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 once yearly, containing articles relevant to Virginia ornithology as well as news of the activities of the Society and its chapters.
4. A newsletter, the *VSO Newsletter,* published quarterly, containing current news items of interest to members and information about upcoming events and pertinent conservation issues.
5. A journal, *Virginia Birds: A Quarterly Journal of Ornithological Sightings in the Commonwealth,* published quarterly and contains records of bird sightings from the different regions of the Commonwealth.
6. Study projects (nesting studies, winter bird population surveys, etc.) aimed at making genuine contributions to ornithological knowledge.

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

Those wishing to participate in any of the above activities, or to cooperate in advancing the objectives of the Society, are cordially invited to join and should contact the Membership Secretary. As of January 2022, annual dues are $10.00 for students, $20.00 for active members, $35.00 for families, $50.00 for sustaining members, $75.00 for contributing members, and $500.00 for life members.

New manuscripts and queries about *The Raven* should be sent to Editor John Styrsky: ravensubmissions@lynchburg.edu. Queries and comments about *Virginia Birds* should be directed to Evan Spears: e3sprears@gmail.com.

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2019-2021 Cumulative Report of the Virginia Avian Records Committee

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The members of the 2019 Virginia Avian Records Committee (VARCOM) were C. Michael Stinson (Chair), Lewis Barnett (Secretary), Matt Anthony (Vice Chair), Rob Bielawski, Todd M. Day, Gerry Hawkins, Gerco Hoogeweg, John Rowlett, and Dave Youker

The members of the 2020 Virginia Avian Records Committee (VARCOM) were C. Michael Stinson (Chair), Lewis Barnett (Secretary), Matt Anthony (Vice Chair), Rob Bielawski, Larry Cartwright, Paul Glass, Gerco Hoogeweg, John Rowlett, and Dave Youker

The members of the 2021 Virginia Avian Records Committee (VARCOM) were C. Michael Stinson (Chair), Chris Monahan (Secretary), Matt Anthony (Vice Chair), Rob Bielawski, Larry Cartwright, Todd M. Day, Paul Glass, Nick Newberry, and John Rowlett

This report covers the activities of VARCOM since the most recent annual report was published in *The Raven* vol. 89(1) in 2019. Encompassed in this report are the years from 2019-2021. During this time, VARCOM met once in March 2019. The committee's activity during 2020 and much of 2021 was substantially impacted by the COVID-19 pandemic. The VARCOM annual meeting, which is traditionally held in March, was unable to be held in 2020 due to statewide travel restrictions arising from the COVID-19 pandemic. Efforts to convene a virtual meeting were unsuccessful, and as a result VARCOM did not have a formal meeting. Some business was conducted via virtual communication, and review of records continued unabated.

The committee was dealt a further blow in January 2021 when longtime Secretary Lewis Barnett passed away following a battle with cancer. Lewis's service to VARCOM and the wider birding community was immeasurable, and the loss of his steady presence as Secretary effectively halted many of VARCOM's typical operations. The Chair and Vice Chair initiated a search to fill the vacant Secretary position, but several candidates were approached and declined. Without anyone filling the Secretary position, circulation and review of records functionally ceased. The position was finally filled in July 2021, when Chris Monahan graciously accepted a nomination and was confirmed by unanimous vote of VARCOM members. When Chris assumed the Secretary position, review of records resumed, but during the intervening months the Database for Ornithological Verification and Submission (DOVES) had accumulated a backlog that was too large to be circulated in a single review packet. Among the unreviewed records were several submissions that would constitute potential state firsts, so a decision was made to prioritize review of these records in order to keep the official state list up to date. Review of these records was nearly complete by the start of 2022, and VARCOM expects to be caught up on review early in the year.

The most recent annual meeting was held 30 March 2019 at the Prince Edward Regional Library in Farmville. In attendance were Mike Stinson (Chair), Lewis Barnett (Secretary), Matt Anthony, Gerry Hawkins (attending by phone), John Rowlett, and Dave Youker. It was determined that the Vice Chair, Ellison Orcutt, had rotated off the committee and Matt Anthony volunteered to assume this position. Some discussion was devoted to the continued viability of the DOVES online submission and review platform. The Secretary noted that while DOVES is currently functional, continued maintenance could be outside the expertise of VARCOM or VSO members and suggested developing contingency plans for hiring someone with appropriate expertise.

Topics of discussion also included several items that were previously considered during the 2018 annual meeting but tabled for further evaluation. Among these were several suggested revisions to the language used to define categories of acceptance. The definition of Category 1 was amended to clarify that a Category 1 record must include an *identifiable* photograph. The possibility of allowing members to abstain from voting in the first round was discussed but rejected. Changes were also made to individual taxa on the state list. The committee determined that records of European Goldfinch, previously accepted as Category 3 and included on the state list, had been considered by the committee to be most likely escapees. This placed the acceptance at odds with the definition of Category 3, and therefore the decision was made to amend the status of this species and remove it from the state list. The status of Monk Parakeet was also discussed, and VARCOM concluded that this species is now extirpated in Virginia. The language of Category 5 was clarified to indicate that species must be maintaining self-sustaining populations *in Virginia*. Category 6 was also amended to add Monk Parakeet. The decision to add Northern Goshawk and Brewer's Blackbird to the list of review species, which had been tabled at the 2018 meeting, was revisited and unanimously approved.

The Official List was updated by Rob Bielawski in June 2021 to reflect changes in the American Ornithological Society's 62nd Supplement to its Checklist of North and Middle American Birds (Chesser et al. 2021). During the period from 2019-2021, VARCOM reviewed and accepted records of eight species that were new additions to the Official List. VARCOM also reviewed and accepted records of three hybrid taxa that had no previous records in the DOVES database. One species (European Goldfinch – see above) was removed from the state list for procedural reasons.

What follows is a summary of records that were reviewed by VARCOM between 2019 and 2021. During this period, VARCOM reviewed 243 submissions; 232 of these were accepted and 11 were not accepted. Of those that were accepted, 183 were reviewed through the eBird expedited review process, while 49 were evaluated by the full committee under the traditional review process. The following summary lists expedited review records separately. Accepted records were assigned to one of six categories of acceptance as defined in VARCOM's by-laws, which can be found on the VARCOM section of the VSO website: https://www.virginiabirds.org/varcom-bylaws. Where possible, attempts have been made to contextualize records relative to previous state and/or regional records. It should be noted that, in general, this context is based on records that have previously been reviewed by VARCOM. The committee recognizes that in some instances there may be other valid records that have not yet been reviewed, and welcomes submission of such records for formal review by VARCOM.

Abbreviations: ph. – photographed; † – written documentation submitted; a.r. – audio recording; v.r. – video recording; vis. – visual observation; * – specimen collected; CBC – Christmas Bird Count; eBird – accepted by expedited review; ML XXXXXX – Macaulay Library identification number.

Records Accepted by Traditional Review

Pink-footed Goose (*Anser brachyrhynchus*): one record of a single individual as follows:

One individual, Shirley Plantation, Charles City County [ph. Allen Bryan] 11 Dec 2020; accepted Category 1. First state and Coastal Plain record.

Garganey (*Spatula querquedula*): one record of a single individual as follows:
One adult male, Chincoteague NWR, Accomack County [ph. Bill Hohenstein, v.r. Tyler Hohenstein] 4 May 2020; accepted Category 1. Third state and Coastal Plain record; present through 6 May 2020.

Cinnamon Teal (*Spatula cyanoptera*): one record of a single individual as follows:
One adult male, Leedstown, Westmoreland County [† Fred Atwood] 18 Nov 2018; accepted Category 2. Fourth state and Coastal Plain record reviewed by VARCOM.

Mottled Duck (*Anas fulvigula*): one record of a single individual as follows:
One adult, Craney Island, City of Portsmouth [ph. Bill Williams, Brian Taber, Bob Ake, Edward Brinkley, et. al.] 14 Jun-12 Jul 2018; accepted Category 1. First state and Coastal Plain record.

Eared Grebe (*Podiceps nigricollis*): one record of a single individual as follows:
One individual, Broadway WWTP, Rockingham County [ph. Greg Moyers] 28-30 Apr 2019; accepted Category 1. Fourth Mountains and Valleys record since 2004 Review List.

Common Ground-Dove (*Columbina passerina*): one record of a single individual as follows:
One individual, Holland area, City of Suffolk [ph. Joe Simmons] 21 Feb 2020; accepted Category 1. Ninth Coastal Plain record.

Black-chinned Hummingbird (*Archilochus alexandri*): two records totaling two individuals as follows:
One adult male, Queens Lake, York County [ph. Melissa Ferguson] 20 Oct 2019; accepted Category 1. Fourth Coastal Plain record.

One immature male, Blackwater Road, City of Virginia Beach [ph. Kelly Dean] 15 Nov 2019; accepted Category 1. Seventh Coastal Plain record.

Anna's Hummingbird (*Calypte anna*): one record of a single individual as follows:
One first winter female, Snow Goose Terrace, Frederick County [ph. James Fox, † Bruce Peterjohn] 19 Nov 2019; accepted Category 1. First state and Mountains and Valleys record.

Calliope Hummingbird (*Selasphorus calliope*): one record of a single individual as follows:
One immature male, Purple Cow Road, Augusta County [ph. Marshall Faintich] 10 Nov 2020; accepted Category 1. Fourth state and first Mountains and Valleys record.

Purple Gallinule (*Porphyrio martinica*): one record of a single individual as follows:

One individual, Frog Level Road x Lois Lane, Caroline County [ph. Charles Verdery] 9 Jun 2019; accepted Category 1. Fourth Coastal Plain record since 2004 Review List.

Limpkin (*Aramus guarauna*): one record of a single individual as follows:
One individual, Fountainhead Regional Park, Fairfax County [ph. James Fox] 24 Aug 2019; accepted Category 1. Third state record, second Piedmont record.

Ruff (*Calidris pugnax*): one record of a single individual as follows:
One individual, Middlesex Drive Pond, Loudoun County [ph. Patrick Lewis] 5-7 Jul 2020; accepted Category 1. Second Piedmont Record.

Long-billed Dowitcher (*Limnodromus scolopaceus*): two records totaling three individuals as follows:
One individual, Leonards Pond, Rockingham County [ph. Diane Lepkowski] 26 Oct 2019; accepted Category 1. Ninth Mountains and Valleys record.

Two adults, Mount Solon Pond, Augusta County [ph. Gabriel Mapel, Allen Larner, Penny Warren] 24 Apr 2020; accepted Category 1. 10th Mountains and Valleys record.

Wilson's Phalarope (*Phalaropus tricolor*): one record of a single individual as follows:
One individual, Leonards Pond, Rockingham County [ph. Greg Moyers] 13 May 2019; accepted Category 1. Second Mountains and Valleys record since 2004 Review List.

Red-necked Phalarope (*Phalaropus lobatus*): one record of a single individual as follows:
One individual, John H. Kerr Reservoir—Dam Area, Mecklenburg County [† Adam D'Onofrio] 17 Sep 2018; accepted Category 2. Sixth Piedmont record since 2004 Review List.

Razorbill (*Alca torda*): one record of a single individual as follows:
One individual, Oceanview Beach Park, City of Norfolk [† Rob Bielawski] 19 Mar 2019; accepted Category 2. Fourth inland state record.

Sabine's Gull (*Xema sabini*): one record of a single individual as follows:
One juvenile, East Stratford Road, City of Virginia Beach [† Rob Bielawski, Andrew Baldelli] 6 Sep 2019; accepted Category 2. Fifth Coastal Plain record since 2004 Review List.

Least Tern (*Sternula antillarum*): one record totaling two individuals as follows:
Two individuals, Mason Pond at George Mason University, Fairfax County [ph. Paul & Joan Woodward] 2 Jun 2019; accepted Category 1. Seventh Piedmont record.

Yellow-nosed Albatross (*Thalassarche chlororhynchos*): one record of a single individual as follows:
One adult female, 36.97323, -74.58956, Northampton County [ph. Andrew Rapp et. al.] 8 Nov 2020; accepted Category 1. Third state and Coastal Plain record.

Wood Stork *(Mycteria americana)*: one record totaling nine individuals as follows:
Nine individuals, Private land southeast of South Boston, Halifax County [ph. Chris Ludwig, Alan Weakley, Julie Tuttle] 17 Sep 2019; accepted Category 1. Sixth Piedmont record.

Masked Booby (*Sula dactylatra*): one record of a single individual as follows:
One adult, First Landing SP, City of Virginia Beach [ph. Corinna Wilson] 14 Oct 2020; accepted Category 1. First state and Coastal Plain record.

Anhinga (*Anhinga anhinga*): one record of a single individual as follows:
One male, Old Richfood Road, Hanover County [ph. Harry Brown] 22 Aug 2020; accepted Category 1. 10th Piedmont record.

Neotropic Cormorant (*Nannopterum brasilianum*): one record of a single individual as follows:
One individual, Woodglen Lake Park, Fairfax County [ph. Paul & Joan Woodward] 17 May 2019; accepted Category 1. Second state and second Piedmont record.

Brown Pelican (*Pelecanus occidentalis*): one record of a single individual as follows:
One individual, Mt. Jackson, Shenandoah County [v.r. Diane Holsinger] 15 Jun 2015; accepted Category 1. Second Mountains and Valleys Record.

Gray Heron (*Ardea cinerea*): one record of a single individual as follows:
One individual, Chincoteague NWR, Accomack County [ph. June McDaniels] 31 Oct 2020; accepted Category 1. First state and Coastal Plain record.

Little Egret (*Egretta garzetta*): one record of a single individual as follows:
One individual, Craney Island, City of Portsmouth [† Bill Williams, ph. Brian Taber] 25 Apr 2019; accepted Category 1. Third state and Coastal Plain record.

Cattle Egret (*Bubulcus ibis*): one record of a single individual as follows:
One individual, Bells Lane, City of Staunton [ph. Allen Larner] 3 Nov 2018; accepted Category 1. Second Mountains and Valleys Record.

One individual, Stuarts Draft, Augusta County [ph. Allen Larner] 10 Nov 2018; accepted Category 1. Third Mountains and Valleys Record.

Swainson's Hawk (*Buteo swainsoni*): three records totaling three individuals as follows:
One light morph juvenile, Rockfish Gap Hawkwatch, Augusta/Nelson Counties [† Gabriel Mapel, Jennifer Jowdy] 14 Nov 2018; accepted Category 2. Fifth Mountains and Valleys record.

One light morph adult, Rockfish Gap Hawkwatch, Augusta/Nelson Counties [† Brenda Tekin] 1 Nov 2019; accepted Category 2. Sixth Mountains and Valleys record.

One light morph juvenile, Rockfish Gap Hawkwatch, Augusta/Nelson Counties [† Gabriel Mapel, Vic Laubach] 29 Nov 2019; accepted Category 2. Seventh Mountains and Valleys record.

Couch's Kingbird (*Tyrannus couchii*): one record of a single individual as follows:
One individual, Chincoteague NWR, Accomack County [ph. Brenda Frank, ph. and a.r. Matt Anthony] 16 Nov-6 Dec 2020; accepted Category 1. First state and Coastal Plain record.

Western Kingbird (*Tyrannus verticalis*): one record of a single individual as follows:

One individual, Pin Oak Road, Prince Edward County [ph. Mike Stinson] 18 Sep 1997; accepted Category 2.

Gray Kingbird (*Tyrannus dominicensis*): one record of a single individual as follows:
One individual, Cornland Road, Chesapeake [ph. Laura Mae] 1-5 Jan 2020; accepted Category 1. Fourth Coastal Plain record since 2004 Review List.

Alder Flycatcher (*Empidonax alnorum*): one record of a single individual as follows:
One individual, Western Park Wetlands, Albemarle County [ph. and a.r. Marshall Faintich] 21 May 2020; accepted Category 1. Third Piedmont record since 2004 Review List.

Say's Phoebe (*Sayornis saya*): one record of a single individual as follows:
One individual, Bellevue Lane, Rockbridge County [ph. Richard Rowe] 10 Feb 2019; accepted Category 1. Fifth Mountains and Valleys record.

Black-whiskered Vireo (*Vireo altiloquus*): one record of a single individual as follows:
One individual, Kiptopeke SP, Northampton County [ph. Matt Anthony] 15 Sep 2020; accepted Category 1. Second state and Coastal Plain record.

Cave Swallow (*Petrochelidon fulva*): one record totaling two individuals as follows:
Two individuals, Smith Lake (McCune's Pond), Augusta County [† Gabriel Mapel, et. al.] 23 Apr 2020; accepted Category 2. First Mountains and Valleys record.

Sage Thrasher (*Oreoscoptes montanus*): one record of a single individual as follows:
One individual, Craney Island, City of Portsmouth [ph. Bill Williams, Bob Ake, Brian Taber, et. al.] 24 Oct 2019; accepted Category 1. Third state record, second Coastal Plain record.

Northern Wheatear (*Oenanthe oenanthe*): one record of a single individual as follows:
One individual, Kiptopeke State Park, Northampton County [ph. Kathy Spencer] 26 September 2019; accepted Category 1. Sixth state and fifth Coastal plain record.

Brewer's Sparrow (*Spizella breweri*): one record of a single individual as follows:
One individual, Mockhorn WMA—GATR Tract, Northampton County [† Wes Teets, later ph. Rob Bielawski, ph. Edward Brinkley] 9 Nov 2019; accepted Category 1. Second state and Coastal Plain record.

White-throated Sparrow x White-crowned Sparrow (*Zonotrichia albicollis* x *Zonotrichia leucophrys*): one record of a single individual as follows:
One individual, Nethers Road, Madison County [ph. Rob Bielawski, Ruth Bielawski] 23 Nov 2019; accepted Category 1. First state and Piedmont record.

Nelson's Sparrow (*Ammospiza nelsoni*): one record of a single individual as follows:
One individual, Algonkian Regional Park, Loudoun County [ph. Patrick Lewis, Jody Lewis, Bryan Henson, Allison Gallo, Jim Emery] 7 Oct 2019; accepted Category 1. Third Piedmont record since 2012 Review List.

Scott's Oriole (*Icterus parisorum*): one record of a single individual as follows:
One immature male, Eidson Creek Road, Augusta County [vis. Sarah Foster, ph. Marshall Faintich, et. al.] 14 Feb-23 Mar 2020; accepted Category 1. First state and Mountains and Valleys record.

Blue-winged Warbler x Golden-winged Warbler ("Lawrence's Warbler") (*Vermivora cyanoptera* x *Vermivora chrysoptera*): one record of a single individual as follows:

One adult male, Dale Ridge Road, Wise County [ph. Matt Anthony, ph. James Fox] 7 May 2016; accepted Category 1. First state record reviewed by VARCOM.

Virginia's Warbler (*Leiothlypis virginiae*): one record of a single individual as follows:
One adult female, Marshview Park, City of Virginia Beach [ph. Steve Keith] 10 Oct 2020; accepted Category 1. First state and Coastal Plain record.

Cerulean Warbler x Northern Parula (*Setophaga cerulea* x *Setophaga americana*): one record of a single individual as follows:

One adult male, River Road, Rockbridge County [ph. Richard Rowe, ph. Lucy Rowe] 20 Apr 2019; accepted Category 1. First state and Mountains and Valleys record.

Records Accepted by Expedited Review

Black-bellied Whistling Duck *(Dendrocygna autumnalis)*: ten records totaling 40 individuals as follows:

One individual, Back Bay NWR, Virginia Beach [ph. June McDaniels] 27 April 2019; accepted Category 1 (eBird); https://ebird.org/va/view/checklist/S55472583 ML154187071 ML154187081. 15th Coastal Plain record since the 2004 Review List revision.

Eight adults, Lake Frederick area, Frederick County [ph. David Boltz] 31 May 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S56939340 ML161969301 ML161969311 ML162169601. Third Mountains and Valleys record.

One individual, 1032 Donation Dr, Virginia Beach [ph. Virginia Aquarium & Marine Science Center] 6 June 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S57147650 ML163000301. 16th Coastal Plain record since 2004 Review List.

