

NOVA SCOTIA BIRDS

A Quarterly Publication of the Nova Scotia Bird Society

A PELAGIC TRIP TO THE
CONTINENTAL SLOPE

Pubnico Pelagic 2017

WHAT WE'VE ALL
BEEN WAITING FOR

October 2017 Fallout

TROPICAL KINGBIRD

A Provincial First





The Nova Scotia Bird Society has been a focus for birders in this province for 60 years. Serving about 600 members, we have much to offer anyone interested in wild birds. Browse through our web site (www.nsbirdsociety.ca) for a sample of what we do, and feel free to send us e-mail (contact@nsbirdsociety.ca) if you would like more information.

The Nova Scotia Bird Society is a registered charitable organization that promotes the study and conservation of wild birds in Nova Scotia. Since its establishment in 1955, the NSBS has grown into the largest single Natural History group in the province.

We are a not-for-profit organization that is run entirely by volunteers!



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COVER: Nova Scotia's first Tropical Kingbird was observed only one day in the Chebogue Point area, *Yarmouth*, Oct 24.

Photo by Ervin Olsen.

Nova Scotia Bird Society

c/o The Nova Scotia Museum

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Editor's Foreword

Alix d'Entremont

The foreword in the last issue of Nova Scotia Birds (summer 2017) contained Ian McLaren's 'swan song' as editor. We've been fortunate to have Ian in this role since winter 2011-2012, but he has also been completing the duties of photo editor since winter 1984. His insatiable curiosity combined with knowledge gained from a lifetime of birding, an academic career, and as a member of countless conservation committees are evident in his work. Andy de Champlain and I have split these editorial responsibilities; unlike Ian, we are only human, and two can only dream to approach one.

Feedback from the Nova Scotia Bird Society Board and members as well as Nova Scotia Birds contributors, along with changes in data gathering (mostly eBird), have driven forthcoming changes in the magazine content and style, and ultimately its purpose. A member questionnaire is slated to be distributed in the near future, so please let us know what you'd like to see printed here. This issue and likely a few more to follow will be stepping stones leading to an updated publication.

Mailed-in reports from sparsely scattered locations have been replaced by the continually expanding coverage of eBird data, which totalled over 25,000 birding hours in our province during 2016. While crowdsourced datasets aren't perfect, ongoing research – some by society members from Acadia University – will continue to better define best practices for their use. Attempts will be made to lessen feather ruffling of long-time readers, but 'Species Accounts' will be much condensed and more emphasis will be placed on 'Other Reports'.

Some information that used to be contained in the magazine will be made available through our recently overhauled website, featuring "all kinds of new", as described by our website administrator Peter Brannon. The Nova Scotia Bird Society has a duty to promote good data captured through citizen science and especially via structured projects (see The Need for More Citizen Science Volunteers, p.61). We hope that the evolution of this publication will retain current readers and entice new ones to enjoy writings on the birds of Nova Scotia.

President's Report

David Currie

For me, the highlight of any NSBS year is the Annual General Meeting and Wine and Cheese. It's always been a time when we see members we haven't seen for a while, and when we can relax and catch up on the year that has passed. It's a time to say thank you to all those members who give of their time to keep this active society flourishing.

Allison and Bruce Stevens again this year had us all spellbound with the gorgeous French-inspired Bistro and Sidewalk Café décor, complete with lighting, candles and romantic two-person settings. We may need to have those two sign a long-term contract! Thank you to all those who pitched in to set up and take down this wonderful display.

After reports were presented, we welcomed two new directors, Sylvia Craig and Diane LeBlanc, with Diane taking on the role as Vice President. Thank you both for giving even more of your time to the NSBS and becoming welcome additions to the 2017-2018 directors and officers.

During the Annual General Meeting of Nature Canada in St. Andrew's, New Brunswick, this fall, Dr. Ian McLaren was presented with Nature Canada's Douglas Pimlott Award. Douglas H. Pimlott was a renowned conservationist, wildlife biologist, ecologist and environmentalist. He was a founder of the modern environmental movement in Canada. The award was created over 30 years ago and is Nature Canada's pre-eminent award. It is given to an individual whose outstanding contributions to Canadian conservation serve as an example to us all. At the presentation ceremony, here is what was said:

Dr. Ian A. McLaren, Professor Emeritus of Marine Biology, Dalhousie University, Halifax, Nova Scotia.

Ian was raised in west-end Montreal and studied at McGill. He spent 15 years studying and researching marine life in Nunavut. His beloved wife Bernice tells fondly of spending their honeymoon in a tent in the Canadian north.

Ian received his PhD from Yale, and returned to Canada to teach at McGill, then came in 1966 to Dalhousie here in Halifax. During his years here as a well-loved professor, Ian has published more than 100 scientific papers, many on marine ecology. The summers spent on Sable Island off Nova Scotia's east coast led to a definitive study of the Ipswich Sparrow, a subspecies of Savannah Sparrow, which breeds only on that island. Ian played a major role in establishing the Sable Island Preservation Trust. Always conscious of the need for habitat protection, Ian was also involved in the establishment of the Nova Scotia Nature Trust, which has been able to protect much of the unique coastal ecosystems and off-shore islands.

Love of the birds and the value of data collecting and record keeping made Ian McLaren one of the early members – and former president – of the Nova Scotia Bird Society. He is presently magazine editor of Nova Scotia Birds.

Ian, as a member of the society, I know I can say without hesitation that it is a privilege for our society to have you associated with it. You have given us prestige and credibility, and lent us your enormously valued reputation throughout North America and Europe. On behalf of The Nova Scotia Bird Society and your many friends within it, congratulations, Ian! We are so very proud of you!

During 2017, we saw social media elements continue to grow with Instagram, Twitter and Facebook, catering to memberships of over 10,000 people. Added to that, Mark Dennis's Atlantic Birding Facebook page, with its amazing photos from the entire region, has become the place to go to get the news and critical details on the more uncommon birds seen here. Renee Stolfo has created a Gardening for Birds page in response to fewer feeding stations during the summer months due to the Trichomoniasis outbreak, and Andy de Champlain, being

the editor of Parkview News in Halifax, promotes birds and the NSBS in every paper! Thank you all for increasing the awareness of birds in this province.



Pimlott Award winner Ian McLaren with Joan Czapalay at Nature Canada AGM in St. Andrews, NB

Puffin of the Year Award – 2017

David Currie

There are members of the Nova Scotia Bird Society who, by their actions and dedication, are the glue that holds a group together. We are very fortunate to have those who pour themselves into this group with purpose and a quiet demeanor that simply keeps everything going.

We are a society that is strictly run and managed by volunteers, as you all know. Having this venue and a magnificent Wine and Cheese afterward is also a way to show our members how much they mean to us.

Presenting this award tonight hopefully shows to the recipients each year that all the time they have spent for us didn't go unnoticed and is appreciated.

This year, the award recognizes two people, because recognizing one without the other would be impossible. It was about ten years ago they both appeared as young faces among the wrinkled, bald and greying. At the time but looking back now, I think they represented the beginning of changing attitudes and age demographics when the general public began looking at birding not as something only the most eccentric take part in, but taking notice of the natural world more than ever before.

The first tasks they took on as soon as they joined was the ordering, picking up, sorting and mailing of our magazine. Paper cuts, the taste of glue, unmanageable envelopes and heavy lifting was their four-times-a-year job for eight years. While this was going on, Kate took on the Field Trip Co-ordinator role for the society, which not only increased the number of trips yearly, but the participation increased dramatically. We began to see younger faces led by young faces and with both Kate and Chris leading numerous trips each year, we were welcoming a whole new generation to the NSBS.

They both share a Nocturnal Owl Survey near Elderbank, which often attracts newer birders wanting to tag along and learn from them, and while Kate looks after the Rusty Blackbird Spring Blitz for Nova Scotia, Chris was busy organizing and compiling the Spring Migration Count for the province. These two, without fail, are always of the first to volunteer and attend

any of the society's functions, events and public awareness venues. Over the last several years, Chris has instructed and helped to build nest boxes for various HRM Boy Scout troops, and once finished, these two often go together to help place the boxes in suitable habitat on Scout properties.

The years they have been involved, which by the way are very few in my mind, have given these two tremendous birding skills, with Chris becoming a highly sought-after consultant hired to complete environmental surveys throughout Nova Scotia. They have represented birding with film documentaries here and Kate is even a poster child for the Department of Natural Resources.

They both have been very valuable directors for the NSBS for over five years, with Kate producing the most thorough set of minutes as secretary that I've ever seen, and their contributions to decision-making are always relied upon.



Chris Pepper and Kate Steele presented with the 2017 Puffin of the Year Award by David Currie. *Photo by Andy de Champlain*

With this wonderful carving done by Ross Hall, and on behalf of the Nova Scotia Bird Society, I would like to thank both Chris Pepper and Kate Steele for all the effort and time they dedicate to us by presenting them with the 2017 Puffin of the Year Award.

Annual General Meeting Minutes

November 25, 2017

Kate Steele

Approval of the Agenda – 7:47pm

- Moved by Susann Myers, seconded by Chris Field

Approval of the minutes from November 26, 2016

- Moved by Tony Millard, seconded by Andy de Champlain

Business Arising from the minutes of November 26, 2016

- No business arising from the minutes of November 26, 2016.

Reports

Membership Report

- Ulli Hoeger reported that the total number of paid memberships for 2017 is 389
- There were 80 new members in 2017

Peter Brannon volunteers to update the Nova Scotia Bird Society (NSBS) website and is looking at the possibility of managing our memberships through the website as well.

Treasurer's Report

Gillian Elliott presented a balance sheet and an income statement with comparative figures from 2016.

Ron Arseneault asked about the cost of the liability insurance as it has decreased from previous years. This is due to the donation of our properties to the Nova Scotia Nature Trust (NSNT) that we are no longer responsible for insuring.

Conservation Report

Helene Van Doninck (Conservation Chair) has continued her work keeping lead out of the environment and working to decrease the impact of outdoor cats on birds and other wildlife. She is part of the committee that organized an event at Saint Mary's University on November 21, 2017 about the possible development of by-laws relating to this issue and encouraging people to keep their cats indoors.

Dave also showed those in attendance a deceased Purple Gallinule which was brought to a family in Tangier by their outdoor cat. Dave encouraged everyone to speak to their MLAs to encourage the development of by-laws. Chris Field (professor of mathematics and statistics at Dalhousie University) also spoke up on this topic as he adapted the estimated numbers of bird mortality caused by cats in Canada to the numbers in HRM and determined that the numbers were between 1.7 - 4.1 million birds killed per year in HRM. Judith Davies asked

whether veterinarians in the province have been contacted about this issue. Helene informed us that they have and that most vets agree that it benefits the cat as well as wildlife if cats are kept indoors or in outdoor enclosures.

NS Birds Editor's Report

Ian McLaren informed us that the summer season issue is almost completed and will soon be available online.

President's Report

Dave Currie thanked all of the NSBS volunteers and directors, especially Ian and everyone involved with *NS Birds* as it is a tremendous amount of work. The fall issue will be Ian's final issue as editor.

Dave also updated about how the funds received from the estate of Gerald Francis were redistributed to various research projects in Nova Scotia. In total, all seven proposed projects were granted 60% of their requested funds. Following this, more funds were received from this estate and three of these projects were funded to completion (indicated with an *). This information can be found below:

- *Randy Lauff (St. Francis Xavier University) – Small Raptor Work: Northern Saw-whet and Boreal Owls
- Sue Abbott (Bird Studies Canada) – Piping Plovers: Threats and Stewardship Efforts on NS Beaches
- Brad Toms (Mersey Tobeatic Research Institute) – Bank Swallows, Chimney Swifts and Common Loons
- Meredith Flannery (Ecology Action Centre) – Reducing Cat-related Bird Mortality
- *Shawn Craik (Université Sainte-Anne) – Foraging Ecology of Roseate Terns on N. Brother Island
- Cindy Staicer (Dalhousie University) – Landbirds at Risk in NS
- *Helene Van Doninck (Cobequid Wildlife Rehabilitation Centre) – Permanent Songbird and Aerial Insectivore Enclosure

Dave informed us that all of the properties that were owned by the NSBS Sanctuary Trust were donated to the Nova Scotia Nature Trust and that the NSBS Sanctuary Trust's charitable number was amalgamated with the Nova Scotia Bird Society's under one number as registered with Revenue Canada. If the Sanctuary Trust charitable number is ever needed again in the future, it can be reinstated.

Over the past year, a sub-committee of the NSBS has been created to help better organize the society and increase efficiency.

Several volunteers have been busy working on a 'Birding Passport'. When all of the information is received and the layout is determined, we will apply for grants to cover the printing costs of the passport.



Bruce and Allison Stevens at the annual general meeting. *Photo by Jenn Currie.*

completed over 35 interviews on these topics and thanked Angela Granchelli for all of her work setting up these media contacts.

Anne Mills and Chris Kennedy have been volunteering to represent birds and the NSBS as part of the Healthy Forest Coalition. In the same vein, several volunteers represented the NSBS at Nova Scotia woodlot owners' events in the spring. Dave reported that he plans to steer the society into taking on more conservation initiatives.

Helene Van Doninck has stepped down from the Federation of Nova Scotia Naturalists (FNSN) and Chris Kennedy has offered to take over her role.

New Business

Alison Conrad, on behalf of the Nominations Committee, named the board of directors for 2018 and David Currie asked for further nominations from the floor.

Members of the Nova Scotia Bird Society Board of Directors, 2017-2018:

David Currie, B Haley, Gillian Elliott, Kate Steele, Ulli Hoeger, Angie Millard, Tony Millard, Eric Mills, Chris Pepper, Helene Van Doninck, Diane LeBlanc, Sylvia Craig, Ian McLaren – ex-officio, Anthony Robinson – Honorary Solicitor, Ruth Smith – Honorary Auditor.

Puffin of the Year

Dave Currie presented the Nova Scotia Bird Society's 2017 Puffin of the Year Award to Chris Pepper and Kate Steele for their years of service on the Board of Directors as well as the various other roles they have taken on throughout the years.

Adjournment

Motion to adjourn made by Susann Myers, seconded by Tony Millard, at 8:34pm.

Ian McLaren was presented with the prestigious 2017 Douglas Pimlott award at the Nature Canada AGM in St. Andrews, New Brunswick.

The NSBS Instagram page was launched in 2017 and is being managed by Alison Conrad and Chris Kennedy with 281 followers. Twitter continues to be active with 620 followers. The NSBS Facebook page is in its eighth year and has almost 9700 members! Mark Dennis of Cape Sable Island has also started a Facebook page for more seasoned birders called Atlantic Canada Birding. Another Facebook page was created by Renee Stolfo to provide alternative strategies to bird feeders to continue to attract and feed birds using plants and gardening during the summer trichomonosis outbreak.

The media have also been active covering much bird-related content, such as: vagrant species, outdoor/feral cats, Christmas Bird Counts, and the outbreak of trichomonosis. Dave



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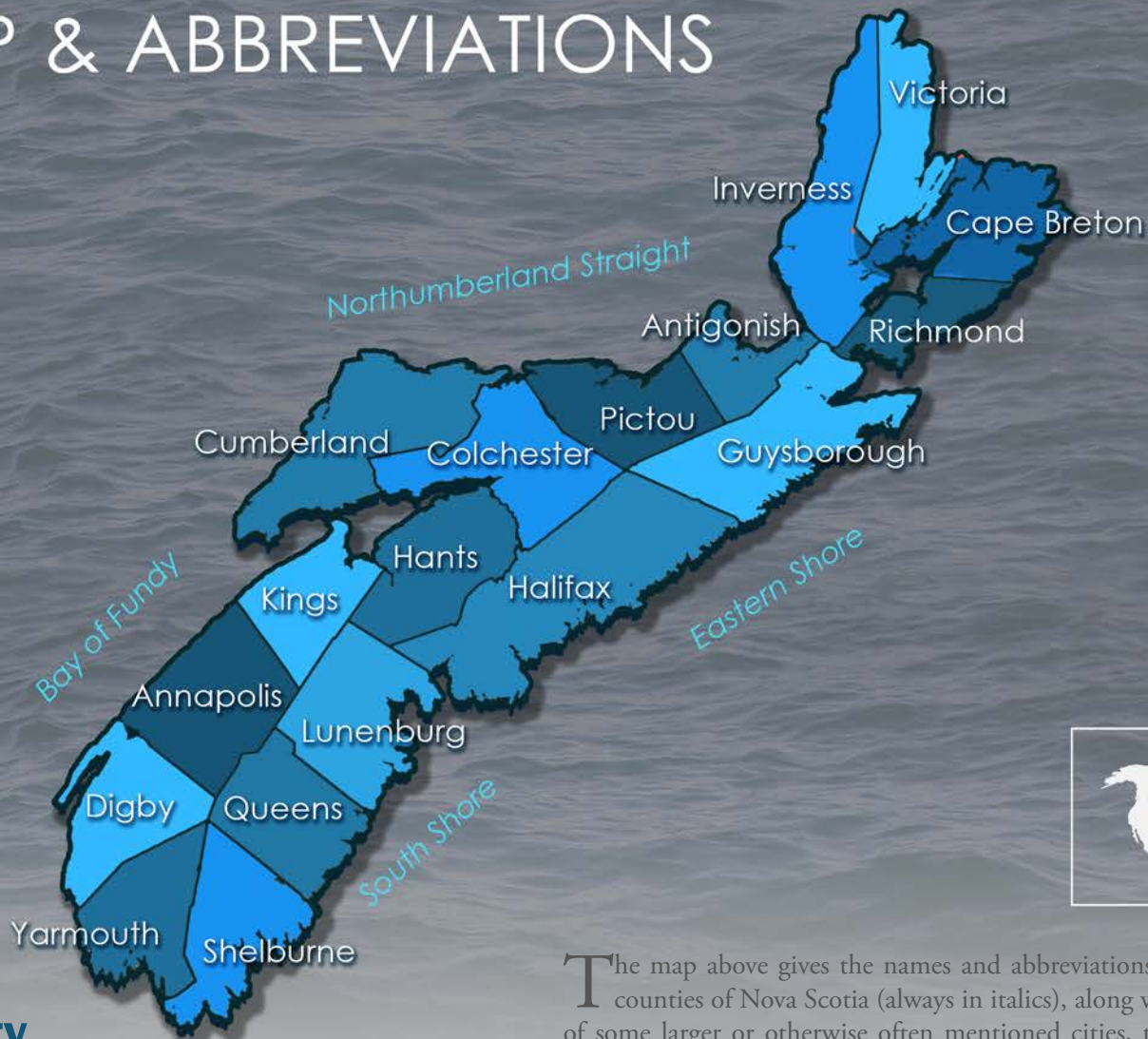


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MAP & ABBREVIATIONS



County Abbreviations

Annapolis	-	Anna
Antigonish	-	Ant
Cape Breton	-	CB (CBI=the whole island)
Colchester	-	Col
Cumberland	-	Cumb
Digby	-	Digby
Guysborough	-	Guys
Halifax	-	Hfx
Hants	-	Hants
Inverness	-	Inv
Kings	-	Kings
Lunenburg	-	Lun
Pictou	-	Pict
Queens	-	Queens
Richmond	-	Rich
Shelburne	-	Shel
Victoria	-	Vic
Yarmouth	-	Yar

The map above gives the names and abbreviations of all the counties of Nova Scotia (always in *italics*), along with names of some larger or otherwise often mentioned cities, towns, and islands (some with abbreviations). Below is a list of frequently used abbreviations and acronyms to save space. Also, cardinal and ordinal compass directions may be abbreviated (as w., n.e., etc.) and capitalized when part of a place name. Bird names in the Seasonal Summary are in full caps when first mentioned and rare ones (those missing or with asterisks on the NSBS Field Checklist, 2014) in **BOLD** font.

GENERAL TERMS

ABO = Atlantic Bird Observatory (reports from)
 AOS = American Ornithologists' Society (formerly "Union")
 ad. = adult
 Atlas, or MBBA = Maritimes Breeding Bird Atlas,
 BBS = Breeding Bird Survey
 Bch., bch. = Beach, beach
 Brk. = Brook
ca. = approximately
 CBC = Christmas Bird Count
 COSEWIC = Committee on Status of Endangered Wildlife in Canada
 DU = Ducks Unlimited (wetlands)
 f. = female
fide = on the authority of

g.d. = good details
Hbr. = Harbour
Hwy(s) = Highway(s) usually numbered
HY = hatch year; a bird born in the current year
I. = Island (pl. Is.)
imm. = immature
incl. = including
juv. = juvenile (first post-nestling plumage)
loc. = location, locality (pl. locs.)
Lr. = Lower (for communities)
m. = male
Mid. = Middle (for communities)
m. obs. = many observers
n.d. = no details (unsupported by documentation)
no. = number
NP = National Park
nr. = geographically near
NSBS = Nova Scotia Bird Society
NSMC = NS (Spring) Migration Count
obs. = observer(s), not observed or observation(s)
Pen. = Peninsula
ph. = photographed
Pk. = Park
PP = Provincial Park
Pt. = Point (not Port)
pr. = pair (not simply two birds, a 'twosome')
R. = River (R. not used when part of a community name)

Rd. = Road
rept. = report (pl. repts.)
Sanct. = Sanctuary
spec. = specimen
thr. = throughout a season, as in 'thr. summer'
Tr. = Trail
Up. = Upper (for communities)
var. obs. = various observers
WMA = Wildlife Management Area
yng. = young
+ or ++ with numbers = more; with dates = later
< > = less (or fewer) than, greater (or more) than

Frequently used locations (no county names)

APBS = Amherst Point Bird Sanctuary, *Cumb*
CBHNP = Cape Breton Highlands National Park
Hartlen Pt. = E. of Eastern Passage, *Hfx*, including the Forces golf course & 'Back Cove' (informal name).
Keji NP = Kejimikujik National Park
Keji Seaside NP = Kejimikujik Seaside National Park
NW Arm, Halifax = Northwest Arm, Halifax
PPP, Halifax = Point Pleasant Park, Halifax
Saltmarsh Tr., *Hfx* = The old rail trail across Cole Hbr.
Uniacke PP = Mt. Uniacke Estate Museum Pk., *Hants*

Contributors

Names of contributors not on this list are spelled out.

