgerow to the west of Back Bay (D. L. Hughes, pers. comm.), large numbers of other sparrow species were present, chiefly Savannah, Song, and Swamp, with smaller numbers of Field and White-throated (*Zonotrichia albicollis*) Sparrows, and single Vesper (*Pooecetes gramineus*) and Lincoln's (*Melospiza lincolnii*) Sparrows. Also present were several Northern Cardinals (*Cardinalis cardinalis*) and American Goldfinches (*Carduelis tristis*). In the case of the Drummond's Field (near Jamestown) birds—one of few records of multiple Le Conte's away from Back Bay—hundreds of sparrows were present, including Field, Chipping (*Spizella passerina*), Swamp, Song, White-throated, White-crowned (*Zonotrichia l. leucophrys*), and a single Vesper Sparrow (Taber, Williams, pers. comm.).

Association with other bird species during fall migration in Virginia. - In fall migration, Le Conte's Sparrow's associations with other species of bird vary tremendously by location. Birds on the Chesapeake Bay Bridge-Tunnel, for instance, have been in company with as many as eleven other sparrow species, as well as several warblers (chiefly Palm, *Dendroica palmarum* and Yellow-rumped, *D. c. coronata*). In such cases, the association of Le Conte's with other species may be opportunistic and coincidental, based as much on the presence of cover or shelter (as with the bridge-tunnel) as on food resources.

Appearance and behavior. - Because the strategies for finding and identifying Le Conte's Sparrows are little known on the Atlantic coast, our observations on behavior and field characters may be of value to those seeking to study the species. Field references currently available offer idealized portraits, rather than text and images that convey impressions of typical encounters with the species in the field (the best available material is to be found in Rising and Beadle 1996). Le Conte's typically, but not always, flies weakly when flushed and rarely rises above waist-height when flying away from a group of observers. The species is frequently mouse-like in behavior, running crouched and very rapidly through the *Spartina*, but when cornered Le Conte's often tolerates close study. Its ability to slink through dense vegetation is no doubt aided by its slender build, noticeably slimmer than other *Ammodramus*, a feature Pyle and Sibley (1992) note as lending the species "an almost reptilian appearance in the field." All of these features have been readily studied on the Back Bay birds, many of which posed within two meters of the observers for several minutes. Rarely, Le Conte's gives a soft call-note when flushed or when on the ground (very like a subdued versions of Savannah Sparrow's contact note), although Davis (pers. comm.) described a bird found near Kerr Lake, Mecklenberg County, as chipping repeatedly from an open perch. Iliff and Armistead observed one behaving similarly near Kiptopeke State Park by Maddox Pond (a borrow pit), which they eventually banded with Brian Johnson later that in the day, the only banding record of the species from Virginia. David L. Hughes obtained excellent photographs of a Le Conte's Sparrow discovered at the Back Bay refuge headquarters 7 December 1974; the bird perched high in a Wax Myrtle for about 15 minutes, unusual behavior for this species.

The single most arresting feature of the sparrow is its saffron-yellow supercilium. This color is unalloyed by grayish components or dusky streaking (as are always found in Nelson's and Saltmarsh Sharp-tailed Sparrows). Complementing this impression of a brightly colored sparrow are the diagnostic off-white median crown stripe, the straw-yellow streaks on a brown back, the nape with its almost chestnut streaks against a gray-buff background (the nape is gray in Sharp-tailed, and dusky-brown with indistinct brown streaks in Grasshopper Sparrow, *Ammodramus savannarum*), the pale but bright golden wash across the breast and sides (always with a dusker component in other species), and the finely streaked sides (unstreaked in Grasshopper). Also unique to the species is a facial pattern sharply defined by a triangular or "anchor-shaped" eyeline (Pyle and Sibley 1992) and powder-gray, almost bluish, auricular patch. Its small bill, slightly smaller than

most Grasshopper Sparrows and sharp-tailed sparrows, lends the bird a delicate look. The species's tones are too brightly yellow for apparently locally wintering races of Nelson's Sharp-tailed Sparrow—that is, nominate Nelson's, James Bay Sharp-tailed Sparrow (*Ammodramus n. alterus*), and Acadian Sharp-tailed Sparrow (*Ammodramus n. subvirgatus*)—as well as for Saltmarsh Sharp-tailed Sparrow races (*A. c. diversus*, Virginia's nesting form, and the nominate form, a regular coastal migrant and probably winter resident). Juvenal-plumaged Nelson's Sharp-tailed Sparrow, which would approach Le Conte's in this intensity of coloration, completes molt into Basic I plumage before commencing migration (Pyle and Sibley 1992).

DISCUSSION

Habitat use in regional and continental perspective. - Le Conte's Sparrow is essentially a North American endemic, with only two records from Mexico, a specimen taken in Sabinas, in the state of Coahuila taken 23 February 1910 (Howell and Webb 1995) and a recent record near Playa Bagdad, Nayarit state 20 January 2003 (Gómez de Silva 2003). Studies of the species on the breeding grounds are adequate, but wintering birds have been little studied. The results of informal survey work at Back Bay have proved intriguing in light of both breeding habitat and wintering habitat elsewhere in North America. Field work on the breeding grounds, for instance, has found that 82.9% of the diet of this species is plant matter, most of it *Panicum* spp. (especially *P. lanuginosum*), *Andropogon* spp. (especially Big Bluestem, *A. gerardii* and Little Bluestem, formerly *A. scoparius*, now *Schizachyrium scoparium*), and Yellow Foxtail, *Setaria glauca* (Easterla 1962). In North Dakota, stands of *Spartina pectinata* comprise the principal nesting areas for the species (Murray 1969). In both cases, the links to the presumed Virginia wintering grounds are of interest, as several *Panicum* species and *Spartina pectinata* appear to be key grasses for finding Le Conte's in the Commonwealth as well.

Studies of grassland birds in Texas (e.g., Grzybowski 1982) have found Le Conte's wintering predominantly in areas of relatively high (1-2 m) grasses and forbs, largely areas dominated by Big Bluestem or other *Andropogon*, by Indiangrass (*Sorghastrum nutans*), or by Little Bluestem, most of which are important in the diet and nesting ecology of the species on parts of the nesting grounds as well (Lowther 1996). Informal field work in 1997 and 1998 by Brinkley and A. M. Humann at Anahuac National Wildlife Refuge and other sites in coastal Texas, where Le Conte's winter in large numbers, revealed a surprisingly wide variety of habitats occupied by the species, from relatively dry fields composed almost entirely of sparse patches of *Panicum*, which hosted large numbers of Savannah Sparrows, to areas of relatively dense areas of native marsh grasses with much standing water over 5 cm deep. Clearly, more data are needed on wintering granivores in coastal marsh habitats.

Apart from data from Texas and Oklahoma studies, data are scant on wintering Le Conte's Sparrows. In Louisiana (Lowery 1955) and Florida (Stevenson and Anderson 1994), moist fields of broomsedge are preferred, whereas in Arkansas, Le Conte's have been found in *Panicum* and rice stubble (James and Neal 1986). Away from these areas, Le Conte's has been considered a very rare visitor or even a

vagrant along the Atlantic Seaboard, with the nearest regular winter residents found some 1000+ km from Virginia in the Florida panhandle (Lowther 1996). Recent discoveries of comparable numbers of Le Conte's Sparrows in South Carolina and North Carolina (J. O. Fussell, pers. comm.) suggest that the Back Bay birds are not an isolated group. Moreover, the species appears in recent years to winter north into Tidewater Maryland on an irregular basis (Iliff 2000).

At Back Bay, the majority of the refuge's interior habitats appear to be too dry or too wet to provide optimal habitat. Investigations of other habitats have consistently proved fruitless for finding Le Conte's Sparrows, although they continue to be monitored annually in the context of the CBC. Areas of other panic grasses, such as Bitter Panic Grass or Seaside Panicum (*Panicum amarum*), found at Back Bay refuge in drier zones such as the sides of sandy dikes or near dunes, have not held Le Conte's Sparrows, though Savannah and Ispwich (*Passerculus sandwichensis princeps*) sparrows frequent these areas commonly, the latter mostly on outer dunes. Another consistent finding is the absence of Le Conte's in areas with standing water over 3-5 cm deep, a niche preferred by Swamp Sparrows, a species with which Le Conte's is sometimes seen. Le Conte's at Back Bay refuge are noted exclusively "shoreward" of most aquatic vegetation.

In Maryland, observers using the recent Virginia findings on habitat associations found three Le Conte's in moist marshes with *Panicum virgatum* and *Andropogon* and another in a *Spartina patens* marsh; Maryland had only 11 previous records of the species (Iliff 2000). New Jersey's only record of a clearly overwintering Le Conte's stayed on the grounds of the Cape May National Golf Course, in a field of *Andropogon glomeratus* with a few tussocks of *Panicum* and scattered *Myrica*, with a single Loblolly Pine (*Pinus taeda*) and an Eastern White Pine (*P. strobus*; H. Armistead, pers. comm.). Nova Scotia's only wintering Le Conte's, and only one of three provincial records, was noted from 25 December 1997 to 10 March 1998. Found in an area of rank grasses and sedges, often free of snow, near a sewage treatment facility, it occasionally frequented a field of unidentified wildflowers that had gone to seed and an area of cattail (*Typha* sp.) as well (Forsythe, pers. comm.; Forsythe 1998).

Associations with other species. - Most of the suite of species noted in the immediate vicinity Le Conte's in Virginia in winter—Yellow Rail, Nelson's Sharp-tailed Sparrow, Sedge Wren, and Swamp Sparrow—all nest in very close proximity to Le Conte's Sparrow where their ranges coincide. In southern Manitoba, Brinkley has frequently noted (May and June, 1996-2000) that the rail and sharp-tailed sparrow inhabit slightly wetter environments than does Le Conte's, which sings amongst Sedge Wrens from small bushes in moist but not flooded portions of meadows and marshes. Swamp Sparrows tend to sing from taller vegetation in even wetter portions of marsh, where Virginia Rail (*Rallus limicola*), Wilson's Snipe (*Gallinago delicata*), American Bittern (*Botaurus lentiginosus*), and Sora (*Porzana carolina*) also nest. All of these observations are mirrored precisely in observations of the segregation of these nine species on the wintering grounds in Virginia, and they may have some predictive value for those searching Le Conte's Sparrow on

the edges of its range. These associations are unsurprising, as even vagrants from like nesting or wintering habitats tend to be found together, as in the case of the wintering Le Conte's Sparrow in Nova Scotia, which was seen with two Nelson's Sharp-tailed Sparrows (one *subvirgatus* and one presumed *alterus*) and one Seaside Sparrow (*Ammodramus maritimus*) (Forsythe, pers. comm.; Forsythe 1998). Of the several species found in loose association with Le Conte's Sparrows in other states to the south of Virginia, it is noteworthy that the similar Grasshopper Sparrow has never been detected within the refuge impoundments in winter, as the species has been noted in winter in drier habitat types not unlike those that hold Savannah Sparrows on the refuge (e. g., at Eastern Shore of Virginia National Wildlife Refuge and in Kiptopeke State Park, and in fields in the Fentress area of the old Norfolk County Christmas Bird Count), and so it should be searched for in the future.

Changing marsh habitats and wintering Le Conte's Sparrows. - Observers on the Back Bay CBC, several of whom have worked on the census through parts of five decades, have noticed myriad changes in the habitats in the refuge's interior, largely owing to management practices. In the 1960s and 1970s, for instance, Seaside Sparrows were fairly common in winter, and unidentified forms of sharp-tailed sparrow were irregularly found in small numbers in the southern half of the refuge in winter. Though still relatively common closer to Chesapeake Bay in *Spartina patens* and *S. alterniflora* in winter, both Nelson's and Saltmarsh Sharp-tailed Sparrows are very uncommon on the Refuge at present in winter. Both species, as well as Seaside Sparrow, can still be found in the refuge in migration, especially in autumn, and in particular along the boundary with False Cape State Park; however, Seaside Sparrow is no longer found on the Back Bay count at all, possibly owing to the changes in habitat resulting from different management strategies.

More recently, at least between 1985 and 1995, the refuge held more short-grass and more "upland" dry areas in the interior impoundments than it had 24 years ago (Brinkley, pers. obs.), and this shift was reflected in the starkly rising numbers of Sedge Wrens (*Cistothorus platensis*) and declining numbers of Marsh Wrens (*Cistothorus palustris*) found in winter on the refuge over that period. Between 1983 and 1989, Marsh Wren typically outnumbered Sedge Wren significantly on the refuge (CBC data are from the entire count circle, which masks this ratio in some years). Beginning in 1990, however, Sedge Wren outnumbered Marsh Wren by factors ranging from 1.28 to 4.33. In the more distant past, Marsh generally outnumbered Sedge, but in 1974, when 88 Sedge Wrens were tallied on the CBC (versus only 40 Marsh Wrens), a Le Conte's Sparrow was also noted, the only one on the CBC prior to 1990. That winter held extensive stretches of walkable marsh edge in the interior as well (P. McQuarry, pers. comm.).

It may well be that the increase in Le Conte's Sparrow records here relates to the change in habitat from deeper marsh to drier sedge and edge habitats, but without strict and long-term census methods, and given the strong sampling biases inherent in our survey, it is not possible to connect availability of appropriate habitat with numbers of Le Conte's Sparrows located. Greater Snow Geese, whose numbers have increased steadily on the middle Atlantic seaboard in the past two

decades (CBC data), also take their toll on the interior impoundments by feeding on the roots of marsh grasses. Although they do not appear to feed on *Panicum* per se, large flocks of Snow Geese do rest in these areas, defecating and trampling the grasses, and so may have some effect on habitat quality as they clearly do on the tundra habitats where they stopover and nest (Ganter et al. 1996). In recent years (1996-2004), as large tracts of the interiors of the diked areas at Back Bay refuge have been deeply flooded for use by waterfowl, areas previously harboring Le Conte's Sparrow and other moist-marsh species will likely not be utilized by the sparrows at all, as the water is now 0.25-0.5 m and deeper in many areas. In the CBC census on the refuge in 1999, numbers of Marsh Wren eclipsed those of Sedge Wren for the first time in ten years. Some small patches of Sedge Wren/Le Conte's Sparrow habitat remain on the edges of the flooded areas both inside and outside the dikes (both just west and east of the eastern dike road), and these will be the areas likely to hold these species in the future.