Eight individuals, Tackett's Mill Pond, Prince William County [ph. John Aleknavage] 15 June 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S57410392 ML164341911 ML164341981 ML164347491. Seventh Piedmont record.

Three individuals, Virginia Tech Duck Pond, Montgomery County [ph. Doug Pfeiffer, † Sally Pfeiffer] 11 September 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S59777316 ML176728171 ML176728181 ML176728201 ML176728211 ML176728221. Fourth Mountains and Valleys record.

One individual, Ford's Colony (Restricted Access), James City County [ph. Virginia Wycoff] 29 Apr-18 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68043725 ML228644661 ML228644811. 17th Coastal Plain record since 2004 Review List.

Twelve individuals, The Hague, Norfolk [ph. Louis Warren] 2 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68250658 ML229795621 ML229795631. 18th Coastal Plain record since 2004 Review List.

One individual, Rappahannock Canal Path, Fredericksburg [vis. Brad Lamphere; later ph. Marc Mains] 30-31 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69852336 ML239808921 ML239808931 ML239808941 ML239808951 ML239808961 ML239808991 ML239809001 ML239809011. 19th Coastal Plain record since 2004 Review List.

Four individuals, Naval Auxiliary Landing Field Fentress (Restricted), Chesapeake [ph. Doug Shultz] 18 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70703571 ML244984191. 20th Coastal Plain record since 2004 review List.

One individual, Beaver Dam Road Farm Pond, Sussex County [ph. Drew Chaney & Tim Chaney] 21-22 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70678669 ML245088141 ML245629411. 21st Coastal Plain record since 2004 review List; present through 22 Jun 2020.

Brant *(Branta bernicla)*: one record of a single individual as follows:

One individual, Ruffin's Pond, Spotsylvania County [ph. James Fox] 3 Nov 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61155137 ML185848441 ML185848461 ML185848471. Second inland Coastal Plain record.

Eurasian Green-winged Teal (*Anas crecca crecca*): one record of a single individual as follows:

One individual, Craney Island Disposal Area, Portsmouth [obs. Lee Schuster & David Youker; later ph. Lee Schuster, Brian Taber, Bill Williams & David Youker] 23 Jan-20 Feb 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S64815195 ML210736841. Eighth state record, seventh Coastal Plain record; present through 20 Feb 2020.

Tufted Duck *(Aythya fuligula)*: three records of three individuals as follows:

One adult male, Airlie Conference Center, Fauquier County [vis. Todd Day, ph. Edward Brinkley] 27 Apr 2006; accepted Category 1 (eBird); https://ebird.org/checklist/S8117005 ML89052871. Third state record.

One female, Chartway Credit Union Pond, Virginia Beach [ph. Andrew Baldelli] 19 Feb 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S52932182 ML141605701 ML141605711 ML141605721 ML141605731. Fourth state record.

One adult male, Back Bay NWR – pool C, Virginia Beach [ph. Steve Myers] 6 April 2019 – 8 April 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S54623057 ML149349721 ML149349841. Fifth state record.

King Eider (*Somateria spectabilis*): one record of a single individual as follows:

One female, Grandview Nature Preserve, Hampton [ph. June McDaniels] 8 Nov 2020; accepted Category

1 (eBird); https://ebird.org/checklist/S76018716 ML278434951 ML278434971. First inland Coastal Plain record since 2004 Review List.

Common Eider (*Somateria mollissima*): four records totaling four individuals as follows:
One female, Grandview Nature Preserve, Hampton [ph. Ellis Maxey & Robert Peterman] 24 Nov 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61710881 ML189601501. First inland Coastal Plain record.

One female, Fort Monroe, Hampton [ph. Saundra Windstead & Tom St. Andre] 30 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69855800 ML239944811. Second inland Coastal Plain record.

One female, Messick Point, Poquoson [ph. Elizabeth Wilkins] 7 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S75996585 ML278306231 ML278306241 ML278306251. Third inland Coastal Plain record.

One female, Grandview Nature Preserve, Hampton [vis. Matt Anthony, ph. Cindy Hamilton & Steve Keith] 9-14 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S76055021 ML278713931 ML278756131. Fourth inland Coastal Plain record.

Western Grebe *(Aechmophorus occidentalis)*: three records totaling three individuals as follows:
One individual, Little Island Park, Virginia Beach [ph. Linda Chittum] 29 Dec 2018; accepted Category 1 (eBird); https://ebird.org/checklist/S51083589 ML132031131. Seventh coastal Plain record since 2004 Review List revision.

One individual, John H. Kerr Reservoir, Mecklenburg County [ph. Adam D'Onofrio] March 2, 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S53279802 ML143356641 ML143356741. Seventh Piedmont record since 1985 split.

One individual, Little Island Park, Virginia Beach [ph. Marie Furnish, Ron Furnish] 27 November 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61803698 ML190214391 ML190216421 ML190216431. Eighth Coastal Plain record since 2004 Review List.

White-winged Dove (*Zenaida asiatica*): three records totaling three individuals as follows:
One individual, Circle Drive (Clayor Lake), Pulaski County [ph. Mark Mullins] 1 Dec 2018; accepted Category 1 (eBird); https://ebird.org/checklist/S69397393 ML237054501. Fifth Mountains and Valleys record.

One individual, Renwick Place (Glen Allen), Henrico County [ph. David Bowden] 26 Dec 2019-9 Jan 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S62635394 ML195191321 ML195191331 ML195191341 ML195191351 ML195191361. Third Piedmont record; present through 9 Jan 2020.

One individual, Wheatlands Farm (Private), Augusta County [ph. Michael Godfrey] 20 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67870811 ML227894921. Sixth Mountains and Valleys record.

Black-chinned Hummingbird (*Archilochus alexandri*): three records totaling three individuals as follows:
One immature male, Kiptopeke SP, Northampton County [ph. Benjamin Clock & Shiloh Schulte] 6 Nov 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61236192 ML186368381 ML186368391 ML186368401 ML186616031 ML186616131 ML186616191. Fifth Coastal Plain record.

One, Kiptopeke SP, Northampton County [ph. Baxter Beamer, Tucker Beamer, Conor Farrell & Martina Nordstrand] 10 Nov 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61329328 ML187005261 ML187005271 ML187397231 ML187297241 ML187397251 ML187397281. Sixth Coastal Plain record.

One immature male, Kiptopeke State Park, Northampton County [ph. Diane Nastase] 8-9 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S74573468 ML269339401 ML269339411 ML269339421 ML269339431. Eighth Coastal Plain record.

Clapper Rail (*Rallus crepitans*): two records totaling two individuals as follows:
One individual, Philpott Road in South Boston, Halifax County [ph. Southwest Virginia Wildlife Center of Roanoke] 31 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73044160 ML259286901 ML259287041 ML259287321 ML259287331. Ninth Piedmont record, second since 1984.

One individual, Huntley Meadows Park, Fairfax County [ph. Cory Swift] 26 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S76118158 ML279320971 ML279320981. First inland Coastal Plain record since 2004 Review List.

Purple Gallinule (*Porphyrio martinica*): one record of a single individual as follows:
One individual, Princess Anne WMA – Whitehurst Tract, Virginia Beach [ph. Rob Bielawski] 6 October 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S60395624 ML180687141 ML180742191 ML180954381 ML180954391 ML180954451 ML180954511 ML180954521 ML180954551 ML180954591 ML180954601. Fifth Coastal Plain record since 2004 Review List.

Limpkin (*Aramus guarauna*): one record of a single individual as follows:
One individual, Totier Creek Reservoir Park, Albemarle County [ph. Barbara Studholme] 2-11 Nov 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61366847 ML187254301. Fourth state record, third Piedmont record.

Black-necked Stilt (*Himantopus mexicanus*): one record of four individuals as follows:
Four individuals, Hog Island WMA, Surry County [ph. Adam D'Onofrio] 26-28 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69680582 ML238945441. Fifth western Coastal Plain record since 2004 Review List.

American Avocet *(Recurvirostra americana)*: twelve records totaling 37 individuals as follows:
Two individuals, Beaverdam Creek Reservoir, Loudon County [ph. Paul Nawrot] 25 July 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S58448355 ML169765991 ML169766021. Eighth Piedmont record.

One individual, Staunton View Public Use Area, Mecklenburg County [ph. Paul Glass] 28 July 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S58514063 ML170192171 ML170192371. Ninth Piedmont record.

Two individuals, Reagan National Airport, Arlington County [ph. Scott Stafford] 6 August 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S58792925 ML171397911 ML171397921. 11th inland Coastal Plain record since 2004 Review List.

One individual, Hunting Creek Bridge, Fairfax County [ph. Jeff Shenot] 1 November 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61092369 ML185346601 ML185346611. 12th inland Coastal Plain record since 2004 Review List.

One individual, Staunton View Public Use Area, Mecklenburg County [ph. Paul Glass] 21 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59973020 ML178150101 ML178150131. 10th Piedmont record.

Eleven individuals, Algonkian Regional Park, Loudoun County [ph. Bryan Henson] 27 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S60149523 ML179135091. 11th Piedmont record.

Twelve individuals, Leonard's Pond, Rockingham County [ph. William Leigh] 15 September 2019; accepted Category 1 (eBird); https://ebird.org/va/checklist/S59831635 ML177289291 ML177289331. Eighth Mountains and Valleys record since 2004 Review List.

Two individuals, Lake Shenandoah, Rockingham County [vis. Betty Gatewood; later ph. Diane Lepkowski] 12 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71405759 ML249079071 ML249079091 ML249079101. Ninth Mountains and Valleys record since 2004 Review List.

Two individuals, Hunting Creek Bridge, Fairfax County [ph. David Ledwith] 17 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71576892 ML249951661. 13th inland Coastal Plain record since 2004 Review List.

One individual, Woodvale Farm, Albemarle County [ph. Walker Catlett] 5-6 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72141223 ML253730671 ML253730681 ML253730691. 12th Piedmont record.

One individual, Hunting Creek Bridge, Fairfax County [ph. David Ledwith] 29 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72951140 ML258709631. 14th inland Coastal Plain record since 2004 Review List.

American Oystercatcher (*Haematopus palliatus*): one record of a single individual as follows:
One individual, Hunting Creek Bridge, Alexandria [ph. Guy Foulks] 25 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S75416986 ML274540321 ML274540411 ML274541061 ML274541181. First inland Coastal Plain record since 2004 Review List.

Wilson's Plover *(Charadrius wilsonia)*: two records totaling two individuals as follows:
One individual, Plum Tree Island NWR, Poquoson [ph. James Fox] 31 May 2019; accepted Category 1 (eBird); https://ebird.org/eBird/view/checklist/S56930852 ML161985421 ML161985431 ML161985731. Third inland coastal plain record.

One individual, Smith Island, Northampton County [ph. Aylett Lipford & Garrett Rhyne] 30 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71962084 ML252526101. First Eastern Shore record away from Accomack barrier islands since 2004 Review List.

Whimbrel (*Numenius phaeopus*): one record of 22 individuals as follows:
Twenty-two individuals, Dyke Marsh Wildlife Preserve & Hunting Creek Bridge, Fairfax County [vis. Joanne Hutton; later ph. Kurt Gaskill] 23 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69529686 ML237913441 ML237913521 ML237913711. Second western Coastal Plain record since 2004 Review List.

Bar-tailed Godwit (*Limosa lapponica*): one record of a single individual as follows:

One individual, Chincoteague NWR, Accomack County [ph. David Larsen] 5 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59529186 ML175714011 ML175714051 ML175714191 ML175714271. Fourth state and Coastal Plain record; present through 27 Sep 2019.

Hudsonian Godwit (*Limosa haemastica*): one record of a single individual as follows:
One individual, LaGrange Lane (Private), King George County [ph. Frederick Atwood] 9-23 Nov 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61680738 ML189490451. Fifth Western Coastal Plain record since 2004 Review List.

Ruddy Turnstone *(Arenaria interpres)*: four records totaling six individuals as follows:
One individual, private location, Rockingham [ph. Diane Lepkowski] August 2, 2018; accepted Category 1 (eBird); https://ebird.org/view/checklist/S47759634 ML110353021. First Mountains and Valleys record.

One individual, Roanoake Sewage Treatment Plant, Roanoke [ph. Nick Ramsey] 21 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69413770 ML238157291. Second Mountains and Valleys record.

One individual, Huckleberry Trail--Airport Field, Montgomery County [obs. Max Nootbaar; later ph. Logan Anderson] 30 Aug-9 Sep 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73011962 ML259172151 ML259172161 ML259172171. Third Mountains and Valleys record.

Three individuals, Lumber Mill Road, Rockingham County [obs. Diane Holsinger; later ph. Huck Hutchens] 1-5 Sep 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73099422 ML259725691. Fourth Mountains and Valleys record.

Ruff (*Calidris pugnax*): two records totaling two individuals as follows:
One male, Chincoteague NWR, Accomack County [ph. Suzette Stitely] 7-9 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68551208 ML231753961 ML231754161 ML231754291. Sixth Coastal Plain record since 2004 Review List.

One individual, Hog Island WMA, Surry County [ph. Andrew Baldelli] 21 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71698895 ML250765351 ML250765371 ML250765381 ML250765391. Seventh Coastal Plain record since 2004 Review List.

White-rumped Sandpiper (*Calidris fuscicollis*): one record of a single individual as follows:
One individual, Colvin Lane Pond, Prince William County [ph. Evan Pannkuk] 30 May-1 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69842720 ML239747971 ML239748021 ML239784331. Third Piedmont record since 2004 Review List.

Buff-breasted Sandpiper (*Calidris subruficollis*): three records totaling six individuals as follows:
One individual, Roanoke Sewage Treatment Plant, Roanoke [ph. Kent Davis] 31 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73041229 ML259280151 ML259280271 ML259280351. Fourth Mountains and Valleys record since the 2004 Review List.

Two individuals, Huckleberry Trail--Airport Field, Montgomery County [1, ph. Logan Anderson] 29 Aug-18 Sep 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72933888 ML258803281 ML258803301 ML258803311. Fifth Mountains and Valleys record since the 2004 Review List.

Three individuals, Shenandoah Valley Produce Auction, Rockingham County [1, ph. Matt Gingerich] 3 Sep-6 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73135426 ML259867421. Sixth Mountains and Valleys record since the 2004 Review List.

Long-billed Dowitcher (*Limnodromus scolopaceus*): two records totaling 19 individuals as follows:
Eighteen individuals, New River Valley Fairgrounds, Pulaski County [ph. Joe Girgente & Hannah Wojo] 24-27 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67712146 ML226792501 ML226792641 ML226792951 ML226793101 ML226793151 ML226793291. 12th Mountains and Valleys record.

One individual, Liberty Corner Farm (Private), Albemarle County [ph. Baxter Beamer, Tucker Beamer, Walker Catlett, Conor Farrell & Max Nootbaar] 24 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67743413 ML227058621 227058631 ML227058641. First Piedmont record since 2004 Review List.

Willet (*Tringa semipalmata*): six records totaling 69 individuals (four records totaling 52 individuals of the Western subspecies [*Tringa semipalmata inornata*] and two records totaling 17 individuals of unspecified subspecies) as follows:
Six individuals of the Western subspecies, Huckleberry Trail--Stroubles Creek, Montgomery County [ph. Joe Girgente, Phil Lehman, Doug Weidemann & Hannah Wojo] 26 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67869594 ML227771171 ML227771211 ML227771271 ML227771351. Fifth Mountains and Valleys record of Willet ssp. since 2004 Review List.

One individual of the Western subspecies, New River Valley Fairgrounds, Pulaski County [ph. Mark Mullins] 26-27 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67949151 ML228164861. Sixth Mountains and Valleys record of Willet ssp. since 2004 Review List.

Forty-four individuals of the Western subspecies, Braeburn Training Center Pond, Albemarle County [ph. Baxter Beamer] 26-30 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67842475 ML227767281 ML227767361. Third Piedmont record since 2004 Review List.

One individual of unspecified subspecies, Fort Lynn Road Pond, Rockingham County [ph. Matt Gingerich] 6-8 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68517233 ML231422421 231422431. Seventh Mountains and Valleys record of Willet ssp. since 2004 Review List.

Sixteen individuals of unspecified subspecies, Carvins Cove Recreation Area, Botetourt County [ph. Mary Barritt] 6 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68493501 ML231334591 ML231337081. Eighth Mountains and Valleys record of Willet ssp. since 2004 Review List.

One individual of the Western subspecies, Rockfish Valley Elementary School, Nelson County [ph. Ezra Staengl & Theo Staengl] 1 Sep 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73072359 ML259551431 ML259551441 ML259551451 ML259551461 ML259551471 ML259551531 ML259551671. Fourth Piedmont record since 2004 Review List.

Wilson's Phalarope (*Phalaropus tricolor*): two records totaling three individuals as follows:
One individual, Mount Solon Pond (Private), Augusta County [ph. Eli Lianez & Ira Lianez] 23-24 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67687057 ML226594971. Third Mountains and Valleys record since 2004 Review List.

Two individuals, Penicks Mill, Bedford County [ph. Bob Epperson] 24-25 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67744140 ML226885071 ML226885951 ML226886541. Fourth Mountains and Valleys record since 2004 Review List.

Red-necked Phalarope (*Phalaropus lobatus*): nine records totaling 22 individuals as follows:
Two individuals, Broadway Wastewater Treatment Plant, Rockingham County [ph. Frederick Atwood] 2 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59480223 ML175366771 ML175366791. 10th Mountains and Valleys Record since 2004 Review List.

One individual, Longs Road, Page County [ph. James Fox] 3 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59498123 ML175515501 ML175515511 ML175515521 ML175515561. 11th Mountains and Valleys Record since 2004 Review List.

One female, Leonard's Pond, Rockingham County [ph. William Leigh] 17 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69229967 ML235890331 ML235891741. 12th Mountains and Valleys Record since 2004 Review List.

Seven individuals, Broadway Wastewater Treatment Plant (Restricted), Rockingham County [vis. Diane Holsinger, ph. Cory Taylor] 21 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69437010 ML237357021 237357041 ML237357061. 13th Mountains and Valleys Record since 2004 Review List.

Five individuals, Mill Creek Lake Park, Amherst County [vis. Mark Johnson; later ph. Mike Boatwright] 20-21 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69384678 ML236956901 ML236956911. Seventh Piedmont record since 2004 Review List.

One individual, Green Springs Historic District--West Jack Jouett Road, Louisa County [ph. Andrew Rapp] 22 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69490054 ML237689161 ML237689511. Eighth Piedmont record since 2004 Review List.

Three individuals, Hog Island WMA, Surry County [ph. Nancy Barnhart] 22 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69468034 ML237538541 ML237538551 ML237538561 ML237538571 ML237538601. Fourth inland Coastal Plain record since 2004 Review List.

One individual, Greenfield--Botetourt Center, Botetourt County [ph. Bob Epperson, Mark Johnson & Barry Kinzie] 23-24 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69525480 ML237879141. 14th Mountains and Valleys Record since 2004 Review List.

One individual, Virginia Tech--Vet School Pond, Montgomery County [ph. Ignacio Moore] 31 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69889678 ML240186741. 15th Mountains and Valleys Record since 2004 Review List.

Common Murre *(Uria aalge)*: two records totaling three individuals as follows:
One individual, Offshore waters (36.927, -75.896), Virginia Beach, [ph. Virginia Aquarium and Marine Science Center] 3 January 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S51275337 ML132873851 ML132873871. Fourth state record.

Two individuals, Offshore waters (37.024, -75.089), Northampton County, [ph. Rob Bielawski, ph. James Fox, vis. Andrew Baldelli, Todd Day, & Ian Topolsky] 26 January 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S52069766 ML137254921 ML137254941 ML137254951 ML137365491 ML137365501 ML137365521 ML137365541 ML137860591 ML137860611 ML137860621. Fifth state record.

Razorbill (*Alca torda*): one record totaling 15 individuals as follows:
ifteen individuals, Fort Monroe National Monument, Hampton [ph. Kat Baganski & Andrew Rapp] 12-23 Feb 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S64401615 ML208842281. Fifth inland state record; present through 23 Feb 2020.