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		MCD	Dennis, Mark C.		



Seasonal Summary

Waterfowl

By Ross Hall

A single SNOW GOOSE was found at Nappan, *Cumb*, Oct 8 (Shawn Chapman, ph.) and seen again Oct 10 (Andrew Wagstaff, ph.). Two discovered at the Hartlen Pt. golf course Oct 19 (Jason Dain, Robert Keereweer, ph.) were observed and photographed by many other birders until Oct 24.

A single BRANT was observed at Cape d'Or, *Cumb*, Oct 12-15 (Howard Shapiro, ph.) and two were seen on Seal I. Oct 19 (DMB, Danae Mouton).

An observant Shawn Chapman also discovered and photographed a **BARNACLE GOOSE** at Shubenacadie Nov 4. Subsequently many birders came to see this bird, finding it either in Snides L., in Shaw Pond, or on nearby corn stubble. On Nov 15 two Barnacle Geese were present at Shaw Pond, but the two were not reported afterwards. Upon seeing photos of the Shubenacadie goose, local hunter Steve Hutt shared photos of a Barnacle Goose shot in Shubenacadie Oct 25, and shared details of singles on the mud flats in Truro and in Middle Musquodoboit in mid-Sept. Previous to this year, the last report of Barnacle Goose was of one in Truro Oct 18-Dec 6, 2013, but it seems probable that hunters were aware of others, but birders weren't.

ACKLING GOOSE (Richardson's *fide* ELM) was observed amongst Canada Goose near Truro and Shubenacadie. Up to two were likely travelling between the Snides L. and Shaw Pond locations, *Hants* Nov 5-13. Near Truro, a single Cackling Goose

was observed at Tidal Bore Rd. and Farnham Mill Rd. locations Nov 8-12.

CANADA GOOSE was widely reported with counts of 2000 in Shubenacadie and 2500 in Truro. A single count of Canada Goose numbers near Truro from North River to Masstown Nov 16 was an impressive 4830 (ROH).

WOOD DUCK was reported from all counties with numbers highest during August and diminishing with each month until November, when only two were sighted at Sir Sandford Fleming Pk., Halifax.

BLUE-WINGED TEAL reports peaked during September, most from New Glasgow westward. Compared to the previous two species, the reports of NORTHERN SHOVELER were much more sparse, most from French Basin Tr., Antigonish, Amherst, Windsor and New Minas. At Amherst sewage lagoons, there was a high of 54 Northern Shovelers Nov 16 (DMB).

All GADWALL observations came from locations in northern and western Nova Scotia with no reports from *GuySBorough*, *Antigonish* or CBI. Hotspots were Wallace Bay National Wildlife Area, Seal I, and French Basin Tr., with up to 28, 37, and 40 individuals respectively.

EURASIAN WIGEON was observed at six locations through fall: 1-2 at French Basin Tr. Oct 5-Nov 29; 1 at Glace Bay Nov 13 (David Turgeon); 1 at Farnham Mill Rd., *Col* Oct 28-Nov 13; up to 7 at West Lawrencetown Sept 9-Nov 15; 1 at Canard Pond, *Kings* Oct 14-15; and 1 at Seal I Oct 11-22

AMERICAN WIGEON reports came from all counties but *GuySBorough*. There were a few counts over 100: 100 at Cape John Oct 7 (STV); 110 at Snides L. Nov 13 (Donald Codling,

This first (here, Nov 2) of eventually two Barnacle Geese found at Shubenacadie, Col, during November, demonstrates again how the area is a hotspot for rare geese. Photo by Jason Dain.



LOC); and up to 170 at West Lawrencetown Oct 2-Nov 15. There were abundant observations of MALLARD and AMERICAN BLACK DUCK across the province.

NORTHERN PINTAIL was reported from all mainland counties except *Guyborough* and not at all from CBI. GREEN-WINGED TEAL was widely observed across the province, with largest counts/ estimates of 230 at French Basin Tr. Oct 16 & 23 (Cliff Sandeson); 268 at New Minas sewage lagoon Sept 12; and 300 as they flew past at Daniels Head CSI Oct 15 (AAD).

RING-NECKED DUCK was widely observed across Nova Scotia. There was a high count of 192 Ring-necked Ducks at Bartlett River Pond, *Digby* Nov 18 (AAD) and several high counts at New Minas sewage lagoon, including 172 birds Nov 25 (GFO, Harold Forsyth). David Turgeon discovered and photographed a male **TUFTED DUCK** at Tower Rd. lagoon, *CB* Oct 14 that was observed until Oct 29. Rob Debay photographed a male Tufted Duck at Miller Lake, *Hfx* Nov 29.

GREATER SCAUP reports spanned twelve counties and notable was an early arrival of 40 Greater Scaup at Middle River Dyke, *Pict*, Aug 9 (KJM). Highest counts came from Pictou at Middle River where there were 225 Nov 24 (KJM) and Big Island with 207 Nov 27 (KJM).

LESSER SCAUP first showed up in October, in five locations, and by November it was reported from 10 counties. High count reports came from Bissett L. (33 on Oct 23, TEB), and the Antigonish sewage lagoons (36 on Oct 26, KJM).

Two thirds of the widespread COMMON EIDER observations came from *Halifax*, *Shelburne*, *Yarmouth*, and *Digby*. The first HARLEQUIN DUCK of the season was spotted at Little Harbour, *Rich*, Aug 21 (PMC, SEM, ph.). The next reports of the species were from 13 locations during October, but widespread arrival occurred in November. At Hemeons Head 56 Harlequin Ducks were counted Nov 25 (AVM, SAB). At Keji Seaside NP, seven observers made a best estimate of an impressive 93-96 diving Harlequin Ducks Nov 25 (Christopher Kennedy, Emily Beacock, Laura Bartlett, Rebeca Jardine, Ryan Fist).

The earliest report of SURF SCOTER was of one on Big I. Merigomish Aug 6 (KJM) – a place where some were present during summer. There is also an early report at Cape d'Or Aug 14 (Howard Shapiro). Fall observations are more abundant beginning late September.

Like Surf Scoter, there were a few August reports of WHITE-WINGED SCOTER with possible continuation birds from summer, but not until later September were observations more abundant. The earliest observation was at Hemeons Head Aug 2 (KLO).

BLACK SCOTER only started showing up widely late-September, but a few were recorded through August and September: 105 at Daniels Head, CSI Oct 18; 65 at Duncans Cove Nov 6 (Diane LeBlanc); 62 at Baccaro Pt. Oct 16 (MCD); and 50 at Isle Madame Nov 7 (MCD).

There is only one August observation of a single LONG-TAILED DUCK at Gold River, *Lun* Aug 22 (KEL, ph.). All other observations occurred after Oct 13.

There is only one August observation of COMMON GOLDENEYE at Tower Rd. lagoon Aug 23 (PMC, SEM). Most reports are through November, and *Pictou* and *Cape Breton* account for the majority. Twenty-eight BARROW'S GOLDENEYE were reported from seven locations from late-October on, most from CBI.

The first BUFFLEHEAD report was of one at Tower Rd. Lagoon, *CB*, Sept 6 (DBM). By November it was observed in most Atlantic Coast counties.

HOODED MERGANSER and RED-BREASTED MERGANSER reports increased through fall with largest numbers in November and were by far most numerous in *Pictou*. COMMON MERGANSER reports showed highest counts during October-November, and again with largest numbers in *Pictou*.

RUDDY DUCK has five fall reports: one at Cape John Oct 7 (STV); one female at Russell L., Dartmouth Oct 26-28 (var. obs., ph.); one at Farnham Mill Rd., *Col*, Nov 11-15 (STV; ELM; DMB; LUB); two at Heritage Tr., *HRM*, Nov 15 (MZE); and at Kingsburg Pond, *Lun*, Nov 22 (DMB).

Galliformes

By Ian McLaren

RING-NECKED PHEASANTS, some of them ‘yard birds’, were found as usual noted throughout the mainland, and in *Cape Breton*. A few were noted as “dark” or “dark-phase”. The eBird totals of RUFFED GROUSE and SPRUCE GROUSE, were down by roughly 45% and 13% respectively, compared with the fall 2016 totals. This might suggest that the apparent decline of the former was ‘real’. However, Ruffed was reported as usual from all mainland counties and CBI, and Spruce only from some mainland counties, and *Inverness* and *Victoria* on CBI. A good place near Halifax to find Spruce Grouse seemed to be half-way between Sheet Harbour and Middle Musquodoboit, *Hfx*, along Beaver Dam Rd, where (family?) groups totalling nine were found Sept 2 (CHP, GRW, KST) and ten Sept 29 (Jason Dain).

Single NORTHERN BOBWHITES were reported from two urban Halifax locations – Clayton Park and the peninsula’s north end. Were these same wandering escapees reported earlier from the Spryfield area? No Chukars were observed, but the HELMETED GUINEAFOWLS in Wolfville clung on, with as many as six spotted Oct 10 (Howard Williams).

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Loons and Grebes

By Ross Hall

There were very few reports of RED-THROATED LOON August–September with most sightings October–November. This species was seen along shores of all counties except *Colchester*. Some higher counts came from CSI (61 on Oct 21, MCD); BPI (41 on Oct 22, DMB & LUB); Waterside PP, *Pict* (49 on Oct 23, KJM); Skinner’s Cove, *Pict* (54 on Nov 9, KJM); Malignant Cove, *Ant* (33 on Nov 12, KJM); Baccaro Pt. (117 Nov 19, MCD) and Black Rock Lighthouse, *Kings* (38 on Nov 26, PHT).

A PACIFIC LOON was photographed by Larry Neily at Port George, *Anna*, Sep 30, and described as “a small loon, body unspeckled black above to the waterline and pure white below, dark gray on the back of the head and neck and a visible chin-strap, bill and feet appeared gray.” Also, two Pacific Loons were observed Oct 3, and another on Oct 18, at Seal I. (Danae Mouton, DMB, Sarah Fensore). On Oct 3 David Bell commented that they “Flew right over the alders banding station together heading SE around 10:30... Giving odd croaking calls (sounding like a weird SACR/goose hybrid) which I found match a few tapes on [Xeno-Canto] and I’ve never heard COLO doing (and can’t find tapes of it online).



This Red-throated Loon at Caribou I., *Pict*, Oct 7, shows nothing unusual when swimming along, but a wing stretch shows its temporarily short wings. All loons undergo synchronous wing moult where all flight feathers are dropped at the same time, rendering them briefly flightless. Adult Red-throated Loons moult their wing feathers Oct–Nov, earlier than adults of other loon species which moult theirs Feb–Mar. It is thought that it is more advantageous to endure a relatively short period of flightlessness rather than undergo a prolonged period of impaired flight. Other species groups that also use the synchronous wing moult strategy are grebes, waterfowl, rails, murres and puffins. Photos by Peggy Scanlan.

Just had a brief look as I was on a net run and had to run out of the woods but clearly saw two smallish loons – slimmer but otherwise similarly shaped to COLO, with all-dark backs and white undersides, just before they went behind the trees.” For the Oct 18 observation David Bell commented “Molting adult still in partial alternate plumage (pale nape with darker feathers coming in, mostly black throat with some white coming in) headed S past the west village at 08:09. Flying about 20m behind a RTLO for direct comparison. Slightly slower wingbeats and much blacker back; otherwise similar in size and flight style but a bit stockier, not lifting head as often. Fairly close to shore and in good light but viewed from hill at alder patch due to banding commitments.”

COMMON LOON was, as its name implies, commonly seen with highest counts during October. Reports from August–September contain references to fledged young PIED-BILLED GREBE, often of successive age groupings. Most observations of our only breeding grebe species were at wetlands such as French Basin Tr., Russell L., Miner’s Marsh and Old Halifax Rd. Wetland, *Pict*. There were only a few observations in November, the last being of a bird still in juvenile plumage at Newville Lake, *Cumb*, Nov 16 (DMB).

RED-NECKED GREBE and HORNED GREBE numbers were highest during November. Horned seem most abundant mid-province with very few reported from CBI and *Yarmouth* through the Bay of Fundy. In comparison, Red-necked reports are more evenly distributed.

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Tubenoses through Cormorants

By John Loch

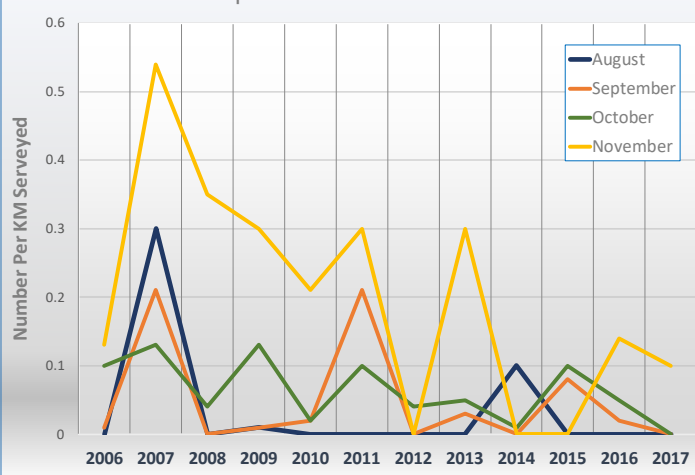
Data for this report were drawn from Eastern Canada Seabirds at Sea (ECSAS) surveys conducted by the Canadian Wildlife Service in the 2017 fall season (August 1 to November 30) – see the autumn 2015 issue of *NS Birds* for more details on the ECSAS database, survey methodology and proprietary control. Of course, there were *eBird*-reported sightings available for the fall as well; see this section in the spring 2017 issue of *NS Birds*, however for its new policy regarding *eBird* & ECSAS data inclusion in *NS Birds*.

Fall 2017 ECSAS sightings are shown in the table at right, above. Efforts to compare fall 2017 with previous years (2006-2016) were done cautiously as the surveys were more inshore in 2017. In fact, 62% of the surveys in NS waters were in the Eastern Shore Islands area (*fide* C. Gjerdrum). A good illustration of the anomaly that can arise is the 2017 cormorant sightings where about 800 Double-crested and 40 Greats were seen in fall 2017 versus 274 and four, respectively, seen over the entire previous 11 falls in total! On the other hand, Sooty Shearwaters were observed in such relatively large numbers in fall 2007 that the 2007 fall season accounts for about 60% (159 of 260) of all Sooties observed since 2006. The fall 2017 ECSAS

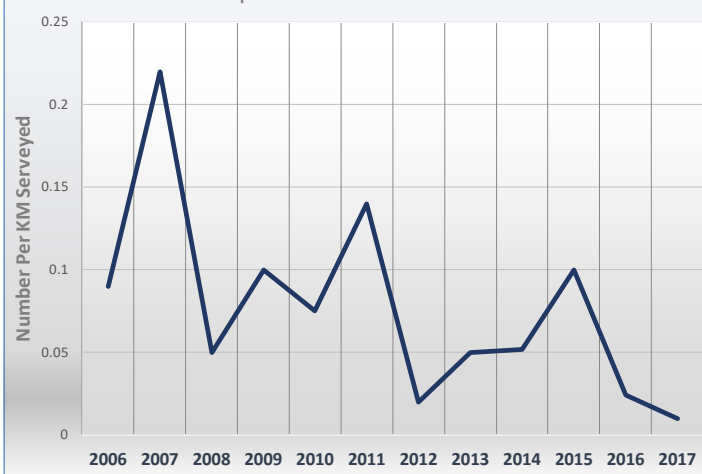
Unweighted ECSAS counts, fall 2017

Species	Aug	Sep	Oct	Nov	Totals
Northern Fulmar	0	0	0	35	35
Cory's Shearwater	0	428	120	0	548
Great Shearwater	110	81	7	0	198
Sooty Shearwater	1	0	0	0	1
Manx Shearwater	1	0	0	0	1
Wilson's Storm Petrel	40	0	0	0	40
Leach's Storm-Petrel	10	0	0	0	10
Northern Gannet	993	476	539	0	2008
Double-crested Cormorant	15	669	118	0	802
Great Cormorant	0	0	38	0	38
Monthly totals	1170	1654	822	35	3681
Effort (kms surveyed)	136	249	1175	152	1712

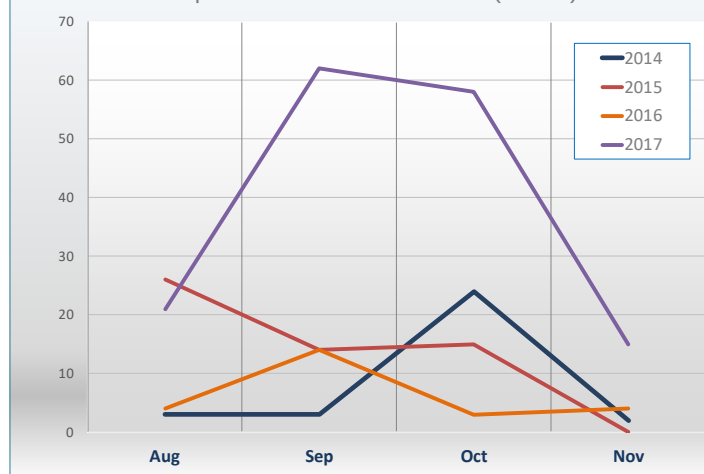
Graph 2: Northern Fulmar



Graph 1: Northern Fulmar



Graph 3: Northern Fulmar (eBird)



survey data presented in the table on page 14 shows unweighted totals but subsequent ECSAS-related figures and analyses only use sightings that are effort-weighted by kilometres surveyed.