There is anecdotal evidence, gathered through examination of the specimen record, that relative abundance of Le Conte's Sparrows in the Southeastern states may vary annually in unpredictable ways, perhaps not dependent upon the availability of optimal local wintering habitat (McNair and Post 2000). High reproductive success may be the determining factor in good local counts ("flight years") of Le Conte's Sparrows in some areas on the edges of typical wintering range (McNair and Post 2000). Indeed, the widespread occurrence of the species in winter 1974 from Wise County to Virginia Beach was labelled a "Le Conte's Sparrow invasion" by Ake and Scott (1976).

The question remains open as to how long individuals of this species remain in the Back Bay vicinity in the nonbreeding season. "Wintering" Le Conte's Sparrows might be defined as those individuals determined to have remained in one vicinity well past the New Year, as appears to be the case with some of the Back Bay area records but only with one other (College Creek, Williamsburg area) eastern Virginia record. Since 1991, however, the Back Bay habitat has not been accessible for subsequent surveys, such that, though it seems quite likely, it is not possible to determine at this time whether the refuge holds a true wintering population.

Status in Virginia. - The status of Le Conte's Sparrow in Virginia, not formally reviewed since the publication of *Virginia's Birdlife: An Annotated Checklist* (Kain 1987), merits attention in light of the more than fourfold increase in individuals recorded since the time of that volume's database, that is, in the past 15 years versus the previous 32 years (1954-1985 $n=15$ individuals; 1986-2002, $n=67$ individuals). The *Checklist* lists the species as a "rare fall transient and early winter visitor" in the Coastal Plain, a "rare fall transient" (with one winter record) in the Mountains and Valleys, and notes single spring records in the Piedmont and Coastal Plain. One of these has been reviewed by the Virginia Avian Records Committee (VARCOM archive). Johnston (1997) describes its status as "rare fall transient and winter resident at widespread sites from Chincoteague to Wise County."

In previous decades, the suggestion that Le Conte's Sparrow was almost strictly a migrant in the state, very rarely lingering into early winter, was supported by the few records, which fell neatly between what appeared to be valid dates for

migrants. As of 2002, about half of the state's records (31 of 60; Appendix) involve presumed migrants, most of which have been seen in middle to late autumn, although there are now five spring records from April. Of course, seasonality data in Virginia are heavily skewed by Back Bay records, and so our assessment is necessarily somewhat tentative, and we intentionally avoid statistical manipulation of the data collected in the Appendix as a result. Nevertheless, in light of the new data, we propose that the species' status in the state be revised:

Coastal Plain: A very rare spring (2-27 April) and rare fall migrant (29 September to 24 November and possibly later) along the coast and very near Chesapeake Bay and major tributaries, with no interior Coastal Plain records; a regular but very scarce winter resident in Virginia Beach, particularly in *Panicum* marshes at Back Bay NWR, where up to six birds have been recorded per day. Spring records may refer to lingering winter birds or to migrants.

Piedmont: Seven records, two from spring (13-30 April), four from fall (20 October to 1 November), and one from winter (13 January).

Mountains and Valleys: Ten records, one in winter (25 December), nine in fall (14 September to 18 November, most in October).

Very few data on the age of migrant Le Conte's in Virginia are available, although the presence of two differently plumaged birds at Amsterdam, Botetourt County, one of which bore a finely streaked breast, suggests the latter was in juvenal plumage (Via 1978). Le Conte's Sparrows, apparently unlike other *Ammodramus*, regularly migrate in juvenal plumage (Pyle and Sibley 1992). Confirmed juvenile Le Conte's have been found at Kiptopeke State Park on 22 October 1995 by T. M. Gwynn, III, and on the Chesapeake Bay Bridge-Tunnel on 13 October 2000 by Iliff and G. Armistead (Iliff 2001). The state's second record of the species, from the bridge-tunnel, was described as having a streaked breast (Scott 1971) but was not recalled to be in juvenal plumage (D. Sonneborn, pers. comm.). The Le Conte's Sparrow banded on 8 November 1998 at Kiptopeke was aged as a hatch-year bird in first-winter (or Basic I) plumage by Brian Johnson (pers. comm.).

Back Bay and its environs are certainly not the only local habitat in Virginia for Le Conte's Sparrows, as recent records from western and northern Virginia Beach demonstrate. It is hoped that the description of habitat presented here will stimulate interest in finding other sites for the species in Virginia and elsewhere, and that naturalists searching for this species will make every effort to minimize their impact on wetland habitats.

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APPENDIX

This summary of Virginia records of Le Conte's Sparrow (through 2002) is divided by geographic region. Each entry includes the date, number of individual observed, location, and most principal observers.

Coastal Plain (ca. 40-43 records of 63-66 birds)

- 24 Nov 1970. 1 ind. Chesapeake Bay Bridge-Tunnel, D. W. Sonneborn.
- 3 Nov 1973. 1 ind. Craney Island, G. S. Grant.
- 23 Nov 1974. 1 ind. Grandview Beach, B. Taber, B. Akers, S. Sturm, J. Via.
- 7 Dec 1974. 1 ind. Back Bay NWR, D. Hughes, R. Ake, R. Peake, G. Williamson.
- 29 Dec 1974†. 1 ind. Back Bay NWR, P. McQuarry, R. Pyle, P. Pyle, P. Sykes.
- 31 Dec 1974. 1 ind. Lynnhaven Inlet, P. Sykes.
- 26 Dec 1979. 1 ind. Lynnhaven Inlet, P. Sykes.
- 26 Apr 1980. 1 ind. Chincoteague NWR, J. Abbott, D. Abbott.
- 2 Apr 1988. 1 ind. Newport News, D. & M. Mitchell, B. Williams, C. Hacker.
- 30 Oct 1988. 1 ind. Chesapeake Bay Bridge-Tunnel, G. Pearce, E. Brinkley, T. Kain, M. Boatwright, L. Wilkinson.

- 10 Dec 1988. 1 ind. Back Bay NWR, B. Patteson, T. Gwynn, D. Shoch, G. Pearce, B. Taber, F. Day.
- 28 Jan 1989†. 1 ind. Back Bay NWR, D. Abbott, F. Day, S. Rottenborn, R. Aaron, G. Wheaton, K. Bass, M. Barnhill.
- 27 Apr 1989. 1 ind. Chesapeake Bay Bridge-Tunnel, D. Schwab, E. Popp, D. Silsby, J. Sommerville.
- 28 Dec 1990. 1 ind. Back Bay NWR, B. Patteson, E. Brinkley.
- 13 Jan 1991¶. 1 ind. Fort Eustis, S. Rottenborn.
- 26 Apr 1991. 1 ind. Fisherman Island, T. Gwynn, D. Schwab.
- 10-11 Nov 1991. 1 ind. Chesapeake Bay Bridge-Tunnel, G. Pearce, T. Gwynn, D. Schwab.
- 14 Nov 1991†. 1 ind. Chesapeake Bay Bridge-Tunnel, D. Mitchell, D. Silsby.
- 29 Dec 1991. 1 ind. Back Bay NWR, D. Abbott, B. Patteson, R. Abbott, A. Tate, F. Tate, E. Brinkley.
- 18 Oct 1992. 1 ind. Chesapeake Bay Bridge-Tunnel, T. Gwynn, D. Schwab.
- 29 Oct 1992. 2 ind. Drummond's Field*, B. Williams, B. Taber, L. Lynch, W. Ealding.
- 28 Dec 1992‡. 2 ind. Back Bay NWR, G. Armistead, C. Witt, M. Sharp.
- 31 Dec 1992. 1 ind. Princess Anne HS, T. Barry.
- 18 Jan 1993. 1 ind. College Creek*, B. Williams.
- 29 Dec 1993. 6 ind. Back Bay NWR, G. Armistead, D. Abbott.
- 6 Feb 1994†. 1 ind. Back Bay NWR, B. Patteson.
- 29 Sep 1994. 1 ind. Chesapeake Bay Bridge-Tunnel, D. Schwab, T. Gwynn.
- 28 Dec 1994. 2 ind. Back Bay NWR, C. Witt, G. Armistead, M. Sharp, E. Brinkley.
- 22 Oct 1995. 1 ind. juv. Kiptopeke SP, T. Gwynn.
- 29 Dec 1995. 3 ind. Back Bay NWR, C. Witt, G. Armistead, M. Sharp.
- 29 Dec 1996. 4 ind. Back Bay NWR, J. Patteson, G. Armistead, E. Brinkley.
- 21 Oct 1997. 1 ind. Eastern Shore NWR, D. Cristol.
- 28 Dec 1997. 3 ind. Back Bay NWR, M. Iliff, G. Armistead, M. Sharp, J. Stasz.
- 8 Nov 1998. 1 ind. HY Kiptopeke SP, M. Iliff, G. Armistead, B. Johnson (banded).
- 28 Dec 1998. 1 ind. Back Bay NWR, H. Armistead, W. Russell.
- 21 Nov 1999-3 Jan 2000. 1 ind. Eastern Shore NWR, B. Sullivan, E. Brinkley.
- 29 Dec 1999. 6 ind. Back Bay NWR, G. Armistead et al.
- 29 Dec 1999-17 Feb 2000. 1 ind. Whitehurst Tract, Princess Anne WMA, D. Hughes et al.
- 13 Oct 2000. 1 ind. juv. Chesapeake Bay Bridge-Tunnel, M. Iliff, G. Armistead.
- 20 Nov 2000. 1 ind. Eastern Shore NWR, B. Sullivan.
- 29 Dec 2000. 1 ind. Back Bay NWR, E. Obercian, P. Hill.
- 29 Dec 2001. 4 ind. Back Bay NWR, E. Brinkley, K. Kearney, M. Sharp, J. Beard.
- 28 Dec 2002. 1 ind. Back Bay NWR, G. Armistead, M. Sharp, P. Lehman, Y. Kolbeinsson, E. Mathers.

- 30 Apr 1983. 1 ind. Blackstone, unknown.
 26 Oct 1987. 1 ind. Dick Cross WMA, R. Davis.
 13 Jan 1995. 1 ind. Dick Cross WMA, R. Davis.
 22-24 Oct 1996. 1 ind. Dulles Greenways Wetlands Mitigation Project, Loudoun Co., D. Abbott, G. Wheaton.
 13 Apr 1998. 1 ind. Dulles Greenways Wetlands Mitigation Project, Loudoun Co., D. Abbott, G. Wheaton.
 20-21 Oct 2001. 1 ind. Sky Meadows SP, S. Eccles, T. Day.
 31 Oct-1 Nov 2002. 2 ind. North Fork Wetlands Bank, Prince William Co., S. Rottenborn, T. Day, R. Smith.

Mountains and Valleys (10 records of 11 birds)

- 25 Dec 1954. 2 ind. (1 specimen) Saltville, Washington Co., S. Russell.
 3-5 Nov 1974. 1 ind. Wise Co., R. Peake.
 12-18 Nov 1976. 1 ind. Bobolink Rd., Botetourt Co., B. Kinzie, M. Moore, J. Via, J. Opengari, W. Opengari, J. Ayers, N. Middleton.
 10 Oct 1979. 1 ind. Staunton, L. Teuber, Y. Larner.
 23 Oct 1979, 1 ind. Stuarts Draft STP, R. Snyder (the date for this individual published in *American Birds* 34: 163 is inaccurate, per Larner and Scott).
 21-22 Sep 1986. 1 ind. Stuarts Draft STP, S. Rottenborn, M. Henkel.
 11 Oct 1986. 1 ind. Spring Cr., Rockingham Co., C. Tumer.
 19-28 Oct 1987 1 ind. Bobolink Rd., Botetourt Co. N. Middleton, J. Ayers, B. Kinzie, M. Donahue, B. Patteson, J. Wood, J. & T. Dalmas.
 14 Sep 1990. 1 ind. Roanoke STP, M. Smith.
 25-26 Oct 1998. 1 ind. Hidden Valley WMA J. Via, B. Akers.

Key to symbols and abbreviations in Appendix

- * = Drummond's Field is in Williamsburg ca. 1 km nw. of entrance to Jamestown; at least one individual was seen repeatedly through 9 Nov 1992. College Creek is near Ferry Landing, Williamsburg.
 ‡ = at least one individual reported in this vicinity through 6 Jan 1993
 † = possible duplication with record immediately preceding
 ¶ = also seen 16 Feb 1991
 = correct date; incorrect date in some earlier publications (e.g., *American Birds*)

NWR = National Wildlife Refuge

SP = State Park

STP = Sewage Treatment Plant

WMA = Wildlife Management Area

HS = High School

HY = hatch-year

juv. = juvenal plumage

THE BATH AND HIGHLAND COUNTY FORAY OF JUNE 2003

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INTRODUCTION

The 35th annual Virginia Society of Ornithology breeding bird foray covered Bath and Highland Counties from June 7 to June 15, 2003. This nine-day period was divided equally between the two counties with the first 4-½ days concentrating on Highland County (HC) where the designated headquarters was The Wilson House, a small farmhouse south of Monterey along SR 84. The Warm Springs Inn served as headquarters for Bath County (BC). The temperatures during this period ranged from the mid 40s to the low 80s EF. The cooler temperatures, along with nearly daily rain and overcast skies, predominated during much of the HC portion. The days gradually warmed up with less rain and clearer skies for the BC portion.