Little Gull (*Hydrocoloeus minutus*): one record of a single individual as follows:
One adult, Belmont Bay Marina, Prince William County [ph. Linda Chittum & Ada Jones] 17 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67375281 ML224517741 ML224517771 ML224517781 ML224517801 MLML224517811. Third inland Coastal Plain record since 2004 Review List.

Franklin's Gull *(Leucophaeus pipixcan)*: one record of a single individual as follows:
One individual, Staunton View Public Use Area, Mecklenburg County [ph. Paul Glass] 2-3 April 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61113393 ML185496221 ML185496291 ML185496471. Fifth Piedmont record; Present through 3 Nov 2019.

Iceland Gull (Thayer's) *(Larus glaucoides thayeri)*: one record of a single individual as follows:
One individual, T. Tyler Potterfield Memorial Bridge, Richmond City [ph. Ellison Orcutt] 30 November 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61867757 ML190756051 ML190761121 ML190761551. Third Piedmont record.

Iceland Gull (Kumlien's) (*Larus glaucoides kumlieni*): one record of a single individual as follows:
One immature, T. Tyler Potterfield Memorial Bridge, Richmond [ph. Ira Lianez] 11 Jan 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S63286321 ML198713131. Seventh Piedmont record.

Sooty Tern (*Onychoprion fuscatus*): three records totaling nine individuals as follows:
Five individuals, Bill Jessee Park, Suffolk County [ph. Andrew Cameron] 6 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59569036 ML175937551 ML175937601. Seventh onshore Coastal Plain record since 2004 Review List. This record occurred during the passage of *Hurricane Dorian*.

Two individuals, Lynnhaven Inlet, Virginia Beach [vis. Todd Day & Ian Topolsky, later ph. Rob Bielawski] 6 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59562466 ML175907771 ML175907781 ML175907791 ML176233991 ML176234011 ML176234111 ML176234131 ML176234161. Eighth onshore Coastal Plain record since 2004 Review List. This record occurred during the passage of *Hurricane Dorian*.

Two individuals, Rudee Inlet, Virginia Beach [ph. Rob Bielawski] 4 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72097202 ML253740441 ML253740461 ML253740481 ML253740801 ML253740871. Ninth onshore Coastal Plain record since 2004 Review List. This record occurred during the passage of *Tropical Storm Isaias*.

Gull-billed Tern (*Gelochelidon nilotica*): one record of a single individual as follows:
One individual, Hog Island WMA, Surry County [ph. Timothy Burnett] 14 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70437266 ML243335301 ML243335311 ML243335321 ML243335331 ML243342761. First inland Coastal Plain record since 2004 Review List.

Roseate Tern *(Sterna dougallii)*: two records of two individuals as follows:
One adult, Back Bay NWR, Virginia Beach [ph. Rob Bielawski, vis. Lisa Rose] 1 June 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S56963198 ML162111551 ML162111641 ML162111651 ML162111661. Fourth Coastal Plain record since 2004 Review List revision.

One individual, Lynnhaven Inlet, Virginia Beach [ph. Andrew Rapp] 6 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59567450 ML175908381 ML175908391 ML176234251 ML176234291 ML176234301 ML176234331 ML176234341 ML176234351. Fifth Coastal Plain record since 2004 Review List. This record occurred during the passage of *Hurricane Dorian*.

Royal Tern (*Thalasseus maximum*): one record of a single individual as follows:
One individual, Steel Bridge Boat Ramp, Mecklenburg County [ph. Ty Smith] 18 August 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S59091942 ML173098451. Sixth Piedmont record since 2004 Review List.

Black Skimmer (*Rhynchops niger*): two records of two individuals as follows:
One individual, Hog Island WMA, Surry County [ph. Chris Monahan & Nick Newberry] 28 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69750476 ML239924521 ML239924541 ML239924551 ML239924561 ML239924571 ML239924591 ML239924611 ML239924631 ML239924641 ML239924651. First inland Coastal Plain record since 2004 Review List.

One individual, Jamestown-Scotland Ferry, James City County [ph. Nancy Barnhart] 20 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70629224 ML244513871 ML244517401. Second inland Coastal Plain record since 2004 Review List.

Red-throated Loon (*Gavia stellata*): one record of a single individual as follows:
One individual, Swift Creek Reservoir, Chesterfield County [ph. Arun Bose] 1-8 Dec 2019; accepted Category 1 (eBird); https://ebird.org/va/checklist/S61905910 ML190888161. Seventh Piedmont record since 2004 Review List.

Pacific Loon (*Gavia pacifica*): two records totaling two individuals as follows:
One individual, Port Messick Marina, Poquoson City [ph. Bruce Davis] 14 May 2016; accepted Category 1 (eBird); https://ebird.org/view/checklist/S29690654 ML172340701 ML172340711 ML172340721 ML172340741 ML172340751 ML172340761 ML172340781 ML172340791 ML172340801. Eighth Coastal Plain record.

One individual, Sherwood Lakes, Virginia Beach [ph. Andrew Baldelli, Tracy Tate] 30 Oct 2018; accepted Category 1 (eBird); https://ebird.org/checklist/S49563737 ML121298341 ML121298351 ML121298401 ML121298411. Ninth Coastal Plain record.

White-faced Storm-Petrel (*Pelagodroma marina*): one record of a single individual as follows:
One individual, Pelagic Waters, Northampton County [ph. Ty Smith] 9 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72314040 ML254896341 ML254896351. First state record since 2004 Review List.

Leach's Storm-petrel *(Oceanodroma leucorhoa)*: two records of two individuals as follows:
One individual, Back Bay NWR, Virginia Beach [ph. Rob Bielawski] 9 June 2019; accepted Category 1 (eBird); https://ebird.org/atlasva/view/checklist/S57221098 ML163408231 ML163408251 ML163408301 ML163408321 ML163408331 ML163475591 ML163477541 ML163477551 ML163477581. Second onshore Coastal Plain record since 2004 Review List.

One individual, Little Island Park, Virginia Beach [ph. Rob Bielawski] 20-21 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69389789 ML237019901 ML237019911 ML237019931 ML237019961 ML237019981 ML237020011 ML237020021 ML237020031 ML237138671 ML237138681. Third onshore Coastal Plain record since 2004 Review List.

Black-capped Petrel (*Pterodroma hasitata*): one record of a single individual as follows:
One individual, Offshore Waters (36.81649°N, 74.59473°W), Northampton County [ph. Edward Brinkley et al.] 10 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S74702689 ML270130301. Fifth pelagic record since 2004 Review List.

Sooty Shearwater (*Ardenna grisea*): five records totaling 63 individuals as follows:
One individual, North Thimble Island (Chesapeake Bay Bridge-Tunnel), Northampton County [ph. Edward Brinkley & Robert Ake] 26 Dec 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S62633880 ML195266551 ML195266561 ML195266571 ML195266581 ML195266591 ML195266601 ML195266621. Third onshore Coastal Plain record since 2004 Review List.

Thirteen individuals, North End Beaches, Virginia Beach [ph. Edward Brinkley] 19-21 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69319406 ML236618231 ML236618251 ML236618601 ML236618611 ML236618791. Fourth onshore Coastal Plain record since 2004 Review List.

Thirty-four individuals, Rudee Inlet, Virginia Beach [vis. Andrew Baldelli, later ph. Rob Bielawski] 20-22 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69368184 ML236862141 ML236862161 ML236862181 ML236872531 ML236872541 ML236872551 ML236872591 ML236882211 ML236882221 ML236882231. Fifth onshore Coastal Plain record since 2004 Review List.

One individual, Back Bay NWR, Virginia Beach [vis. Reuben Rohn, ph. Steve Myers] 21 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69428836 ML237259451. Sixth onshore Coastal Plain record since 2004 Review List.

Fourteen individuals, Little Island Park, Virginia Beach [ph. Rob Bielawski] 20-21 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69389789 ML237019821 ML237019831 ML237019851 ML237138731 ML237138741 ML237138751 ML237138771 ML237138781 ML237138801 ML237138821. Seventh onshore Coastal Plain record since 2004 Review List.

Great Shearwater (*Ardenna gravis*): one record of a single individual as follows:

One individual, False Cape State Park, Virginia Beach [ph. Marlee Fuller-Morris] 9 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71346455 ML248765731. Second onshore record since 2004 Review List.

Wood Stork (*Mycteria americana*): five records totaling nine individuals as follows:

One juvenile, Granby Park Drive, City of Norfolk [ph. Anne Pitchford Coia] 14 Jan 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S51711481 ML135260781. Seventh Coastal Plain record since 2004 Review List revision.

One juvenile, Sterling Circle, Franklin County [ph. Southwest Virginia Wildlife Center of Roanoke] 20 July 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S58329463 ML168958641 ML168958661 ML168958731. Fourth Mountains and Valleys record since 2004 Review List.

Three individuals, Sandy River Reservoir, Prince Edward County [ph. Julian Dymacek] 12 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59720699 ML176837111 ML176837491 ML176837501. Fifth Piedmont record.

Three individuals, Back Bay NWR, Virginia Beach [ph. Steve Keith] 8 Jan 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S63172729 ML198119871 198143811 198143851. Eighth Coastal Plain Record since 2004 Review List.

One individual, Carolanne Farms Park, Virginia Beach [ph. Charlie Bruggemann] 11-14 Jan 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S63265362 ML198648551 ML198648561 ML198648571 ML198648581 ML198648591. Ninth Coastal Plain record since 2004 Review List; present through 14 Jan 2020.

Brown Booby (*Sula leucogaster*): three records totaling three individuals as follows:

One immature, Croatan Beach (Private Residence), Virginia Beach [ph. Anonymous Homeowner *fide* Karen & Keith Roberts] 15 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70520476 ML243881501 ML243881511. Seventh state and fourth Coastal Plain record since 2004 Review List.

One individual, Chesapeake Bay off Kiptopeke SP, Northampton County [ph. Audrey Whitlock] 30 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73001811 ML259002511 ML259002541 ML259004551 ML259004561 ML259004571. Eighth state and fifth Coastal Plain record since 2004 Review List.

One immature, Offshore Waters, Northampton County [ph. Jeffrey McCrary] 8 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S74611277 ML2716066451 ML271606461 ML271606481 ML271606491 ML271606501 ML271606511 ML271606521. Ninth state, sixth Coastal Plain, and first pelagic record since 2004 Review List.

Anhinga (*Anhinga anhinga*): five records totaling 10 individuals as follows:

One individual, Greensprings Interpretive Trail, James City County [ph. April Harper & George Martin] 19-21 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67498425 ML225256621 & https://ebird.org/checklist/S67467716 ML225096121. Third Coastal Plain record north of James R., west of Bay since 2004 Review List.

Six individuals, Carson Wetland, Prince George County [vis. Adam D'Onofrio & Tina Trice; later ph. Kathy Louthan] 18 Apr-5 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70152439 ML242006791 ML242006861. Third western Coastal Plain record since 2012 Review List.

One individual, Bird Dog Mine (Private), Caroline County [ph & v.r. Ellison Orcutt] 23 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69508145 ML237827721 ML237827991. Fourth Coastal Plain record north of James R., west of Bay since 2004 Review List.

One individual, Buggs Island Road at Kettles Creek, Mecklenburg County [ph. Sergio Harding] 8 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70309485 ML242641811 MLML242642051. Ninth Piedmont record, fourth since 2004 Review List.

One individual, Zuni, Isle of Wight County [ph. Kathleen Quinn] 22 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72741672 ML257585061.

American White Pelican (*Pelecanus erythrorhynchos*): four records totaling 87 individuals as follows:

One individual, Pamunkey Bridge (Route 522), Spotsylvania County [obs. Drew Chaney & Conor Farrell; later ph. Kathy Louthan] 20-23 Feb 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S64791373 ML210610211. Eighth Piedmont record; present through 23 Feb 2020.

Twenty-nine individuals, Wakefield Drive, Fairfax County [ph. Laura Sebastianelli] 27 Mar 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S66279259 ML218473641 218473991 ML218474061 ML218474091 ML218512101. Third Coastal Plain record west of Bay since 2004 Review List.

Fifty-six individuals, Occoquan Bay NWR, Prince William County [ph. Kurt Gaskill, Kathy Hixson, Kevin O'Hagan] 12 Apr-18 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67079078 ML223032431 ML223032521 ML223033361. Fourth Coastal Plain record west of Bay since 2004 Review List.

One individual, Swift Creek Reservoir, Chesterfield County [ph. Larry Tipton & Lucia Tipton] 11-12 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S74696491 ML270084671. Ninth Piedmont record.

Brown Pelican (*Pelecanus occidentalis*): one record of 19 individuals as follows:
Nineteen individuals, Downing Bridge (Route 360), Essex County [obs. Brett Dawson; later ph. Maeve & Joey Coker] 26-27 Nov 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S61768772 ML190025721 ML190025731 ML190025741.

Snowy Egret (*Egretta thula*): two records totaling two individuals as follows:
One individual, River Road--Angola Creek Farm Fields, Cumberland County [ph. Evan Spears] 22 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69474862 ML237591961. Eighth Piedmont record since 2004 Review List

One individual, Oakwood Drive Pond, Rockingham County [ph. William Leigh; later ph. Diane Lepkowski] 24 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69579800 ML238358671. Fourth Mountains and Valleys record since 2004 Review List.

Tricolored Heron (*Egretta tricolor*): one record of a single individual as follows:
One individual, Ivy Creek Natural Area, Albemarle County [ph. Conor Farrell] 20 Aug 2018; accepted Category 1 (eBird); https://ebird.org/checklist/S47967317 ML111601301. Seventh Piedmont record since the 2004 review list.

Cattle Egret (*Bubulcus ibis*): one record of a single individual as follows:
One individual, New River Valley Fairgrounds, Pulaski County [ph. Derek Hudgins, Reinhard Beatty] 9-10 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S76042438 ML278649231 ML278649241. Fourth Mountains and Valleys record since 2015 Review List.

White Ibis (*Eudocimus albus*): one record of a single individual as follows:
One individual, Broadway Wastewater Treatment Plant (Restricted), Rockingham County [ph. Cory Taylor] 10 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72319685 ML254934461 ML254934791 ML254934801 ML254934811 ML254934821. Eighth Mountains and Valleys record since 2004 Review List.

Glossy Ibis (*Plegadis falcinellus*): three records totaling six individuals as follows:
Four individuals, Penicks Mill, Bedford County [ph. Bob Epperson] 26 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67838836 ML227866461 ML227866741 ML227866871. Second Piedmont record since 2004 Review List.

One individual, Meems Bottom Covered Bridge, Shenandoah County [ph. Ron White] 8-9 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68627122 ML232177191 ML232177201 ML232196171 ML232196181. Seventh Mountains and Valleys record since 2004 Review List.

One individual, Guthrie Road, Augusta County [ph. Herbert Larner & Vic Laubach] 22 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69453559 ML237488871 237488881 ML237488891 ML237488901 ML237488911 ML237488921 ML237488991. Eighth Mountains and Valleys record since 2004 Review List.

Roseate Spoonbill *(Plata ajaja)*: two records totaling three individuals as follows:
Two individuals, Shirley Plantation, Charles City County [ph. Arun Bose] 16 July – 12 August 2017; accepted Category 1 (eBird); https://ebird.org/va/checklist/S38167523 ML63489861 ML63489871. Third state record and second Coastal Plain record.

One individual, US 340 n. of Senseny Rd, Clarke County [ph. Eileen Hildt Wise] 15 June 2018; accepted Category 1 (eBird); https://ebird.org/checklist/S62431313 ML198697321. Sixth state record and second Mountains and Valleys record.

Swallow-tailed Kite *(Elanoides forficatus)*: eight records totaling nine individuals as follows:
One individual, River Road, Rockbridge County [ph. Bob Epperson] 3 August 2019; accepted Category 1 (eBird); https://ebird.org/atlasva/ checklist/S58722119 ML171014611. 10th Mountains and Valleys record.

One individual, Marl Bank Road, Essex County [ph. Drew Chaney & Tim Chaney] 9 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71283993 ML248692891.

Two individuals, Eldon Farms (Private), Rappahannock County [1, ph. Patty Lane & Alan Williams] 26 Jul-9 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71857828 ML251781961 ML251782011 ML251782021. Eighth Piedmont record since 2004 Review List.

One individual, Bowling Green, Caroline County [ph. Matthew Crittenden] 1-6 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72012812 ML252865091 ML252865101 ML25865111 ML252865121.

One individual, Gordonsville vicinity, Orange County/Louisa County [vis. Christina Neal; later ph. Baxter Beamer & Max Nootbaar] 2-6 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72107357 ML253548591. Ninth Piedmont record since 2004 Review List.

One individual, Graves Mill Road, Madison County [vis. Karli Rogers; later ph. Todd Day & Ian Topolsky] 25-27 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72840941 ML258067661 ML258067721. 10th Piedmont record since 2004 Review List.

One individual, Thrashers Lake Park, Amherst County [ph. Michael Boatwright] 29 Aug 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S72952666 ML258717631 ML258717651 ML258717661. 11th Piedmont record since 2004 Review List.

One individual, Collier Street (Dublin), Pulaski County [obs. Anonymous Residents, later obs. Beth Lancaster, later ph. Phil Lehman] 7-13 Sep 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73316896 ML260950031 ML260950061. 11th Mountains and Valleys record.

Ash-throated Flycatcher (*Myiarchus cinerascens*): five records totaling five individuals as follows:

One individual, James River Park, Ancarrows Landing section, Richmond City [ph. Paul Bedell] December 29, 2018 – January 28, 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S51050551 ML131754271 ML131754311. 10th Coastal Plain record since 2004 Review List revision. Present through 28 January 2019.

One individual, Colechester Road, Virginia Beach [ph. Steve Keith] 12 Dec 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S62249397 ML192828771 ML192835561. 11th Coastal Plain record since 2004 Review List.

One individual, Great Dismal Swamp NWR, Suffolk County [ph. Cindy Hamilton] 18 December 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S62427704 ML193890111 ML193890121. 12th Coastal Plain record since 2004 Review List.

One individual, Kinder Morgan Elizabeth River Terminals (Restricted), Chesapeake [ph. David Gibson] 22-29 Dec 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S62707781 ML195643601 ML195643631. 13th Coastal Plain record since 2004 Review List.

One individual, Dutch Gap Conservation Area/Henricus Historical Park, Chesterfield County [ph. Anonymous; later ph. Michael Kendrick] 10-19 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S76268020 ML280231391 ML280231421. 14th Coastal Plain record since 2004 Review List.

Gray Kingbird (*Tyrannus dominicensis*): one record of a single individual as follows:

One individual, Back Bay NWR, Virginia Beach [ph. Betty Sue Cohen] 21 September 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S59983245 ML178198161. Third Coastal Plain record since 2004 Review List.

Scissor-tailed Flycatcher (*Tyrannus forficatus*): three records totaling three individuals as follows:

One individual, Morris Farm Lane (Private), Gloucester County [ph. Harry Colestock] 23 October 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S60873366 ML183836911 ML183836991 ML183837001. 11th Coastal Plain record since 2004 Review List.

One individual, Blackwater Road, Bedford County [vis. Christin Elliott, later ph. Bob Epperson] 6-7 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68499568 ML231290991. Sixth Piedmont record since 2004 Review List.

One individual, Farmville Road (U.S. Route 15), Prince Edward County [ph. Mike Stinson] 4-7 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S75841412 ML277409261 ML277409321 ML277409341. Seventh Piedmont record since 2004 Review List.

Say's Phoebe (*Sayornis saya*): two records totaling two individuals as follows:

One individual, Sandiges Road, Amherst County [ph. Michael Boatwright] 24 Dec 2018; accepted Category 1 (eBird); https://ebird.org/va/checklist/S50934439 ML130937621 ML130937631 ML130937641. Fifth Piedmont record.