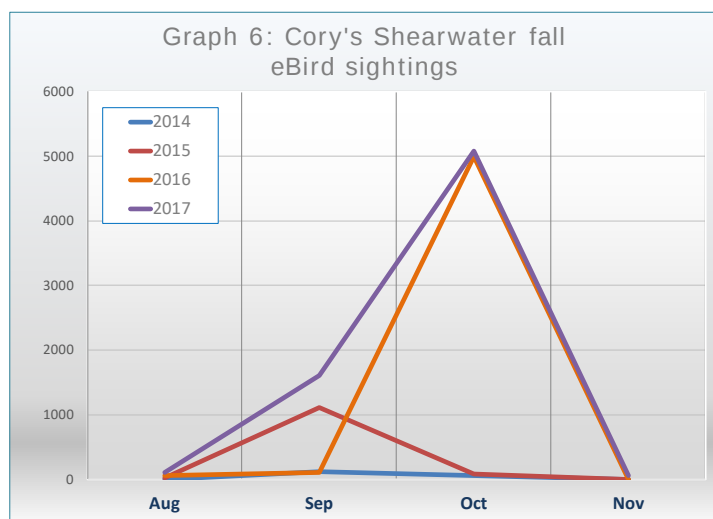
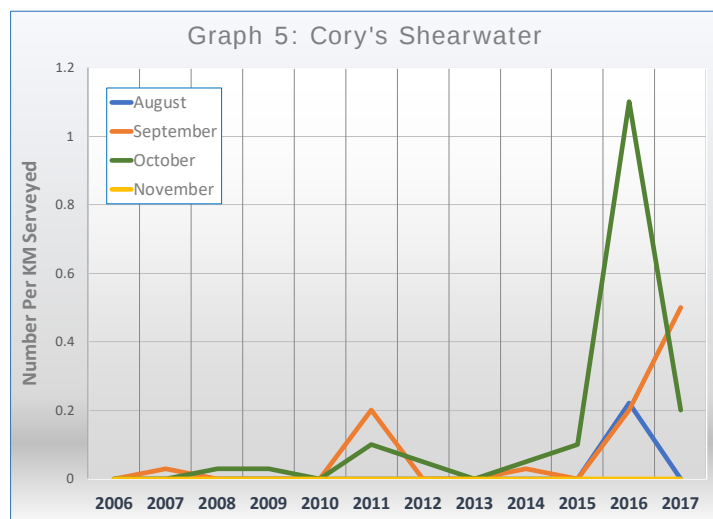
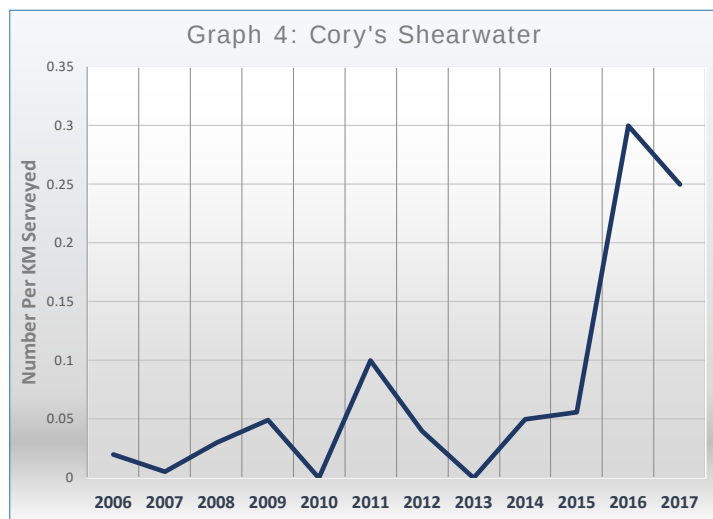
Clearly, total fall ECSAS sightings of NORTHERN FULMAR in 2017 declined considerably compared to the all previous falls (see graph1, previous page). This may be attributable to the course followed by the survey ship this fall – closer to shore

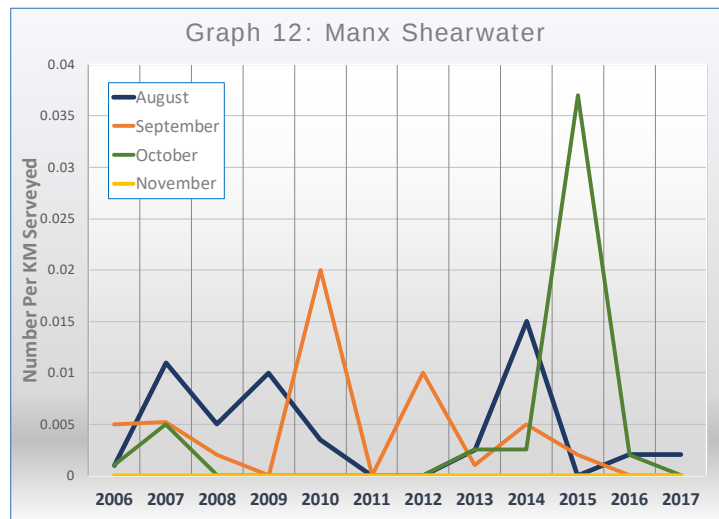
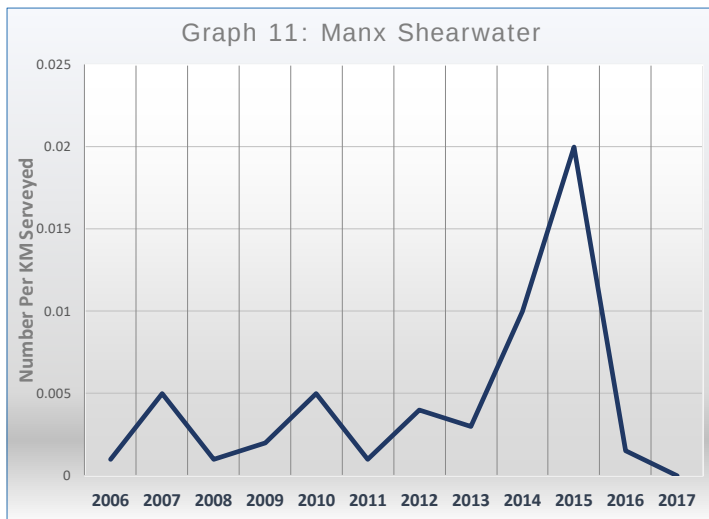
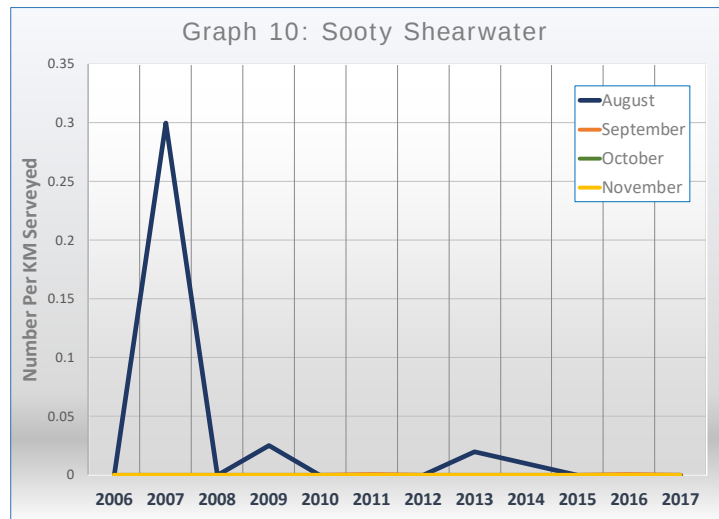
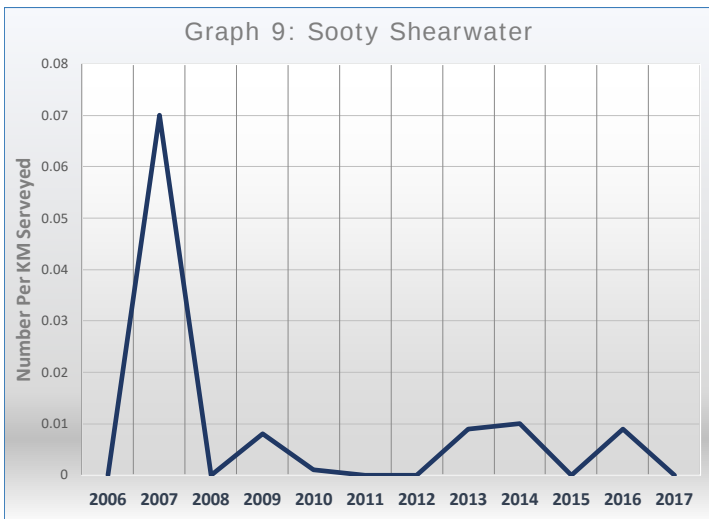
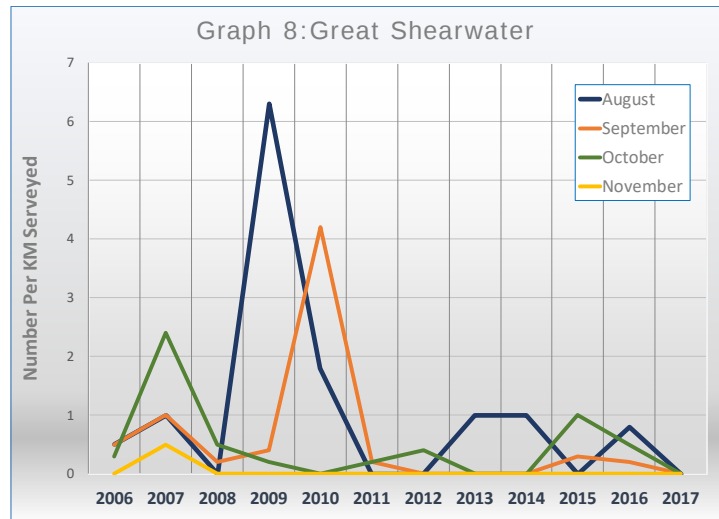
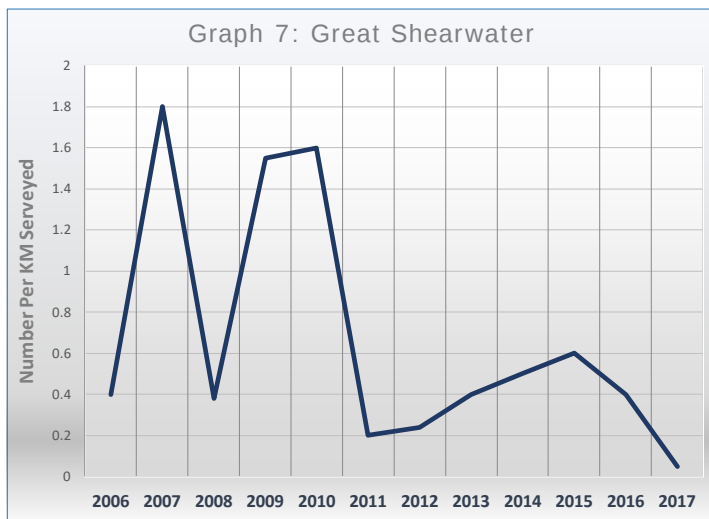
than usual. However, eBird reports that fulmars were often seen close to shore in falls of 2014-2016 and especially 2017 - see Graph 3. In the fall of 2017, fulmars were seen by ECSAS observers only in November (Graphs 1 & 2), obviously quite different than previous years. The highest eBird estimate for fall 2017 was 40 seen at Baccaro Pt., Shel, Sept. 27).

CORY'S SHEARWATER has attracted a lot of attention in recent years, from 2014 on, when sightings both by ECSAS and eBird increased rapidly. Unweighted ECSAS sightings in fall 2017 were higher than average (548 vs. 186, respectively) but only less than half (42%) as many as were observed in 2016 (1305). However, effort-weighting reduced the magnitude of that decline considerably (-58% to -21%) —see Graph 5 . Within fall 2017 Cory's effort-weighted ECSAS sightings were much fewer in this year's October than last but they increased this September over the numbers for 2016 and indeed were the highest of the entire September effort-weighted sightings series (2006-2017) – see Graph 4. Furthermore, eBird sightings of Cory's for the past four falls (Graph 6) suggest that ECSAS survey location had little to do with the ongoing surge in Cory's Shearwater sightings. Nonetheless, overall fall 2017 ECSAS sightings did decline from last years' 2006-2017 time series maximum. In addition, an estimated 1800 Cory's Shearwater were seen off Seal I. Oct 4 (DMB, Sarah Fensore, D. Mouton), reporting 1-10/min for the whole day - averaged to 3/min for 10 hrs.

Fall ECSAS sightings of GREAT SHEARWATER had gradually increased from 2012 until 2016 when a decline occurred (Graph 7). Monthly ECSAS sightings within fall 2017 were very low relative to other falls (Graph 8). Indeed, in this regard, it is worth noting that fall eBird sightings of Greats in 2017 were 30% greater than their 2014-2016 average, suggesting that the inshore locations of the fall 2017 ECSAS surveys may indeed have influenced the number of ECSAS fall 2017 effort-weighted sightings of this species. Nonetheless, all fall ECSAS effort-weighted sightings of Greats have decreased by three to six-fold (and 18-fold in 2017) since 2010. Approximately 12,000 Great Shearwaters were counted off Seal I. Oct 4 (D. Mouton, DMB, S. Fensore): they were “passing at 5-70/min for the whole day.”

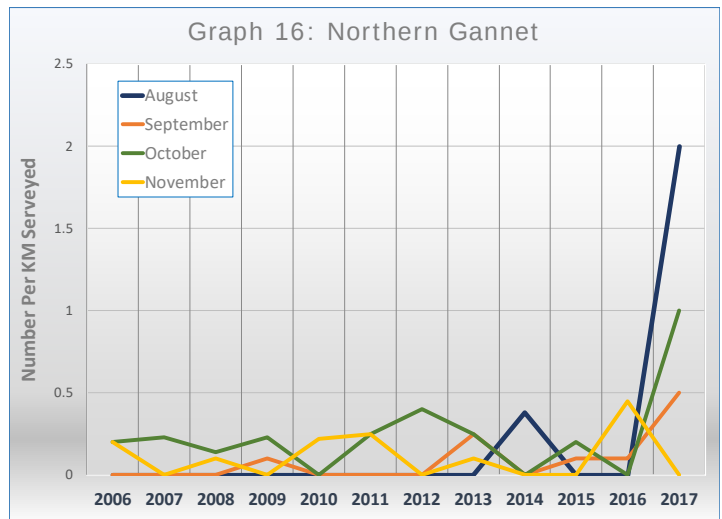
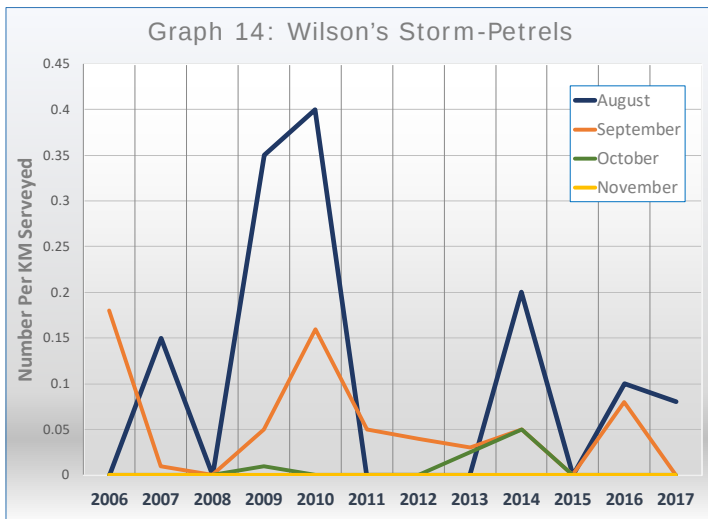
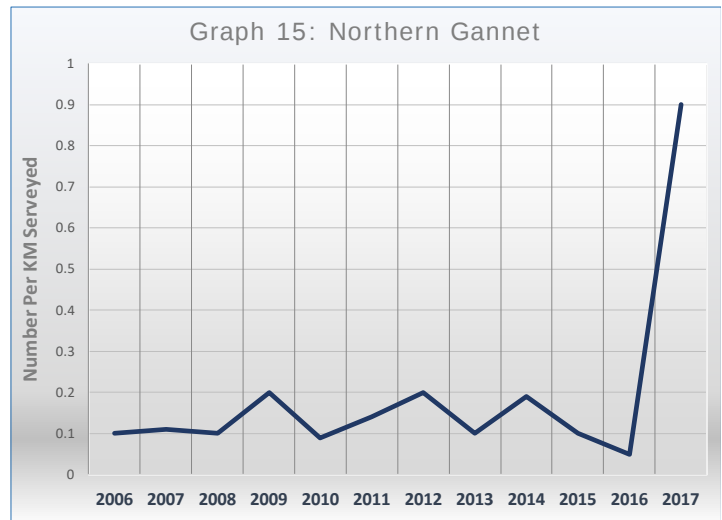
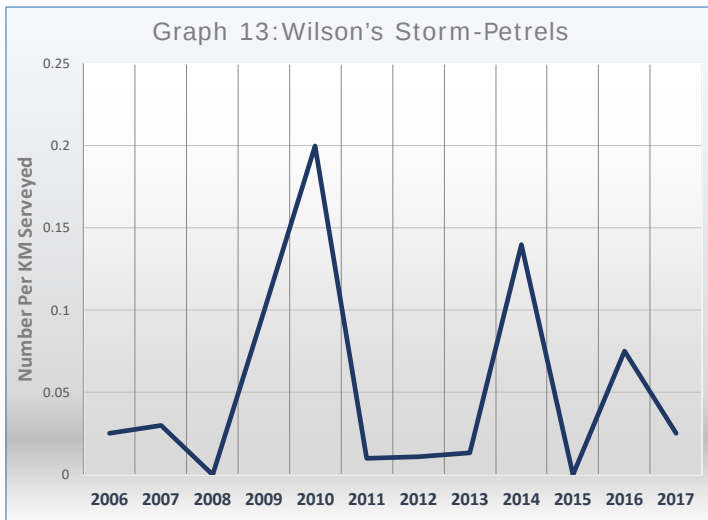
On the other hand, SOOTY SHEARWATER fall ECSAS numbers in fall (Graphs 9 & 10) have always been low, with the notable exception of 2007 when 159 were observed in August. The one bird sighted in fall 2017 was in line with six other years during 2006-2017 where total sightings were fewer than six. Furthermore, it's apparent from the ECSAS longer-term data that August has been the only fall month with any sightings of note. Approximately 100 Sooty Shearwaters were observed off BPI Aug 8 (DMB, D. Mouton, S. Darlington, S. Fensore).





AUDUBON'S SHEARWATER is considered a rare species in NS waters with only about a dozen sightings prior to 2010 (McLaren, 2012, *All The Birds of Nova Scotia* p. 69), and three (with photos) since: one in 2014, three in 201? (see past *NS Birds* issues), and now one more. This season's was sighted on 4 August, 2017 on the "Pubnico Pelagic" trip about 180 kms. due south of CSI (See complete write-up of that pelagic trip

pp 40-46.) **MANX SHEARWATER** sightings have been more variable than other species (see Graphs 11 & 12 for the effort-adjusted ECSAS sightings). As with Sooty Shearwater, there was only one sighting of one individual in August, making this fall's effort-adjusted ECSAS total the lowest in the entire 2006-2017 series. This may be linked to the survey coverage in 2017 which was mostly inshore, not favoured by Manx. Other sightings of



one-to-13 individuals were reported on eBird, but one report of 125 Manx Shearwaters 38 kms. sse of Peggy's Cove, Lun, Oct 12, might be questioned since no Great Shearwaters were reported by the same observer on that date.

Both WILSON'S and LEACH'S STORM-PETRELS have shown similar trends over the ECSAS time series – gradual declines in peaks and no sightings in the fall 2017 months, except for Wilson's in August; see graphs of Wilson's Storm-Petrel yearly and monthly fall effort-adjusted sightings above. It's obvious that Wilson's Storm-Petrel appears in good numbers in most Augusts and Septembers but has much reduced numbers in October and none in November. Leach's (not graphed) are similar, although not as abundant, but they do occur in October in most years, unlike Wilson's. 160 Wilson's Storm-Petrels were reported on eBird from a whale-watching trip out of Brier I. Aug 24 (Andrew McCartney). A large estimate of 60 Leach's Storm-Petrels was reported for August 4 on eBird from an offshore "Pubnico Pelagic" (see write-up pp. 40-46).

A **MAGNIFICENT FRIGATEBIRD** was observed on Seal I. Sept 28 (DMB, S. Fenmore, D. Mouton) and reported by David Bell as an "adult female sitting on the east-side church at 17:03, took off at 17:29 when two GBBG harassed it —[it



Most Leach's Storm-Petrels have left our waters by October, so this one at the Canso Causeway Nov 4, as well as others during the same period, were late.
Photo by Ian Murray.



Once tropical storm Maria's torrential rain stopped at Seal I., the Atlantic Bird Observatory crew found this adult female Magnificent Frigatebird on the East Village church Sept 28. Maria was a category 5 hurricane as it crossed Dominica, was downgraded to a category 4 just before striking Puerto Rico, passed north of Cuba and then headed north, staying far offshore, and then headed eastward about 750 km south of Nova Scotia.

Photo by David Bell.

was the] second bird I saw when out for a walk once the rain stopped!" See the excellent photo above. McLaren (2012, p. 76) reports "three specimen records and three sightings before 1981 and about 15 since then". Three more have been found since 2010, all photo-documented in *NS Birds*, but none from ECSAS surveys (2006 and thereafter).

NORTHERN GANNET has had a steady range of unweighted ECSAS sightings (totals of 200-500 birds) from fall 2006 to fall 2016; the effort-weighted ECSAS sightings in the fall of 2017, however, surged by about fifteen-fold, most occurring in August but with substantial increases in September and October as well; see the two graphs (Graphs 14 & 15) above. There was also an increase in eBird sightings in fall 2017 relative to the previous three falls (totals of about 44,000 versus 34,000, 28,000 and 33,000). While there may be more than one factor at play, it would seem that there was an increase in Northern Gannet abundance, independent of ECSAS survey location. It was reported on eBird that 3000 gannets were observed from Baccaro Pt., *Shel*, Nov. 5 (AAD, PRG), and a "50 per minute average going south. Counted for one minute three times during the hour with results of 60, 39 and 55 per minute; rounded average to 50 per minute."

Neither DOUBLE-CRESTED nor GREAT CORMORANT has ever been regular in ECSAS surveys from 2006-2016. Fall 2017 was an exception, however, with relatively large numbers of both species reported (about 800 and 40 respectively). This was almost certainly due to the inshore locations of most of the surveys in fall 2017. As suggested in this section of the summer 2017 issue of *NS Birds*, these colony-nesting species aren't really amenable to analyses based on ECSAS (normally predominantly offshore) surveys or from non-random eBird sightings.

Herons and Relatives

By Jake Walker

Single AMERICAN BITTERNS were reported from 16 locations in eight counties this fall, the latest on Seal I. Oct 17. Not surprisingly, GREAT BLUE HERON was found in every county, with particularly large post-breeding gatherings of 28 in the Big I.-Merigomish area, *Pict*, Aug 29 (KJM), 40 in Wallace Bay, *Cumb*, Sept 5 (Shelley Appleton), and 57 in Morien Bay, CB, Sept 3 (SEM). At least a dozen GREAT EGRETS were sighted throughout the season, at nine localities, with up to three present on CSI Nov 10. Three SNOWY EGRETS were reported this fall, at Sambro Oct 28-Nov 3, Chezzetcook Inlet Nov 4, and CSI Nov 5. The season's only LITTLE BLUE HERON was found at Sandhills Bch. PP, *Shel*, Aug 9 (Diane LeBlanc). It was also a slow fall for CATTLE EGRET, with single individuals at Greenville, *Yar*, Oct 21, and Nappan, *Cumb*, Nov 20-21. Single BLACK-CROWNED NIGHT-HERONS were found on BPI, where they nest (see last issue) on several dates in August (ABO researchers), and a single bird was seen near Wolfville Harbour, *Kings*, three consecutive evenings Oct 17-19, flying out to the river at dusk. Young **YELLOW-CROWNED NIGHT-HERONS** were seen at three locations in *Halifax* and five locations on the South Shore between early August and Oct 10, and a single bird was on Sable I. through almost all of September (DMC et al.; Greg Stroud).