This survey area represents a series of mountain ridges and river valleys arrayed northeast to southwest. The mountain ridges include 13 peaks above 1200m, most along the western ridge of Allegheny Mountain. In HC these ridges are, from east to west, Shenandoah Mountain (850-1160m), Bullpasture Mountain (850m-975m), Jack Mountain (975-1310m), Monterey / Back Creek Mountain (1070-1190m), Lantz Mountain (975-1160m) and Allegheny Mountain (1160-1370m). Allegheny Mountain spans the entire north-south axis of both counties, its ridge representing the West Virginia border. Shenandoah, Jack and Back Creek Mountains terminate in northern BC with their southern counterparts being considerably lower, except for Warm Spring Mountain (975-1280m), which extends centrally into Allegheny Co. The river valleys range in elevation from 915m along the south branch of the Potomac in northwest HC to below 365m along the Cowpasture River in southeast BC. The major south flowing waterways are, from east to west, the Cowpasture, Bullpasture and Jackson Rivers, and Back Creek. The mountains are mostly forested, while a substantial portion of the river valleys is farmland. In addition to the numerous rivers and tributaries, there are several man-made lakes, the largest of which is Lake Moomaw, a 1000 hectare impoundment in the southwest section of BC. Habitats, therefore, included Canadian zone coniferous forests along the Allegheny ridge; deciduous and mixed woods at all elevations; open pastures at various elevations; and low elevation open fields, marshes and riverside groves.

Bath and Highland Counties (population 5000 and 2500 respectively) are sparsely populated and contain a scattering of small towns and villages along with many farmsteads. This rural setting with its network of federal, state, and forest service roads afforded convenient access to many public sites. In addition,

permission was received to survey several large private tracts, especially in HC. Consequently, most locally existing habitats were surveyed.

Three previous forays to these counties have been conducted in 1975 (HC), 1982 (BC) and 1985 (HC). Species found in previous forays but not in 2003 include Pied-billed Grebe, Cattle Egret, Red-breasted Merganser, Mississippi Kite (all in 1982), Golden Eagle (1985), American Woodcock (1975, 1982), Herring Gull (1982), Common Tern (1982), Long-eared Owl (1975), Chuck-Will's Widow (1982), Alder Flycatcher (1985), Bank Swallow (1982), Bewick's Wren (1975, 1985), Nashville Warbler (1985), Northern Waterthrush (1975, 1985), Summer Tanager (1985), and Red Crossbill (1975, 1982, 1985). Cattle Egret, Red-breasted Merganser, Mississippi Kite, Herring Gull and Common Tern are non-breeding transients and accidentals, while most of the others are known or possible breeders in this area, which is at the margin of their summer range. The Bewick's Wren is considered extirpated from Virginia. Species found in this foray but not in the previous ones include Northern Shoveler, Hooded Merganser, Fish Crow, Dickcissel, and Pine Siskin. The Hooded Merganser was a confirmed breeder and Dickcissel as a possible breeder.

METHODS

The previous published foray information was also used for historical comparison to assess possible change in a species status, realizing that such temporal comparison is limited by the few data points (3 years for Highland; 2 years for BC) and by the non-standardized survey methods. Nevertheless, where comparison suggests a possible/probable trend or status change, a comment is offered in the species accounts. Where no appreciable change was noted or the historical accounts are incomplete or vague, no such comment is included.

The methodology of this survey was similar to that of previous forays. Individuals or small groups covered pre-assigned driving routes or hiking trails each day. Essentially all public roads and most habitat types were covered at least once. Some of the regions and routes were surveyed several times on different days and by different teams. Whenever an area received repetitive coverage an attempt was made to minimize over counting of a species. For example, three different teams did SR 600 in HC on three successive days and reported counts of Common Yellowthroat of 3, 8 and 16. Although the total number of yellowthroats along this route may well be the sum of these counts, it was the highest count (16) that was typically used and incorporated into the county total for that species. Therefore any total counts listed in the species accounts should be considered a minimum, rather than a maximum, for that species. These forays do not employ standardized methods such as timed point counts with precise start times, which could contribute to such day-to-day count variances (along with normal bird movements, weather, auditory recognition skills of participants, etc.). For many species the high counts and/or the number of parties reporting that species are also listed as supplemental information to assess prevalence and distribution.

The accounts that follow were compiled from 104 field lists (59 HC and 45 BC) and 175 observer days (109 HC and 66 BC). An observer day represents one

participant surveying for at least six hours in one day. The highest elevations (above 3500 ft.) received 37% of the observer days in HC and 20% in BC. Dedicated nighttime birding was limited to less than six hours in each county. Most night calling birds were reported as incidental encounters from the homes, places of lodging or while camping. Previous foray reports did not report observer days or topographic distribution of their effort, so a reliable comparison of effort is difficult to determine.

The observers participated in this foray are listed alphabetically as follows except where a group of 3 or more consistently surveyed together as one team, in which case the team is bracketed with the designated team leader listed first. They are: Pat Adams, Bob Ake, (John Bazuin, Charles "Mo" Stevens, Tom Brody, Patti Reum), Paul Bedell, Sandy Bratton, Shawna Bratton, Rexanne Bruno, Carolyn and John Coe, John and Thelma Dalmas, Andrew Dolby, John Drummond, Robert Ferrell, Linda Fields and Alan Schreck, William and Betsy Foster, Kurt Gaskill, Lisa Hamilton, George and Rosemarie Harris, David Hogg, Lisa and Jim Jacenich, Charlie Jackson, Patsy Johnson, Nettie Johnson, Bill Keith, Mary Keith, (Josephine King, Marietta Beverage, Tom Pendleton), (Barry Kinzie, Bill Opengari, John Pancake, Kathy Summers), Bob Klarquist, John Lanier, YuLee Lerner, (Larry Lynch, Fenton Day, Ann Esmas, Lauren Scott), Grace McCrowel, Alex Merritt, Linda Millington, Margaret O'Bryan, Rich Rieger, Bob Riggs, Gene Sattler, Grant Simmons, Mike Smith, Ryan Smith, John Spahr, Brian Taber, Leonard Teuber, Mary Vermeulen, Rick and Susie Webb, Ann Wefer, Bill Williams.

RESULTS

A combined total of 136 species was recorded during the present bi-county foray. In Highland County, 123 species were tallied, compared to 129 and 132 in 1975 and 1985, respectively. Effort was comparable, with 49 observers participating, compared with 44 and 52 in 1975 and 1985, respectively; this years foray included 4.5 days, while the previous two lasted 6 days. In Bath County, 124 species were recorded, compared to 129 in 1982. Only 21 observers participated over 4.5 days, compared to 31 over 6 days in 1982.

SPECIES ACCOUNTS

Locations included below include the following abbreviations: US + numeral = part of the U.S. national highway system, e.g. US 250; SR + numeral = part of the Virginia DOT highway system, e.g. SR 642; FR + numeral = part of US Forest Service road system, e.g. FR 55.

Canada Goose – Unrecorded in the 1975 Highland foray and with only two adult pairs found in 1985, this species has been slowly increasing in HC. Seven parties reported 16 adults in the Potomac River and Jackson River drainage with four reports mentioning goslings. In BC the increase was more dramatic. Whereas the 1982 Bath foray reported only a single adult pair with young, the present survey found nearly 300 adults distributed along rivers, ponds and the reservoirs, mostly in the western county. The highest concentration was along Back Creek and the lower VEPCO reservoir system (SR 600) where three parties counted more than 100

geese including a high of 145 on June 14 (Drummond and Foster). Goslings were mentioned in most reports.

Wood Duck – There were 9 reports of 16 adult birds in BC and 7 reports of 9 adults in HC, numbers not substantially different from early forays. All were from lower elevations rivers and ponds, with five in the Potomac River and 12 in the Cowpasture River drainages. Five of the sightings mentioned hens with ducklings.

Mallard – Only 6 adults were located in HC and more than three times that number in BC. The HC birds were sparsely scattered along the main south flowing rivers in the lower part of the county. The BC birds were mostly along the upper Cowpasture and Lake Moomaw, where several parties counted 12 adults, including 1 female with ducklings (Gaskill and Millington, June 15). These numbers are slightly higher than those from the two in the 1980s. No Mallards were seen in the 1975.

Northern Shoveler – A single bird was located on Lake Moomaw by the Dalmases on June 7. This rare transient and possible winter resident has had no previous summer records.

Lesser Scaup – Foster observed two males on June 11 in a large farm pond along US 220 just south of the HC line. A single male was seen in the same pond several weeks earlier (Spahr). This species is an uncommon transient and winter visitor in these counties, with no prior summer records.

Hooded Merganser – Drummond saw 1 adult female and 2 nearly grown young on the lake in Douthat State Park (BC) on June 11. Not reported on any of the previous local forays, this merganser has one previous summer report, on a pond in Monterey (Teuber, July 6, 1989). The present observation represents the first documented breeding of Hooded Merganser in these counties and in the Mountains and Valleys area of Virginia.

Ruffed Grouse – Several breeding records were reported in both counties with the total adult count of 13 in Highland and 5 in Bath. This is less than half the numbers reported in the two previous forays. Hens with chicks were reported from Sounding Knob (Kinzie et al., June 8), Paddy Run Trail (Klarquist, June 10) in Highland Co, and in along FR 55 in BC (Spahr, June 11).

Wild Turkey – There were 12 reports in each county totaling over 40 adults. In HC two thirds of the encounters were on Allegheny Mountain from Locust Springs to Paddy Knob. The others were widely scattered throughout all regions. All but one of the BC sightings was north of US 39. Precocial young were reported on SR 654 near Doe Hill by a HC resident on June 9 and observed by Fields and Schreck along FR 55 on June 14.

Northern Bobwhite – This quail appears to be drastically declining in the survey area. Only two birds were counted in BC (1 on June 8 along SR 600, the Dalmases; 1 on June 15 along SR 629, Baron) and none in HC. The species was considered "common" in Bath during the 1982 foray and over 30 were located during the 1985 Highland foray.

Great Blue Heron – Only 4 individuals were located, all within BC. Three of these were reported along the upper Cowpasture River and 1 along Lake Moomaw. This

is an uncommon summer species with all previous forays locating either 2 or 3 birds.

Green Heron – There were reports of 4 birds in HC and 13 in BC, widely distributed along river systems. There were at least 15 counts of this species in the 1982 Bath foray and more than 20 in both previous Highland forays. On June 7, two adults (possible pair) were observed feeding or gathering food on a lawn in southwestern HC along US 84 (Spahr and Rieger).

Black Vulture – 10 individuals counted in HC and 8 in BC, all within the lower and middle elevations. All reports were of single birds except for groups of 4 seen north of Bolar on June 7 (Williams and Taber) and in Hidden Valley (Bruno, June 11). During the 1975 and 1985 Highland forays this species was recorded only south of US 250, whereas 3 of the 10 birds in the present foray were found in the upper Blue Grass valley. This species has never been a common summer resident in either county.

Turkey Vulture – This vulture is still common in both counties where total counts exceeded 450 birds. Most reports were of multiple birds and counts of 10 or more were common. The species was reported at all elevations and distributed fairly evenly except for a relative reduction in the Jack Mountain - Warm Springs Mountain range.

Osprey – Two birds were seen in HC and 3 in BC. R. Smith noted 1 flying over Sitlingen Hill near McDowell on June 9 and Beverage saw 1 at the a commercial trout hatchery near Forks of Water on June 8. The sightings from BC were 1 along the Jackson River just south of the HC line (Kinzie et al.) and 2 at Coursey Springs Fish Hatchery (several groups). This raptor is an uncommon transient during migration. A few have regularly been seen at Coursey Springs in the summer and are presumed to be unmated immature birds.

Bald Eagle – The only prior foray record for this eagle was of a single immature on Lake Moomaw on June 9, 1982. This species has evidently increased in both counties and has successfully bred in BC. There were multiple sightings of Bald Eagles in both counties by many parties and on most days. Given their flight range an accurate count was not possible. A reasonable estimate places at least 10 birds in HC and approximately 8 in BC, most west of US 220 in the Potomac and Jackson River drainage systems. Age details were listed in only some of the reports and broke down as 5 adults, 3 third-year, 1 second-year and 2 first-year (juveniles).

Sharp-shinned Hawk – There were 6 reports of single birds in HC: 3 from the Northwest Highlands, 1 from SR 600 and 3 from north Jack Mountain. The single BC report was from FR 55 where Fields and Schreck saw a bird carrying prey. An almost certain breeder, this species was reported in similar numbers in earlier forays, when the distribution was skewed towards lower elevations.

Cooper's Hawk – 3 birds were located in each county, widely distributed and at all elevations. Uncommonly encountered in the summer, this species is a presumed breeder in forested habitats.

Red-shouldered Hawk – There were 7 reports totaling 14 individuals in HC, all in the northwest highlands. Reports of 6 (1975) and 10 (1985) individuals in the prior HC forays, in a nearly identical distribution, suggest that a small, stable

population persists. In BC, 10 hawks were counted, representing a five-fold increase over the 1982 total. Four of these were from the northwest section, 5 were from the east and 1 was from the Cowpasture River valley.

Broad-winged Hawk – In HC there were 7 reports of this hawk, all of single birds, except for Bazuin and Stevens who saw 3 birds on two successive days at Bear Mountain Farm (SR 601), one of which was observed carrying a flying squirrel (June 8). Only 2 of the HC reports came from locations other than the western ridges. Foster observed 1 along the lower Cowpasture River (SR 613) on June 7, as did Bedell and Klarquist on June 9. A total of 13 hawks, widely distributed, were identified in BC. Comparison with previous foray reports suggests stable populations in both counties.

Red-tailed Hawk – The 28 hawks counted in HC represents a similar number to that observed in 1985. There were 13 birds listed in BC, less than one-half the number found in 1982. Only 1 of these was found south of US 39, near Douthat S.P (Drummond, June 11). Otherwise, the locations of the sightings in both counties were widely scattered and included both river valleys and ridge tops. Williams and Taber spotted a juvenile northeast of Monterey on June 7.