One individual, Sully Woodlands, Fairfax County [ph. Keith Freeburn] 20 Sep 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S73971331 ML265163121 ML265163191 ML265163221 ML265163261. Sixth Piedmont record.

Common Raven (*Corvus corax*): one record of a single individual as follows:

One, Dutch Gap Conservation Area, Chesterfield County [ph. Bill Wood] 5 Dec 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S62020484 ML191591421. Third Coastal Plain record since 2004 Review List.

Bicknell's Thrush (*Catharus bicknelli*): one record of a single individual as follows:
One individual, Eastern Shore NWR, Northampton County [ph. & a.r. Edward Brinkley] 24 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S69556740 ML238617331 ML238618671. Second record reviewed by VARCOM since 2004 review list.

White-winged Crossbill (*Loxia leucoptera*): one record of a single individual as follows:
One individual, Brambleton (Private Residence), Loudoun County [ph. Bruce Hill] 14 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S76285299 ML280243781 ML280243901 ML280243951 ML280243971 ML280244051. Third Piedmont record since 2004 Review List.

Gambel's White-crowned Sparrow (*Zonotrichia leucophrys gambelii*): five records totaling five individuals as follows:
One individual, Private Residence (Woodstock), Shenandoah County [ph. Ed Trelawny] 27 Dec 2017; accepted Category 1 (eBird); https://ebird.org/checklist/S41356212 ML79587401 ML79590121. Sixth state record and fourth Mountains and Valleys record based on Gold Book.

One adult, Edward S. Brinkley Nature Preserve, Northampton County [ph. Andrew Rapp] 13 Oct 2018; accepted Category 1 (eBird); https://ebird.org/checklist/S49175664 ML118810091. Seventh state record, third Coastal Plain record.

One adult, Harris Teeter Retention Pond (Red Mill), Virginia Beach [ph. Andrew Baldelli & Mike Collins] 27 Dec 2019-4 Jan 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S62667851 ML195606501 ML196716581 https://ebird.org/checklist/S62723654 ML196157881. Eighth state record and fourth Coastal Plain record.

One adult, Wengers Mill Road (Private Residence), Rockingham County [ph. Matt Gingerich] 27 Oct-9 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S75487266 ML274988541. Ninth state record and fifth Mountains and Valleys record.

One adult, Harris Teeter Retention Pond, Virginia Beach [ph. Steve Myers] 19 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S76410533 ML281030191. 10th state record and fifth Coastal Plain record.

Harris's Sparrow (*Zonotrichia querula*): one record of a single individual as follows:
One adult, Church Neck, Northampton County [ph. Roberta Kellam] 31 Dec 2018; accepted Category 1 (eBird); https://ebird.org/checklist/S51138190 ML132267491. Second Coastal Plain record.

LeConte's Sparrow (*Ammospiza leconteii*): one record of a single individual as follows:
One individual, Occoquan Bay NWR, Prince William County [ph. Edward Eder] 29 Jan-16 Feb 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S63913329 ML203720741 203721231. Second Coastal Plain record west of the bay since 2004 Review List.

Seaside Sparrow (*Ammospiza maritima*): one record of a single individual as follows:
One individual, Aquia Landing Park, Stafford County [ph. Jason Strickland] 6 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S68510975 ML232349741. First inland Coastal Plain record.

Nelson's Sparrow (*Ammospiza nelsoni*): one record of a single individual as follows:
One individual, Hidden Swamp (Private), Albemarle County [ph. Baxter Beamer] 2-6 Oct 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S74313805 ML267628881 ML267631741 ML267633441. Fourth Piedmont record since 2012 Review List.

Henslow's Sparrow (*Centronyx henslowii*): one record of two individuals as follows:
wo individuals, Rokeby Road, Fauquier County [ph. & a.r. Ian Topolsky & Amy Venclik] 16 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71731709 ML261429981 ML261430641 ML261431051. Fourth Piedmont record since 2004 Review List.

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*): two records totaling two individuals as follows:
One adult male, Dyke Marsh Wildlife Preserve, Fairfax County [vis. Connie Ericson & Joan Mashburn; later ph. Kurt Gaskill, Richard Rieger & Sherman Suter] 22 Mar-5 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S66501947 ML219861011 ML219864311 ML219931151 ML219931681. Second western Coastal Plain record since 2012 Review List.

One individual, Clover Hill Village (Private Residence), Appomattox County [ph. Jane Kendall] 31 Jul 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S71993556 ML252697121 ML252697151 ML252697161. Third Piedmont record since 2004 Review List.

Brewer's Blackbird (*Euphagus cyanocephalus*): two records totaling eight individuals as follows:
wo individuals, Hybla Farm Road (Private), King William County [ph. Drew Chaney & Andrew Rapp] 3 Jan 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S62992705 ML197158801 ML197699631 ML197699641. First Coastal Plain record since 2019 Review List.

Six individuals, Breeze Farms (Private), Virginia Beach [ph. Kerry, Tom & Tommy Maloney] 29 Dec 2019- 15 March 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S62734371 ML195868661 ML195868671. Second Coastal Plain record since 2019 Review List.

Kirtland's Warbler (*Setophaga kirtlandii*): one record of a single individual as follows:

One individual, Back Bay National Wildlife Refuge, Virginia Beach [ph. Steve Myers] 4 October 2019; accepted Category 1 (eBird); https://ebird.org/view/checklist/S60338000 ML180330991 ML180331001 ML180331031. Sixth state record, third Coastal Plain record.

Black-throated Gray Warbler (*Setophaga nigrescens*): one record of a single individual as follows:

One individual, Shore Drive, James City County [ph. Dan Cristol] 20-23 Nov 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S76482235 ML281738281 ML281738341 ML281738561 ML281738601 ML281738661 ML281738691 ML2817348741. Second Coastal Plain record since 2004 Review List.

Townsend's Warbler (*Setophaga townsendi*): one record of a single individual as follows:

One adult male, Mt. Trashmore Park, Virginia Beach [ph. Matt Anthony] 26-27 Sep 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S74136812 ML266397921 ML266397981 ML266398051 ML266398131 ML266398221 ML266398301. Fourth state and Coastal Plain record; second state photographic record.

Western Tanager (*Piranga ludoviciana*): two records totaling two individuals as follows:

One individual, Private Residence (Guilford Lane), Albemarle County [ph. Jennifer Gaden & Stauffer Miller] 22 Mar-21 Apr 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S66102946 ML217305041. Fifth Piedmont record since 2004 Review List.

One individual, Private Residence (Stingy Hollow Road), Augusta County [ph. MaryAnn Vessey; later ph. Gabriel Mapel & Penny Warren] 22 Apr-4 May 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S67620499 ML226176671 MLML226176681 ML226176691. Seventh Mountains and Valleys record, fourth since 2004 Review List.

Painted Bunting (*Passerina ciris*): five records totaling five individuals

One female/immature, Private Residence (Sperryville), Rappahannock County [ph. Stephen Paull] 13-19 Dec 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S62273755 ML192942871 ML192942961 ML192942991 ML192943001 ML192943011 ML192943041 ML192943071 ML192943081. Fifth Piedmont record since 2004 Review List; present through 19 Dec 2019.

One female/immature, Blandy Experimental Farm, Clarke County [ph. Laura Frazier] 24-25 Dec 2019; accepted Category 1 (eBird); https://ebird.org/checklist/S62590807 ML194925361 ML194925381 ML194925421 ML194925431 ML194925441 ML194925451 ML194925491 ML194925511. Seventh Mountains and Valleys record; present through 24 Dec 2019.

One female/immature, Belle Isle (James River Park), Richmond [ph. Paul Bedell] 6-24 Jan 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S63093630 ML197710351. Sixth Piedmont record since 2004 Review List; present through 24 Jan 2020.

One adult male, Ford's Colony (Private Residence), James City County [ph. Mary Schafrik] 29 Mar 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S66414470 ML219403861 ML219403881.

One female/immature, Foxanna Farms (Private), Hanover County [ph. Carson Lambert & Andrew Rapp] 6 Jun 2020; accepted Category 1 (eBird); https://ebird.org/checklist/S70128097 ML241590331. Seventh Piedmont record since 2004 Review List

Records Not Accepted

Eared Grebe (*Podiceps nigricollis*): One individual, Lake Holiday, Frederick County, 20 Mar 2020. The notes provided did not sufficiently rule out the possibility of a molting Horned Grebe.

Swallow-tailed Kite (*Elanoides forficatus*): One individual, Ashburn, Loudoun County, 14 Jul 2020. The field notes were lacking in sufficient detail to support the images, which were too distant to be of use in confirming the identification.

Swallow-tailed Kite (*Elanoides forficatus*): Three individuals, Morris Mill Road, Augusta County, 1 Nov 2020. The report was submitted on behalf of the original observer by a third party, and the committee felt that it was difficult to gauge the original context of the sighting from this submission.

Swainson's Hawk (*Buteo swainsoni*): One individual, Rockfish Gap Hawk Watch, Augusta/Nelson Counties, 19 Aug 2020. The committee felt that the written notes did not have sufficient detail to rule out other raptor species.

Northern Goshawk (*Accipiter gentilis*): One individual, Weyers Cave, Augusta County, 1 Nov 2018. The committee felt that the photographs submitted seemed more suggestive of Cooper's Hawk than Northern Goshawk.

Monk Parakeet (*Myiopsitta monachus*): Two individuals, private residence near Lexington, Rockbridge County,

2 Feb 2019. Though formerly considered established in Virginia, Monk Parakeet was recently moved to Category 6. This report was reviewed at the request of a VARCOM member. The identification was not in doubt, but the committee agreed that provenance was an issue and that these birds mostly likely originated from captivity rather than as vagrants from an established population elsewhere.

Cassin's Vireo (*Vireo cassinii*): One individual, Kiptopeke State Park, Northampton County, 18 Oct 2019. While some members of VARCOM felt that the detailed notes made a compelling case for this notoriously difficult-to-identify species, the committee ultimately decided that this bird fell into the overlap between brighter Cassin's and duller Blue-headed. Given the difficulty of the ID, the committee decided that the documentation of this bird did not quite rise to threshold necessary for this species.

Great Tit (*Parus major*): One individual, Norfolk Naval Base, City of Norfolk, 20 Dec 2018. Given its proximity to one of the largest ports on the east coast, this bird generated some discussion over the possibility of ship assisted origin. However, the committee felt that the lack of supporting details – particularly since review was based only on the eBird submission without additional context from the observer – meant that there was not sufficient documentation to accept this record.

European Robin (*Erithacus rubecula*): One individual, Grindstone Recreation Area, Grayson County, 16 Oct 2017. This bird was well-documented with photographs, and the identification was not in dispute. However, VARCOM members felt that provenance was an issue, particular at a location well inland from where a ship-assisted bird might disembark.

Brewer's Blackbird (*Euphagus cyanocephalus*): One individual, private residence on Mill Road, King William County, 3 Jan 2020. The description provided did not sufficiently rule out Rusty Blackbird.

Lazuli Bunting (*Passerina amoena*): One individual, Daingerfield Island, City of Alexandria, 15 Dec 2019. The committee was impressed with the thorough documentation of this record, but not all members felt that this difficult identification could be conclusively supported from the images available.

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The Kiptopeke Hawk Watch 1977-2018: Trends in Counts of Migrating Diurnal Raptors at a Coastal Virginia Site

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Abstract

From 1977-2018 volunteers and professional staff have documented more than 800,000 migrating diurnal raptors at Virginia's only fall season coastal region hawk watch located on property currently recognized as Kiptopeke State Park. The watch was established within the context of growing public awareness of and access to sites of concentrated avian migration. We present a chronological status overview of the 20 diurnal raptor species recorded at Kiptopeke Hawk Watch. Osprey (*Pandion haliaetus*), Cooper's Hawk (*Accipiter cooperii*), Bald Eagle (*Haliaeetus leucocephalus*), Red-shouldered Hawk (*Buteo lineatus*), Merlin (*Falco columbarius*), and Peregrine Falcon (*Falco peregrinus*) have shown count-total increases over time. Northern Harrier (*Circus hudsonius*), Sharp-shinned Hawk (*Accipiter striatus*), Broad-winged Hawk (*Buteo platypterus*), and American Kestrel (*Falco sparverius*) have shown declines. Red-tailed Hawk (*Buteo jamaicensus*) has remained relatively unchanged.

Introduction

A fall-season hawk watch has been conducted annually at Kiptopeke, Northampton County, Virginia since 1977 (Williams 1983). This paper presents an overview of findings from that count's initial 42 years. Counts from 1977-1994 were conducted entirely by volunteers (Appendix 1). Thereafter, 1995-2018, the watch was conducted by paid staff (Appendix 2), supplemented by volunteers, as an integral part of autumnal research programs conducted at Kiptopeke State Park under the auspices of the Coastal Virginia Wildlife Observatory, formerly the Kiptopeke Environmental Station, Research and Education Laboratory. Watch data for all years were recorded following the Hawk Migration Association of North America (HMANA) protocols and then entered into that organization's Hawkcount database (HawkCount 2018). The data presented here include 41 years of hourly totals plus one year (1977) of mixed hourly/daily totals.

Historical Context

Establishment of a diurnal raptor monitoring site near the southern tip of the Delmarva Peninsula in the mid-1970s can be chronicled through a progression of confluent ornithological and avocational birding advancements. Robbins (1975) outlined five North American hawkwatching periods dating from a "curiosity period" (mid-1700s-1895) to an "initial study period" (1895-1930), the latter largely populated by gunners who frequented sites of concentrated bird migration for sport. Emblematic of the transition from that period to the "conservation and education" period (1930-1950), National Association of Audubon Societies' representatives logged detailed raptor flight records as a means of furthering law enforcement during fall seasons at Cape May, New Jersey in 1931, 1932, and 1935 (Allen and Peterson 1936) and at Kiptopeke, Virginia in 1936 (Rusling 1936).

Hawkwatching's subsequent "data gathering" period (1950-1970) witnessed the melding of two kindred constituencies: banders in the 1950s investigating fall season transient land bird concentrations at "southern tips of coastal peninsulas, such as Cape May, New Jersey, and Kiptopeke, Virginia" (Baird et al. 1958), and an eager, rapidly growing, recreational birding community (Wilds 1994, Floyd 2006). Both became aligned in Virginia with the start of an Operation Recovery songbird banding station at Kiptopeke Beach in 1963 (Scott 1963). Birders quickly embraced the station due to its relatively easy access facilitated by the April 1964 opening of the Chesapeake Bay Bridge-Tunnel (CBBT) (Chesapeake Bay Bridge-Tunnel 2022). The station's incidental raptor banding reports combined with word-of-mouth and published anecdotal accounts (e.g., Robbins and Stewart 1946, Scott 1970, 1976, Ake 1976, Heintzelman 1976) confirmed that fall season flights at Kiptopeke included a high volume of migrant birds of prey.

The formation of HMANA in April 1974 (Harwood 1975) proved to be the seminal development for Robbins' (1975) fifth hawkwatching period, defined by population monitoring, data standardization and analysis that began in 1970 and continues through the present. HMANA effectuated communications among North America's more than 300 hawk watchers to develop a formalized hawk watch reporting form, the "green sheet", which standardized all watch sites' data criteria, recording protocols and submissions (Hawk Migration Association of North America 2022).

Two years after HMANA formed, the New Jersey Audubon Society initiated the Cape May Hawk Watch (Goodrich and Smith 2008, Dunne 2016). News of that coastal count's immediate success was rapidly disseminated via HMANA outreach and the birding community's numerous informal networks. That evidence, reinforced by the aforementioned anecdotal record and Kiptopeke's well established access and popularity, were more than sufficient impetus to implement a Kiptopeke Hawk Watch (KHW) at that location in 1977 (Williams 1983).

That inaugural season was a patchwork of occasional observations logged on 15 dates from 12 September-31 October; none of the counts exceeded 1.5 hours (HawkCount 2018). Nevertheless, 9,245 diurnal raptors were recorded including 6,652 Sharp-shinned Hawks and 1,568 American Kestrels.

Commitment to the KHW grew over ensuing years, enabled in part by modest funding from Virginia Society of Ornithology and HMANA grants that partially defrayed logistical costs. The popularity of the KHW was complemented by an on-site raptor banding station that also began in 1977 (White 1993, Smith 2009). In 1994, songbird and raptor migration studies at Kiptopeke gained support with the formation of the 501(c)3, not-for profit, Kiptopeke Environmental Station, Research and Education Laboratory (KESTREL), now the Coastal Virginia Wildlife Observatory (CVWO). Grant funding secured by the organization through the Coastal Zone Management Program of the Virginia Department of Conservation and Recreation from 1995-2000 enabled it to hire professional hawk watch staff (Appendix 2), a practice CVWO continues through use of its organizational funds.

The hawk watch significantly enhanced KESTREL's well-established reputation for learning about avian migration through firsthand experiences guided by expert mentors. The development of the property as a state park included the construction of a raised, multifunctional platform designed specifically to accommodate gatherings for interpretive programs. Formal and informal education outreach became a quotidian responsibility of the professional hawk watch staff and educator interns. Migrant raptor monitoring and other on-site studies became annual destinations for bird clubs, community and natural history groups, public school, graduate and undergraduate college/university and Road Scholar programs, Virginia Master Naturalists training, and were essential to the 24-year success of the Eastern Shore Birding and Wildlife Festival.

Site Description

Kiptopeke Hawk Watch is located at N 37° 9′ 49.6″, W 75° 58′ 36″ (37.16378, -75.97667), 5.8 km northwest of the southern tip of the Delmarva Peninsula in Northampton County on Virginia's Outer Coastal Plain. The watch site is 7.4 m above sea level and slopes slightly to the north. It is 550 m east of the Chesapeake Bay shoreline, and 12.4 km west of Smith Island Beach. From 1977-1992 counts were made from the crest of the tree-lined slope's western terminus. The watch was relocated 150 m east of that site in 1993 to a publicly accessible raised platform erected through a partnership between the Virginia Department of Conservation and Recreation and the Virginia Society of Ornithology (Fig. 1)

Formerly privately owned, the watch site property was incorporated into the Virginia State Parks system as part of Kiptopeke State Park in 1992. The facility now encompasses 227 ha of which 50 ha was agricultural land that was left to natural succession in the early 2000s. The park currently has 6.8 km of woodland and beachfront trails, 138 campsites (47 tent only), 2 two-bedroom lodges,

Figure 1. Raised platform used for the Kiptopeke Hawk Watch, Kiptopeke State Park, VA.

2 three-bedroom lodges, 5 six-bedroom lodges, and 4 yurts. Taylor Pond, a 1.6-ha borrow pit in the southeast section of the park adjacent to US Route 13, was created in the early 1960s during the Chesapeake Bay Bridge-Tunnel construction.

Habitat surrounding the watch site is maritime coastal forest characterized by overstories that vary from almost pure loblolly (*Pinus taeda*) and Virginia pine (*P. virginiana*) to mixtures of pine, black cherry (*Prunus serotina* var. *serotina*), southern red oak (*Quercus falcata*), black oak (*Q. velutina*), willow oak (*Quercus phellos*), and other hardwoods. These stands exhibit sparse to dense understories of red maple (*Acer rubrum*), black cherry, sassafras (*Sassafras albidum*), American holly (*Ilex opaca)*, persimmon (*Diospyros virginiana)* and flowering dogwood (*Cornus florida)*. Shrub cover includes southern bayberry (*Myrica cerifera* var. *cerifera*) and highbush blueberries (*Vaccinium corymbosum*, *V. formosum*, and *V. fuscatum*). Xeric back-dune woodlands are dominated by black cherry, southern bayberry, and seaside little bluestem (*Schizachyrium littorale*). Muscadine grape (*Vitis rotundifolia*) and greenbrier species (*Smilax rotundifolia* and *S.bona-nox*) are quite common throughout. Although the overstory and shrub strata can be quite dense, the herb layer is sparse and floristically depauperate. Broom sedge (*Andropogon virginicus)*, dog fennel (*Eupatorium capillifolium*), bramble (*Rubus sp*), red cedar (*Juniperus virginiana*), marsh elder (*Iva frutescens)* and groundsel tree (*Baccharis halimifolia)* flourish in the fallow fields (Fleming et al. 2012).