Diurnal Raptors

By Ian McLaren

Vagrant **BLACK VULTURES** are generally found here on their own; one found by Jeff Ogden on Brier I. Aug 25 “in a kettle of 4-5 Turkey Vultures, eventually peeled off and headed southwest.” **TURKEY VULTURE** was only spotted in small numbers at three locations in *Cape Breton*, and in almost all mainland counties. Larger counts of 35 to 66 were noted at traditional locations in *Annapolis* and *Yarmouth*. Less routine were 21 over CSI Oct 21 (MCD) and a flight of at least 30 circling over Brass Hill, *Shel*, Nov 8 (PRG).

OSPREY was found in small numbers (day totals of one to six on eBird), in every county, more or less in proportion to birding intensity. Almost all were on-the-move; the latest was over Seal I. Oct 18 (DMB, Danae Mouton). **BALD EAGLE** was also reported from every county. About 900 eBird reports were of single birds, but larger gatherings of 25 to 57 birds were observed feeding on Atlantic Saury off the Canso Causeway late Oct–early Nov; the usual group, estimated as 50, was still hanging around the Bird Is., *Vic*, Aug 1; and 38 gathered at Horton Landing, *Kings*, Nov 30, were anticipating winter handouts. **NORTHERN HARRIER** is generally encountered as single individuals coursing over fields, and often as not, from moving automobiles. Even counts of migrants are seldom impressive: e.g., maximal eBird totals this fall (sev. obs.) were eight on BPI Sept 11; six on Cape Sable, *Shel*, Sept 12; and seven on Seal I. Sept 22.

One to a few **SHARP-SHINNED HAWKS** were noted in all counties, but the usual migratory pulses appeared on our ‘southern’ islands. There were eBird peaks of perhaps as many as 24 on BPI Sept 11 (DMB, Danae Mouton); 35 on CSI

Sept 23 (sev. obs.); 14 on Seal I. Sept 29 (sev. obs.); and 25 on Brier I. on both Sept 24 (DAC) and Sept 29 (GFO, Harold Forsyth). Perhaps as many as 25 **COOPER’S HAWKS** were reported (all sources) this fall, probably an all-time record. Almost all were seen by experienced birders, well described, or photographed. The latest was photographed by Maurice LeBlanc near Saulnierville, *Digby*, Nov 16; but of course, some will over-winter. Up to 35 **NORTHERN GOSHAWKS** were also an impressive season’s total. A persistent goshawk October through mid-November (and up to three tallied Oct 28) at Don and Lois Codling’s yard in Lr. Sackville, did well on “a large number of rats after our bird food . . .”

BROAD-WINGED HAWK was as usual found widely in small numbers during August. Large migrating ‘kettles’ were noted later over Brier I., with large eBird totals of 250 Sept 11, 1000 Sept 21, 500 Sept 24 and 25 Oct 1 (var. obs.). Jason Dain posted an excellent photo of a Swainson’s Hawk on NSBS Facebook Nov 30 that had been lingering in NB a few kms from our border; it’s been a while since we’ve had a ‘twitchable’ one. Single and occasionally two-to-four **RED-TAILED HAWKS** predominated the reports from all counties through the season. Ten at CSI Sept 23 (MCD) were presumably on the move. Readers are reminded that good photographs of Red-tailed Hawks should be shared, preferably to eBird, to broaden our knowledge on the somewhat complicated mix of northern and southern forms (possible subspecies) that occur here through the seasons. **ROUGH-LEGGED HAWK** appeared on schedule: a light-phase HY bird on Brier I. Oct 21 (RBS, ph.) was followed by scattered singles Oct 28–Nov 30.

GOLDEN EAGLE has always been elusive here, with

tantalizing reports in recent years from just across the NB border. Kevin Lantz was lucky enough to photograph a juvenile that flew overhead when he was birding by bicycle in the Kelley River Wildlife Area, *Cumb*, Nov 13.



While a Golden Eagle has been a regular winter sight in recent years just across the NS-NB border at Tantramar Marsh, and it is about annual in our province, those found here are typically not 'twitchable'. This juvenile Golden Eagle at Kelley River Wilderness Area, *Cumb* Nov 13 was found by Kevin Lantz while riding his bicycle. Photo by Kevin Lantz.

We continue to include the falcons within the informal category of “diurnal raptors”, although they are unrelated to the hawks and eagles, but are an early ‘offshoot’ of the genetic line that led to the passerine ‘songbirds’. Small numbers (one-to-five) of AMERICAN KESTRELS were encountered widely through the season, but there were evident peaks of out-migration on our ‘southern’ islands: 12 on Brier I. Oct 7 (Bob Hay); 18 on Seal I. Sept 22 (DMB, Danae Mouton, Sarah Fensore); seven on BPI Sept 10 (DMB, Danae Mouton); and nine on CSI Sept 29 (MCD). MERLIN was also widespread in small numbers, but with even more modest migration peaks of five on Brier I. Sept 24 (DAC); seven on Seal I. Sept 22 (DMB, Sarah Fensore, Danae Mouton); and five on BPI Sept 10 (DMB, Danae Mouton). PEREGRINE FALCON was of course more sparsely reported, with the most found lingering near concentrations of migrant ‘peeps’ at the head of the Bay of Fundy. Migration seemed subdued, with maximal counts of five on Seal I. through the first half of October (DMB, Danae Mouton, Sarah Fensore).



TOP: Adult Common Gallinules show a “shield” on the forehead all year, but this becomes more extensive and a brighter red during breeding season. This bird at West Head, CSI (here Nov 25) lacks this “shield” and shows the greyish undersides and neck of a hatch-year bird, born in 2017. Photo by Cal Brown.

BOTTOM: The dull legs and bill, brownish iris, pale buffy undersides as well as brownish head and back help to age this Purple Gallinule as a hatch-year bird, born in 2017. This individual was brought to the Cobequid Wildlife Rehabilitation Centre on Nov 20. Photo by Helene Van Doninck.

Rallids and Crane

By Jake Walker

A single VIRGINIA RAIL was noted this fall, on Seal I. Oct 22. SORA was seen or heard at some usual mainland locations from the beginning of the season through Sep 24. These included an adult and two young. Two **PURPLE GALLINULES** were recorded this fall, both deposited by the same storm system in late November. The first was picked up on Nov 20 in Brookfield, *Col*, and sent for rehabilitation, and the second was found dead on Nov 24 in Tangier, *Hfx*, apparently killed by a cat. Two **COMMON GALLINULES** were reported this fall, one at APBS, *Cum*, Sept 19, and the other at West Head (Newellton), *Shel*, Nov 25-26. AMERICAN COOTS were reported from 15 locations in nine counties this fall, the earliest on Oct 10. Several continued through the end of the reporting period. Summering **SANDHILL CRANES** including some young, were seen into the fall season at several locations in *Colchester* and *Cumberland* this season. One group of up to four was seen in the vicinity of Shiminicas, *Cumb*, another of up to seven in the Amherst area, and a third group of up to three in the Stewiacke-Shubenacadie, *Col*, area. An obvious migrant was seen on Seal I. Aug 27, and two probable migrants near Little Mabou, *Inv*, Oct 4.

Shorebirds

By Rick Whitman

Three **AMERICAN AVOCETS** were found during this period: one at Dominion Bch., *CB*, Aug 25-28 (Monique Vassallo, ph.); one at Pinkneys Pt., *Yar*, Aug 29-Sept 4 (Brenda Levy Tate, var. obs.); and one at The Hawk, *CSI*, Sept 14-28 (CST, var. obs.). The usual **AMERICAN OYSTERCATCHERS** were present on *CSI* and Cape Sable through Sept 20 (var. obs.). At least one young was successfully fledged. Mark Dennis reported five birds in total at The Hawk and Daniels Head on Aug 11, based on quick travel between the two locations. Three at Crows Neck Bch. *PP*, Sept 8 (Julie Smith) and an adult and *HY* young at Sand Hills Bch. *PP*, Sept 17 (Hilary Spidle) had presumably wandered from the nearby *CSI* area. The latest were two on *CSI* 20 Sept (MCD)

Among the many reports of **BLACK-BELLIED PLOVER**, estimates of 200-221 birds came from Horton Landing, *Kings*; *CSI*; and Chebogue Pt., *Yar*, and small numbers remained at many locations through November. The first **AMERICAN GOLDEN-PLOVER** of the year was at the Sydney Airport, Aug 7 (SEM), but daily sighting began Aug 23. The largest estimate of 150 birds was made at the Sydney Airport Sept 16 (NSBS field trip). The only other locations where more than ten birds were seen were Sable I. (max. 16) and Chebogue Pt., *Yar* (max. 45). The latest reported was one with an injured leg at Chebogue Pt. Nov 6 (PRG).

A **COMMON RINGED PLOVER** was observed and heard calling by ABO researchers as it flew overhead in a mixed flock of shorebirds on *BPI* Sept 1. David Bell was satisfied with his ID by comparing its call on the spot with a *Xeno-Canto* recording. **SEMIPALMATED PLOVER** was reported from every county, and was almost daily through October, but only four birds were seen in November, the latest at Martinique Bch. *PP*, Nov 18 (CPE). Reports of 500 or more were received from seven coastal counties and as was often true in the past, the largest estimate (1500 birds) was also made at Martinique Bch. Aug 28 (GRW).

PIPING PLOVERS were reported from only 16 locations on eBird and NSBS Facebook, but additional locations were reported in Bird Studies Canada updates. (Their year-to-year status will be periodically updated in the Other Reports section.). The largest hatched brood reported this season was six with an adult at Cherry Hill Bch., *Lun*, Aug 17 (SJF). The latest reported was one on *CSI*, Oct 15-16. Our summer-resident **KILLDEER** was seen at least once in 16 counties. All reports of 20-44 came from the Sydney Airport, Aug 7-Sept 16 (var. obs.). About eight different birds were seen in November.

Single **UPLAND SANDPIPERS** were found at Horton Landing, *Kings*, Aug 10 (RIW); Amherst Marsh, *Cumb*, Aug 16 (KJM, JUO, GDE); Chebogue Pt., *Yar*, Aug 17 (Ervin Olsen, ph.); and Seal I., Aug 25 (DMB, J. Gregg, S. Darlington). The unique flight call of this species was an important part of the ID of three of these records. A fifth was identified only from its calls recorded by John Kearney's nocturnal monitoring program at Carleton, *Yar*, Sept 18. **WHIMBREL** was reported at least once from 15 counties. The latest one was at Lr. Three Fathom Hbr., *Hfx*, Oct 27 (AMI). The largest eBird totals were 20 at Chebogue Pt., *Yar*, Sept 8-13 (MIM, TMI, AMI) and 26 at Blanche Pen., *Shel*, Aug 3 (J-F Piche). **HUDSONIAN GODWIT** was found in *Cape Breton*, *Cumberland*, *Kings*, *Halifax*, *Shelburne* and *Yarmouth*, with three or four birds seen only at Morien Bar, *CB*; Amherst sewage lagoons; Cole Hbr. salt marsh, *Hfx*; and The Hawk, *CSI*. The latest were two lingering at Conrad Bch. Nov 12-13 (B. Haley, var. obs.).

RUDDY TURNSTONE was reported from 13 counties on eBird. The maximum flock of 40 birds was seen at The Hawk, *CSI*, Aug 4 (DMB, Siobhan Darlington). Flocks of 20-35 birds were seen at six more locations. Only seven birds were seen in November, the last one on the Blanche Pen., *Shel*, Nov 23 (MCD). **RED KNOT** was reported from 11 counties. Flocks exceeding 25 birds were reported only from Chezzetcook Inlet, *Hfx* (25-43 birds) and The Hawk, *CSI* (28-59 birds). They were seen almost daily to mid-November, but the latest were seen at three locations in *Halifax* Nov. 18 (PMC, SEM). This year's only **RUFF** was found and photographed by Andrea Drake at Miners Marsh, Kentville, the morning of Sept 3. It was still there for James Churchill in the afternoon, and about four additional birders early next day.

About nine unique **STILT SANDPIPERS** were reported from *Kings*, *Halifax*, *Lunenburg*, *Queens*, *Shelburne* and *Yarmouth*, but some long-staying ones produced numerous eBird reports. One bird at Miners Marsh and Stellas Pond,

Relative size is extremely important when identifying shorebirds and this photo is tremendously instructive. From left to right in this photo from Miners Marsh, Oct 10, are Greater Yellowlegs, Long-billed Dowitcher, Stilt Sandpiper, Greater Yellowlegs, Lesser Yellowlegs and Pectoral Sandpiper. Photo by Jason Dain.





The very pale greenish legs of this adult male Ruff at Miners Marsh, Sept 4, aren't depicted in most field guides, but this variation in leg colour is described in some texts and is quickly found through online image searches. The patches of dark feathers on the breast sides and upperparts as well as lanky proportions aid to identify its age and sex. Photo by Richard Stern.

Kentville, generated 58 reports, was the only one seen after Sept 27, and stayed until Nov 9. A photo of a **CURLEW SANDPIPER** was taken by Chris Peters at Martinique Bch. PP, Aug 27. Ian McLaren worked on the photo to obtain the ID but the bird was also re-found on Aug 31 by Blaine & Amber MacDonald, Alison Conrad and Angela Granchelli.

SANDERLINGS were reported from 14 counties throughout the period. Observations of 200-450 birds were made on CSI, Martinique Bch. PP and Sable I. DUNLIN were seen in 13 counties. The earliest returnee was on BPI Aug 6 (DMB, LUB), but only eight more were reported during August. Observations of 200-300 birds were made at Morien Bar, CB; Chezzetcook Inlet, Hfx; Horton Landing, Kings; Hemeons Head, Shel; and on CSI. Our winter-resident PURPLE SANDPIPER was reported from seven counties. One very early returnee, or failed migrant, was at Baccaro Pt., Shel, Sept 22 (MCD, RDE), but only seven more were seen during October. Modest numbers were seen at 15 additional locations in November as migration became active. About 20 BAIRD'S SANDPIPERS were seen this fall in seven counties. The first two were on Seal I. Aug 17 and the latest was also there, Oct 16 (ABO group). LEAST SANDPIPERS were reported from every county except Annapolis and were surely there as well. The latest were a single bird at Chezzetcook Inlet, Hfx, Nov 8 (SEM) and six along the Salt Marsh Tr., Hfx, Nov 12 (MZE). Estimates of 100 or more came from Kings, Halifax, Shelburne and Yarmouth, with a maximum of 600 at Martinique Bch. PP, Aug 28 (GRW). WHITE-RUMPED

Sexual dimorphism in birds can be rather subtle as in the wood-warblers or quite obvious as shown by this photo of assumed male (left) and female (right) Pectoral Sandpipers at Miners Marsh Sept 22. Unlike most other shorebirds like the peeps, Sanderling, White-rumped, Baird's, Purple and Dunlin, the male Pectoral is larger than the female.

Photo by Richard Stern.

SANDPIPERS were also seen in 13 counties. The species was present throughout the period but numbers were modest after the first week of November. Although estimates of 100-150 birds were reported from coastal Kings Aug 2-Sept 4, a much larger estimate of 400 birds came from Sable I., Sept 9 (DMC). About 20 BUFF-BREASTED SANDPIPERS were seen at ten locations in Cape Breton, Halifax, Shelburne, Yarmouth and Digby, Aug 21-Sept 16. Cape Sable, Shel (up to four birds) and Chebogue Pt., Yar (up to six birds) were the best locations for viewing this beautiful species.

PECTORAL SANDPIPERS were also reported from 13 counties. About a dozen birds continued to November, the last one at Chebogue Pt., Yar, Nov 23 (EOL). Larger flocks of 25-45 birds were seen at Sydney Airport, and on CSI and Cape Sable, Shel. SEMIPALMATED SANDPIPERS were also reported from every county except Annapolis. Reports were almost daily to Nov 1 but only 16 birds were seen in November, at four locations. The last report was three birds at Chezzetcook Inlet, Hfx, Nov 8 (SEM). All reports of 5000-100,000 birds were from The Guzzle, Horton Landing and Avonport Bch. in Kings and peak numbers there were Aug 2-9. A large estimate for recent years was of 100,000 at The Guzzle, Aug 9 (JOL).

Two WESTERN SANDPIPERS were reported as juveniles with the bright rufous scapulars. The first was on Seal I. Aug 27 (DMB, J. Gregg, S. Darlington) and the second was at Gabarus, CB, Sept 8 (Tony Timmons).



What appear to be a white rump, white wing stripe, down-curved bill and chestnut-red head and throat fit only for Curlew Sandpiper. This photo, a Photoshop edited version by Ian McLaren of the original, is cropped, enlarged, has enhanced brightness and contrast and finally had the thus-induced fuzzy edges of the bird removed. This rarity was among other shorebirds at Martinique Bch., Hfx, Aug 27.

Photo by Chris Peters.



SHORT-BILLED DOWITCHER was seen in twelve counties, but only from eight locations in October, and the latest was seen off the Salt Marsh Tr., Hfx, Nov 8 (MZE). Estimates of 100-300 birds were made in *Guysborough, Halifax, Lunenburg, Queens* and *Shelburne*, but the single largest estimate (3500 birds) was made at The Hawk, CSI, Aug 11 (MCD). About twelve **LONG-BILLED DOWITCHERS** were reported. There were three birds on Sable I. Sept 10 (LUB, Sydney Bliss);



three very long-staying birds at Miners Marsh, Kentville, Oct 9-Nov 20 (many obs.); a single bird at Shipyard Park, Canning, *Kings* Oct 4-10 (JAW, PHT); one, or possibly two, were on CSI Sept 15-Oct 23 (MCD, MIM, Jim Scarff); a single bird on Seal I. Aug 24 (DMB, J. Gregg, S. Darlington); and three birds at Town Point Rd., *Yar* Nov 11 (AAD). Only about 17 unique AMERICAN WOODCOCK were reported from *Antigonish, Pictou, Guysborough, Halifax, Lunenburg, Shelburne, Yarmouth* and *Digby*. The latest was at Midville Branch, *Lun*, Nov 26 (Carmel Smith). WILSON'S SNIPE was reported from 14 counties with Miners Marsh, Kentville, standing out again as a major fall-staging location. The count there peaked at 29 birds Sept 27 (James Churchill). No more than five were reported from any other location. The latest was on CSI Nov 21 (MCD).

Six **WILSON'S PHALAROPES** were seen this year. The first was at Cherry Hill Bch., *Lun*, Aug 7 (SJF); the second at Hemeon Head., *Shel* Aug 27 (Russel Crosby); two birds were at Englishtown, *Vic*, Aug 29 (BSK); the fifth at Lawrencetown Bch. PP, *Hfx*, Sept 9-10 (Sharon Cormier-Aagaard, var. obs.);

Separating the two dowitcher species can be challenging, and this combination of hatch-year birds shows how some of the often quoted fieldmarks are not diagnostic. Most guides describe and illustrate the rufous-buff internal markings found on the tertials and coverts of Short-billed, but fail to adequately describe the variation in this characteristic. The Short-billed Dowitcher shown here (above; Cape Sable Aug 27) shows plain centred coverts and tertials, but unlike Long-billed, the feather centres are dark. Upon seeing the photos, Michael O'Brien noted that "Such birds with reduced internal markings are rare, but do occur, most frequently in *caurinus* of the Pacific Coast, but also in *East Coast griseus*." The Long-billed Dowitcher (below; Miner's Marsh Oct 10) also shows plain centred tertials and coverts, but the centres are grey. Also note how in comparison with the Short-billed, the cap of the Long-billed contrasts less with the supercilium and the markings on the neck, breast and flanks are paler and more diffuse. The body shape of both birds appears similar, the Long-billed not showing the typical "grapefruit" shape. Photos by Alix d'Entremont (above) and Jason Dain (below).



This crisply-plumaged hatch-year Wilson's Phalarope photographed in Lawrencetown, Hfx, Sept 10 has begun replacing its juvenal scapulars and mantle feathers with grey-centred and white-edged feathers. Photo by Jason Dain.

Skuas to Terns

By John Loch

and the latest at the New Minas sewage lagoons Sept 16 (GFO, var. obs.). RED-NECKED PHALAROPES were reported from *Guysborough, Cumberland, Halifax, Shelburne, Yarmouth, Digby* and *Kings*. Numbers were generally modest with a maximum of 100 reported from pelagic trips out of Brier I. Aug 24 and 29. Daily reports ended Oct 6, but two birds were seen at Aulds Cove, *Guys*, Nov 5 (STV). RED PHALAROPES were seen in *Antigonish, Halifax, Shelburne, Yarmouth* and *Digby*. Estimates of 100-600 birds were reported on six different dates from pelagic trips out of Brier I. and one fishing trip in *Digby* waters. The latest was at Arisaig, *Ant*, Nov 12 (KJM).