American Kestrel – The 14 reports from HC were mostly of single birds. All but three of these were west of Jack Mountain. The highest elevation report was from Sapling Ridge (4200 ft) where Williams and Hamilton found a juvenile male on June 8. Kinzie et al. found a nest hole in the side of a barn on US 220 south of Monterey where adults were observed feeding young (June 8). The Keiths spotted an adult carrying prey on SR 600 on June 8. Only 5 Kestrels were counted in Bath Co, compared to 18 in 1982. These were scattered from Sidling Mountain in the east to the western ridge top (FR 55), all north of US 39.

Killdeer – All but two of the 16 HC reports were from the lower elevations, with most coming from the Blue Grass Valley where most reports were of multiple birds. Lynch et. al. counted 10 in this area on June 7. The only high elevation reports came from SR 601 where Brody saw 1 on June 7 and Sattler and Ferrell saw 2 on June 9. The 10 BC reports were all at lower elevations. Several reports of distraction displays were turned in.

Ring-billed Gull – Lerner and Vermeulen found one gull on a back street of Monterey on June 10 and Drummond found an immature near the Lake Moomaw dam on June 13. There have been previous summer reports of non-breeding birds in the Lake Moomaw area including up to 9 in the 1982 Bath foray.

Rock Pigeon – This species was uncommon in both counties. All but 3 of the 43 HC "pigeons" were sighted either along south SR 614 (Foster) or SR 600 (Keiths), both on June 7. A small flock of 6 along US 42 south of Millboro Springs was the only report from BC (Spahr and Bruno, June 12).

Mourning Dove – This common and widespread dove was reported by most groups with well over 100 birds in each county. It was reported in a wide variety of habitats including towns, farms and forests. Most reports were from low and mid elevations with one high elevation account of 2 from FR 55 in BC on June 8 (the Dalmases).

Black-billed Cuckoo – The only previous foray report of this cuckoo was the 1982 Bath foray during which two birds were sighted. In the present survey there were 8 reports totaling 13 birds, 5 in HC and 8 in BC. Most were from forested habitats at middle to high elevations. All but one report, that of an agitated pair near Douthat State Park on June by Drummond, were west of US 220. Teuber also noted agitated activity between two birds along US 250 west of Hightown.

Yellow-billed Cuckoo – This was a much more common cuckoo found in a variety of habitats and at all elevations throughout both counties. In HC the 22 reports were mostly of 1-2 birds, whereas 7 of the 24 BC reports were of more than 5 birds. Baron counted 14 in the north Bullpasture River Valley of BC on June 15, an area where several others reported up to 9 individuals earlier. Ake counted 13 in BC along SR 629 between McLung and the Augusta Co. line, including one adult carrying food on June 13. The Keiths saw a bird carrying food in HC along SR 678 on June 7. Spahr and Bruno saw an adult on a twig platform nest in a white pine tree along US 42 south of Nimrod Hall on June 12.

Eastern Screech-Owl – Minimal effort was made to specifically search for owls and only two reports of this species were turned in, both on June 7 in HC. Bazuin et al. heard one calling at dusk along SR 601 and O'Bryan heard one at her farm north of Blue Grass.

Great Horned Owl – Only one report was turned in, that of a single bird calling on the morning of June 12 on Back Creek Mtn (FR 121) in BC (Riggs and Spahr).

Barred Owl – There were sparse reports of mostly single birds, 7 in HC and 3 in BC, all in forested areas. Many were daytime sightings or calls. Only one of these, on south Bullpasture Mtn. by King et al (June 7), was east of US 220. Foster viewed a pair in the Laurel Forks area on June 10.

Northern Saw-whet Owl – This species was heard calling at night in the conifers of the Locust Springs area (Smith and Smith, June 7 and 8) in HC. Similar observations were noted previously, with single birds from the western ridge reported in the 1982 Bath and 1985 Highland forays. This species is a likely breeder in this part of Virginia, which may represent the eastern fringe of its southern Appalachian range.

Whip-poor-will – This was the only representative of the "goatsucker" family during the entire survey period and, based upon comparisons with previous forays, seems to have declined significantly. During the present survey only 2 HC birds were heard, contrasted with the more than 30 reported in 1975 or the ca. 12 in 1985. In BC 7 were heard, including 3 in the Millboro Springs area (Fields and Schreck, June 14), which is to be compared to the more than 20 in 1982.

Chimney Swift – This species is still common and widespread throughout both counties with fewer numbers reported at the highest elevations. Of the 38 total reports 16 included more than 5 birds and 5 of these included more than 10.

Ruby-throated Hummingbird – More than 30 reports indicate a widespread distribution of this species. Nearly twice as many sightings were in BC than in HC, which is at variance with earlier forays when the reverse was noted.

High elevation sightings included Locust Springs and Paddy Knob in HC and FR 55 in BC (multiple groups). A high count of 6 came from near Blue Grass (O'Bryan and the Coes, June 7) and 5 from Hidden Valley in BC (Merritt, June 13). Several parties observed territorial chases. O'Bryan observed a courtship flight north on June 7 and McGrowell and Lanier found fledged young near Millboro on June 14.

Belted Kingfisher – Of the 22 combined reports one half (about 20 birds) came from north of US 250 in HC, evenly distributed from west to east. The rest were widely scattered throughout both counties with no reports from the lower Cowpasture or Bullpasture Valleys of HC. Lerner and Vermeulen had a HC high count of 4 in the upper Bullpasture Valley between McDowell and Doe Hill on June 8. Drummond and Foster had a BC high count of 3 along SR 600 of June 12. The Keiths observed an adult carrying food along SR 600 in HC on June 8.

Red-headed Woodpecker – As in prior forays this woodpecker was reported only in HC, where there were approximately 15 total birds. This compares with approximately 10 in 1985 and 6 in 1975. All but 3 birds were north of US 250; more than half were in the lower elevations of the northwest part of the county. M. Smith located an active nest hole near the SR 637 and 638 intersection on June 9 and Williams and Taber spotted 2 adults at a possible nest hole along SR 618 on June 7.

Red-bellied Woodpecker – Based on previous foray data this adaptable woodpecker appears to have increased. In HC only 3 birds were reported in 1975, compared to more than 15 in 1985 and now 24 in 2003. The recent survey also nearly doubled the 1982 Bath count of 23. This species was widely and evenly scattered throughout all low and middle elevation locations, with sparse accounts from the western most ridges.

Yellow-bellied Sapsucker – The 13 reports of up to 34 individuals in HC are considerably more than the handful located in the previous two forays. All nine groups that surveyed parts of the northwest highlands reported this species. Spahr totaled a high count of 9 along Mullenax Run on June 10, including two birds in pursuit activity. The other HC reports include single birds near Snowy Mountain (Lynch et al., June 7), north of Blue Grass (O'Bryan and the Coes, June 7), SR 600 (Keiths, June 8) as well as 2 birds on SR 601 (Bazuin et al., June 8), and 5 near Paddy Knob (Keiths, June 9). Gaskill and Millington reported the only BC sapsucker on June 15, 1 female on FR 55.

Downy Woodpecker – Approximately 60 birds were reported, evenly distributed throughout both counties. Most parties reported 1-3 birds. Brody and Reum located an active nest cavity with adults feeding young along SR 601 in HC on June 7.

Hairy Woodpecker – There were 18 reports of mostly single birds in HC with 12 of these (16 birds) coming from north of US 250 and west of US 220, many from the northwest highlands. The rest of the HC reports and all 7 BC reports were widely scattered in forested habitat at middle to high elevations. Bedell observed adults feeding fledged young along SR 616 in northeast HC on June 7.

Northern Flicker – This common woodpecker with liberal habitat tolerance

ranged widely. Approximately 150 birds were seen, evenly scattered throughout both counties. Reports came from the heights of the Allegheny ridges to the lowest points along the lower Cowpasture River; from the remote forests of Locust Springs to the open pastures of the Blue Grass Valley and Hidden Valley to downtown Monterey and Millboro. Gaskill and Millington reported an active nest cavity on SR 629 in BC on June 12 and a single fledged young was seen clinging to the side of a tree on SR 637 in HC by Rieger and Spahr on June 7.

Pileated Woodpecker – The 52 reports of nearly 100 birds were evenly divided between the two counties. Most reports came from forested mountain ranges with lesser numbers from lower elevation wooded regions.

Eastern Wood-Pewee – This plain flycatcher was reported by essentially all groups that surveyed forests or wooded habitat, in all parts of both counties and at all elevations. Counts of 2 - 5 birds were the norm, with almost 60 birds totaled in HC and 90 in BC. Fields and Schreck recorded the high count of 14 on FR 55 on June 14. Birds carrying nesting material were observed near Paddy Knob by both Lynch et al. (June 8) and the Keiths (June 9). King et al. identified a juvenile on the northwest Allegheny ridge (FR 106) of HC on June 8.

Acadian Flycatcher – This was the most common of the three empidonax species recorded, with 65 counted in HC and just over 100 in BC. It inhabited forests at all elevations from Locust Springs, where Smith and Smith had a HC high count of 10, to Hidden Valley in BC, where Riggs and Merritt had combined counts of over 40.

Least Flycatcher – Less common (81 birds; 51 in HC) than the Acadian Flycatcher, this species was largely limited to the westernmost regions, especially west of Lantz Mountain. Only two birds were identified east of US 220, both in HC-- one on Sounding Knob (Kinzie et al., June 8) and one on Bullpasture Mountain south of McDowell (King et al., June 7). Lower and middle elevation reports were more common than in prior forays and included 2 reports of 2 birds each along the upper Jackson River in HC (SR 637, Spahr and Rieger, June 7 and SR 600/603, Spahr, June 11), and 2 in Hidden Valley (Merritt, June 13). Lynch et al. spotted two nests with incubating adults near Paddy Knob on June 8.

Willow Flycatcher – This "empid" may have decreased since the 1980s. Whereas those forays reported counts in excess of 20 in BC and more than 30 in HC, the present survey yielded only 9 and 4 respectively. There were no high elevation reports. Four of the finds in HC were scattered in the upper Blue Grass Valley and a BC high count of 4 came from Hidden Valley (Merritt, June 13).

Eastern Phoebe – This is still an abundant flycatcher, primarily in the lower and middle elevations throughout the entire survey area. High counts of 19 came from SR 600 in HC (Keiths, June 8) and 22 in north central BC (Gaskill and Millington, June 15). The Eastern Phoebe may have the most confirmed accounts of breeding activity of any species during this foray. In HC alone there were six reports of active nests, one report of a recently used nest, and four reports of fledged young. Three active nests were reported from BC.

Great-crested Flycatcher – Fairly abundant throughout both counties and

at all elevations, with over 50 reports totaling approximately 180 birds. There were numerous accounts of more than 5 birds. Sattler and Ferrell recording a high count of 10 on June 10 in northeast HC. There were several reports of 6-8 birds in BC.

Eastern Kingbird – This flycatcher was common along pastures and open farm habitats in both counties and was absent from forests and high elevations. 29 reports were collected, mostly of 1 to 3 birds. Bedell reported a bird on a nest on in HC along SR 614/616 on June 8.

Loggerhead Shrike – Only one shrike was seen in BC at Coursey Springs Fish Hatchery on June 14 by Hamilton. Although not found in the 1982 Bath foray, the Virginia Atlas project confirmed this species to be a rare breeder in this county. In HC, where there have been multiple historical breeding records, 3 adults were seen. O'Bryan and Coes located one bird on SR 644 north of Blue Grass on June 8. Also on June 8 King and Pendleton found a pair completing a nest in a hawthorn tree in a pasture along SR 604 near Mill Gap.

White-eyed Vireo – While the previous two Highland forays tallied between 15 and 30 birds, only 3 were counted in HC during the present foray. Foster found 2 in the southeastern section (SR 614) on June 7 and Spahr heard one along the Jackson River (SR 603) on June 11. In contrast, there were 16 reports and up to 38 individual birds in BC. Merritt recorded a high count of 14 along Hidden Valley Trail on June 14.

Blue-headed Vireo – This vireo was nearly twice as prevalent in HC (18 reports/80 birds) as in BC (11 reports/45 birds). Two thirds of the HC birds were reported from the northwest highlands with peak counts of 10 on Sapling Ridge (Williams and Hamilton / Taber and Spahr, June 8) and along Bearwallow Run (Kinzie et al., June 9). The BC high count of 16 also came from the Allegheny Mountain ridge (FR 55) by Fields and Schreck on June 14. Most of the remaining counts were from high and middle elevations. A few low elevation reports included 1 bird along SR 614 in southeast HC (Bedell and Klarquist, June 7) and 2 in Hidden Valley (Merritt, June 13).

Yellow-throated Vireo – This vireo of deciduous forests was far more common in BC (14 reports/34 birds) than in HC (6 reports/16 birds). These numbers are approximately half those of prior forays. Most reports were of 1-3 birds with the high count of 5 recorded by Williams and Taber near Bolar in HC on June 8. High elevation reports were scant and included single birds near Locust Springs (King et al. June 8) and Mullenax Run (Williams and Spahr, June 9) and 2 on FR 55 (Drummond and Bruno, June 12).

Warbling Vireo – Although not reported from HC during the actual survey dates, a single bird was seen on June 6 at Forks of Water (Scott) at a historically reliable site for this species. Several subsequent visits by others could not find the bird again. Given the streamside habitat preference of this vireo, auditory recognition was likely hampered by the roar of unusually high waters during the survey period. Nine birds were listed in BC with the Harrises finding 4 along and near the Cowpasture River between Bath Alum and Ft. Lewis. Spahr saw a pair carrying nest material near the terminus of SR 601 in BC.

Red-eyed Vireo – Ubiquitous and very common in both counties in a wide variety of wooded habitats. Over 1000 birds were reported, evenly split by county. Klarquist, hiking up to Paddy Knob from SR 600 on June 8, reported a high count of 50.

Blue Jay – Over 100 jays were reported in each county. In HC 80% were west of Jack Mountain, while in BC no special distribution was noted. Recently fledged young were reported near Millboro on June 6 (McCrowell and Lanier) and juvenile birds were reported among the 22 counted by Gaskill and Millington on June 12 (north central BC).