A songbird habitat restoration of the park's 10.5-ha Coastal Zone Management/Taylor Tract was completed in 2010 through planting of native canopy and understory trees and shrubs throughout 5.3 ha, and warm and cool season grasses on 2 ha (Sweeney 2011). Thereafter, the tract has been allowed to regenerate naturally.

Methods

Data Collection

The typical count day commenced ~30 minutes before civil daybreak and continued uninterrupted, weather permitting, until dusk. Observers faced north to northeast employing binoculars and/or spotting scopes as necessary to scan for approaching migrant raptors. Only birds that conclusively passed south of the watch site were tallied either on paper as running totals per hour or by means of tally counters assigned to each species. Hourly totals and meteorological information were posted to data forms following HMANA (2006) protocols.

Effort

The typical count season was conducted 1 September through 30 November with an extreme early start date of 12 August (1995) and an extreme late date of 12 December (1984). From 1977 through 1994 (n = 18) a volunteer served as the primary counter, aided ad hoc by additional volunteers. The number of count-days ranged from 6 in 1978 to 76 in 1994 (mean ± SD = 43.5 ± 23). The number of count-hours per season ranged from 34.4 in 1978 to 688 in 1994 (353 ± 203). During those fall seasons the mean number of count-hours/day was 7.4 ± 1.0.

From 1995 through 2018 (n = 24) the number of count-days ranged from 72 in 2006 to 96 in 1997 (87.3 ± 5.1) and the total number of count-hours ranged from 711 in 2009 to 965 in 1996 (787 ± 88). The mean number of count-hours/day 1995-2018 was 9.0 ± 0.5. During those fall seasons paid hawk watch staff, often assisted by volunteers, were responsible for the count. The mean number of count-days from 1977-2018 was 68.5 ± 26.8. The mean number of count-hours/day from 1978-2018 was 8.7 ±1.2.

Data Analysis

Long-term trends in numbers of migrating individuals by species were examined by plotting interannual totals expressed as birds/100 hours against year. We also examined long term trends by calculating the percentage of each species as part of the total of all species for count-seasons 1978, 1988, 1998, 2008, and 2018. Those season totals excluded counts of rarely or seldom recorded species such as Swallow-tailed Kite, Golden Eagle, Mississippi Kite, Swainson's Hawk, Rough-legged Hawk and Northern Goshawk.

Species' peak migration dates were interpreted from migration timing graphs posted on the KHW Site Profile in the HMANA Raptor Migration Database (HawkCount 2022).

Results

From 1977 through November 2018 a total of 831,539 diurnal raptors of 20 species was recorded during 24,884 observation hours over 2,878 count days. Those 20 species include Osprey (*Pandion haliaetus*), Swallow-tailed Kite (*Elanoides forficatus*), Golden Eagle (*Aquila chrysaetos*), Northern Harrier (*Circus hudsonius*), Sharp-shinned Hawk (*Accipiter striatus*), Cooper's Hawk (*Accipiter cooperii*), Northern Goshawk (*Accipiter gentilis*), Bald Eagle (*Haliaeetus leucocephalus*), Mississippi Kite (*Ictinia mississippiensis*), Red-shouldered Hawk (*Buteo lineatus*), Broad-winged Hawk (*Buteo platypterus*), Swainson's Hawk (*Buteo swainsoni*), Zone-tailed Hawk (*Buteo albonotatus*), Red-tailed Hawk (*Buteo jamaicensus*), Rough-legged Hawk (*Buteo lagopus*), American Kestrel (*Falco sparverius*), Merlin (*Falco columbarius*), Gyrfalcon (*Falco rusticolus*), Peregrine Falcon (*Falco peregrinus*), and Short-eared Owl (*Asio flammeus*).

Species Profiles

Osprey

Ospreys are common breeders throughout the greater Chesapeake Bay (Watts et al. 2004, Watts and Paxton 2007). A total of 81,592 (42-yr. mean ± SD = 1,943 ± 1,430) Osprey sightings was recorded in HawkCount through the 2018 season. The single-season maximum count was 5,775 in 1996, the same season the one-day high of 1,053 was posted 20 September (Iliff 1997). This species was recorded almost daily from 19 August to 3 December with peak migration 15 September – 15 October. The KHW 2002-2006 average season Osprey count (1,896) was ranked fifth in the East during that five-year period (Goodrich and Smith 2008).

Rusling (1936) reported a total of 600 Osprey sightings, which represented 5% of the 1936 season cumulative total for all species combined (Table 1). By comparison, Ospreys accounted for 10% of KHW 1978 and 1988 season totals, 11% for both the 1998 and 2008 seasons and 19% of the 2018 season total. Osprey sightings per 100 hours declined in the 1970s and 1980s, but have been rising since then (Fig. 2a). Increased Osprey counts at KHW are consistent with trends documented at other northeast United States watch sites (Farmer et al. 2008).

Swallow-tailed Kite

KHW recorded 3 Swallow-tailed Kites through the 2018 season. The first, posted 8 September 2007 (Williams 2007), constituted Virginia's second September record (Brinkley et al. 2008). The second individual was logged 10 September 2012 (Adams et al. 2013, Williams 2013). The third lingered at and near Kiptopeke State Park 12-15 September 2017 (Williams 2018).

Golden Eagle

A total of 292 (7 ± 8) Golden Eagles was entered into HawkCount for KHW through 2018. This species is recorded in migration from 7 October to 30 November with the peak occurring from 5-12 November. The single season high count was 37 in 1995 (HawkCount 1995). The highest single-day count was six on 3 November 1996 (Iliff 1997).

Northern Harrier

Rusling (1936) noted this species "…was the migrant Raptor seen with the greatest regularity. Their numbers remained fairly steady throughout the entire period...", a pattern also evident in the KHW migration date range (15 August to 2 December) that peaks 15 September to 10 November. The KHW cumulative Northern Harrier total through 2018 is 24,252 (577 ± 373). The maximum count for a season, 1,697 in 1995, included the one-day peak count

Table 1. Fall 1936 diurnal raptor sightings and % season total of all species (from Rusling 1936).

Species	Season Total	% Total of all species
Osprey	600	5
Northern Harrier (Marsh Hawk)	350	3
Sharp-shinned Hawk	6932	52
Cooper's Hawk	2608	20
Bald Eagle	106	<1
Red-shouldered Hawk	171	1
Broad-winged Hawk	570	4
Red-tailed Hawk	297	2
Rough-legged Hawk	2	<1
American Kestrel (Sparrow Hawk)	913	7
Merlin (Pigeon Hawk)	416	3
Peregrine Falcon (Duck Hawk)	242	2
Totals	**13,207***	**100**

*Rusling (1936) included a Black Vulture for a sightings total of 13,208.

of 119 on 25 September (Illif 1996). KHW was ranked fifth among the highest average autumn season counts (642) in the east for Northern Harrier 2002-2006 (Goodrich and Smith 2008).

Rusling (1936) tallied 350 "Marsh Hawks", representing 3% of the 1936 season cumulative species total (Table 1). Comparable proportions of Northern Harrier sightings at the KHW ranged from 1% in 1978 to 5% in 1998, and 3% for the 1988, 2008, and 2018 count seasons, respectively (Table 2). The number of Northern Harriers per 100 hours modestly declined from 1978-2018 but varied substantially year to year (Fig. 2b). Farmer et al. (2008) noted no significant long-term trends in migration sightings for this species at northeast United States watch sites.

Sharp-shinned Hawk

Numerically the most abundant species annually at KHW (Goodrich and Smith 2008), a total of 347,682 (8,278 ± 5,759) Sharp-shinned Hawks was reported in HawkCount through the close of the 2018 season. The migration date range for this species extends from 23 August to 3 December, peaking 1-14 October. The highest single-day count was 3,842 on 29 September 1995 (Bildstein and Meyer 2000), part of the record-setting season high of 26,361 (Illif 1996).

Fifty-two percent (6,932) of combined sightings in 1936 were Sharp-shinned Hawks (Table 1). By comparison, this species comprised 80% of KHW 1978 cumulative species totals, 49% of the 1988 totals, 32% and 38% for the 1998 and 2008 totals, respectively, and then 15% for the 2018 season (Table 2). That negative trend is consistent with findings from northeast United States autumnal watch sites (Farmer et al. 2008, Viverette et al. 1996). Analyzed by number of Birds per 100 hours, Sharp-shinned Hawk sightings dropped precipitously from 1978 – 1986 and then have remained fairly steady through 2018 (Fig. 2c). Although the causes for this are unclear, the reduction in sightings of this species has been suggested to be a migration response pattern in which birds remain north to take advantage of greater food availability (Hawk Mountain Sanctuary 2018).

Cooper's Hawk

KHW recorded 57,996 (1,381 ± 1,029) Cooper's Hawks during its first 42 years of operation. This species' protracted 20 August to 3 December migration period peaks 7 – 21 October (Table 2). The single-season peak count was 3,625 in 1995 (Iliff 1996) and the single-day high count was 396 on 9 October 2006 (Day 2007). The KHW average autumn season counts from 2002-2006 (1,920) ranked fifth in the East during that period (Goodrich and Smith 2008). Rusling (1936) reported a total of 2,608 Cooper's Hawk sightings representing 20% of the 1936 season cumulative total for all species combined (Table 1). By contrast, this accipiter comprised <1 % of the 1978 KHW season totals. Cooper's Hawks sightings have since increased, accounting for 13% in both the 2008 and 2018 seasons totals (Table 2). The annual number of Cooper's Hawk sightings per 100 hours also shows this positive trend from 1978-2018 (Fig. 2d) and mirrors similar patterns at other northeastern United States fall season watch sites (Farmer et al. 2008, Hawk Mountain Sanctuary 2018).

Northern Goshawk

Kiptopeke tallied its first Northern Goshawk 10 October 1981 (Hawkcount 1981). This species has been observed at the site from 30 September to 2 December with a 5-30 November peak migration period. Through 2018 the watch recorded a total of 212 (5 ± 7) sightings of this species. The most recorded for a single season, 27 in 1999, included a single-day high of

Table 2. KHW % of season total of all species by ten-year interval, 1978-2018.

Species	1978	1988	1998	2008	2018
Osprey	10	10	11	11	19
Northern Harrier	1	3	5	3	3
Sharp-shinned Hawk	80	49	32	38	15
Cooper's Hawk	<1	3	6	13	13
Bald Eagle	<1	<1	1	1	3
Red-shouldered Hawk	<1	<1	<1	<1	1
Broad-winged Hawk	1	7	6	3	7
Red-tailed Hawk	<1	2	4	3	4
Rough-legged Hawk	0	0	0	0	0
American Kestrel	7	21	22	18	20
Merlin	1	4	10	5	8
Peregrine Falcon	<1	1	3	5	7

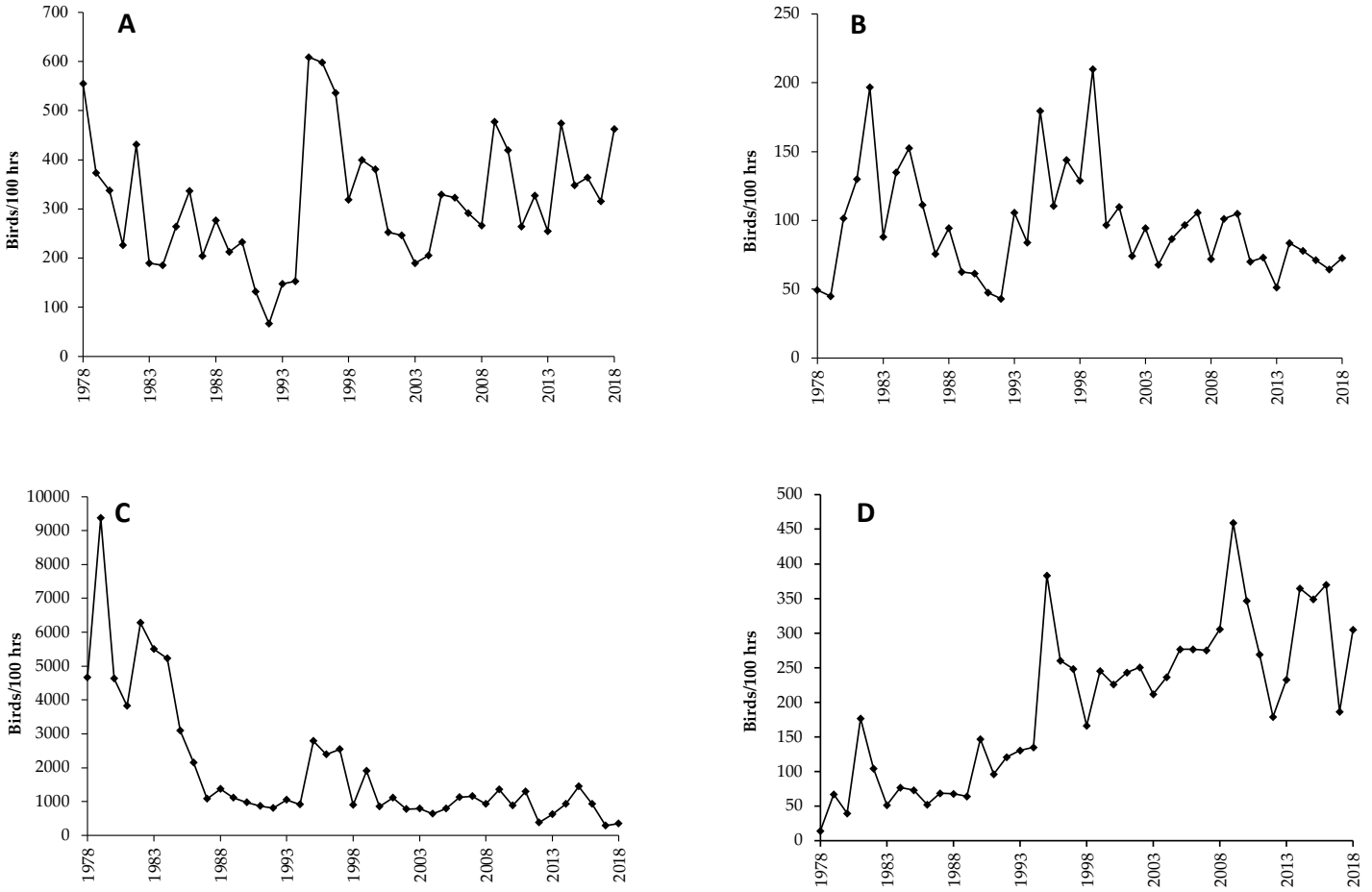

Figure 2. Number of birds sighted per 100 hours of observation during Autumn migration at Kiptopeke Hawk Watch, Kiptopeke State Park, VA from 1978 – 2018 for A) Osprey, B) Northern Harrier, C) Sharp-shinned Hawk, and D) Cooper's Hawk.

7 on 17 November (Iliff 2000). That total was subsequently equaled 27 November 2007 (Williams 2007).

Bald Eagle

Bald Eagles are uncommon to locally common permanent residents in Virginia's Coastal Plain (Rottenborn and Brinkley 2007). KHW data are consistent with this species' range-wide and greater Chesapeake Bay region population recovery documented elsewhere (Buehler 2000, Watts and Byrd 2002, Turrin et al. 2014). The long-term positive trend in Bald Eagle migration sightings at KHW (Fig. 3a) is consistent with moderate to high increases experienced at other northeastern United States autumnal watch sites (Farmer et al. 2008).

A total of 7,897 (188 ±164) Bald Eagles was recorded in HawkCount through the 2018 season. The protracted migration date range of this species, 15 August-30 November, peaks 15 September-10 November. The single-season high count was 617 in 2018 (Williams 2019). The single-day peak count was 38 on 6 October 2008 (Williams 2020). During the five-year period 2002 – 2006, KHW averaged 240 autumn season Bald Eagles ranking fourth highest in the East (Goodrich and Smith 2008). Rusling's (1936) Bald Eagle total of 106 was < 1% of the total of all species recorded for the 1936 season (Table 1). That low percentage was repeated at KHW in 1978 and 1988, before increasing to 1% in 1998 and 2008 respectively. The 617 Bald Eagles entered in HawkCount for the KHW 2018 season was 3% of that season's cumulative species total (Table 2).

Mississippi Kite

The occurrence of Mississippi Kites at KHW was coincidental with the establishment of this species' breeding populations in Virginia's northern Coastal Plain in 1995 (Prince William County), Piedmont in 2004 (Rottenborn and Brinkley 2007), and southeastern Coastal Plain in Virginia Beach only 40 km south of the watch site in 2015 (Williams 2015).

KHW documented 11 Mississippi Kites through the 2018 season. The first was observed at 08:30 on 29 September 1998 (Iliff 1999). The next was recorded 25 August 2001 (Iliff 2002). Thereafter, none was observed until the 2015 season which included the single-season high count of five and the one-day high count of two on 13 September (Williams 2016). By comparison, the Cape May, NJ Hawk Watch recorded its first Mississippi Kite (two individuals) in 1980. Through the 2018 season that watch had posted a total of 12 which included singles in 1983 and 1984, two in 1998, singles in 2000 and 2006, two in 2008, and singles in 2013 and 2017 (HawkCount 2018).

The possible source population(s) for these mid-Atlantic coastal migrants is unclear. Mississippi Kites were recorded breeding for the first time in Ohio in 2007 (Macormac and Boone 2008). The following year the species successfully nested in New England near New Market, NH (Masterson 2013) and in CT, followed in 2010 by NY and again in NH, and then RI in 2011 (Conor, 2012).

Red-shouldered Hawk

Since KHW was initiated, a total of 2,715 (65 ± 57) Red-shouldered Hawk sightings have been recorded in HawkCount. The 194 recorded in 2009 (Williams 2009) was the highest for a single season, and the most recorded for a single day was 44 on 5 November 1997 (Illiff 1998). This migration date range for this species extends from 20 August – 2 December, peaking 5-12 November.

Rusling (1936) noted 171 Red-shouldered Hawks during the 1936 fall season which accounted for 1% of the total of all species recorded (Table 1). That proportion of the total of all species recorded per season has been comparable throughout the 42-year history of KHW (Table 2). Red-shouldered Hawk migration sightings at KHW have been increasing slightly on average since 1978 (Fig. 3b), consistent with similar trends at other northeastern United States watch sites (Farmer et al. 2008).