SPOTTED SANDPIPERS were reported from every county except *Colchester*. Most of the larger estimates came from BPI and Seal I. with a maximum 16 birds on Seal I. Aug 24 (ABO researchers) during a walk around the perimeter of the island that day. Only ten unique birds were seen in October, and the only later one was at Hartlen Pt. Nov 4 (Christopher Kennedy, DAC). SOLITARY SANDPIPER was reported in modest numbers from 13 counties, including five records of six to ten birds. Only four birds were seen in October and the latest was along the Sandhill Tr., Auburn, *Kings*, Nov 3 (John Ogletree, ph.). GREATER YELLOWLEGS was seen in every county and counts of 100-133 came from Chezzetcook Inlet, *Hfx*; Morien Bar, *CB*; and Eel L., *Yar*. Reports were almost daily through Nov 18 but only six unique birds were seen Nov 22-26. WILLETS were seen in every county except *Annapolis, Kings*, and *Hants*. Maxima were 53 at Morien Bar, *CB*, Aug 7 (SEM) and 50 at Three Fathom Hbr., *Hfx* Aug 11 (CHP, KST). The last "eastern" Willet was at Big I. causeway, *Pict* Sept 24 (KJM) but the apparent resident "western" Willet at Crescent Bch., *Lun*, was reported eight times Aug 5-Nov 26 (JAH, PRG). LESSER YELLOWLEGS were also seen in every county. The largest counts came from Chezzetcook Inlet, *Hfx* (104 birds, Aug 17, SEM) and Morien Bar, *CB* (99 birds, Aug 7, SEM). There were five records in November, the latest at Conrad Bch., *Hfx*, Nov 18 (Aaron Marshall).

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This section of the fall *NS Birds* issue provides highlights largely based on records of skuas to terns listed by ECSAS and eBird. The reader is referred to this section in previous issues for details on these data sources. Also see the full account of the annual "Pubnico Pelagic" to waters south and east of CSI Sept for details and images of some of the rarities encountered (p. 40).

Perhaps the major highlights of the fall were five rare species reported in eBird. First sightings included: **GREAT SKUA** on a whale-watching trip off Brier I. Sept 9 (AMI, TMI); **LONG-TAILED JAEGER** (on the "Pubnico Pelagic" trip Aug 4; a **LAUGHING GULL** Oct 6 at Westport Brier I. (JAW); **FRANKLIN'S GULL** Sept 15 at the Windsor Causeway, *Hants* (JAW, PHT); and a weary, storm-battered (and moribund?) **SANDWICH TERN** at Crescent Beach, *Lun*, Aug 20 (LAB).

Because there is no other easily accessible public source, a table summarizing all ECSAS sightings this fall (NOT adjusted for effort) is included below. While effort-adjusted data (no. of birds/km of transect) are available, I considered any attempt at comparison with long-term averages to be of questionable value given that most of this fall's ECSAS surveys (>60% - *fide* Carina Gjerdrum) were conducted inshore where inshore gulls and NS-nesting alcids would likely be disproportionately oversampled. Nonetheless, for the record, I have included the 2006-2016 effort-adjusted birds/km data for the species observed this fall. Note that all species seen this fall exceeded their long-term averages using effort-adjusted sightings data.

While there is some variability for individual months, it's clear that in fall 2017 there was a remarkable increase in ECSAS fall sightings, especially for the total number for the entire season: all eight species had higher effort-adjusted sightings in fall 2017 than the comparable fall 2006-16 averages with an average increase compared to the past 11 years of 60% per species. It appears obvious that the nearer-shore locations of a significant proportion of the fall 2017 ECSAS surveys was the likely cause.

Long-term, within-fall trends in eBird reports were mostly similar: (i) numbers of the overwintering birds, like DOVEKIE, RAZORBILL, BLACK GUILLEMOT, BLACK-LEGGED KITTIWAKE, as well as of ICELAND, BLACK-HEADED and BONAPARTE'S GULLS, increased or remained steady in November; whereas (ii) late-fall out-migrants SOUTH

Largest eBird counts or estimates of species in this section, fall 2017

Species	No.	Date	Locality	Observer(s)
South Polar Skua	3	Sept30	Brier I. whale-watch	Jason Dain
Pomarine Jaeger	48	Sept 28	Daniels Head, CSI	MCD
Parasitic Jaeger	18	21 Sept	Baccaro Pt., <i>Shel</i>	MCD
Razorbill	1418	Nov 19	Baccaro Pt, S <i>Shel</i>	MCD
Black Guillemot	230	Aug 2	Hemeons Head, <i>Shel</i>	KLO
Atlantic Puffin	110	Aug 8	Bird Is. <i>Vic</i>	Oliver Patrick
Black-legged Kittiwake	887	Oct 30	Baccaro Pt., <i>Shel</i>	MCD
Bonaparte's Gull	2580	Nov 30	Haliburton Gut, <i>Pict</i>	KJM
Black-headed Gull	20	Oct 5	Margaree Hbr., <i>Inv</i>	Howard Williams
Iceland Gull	50	Nov 11	Hill Street, Glace Bay	David Turgeon
Lesser Bl.-backed Gull	11	Oct 13	Horton Landing, Kings	PHT
Caspian Tern	5	Aug 29	Jersey Cove. <i>Vic</i>	BSK
Common Tern	164	Sept 25	Caribou I. Light, <i>Pict</i>	KJM
Arctic Tern	17	Aug 27	Seal I.	DMB, J. Gregg, S. Darlington

Notable first- eBird sightings - fall 2017 (excluding those found in summer 2017)

Species	No.	Date	Locality	Observer(s)
Great Skua	1	Sept 11	Brier I. whale-watch	AMI,TMI
Long-tailed Jaeger	2	Aug 4	Pubnico Pelagic	AAD <i>et al.</i>
Dovekie	1	Oct 14	Seal I.	DMB, D. Mouton
Thick-billed Murre	1	Nov 22	Near Englishtown, <i>Vic</i>	BSK
Iceland Gull	1	Oct 5	Seal . I.	DMB, S. Fensore, D. Mouton
Glaucous Gull	1	Nov 4	Florence, <i>CB</i>	David Turgeon

Notable latest eBird records – fall 2017 (excluding those normally staying in winter)

Species	No.	Date	Locality	Observers
Great Skua	1	Oct 4	Seal I.	DMB, S. Fensore D. Mouton
South Polar Skua	1	Nov 2	220 km se of CSI (41.487, -66.19)	JOL
Pomarine Jaeger	1	Nov 20	Brier I.--North Point	DMB
Parasitic Jaeger	1	Nov 18	Bordens Cove, <i>CB</i>	David Turgeon
Long-tailed Jaeger	1	Sept 21	Baccaro Pt., <i>Shel</i>	MCD
Laughing Gull	1	Oct 9	Seal I.	DMB, S. Fensore, D Mouton
Caspian Tern	1	Oct 11	Morien Bay--Morien Bar, <i>CB</i>	BSK, SEM
Black Tern	1	Aug 9	Middle River Dam, <i>Pict</i>	KJM
Roseate Tern	1	Aug 21	Fort Creek Pk., <i>Shel</i>	B. Sabourin, C. Owen
Common Tern	2	Nov 4	Big I.-Merigomish Pt., <i>Pict</i>	Robert Lange
Arctic Tern	1	Sept 22	Seal I.	DMB, S. Fensore D. Mouton

POLAR SKUA, POMARINE and PARASITIC JAEGERs, ATLANTIC PUFFINS, LESSER BLACK-BACKED GULLS, COMMON and ARCTIC TERNS decreased in October and continued to decline into November; (iii) the more abundant HERRING, GREAT BLACK-BACKED and RING-BILLED GULLS showed little differences in eBird sightings throughout the fall months. Data and graphs for these eBird numbers are available from the author.

Our reports usually also provide information on the largest counts or estimates of the season, and earliest and latest sightings of the season (i.e., first and latest fall migrants). These are tabulated above.



Species seen during	Fall 2017 ECSAS unadjusted sightings					2006-16 effort-adjusted (#birds/km) averages				
ECSAS fall 2017	Aug	Sep	Oct	Nov	Total	Aug	Sep	Oct	Nov	Total
Great Skua	0	1	0	0	1	0.0001	0.0001	0.0002	0.0001	0.0001
Pomarine Jaeger	1	1	0	0	2	0.0001	0.0003	0.0009	0.0001	0.0005
Dovekie	0	0	0	236	236	0.0000	0.0000	0.0006	0.1083	0.0067
Common Murre	0	1	0	0	1	0.0001	0.0000	0.0001	0.0023	0.0002
Black Guillemot	5	5	235	0	245	0.0008	0.0001	0.0001	0.0005	0.0003
Atlantic Puffin	0	0	0	8	8	0.0005	0.0001	0.0006	0.0025	0.0006
Black-legged Kittiwake	2	0	15	42	59	0.0012	0.0002	0.0029	0.0374	0.0037
Ring-billed Gull	11	0	8	0	19	0.0016	0.0008	0.0001	0.0003	0.0007
Herring Gull	34	159	284	80	557	0.0073	0.0051	0.0057	0.0114	0.0063
Iceland Gull	0	0	2	0	2	0.0000	0.0000	0.0000	0.0004	0.0000
Great Black-backed Gull	26	89	183	26	324	0.0055	0.0034	0.0034	0.0047	0.0040
Common Tern	1	2	0	0	3	0.0005	0.0003	0.0000	0.0000	0.0002
% of species with 2017 ECSAS effort-adj. nos. > 2006-16 avgs.						75%	50%	63%	63%	100%

Pigeons through Woodpeckers

By Andy de Champlain

ROCK PIGEON remained prevalent across the province this season, with an average of 5.11 birds observed per hour of birding on eBird checklists that include them, compared with 2.86 MOURNING DOVES per hour. A considerably less common **EURASIAN COLLARED-DOVE** surprised ABO researchers at the south end of Seal I. Aug 28. David Bell noted that it was a flyby, "...quite a bit fatter and more powerful-looking with slower flaps than MODO... then when it got closer [we] could see the shorter, squared tail with just a whitish tip, dark undertail coverts, and dark upper-wings (lacking white crescent of WWDO)...Size, flight, and shape alone rule out MODO."

Over 50 YELLOW-BILLED CUCKOOS were reported from across the province, the earliest on BPI Aug 29 (LUB, Danae Mouton), a couple in *Guyborough*, one in *Cumberland* and many others through the counties to the south and west. The latest, and also the most far flung, was on a beach at Louisbourg Nov 12 (David Turgeon). The peak of eleven on a single day was on BPI Oct 27 (DMB et al.). A BLACK-BILLED CUCKOO in PPP, Halifax, Aug 3 (AGH), might

have been an early migrant, but could an adult and young bird on BPI Aug 10-31 (ABO) have nested locally? The latest was found at Glasgow Head in Canso Oct 29 (CHP, KJM, KST).

Early reports of SNOWY OWL across southern Canada portended a major incursion. Our first was spotted by Kevin d'Entremont from Canadian waters of Georges Bank Nov 11. The first from *terra firma*, however, was noted by Maurice LeBlanc along Duffy Rd., Saulnierville, *Digby*, Nov 14. Two other reports came from *Shelburne*: one at Crescent Beach, Lockeport, Nov 17 (Bill Crosby); and another at West Head, CSI, Nov 18 (Jason Dain). By November 30 the first Snowy had shown up at Hartlen Pt., *Halifax* (DAC), a popular place to find the species in winter.

GREAT-HORNED OWLS were reported in unsurprising numbers, mostly in ones or twos, from the northwest counties down to those of the southwest. BARRED OWL was heard, and sometimes seen, in at least 12 counties this season. Single (the same?) **LONG-EARED OWLS** were found on BPI Oct 7 and Oct 24. Phil Taylor described the call of first one as a "low single upward hoot heard repeatedly behind cabin for about 5 mins". Sadly, another was found freshly dead on the Pictou Causeway Oct 21 (John Moore, ph). There were eBird reports of SHORT-EARED OWL from three areas this season: one was observed on Cape Sable, *Shel*, Nov 4 (MCD, MIM, RDE, ph.), and another (possibly the same one?) was at The Hawk, CSI, Nov 21 and Nov 30 (MCD). From BPI, Lucas Berrigan



It might be useful to track numbers of **HY COMMON NIGHTHAWKS** (right, Brier I., Aug 20, 2016) from white-throated adults (left, Parrsboro, Aug 16) in the large flocks that migrate here in early fall, probably mostly from their wider range in e. Canada. It might inform us on annual fluctuations and trends in breeding success.

Photos: left, Andrew Wagstaff; right, Richard Stern.

observed one being chased by crows on BPI Oct 21 (LUB); and likely a second individual was seen there Oct 28 (sev. obs.). Another was found at Hartlen Pt., Hfx, Oct 21 (Petr Soukal, n.d.).

NORTHERN SAW-WHET OWL was noted twice in September: one bird in *Kings* Sept 24 (John Brazner) and another in *Cape Breton* Sept 28 (Julia Cameron). Another was reported in *Lunenburg* Oct 14 by Tom Rogers, who noted: “Our dog and the owl were exchanging greetings.” At least two were heard on Seal I., Oct 17 and Oct 21 (DMB), and there were six reports of ones and twos on BPI in the second half of October (LUB et al).

COMMON NIGHTHAWK was well represented across the province this season; a few notable sightings of flocks of 40 or more are noted here from eBird accounts. Wayne Neily estimated 40 over Greenwood, *Kings*, Aug 9, adding: “Best flock that I have seen in several years. Probably more present – difficult to count.” Kevin Lantz conservatively reported 75 from *Lunenburg* Aug 16, noting that: “75 is a low estimate. I counted 50 before they became so jumbled they were impossible to count. There could have easily been twice that many.” Jake Walker saw 200 from a park in New Minas, *Kings*, Aug 22; he said the birds were “streaming over in a five-minute period, heading southwest. I was playing soccer at the time, so could not get a more accurate count.” Graham Williams had at least

40 in *Digby* Aug 24: “All seen between exit 26 and 24 as we drove east. Oddly enough, all the CONI were flying in the same direction towards the east. 40 is a minimum count of what we saw over the road. It was an impressive sight!” It seems the species can be difficult to count! Over 90 more eBird entries reported Common Nighthawk, almost all in August and early September; the latest was reported Sept 21 in *Yarmouth* (AAD).

An **EASTERN WHIP-POOR-WILL** was seen on BPI Sept 15 by Danae Mouton and David Bell, who wrote that it “flushed from the ground on the edge of a deadfall near our interior nets at 06:38. Medium nightjar with rounded wings (no white in wings like nighthawks, not large enough and with more rounded wings than Fall CWWI), long tail and brown overall plumage. Female or immature type with no noticeable white in tail. Didn’t call when flushed and flew with low direct flight to the south.”

Records indicate that **CHIMNEY SWIFT** occurred in nine counties in the province this season, with the regular most noticeable population reported from the Temperance Street Elementary School in New Glasgow, *Pictou*. The peak number was 159 birds on Aug 7, as dutifully monitored by Ken McKenna. Our loyal **RUBY-THROATED HUMMINGBIRD** continues to summer in NS, as the 556 eBird reports this fall attest. The latest ‘hummer’ (ID uncertain) visited a feeder in Shelburne Oct 13 (Danny Acker). **BELTED KINGFISHER** remains of



Short-eared Owl at Cape Sable, Shel, Sept 25.
Photo by Ronnie d'Entremont.

little concern with 933 eBird records of 1201 birds. Some will stay into winter.

RED-BELLIED WOODPECKER numbers changed little this season, with most reports coming from South End Halifax, and others reported from *Yarmouth, Colchester, Digby, Guysborough* and BPI. An outlier was reported from a yard in Lingan, *CB*, Sept 29 (Julia Cameron, n.d.). The 138 eBird reports of YELLOW-BELLIED SAPSUCKER added up to 214 birds from around the province.

There were no surprises in eBird postings of DOWNY and HAIRY WOODPECKERS. Among checklists that included either of the species, one of the former was observed for about every 100 minutes of birding; and of the latter for every 129 minutes of birding. An **AMERICAN THREE-TOED WOODPECKER** was observed Nov 13 along the Skyline Trail of the Cape Breton Highlands NP, *Inv*, by David Bell, who said it “flew in from coast at the far moose exclosure and disappeared into the woods nearby – male with yellow crown, white on back, giving ‘pip’ calls markedly different to those of the Black-backed Woodpecker nearby.” He found three BLACK-BACKED WOODPECKERS all-told along that trail the same day, where others had found one or two along the trail in August. Other individuals were found at two different locations in *Kings* Sept 4 and Nov 1 (RIW). Among the 315 eBird reports totalling 367 PILEATED WOODPECKERS this season, several were probably repeats.

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Flycatchers through Thrushes

By Ian McLaren

Vagrant **BLUE-GRAY GNATCATCHERS**, all single birds except for the three on CSI Sept 12, turned up in good numbers, and seem worth tabulating by dates of appearance (table on following page). Most were photo-documented.

Flycatchers, with good reason, are early fall migrants, and most are finished breeding by August. The totals given in this section are mostly from eBird, but augmented from other sources, and with probable repeat sightings discounted. The season's slightly fewer than 40 OLIVE-SIDED FLYCATCHERS was less impressive than the roughly double total in summer; hopefully this was because of increased attention during its breeding season, but detectability after the young have hatched is decreased due to less vocal adult males. The latest was found by David and Jennifer Currie on Brier I. Sept 29. Roughly 270 EASTERN WOOD-PEWEES were reported through the season; the latest were singles at two sites in Lunenburg (KEL; GFO, Harold Forsyth, ph.) and on CSI Nov 1 (MCD, ph.). Some interest was stirred by observations and photos of Wood-Pewees that some thought had field marks of Western Wood Pewee. Research by Alix d'Entremont, however, clarified that HY Eastern Wood-Pewee in fall can have more extensively black lower mandibles and rather dusky breasts and flanks. It seems uncertain if the sharp increase in numbers of Eastern Wood-Pewee relative to the most commonly reported *Empidonax*, the ALDER FLYCATCHER (table below) is real or reflects a switch in birders' habits, although the late-October arrival of Eastern Wood-Pewee did inflate the numbers this season. The balance in numbers of the three flycatchers, with YELLOW-BELLIED increasing sharply and LEAST FLYCATCHER decreasing since Fall 2015, seems worth continuing to document (table below).

The latest Yellow-bellied was in *Halifax* (locality uncertain) Sept 29 (Sean DeKolver, g.d.); the latest Alders were three banded on BPI, Sept 10-14. The latest Least were singles at two sites in *Yarmouth* Sept 17 (AAD, MCD, PRG). It was a banner year for **WILLOW FLYCATCHERS**, with a total of 26

Species	Fall 2017	Fall 2016	Fall 2015
EASTERN WOOD-PEWEE	0.64	0.30	0.37
YELLOW-BELLIED FLYCATCHER	0.30	0.15	0.13
ALDER FLYCATCHER	1.00	1.00	1.00
LEAST FLYCATCHER	0.23	0.33	0.46

A few pewees photographed this season had observers questioning if they could be Western Wood-Pewees. These individuals seemed to have overall darker plumage and mostly or entirely black mandibles. Voice is the only evidence that is in itself enough to identify out-of-range Westerns, but plumage colouration and soft part colouration are often quoted as useful, although not diagnostic. Morphometrics, and more precisely primary vs. tail extension (smaller than 1 for Easterns, equal to or greater than 1 for Westerns) from high quality photos of birds here, combined with other pro-Western features should be strongly suggestive. For detailed identification criteria, see the 2008 article Field Identification of Western & Eastern Wood-Pewees (Lee et al., *Birding*, 40:34-40). It should be noted that hatch-year Eastern Wood-Pewees generally have darker underparts than adults and can have all-dark bills. The hatch-year (buffy-coloured wing bars) Eastern at left, photographed at Brier I.



Sept 30, shows an almost all dark mandible. The inset showing the mostly-dark underside of a mandible is of a deceased hatch-year Eastern at Pinkney's Pt. Sept 18. The photo at right is of an adult Eastern Wood-Pewee (more whitish wing bars) on BP Oct 28 with mostly pale mandible. Photos: left, David McCorquodale; right & inset, Alix d'Entremont.

Blue-gray Gnatcatcher observations		
Dates	Locations	Observers
August 27	Seal I.	DMB, Siobhan Darlington
September 5,6	Sandy Cove Road	Diane Leblanc + sev. Obs
September 9	Schooner Cove, CB	DBM
September 12	CSI	fide MCD
September 19	Lawrencetown, HFX	CHP
September 25- October 1	Seal I.	LUB, DMB
October 1	Schooner Cove, CB	DBM
October 19-25	Seal I.	DMB
October 25	Dartmouth	JED + sev. Obs.
November 11	Westville, Pict	KJM + sev. Obs.

banded and ID'd in the hand or from their vocalizations on BPI and Seal I. (ABO researchers). Observers do, and should, shy away from ID'ing silent Alder/Willow Flycatchers, of which over 200 were reported this season, about a third of them on BPI and Seal I. However, it should be kept in mind that Alder and (eastern) Willow Flycatchers can be almost 100% separated by ratios of primary to secondary extension measured on suitably-posed high-quality photos (see *NS Birds*, 2017, Vol. 59, issue 1, p. 54, table 2).