American Crow – This crow is common and widespread at all elevations in both counties. More than 600 total birds were counted via 60 reports. HC high counts of 46 were received from SR 600 (Keiths, June 8) and north Bullpasture Mountain (Sattler and Ferrell, June 10). In BC, 32 were seen on June 15 in the Bath Alum to Ft. Lewis area (Gaskill and Millington). Bazuin saw a young crow begging for food on SR 601 (HC).

Fish Crow – One bird was seen and heard near the dam of Lake Moomaw on June 13 by Drummond. This is the first foray and summer record of Fish Crow in these counties and only the third overall (the previous two were March records). This historically tidal species has been gradually expanding its range inland along river systems. Future records may tell whether this bird represents an aberrant vagrant or a pioneer colonizer.

Common Raven – A still common and widespread corvid in these counties, ravens were reported from all regions and at all elevations. Two thirds of the approximately 100 birds were sighted in HC and half of these were west of US 220 and north of US 250. In HC high counts of 5 were reported from Sounding Knob (Kinzie et al.) and SR 601 (Sattler, Ferrell, Simmons). The BC high count of 5 was on FR 55 (Fields and Schreck, June 14).

Horned Lark – Found in HC only. 4 scattered individuals were located by several parties in the open pastures and farmland of the upper Blue Grass valley, where flight song displays were observed by Teuber et al. (SR 642) and O'Bryan and the Coes (SR 644), both on June 8. In addition several parties witnessed loose groups of up to 10 birds in the alpine meadows along SR 601.

Tree Swallow – This swallow is now common in both counties, having multiplied more than ten fold from localized colonies of less than a dozen birds in the 1975 and 1982 forays. The increase is most certainly due to the popularity of roadside bluebird boxes, which these cavity-nesters usurp with abandon. These swallows were identified in open country at all elevations. At least six reports of either active nests, all in bluebird boxes, or fledged young were turned in throughout the survey area.

Northern Rough-winged Swallow – Fairly common in BC (15 reports/76 birds) and less so in HC (11 reports/33 birds). The sightings were widely scattered within all the river valleys.

Cliff Swallow – Small groups and colonies were scattered throughout both counties always in association with Barn Swallows with whom they share nesting

niches. All but 3 of the more than 10 HC reports came from west of Jack Mountain, along SR 640 and US 220 where nearly 40 adults were sighted. Kinzie et al. counted six nests under construction beneath the Jackson River Bridge on SR 607 near Bolar (HC) and several active nests in an abandoned house on SR 640 north of Hightown. There were five BC reports totaling 21 birds. Lerner and Vermeulen had a high count of 11 near Shiloh (SR 624 and 609) on June 12, including birds carrying food and visiting probable nests in two separate barns.

Barn Swallow – Given the abundant farmland in the survey area it is not surprising that this swallow is abundant. More than 300 were reported in each county with most groups encountering this species daily. Most reports were from the river valleys; however, a few came from high elevations (above 3700 ft) farmsteads in western HC. There were multiple reports of small colonies nesting in barns and under bridges as well as adults feeding fledglings.

Carolina Chickadee – Two Carolina Chickadees were heard calling and well seen in the southeast section of BC along US 42 on June 12 (Spahr and Bruno). The male briefly sang a typical four-part song. Given their interaction these were likely a mated pair. This species has historically been rare to absent in HC and rare in BC where it has been limited to the southern sections. There were only 7 records of this chickadee in previous forays, all from BC.

Black-capped Chickadee – This is the “default” resident chickadee in the survey area with over 100 birds reported in each county. While present at all elevations most reports came from the forested mountains. This species seemed especially prevalent at the highest elevations in HC with 9 reports totaling 48 birds between Locust Springs and Sapling Ridge. Kinzie et al. turned in a high count of 18 from Sounding Knob (June 8). The BC high count came from the northeast section along SR 640 (Spahr and Baron, June 13). A total of five reports (27 birds) came from the lowest elevations (2000 ft and lower) in the Cowpasture River drainage, from north of Head Waters in HC to south of Nimrod Hall in BC. Drummond and Bruno observed fledged young in BC on FR 55 (June 13).

Tufted Titmouse – As in the previous forays, this species was fairly common in HC (39 reports/71 birds) and even more so in BC (39 reports/182 birds). Reports of titmice were received from all regions and altitudes, with most reports coming from the lower and middle elevations. Bazuin saw a bird carrying food into a birdhouse in Monterey on June 7. Gaskill and Millington recorded a BC high count of 21, including one juvenile, on June 15 in a route from Warm Springs to Lake Moomaw to Paddy Knob. There were several high counts of 10 birds in HC.

Red-breasted Nuthatch – There were five reports (8 birds) of this species from various conifer stands in the northwest highlands of HC. This contrasts with 1 bird in each of the 1975 and 1985 forays from the same region. On June 12 Drummond and Bruno located a single bird on FR 55, possibly the first summer BC record. Based on foray data, this species may be increasing in select high elevation habitats.

White-breasted Nuthatch – This nuthatch also may have increased in HC since the last foray (40 birds in 2003 vs. *ca.* 17 in 1985). Certainly the distribution

seems to have changed. High elevation reports were scant in prior forays, yet represented the majority of reports in 2003. There were 7 reports totaling 16 birds in the northwest highlands, 6 birds along SR 601 (Bazuin et al., June 9, 10) including 2 that were repeatedly seen carrying food, and 1 on Sounding Knob (Kinzie et al., June 8). As in previous forays, this species was even more prevalent in BC, where there were 24 widely scattered reports, mostly of 1-3 birds, with 4 reports of more than 5. Drummond and Bruno tallied 10 birds along FR 55 on June 13. Lerner and Vermeulen found an adult feeding young in a nest cavity on Warm Springs Mountain (SR 703) on June 14.

Brown Creeper – This species remains a rare summer resident and probable breeder in the high elevation forests of northwest HC. Here, Kinzie et al. counted 3 along Bearwallow Run (June 9) and 2 along Slabcamp Run (June 10). Smith and Smith had 2 at Locust Springs (June 8, 9), and Sattler and Ferrell found 1 on SR 601 (June 9). In BC there were 5 birds, all from considerably lower elevations. Riggs saw a pair and heard the male sing along a trail from Hidden Valley campground (approximately 1800 ft.) on June 11. Gaskill and Millington found 3 on June 15 including 2 at a similar altitude near Bacova and 1 singing male at Ryder Gap (2480 ft; intersection of US 39 and FR 55). The 4 creepers found in the 1982 BC foray were along FR 55, near Paddy Knob and above 4000 ft.

Carolina Wren – In HC 16 widely scattered reports of this wren were turned in, mostly of 1 to 3 birds, and all from lower and middle elevations. In BC more than twice as many birds were reported with 6 reports of more than 5 birds and a high count of 9 along SR 629 south of US 39 (Riggs, June 13).

House Wren – Previous forays considered this wren “common” in HC and “uncommon” in BC. The 2003 reports suggest a similar prevalence and distribution. The House Wren tallies were 56 in HC and 17 in BC. High counts in HC included 8 in a loop between Bolar and Trimble (Lerner and Vermeulen, June 7) and by several parties along SR 600. All BC reports were of 1 to 2 birds. All reports were from low to middle elevations except for several from SR 601 in HC where Bazuin et al. reported at least 3 from June 7-10. Several parties reported active nest cavities.

Winter Wren – Four adult birds were located, all in HC, where at least six were listed in the 1975 foray, but none in 1985. Stevens and Bazuin heard one along lower Slabcamp Run on June 10. The same day Spahr heard and saw 3 adults along Mullenax Run at two separate sites. One sighting included a pair with 2 fledged young; the first confirmed breeding record in HC for this species. As in 1982, there were no reports from BC.

Golden-crowned Kinglet – This rare breeder appears to be increasing in HC. Kinglet numbers rose from zero in 1975 to at least 20 birds in 1985 to 40 in 2003. All but 1 of the present reports were from various conifer (primarily spruce) stands in the Locust Springs/Laurel Forks area. Kinzie et al. reported a high of 17 along Bearwallow Run on June 9. Other reports came from adjacent locations such as Locust Springs, Slabcamp Run, SR 642, Sapling Ridge and Mullenax Run. The only report away from this area was of 1 bird from nearby SR 601 (Bazuin et al., June 9). There were several reports of pairs and displaying adults as well as one adult carrying food

along Mullenax Run (Spahr, June 10). BC, as before, had no reports of this species

Blue-gray Gnatcatcher – There were 47 birds (15 reports) in HC and 141 (27 reports) in BC. More than 2/3 of the HC gnatcatchers were east of Jack Mountain including a high count of 16 by the Keiths along SR 678 on June 7. In BC this species was evenly distributed in the lower and middle elevations. High elevation reports, few in earlier forays, were limited to 1 bird on FR 55 in BC (Drummond and Bruno, June 12). Fledged young were observed in BC by Gaskill and Millington on SR 629 (June 13) and by McCrowell and Lanier near Bubbling Springs (June 14).

Eastern Bluebird – Still a common and widely distributed thrush of open fields and pastures. Most of the 40 total reports came from lower and middle elevations. High elevation reports were limited to 3 birds along FR 55 in BC (Fields and Schreck, June 14) and 3 in HC along SR 601 (Bazuin et al., June 7). There were several reports in both counties of fledged young or active nests in bluebird boxes or fence post cavities.

Veery – This species is still fairly common at the highest elevations of both counties. In HC the sightings were distributed mostly along Allegheny Mountain: 27 in the northwest highlands, 7 along SR 601 and west US 250, and 30 on or near Paddy Knob. A separate small population apparently exists on Jack Mountain (Sounding Knob) where Kinzie et al. found 4 on June 8. In BC all five teams that visited Paddy Knob via FR 55 had multiple birds, with Fields and Schreck reporting 15 on June 14. East of this ridge, 1 bird, carrying nesting material, was seen atop Back Creek Mountain (FR 121) on June 12 (Spahr and Riggs). The only low elevation bird was located in Richardson Gorge (SR 603), a densely forested ravine southwest of Bacova (approximately 1750 ft) by Bruno on June 11. In HC breeding evidence came from the Locust Springs/Laurel Forks area and included several reports of adults carrying food or nesting material as well as an active nest with 3 young along SR 642 (the Keiths, June 9).

Hermit Thrush – Foray data suggests that this *catharus* thrush may have increased. The 24 counted in HC compare with 10 (1975) and ca.15 (1985) in prior forays. There were 5 counted in BC this year compared to none in 1982. Of the HC birds 21 were in the northwest highlands where a high count of 7 came from Mullenax Run (Spahr, June 11). Whereas past summer accounts of Hermit Thrush were limited to these highlands, the present survey indicates a limited distribution beyond this region. There were 7 birds reported from the Paddy Knob area – 3 in HC and 4 in BC. In addition Ake and the Harrises reported 1 from Duncan Knob (3800 ft.) in BC on June 11, possibly the first report from this site. In HC, 1 bird carrying food was seen along SR 642 (the Keiths, June 9) and a nest with 4 young was found on Middle Mountain (Sattler et al., June 9).

Wood Thrush – Reports of this species came from forested areas at all elevations. Approximately 60 birds were reported in HC and twice as many in BC. Similar numbers were reported in both previous HC forays; however, the present BC count is considerably less than the 349 cited in 1982. A HC high count of 7 came from along SR 614 (Bedell and Klarquist, June 9) and in BC the high of 22 was reported along Hidden Valley Trail (Merritt, June 14).

American Robin – Still an abundant species throughout both counties, robins were present in substantial numbers at the lower and middle elevations but less so at the highest points. Many participants observed breeding activity in both counties. There were 5 separate reports of fledged young, 4 reports of young or eggs in nests, and multiple reports of adults carrying food or nesting material.

Gray Catbird – This bird is still common and was reported most days and by most parties. It remains widely distributed, from the remote high elevations of Locust Springs through all surveyed towns and villages to the southernmost Cowpasture River Valley. Catbirds carrying food were seen in HC along north SR 616 (Bedell, June 8; Klarquist June 10) and SR 620 (Sattler and Ferrell, June 10) and in BC on SR 614 (Hamilton, June 14). The Keiths saw adult birds feeding fledged young along SR 600 in HC on June 8.

Northern Mockingbird – This species remains uncommon in HC where 12 reports of mostly single birds were turned in. All but 1 of these, a report from near Bolar (Williams and Taber, June 7), was from north of US 250 in scattered lower and middle elevation open habitats. BC had 15 reports and 46 birds in similar habitats, distributed mostly east of US 220. McCrowell and Lanier found fledged young near Millboro on June 14. Gaskill and Millington noted a mockingbird carrying food and a nest with young in the north central section (June 13) of BC.

Brown Thrasher – There were 66 birds counted within HC and 112 in BC, mostly from the lower and middle elevations. High elevation reports were less than in past forays, limited to 2 birds along HC SR 601 (Bazuin et al., June 9) and 1 on Paddy Knob (the Keiths, June 9). High counts of 13 were turned in along Hidden Valley Trail (Merritt, June 14) and along SR 629 in northwest BC (Ake, June 12). There were three HC reports of birds carrying food and one of a bird feeding fledged young along SR 637 (Spahr and Williams, June 9).

European Starling – Abundant in both counties in open rural habitat, farms and towns. Nesting and breeding activity was observed by many in old barns and houses and in dead trees with woodpecker cavities. The only high elevation report came from SR 601 in HC where Bazuin et al. reported up to 11 starlings on June 8.

Cedar Waxwing – With over 500 birds reported, this species was very common. It was reported from most regions and at all elevations. High counts of 30 came from SR 600 in HC (the Keiths, June 8) and from Hidden Valley (Merritt, June 13) in BC. There were five counts of nest building including one at 3900 ft. near Sounding Knob (Kinzie et al., June 8), 3 counts of birds carrying nest material, 3 birds on nests, 2 reports of fledged young and 1 of an adult carrying food. In comparison with previous forays this year's counts and reports of breeding evidence are substantially higher, suggesting that 2003 may be an irruptive breeding year for waxwings.