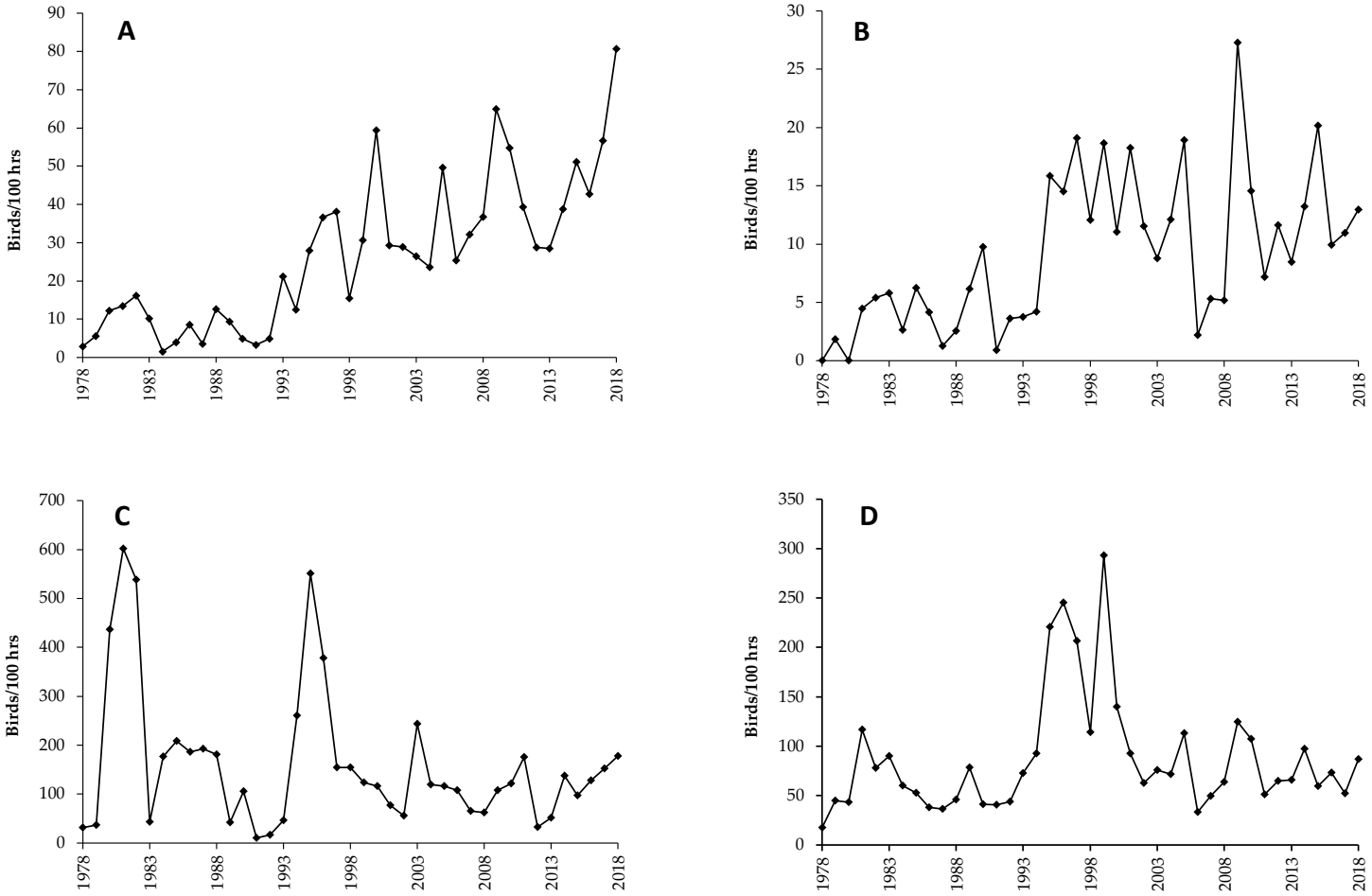

Figure 3. Number of birds sighted per 100 hours of observation during Autumn migration at Kiptopeke Hawk Watch, Kiptopeke State Park, VA from 1978 – 2018 for A) Bald Eagle, B) Red-shouldered Hawk, C) Broad-winged Hawk, and D) Red-tailed Hawk.

Broad-winged Hawk

The peak Broad-winged Hawk flight at KHW occurs during the first two weeks of October, effectively the mid-point of this species' 15 August – 29 November extended migration date range. The total of 37,978 (904 ± 933) recorded through the 2018 season included a single-season high count of 5,214 in 1995 which included the single-day high of 2,454 on 30 September (Illiff 1996). Rusling's (1936) season total of 570 was 4% of the cumulative total for all species (Table 1). Broad-winged Hawks have accounted for 1% (1978) to 7% (1988 and 2018) of those seasons' totals at KHW (Table 2). The high interannual variability of sightings at KHW (Fig. 2c), is indicative of highly variable meteorological conditions (e.g., wind drift) that influence the passage of this typically mountain-ridge migrant (Goodrich et al. 1996). Broad-winged Hawk counts at KHW and other northeast United States watch sites have shown a slightly downward trend (Farmer et al. 2008) (Fig. 3c).

Swainson's Hawk

Virginia's first Swainson's Hawk was documented some 115 km north of KHW 21 August 1978 at Chincoteague National Wildlife Refuge in Accomack County (Scott 1979, Rottenborn and Brinkley 2007, Sullivan and Taber 2003). The following year an immature was banded 20 October at Fisherman Island National Wildlife Refuge, Northampton County (Scott 1980), 14 km south of KHW. Through the 2018 season a total of 44 (1 ± 2) had been recorded, the first being recorded 10 October 1991 (HawkCount 1991). The highest number recorded for a single season was eight in 1998 (Iliff 1999), a total that included a single-day high of two on 26 October. The migration date range for Swainson's Hawk in Virginia is 21 August-23 November (Sullivan and Taber 2003). This species has been recorded at KHW 10 September (Williams 2015) to 23 November (Iliff 2003, Williams 2014) with bimodal peak periods during the middle ten days of September and the second half of October (Sullivan and Taber 2003).

Red-tailed Hawk

Red-tailed Hawks have been recorded at KHW from 15 August – 4 December with migration peaking 5-21 November. The cumulative total at KHW through 2018 was 24,512 (584 ± 588). The highest number recorded for a single season was 2,370 in 1996 (HawkCount 1996). The single-day high count was 347 on 5 November 1997 (Illiff 1998). This species comprised 2% of Rusling's (1936) cumulative species totals (Table 1) and <1% (1978) to 4% (1998 and 2018, respectively) for KHW (Table 2). Red-tailed Hawk counts at other northeast United States hawk watch sites have shown a slightly negative trajectory (Farmer et al. 2008), whereas count numbers at KHW (Fig. 3d) have remained relatively unchanged.

Zone-tailed Hawk

A Zone-tailed Hawk, the state's first, was documented at KHW 23-28 September 2015 (Williams 2016, Williams and Ealding 2016, Bose et al. 2017). This was almost certainly the same individual seen in Cape May, NJ (m. obs. *fide* ebird 2014) and Cape Henlopen, DE (Ottinger 2014) 27 September 2014. The following year it was spotted 15 August near Woodville, Washington County, RI (Munns et al. 2015), Then photographed 20 September over Lighthouse Point, New Haven, CT (m. obs. *fide* ebird 2015) and at several Cape May, NJ sites 23 September before departing across Delaware Bay approximately 11:00am that day (Wilson 2015). This raptor flew southbound past KHW at about 3:15 pm (Gross 2015a) that day, having made the 220 km flight to lower Northampton County, VA in slightly over four hours. The hawk was tracked over the following days between KSP and the southern tip of the peninsula (e.g., Brinkley 2015), then last recorded 28 September headed south past KHW at 09:48 (Gross 2015b).

Rough-legged Hawk

Rough-legged Hawk is a rare and irregular Virginia Coastal Plain transient, and rare on the Delmarva Peninsula as far south as the Cape Charles, Northampton County area (Rottenborn and Brinkley 2007). This species has been logged at KHW 30 September – 23 November. Through the 2018 season 35 (1 ± 2) individuals were recorded at KHW, with 14 of those in 1999 including a single-day high of four on 19 October (Iliff 2000, Rottenborn and Brinkley 2007).

Short-eared Owl

A Short-eared Owl passed the KHW platform between 08:00 and 09:00 on 4 November 2016. It was included in the HawkCount daily and, therefore, season totals for 2016 (HawkCount 2016, Williams 2017).

American Kestrel

American Kestrel is the second-most abundant raptor recorded at KHW (Goodrich and Smith 2008). The total recorded in HawkCount through the 2018 season was 176,961 (213 ± 3,438). This species has been documented 12 August – 4 December with the flight peaking 15 September – 15 October. The highest single-season count, 20,686 in 1995, included the KHW single-day high of 2,427 on 29 September (HawkCount 1995). The 2002-2006 average autumn season American Kestrel counts (3,788) at KHW was ranked second among the five highest in the East for that five-year period (Goodrich and Smith 2008).

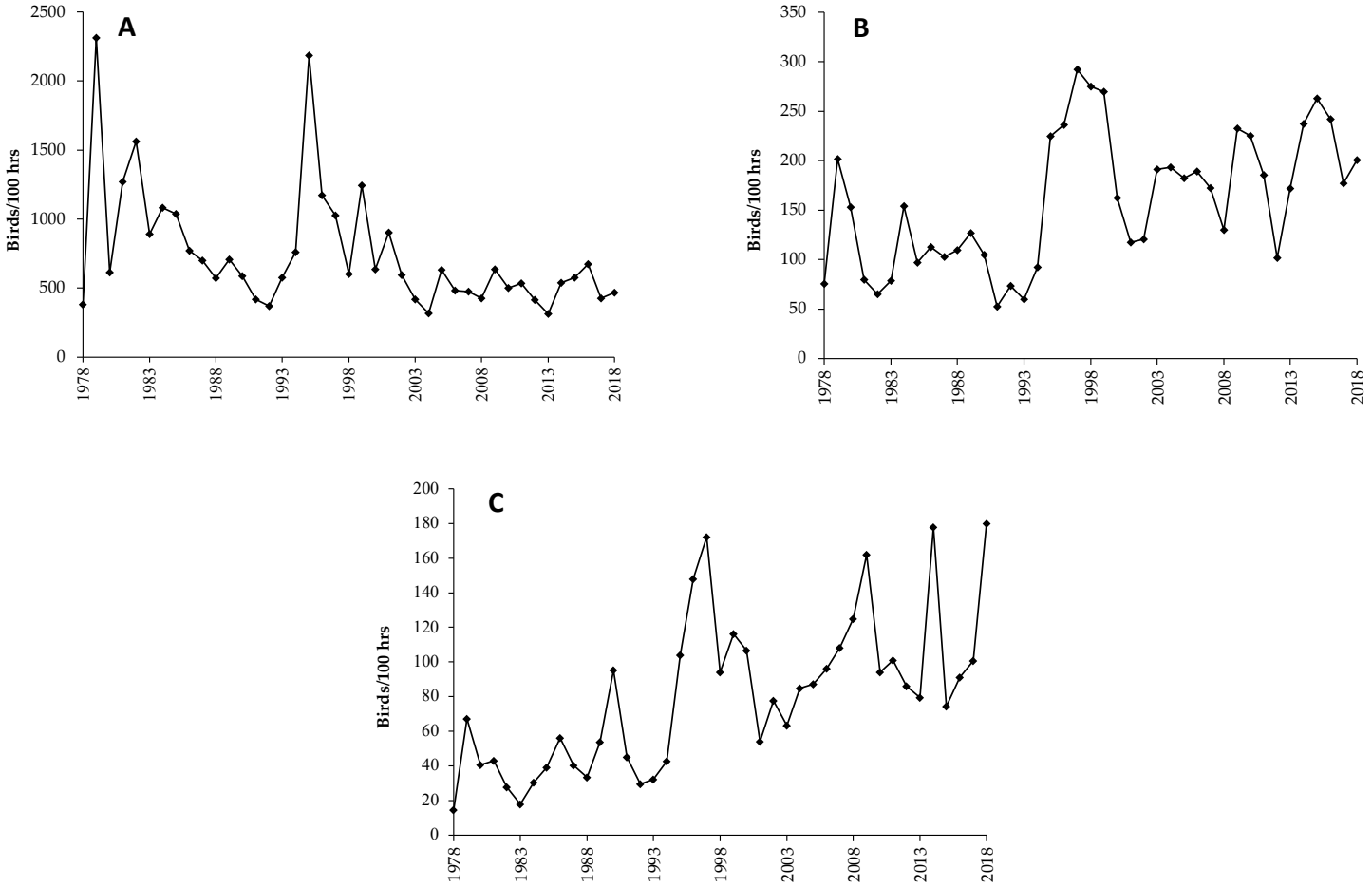

Figure 4. Number of birds sighted per 100 hours of observation during Autumn migration at Kiptopeke Hawk Watch, Kiptopeke State Park, VA from 1978 to 2018 for A) American Kestrel, B) Merlin, and C) Peregrine Falcon.

Rusling's (1936) fall season total of 913 "Sparrow Hawks" was 7% of all the raptors recorded that year (Table 1), the same percentage as that for KHW in 1978. Notably, however, this species represented a greater percentage of sightings out of all species combined every tenth year thereafter (21% in 1988, 22% in 1998, 18% in 2008, and 20% in 2018). This is potentially explained by the fact that many fewer Sharp-shinned Hawks were recorded in those years, whereas American Kestrel sightings held steady; thus, a comparable number of American Kestrels each of those years simply made up a larger proportion of the season total for all species combined (Table 2). Considering all years, however, American Kestrels do seem to show a long-term gradual decline at KHW (Fig. 4a). This decline is consistent with a documented decline in this species across its range (Bird 2009, Christopher et al. 2017), including at other northeast United States watch sites (Farmer et al. 2008).

Merlin

Merlins have been recorded at KHW from 29 August – 30 November with counts peaking 16 September – 21 October. Through the 2018 season 43,570 (1,037 ± 738) Merlin sightings were documented. The highest count for a single season was 2,780 in 1997 (Illiff 1998) and the single-day record was 462 on 18 September 1998 (Illiff 1999). The average number (1,353) of Merlins recorded at Kiptopeke 2002-2006 ranked second among the highest autumn season counts in the East for that five-year period (Goodrich and Smith 2008).

Rusling's (1936) count of 416 "Pigeon Hawks" was 3% of all the raptors recorded in 1936 (Table 1). The percentage of total sightings for all species at KHW ranged from 1% (1978) to 10% (1998) (Table 2). Merlin sightings have been increasing on average at KHW (Fig. 4b), a trend consistent at other northeast United States hawk watches (Farmer et al. 2008).

Gyrfalcon

The Virginia Avian Records Committee (VARCOM) has accepted four Gyrfalcon records. One that was shot in Rockingham County 29 January 1984 was partially rehabilitated, but not released back into the wild (Kain 1985, Larner 1986). Virginia's second record was banded at

Short Hill Mountain in Loudoun County 27 November 1991 (Kain 1994). The third, accepted by VARCOM as Virginia's first Coastal Plain record (Heath 2003), was observed at KHW 21 October 2000 (Iliff 2001, Rottenborn and Brinkley 2007). The fourth was photographed at Lowe's Island Golf Club in Loudon County 13 December 2017 (Barnett and Stinson 2019). A potential fifth Gyrfalcon, reported at KHW 27 October 2008 (Williams 2009), has not been vetted by VARCOM.

Peregrine Falcon

Through the 2018 season KHW recorded 23,020 (548 ± 431) Peregrine Falcons. The highest season total, 1,640 in 1997, included the single-day high of 364 on 7 October (Illiff 1998). For the five-year span 2002-2006 KHW ranked fifth among the highest average (628) autumn season counts in the East for this species (Goodrich and Smith 2008). Rusling's (1936) count of 242 "Duck Hawks" comprised 2% of the total of all species recorded in 1936 (Table 1). The percentage of Peregrine Falcons out of all species recorded by KHW increased from <1% in 1978 to 7% by 2018 (Table 2). Indeed, Peregrine Falcon sigthings have increased dramatically over 42 years at KHW (Fig. 4c), which mirrors positive trends at other northeast United States hawk watches (Farmer et al. 2008) and the range-wide population recovery of this species in general (Milsap et al. 1998, Mesta 1999, White et al. 2002, Watts et al. 2015).

The Peregrine Falcon's protracted 19 August – 30 November migration date range at KHW is likely broadened by birds that have bred and/or fledged from artificial nest sites established within several km of Kiptopeke (Watts et al. 2015). This species' peak flight window at KHW, 1-15 October, is consistent with the timing of continent-wide autumn peak flights (Worcester and Ydenburg 2008). Recoveries of peregrines previously captured at autumn trapping sites along the East Coast revealed these birds originated from across North America, particularly Greenland (R. Lukei pers. comm.) and the Mackenzie Delta in AK (Yates et al.1988, Fuller et al. 1998).

Conclusions

The 42-year contribution of KHW to the study of diurnal raptor migration underscores the importance of long-term hawk watch information for interpreting species' population trends (Sattler and Bart 1984). It has also highlighted the value of volunteers "in wildlife conservation wherever their efforts can be coupled with those of professional practitioners" (Bildstein 1998). The KHW evolved from modest beginnings in the mid-1970s as part of a continent-wide confluence of ornithological investigations, growth of recreational birding, and significant improvements to the site's access and infrastructure. As watch effort matured over four decades, its fall season totals were routinely among the East Coast Flyway Mid-Atlantic Region's highest for species diversity and abundance, particularly for Ospreys, Northern Harriers, Bald Eagles, Cooper's Hawks, American Kestrels, Merlins and Peregrine Falcons (Wargo 2015, 2016, 2017, 2018, Goodrich and Smith 2008). Species profiles synthesized from KHW data are consistent with findings from other hawk watch sites with respect to species trends in sightings. Ospreys, Cooper's Hawks, Bald Eagles, Red-shouldered Hawks, Merlins, and Peregrine Falcons have generally increased in number, whereas Northern Harriers, Sharp-shinned Hawks, Broad-winged Hawks, and American Kestrels have generally decreased in number. Sightings of Red-tailed Hawks have remained relatively stable over four decades. Documentation of the migration of Mississippi Kites through KSP has added to a growing body of information related to this species' relatively recent range expansion.

The species profiles show that late September into early October represent the peak raptor migration at KSP. Chronicling this phenomenon over the past several decades began with a core of votaries who were, and continue to be, as annual at the watch as the passing birds of prey. The stature and longevity of KHW stands as testament to their beginnings and to the professionals who continue the work they initiated.

Acknowledgements

Myriam Moore's experience shepherding a fall season watch at Rockfish Gap in Augusta County, Virginia in 1976 (Tekin 2001, Bildstein 2008, Goodrich and Smith 2008) was critical to the 1977 advent of the both the KHW and the Harvey's Knob Hawk Watch in Botetourt County (*fide* Roanoke Valley Bird Club).