Almost 80 EASTERN PHOEBES were recorded, in all but three mainland counties, but only in *Richmond* on CBI. The latest were individuals at two sites in *Kings*, Nov 22 (JAW), although they routinely linger into winter.

There was an unusual influx of **SAY'S PHOEBE**, with individuals at N. Point, Brier I. Sept 28 (Jane Sender, Kathy Seymour, ph.); Apple River, *Cumb*, Aug 30-31 (KFS, ph.); BPI Sept 1-5 (ABO, sev. obs., ph.); and on a beach at The Fortress of Louisbourg, Sept 27 (Roeland Hakkert, ph.). Subspecific identification from photos of this species is difficult, but the BPI bird's measurements assign it to the northwestern subspecies *yukonensis*. A migrant **GREAT CRESTED FLYCATCHER** paused briefly on BPI Aug 29 (LUB, DMC, Danae Mouton), to the delight of the Québec film crew that were recording for one of two episodes of *Fou des oiseaux* in Nova Scotia.

The "bird of the season" (or year) was surely Nova Scotia's first **TROPICAL KINGBIRD** featured on the front cover. Discovered by Ervin Olsen at the southern end of the Cleveland Rd, Chebogue, *Yar*, Oct 24, it stayed only briefly to be added to life lists by only a few more observers. See an account of its discovery and identification on p. 58 of this issue.

The more routine vagrant, **WESTERN KINGBIRD**, was well reported. The earliest was found on Sandy Cove Rd, *Hfx*, Aug 26 (Diane LeBlanc, Sean Dempsey), when it took flight and was found later that day along the main road north of Ketch Hbr. (GRW). The next was likely the same individual found by David Currie and Sebastian Pardo along the main road near Ketch Hbr, *Hfx*, on the morning of Oct 31. Then a Western Kingbird was discovered by Eve Brunell in mid-afternoon on the same day at the north end Halifax dump. Photographs suggest (see below) that these two are the same wandering individual, which then stayed in the 'dump' area until Nov 11. A Western Kingbird found by Mark and Sandra Dennis on CSI Sept 17 did not linger beyond Sept 20, but a drab HY bird found there



The Say's Phoebe at right (BPI Sept 3) was assigned to northern subspecies *yukonensis* via measurements. The BPI bird, along with the one at left (Apple River Aug 31) have pale plumage suggestive of the central NA subspecies *saya*, demonstrating the pitfalls of subspecific identification of Say's Phoebes from images. Photos by Kathleen Spicer (left) and Diane LeBlanc (right).

Oct 12 (JON) remained to be seen and photographed by many up to Oct 28. Yet another was reported from CSI at Clam Pt. Oct 22 (Mark & Sandra Dennis, ph.). Tom Kavanaugh found two late wanderers in Canso (a well-known vagrant 'magnet') Nov 2, and the season's latest was observed by David Turgeon at Bordens Cove, *CB*, Nov 18, as it gobbled seaweed flies on the beach. EASTERN KINGBIRD is much less exotic, but unusually many, about 100 overall, were found in most mainland counties (and three on CBI). Some in August into September may have nested or been produced locally, and the latest wandered to Seal I. Sept 30 (ABO researchers).

Single NORTHERN SHRIKES appeared on CSI Oct 13 (MCD, Sandra Dennis, ph.); at Port Williams, *Kings*, Oct 15 (GFO); and near Country Hbr., *Guys*, Nov 5 (KJM). These did not seem to herald a big 'shrike winter'. On the other hand, it was an exceptional 'vireo autumn', probably all delivered in the great fallout of vagrants in late October (see write-up of this event pp. 47-57 in this issue). All-told there were reports of somewhat more than 100 **WHITE-EYED VIREOS**; the first was on Seal I. Oct 22 (ABO), the rest beginning Oct 27 – one in *Kings*, a half dozen each in both *Halifax* and *Lunenburg*, and the rest in *Shelburne* and *Yarmouth*. The latest was at West Head, *Shel*, Nov 30 (Bill Crosby, ph.). An early vagrant **YELLOW-THROATED VIREO** was found during a rails-to-trail walk in *Kings*, Sept 3 (GFO). Then one appeared in Dartmouth; another at Graves I. PP, *Lun*; and more than 20 in *Shelburne* and *Yarmouth*, Oct 27 to Nov 3. Singles found by Diane LeBlanc at Crystal Crescent Bch., *Hfx*, Nov 12, and Rebecca Goreham at Forbes Pt., *Shel*, Nov 28 might have lingered. On the order of 600 BLUE-HEADED VIREOS were reported, at least one from all counties. The mix of residents and migrants is difficult

Yet another DUSKY FLYCATCHER on BPI, Oct 24-27, was the third to wander there from the Rockies. It was readily ID'd when spotted, and confirmed from measurements when captured for banding. It is also discriminable in this photo by its plumage features (olive-brown back, changing to gray face and nape, with darker olive-brown cap, and whitish outer tail-feather margins), head size, as well as bill size and shape. The ratios of primary extension (PE) to tail extension (TE) and secondary (SE) extensions together overlap those of no other empid. The methods of measuring such ratios and their efficacy in distinguishing among these species in suitable poses is described in *NS Birds* (2017, Vol 59, issue 1, pp. 74-79; also, issue 2, pp 63-66). Another article applying the method to all N. American Epidonax species is in review. Photo by David Bell.



to sort out, but there was no noticeable 'boost' in late October. The latest was in Lr. Sackville, Nov 22 (RIV, ph.). About 40 PHILDELPHIA and 15 WARBLING VIREOS seemed also not involved in the 'fallout'; the latest were at Broad Cove, Lun, Nov 3 (CSS) and Schooner Cove, CB, Oct 7 (David Turgeon) respectively. Only one report of Warbling Vireos (two on Seal I. Sept 10; DMB, Danae Moulton) discriminated them as the eastern subspecies *gilvus*. Perhaps as many as 2000 RED-EYED VIREOS were reported (most, but not all 'repeats' discounted). They did show an 'uptick' in late October, with 35+ on BPI Oct 27 (DMB, LUB, Danae Mouton, Sarah Fensore) and others having recently arrived on the south shore.

Little sense can be made of the voluminous and province-wide numbers of our resident corvids, except to add to their *relative* abundances, as reported in our two previous fall issues, and see if a pattern emerges.

Although only about 20% more AMERICAN CROWS were entered in eBird in 2016 than in 2015, their seasonal balances with the other two corvids differed substantially: BLUE JAY appeared relatively about half as common during September-November 2016, and COMMON RAVEN twice as common during August. A dozen large eBird counts (50+, including 75 on BPI Oct 3) of Blue Jays in September-November might have indicated a noteworthy out-migration this fall; we'll await

any indications of reduced numbers in winter. I can offer no speculation on the reduced relative abundance of ravens in August compared with September-November. Again this fall (see *NS Birds*, 2017 Vol. 59, issue 1, p. 50, for last year's report), a second-hand report of was posted on NatureNS of two magpies in Dartmouth in mid-August. Such reports demand documentary photos; our only published images of one (and evidence from its vocalizations) at Clam Bay, HFX, April 2008, indicated that it was a (ship-assisted?) Eurasian Magpie. It should also be borne in mind that escaped 'pet' magpies have turned up in eastern N. Am. cities.

The season's only **NORTHERN ROUGH-WINGED SWALLOW** wandered to Chebogue Pt. Sept 8 (PRG). Our regularly nesting swallows were in the usual numbers and places, with maximal reported post-breeding gatherings tabulated above. The gathering of BANK SWALLOWS at New Minas,

Species	BBS ratio	August			September-November		
		2016 total	2016 ratio	2015 ratio	2016 total	2016 ratio	2015 ratio
Gray Jay							
Blue Jay	0.14	1481	0.23	0.28	4077	0.12	0.25
Am. Crow	1.00	6334	1.00	1.00	32,900	1.00	1.00
Com. Raven	0.13	856	0.12	0.23	3470	0.11	0.09

Species	Maximal Post-breeding group			
	No.	Location	Date	Observer
TREE SWALLOW	60	Goose Creek Marsh, Yar	Aug 2	Jerome K. d'Eon
BANK SWALLOW	750	New Minas Sewage Lagoon	Aug 19	PHT
BARN SWALLOW	700	Goose Creek Marsh, Yar	Aug 2	Jerome K. d'Eon
CLIFF SWALLOW	40*	Fortress Louisbourg	Aug 11	Denis Talbot

Kings, is especially reassuring. Latest reports of these species were: TREE SWALLOW, one at Saulnierville, *Digby*, Nov 25 (Joan Comeau); BANK SWALLOW, one at the Windsor sewage lagoons Oct 12 (Jason Dain, ph.); BARN SWALLOW, two on CSI Nov 30 (MCD); Cliff Swallow, two along Hilton Rd., *Yar*, Sept 9 (PRG).

The most swallow excitement was caused by the discovery by Ervin Olsen of two **CAVE SWALLOWS** with four Barn Swallows feeding over a newly dug-up field at Chebogue Pt. Nov 10. He took photos and quickly sent them to Alix d'Entremont, who recognized them as of the expected subspecies *pallida* (also referred to as *pelodoma* in some texts) of Mexico and s.w. US, reported them, and rushed over to see them for himself. The birds were not there when others arrived; but a handful of birders were able see one bird the next the morning that remained until early afternoon. There is an annual pattern of hatch-year *pallida* Cave Swallows appearing in n.e. US up through Atlantic Canada during late fall.

The regular forest insectivores in this section (both chickadees, both nuthatches, BROWN CREEPER, WINTER WREN, and both kinglets) were as usual exhaustively reported. Compared to the eBird totals, for BLACK-CAPPED CHICKADEE, however, the other species were all less common this fall than last. (See the fall 2016 totals tabulated in *NS Birds*, Vol. 59, issue 1, p. 52). This could have partly resulted from less frequent reporting of Black-capped Chickadees from settled areas and feeders. Perhaps tellingly, WHITE-BREASTED NUTHATCH (a settled-area and hardwoods species) was the least (relatively ca. 25 % fewer) and RED-BREASTED NUTHATCH (largely in mixed and conifer stands) the most divergent (ca 75 % fewer) this fall. None of the partial-migrant species in the above group showed any obvious 'pulses' on BPI or Seal I.

Six HOUSE WRENS wandered here this fall. The earliest was spotted by Simon d'Entremont at Cape St. Marys, *Digby*, Sept 16. His posted photo shows it as a rufous bird, so probably the eastern N. Am. subspecies *aedon*. The next was found by David Currie behind the Woodlawn Library in Dartmouth,



Cave Swallows: The Texas/New Mexico/Mexico breeding *Petrochelidon fulva pallida* and the Caribbean *P.f. fulva* group have both previously been recorded in Nova Scotia. This composite shows an individual from the *fulva* group in Florida May 5, 2017 (left), and one of the Chebogue Pt. birds Nov 10 (right). The overall paleness of the Chebogue Pt. individuals immediately recalls *pallida*. The dorsum and crown are a dark blue, paler than online photos of *fulva*. The dorsal streaks are not extensive, the nape is pale tan without dusky streaking, the underparts are extensively whitish and the flanks have minimal pale greyish markings like *pallida*. The rump and forehead are cinnamon vs. the comparatively deeper chestnut seen on *fulva*. Photos by Tom Johnson (left) and Alix d'Entremont (right).

Oct 3 which was present to Oct 6. His posted photo depicts a decidedly paler and greyer bird with back markings more like one of the variously described mid-west to western subspecies group. Others were found at Chebogue Pt., *Yar*, Oct 7 (Simon d'Entremont, ph.); Schooner Pond, *CB*, Oct 15 (David Turgeon); Seal I., Oct 20 (DMB, Danae Mouton; heard only); and at Ira Settle Pk., Dartmouth, Nov 5 (KST, CHP) and Nov 11 (Jason Dain). Individuals or small groups of EASTERN BLUEBIRDS in *Yarmouth*, *Queens*, *Digby*, *Cumberland*, *Kings*, and *Guysborough* were all in localities where they are known or believed to have nested. However, a gathering of 21 along Hilton Rd., *Yar*, Oct 21 (AAD, PRG, ph.) was unprecedented.

VEERY was found at a few mainland regions where it nests



While similar to our breeding Cliff Swallows, the two Cave Swallows at Chebogue Pt. (one here Nov 11), show orangish foreheads, paler lower faces and lack a dark bib. Both individuals show new and dark inner primaries, compared to the brown retained juvenile outer primaries – indicating that both are hatch-years, born in 2017. Photo by Alix d'Entremont.

Mimic-Thrushes through Warblers

By Ken McKenna

What started as a normal fall migration for species in this section was turned on its heels in the dying days of October by a 'fallout' of catbirds, warblers, and others in migration much further south. That event, frequently noted in this section, is fully analysed by Alix d'Entremont and John Kearney in this issue (see p. 47). The latest (July 2017) AOS (former AOU) Checklist places EUROPEAN STARLING just ahead of the mimids in this section; the 3100 eBird reports of about 118,000 starlings certainly reflect their breeding success here.

Although there were over 800 reports of 1500 GRAY CATBIRDS (many repeated sightings), only two appeared on CBI. A small initial migration peak was in the latter half of August, but in late October scores appeared along the Atlantic coasts and islands and from *Yarmouth* to *Halifax*. The ABO researchers on BPI banded 23 of an estimated 80 that arrived Oct 26/27. About 80 remained along the coast into late November and the ample supply of berries will certainly entice some to attempt to over-winter. By contrast, BROWN THRASHER (a shorter-distance migrant) was only spotted in two places: three different birds on Seal I. Sept 29 – Oct 11 (ABO group) and one in Smithsville, *Shel*, Oct 8 (AAD). NORTHERN MOCKINGBIRD was reported from about 16 locations, including six or seven in *Kings*, where Richard Stern has found them along the Kentville Rail Trail for most of the 36 years he has birded there, and reported that adults with fledged young were seen this summer. None was seen on CBI, but individuals were seen on Sable I. and in several mainland counties.

The first returning AMERICAN PIPIT was along the Big I. causeway, *Pict*, Sept 3 (KJM). There were many more by late September, including 75 flushed by a Merlin on Brier I. Sept 23 (DAC), and an estimated 200 at Grand Pré Sept 28 (JAW). They continued into November especially along the Atlantic and Fundy coasts. BOHEMIAN WAXWINGS barely made the list, with singles on BPI Oct 28, *Guysborough* Nov 12, and *Cape Breton* Nov 19. Recently fledged CEDAR WAXWINGS along the Strathglass Rd, *Pict*, Aug 24 (KJM), were not unusual for these late nesters. They were abundantly reported, with a half-

during August and early September; but early migrants were two on Brier I. Aug 25, and singles on Seal I., Aug 18 and Aug 25 (ABO), and a window kill in Annapolis Aug 26. The latest was on CSI Oct 27 (MCD, Sandra Dennis, Mike MacDonald). About a dozen migrant GRAY-CHEEKED THRUSHES were reported, but only one, in Crousetown, *Lun*, Nov 1-4, (var. obs., ph.), the latest reported, was identifiable from photos as the trans-boreal subspecies *aliciae* (*fide* AAD). One or more BICKNELL'S THRUSHES were ID'd by calls along Benjies Lake Tr., CBHNP, Aug 22 (Carl Savignac). Both SWAINSON'S THRUSH and HERMIT THRUSH were reported widely, but sparsely or not at all from a few counties. The maximum August day-count of 45 Swainson's Thrushes was on Seal I., where they are the only breeding woodland thrush (ABO). The latest was found along Sandy Cove Rd., *Hfx*, Nov 5 (PLC, SEM). The largest August day-count of 25 Hermit Thrushes came from Jerry Lawrence PP, *Hfx*, and also included fledged families (PLC). Kevin Lantz had a brief visit from an errant WOOD THRUSH in his yard at Front Centre, *Lun*, Oct 28.

AMERICAN ROBINS – everywhere; eBird totals of more than a hundred came from 10 mainland localities in October-November, and included an estimated 250 at both Hartlen Pt. Oct 19 (JED) and Glasgow Head, *Guys*, Nov 12 (DMB).

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dozen eBird totals of about 100-200 birds between late August and late October. Their numbers being augmented by migrants is indicated by totals of 20 to 50 on Sable I. Sept 3-18 (ABO researchers). Numbers usually diminish in late fall, but over 800 were noted into the second half of November, suggesting good numbers the coming winter.

The latest AOS Checklist places the Longspurs and Snow Bunting at the end of the finches, which are now moved to precede the New World Sparrows, but since this will require considerable arrangement of many species, we will postpone it 'til the next issue. Joan Comeau photographed the first LAPLAND LONGSPUR on Brier I, Sept 14, and just over a week later four were found on Sable I. (Greg Stroud). There were then many reports of small numbers, until estimates of 30 and 25 were made in the Grand Pré area Nov 28 (JAW) and Nov 30 (RIW), respectively. The first SNOW BUNTING was found on BPI Oct 4 (LUB), after which this harbinger of winter became more common than the longspur, with about 100 eBird reports from 14 counties totalling just under 1000 birds. The largest number, 152, was encountered at Church Pt., Digby, Nov 13 (AAD, PRG).

Fall usually brings the anticipation of southern and western warblers, and this fall did indeed add some excitement for those lucky enough to be on location for such vagrants. The most recent changes in the AOS (AOU) Checklist order have moved Yellow-breasted Chat from the warbler section to the end of the sparrows, see p. 37. Comparative totals of the regular warbler migrants given here are from eBird without correcting for repeated sightings, but other sources have also been used to clarify the true numbers of rarities.

OVENBIRD is an early migrant, with about 150 of 250 this season found in August. Nocturnal migration monitoring at Cape Forchu indicated most were on the move there during the last week of August, with a second pulse Sept 8-11 (JOK). After mid-September there was only a trickle, but a small 'fallout' of five (two banded) was found on BPI and one at Pubnico Pt. Oct 27; two remaining next day on BPI became the season's latest. A **WORM-EATING WARBLER** was netted and photographed by the ABO group on Seal I. Oct 11. It was fitted with a transmitter as part of David Bell's study of re-orientation of vagrant birds. NORTHERN WATERTHRUSH is another early migrant through the province that peaks in the second half of August. Most of the observations were by ABO researchers on BPI and Seal I. and by John Kearney at his night-flight-call station on Cape Forchu. An impressive 87 were banded on Seal I. and BPI Aug 25-28 with a maximum single-day count of 138

observed on Seal I. Aug 25. Reports fell rapidly after August, although 12 were noted on BPI Sept 13 and a straggler on Seal I. Sept 25. An abnormally late bird Oct 27 on BPI was the only one of this species in the late October fallout.

There was a great show of **GOLDEN-WINGED WARBLERS** this fall, beginning with a female found by Simon d'Entremont near Mavillette, Digby, Sept 4. The next three seem to have been associated with the fallout: a HY female banded on BPI Oct 27 (ABO, ph.); a female on Chebogue Pt., Yar, Oct 31 (AAD, ph.); and one in E. Passage, Hfx, Nov 4 (sev. obs., ph.). It was also an exciting autumn for **BLUE-WINGED WARBLER**. James Churchill described seeing one close-up during a hike on the Cape Split trail, Kings, Sept 2; a HY female was seen briefly by the ABO group on Seal I. Oct 7; and three were found in the s.w. end of the province after the 'fallout'. Ervin Olsen photographed one at Cape Forchu Oct 28; two singles were found in Shelburne Oct 31: one near Ingomar was well-described by Bertin d'Eon (g.d.), another was spotted by Mark Dennis on CSI. Most of the season's eBird total of BLACK-AND-WHITE WARBLERS were found in the second half of August and the first half of September. Seventeen of an estimated 87 were banded on Seal I. Aug 25, and another 35 were noted on BPI that day (both by ABO groups). There was a slight boost in numbers in the s.w. from the 'fallout', with 20 observed after Oct 27, five of them at Lr. Argyle, Yar, Aug 29 (Richard Donaldson). The season's latest was at White Point, Queens, Nov 14 (sev. obs.).

The season's only **PROTHONOTARY WARBLER** was photographed by Jim Edsall at Hartlen Pt. Aug 28. TENNESSEE WARBLER was found at about 35 locations this fall, only one of them on CBI. The species is now showing signs of increasing, probably in response to the Spruce Budworm outbreak to our west. Singles were noted at eight locations after the late-October 'fallout', with the latest one photographed at Mortons Neck, Yar, Nov 1 (AAD). ORANGE-CROWNED WARBLER does not nest here and arrives late, and our first was along Sandy Cove Rd., Hfx, Sept 25. They peaked in the



This Marsh Wren at Broad Brook Park, Yar, Nov 20, appears to be an individual of the regional breeding subspecies *disaepus* by its overall contrasting plumage. Photo by Joan Comeau.