Blue-winged Warbler – Three Blue-winged Warbler songs were heard in the Cowpasture River drainage of BC. Two were in the USFS Walton Tract (SR 632) south of Nimrod Hall in successional and brushy habitats. One was well seen and studied (Spahr and Bruno). Gaskill and Millington heard a third on 627 near Green Valley. This species was recorded in neither the 1982 Bath foray nor the Vir-

ginia Atlas project. No definite "blue-wings" were identified in HC. This species hybridizes with Golden-winged Warblers producing first generation "Brewster's" Warbler and several backcrosses. Merritt found a single male Brewster's backcross in Hidden Valley on June 13 singing an atypical song. Of special note is the finding of two typical plumaged Golden-winged Warbler singing convincing Blue-winged Warbler songs in northern HC (O'Bryan, Rowlett) earlier this year and also near Ft. Lewis in BC in May of 2002 (Spahr). Visual confirmation is therefore important for this species that has been expanding its range, sometimes at the expense of Golden-winged Warblers.

Golden-winged Warbler – Though not nearly as common as in earlier forays, 17 accounts of this species were recorded in scattered mid and lower elevation sites in both counties where suitable habitat remains. In the 1982 Bath foray a record 125 birds were recorded. Presumably there was far more favorable habitat two decades ago, much of which has either matured into forest or was otherwise altered. The 10 birds identified in BC were sparsely distributed from the west of Sidling Mountain in the northeast to the Back Creek/Lake Moomaw area in the west. Four birds (Riggs) and one Brewster's backcross (Merritt) were identified in Hidden Valley. The Harrises (June 10) and Spahr and Baron (June 14) located 3 birds on the gravel portion of SR 640 along Mill Creek, including one vocal agitated pair. HC yielded 6 "golden-wings," three north of Blue Grass (several teams), two along the Jackson River near Bolar (Williams and Taber, June 7), and one in the McDowell Battlefield site along US 250 (Sattler and Ferrell, June 10). One of the singing males north of Blue Grass had been observed more than one week, presumably on permanent territory (O'Bryan and Coes).

Northern Parula – This known breeder was tallied 49 times in HC, mostly south of US 250, and 122 times in BC. Except for several birds on FR 55 on the BC/West Virginia border (3000-4000 ft.; Schreck and Fields) and one on Back Creek Mountain (3200 ft.; Spahr and Riggs), this species was most commonly encountered in lower and mid elevation forest and riverine woods.

Yellow Warbler – A common warbler in wooded and shrubby areas along the streams and rivers of both counties. There were 80 reports on HC, eighty percent of which were west of Monterey Mountain. This represents more than twice the number of birds in the 1985 foray, when only 1 of 34 total was noted west of this ridge. Lynch et al., traveling from Hightown to Snowy Mountain on June 7, recorded a peak count of 25. Teuber found an active nest near Forks of Water on June 8 and there were several reports of adults carrying food in both counties. In BC there were 18 reports of 43 birds, all but 3 of which were north of US 39.

Chestnut-sided Warbler – Still common in second growth and edge habitats in the mid to higher elevations of both counties (68 Highland; 50 Bath). Two separate parties recorded high counts en route to Paddy Knob: Lynch et al., with 38 via a HC approach from Mill Gap along SR 85 on June 8 and Fields and Schreck with 35, approaching from FR 55 in BC on June 14. There were several reports of adults carrying food in HC. Stevens discovered a nearly complete nest in a blackberry cane on June 7 on SR 601 in HC (elevation 4200 ft.). By June 11 this nest contained 2

eggs. Note: John Rowlett a professional birding guide who leads annual "Warblers of Virginia" tours through HC mentioned that in his experience the Paddy Knob offers area holds "the thickest concentration of this species anywhere in Virginia." During his May 2003 tour his group found "3 nests in the period of about 40 minutes" within the blackberry cane.

Magnolia Warbler – There were at least 10 reports of this species in HC, with a total of more than 100 birds, the vast majority coming from the northwest corner. Spahr listed a high count of 28 on June 9 along Mullenax Run. Williams and Hamilton / Taber and Spahr combined a count of 23 on neighboring Sapling Ridge on June 8. The remaining reports were all from the Locust Springs to Bearwallow Run area, except for 2 on SR 601, 6 on SR 600 and 1 near Paddy Knob. This approximate doubling of reports from the 1980 Highland foray may be attributable to interval growth and maturing of large stands of conifers, predominantly red spruce. Gaskill and Millington recorded the only 2 birds in BC near the top of Warm Springs Mountain along US 39. This species was not recorded in BC in either the 1982 foray or in the Virginia Atlas project. Note: Adults feeding fledged young were seen at Locust Springs on July 27 (Spahr).

Black-throated Blue Warbler – There were 13 reports of this species mostly of one or two singing males. In HC all 7 reports were in the western forests of Shenandoah Mountain above 2500 ft. In BC 3 of the 6 reports were from this same ridge. The others were from SR 633 on Mill Mountain (Harris), along FR 394 on the west slope of Shenandoah Mountain (2250-2500 ft.; Harris), and in Hidden Valley (Riggs). The Hidden Valley reports suggest that this species will breed at altitudes as low as 2000 ft in appropriate habitat. Note: An adult male carrying food was seen at Locust Springs on July 27 (Spahr).

Yellow-rumped Warbler – Reported from HC only, with a high count of 8 birds on Sapling Ridge, June 8 (Williams and Hamilton / Taber and Spahr) and an additional 3 in the Locust Springs and Slabcamp Run areas. Kinzie et al. found 5 on Sounding Knob on June 8. This species was not recorded in either county during the three prior forays or in the Virginia Atlas project. Although evidence of breeding has not been documented the circumstantial evidence suggests this is a breeding species in the high elevation conifer stands of HC. Note: Rowlett reported 3 singing males in the Mullenax Run area and 2 from Bearcamp Knob in late June 2003 and noted that this has been the case for many of the past years that he has visited that area in June.

Black-throated Green Warbler – A commonly heard warbler in the higher elevations of both counties. Of the approximately 140 birds tallied in HC 80% were in the northwest highlands. This area yielded high counts of 24 on Sapling Ridge (Williams and Hamilton / Taber and Spahr, June 8), 22 along Bearwallow Run (Kinzie et al., June 9), and 19 near Mullenax Run (Spahr, June 10), as well as 4 additional counts of 10 or more in the Locust Springs/Slabcamp Run areas. Lower elevation reports were scant except for 10 birds along SR 678 in the forested Bullpasture Gorge (~2000 ft. elevation) by the Keiths, including 1 adult carrying food. In BC a scattering of reports were from mid elevations including 9 along SR 627 and FR 394 by the Harris on

June 12, and 5 in the Hidden Valley area by Merritt on June 13 and 14. The rest were at higher sites, primarily along FR 55 on the Allegheny Mountain ridge, where Drummond and Bruno identified 28 on June 12 and Fields and Schreck 25 on June 14 (many presumably the same birds). Ake and Harris reported 3 from Duncan Knob (3819 ft.) on June 11. Based on prior foray findings this species seems to have increased.

Blackburnian Warbler – Reported in HC only, essentially all above 3500 ft. and mostly within the conifer and mixed forests of the northwest corner. There were multiple reports that in combination yielded between 23 and 30 birds in the Locust Springs-Laurel Fork area. High counts of 25 along Mullenax Run (Spahr, June 10) and 20 on Sapling Ridge (Williams and Hamilton / Taber and Spahr, June 8) were reported. The lowest elevation record was a single bird along the northern terminus of SR 600 (3000 ft.). This species appears to be stable in this region of HC. That none were located in BC is of uncertain significance since there were only 4 during the 1982 Bath foray and none during the Virginia Atlas project. Four of the HC birds were near the Bath-Highland border on Paddy Knob (various teams).

Yellow-throated Warbler – Of the 14 birds that were reported all were in riverside sycamore stands. Drummond recorded a high count of 5 along Back Creek (SR 600) in BC on June 12. The remaining 9 were all along a limited stretch of the Cowpasture River spanning both counties. On June 15 Spahr identified 4 along SR 628 near Williamsville and 2 along SR 614 in neighboring HC. Other reports of single birds along this stretch were in HC on SR 614 (June 7, Bedell and Klarquist), and in BC along SR 627 (June 14, Spahr and Baron) and SR 624 (June 15, Larner and Vermeulen). This may be a new and recently colonized area as neither the Virginia Atlas project nor prior forays located birds here. The previous foray reports identified only 2 birds in each county.

Pine Warbler – This species was scarce (3 individuals) and sparsely distributed in HC and much more prevalent (37) in BC. Of the 15 BC reports nearly ½ were in the northeast sector east of Warm Springs Mountain. Here the Harrises recording a high count of 7 along SR 640 and FR 61 on Sidling Mountain on June 10. This species was reported at all elevations from river valleys to ridge tops including several on FR 55. The raw numbers suggest a marked decline in this species in HC since the 1985 foray and less of a decrease in Bath Co, possibly related to natural succession of timber from pine to hardwood.

Prairie Warbler – Bedell and Klarquist provided the most records of this species in HC with 6 birds on June 7, all in the lower Cowpasture River valley (SR 614 south of US 250). Several groups recorded a scattering of 6 birds in the BC continuation of the same valley, from Williamsville to the Allegheny Co. line. While most reports were from low elevations there were two independent reports from Paddy Knob -- the Keiths on June 10 with a HC approach, and Fields and Schreck on June 14, approaching from BC on FR 55. The 7 total birds recorded in HC were notably fewer than the 10-15 reported in the 1985 foray and dramatically less than the more than 50 counted in 1975. Similarly the 9 birds located in BC contrast with the 35 during the 1982 Bath foray, a number that led Larner and Scott to consider this species "uncommon" at that time. It may be even less common now.

Cerulean Warbler – Only four reports from HC, all of single birds, except for Sattler and Ferrell who located 3 along the west slope of Shenandoah Mountain (SR 614 and SR 620) on June 10. While there were no reports west of Bullpasture Mountain in HC, interestingly all BC reports were west of this ridge. Nearly ten times as many Cerulean Warblers were identified in BC. A high count of 10 came from Duncan Knob on June 11 (Ake and Harris) and Merritt recorded 9 on June 14 hiking along the Hidden Valley Trail and up Duncan Knob. There were 3 reports of between 5-7 birds on FR 55 along the western boundary of BC. In the 1982 Bath foray only ½ as many birds were recorded while a similar number was reported in the 1985 Highland foray.

Black-and-white Warbler – Approximately 35 birds were counted in HC and over 100 in BC, numbers that are comparable to those of prior forays. Two thirds of the birds were located west of US 220. Drummond and Bruno counted 23 on FR 55 between US 39 and Paddy Knob on June 12. This species was found predominantly in mixed or deciduous forest at various elevations with very few recorded in moist bottomlands. Adult birds carrying food were observed by Klarquist on the Paddy Run trail (June 10) and by Bedell at the McDowell Battlefield site (June 8).

American Restart – A still common and widespread species found at all elevations and reported by most parties. While approximately 50 birds were recorded in HC more than three times that number were found in BC. Lynch et al. had a high count of 25 on June 8 in a HC route from Meadowdale to Paddy Knob via US 84, and also observed a nest with young. Gaskill and Millington tallied a BC high of 31 traveling from Lake Moomaw to Paddy Knob, with many records coming from FR 55. Hikers of various trails in and near Hidden Valley listed counts of between 19 and 29. There were no reports from the southeast section of BC east of Warm Springs Mountain and south of US 39.

Worm-eating Warbler – There were 9 reports with 23 birds recorded in HC, all but 2 of which were east of Jack Mountain with 16 on the west slope of Shenandoah Mountain. These numbers and distribution are very similar to what was recorded in the 1975 and 1985 Highland forays, suggesting a small but stable population. In BC this species was widely distributed over all sectors with a more than 7 fold increase over the 23 birds reported in the 1982. There were seven reports of between 5 and 9 birds, eight reports of 10 to 17 and a high count of 26 on June 11 along south SR 629 / Douthat State Park, by Drummond. McGrowell and Lanier saw an adult bird feeding fledged young near Bubbling Springs on June 14.

Ovenbird – Still fairly common in both counties, primarily in middle and higher elevation forests. In HC 80 out of the 89 total birds were counted either north of US 250 or west of SR 600. Kinzie et al. reported the remaining 9 from Sounding Knob (southeast of Monterey) on June 8. Williams and Taber noted an adult carrying food on Jack Mountain on June 7. BC yielded twice as many birds in a wide distribution on all the forested ridges. Seven parties reported more than 20 birds, including Drummond along SR 629 / Douthat S.P. on June 11, Ake in the northeast section along SR 629 on June 13, Riggs and Merritt hiking separate Hidden Valley

trails on June 11 and 13, and three parties traveling to or from Paddy Knob on FR 55, where Drummond and Bruno had the high count 38 on June 12.

Louisiana Waterthrush – This species was noted in all sections of both counties along flowing streams through forests and at all elevations, from below 2000 ft. (Bolar Run, Hidden Valley) to above 3500 feet (Locust Springs, Duncan Knob). More than 2/3 of the total were identified in BC. Here 16 parties reported 1 to 2 birds and three parties found 4 to 7. The Keiths observed an adult carrying food in the Bullpasture Gorge (SR 678) on June 7 and Merritt noted fledged young being fed along the Hidden Valley Trail on June 14. Populations of this species may have declined slightly since prior forays.

Kentucky Warbler – Only two birds were located in BC, one on the Hidden Valley Trail along the Jackson River by Merritt and another along SR 614 towards Burnsville by Hamilton, both on June 14. None was found in HC. During the previous forays 4 were found in 1975 (Highland), 15 in 1982 (Bath) and 12 in 1985 (Highland). This species may be declining locally although ample deep-forest habitat remains.