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Appendix 1:
Kiptopeke Hawk Watch Leaders* 1977-1994

1977-Bill Williams, Bob Ake, Paul Baker, Paul McQuarry, Fred Scott

1978-Bill Williams, Bob Ake

1979-Bill Williams, Tom Armour, Chris Foster

1980-Bill Williams, Ann & Paul Smith, Dot Silsby, Myriam Moore

1981-Bill Williams, Ann & Paul Smith, Dot Silsby, Ruth Beck

1982-Bill Williams, Dot Silsby, Ann and Paul Smith, Ruth Beck, Chris Foster, Thom Blair, Bruce and Pring Davenport

1983-Bill Williams, Dot Silsby, Margaret Abbott, Bob Barbee, Richard Morton, Bruce Reid, Charles Ziegenfus

1984-Bill Williams, Dot Sislby, Margaret Abbott, Bob Barbee, Chris Foster, Reese Lukei, Richard Morton, Bruce Reid

1985-Bill Williams, Dot Silsby, Margaret Abbott, Chris Foster, Richard Morton, Bruce Reid

1986-Bill Williams, Dot Silsby, Margaret Abbott, Bob Barbee, Tadd Finnell, Chris Foster, Doug Miller, Richard Morton, Bruce Reid, Ann & Paul Smith

1987-Bill Williams, Dot Silsby, Margaret Abbott, Bob Barbee, Gary Fraser, Doug Miller, Richard Morton, Brian Patteson, Bruce Reid

1988-Bill Williams, Dot Silsby, Margaret Abbott, Harry Armistead, Charlie and Stalma Hacker, Doug Miller, Bruce Reid, Ann and Paul Smith

1989-Bill Williams, Dot Silsby, Margaret Abbott, Bob Ake, Bob Barbee, Pring Davenport, Jesse Fulton, Kerrie Kirkpatrick, Steve Mallette, Doug Miller, Tom Simpson, Ann and Paul Smith, Ben Yokel

1990-Bill Williams, Dot Silsby, Margaret Abbott, Bob Barbee, D. H. Crook, Charles McComb, Dorothy Mitchell, Brian Taber

1991-Bill Williams, Dot Silsby, Bob Barbee, Fenton Day, Earl Hodnett, Charles McComb, Doug Miller, Dorothy Mitchell, Ann and Paul Smith, William and Eleanor Standuert, Brian Taber

1992-Bill Williams, Dot Silsby, Margaret Abbott, Bob Barbee, Liz Darnell, Pring Davenport, Earl Hodnett, Charles McComb, Doug Miller, Bill Minor, Dorothy Mitchell, Sean Smith, Ada Van Ness

1993-Bill Williams, Dot Silsby, Margaret Abbott, Liz Darnell, Pring and Bruce Davenport, Lynn Davidson, Earl Hodnett, Helen Irving, Charles McComb, Dorothy

Mitchell, Bill Minor, Michael O'Brien, Sandra Sherman, Brian Taber, Hal Weirenga

1994-Bill Williams, Dot Silsby, Margaret Abbott, Liz Darnell, Lynn Davidson, Earl Hodnett, Charles and Peggy McComb, George McNeil, Dorothy Mitchell, Bill and Mary Minor, Tony Quezon, Bernie and Jane Schaff, Ann and Paul Smith, Brian Taber, Hal Weirenga

* individuals responsible for data gathering for all or part of at least one count day

Appendix 2:
Kiptopeke Hawk Watch Staff* 1995-2018

1995-Brian Sullivan

1996-Brian Sullivan

1997-Brian Sullivan

1998-Marshall Iliff

1999-Susan Hopkins

2000-Calvin Brennan

2001-Calvin Brennan

2002-Zach Smith

2003-Jen Ottinger

2004-Sam Stuart

2005-Sam Stuart

2006-Scott McConnell

2007-Jeff Birek

2008-Aaron Bevill, Kevin Georg

2009-Calvin Brennan

2010-Zak Poulton

2011-Kyle Wright

2012-Steve Kolbe

2013-Katie Rittenhouse

2014-Katie Rittenhouse

2015-Eli Gross

2016-Anna Stunkel

2017-Anna Stunkel

2018-Anna Stunkel

*employed by KESTREL/CVWO to conduct fall season daily hawk counts

Urban Bird Species in Virginia Increase the Frequencies of Songs and Calls in Areas of Higher Anthropogenic Noise

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Abstract

North American bird populations are declining due to human-influenced activities, including urbanization. Urbanization has varied effects on bird species as the expansion of cities disturbs forests, wetlands, and coastal ecosystems. One important effect of urbanization is an increase in ambient noise caused by human activity (i.e., anthropogenic noise). I examined the influence of anthropogenic noise on vocal communication in the Northern Cardinal (*Cardinalis cardinalis*), Carolina Wren (*Thryothorus ludovicianus*), and Song Sparrow (*Melospiza melodia*) at 12 study sites in northern Virginia. I conducted sound analyses of these birds' vocalizations to test the hypothesis that minimum and maximum song or call frequencies (i.e., pitch) have increased in response to anthropogenic noise. Results show that both minimum and maximum song frequency of Carolina Wrens, and maximum song frequency of Song Sparrows were higher in areas with higher levels of anthropogenic noise. Likewise, minimum call frequency of Northern Cardinals was also higher in areas with higher levels of anthropogenic noise. These results are consistent with other studies that show that birds shift the frequencies of their songs and calls up in louder habitats to avoid the masking effects of low-frequency anthropogenic noise. Effects of ambient noise on bird vocalizations are likely influenced by other variables such as vegetation structure, competition for breeding sites, and predation risk.

Introduction

Since the late 20th century, North American bird populations have been declining due to human-influenced activities (NABCI 2022). One aspect of human activity that has gotten recent attention by scientists is anthropogenic noise in the form of construction, road and air traffic, and industrial and residential activity. The increased level of noise has dramatic effects on vocal communication in birds because it masks or otherwise interferes with song and call frequencies (Dowling et al. 2012). Avian communication is essential for territorial defense, group coordination, and reproductive success (Catchpole and Slater 2008, Nemeth et al. 2013), and increased levels of ambient noise are likely to interfere with successful communication. In sexual competition, for example, bird songs are crucial in mating rituals because specific song characteristics are used by females to choose potential mates (Slabbekoorn and Ripmeester 2008). Further, males may be forced to improve detection of their songs or calls by manipulating amplitude or frequency, thereby potentially making them more conspicuous to predators (Zwart et al. 2016).

Increasingly, evidence shows that birds respond to anthropogenic noise by altering components of their songs and calls. In urban settings, Northern Cardinals (*Cardinalis cardinalis*) and American Robins (*Turdus migratorious*) often increase the frequencies of their vocalizations to increase their detection (Seger-Fullam et al. 2011). Both species exhibit high vocal plasticity with individuals altering their minimum frequency during a song bout when aware of masking by ambient noise (Seger-Fullam et al. 2011). Similarly, male Black-capped Chickadees (*Poecile atricapillus*) produce higher song frequencies when ambient noise increases and reduce song frequencies as noise levels decline (LaZerte et al. 2016).

These changes in the way that birds produce songs and calls in response to anthropogenic noise may have negative fitness consequences. Altering vocalization frequency to counteract anthropogenic noise increases energy allocation to singing because producing higher frequency notes is more strenuous physiologically (Lambrechts 1996). As a result, birds must compensate by allocating more time to foraging, which may then increase predation risk (Lima and Dill 1990). Alternatively, birds may spend less time foraging for food and exhibit increased vigilance behavior against potential predators in noisy environments because noise makes it more difficult for them to detect predators using auditory cues (Quinn et al. 2006, Sweet et al. 2022). Such behavioral shifts may then decrease the ability of birds to provision nestlings adequately, thereby leading to reduced reproductive success (Slabbekoorn and Ripmeester 2008, Merrall and Evans 2020).

Anthropogenic noise may also force birds away from particular areas or shift the timing of when they sing. When North American migratory birds in rural areas were exposed to broadcasts of recorded road noise, for example, their abundance declined by 25% compared to

control areas, and some species such as the Yellow Warbler (*Setophaga petechia*) completely avoided the area around the simulated road (McClure et al. 2013). European Blackbirds (*Turdus merula*) sing up to five hours earlier in the morning in highly urbanized, noisy areas compared to rural, quiet areas to avoid the masking effects of artificial noise (Nordt and Klenke 2013). Similarly, European Robins (*Erithacus rubecula*) have switched to singing at night in urbanized areas that are noisy during the day (Fuller et al. 2007).

The research presented here assesses the effects of anthropogenic noise on vocal communication in three species of birds that breed and overwinter in Virginia: Northern Cardinal, Carolina Wren (*Thryothorus ludovicianus*), and Song Sparrow (*Melospiza melodia*). These three species have generalized diets and similar habitat preferences including dense shrubby fields, forested edges, and bushy thickets. In terms of sociality, Northern Cardinals form short-term pair bonds during the breeding season, and they forage within mixed-species groups (Cornell University 2019). By comparison, Carolina Wrens and Song Sparrows retain pair bonds outside of the breeding season, and in the fall, juvenile Song Sparrows form foraging groups (Cornell University 2019). Considering these behavioral traits, pair and group communication is essential in these species. Specifically, I tested the hypothesis that the level of anthropogenic noise influences the minimum and maximum frequencies (i.e., pitch) of vocalizations in these three species. Because higher frequency sounds are more conspicuous against background noise, I predicted that both minimum and maximum frequencies of the vocalizations of these three species would be higher in areas with greater anthropogenic noise.

Methods

I recorded random calls and songs for each species and observed their behavior at twelve study sites in the Fairfax area of Northern Virginia. Calls are identified as 'chip' notes that are usually one syllable in length. Songs are longer sequences of notes that are more detailed and vary in duration, frequency, amplitude, and overall syllabic arrangement. I selected the study sites based on perceived noise levels, ranging from more quiet to more noisy environments. I used a KASUNTEST KT 202 sound level meter to collect noise level measurements in decibels. Sites with a range of 40 to 48 decibels of noise (natural background noise) were designated as areas of low noise, whereas sites with a range of 49 to 60 decibels of anthropogenic noise (e.g., traffic) were designated as areas of high noise (Table 1). Low-noise sites were located within parks and farther from major roads, whereas high-noise sites were either near highways with heavy traffic or close to urbanized areas (Fig. 1).

I recorded bird vocalizations from 0700-0900 between 7 October 2018 and 2 February 2019. I used a tripod-mounted Canon Powershot 60 HS camera to record bird songs and calls and boosted the audio recording using a VideoMicro microphone with wind muff (RØDE). Following Dowling et al. (2012), I recorded bird songs and calls in the first three minutes of each of twelve successive 10-minute intervals at each site, and I visited each site only once. I reviewed the

Table 1. Noise level measured in decibels (mean ± 1SD) at low-noise and high-noise study sites in the Fairfax, Virginia area between October 2018 and February 2019.

Sites	# of samples	Mean	Standard Deviation
Low-noise			
Burke Lake	5	43.5	0.75
Hall Street	13	44.9	1.54
Hidden Pond	6	46.5	1.50
Huntley Meadows	8	42.4	0.89
Mason Neck	8	42.0	1.25
Pohick Creek	6	42.7	0.73
Low-noise sites mean	6	43.7	1.73
High-noise			
Backyard	10	53.9	4.18
Bull Run	8	52.9	9.60
Occoquan Regional Park	5	57.7	2.96
Scott Run	3	51.0	2.50
South Run	12	48.5	2.61
Wakefield Park	11	52.0	1.13
High-noise sites mean	6	52.7	3.08

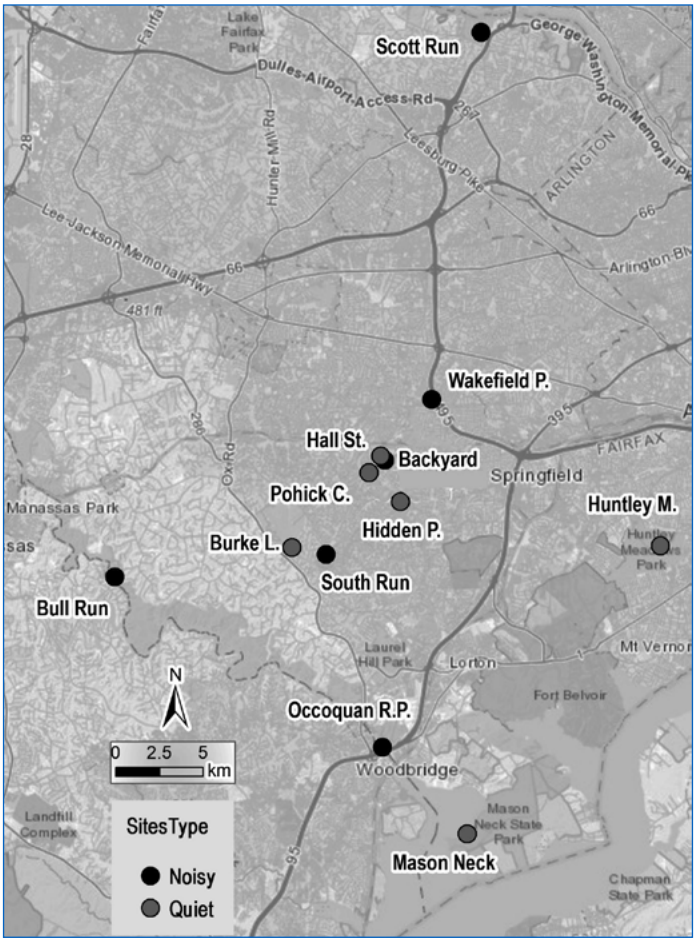

Figure 1. Map of the Fairfax, Virginia area showing the sites at which bird songs and calls were recorded and the classification of those sites as having lower or higher levels of anthropogenic noise.

recordings for songs or calls of Northern Cardinals, Carolina Wrens, and Song Sparrows. Typically, between zero and three distinct individuals of a species were identified from the recordings at any single site. Multiple unique bird songs and calls were determined from a single recording only when they were readily distinguishable as different song structures or pitches, when it was observed that different individuals were engaging in counter-singing, or when the phrasing of the songs were sufficiently different to assume they were from separate individuals. Table 2 shows the number of songs and calls recorded at each site. I recorded a total of 28 songs and seven calls of different individual Carolina Wrens, 18 songs and eight calls of Song Sparrows, and nine songs and 25 calls of Northern Cardinals.

I used Camtasia (TechSmith), a video editing program, to separate and convert the audio into .wav files. Raven Lite 2.0 (Cornell Laboratory of Ornithology) was used to generate spectrograms from the .wav files. I used these spectrograms to determine minimum and maximum frequencies for each distinct song and call identified in the recordings. I used one-tailed t-tests to compare 1) minimum frequency and 2) maximum frequency of song and calls for which there were sufficient data between areas of low and high anthropogenic noise ($\alpha \leq 0.05$ for all statistical tests). Because I recorded so few Carolina Wren and Song Sparrow calls, my analysis focused only on songs for these two species. In contrast, my sample size for Northern cardinal songs was low, so I only analyzed Northern Cardinal calls.

Table 2. Number of songs and calls of three bird species recorded at each high-noise and low-noise study site in the Fairfax, VA area between October 2018 and February 2019.

Sites	**Carolina Wren**		**Song Sparrow**		**N. Cardinal**		**Total**	
Low noise	Song	Call	Song	Call	Song	Call	Song	Call
Burke Lake	2	1	0	1	0	1	2	3
Hall Street	2	0	4	0	6	1	12	1
Hidden Pond	4	0	0	0	0	2	4	2
Huntley Meadows	2	0	1	1	1	3	4	4
Mason Neck	4	0	1	2	0	1	5	3
Pohick Creek	2	0	0	1	0	3	2	4
Totals	**16**	**1**	**6**	**5**	**7**	**11**	**29**	**17**
High noise								
Backyard	2	1	6	0	0	1	8	2
Bull Run	2	1	0	1	2	2	4	4
Occoquan Regional Park	2	0	0	0	0	3	2	3
Scott Run	1	1	0	0	0	1	1	2
South Run	2	0	6	2	0	2	8	4
Wakefield Park	3	3	0	0	0	5	3	8
Totals	**12**	**6**	**12**	**3**	**2**	**14**	**26**	**23**

Results

Minimum frequency for Carolina Wren songs ranged from 1.50 – 2.70 kHz (mean ± SD = 1.94 ± 0.35 kHz) and maximum frequency ranged from 3.10 – 8.60 kHz (5.14 ± 1.14 kHz) (see example spectrogram, Fig. 2a). Minimum frequency for Song Sparrow songs ranged from 1.40 – 3.40 kHz (2.23 ± 0.55 kHz) and maximum frequency ranged from 4.30 – 8.20 kHz (7.20 ± 1.13 kHz) (see example spectrogram, Fig. 2b). Minimum frequency of Northern Cardinal calls ranged from 4.60 – 6.70 kHz (5.48 ± 0.48 kHz) and maximum frequency ranged from 7.50 – 9.20 kHz (8.25 ± 0.46) (see example spectrogram, Fig. 2c).

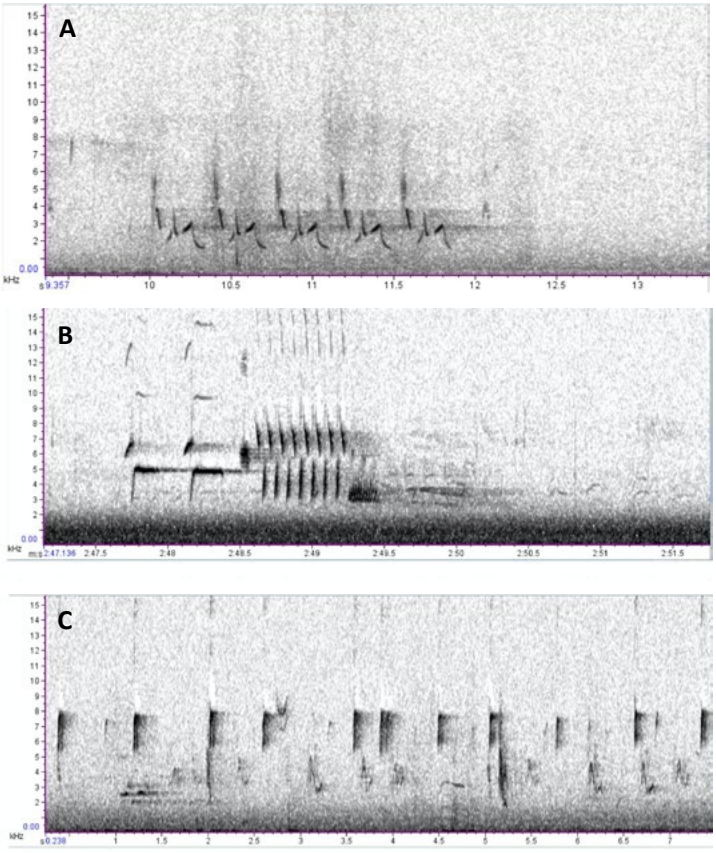

Figure 2. Sample spectrograms for songs of a Carolina Wren (A, recorded 28 October 2018 Pohick Creek, Springfield, VA) and a Song Sparrow (B, recorded 29 October 2018, South Run, Springfield, VA), and for a Northern Cardinal call (C, recorded 27 January 2019, Hall Street, Springfield, VA). Spectrograms were created using RavenLite 2.0, Bioacoustics Research Program, Cornell University. The vertical axes delineate frequency (in kHz) and the horizontal axes delineate time (in seconds).

Carolina Wrens produced songs with a significantly higher mean maximum frequency (t_{26} = -2.49, p = 0.01) at high-noise sites than they did at low-noise sites (Fig. 3a). Mean minimum frequency was also higher at high-noise sites than at low-noise sites, but this difference just bordered on statistical significance (t_{26} = -1.705, p = 0.05) (Fig. 3a). Song sparrows, in contrast, showed no difference in mean minimum frequency of their songs (t_{16} = -0.106, p = 0.46) between low-noise sites and high-noise sites (Fig. 3b). As with Carolina Wrens, however, the mean maximum frequency of Song Sparrow songs was significantly higher (t_{16} = -1.851, p = 0.04) at high-noise sites than at low-noise sites (Fig. 3b).

The mean maximum frequency of Northern Cardinal calls did not differ (t_{23} = 0.196, p = 0.42) between low-noise and high-noise sites, but Northern Cardinals produced calls with a significantly higher mean minimum frequency (t_{23} = -2.52, p = 0.01) at high-noise sites than they did at low-noise sites (Fig. 3c).

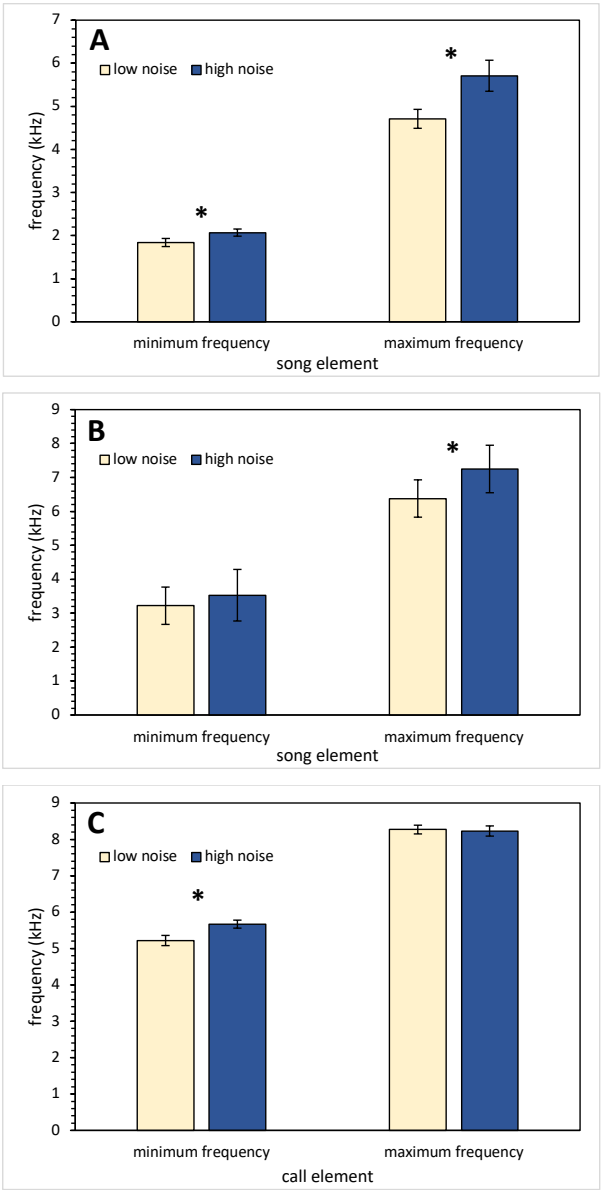

Figure 3. Mean (+ 1 SE) minimum and maximum frequencies (kHz) of songs of Carolina Wrens (A), Song Sparrows (B), and of calls of Northern Cardinals (C) in sites with low and high levels of anthropogenic noise. Asterisks indicate significant differences between adjacent columns (i.e., low noise vs. high noise).