Unlike most warbler species, Worm-eating Warbler plumage is virtually identical between seasons, sexes and ages (after juvenile plumage). Having been processed by the banding lab on Seal I., Oct 11, this individual was aged as HY based partly on the pointed tail feathers. Photo by David Bell.

second half of October, and tapered off slightly in November, but a couple of dozen in the second half of November assures us of sightings into winter. Interestingly, the species was found in nine counties, but not in those bordering the Northumberland Strait. There were just over 200 eBird reports totalling almost 280 NASHVILLE WARBLERS with peak numbers during the first half of September.

MOURNING WARBLER was noted in ten counties, mostly in the second half of August. The latest was on Seal I., Sept 30 (ABO group). COMMON YELLOWTHROAT was numerous as usual with almost 5000 noted and from all counties. About 60% were equally divided between the second half of August and the first half of September. Patricia Chalmers reported an interesting encounter at Sandy Cove, Hfx, Aug 27, when after unsettled weather of sun and cloud followed by heavy cloudbursts, a group of warblers including 45 Common Yellowthroats appeared around a floating cloud of insects. There was a slight boost in numbers after the late October fallout, and the latest was at Hartlen Pt. Nov 25 (Sylvia Craig, Sebastian Pardo, Diane LeBlanc). All but one of the amazing 18 HOODED WARBLERS can be associated with the fallout. The Codlings spotted one in their Lower Sackville yard Aug 25. Five were noted on BPI Oct 27 and a maximum of 10 were there next day. Most of the later sightings were in *Shelburne* and *Yarmouth*, but singles were also noted at Brier I. and at Miners Marsh.

Most of the 500+ eBird reports of about 1400 AMERICAN REDSTARTS came in the second half of August, with the largest day-totals of 59 on Seal I. Aug 25 and 69 on BPI Aug 28. There was a small but noticeable increase in numbers (~13) associated with the late October fallout with sightings from *Shelburne*, *Yarmouth*, *Kings* and *Annapolis*. The latest was in with a group of Yellow-rumped Warblers at Pubnico Pt. Nov 30 (RDE). Fall sightings of CAPE MAY WARBLER continued to climb, with 273 eBird reports of over 1000 birds in 11 counties, almost double last year's totals. This is now the third year of this increase in fall sightings after several decades of hardly any

reports. The earliest was at White Rock, *Kings*, Aug 9 (RIW). A noticeable influx began Aug 17, when seven were noted on both Seal I. and BPI (ABO). A major arrival of 200 (15 banded) occurred on Seal I. Aug 25, just two days earlier than a similar arrival in 2016. Numbers remained strong until Sept 17 when sightings tapered but the migration of this species was also affected by the late October fallout with 19 appearing along Atlantic coasts from *Halifax – Yarmouth*. The latest one was in Birch Cove Pk., Dartmouth, Nov 29 (MZE).

The 600+ eBird reports of about 1200 NORTHERN PARULAS revealed their main migration in the second half of August and first half of September. The species occurred in the late October fallout, beginning with at least 12 on BPI Oct 27, and about 60 were reported on eBird (with an attempt to remove repeated sightings) to the end of the report period in ten counties bordering the Atlantic or Bay of Fundy coasts. At least four remained in the final week of November, with one each at Schooner Pond, *CBRM*; Birch Cove Park, *Hfx*; Graves I, *Lun*; and Pubnico Pt., *Yar*. The eBird total of 1400 MAGNOLIA WARBLERS was only slightly higher than the Parula's, but its peak migration was similar, with roughly equal numbers in the second half of August and first half of September. Its late October fallout was much smaller, with about 16 noted after Oct 27 and the latest Nov 2 at Front Centre, *Lun* (KEL).

BAY-BREASTED WARBLER, like the Tennessee Warbler, has been showing a distinct increase in fall numbers, and this fall's eBird total of 272 was five times that of fall 2016. None appeared until Aug 19, and later reports were all from the mainland, which would seem to point to migration from the west. The ABO group banded five of 12 found on BPI Aug 25, and another 11 were noted at Blomidon PP, Aug 29 (JAW). There was minimal involvement of this species in the late October fallout, with only one reported Oct 27-28, on BPI, and none thereafter. Reports of BLACKBURNIAN WARBLER trailed those of Bay-breasted, with 115 eBird reports of 165 individuals, peaking in the second half of August. Late October fallout birds were noted at southern locations of Blanche, BPI and Cape Forchu. The latest was spotted in scotch pine in south end Halifax Nov 1 (Rebecca Jardine, Ryan Fisk).

August was the big month for YELLOW WARBLER with about 1800 of the 2400 seen this report period noted mostly in the second half of the month and from all counties except *Victoria*. At the ABO banding islands, 49 were noted on BPI Aug 9 and 69 on Seal I Aug 25. This species was not involved

The lack of black on the face and throat indicate that this Golden-winged Warbler at Mavillette, Digby, Sept 4, is a female. The yellowish wash to the underparts suggests that it is a hatch-year. There seems to be no evidence in the plumage of recent hybridization with Blue-winged Warbler – a common hybrid pair.

Photo by Simon d'Entremont.



in the late October fallout, with the latest sighting a drab HY female on Seal I Oct 22 (ABO). About 90% of about 400 CHESTNUT-SIDED WARBLERS for this period were reported prior to mid-September. Patricia Chambers noted a high count of 15 at Hartlen Pt. Aug 2. Only three were reported after the late October fallout, with the latest at Sandy Pt. *Shel*, Nov 1 (*fide* Liz Voellinger).

Similar to 2016, there were two peak BLACKPOLL WARBLER migration periods (second half of Aug and Sept), which is not unusual for this species. This species continued to be studied by ABO researchers on Seal I. and BPI, from which most eBird sightings were reported. A peak of 49 was noted on Seal I. Aug 25, and Jim Edsall noted 50 at Hartlen Pt., Oct. 2. Numbers were also detected away from the coast, with 32 noted on a hilltop area near McLellans Brook, *Pict*, Sept 18 (KJM). There was a slight increase in Blackpolls with the late October fallout, with a maximum of nine on BPI Oct 27. Four of about 20 seen after that date were spotted in early November, with the latest one at Eastern Passage, *Hfx*, Nov 4 (DMB, DMC).

Fewer than 100 BLACK-THROATED BLUE WARBLERS were reported on eBird this season, and about 20% of them were spotted during and after the late October fallout. Most of these were found in the s.w., but the latest was found at Wolfville Nov 5 by James Churchill. PALM WARBLER is a later migrant, so it is not unusual that about a quarter of the eBird total came from the second half of September. Three of the “western” subspecies were noted in September, the first one banded on BPI Sept 12, considered quite early; a total 56 more were noted after September. The species increased slightly after the ‘fallout’, and four were noted in the second half of November. Five PINE WARBLERS were at their known breeding location in Miller Pt. Peace Pk, *Lun*, Sept 14 (KEL), but the earliest clear migrant was a dull one in “The Forest” on Cape Sable Sept 12 (MCD). Later migrants (some presumably ‘reverse’ migrants), apart from two in *Guysborough*, Oct 27, were all in *Halifax-Kings* and southwest. There appeared to be a small bump in numbers associated with the fallout, but most were reported in the second half of November, many of them repeat sightings in Metro *Halifax* locations. No doubt some will attempt to over-winter. YELLOW-RUMPED WARBLER was as usual the most commonly reported warbler with 1760 eBird reports totalling about 12,000 birds from all counties, a third of them in the first half of October. Over a tenth of the nearly 500 that appeared on Seal I. Oct 11, were banded, as were 25

of about 100 observed on BPI Oct 21. Large numbers in late October and early November suggest many were brought in the ‘fallout’. About 200 were noted in the last half of November, nearly all from counties bordering the Atlantic.

Single **YELLOW-THROATED WARBLERS** were noted three times prior to Oct 27: at Cape Forchu, *Yar*, Sept 20 (PRG); Sable I. Sept 23 (Greg Stroud); and Pubnico Oct 21 (AAD). This species was well represented in the late October fallout, with about 33 reported thereafter from eight counties. Many were photographed, and among those identified to subspecies, *albilora* outnumbered the more southeastern coastal *dominical/stoddari*. A minimum of 14 were on BPI Oct 27, with five ID’d as *albilora* and three as *dominical/stoddari*. At least a dozen were present into November, and no doubt some will attempt to overwinter. The season’s first **PRAIRIE WARBLER** was on Seal I. Aug 16 (ABO), and about 30 (with probable ‘repeats’ removed) were noted in five counties: *Cape Breton*, *Guysborough*, *Halifax*, *Shelburne* and *Yarmouth*. Most were in the second half of September, and they were not part of ‘fallout’ species. Three were observed into November, the latest in Look-Off Pk, *Halifax*, Nov 19 (Robert Edsall). The peak migration of BLACK-THROATED GREEN WARBLER occurred in the second half of August and first half of September, when about two-thirds of the eBird total of 1500 were tallied. A highest day total was at Blomidon PP Aug 29 (JAW). About 30 were noted after the ‘fallout’, mostly on coastal headlands and islands between Graves I., *Lun*, and *Yarmouth*. Sylvia Craig spotted the latest along Africville Rd., *Halifax*, Nov 1.

There were 52 eBird reports of 69 CANADA WARBLERS from eight counties. John Kearney’s nocturnal flight-call study at Cape Forchu revealed some amazing results during August, including an estimated 54 in the second week, 69 the third week, and 67 the fourth week, but only a handful later. Two of seven on BPI Aug 25 were banded. The eBird reports continued past the end of September, with the latest one at White Rock, *Kings*, Oct 6 (RIW). WILSON’S WARBLER numbers were notably up, with almost 200 eBird reports totalling about 300

The greenish feathers on the back, greater primary coverts, secondary edges and flank feather edges as well as the pale gape line identify this Black-throated Blue Warbler at Sandy Point, *Shel*, Oct 10, as a hatch-year bird. Photo by Simon d'Entremont.



individuals – about three times the number in fall 2016. The high day-total of 24 was on BPI Aug 25 (ABO). Although there was a small increase in November, it might have been only partly due to the fallout. About eight were observed in the final week of November.

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Sparrows to Dickcissel

By Ian McLaren

Taxonomy Note:

The revised 2017 AOS (formerly AOU) checklist has convincingly placed the Yellow-breasted Chat between our sparrows and blackbirds, but it is left here with the Wood Warblers for now (see p. 33). Dickcissel has been moved to the end of our *Passerina* buntings, in this section. The sequence among our sparrows has also been changed, and that new order is used here.

As usual, a few wandering **EASTERN TOWHEES** turned up: a female on Seal I. Oct 7-22 (ABO); another female at Glasgow Head, *Guys*, Oct 9 (KJM, STV, ph.); then males appeared and were photo'd at feeders in Lr. Sackville Nov 16 (Jan Field Nielsen) and Port Maitland, *Yar*, Nov 27 (Bill Curry).

The season's earliest **AMERICAN TREE SPARROW** was a timely individual at the New Minas Sewage Lagoons Oct 31 (DMB); others appeared throughout the mainland through November (oddly, none reported from CBI). **CHIPPING SPARROW** was recorded in all counties, including those on CBI. Those appearing in early August (including two in *Victoria*) might have nested locally, but by late August probable migrants began to appear more widely. A particularly early **CLAY-COLORED SPARROW** "posed nicely for photos" by Ronnie d'Entremont along Thomas Rd., Cape Forchu, *Yar*, Aug 23. Others, perhaps 21 in all, strayed to seven mainland counties, including at least eight on our 'southern' islands. The earliest **FIELD SPARROW** wandered to Brier I., Oct 7 (JAW), and about six more appeared on Seal I., BPI, and CSI, and other localities in *Kings*, *Lunenburg*, and *Yarmouth* between mid-October and mid-November, one lingering along on the Wolfville Rails Trail until at least Nov 28 (DMB). Two **VESPER SPARROWS** along the Sandhill Trail, *Kings*, Aug 28 (John Ogletree), probably belonged to the locally breeding population. Others on Seal I. Oct 7 (ABO); near Pembroke,

Yar, Oct 9 (Simone Sweeney, ph.); and again on Seal I. Oct 20 (4 obs.) were certainly out-of-range migrants. The earliest **LARK SPARROW** appeared on the Dartmouth waterfront Aug 17 (PMC, ph.) and was soon followed by birds on Seal I. Aug 22-25 (ABO) and Brier I., Aug 31 (RDE, ph.). About eight more occurred later in *Halifax* (including Sable I.), *Lunenburg*, *Shelburne* and *Yarmouth*.

SAVANNAH SPARROW was reported from at least two places in all counties. Some will be found in all seasons, but eBird day totals of 50 or more in *Kings*, and on CSI and Seal I. late August to mid-September might indicate passages of migrants. Counts of up to 200 "IPSWICH" SAVANNAH SPARROWS on Sable I., late August and mid-September, did not represent coverage of the whole island. The earliest reported from the mainland were 36 (all carefully ID'd) on Conrad Bch. and Lawrencetown Bch. PP, Sept 23 (Sydney Bliss), but others did not appear there (Sebastian Pardo, Sydney Bliss) and on Seal I. (17 individuals, ABO) until Oct 1.

GRASSHOPPER SPARROW has become increasingly rare as a vagrant here, no doubt because of its continuing decline in its breeding range in n.e. US and adjacent Québec and Ontario. One was flushed by Chris Pepper and Kate Steele from shrubbery in the town of Canso Oct 2, and likely the same one was seen until Nov 12 (DMB). Even rarer was a **LECONTE'S SPARROW** found by Alix d'Entremont and Bertin D'Eon Sept 10 on Johns Island (among the Inner Tusket Is. south of Yarmouth) and readily identified from photos. Our routine **NELSON'S SPARROW** was reported from almost all coastal counties; most reports and largest numbers were from *Halifax*, *Shelburne* and *Yarmouth* - no doubt partly reflecting the intensity of birding. No subspecies other than our regional *subvirgatus* was claimed or identifiable from available on-line photos.

FOX SPARROW apparently still breeds on BPI, with counts of up to eight there in August (ABO); the lack of records

Even with initial poor views, the dry grassy and shrubby habitat in which this *Ammodramus* (a.k.a. grassland sparrow) was found on John's Island, Yar, Sept 10, led the identification away from our default in that genus (Nelson's Sparrow), so other species had to be considered. The lack of any appreciable lateral throat stripe, the white median crown-stripe and the lack of a bold eye-ring eliminate the rest of the genus. Photos by Alix d'Entremont.



from Seal I., however, suggests that the small breeding population there last summer (see last issue of *NS Birds*) was unsuccessful. Two at Schooner Pond, CB, Oct 14-15, might have been summer residents, but a few individuals began to appear at inland locations Oct 28 on. SONG SPARROW is an abundant, year-round presence, so the over 5000 eBird entries totalling more than 20,000 individuals come as no surprise. Perhaps more surprising were almost 1200 checklists with single Song Sparrows, perhaps indicating lack of interest in the species. Finding and identifying LINCOLN'S SPARROW is more challenging. A few ones and twos were in mainland locations during late August, but CBHNP as a leading place to find breeding birds was demonstrated by a count by John Raven of ten along the Skyline Trail Aug 29. Discriminating juvenile Lincoln's from SWAMP SPARROW of the same age, even in excellent photographs, was extensively discussed on NSBS Facebook. Probable estimates of breeding populations of Swamp Sparrow were: 12 along French Basin Tr. Aug 3 (Eleanor Ritchie); 11 at Brookfield Wetlands, Col, Aug 12 (CSA); and ten at Amherst Marsh Aug 16 (KJM). A later estimate of 50 at Brookfield Wetlands Sept 12 (CSA) suggests a successful breeding season.

WHITE-THROATED SPARROW was found in at least two localities in all counties, with numbers and dates indicating no clear peak of migration. Eastern WHITE-CROWNED SPARROW arrives here in fall from the Canadian taiga. The first was found by David Currie at the old Halifax dump Sept 25, and two were found by Steve Manuel next day along the Sambro Creek Rd., Hfx. They were found widely in small numbers thereafter up to Nov 15. DARK-EYED JUNCO is another breeding (and year-round) resident in which observation dates are largely uninformative. There were about 1000 eBird checklists with the species, about 350 of them entered as the "Slate-colored" subspecies (*hyemalis*). No 'western' juncos were reported or identified from photos posted in other media sources.

The recent revision of the AOS Checklist deems YELLOW-BREASTED CHAT as belonging within a group of tropical

tanager-like species (not *our* tanagers) and places it after the juncos and before the cardinalids (which includes *our* tanagers); so here it be. The first one appeared on BPI Aug 25 (LUB, D. Mouton), another next day in Lockeport (Robert Turner, ph.), after which about 20 were reported from mainland counties and one appeared in Sydney Nov 28.

About 40 **SUMMER TANAGERS** appeared here this fall, beginning with one on Seal I. Aug 25 (DMB, S. Darlington) and ending with one at a Yarmouth feeder Nov 29-30+ (sev. obs.). There was a notable boost of arrivals in ones and twos after the 'fallout' in late October (see p.47). One SCARLET TANAGER near Chaswood, Hfx, Aug 14 might have summered locally, but singles found by Greg Stroud on Sable I. Sept 25-26 and by Jason Burke in PPP, Halifax, Oct 7, were probable reverse migrants. A major arrival of ones and twos along the Atlantic coast from *Halifax* to *Yarmouth* followed the late October 'fallout'. NORTHERN CARDINAL continued its role as a yard bird and subject of numerous Facebook photos, especially in urbanised *Halifax*, *Kings*, and *Yarmouth*. They weren't reported from n.e. of *Colchester-Halifax*. ROSE-BREASTED GROSBEAK was found in small numbers almost every day through the season, but not in all mainland counties and not at all on CBI. Most late ones were at feeders. The first 'reverse migrant' **BLUE GROSBEAK** was on BPI Sept 5, and a different one was there Sept 8-9 (DMB, D. Mouton). Another



Banded Ipswich Sparrow on Sable Island Sept 25.
Photo by Greg Stroud.

ten were found from *Yarmouth* to *Guysborough*, the latest at Canso Nov 12 (DMB). This season produced a probable record number of **INDIGO BUNTINGS**, about 260 in all, with probable repeated sightings discounted. Many were brought in the late October ‘fallout’.

It was a bonanza fall for **DICKCISSEL**. The first was found at Mavillette, *Digby*, Oct 12 (AAD), and another half-dozen appeared on BPI and along the Atlantic Coast between *Guysborough* and *Lunenburg* Sept 19–Oct 16. Most stayed to be found and photographed by several birders.

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Icterids to House Sparrow

By Alix d’Entremont

All the common icterids were reported from much of the province, with no clear trends in numbers. Also, since all occur here through much of the year, the season’s earliest and latest are not worth documenting. However, the latest **BOBOLINK**, which normally leaves us in fall, was found along Breakwater Rd., *Shel*, Nov 4 (LNE). Six **YELLOW-HEADED BLACKBIRDS** were reported, about twice the ten-year average: three on Seal I. Aug 17-25 (DMB, Jason Gregg, Siobhan Darlington, ph.); one on BPI Aug 28 (LUB, Danae Mouton), one on Sable I. Sept 6 (DMC); and one in Rockville, *Yar*, Sept 9 (PRG, ph.). Single **EASTERN MEADOWLARKS** were found on Seal I. Oct 7 (DMB, Danae Mouton, Sarah Fensore) and at Crescent Beach, Lockeport, *Shel*, Nov 11 (Bill Crosby, ph.).

At least three **ORCHARD ORIOLES** were observed on Seal I. Aug 20-28 (DMB, Jason Gregg, Siobhan Darlington, ph.) and another was spotted at Hartlen Pt. Aug 28 (Jim Edsall). The bulk of the **BALTIMORE ORIOLES** were reported from *Halifax*, *Shelburne* and *Yarmouth*; some in *Kings* during early August had probably summered or been produced locally, but peak numbers occurred during September and there was also an obvious spike after the late October fallout (see p. 47). Several in late November seemed likely to overwinter. A slightly lower than average 21 **RUSTY BLACKBIRDS** were sparsely spread throughout the province.

Compared to the good numbers of **EVENING GROSBEAKS** during autumns 2012 and 2016, the total of 75 reported from 20 locations this year, most from *Kings* and *Pictou*, was more similar to the 10-year average. Only 11 **PINE GROSBEAKS**, about half the 10-year average, were reported from 8 locations, predominantly on CBI. While **PURPLE FINCH** numbers seemed slightly lower than previous years province-wide, the most dramatic declines seemed to occur on the Atlantic Coast and were most apparent during November when birds are usually seen at feeders – these changes are likely related to trichomoniasis. The only report of **COMMON REDPOLL** was of 45 at the Skyline Trail, *Inv*, Nov 13 (DMB). Compared to the relatively high 2016 totals, about half the **RED CROSSBILLS** were reported, but **WHITE-WINGED CROSSBILL** numbers were similar. **PINE SISKIN** numbers reported were very few until an obvious peak during October followed by a steep fall in November, similar to last year.

No obvious trends were evident in reports of **HOUSE FINCH**, **AMERICAN GOLDFINCH** and **HOUSE SPARROW**.

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Pubnico Pelagic 2017: The Big One

In 2017 it was decided that we would attempt the over 400-kilometre round trip to the continental slope – the only place in Canada where you could hope to see certain warm-water species.