Mourning Warbler – At least ten and possibly as many as 13 individual birds were identified by 10 parties. All but one of these was in the Paddy Knob area, where the abundant open thickets and raspberry canes offer favorable habitat above 4000 ft. The Keiths and Klarquist, approaching from HC, tallied 5 birds that included two pairs, one of which was observed copulating. The Paddy Knob population appears stable.

In previous Highland forays this species was also noted in the Laurel Fork/Locust Springs area with as many as 20 birds in 1975 and 8 in 1985. There were no records from that area during the present foray even though it was extensively surveyed. The open brushy habitats to which this species is so specific have since undergone natural succession to less favored forest. Nearby on Sapling Ridge Taber and Spahr found one singing male in a recent clear-cut on June 8.

Common Yellowthroat – There were 14 reports of this species in HC and 20 in BC, mostly of 1-4 birds. The Keiths reported high counts of 16 on June 8 along the HC segment of SR 600 and Merritt identified 10 in Hidden Valley on June 13, also observing an adult carrying food. Most reports were from marshy and streamside areas in the low to mid elevations. Higher elevation reports included up to 7 birds by four parties in the Bearwallow Run and Sapling Ridge area. This species is still common and widespread in both counties.

Hooded Warbler – This warbler, scarce in HC (5 birds), seemed common at all forested elevations in BC (more than 70 birds, 18 reports). Of the Highland birds, two were near McDowell on Bullpasture Mountain and three were along SR 610. Unlike as in former forays, there were no reports from the northwest highlands. High elevation reports from BC came via Drummond and Bruno, who reported 3 from Allegheny Mountain (FR 55) on June 12, and from Ake and Harris, who located 3 on Duncan Knob on June 11. Most of the widely scattered BC reports were of 1-3 birds with the greatest number (34, 4 parties) coming from the Hidden Valley area including 20 on June 14 (Merritt) along the Hidden Valley Trail along the Jackson River. Merritt

also observed an adult carrying food. The foray data suggests a possible decline of an already uncommon species in HC and a stable population in BC

Canada Warbler – This species, uncommon in both counties, was located only at elevations above 3500 ft., typically in rhododendron thickets. Approximately 18 individuals were identified in the northwest corner of HC including 4 from Bearwallow Run (Kinzie et al., June 9), 3 from Locust Springs on (Fosters, June 10), 2 on Sapling Ridge (Williams and Hamilton, June 8) and a high count of 8 along SR 642 west of Straight Fork (Keiths, June 9). Rowlett considers this stretch along SR 642 to hold one of the densest populations of this species in HC. He also has found three nests in this area over the past few years. There were reports of single birds on Sounding Knob (Kinzie et al., June 8) and along SR 601 (Bazuin and Stevens, June 9). In BC there were no reports of this species from FR 55 where more than 10 were counted in 1982. The only Canada Warblers located in BC were atop Warm Spring Mountain on SR 703 by Riggs on June 11. Foray comparison data suggests a stable population in HC and a likely decline in BC.

Yellow-breasted Chat – An uncommon and local species in HC with only 5 birds reported, one along 640 south of Blue Grass on June 9 by Ake and the Fosters and 4 along the lower Cowpasture River (SR 614) by Foster on June 7. The species was slightly more common in BC with 9 reports from lower elevation sites including 5 reports (9 birds) in the Cowpasture River drainage and 3 reports (6 birds) in the Jackson River drainage (Hidden Valley). Foray data suggests a decline of chats in both counties.

Scarlet Tanager – This species was present in moderate numbers in forested habitats at all elevations but predominated in the middle and higher ranges. One fourth of the 144 HC birds came from the northwest highlands and another 17 farther south along the same ridge farther (including Paddy Knob). The high count by Kinzie et al. (June 8) came from Sounding Knob. The nearly 300 birds counted in BC were reported in a similar altitudinal distribution. Fields and Schreck turned in upper elevation high count of 28 from FR 55 on June 14 and Gaskill and Millington had a lower elevation high count of 19 in the north central section.

Eastern Towhee – Towhees were widely and liberally distributed across both counties with 60 total reports tallying nearly 500 birds. Reports of this species came from all elevations with the greatest number reported from middle and high elevations. Kinzie et al. recorded a HC peak count of 26 on and near Sounding Knob on June 8 and Gaskill and Millington reported 39 in the lower and middle elevations of BC on June 13.

Chipping Sparrow – The present survey confirms that this sparrow remains quite common and widely distributed in both counties. There were 30 reports in each county, most of which returned more than 5 birds, with 16 reports listed more than 10 birds. A high count of 32 in HC came from Lynch et al. in the Blue Grass Valley on June 7. In BC the peak count of 46 came from Gaskill and Millington in the north central section on June 13. There were 6 reports of adults feeding fledged young, 3 of adults carrying food, and 1 of an adult on a nest (US 84 en route to Paddy Knob, Lynch et al., June 8).

Field Sparrow – This sparrow was widely and evenly distributed in open brushy habitat, with only four reports (9 birds) from the highest elevations. The remaining 225 birds were reported from low and middle elevations. The highest counts come from the Hidden Valley area where Merritt had 25 in and around the campground on June 13, including fledged young, and another 16 along the Hidden Valley Trail on June 14. Other breeding evidence included several HC reports of birds carrying food and adults feeding a fledged young on SR 638 (Spahr and Rieger, June 7).

Vesper Sparrow – In previous forays this species was found in HC only, as was the case in 2003. In 1985 more than 25 birds were counted compared to 14 birds in this survey. Middle elevation reports totaled 4 birds from the Blue Grass Valley and 3 from the Jackson River Valley. High elevation reports include 1 from Sapling Ridge and 6 from SR 601, where Sattler and Ferrell listed a peak count of 4 on June 9 and Lerner and Vermeulen saw an adult carrying food on June 10.

Savannah Sparrow – A small but seemingly stable population persists in HC where there were ten reports totaling 16 birds, 7 of these from the Blue Grass Valley. A high count of 4 came from SR 601 (Bazuin et al., June 8). The remaining scattered reports were from the southern valleys along Back Creek, the upper Jackson River, and the lower Bullpasture and Cowpasture Rivers. The 4 BC sparrows were widely scattered and included 1 on SR 629 near the Augusta Co. line (Ake, June 12), 1 along US 220 near the HC line (Spahr, June 15), and 2 south of Bacova on SR 687 (Gaskill and Millington, June 15). The 1982 Bath foray reported only 2 birds.

Grasshopper Sparrow – Only 4 reports, all of single birds, were received in HC, 3 of which were in the Blue Grass Valley and 1 along the upper Jackson River (Spahr and Rieger, June 7). That there were more than 25 birds in the 1975 Highland foray and more than 15 in 1985, suggests a declining trend in HC. In BC the eight reports totaled 18 birds, all but 2 of which came from the northeast section where the Harrises reported a peak count of 10 along SR 678 and 627 on June 12. Considered “uncommon and local” in the 1982 foray, the present BC numbers and distribution are not substantially different.

Song Sparrow – This well-known sparrow may be less common today in HC. In 1985 there were 60 reports, including 8 with more than 20 birds, 15 with more than 10, and a high count of 49. This compares to 23 reports (135 birds) in 2003, including only 1 with more than 20, 2 with more than 10, and a high count of 27 (Blue Grass Valley, Lynch et al. June 7). High elevation reports were limited to 1 bird at Locust Springs (Smith and Smith, June 8) and 2 on SR 601 (Bazuin et al., June 8). There were 2 reports of birds carrying food and 2 of adults feeding fledged young. In BC the 20 reports totaled 87 birds evenly scattered throughout the low and middle elevations, with no high elevation reports and no reports of more than 8 birds. In the 1982 Bath foray this species was considered “common at all elevations” with a peak count of 42.

Dark-eyed Junco – All reports of this species were from above 3500 ft. In HC there were 8 reports totaling 129 birds from the northwest highlands. The remaining HC birds included 11 from SR 601, 26 from Paddy Knob, and 29 from Sounding

Knob. In BC there were at least 50 birds from FR 55, 6 from Duncan Knob, 4 from Back Creek Mountain and 17 from SR 703. Nests with eggs or chicks were reported in HC from Allegheny Ridge / FR 106 (King et al., June 7), Sapling Ridge (3 by Williams and Hamilton, June 8), and Mullenax Run (Spahr, June 10). Fledged young birds in HC were seen on June 10 along Slabcamp Run (Kinzie et al.) and Paddy Run Trail (Klarquist), and in BC on June 14 along FR 55 (Fields and Schreck).

Northern Cardinal – The 19 HC reports totaling 51 birds contrasts with the 31 reports and over 300 birds in the 1985 foray. The 2003 reports were all of 1 to 5 birds with the exception of a high count of 11 by Foster on June 7 in the lower Cowpasture Valley. In BC, 132 cardinals were counted compared to 291 in 1982. Five of the BC reports were of more than 10 birds, with Gaskill and Millington listing a high count of 18 on June 13 in north central section. Larner and Vermeulen noted an adult feeding a fledgling in Little Valley (BC, SR 694) on June 11. There were no high elevation reports in either county.

Rose-breasted Grosbeak – As in former forays this species was much more common in high elevation forests. The present survey, however, suggests a wider distribution. In HC 23 parties reported a total of 49 birds, of which 31 came from Allegheny Mountain, from Locust Springs to Paddy Knob. The rest were widely scattered in all but the southeastern section of HC, including a singing male in downtown Monterey. In BC 26 birds were reported by 12 parties. Lower elevation (below 2500 ft.) reports of one to two birds came from SR 600 (the Dalmases, June 8; Drummond and Foster, June 14), Hidden Valley (Riggs, June 11) and the southern Cowpasture River Valley (Spahr and Bruno, June 12). Sattler and Ferrell found an occupied nest at the McDowell Battlefield site on June 10.

Blue Grosbeak – Only 6 birds were located during the entire survey period, all limited to BC. Drummond found 1 in the south-central section along SR 629 on June 11, Gaskill and Millington located 3 along a loop from Bath Alum to Green Valley to Ft. Lewis, and Larner and Vermeulen found a copulating pair in Little Valley (SR 694) on June 11. This species was always uncommon and local in BC (ca. 20 birds in 1982) and rare in HC (4 birds in 1985).

Indigo Bunting – This species was very common and widely distributed in both counties. Most parties reported "buntings" on each day, irrespective of location or altitude. Most reports were of more than one bird with 33 of the 68 reports listing more than 10 birds. Foster, in the southeastern section of HC, listed a high count of 30 on June 7. In BC, Merritt located 62 along the Jackson River Trail on June 14 and Gaskill and Millington, counted 83 in the north central section.

Dickcissel – One pair was located in HC along SR 638 on June 7 by Larner and Vermeulen and was seen by one other group shortly thereafter. No additional sightings of these birds were reported even though multiple groups returned to the area in subsequent days. This species was not recorded in any of the prior forays. There are only 5 previous Dickcissel records in the survey area, all of single birds, and only 2 during the summer. Finding a pair in appropriate habitat suggests probable breeding of this Midwestern species known for its erratic wanderings that regularly extend into Virginia.

Bobolink – Bobolinks were common in their historical HC location north of Hightown along SR 640 and the Blue Grass Valley. They were recorded by all groups that surveyed those regions, with a total count of more than 60 birds, mostly males. This represents an approximate doubling over the 1985 foray count. Lynch et al. had a high count of 34 between Hightown and Snowy Mountain on June 7. A smaller colony of at least 11 birds was recorded south of US 250 along SR 637 and US 84 in the Meadowdale vicinity. Bedell and others made some attempt to search for nests in this area, but none was found. The species was not located in BC, where its summer presence has historically been limited and sporadic.

Red-winged Blackbird – This blackbird remains an abundant breeding species in HC and a common one in BC. Reports were well distributed throughout all of the lower and middle elevations in open habitats. The greatest density was along north SR 640 and the Blue Grass Valley where counts of more than 25 birds were the norm and where Ake and Foster turned in a high count of 300 on June 9. BC concentrations included the northwest area where Gaskill and Millington had a high count of 34 on June 13, and the Hidden Valley region where Riggs reported a high count of 31 on June 11. There were no reports from the highest elevations. Reports of 3 birds carrying food, 1 carrying nesting material and 1 carrying a fecal sac were turned in.

Eastern Meadowlark – This species is still very common in the many fields, pastures and meadows within the survey area. The overall prevalence and distribution paralleled that of the Red-winged Blackbird, including the greatest density recorded along north SR 640 and the Blue Grass Valley. Here many groups reported counts in excess of 10, totaling to nearly 160 Meadowlarks, which represented 40% of the total two-county count. Ake and Foster had a high count of 70 in this region on June 9.

Common Grackle – Comparison with past forays indicates that this species remains stable and common in the lower and middle elevations and absent from the highest regions. Counts totaling almost 300 birds came in from HC with half that number recorded in BC. HC high counts included 57 between Bolar and Trimble (Williams and Taber, June 8), 46 along north SR 640 (Lynch et al., June), and 33 in Monterey (Bazuin, June 7). In BC there were high counts of 40 near Lake Moomaw (Dalmases, June 7) and 41 in the north central section (Gaskill and Millington, June 13). A few reports of birds carrying food or of fledged young were turned in.

Brown-headed Cowbird – Cowbirds remain widely distributed across both counties with reports of 1-5 birds being the norm. A count of 16 between Bolar and Trimble by Williams and Taber on June 7 was the HC peak count. In BC, Spahr and Baron recorded 15 on June 14 from the northeast section along SR 640 and 629. High elevation reports were limited to HC and included a scattering of birds from Sapling Ridge, Mullenax Run, SR 601 and Paddy Knob.

Orchard Oriole – A total of 20 Orchard Orioles were counted in HC and 40 in BC, numbers which are slightly higher than those reported in the prior forays. The 10 HC and the 15 BC reports were mostly of 1-3 birds, with four counts of 4. All reports were from the various river valleys. Hamilton observed an adult carrying food near Ft. Lewis on June 14. Spahr found a nest with young on SR 628 near Williamsville in BC.