Discussion

The purpose of this study was to assess whether anthropogenic noise affected minimum and maximum frequencies of vocalizations produced by three bird species that commonly live in and near highly developed areas. Overall, the data are mostly consistent with my hypothesis that anthropogenic noise causes changes in the vocalizations of these species. Northern Cardinals increased the minimum frequency of their calls, while Carolina Wrens and Song Sparrows increased their maximum frequency of their songs in areas of greater noise. The fact that all three species made frequency adjustments to their calls or songs suggests a consistent pattern to avoid masking by anthropogenic noise.

My results are consistent with numerous observational and experimental studies that show that many bird species alter their vocalizations by shifting frequencies of their songs upwards in response to lower frequency anthropogenic noise (Slabbekoorn 2013, Roca et al. 2016). More specifically, however, my results are only partially consistent with those reported in a previous study that included Northern Cardinals, Song Sparrows, and Carolina Wrens. Similar to what I found with Northern Cardinal calls, Dowling et al. (2012) found that Northern Cardinals increased the minimum frequency of their songs in response to higher noise levels. Dowling et al. (2012) also found that Carolina Wrens increased the minimum frequency of their songs as noise levels increased, but only in rural habitats, whereas I found that this species increased both their minimum and maximum song frequencies. Further, Dowling et al. (2012) found no effect of anthropogenic noise on the minimum frequency of Song Sparrow songs, which is consistent with my results. Dowling et al. (2012) argue that bird species with higher minimum song frequencies (e.g., Song Sparrows) are less likely to alter their vocalizations because of less frequency overlap with lower frequency ambient noise; however, my results showed that Song Sparrows significantly increased the maximum frequency of their songs.

Birds evaluate multiple factors when selecting territories. In addition to the intensity of human activity, other important factors include predation risk, availability and quality of food resources, competition, and vegetation structure (Huhta and Jokimaki 2000, Kurucz et al. 2021). Future research should also consider energy costs of vocal communication in high-noise environments because it is metabolically expensive to produce high-amplitude and high-frequency songs (Read et al. 2014). As a result of having to increase the frequencies of calls or components of songs, Northern Cardinals, Carolina Wrens and Song Sparrows in the Fairfax, VA area may require more time foraging to compensate for such energy loss. This might represent a challenge in highly urbanized environments where predation risk may be higher and food resources may be lower.

Birds are presented with a choice, however, as background or ambient noise increases. In the immediate term, individual birds can alter the structures of their vocalizations (e.g., by shifting frequencies or increasing amplitude) to increase detectability (Slabbekoorn 2013). Assuming the benefits of doing so in terms of avoiding masking outweigh associated costs (but see Luther et al. 2016), this can lead to an evolutionary response that characterizes the entire population in an area (Riechard et al. 2020). Alternatively, birds can move elsewhere to avoid loud areas leading to local extirpation and homogenization of bird communities in highly urbanized environments (Slabbekoorn 2013). Although a lack of capacity to adapt might eventually contribute to population decline, some bird species such as omnivores (e.g., blackbirds) and cavity nesters (e.g., wrens) have been quite successful due to their plasticity, behavioral flexibility, and cognition (Patankar et al. 2021). In fact, a recent study found that White-crowned Sparrows (*Zonotrichia leucophrys*) rapidly responded to the reduction in anthropogenic noise during the 2019 Covid-19 pandemic shutdown in the San Francisco Bay area by producing higher performance songs at lower amplitudes, thereby demonstrating the capacity of birds to respond adaptively to changes in the soundscape of their environment even after decades of noise pressure (Derryberry et al. 2020). Further study of how avian vocalizations change in response to anthropogenic noise provides important insight into the environmental and biological factors behind such change, and ultimately, in the evolution of avian communication (Kroodsma 1996).

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Observations of Unusual Feeding Behaviors of Red-tailed Hawks, Bald Eagles, and Turkey Vultures at Urban Bait Sites in Coastal Virginia

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Abstract

From 1-31 January 2022 we observed unusual feeding behaviors of Red-tailed Hawks (*Buteo jamaicensis*), Bald Eagles (*Haliaeetus leucocephalus*), and Turkey Vultures (*Cathartes aura*) at baited trap sites while conducting a raptor relocation study near Newport News, Virginia. Atypical mantling behavior was observed on multiple days in at least one Red-tailed Hawk. Crepuscular feeding on carrion was observed in normally diurnally feeding Bald Eagles and Turkey Vultures.

Introduction

As part of a relocation study of raptors on military airfields in Virginia, camera traps were used to monitor trap locations baited with deer carcasses at three sites: Big Bethel Reservoir, VA (37.0947° N, 76.4357° W), Joint Base Langley Eustis (JBLE)-Eustis (37.1593° N 76.5752° W) and private property near JBLE-Langley (37.0835° N, 76.3592° W). Noteworthy feeding behavior of three species of raptors was observed across these trap sites during camera trapping efforts throughout January 2022.

Mantling is a behavior exhibited by a variety of raptors including the genus *Falco* and *Buteo* as well as in Osprey (*Pandion haliaetus*). Mantling is a term that describes the way that a raptor will spread its wings and tail, and hunch its body to cover up a food item as shown by the Red-tailed Hawk (*Buteo jamaicensis*) in Figure 1 (Cestari and Loiselle 2021). In adult birds, mantling serves to prevent other raptors or scavengers from stealing food. The mantling position is also believed to reduce the chance for the prey to escape if it gets free from the grasp of the raptor (Jones 2007). Mantling is also common in nestling raptors when competition for food resources is high or when rapid consumption of food is necessary (Preston 2000, Mayntz 2010). During this study, unusual mantling behavior was observed in a Red-tailed Hawk. The mantling behavior was atypical in terms of its overall duration and how the hawk's body was positioned in relation to the food source it was guarding.

Figure 1. Typical mantling behavior exhibited by a female Red-tailed Hawk at the Big Bethel Reservoir site. In this photo the hawk shows outstretched wings and tail feathers while crouching over a deer carcass.

Both Turkey Vultures (*Cathartes aura)* and Bald Eagles (*Haliaeetus leucocephalus*) are generally categorized as diurnal animals (Holland et al. 2019, Todd 2004). Over the past 10 years, however, vultures have been observed feeding nocturnally (Charette et al. 2011). Similarly, nocturnal movement by Bald Eagles has been measured with permanently attached telemetry devices (T. Miller, personal communication, 22 April 2021). During the period of this study, we observed Turkey Vultures and Bald Eagles feeding after sunset on 12 different evenings.

Methods

The three trap sites were set up using either an unarmed 8m x 12m rocket net or a 3-m bow net placed adjacent to a deer carcass. Observation blinds were constructed

approximately 100 m from the bait site. Two wildlife cameras were placed within 10 m of bait carcasses out of the line of fire for net traps. At the Big Bethel Reservoir site, one Reconyx HyperFire PC900 wildlife camera was placed in the line of sight of the bait. At both the Fort Eustis and private site in Hampton, TACTACAM Reveal X Trail camera traps were used in the same way. Camera traps were left in place for at least two weeks prior to the trap site being manned for attempted bird capture. Photographs were obtained by manually checking the SD card at the Big Bethel Reservoir site with a portable laptop. Photographs were uploaded remotely via Wi-Fi to cell phones from both the Fort Eustis site and the private site.

Results

On four separate days between 10 and 25 January 2022 while trapping for bald eagles at the Big Bethel Reservoir trap site, a large female (sex assigned based on size) Red-tailed Hawk was observed exhibiting atypical mantling behavior. Instead of hunching over the carcass in a typical mantling position, this individual appeared to have laid down on the carcass (Figure 2). This individual ate for between two and three hours at a time, in contrast with three other Red-tailed Hawks observed during the same period of time, which ate for approximately 20-30 minutes at a time. This individual guarded the carcass from competitors including Black Vultures *(Coragyps atratus)* and Turkey Vultures, Bald Eagles, and other Red-tailed Hawks and successfully averted all challenges by rivals for the food source (Figure 3).

Figure 2. Atypical low mantling exhibited by the same female Red-tailed Hawk in Figure 1 at the Big Bethel Reservoir site. In this photo, the hawk shows outstretched wings and tail feathers, but it is lying down on the deer carcass.

Figure 3. The female Red-tailed Hawk guarding a deer carcass from a juvenile Bald Eagle at the Big Bethel Reservoir site.

In two separate instances, Red-tailed Hawks landed approximately three meters away and waited in the grass for over an hour before flying off. When challenged by another large Red-tailed Hawk that had landed approximately one meter from the bait, she flew at the other hawk and struck it with her talons, causing the competitor to leave. She then resumed eating in the mantling position. On four separate instances Bald Eagles landed nearby and one approached as close as four and a half meters to the carcass, but they all eventually flew off without feeding. We trapped the hawk in a net on 20 January 2022 in an effort to discourage her from returning to the bait, but after three days she returned and resumed the extended feeding behavior in the same atypically low mantling position. During each subsequent visit she was observed eating for between 30 minutes and three hours.

During the period of study two Bald Eagles were observed feeding on carrion past sunset at the Fort Eustis and private

Figure 4. Turkey Vultures and an adult Bald Eagle feeding on a deer carcass after sunset on 30 January 2022 at a private trapping site. These photos were taken at 17:52 and 17:53. Sunset occurred at 17:28 and civil twilight ended at 17:56.

sites (Figures 4 and 5). Three Turkey Vultures were also observed feeding during the same period of time at these sites (Figures 4 and 5). This unusually late feeding behavior was observed on 12 of 29 nights of observation, but it is unknown whether it was the same or different individuals each evening. All of the late evening feeding for both species occurred within one hour following sunset and concluded at least 10 minutes before astronomical twilight. During astronomical twilight faint stars and planets are visible and remaining illumination from the sun is so faint that humans observe the sky as fully dark.

Figure 5. A Bald Eagle and a Turkey Vulture feeding on a deer carcass after sunset on 5 January at the Fort Eustis trapping site. This photo was taken at 17:26. Sunset occurred at 17:03 and civil twilight ended at 17:32.

Discussion

This is the first report of which we are aware that a raptor has lain down on the carrion it was consuming. We hypothesize this unusual behavior was an atypical form of mantling behavior to protect the food source from potential competitors. As previously stated, mantling is a common behavior in raptors when competition for food is intense (Jamison et al. 1983; Bittel 2017). This may have been a younger bird: as can be seen in Figures 1 and 2, banding on the tail typically seen in younger Red-tailed Hawks is present. The presence of bands in tail plumage, however, is not a sufficient characteristic by itself to indicate age in this species. Red-tailed Hawks are known to exhibit highly variable plumage that can include occasional retention of tail banding in older birds (Liguori 2015).

Metabolic rate in Red-tailed Hawks increases in response to cold stress more than for larger species such as Golden Eagles (*Aquila chrysaetos*) (Hayes 1978). This variation in metabolic response has been attributed to differences in feather depth rather than body size (Hayes, 1978). In the days before this Red-tailed Hawk was observed mantling and resource guarding, the temperature had dropped from a low of 10 C to -6 C within 48 hours. This shift in weather likely increased the hawk's resting metabolic rate making the bird very hungry. In addition to the very cold temperatures, the presence of numerous and larger potential competitors (Turkey Vultures and Bald Eagles) may have prompted the hawk to be more aggressive in guarding its food source.

Human food subsidies including trash and carrion are known to influence feeding behavior of birds in urban settings (Boal 2018, Kumar et al 2019). Within the highly urbanized study area (near Newport News, Virginia) interactions between generalists raptors, including Red-tailed Hawks and Bald Eagles, may have become more common as populations of both species have recovered (Preston 2000, Watts 2005). Novel interactions between raptors within the urban environment could influence competitive behaviors such as the low mantling position and resource guarding by the Red-tailed hawk observed in this study (Boal 2018, Møller et al. 2018).

Populations of both Turkey Vultures and Bald Eagles have increased in urban areas of Virginia (Watts 2005, Zimmerman et al. 2019). In environments where birds are occasionally disturbed by the presence of humans it has been shown that typically diurnal birds will feed later into the evening and even at night (Merke and Mosbech 2008). Given the large human population surrounding the three baited trap sites, both vulture species and Bald Eagles may continue eating after sunset to avoid human activity.

Competition-driven shifts in foraging periods have been observed in response to intraspecific competition in Old World Griffon Vultures (*Gyps fulvus*) (Mateo-Thomas and Olea 2018). Modified foraging periods among scavenger bird species experiencing interspecific competition and dominance hierarchies has also been observed in carrion-eating birds (Moreno et al. 2020, Sebastian-Gonzalez et al. 2015). Competition avoidance may explain crepuscular feeding by Turkey Vultures and Bald Eagles in our study area. We observed no more than three individuals feeding following sunset compared to 50 or more individuals feeding at the same trap sites during full daylight. Human activity and high rates of competition for food at the monitored trap sites, as well as shorter winter days, are probable drivers of evening feeding behaviors observed during this study.

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Virginia Christmas Bird Counts: 2021-2022 Season

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The National Audubon Society's (Audubon) special pandemic protocols for conducting CBCs remained in effect for the 2021-2022 Christmas Bird Count (CBC) season. The Gordonsville CBC was not conducted this season and data was not submitted for the Clifton Forge CBC.

Fifty-six counts were conducted in Virginia in the 2021-2022 CBC season. The results from three of these counts (Chesapeake Bay, Darlington Heights, and Giles County) are not submitted to Audubon for various reasons, but are included as part of this summary of Virginia CBCs. The Bristol, Tennessee count results are also included because most of the count circle is in Virginia (Audubon includes this count with the results for Tennessee). The total number of species tallied on the 2021-2022 counts was 211, and the total number of individual birds counted was 827,870.

There were a few compiler changes in 2021-2022. After compiling the count since it began in 2006, Henry Armistead handed over the reins for the Nassawadox CBC to Roberta Kellam. Cynthia Morris is the new compiler for the Dismal Swamp CBC replacing Jen Wright. Mark Sopko assumed compiling duties for the Mathews CBC from Joyce McKelvey. Arun Bose has compiled the Hopewell CBC since 2005, but turned over those duties this year to Ellison Orcutt. Bridget Bradshaw is the new compiler for The Plains CBC, replacing Alison Zak.

NEW SPECIES: A first year Heermann's Gull had been observed regularly around the Hopewell City Marina since October 2021 and was photographed December 19, 2021 on the Hopewell CBC. This is a new species for Christmas Bird Counts in Virginia.

UNUSUAL SPECIES REPORTED: Greater White-fronted Goose (2 Walkerton and 1 Fort Belvoir), Eurasian Wigeon (3 Chincoteague and 1 CW Nansemond River), Blue-winged Teal (3 Back Bay and CW Hopewell), Harlequin Duck (1 Chesapeake Bay), Ruffed Grouse (1 Rockingham County), Ring-necked Pheasant [introduced species currently extirpated] (1 Washington's Birthplace), Red-necked Grebe (2 Little Creek and 1 Nansemond River), Western Grebe (1 Back Bay), American White Pelican (114 Williamsburg and 9 Northumberland-Lancaster), Cattle Egret (1 Back Bay), Green Heron (1 Brooke and 2 Lynchburg), Golden Eagle (CW Northern Shenandoah Valley, 1 Highland County, 2 Tazewell, and 2 Blackford), Red-tailed Hawk (*abieticola*) (1 Back Bay), King Rail (2 Back Bay and 1 Fort Belvoir), Sora (2 Chincoteague, CW Back Bay, 1 Williamsburg, 1 Hopewell, 1 Walkerton, and 2 Fort Belvoir), Sandhill Crane [for a second year] (1 Chincoteague), American Avocet (3 Chincoteague and CW Nansemond River), Spotted Sandpiper (1 Lynchburg), Whimbrel (3 Cape Charles), Razorbill (CW Back Bay), Black-headed Gull (1 Hopewell), Heerman's Gull (1 Hopewell), Iceland Gull (1 Central Loudon), Royal Tern (1 Chesapeake Bay and 1 Back Bay), Northern Saw-whet Owl (1 Mount Rogers-Whitetop [last time recorded on CBCs in Virginia was 2015 when 1 was reported at Glade Spring and 1 at Calmes Neck]), Ruby-throated Hummingbird (1 Newport News and 1 Blacksburg), Rufous Hummingbird (1 Rappahannock and 1 Blacksburg), *Selasphorus* hummingbird sp. (1 Charlottesville), Red-cockaded Woodpecker (3 Dismal Swamp [the most found on a Virginia CBC since 4 at Back Bay in 1976]), Ash-throated Flycatcher (1 Fort Belvoir), Western Kingbird (1 Cape Charles), White-eyed Vireo (1 Dismal Swamp), Blue-gray Gnatcatcher (2 Little Creek and CW Hopewell), Nashville Warbler (1 Back Bay and 1 Williamsburg), American Redstart (1 Fort Belvoir), Black-throated Blue Warbler (1 Newport News), Wilson's Warbler (1 Cape Charles), Lark Sparrow (1 Nansemond River and 1 Mathews).

NEW RECORD HIGH COUNTS FOR STATE: Bald Eagle (1,652), Lesser Black-backed Gull (332), Barred Owl (137), Red-bellied Woodpecker (4,388), Yellow-bellied Sapsucker (1,613), Downy Woodpecker (3,322), Hairy Woodpecker (634), Pileated Woodpecker (1,404), Eastern Phoebe (576), Blue-headed Vireo (32), House Wren (121), Hermit Thrush (1,438), Black-and-White Warbler (12 [+ 1 CW]), Orange-crowned Warbler (52 [+ 2 CW]), Chipping Sparrow (2,500), and Baltimore Oriole (43 [ties the record set in 2020]).

OTHER HIGH NUMBERS (but not record high counts): The 10,008 American Robins observed at The Plains contributed to 68,471 recorded across all Virginia CBCs (record high count for the state was 90,828 set in 2017). The 292 Gray Catbirds are the most reported since 308 were seen in 1974. The 74,221 Common Grackles represents the highest total since 106,833 were reported in 2001. The 13,654 Brown-headed Cowbirds are the most recorded since 24,393 in 1998. Finally, the 42 Red Crossbills (20 Fincastle and 22 Mount Rogers-White Top Mountain) are the most observed since 83 were discovered on eight counts (Cape Charles, Back Bay, Warren, Northern Shenandoah Valley

[CW], Shenandoah NP-Luray, Roanoke, Blacksburg, and Nickelsville) in 1977.

LOW COUNT: Canvasbacks were sighted in their lowest number (325) in over 60 years since 66 were recorded in 1956.

As in the past, species data for all of the Virginia CBCs has been tabulated into one large table. This comprehensive table listing the fifty-six counts with all of the species reported on each count plus the numbers for each species can be viewed by clicking on the 2021-2022 link on the Christmas Bird Count page on the VSO website (https://www.virginiabirds.org/events/christmas-bird-counts). Details on individual Audubon CBCs can also be found on the National Audubon Society's Christmas Bird Count website at http://netapp.audubon.org/cbcobservation/.

INFORMATION FOR CONTRIBUTORS

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

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

Format and style of *The Raven* generally follows guidelines outlined in *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers* (6th Edition, 1994, Cambridge University Press). Recent volumes of *The Raven* should be inspected for style. Vernacular and scientific names of birds should be those in the most recent edition (and supplement) of the American Ornithological Society Checklist of North and Middle American Birds (http://checklist.americanornithology.org/taxa). Scientific names should be italicized. All size, temperature and other measurements should be in metric units.


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