Baltimore Oriole – Like the Orchard Oriole, this species was most common along river valleys in the lower and middle elevations. A total of 59 adults were recorded in HC and 47 in BC, quantities similar to those reported in the last two forays. In HC active nests were found on south Bullpasture Mountain (King et al.), SR 620 (Hamilton), and along the upper Jackson River (Spahr and Rieger), all on June 7. In BC Spahr found an active nest along north US 220 (Jackson River bridge) on June 15. Merritt observed fledged young on June 14 along Hidden Valley Trail.

Purple Finch – Only 9 birds were counted, all but 1 of these came from the Locust Springs/Laurel Fork area of northwest HC. Kinzie et al. reported 2 along Bearwallow Run (June 9) and 4 from Slabcamp Run (June 10) including a pair exhibiting courtship behavior. At Locust Springs, Smith and Smith found 1 on June 8 and Foster saw 2 on June 10. The only report away from this region was of a single bird farther south along the same ridge on SR 601 (Sattler and Ferrell on June 9). In 1985 only 5 Purple Finches were found in the very same distribution suggesting a small stable population in the high elevation conifer forests.

House Finch – In HC 51 House Finches were reported, mostly north of US 250, including a high count of 27 in Monterey (Bazuin, June 7). This represents an approximate doubling of the finches found in 1985 and contrasts with the absence of reported birds in the 1975 HC foray. O'Bryan and the Coes saw adults feeding young near Fork of Water on June 7. In BC, 3 reports totaled 8 birds, the same number as reported in 1982.

Pine Siskin – Riggs heard and finally saw a single bird in some conifers on Cobbler Mountain Trail (2000 ft.) above Hidden Valley on June 11. This is the first summer record of this species in either county.

American Goldfinch – As reported in the earlier forays, this species remains "common at high elevations and abundant elsewhere." Nearly all groups reported this species daily and counts of 10 to 30 were common, more so in HC. Lerner and Vermeulen saw a flock of more than 50 on SR 601 in HC on June 10.

House Sparrow – There were 15 reports from HC and 8 from Bath of this species, mostly from towns, villages and farmsteads in the lower and middle elevations with only 1 report from above 3700 ft. at Mullenax Run (Spahr, June 10). Most counts were of 1-10 birds, with Bazuin counting 51 in Monterey on June 7. Several active nests were reported in old barns, nest boxes and fence posts. Based on historical foray data, this species appears to remain stable

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A SUMMARY OF THE 2002 BEACH-NESTING AND COLONIAL WATERBIRDS SURVEY OF THE VIRGINIA BARRIER ISLANDS

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The twenty-eighth consecutive annual survey of the beach-nesting and colonial waterbirds of the Virginia barrier islands was accomplished 16-19 June 2002. With the exception of Parramore Island, all of the islands from Assawoman on the north through Fishermans on the south were visited. Survey protocols were consistent with those previously described (Williams et al. 1990). Table 1 provides a summary of the survey data.

This survey's count of 1892 Brown Pelicans (*Pelecanus occidentalis*), all on Fishermans Island, was the highest for this species since it was first found breeding in Virginia on Metompkin Island in 1987 (Williams 1989). Previous high counts of 1878 and 1822 occurred in 1998 (Williams et al. 2000) and 1999 (Williams et al. 2001a) respectively. The number of nesting Double-crested Cormorants (*Phalacrocorax auritus*) declined for the second consecutive year at Chimney Pole Marsh, this species' only barrier islands colony site. In 2000 (Williams et al 2001b) and 2001 (Williams et al. 2002) there were 29 and 20 respectively. This year there were 16 breeding birds. Each of the 8 nests had ambulatory, downy young. No nests had remaining eggs.

For the first time in the history of the survey no mixed species heronries were found on Fishermans Island, despite diligent searching. When these surveys commenced in 1975 (Williams 1976) there were 8 mixed species heronries within the scope of the study. Two were on Metompkin Island. Single heronries were on Hog, Rogue, Wreck, Ship Shoal, and Fishermans islands. Over the course of our work the number of heronries has ranged from 9 (1980, 1981, 1983, 1984) to 4 (1988, 1990, 2001), with an average of 6 (Williams et al. unpubl. data). This year the number of heronries decreased to 3 including a small one of 193 birds of 6 species on Chimney Pole Marsh, and 2 relatively sizeable ones on Cobb (386 birds of 8 species) and Wreck (354 birds of 10 species) islands.

Four Great Blue Heron (*Ardea herodias*) nests were found on the western side of Fishermans Island. Three were in a mixed sassafras (*Sassafras albidum*) and black cherry (*Prunus serotina*) forest, and a fourth was uncharacteristically in a lone black cherry tree approximately 100 meters to the northwest of the forest. All four nests were empty, though each had whitewash evidence of recent occupation.

The absence of a mixed species heronry on Fishermans Island may in part explain the dramatic decrease in the number of several breeding herons, egrets, and ibis species. With the exception of Great Egrets (*Ardea alba*), which increased for the third consecutive year, all-time low counts were recorded for Snowy (*Egretta thula*) and Cattle (*Bubulcus ibis*) egrets, Black-crowned Night-Herons (*Nycticorax nycticorax*), and Glossy Ibis (*Plegadis falcinellus*). The Snowy Egret count plummeted, for the fourth consecutive year, to 88, eclipsing the previous low count of 91 in 1998 (Williams et al. 2000). Little Blue Herons (*E. caerulea*), Tricolored Herons (*E. tricolor*) and White Ibis (*Eudocimus albus*) also declined. The decrease in the latter species was attributed to the lack of breeding on Fishermans Island where as many as 46 of the survey total of 127 were found in 2001 (Williams et al. in press). The declines among the heron/egret species are consistent with those noted in 1998 by Truitt and Schwab (2001) within the larger seaside/barrier islands lagoon system.

The Wilson's Plover (*Charadrius wilsonia*) count declined slightly from the previous year, reflecting a decrease in the number found on Cedar Island from 19 in 2001 (Williams et al. 2002) to 8. This decrease appears to be the result of continued beach vegetation succession on the northern half of the island reducing suitable nesting habitat for this plover species. All but 1 of the Wilson's Plovers were found on the northernmost islands, Assawoman, Metompkin, and Cedar. A single bird was noted on Smith Island. Piping Plover (*C. melodus*) numbers declined by 11% from 160 in 2001 (Williams et al. 2002) to 142, a figure that is still well above the 25-year mean of 113 (Williams et al. 2001a). American Oystercatchers (*Haematopus palliatus*) registered another year of decline with an all-time low count of 422.

Laughing Gulls (*Larus atricilla*) were at an all-time low due to the diminution of numbers of breeding birds on Fishermans Island. While the number of breeding Herring Gulls (*L. argentatus*) was consistent with past counts, the barrier islands Great Black-backed Gull population (*L. marinus*) reached an all-time high count of 667, eclipsing the previous high of 561 in 1986 (Williams et al 1990), and more than triple the 25-year mean of 206 (Williams et al 2001a).

Gull-billed Terns (*Sterna nilotica*) increased significantly from the all-time low of 42 in 2001 (Williams et al. in press) to 200. For the sixth consecutive summer we failed to find a Caspian Tern (*S. caspia*) nest during the survey. Both Royal (*S. maxima*) and Common (*S. hirundo*) terns registered their all-time second lowest counts for the survey at 1790 and 581 respectively. Two encouraging trends were that Least Terns (*S. antillarum*) continued to increase for the third consecutive year, and that the number of Black Skimmers (*Rynchops niger*), while not at historic breeding population levels, remained relatively unchanged.

Birds of special interest recorded during the survey included 5 Wilson's Storm Petrels (*Oceanites oceanicus*) off Cobb Island 17 June, and 1 off Assawoman Island 18 June. An immature Northern Gannet (*Morus bassanus*) was off Assawoman Island 18 June. Six Marbled Godwits (*Limnosa fedoa*) and 1 Whimbrel (*Numenius phaeopus*) were on Cedar Island 18 June. On 17 June a total of 208 Black-bellied Plovers (*Pluvialis squatarola*) were noted as follows: 45 on Smith Island, 151 on Myrtle Island, 1 on Wreck Island, 16 on Cobb Island. The same day 92 Short-billed Dowitchers (*Limnodromus griseus*) were counted on Ship Shoal Island. Red Knots (*Calidris canutus*) on 17 June included 29 on Ship Shoal Island, 1 on Wreck Island, and 17 on Cobb Island. The next day 5 more were seen, 4 on Cedar Island and 1 on Metompkin Island. Nine White-rumped Sandpipers (*C. fuscicollis*) were tallied during the survey; 1 each on Ship Shoal Island and Assawoman Island 17 June, and 7 on Metompkin Island 18 June. A Great Horned Owl (*Bubo virginianus*) was observed 18 June on Metompkin Island.

ACKNOWLEDGEMENTS

We wish to dedicate this survey and summary to the memory of Kevin Croll, a graduate student at the College of William and Mary, who passed away quite unexpectedly in December 2001.

Barry Truitt and Richard Ayers gave us the best island-to-island transportation. Meg Milliken did a terrific job keeping us well nourished and accommodated at the Virginia Coast Reserve's Machipongo Station on Hog Island. We thank Susan Rice and John Shorer for allowing us access to Fishermans Island and Assawoman Island respectively. We were joined in the field this year by Pam Denmon, Dot Field, Wes Jolley, Kyle Peterson, Tonya Stephenson, and Alex Wilke.

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	Asa	Metom	Cedar	Das Shl	Parra	Sandy	Chm Pol	Hog	Rogue	Cobb	L. Cobb	Wreck	Shp Shl	Gdwn	Mink	Myrtle	Smith	Fisher	Total
BRPE							16											1892	1892
DCCO																		8	16
GBHE										86		96							8
GREG							108			40		12							290
SNEG							36			40									88
LBHE							2			24									50
TRHE							15			83		64							162
CAEG												4							4
GRHE										2		2							4
BCNH										49		109							158
YCNH												2							2
WHIB										60		16							76
GLIB							16			42		25							83
NOHA		3								2									5
WIPL	17	13	8														1		39
PIPL	35	55	35					1		17				2		12	2		142
AMOY	22	92	83	3	14		8	42			12	46	27		16	14		26	422
LAGU												1410						786	2196
HEGU	12				420		187			170	271	943						827	2530
GBBG	2				60		113			10	83	314						85	667
GBTE			74									126							200
CATE																			0
ROTE																		1790	1790
SATE	2		314															5	5
COTE										8	257								581
FOTE																		60	60
LETE	34	235	198							14		8	38			11			538
BLSK			900								53	571							1524
# Species	2	3	4	0	0	2	8	0	0	11	4	17	1	0	0	1	0	8	23
# Birds	36	249	1486	0	0	480	493	0	0	580	415	3983	38	0	0	11	0	5453	13224
# Colonies	1	3	2	0	0	1	1	0	0	6	1	4	1	0	0	2	0	3	25

Table 1. Census counts of bird species on Virginia barrier islands. Islands listed in the table include Assawoman Island, Metomkin Island, Cedar Island, Dawson Shoals, Parramore Island, Sandy Island, Chimney Pole Marsh, Hog Island, Rogue Island, Cobb Island, Little Cobb Island, Wreck Island, Ship Shoal Island, Godwin Island, Mink Island, Myrtle Island, Smith Island, Fishermans Island. Species abbreviations follow standard USGS Bird Banding Laboratory codes.

Annual Meeting of the Virginia Society of Ornithology

2-4 May, 2003

Charlottesville, VA

The annual meeting was held at the Charlottesville Holiday Inn and Conference Center and hosted by the Monticello Bird Club. Larry Lynch, VSO President, presided over the annual business meeting. Elections were held in accordance with the VSO bylaws. The following were elected unanimously:

President - Teta Kain - Gloucester

Vice-President - John Spahr - Waynesboro

Secretary - Lauren Scott - Henrico County

Treasurer - Sue Thrasher - Lynchburg

Raven Editor - Paul Cabe - Lexington

Newsletter Co-Editors - Linda Fields and Alan Schreck - Arlington

Board of Directors for the term 2003 - 2006

David Spears

Peggy Spiegel

The **Jackson M. Abbott Conservation Award** was given to Kiptopeke State Park, and the award accepted by Dave Summers, Park Manager.

The **J.J. Murray Research Award** was presented to Joshua LeClerc for his project, *Fluctuating asymmetry in golf course birds: Evidence of developmental stress from pesticides*, and to Ann Catherine Markham for her project, *The influence of salinity on diet, prey delivery, and nestling growth in bald eagles in the lower Chesapeake Bay*.





INFORMATION FOR CONTRIBUTORS

The Raven, the official journal of the Virginia Society of Ornithology (VSO), functions to publish original contributions and review articles in ornithology, not published elsewhere, mostly relating to Virginia birdlife. Manuscripts should be sent to the editor, Paul R. Cabe, Biology Department, Washington & Lee University, Lexington, VA 24450 (cabep@wlu.edu).

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

Format of *The Raven* generally follows guidelines set by the Council for Biology Editors as outlined in the CBE style manual, 6th edition, 1994 (Council of Biology Editors, Inc., 11250 Roger Bacon Dr., Reston, VA 20190). Recent volumes of *The Raven* should be inspected for style. Vernacular and scientific names of birds should be those published in the Seventh Edition of the A.O.U. Check-list of North American Birds and subsequent supplements. All measurements should be reported in metric units.

Preferred submission format for manuscripts is by electronic file, prepared using Microsoft® Word or WordPerfect®. Text files should contain minimal formatting. All graphics (photos, maps, graphs, charts) must be in black and white; original size should not exceed 5 x 7 inches. Files may be submitted by email attachment (preferred) or on floppy disk or CD. Authors are encouraged to consult with the editor on additional matters of content, format or style.