Alix d'Entremont

In common with other bird species, seabird distribution and occurrence are tightly linked to habitat. Unlike terrestrial habitats that are relatively stable, those of the oceans are variable both temporally and spatially and our understanding of this complex instability is actually very limited. Productivity of a given volume of water is influenced by factors like temperature, salinity, wind strength and direction, thermocline depth, stratification characteristics, upwelling and fronts. Ocean habitats are mainly defined by the water's biological productivity which depends in part on processes like upwelling to bring nutrient-rich cooler waters into the zone where photosynthesis can occur (Howell, 2012).

The predominant influence on Nova Scotia's coastal water is the cold and nutrient-rich Labrador Current that, once mixed with the fresher St. Lawrence waters, hugs our province's southern coast as the Nova Scotia Current (Thurston, 2011).

The tubenoses most commonly associated with this cold nearshore water, spring through autumn, are Sooty, Great and Manx, plus Northern Fulmar as well as Wilson's and Leach's Storm-petrels. In comparison, the warmer waters of the Gulf Stream showcase species like Cory's and Audubon's Shearwaters, Black-capped Petrel and Band-rumped Storm-Petrel (Howell, 2012). Although nearshore sightings of Cory's Shearwater were rare only 5 years ago, it has now become a much more common species, especially during October – likely a result of the globally extreme rate of warming of the Gulf of Maine (Pershing et al., 2015).

The 100-kilometre-wide Gulf Stream veers away from the coastline north of Cape Hatteras where it starts to meander. Warm-core rings can break off from the main stream and bring warm waters to the continental slope south of Nova Scotia (Davis and Brown, 1998). Tidally-induced upwelling at the



This photo shows the twelve birders and one of the captains, Stephen d'Entremont, at Dennis Point Wharf in Lower West Pubnico, Yarmouth. From left to right are Keith Lowe, Alix d'Entremont, Paul Gould, Mark Dennis, Mike King, Michael Bentley, Richard Stern, Eric Mills, Jake Walker, Ronnie d'Entremont, Ken McKenna, Stephen d'Entremont and David Currie. Photo by Ellis d'Entremont.

Scotian Slope and mixing at the front between the warm-core water and the cold and nutrient-dense continental shelf waters are some of the driving forces that make the slope a productive place, where species normally associated with the Gulf Stream can be found.

Private pelagic birding trips run out of various ports in the province are the yearly highlight for many birders. They offer up-close viewing opportunities of species that, from land, are typically mere specs on the horizon. None of these offshore trips had previously gone to the continental slope, but there have been recent reports of Audubon's Shearwaters, Black-capped Petrels, Band-rumped Storm-Petrels and White-faced Storm-Petrels in warm waters in this area from government research initiatives such as cruises by the USA's National Oceanographic and Atmospheric Administration's National Marine Fisheries Service, and Canadian Wildlife Service's East Coast Seabirds at Sea. Birders in North Carolina, where there are frequent pelagic cruises year-round, are fortunate in that the continental slope and the Gulf Stream are just 40 km from land, compared to the 125 km that separate Nova Scotia from the slope and even more from the Gulf Stream proper.

PUBNICO PELAGIC 2017

Ronnie d'Entremont has been organizing a pelagic trip out of Pubnico each autumn since 2012, with the exception of 2013 when no trip was run. The destinations have been to productive areas on the Scotian Shelf, namely Southeast Bank (~50 km south of Pubnico) and German Bank (~50 km west of Pubnico). In 2017 it was decided that we would attempt the over-400-kilometre round trip to the continental slope – the only place in Canada where you could hope to see certain warm-water species.

At 5 pm on August 3, 12 birders and two captains set off from Dennis Point Wharf in Lower West Pubnico on Rebecca Lynn I, a 50-foot lobster fishing vessel. The two captains, brothers Stephen and Gerald d'Entremont, took turns at the wheel and we motored through the night. Of those onboard, the fortunate ones got to sleep inside on a bunk, but the rest had to sleep outside on the deck in cots. While sleeping under the stars is often romanticised, those on the deck had to deal with the loud rumble of the diesel engine and the pea-soup-thick fog that soaked everything and everyone.



These two Long-tailed Jaegers show checkered underwings, strongly barred undertail coverts and a dark bill tip of first-cycle birds. Both birds appear to be missing both central tail feathers (R1), so that their tails lack the slightly elongated centres. The individual at left is relatively paler, showing a less extensive breast band and less extensive and narrower flank and undertail barring. This photo is a composite of two separate photos. Photos by Alix d'Entremont.

incredible 27.7 degrees Celsius. Five minutes later we had two immature Long-tailed Jaegers following the boat (see “Aug 4:6 am” on the map below for approximate location).

We kept moving south into the warm water and by 8:09 am were looking at a small black-and-white shearwater sitting on the water (see “Aug 4:8 am” on the map below for approximate location). Some of the birders looked through their binoculars while others (including me) madly snapped away at it with their cameras. We knew full well that Audubon’s was a possibility; in fact that species was one of the main reasons for making the trip. There was a short discussion about the bird once it disappeared. Manx and Audubon’s Shearwaters are quite similar and some noted the appearance of dark undertail coverts while others mentioned that they had seen more extensive white on the face than on the typical Manx. The images of the bird on the LCD screens on the back of cameras seemed to show that the bird had white undertail coverts, which didn’t fit most of our expectations for Audubon’s. Other birds were to be seen, so the group decided to leave it as Manx for the time being. It was not until two days later that its identification as an Audubon’s Shearwater was confirmed.

Undertail covert colour in Audubon’s Shearwater actually varies from the less common solidly blackish to extensively white basally which is most common. Audubon’s is slightly smaller



We were south of Browns Bank as dawn broke. Given that the goal of the trip was to reach the warm waters past the slope, we kept an eye on the sea surface temperature as displayed by the boat’s electronics throughout. The nearshore water temperature was about 9 degrees Celsius, but Browns Bank waters were much warmer at about 17 degrees Celsius. We quickly organized ourselves and began a drip feed of fish oil, attracting Great and Cory’s Shearwaters and both usual storm-petrels. Our handout resources consisted of 160 lbs of herring and five buckets of frozen fish meal, fish oil, and Rice Krispies.

Abruptly, at 6:20 am, the humidity and air temperature spiked, causing our binoculars and camera lenses to steam up – we had reached the warm waters! The water temperature was an

This Audubon’s Shearwater south of Browns Bank, in relation to a Manx, shows a longer tail (projecting past the feet), whiter face and a wider dusky trailing edge to broader wings. The undertail coverts are mostly whitish except for a small dusky area.

Photo by Alix d'Entremont.

The Sargassum Midget, a flying fish species, has intricate patterns that serve as camouflage amid the patches of Sargasso weed that they inhabit (Howell, 2014). Photo by Alix d'Entremont.



than Manx and has relatively short and broad and blunt-tipped wings as well as a longer tail. Manx is darker-faced with a white hook around the auriculars, whereas Audubon's lacks the hook and is whiter faced (Howell, 2012).

The province's first report of Audubon's Shearwater was an observation at Western Bank on 7 October 1979 by an experienced observer (Nova Scotia Birds, 1980, Vol. 22, issue 1, p.8). Another four were reported before our first photographically confirmed was found by Tom Johnson south of Browns Bank on 17 August 2012 (Nova Scotia Birds, 2013, Vol. 55, issue 1). Prior to the 2017 record, there had been a total of 42 reports, but many, especially the earlier ones were by a single observer or lacked details.

The warm waters of the Gulf Stream were an exceptionally vibrant blue in contrast to our regular ocean waters which are a dull greyish or greenish. Our resident oceanographer, Dr. Eric Mills, explained that the colour of the water is a function of its contents and that the unbelievable blue colour all around us was in fact the apparent natural colour of water without any substantial amounts of particulates such as plankton. Marine species included Short-beaked Common Dolphins, Pilot Whales, Humpback Whales, tuna, Basking Sharks and even a species of flying fish identified by the Worm Lab at Dalhousie University as Sargassum Midget.

Only two skuas were seen during the trip, both South Polar Skuas (probably, see figure caption below) and both in the Northeast Channel between Georges Bank and Browns Bank. In the upper Gulf of Maine, herring fisherman and birder Ellis d'Entremont has also noted that jaegers and skuas are most

commonly observed in the relatively deeper shipping lanes of the Grand Manan Basin; perhaps they are flying between the more fruitful banks and therefore are easier to see.

Although birds following the ship as we chummed would be counted on multiple checklists, it should still be worthwhile to compare relative abundances of the tubenoses.

Average counts of species per 1-hour checklist seem to be associated with ocean bottom topography, as they should, given that the productivity and therefore habitat varies between these areas. Average numbers of Wilson's and Leach's Storm-petrel were 5 and 4 times higher respectively, on the slope than on the shelf. Cory's averages were similar on the shelf and on the slope. The cool-water-loving Great Shearwater averages were higher on the shelf and especially on Georges Bank compared to the slope. The two Sooty Shearwater sightings were on Georges Bank and Northern Fulmar was in the Northeast Channel. Sootys tend to be most abundant in summer and had likely moved to the n.e. Atlantic by early August. The only *Larus* species was a Herring Gull on Georges Bank. The only other jaeger was Pomarine in the Fundian Channel.



The Wilson's Storm-Petrel in the foreground is an adult. They breed in the southern hemisphere summer (our winter) around the Antarctic and Cape Horn regions and then begin primary moult in mid-Apr to early June and finish mid-Aug to late Sep. The bird in my photograph has replaced most primaries. Young birds completing their preformative moult begin replacing their primaries later. Photo by Alix d'Entremont.



The sea surface temperature above Georges Bank was about 14-17 degrees Celsius, much cooler than the 25+ degree Celsius waters on the slope and deeper waters.

FUTURE TRIPS

This pioneering trip was a tremendous success. One of the birders, a visitor from British Columbia, who had spent thousands of hours birding at sea both for work and recreationally, commented that this pelagic trip was “his favourite paying pelagic trip ever.” In an email sent to the group once back on land, Keith Lowe shared how his sleeping chair tipped over backwards a few times during the night, but said that it was all worth it.

The Audubon’s Shearwater was the only warm-water specialty that was found during the 2017 trip, but many others are possible. Michael Force, wildlife surveyor for NOAA, explains that in warm water cores south of the slope, it is “easy to find Audubon’s Shearwaters and Band-rumped Storm-Petrels,” but that White-faced Storm-Petrels, Barolo Shearwater and Black-capped Petrels are not common. Species such as Bridled Tern, White-tailed Tropicbird and Red-billed Tropicbird have been seen near the continental slope off Massachusetts, so should be looked for on and around the Scotian Slope.

LEFT: These two skuas are at the same stage of primary moult, both having dropped the two innermost primaries, suggesting first-cycle birds by their primary moult scores as per Newell and Howell (2013). The bird depicted in both photos above shows extremely worn and pointed primaries, providing more evidence of a young bird. It is comparatively much more bleached, perhaps because it spent much time at sunnier latitudes. The mottling on the neck is likely due to the darker post-juvenile feathers compared to the highly bleached retained juvenile feathers.

The individual in both photos below shows a pale hind collar and a short gony which are features commensurate with South Polar Skua, but the large bill and plumage colour are suggestive of Brown Skua. In fact, a Brown Skua photographed off the east coast of Australia (Macaulay Library Number ML64312061) was quite similar in plumage. Two individuals with mitochondrial DNA of the Brown Skua group were recorded in the northeast Atlantic in 2001 and 2002 (Votier et al., 2004). Biometrics and the relatively low population of hybrids with South Polar Skua suggest that they were pure Brown Skuas. The few unconfirmed reports from the eastern US and one from Sable Island, Nova Scotia (McLaren & Lucas, 2004), along with the DNA evidence, means that we must consider Brown Skua here, identification criteria are still lacking, however.

Photos by Alix d’Entremont.

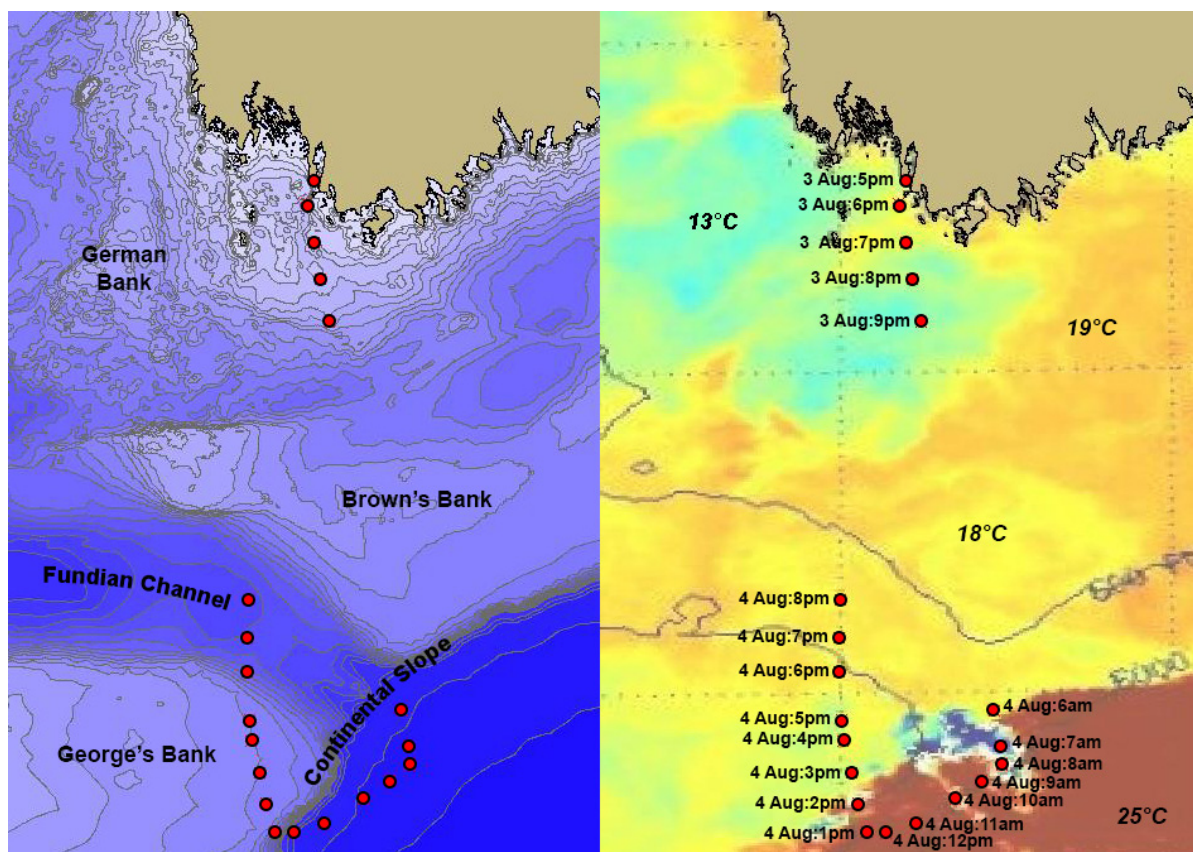
Total Sightings, Aug 3-4 Species	Total
Cory's Shearwater	68
Great Shearwater	727
Sooty Shearwater	2
Manx Shearwater	1
Audubon's Shearwater	1
Northern Fulmar	1
Leach's Storm-Petrel	270
Wilson's Storm-Petrel	767

Nova Scotia birders have yet to see a photographically confirmed Cory's (Scopoli's) Shearwater (*Calonectris diomedea diomedea*), but observers on pelagic trips out of Hatteras during August and September 2017 noted that the majority of Cory's appeared to be of the nominate population (<http://www.patteson.com/>), so it is just a matter of time before we get our first photographic record. However, we must keep in mind the

difficulties of at-sea identification and the ill-defined limits of variation in the two extremely similar taxa before we can claim our first (see Nova Scotia Birds Vol. 57 issue 4 pp. 38-43). The near-threatened Cape Verde Shearwater (*Calonectris edwardsii*) has been reported as singles from North Carolina and Maryland (Howell, 2012). Incredibly, the critically endangered Bermuda Petrel has even been recorded in the vicinity of Georges Canyon, on 21 Apr 2014 (Nova Scotia Birds Vol. 56 issue 4), associating with pilot whales. At least three Bermuda Petrels with tracking devices were recorded in Nova Scotian waters in 2009 (McLaren, 2012). On 7 July 1997, a Fea's Petrel was photographed at The Gully, an area on the continental slope northeast of Sable Island (Birders Journal 1997, Vol. 6:245-248; Nova Scotia Birds Vol. 40 No. 1). Bulwer's Petrel has been reported but not confirmed twice in our waters, and there are three well documented records from the eastern U.S. (Howell, 2012). Trinidad Petrels are now annual off North Carolina (Howell, 2012). It is clear that there are multiple reasons for future trips to the warm waters on and past the shelf slope.

Michael Force recommends honing in on warm water over canyons (like George's and Corsair) and the shelf break, but that he has had "great success" off the southeastern edge of George's Bank and off the Northeast Peak. Chumming at the productive fronts where cold and warm waters meet might prove more beneficial than steaming farther into the warm waters. There remains a lot to learn about bird distribution in our offshore waters. Let's see what surprises are revealed next.

The red dots on both of these maps represent the location of the same eBird checklists for the trip. Only the sea surface temperature map shows the date and time of the checklists. The general water depth during the trip was about 100 m on Georges Bank, 200-300 m in the Fundian Channel and 3000 m at the deepest point off the banks. Bathymetry from MassGIS; Sea Surface Temperature by Rutgers University; annotations by Alix d'Entremont.



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October 2017 Fallout

An unusual combination of weather conditions on the east coast of North America during the 4th week of October 2017 resulted in an extraordinary transport of large numbers of nocturnal migrant songbirds from the southeastern United States to an area including Nova Scotia south to New England as well as Bermuda.

Alix d'Entremont and John Kearney



Hooded Warbler at Daniels Head, CSI, Oct 27. Photo by Mark Dennis

Abstract

An unusual combination of weather conditions on the east coast of North America during the 4th week of October 2017 resulted in an extraordinary transport of large numbers of nocturnal migrant songbirds from the southeastern United States to an area including Nova Scotia south to New England as well as Bermuda. The 2017 fallout was roughly similar in numbers of birds involved, but much more geographically extensive than the “great fallout” of 1998. Numbers were greatest in the southernmost coastal areas of the province but extended east along the Atlantic coast of the mainland. Weather analysis indicates that the main source of the fallout birds was likely central Florida with the possibility of additional birds arriving from northern Florida to South Carolina. In all these areas, north and northwest winds below 500 meters altitude were favourable for southbound migration, but at 1500 meters, crosswinds from the southwest would have carried birds northeast over the Atlantic Ocean. We suggest that updrafts from thunderstorms along a frontal system carried songbirds to these higher altitudes and entrapped them in the crosswinds. The species composition of the fallout birds also supports a Florida origin.

Introduction

The high incidence of vagrant birds to Nova Scotia is at least partly related to its geography. The province sits halfway between the equator and the north pole at the eastern edge of the continent and is virtually surrounded by water – its shores and islands acting as first havens for land birds displaced over the sea (McLaren, 2012). Certain weather systems during times of migration are known to make for exciting birding in what is known as a bird fallout, a phenomenon in which many birds are prevented from reaching their intended destinations due to meteorological conditions – some of which make first landfall in Nova Scotia. This can occur in autumn with passing cold fronts – an October 1998 fallout (McLaren et al., 2000) and now, the October 2017 fallout, are both prime examples.

Lucas Berrigan and David Bell, Atlantic Bird Observatory researchers on Bon Portage Island (BP), noted 6 Indigo Buntings, 3 Red-eyed Vireos and 1 Gray Catbird on the island once the rain had abated on the evening of October 26. Well versed in weather patterns and having previously read McLaren et al. (2000), David connected the eastward moving cold front that had brought the rain with the arrival of birds that should be much farther south, and posted to the Nova Scotia Rare Bird Alert (NS-RBA) warning of a possible fallout. The crew at BP was out early the following morning and quickly found more vagrants including Hooded Warbler, White-eyed Vireo and Yellow-throated Vireo – the fallout had occurred!

For those familiar with the paper by McLaren et al. (2000) about the 1998 fallout, the vagrants involved were referred to as “reverse-migrants”. Recent publications such as Howell et al.

(2014) define “reverse-migrants” as birds whose intrinsic compass is faulty and therefore suffer from misorientation. The term “drift” represents a case where birds begin their migration in the intended direction, but due to adverse winds or rain and an inability to land when over water, have no choice but to simply drift with the wind. The individuals of the October fallouts of 1998 and 2017 were brought to Nova Scotia because of drift.



Yellow-billed Cuckoo, BPI, Oct 28. Photo by Alix d'Entremont.

Geographic Extent - Nova Scotia

NS-RBA posts on October 27 of vagrants from *Shelburne* to *Halifax* established that this was a wide-ranging event in comparison to the 1998 fallout, which was restricted to *Shelburne*. October 28 and 29 fell on a weekend, so more of the province was covered during those two days, but there were still data gaps on the Atlantic Coast of mainland Nova Scotia, most evident in *Queens* and *Guysborough*. The map in Fig. 1 is an attempt to visualize where the vagrants arrived during the first full 3 days of the fallout.

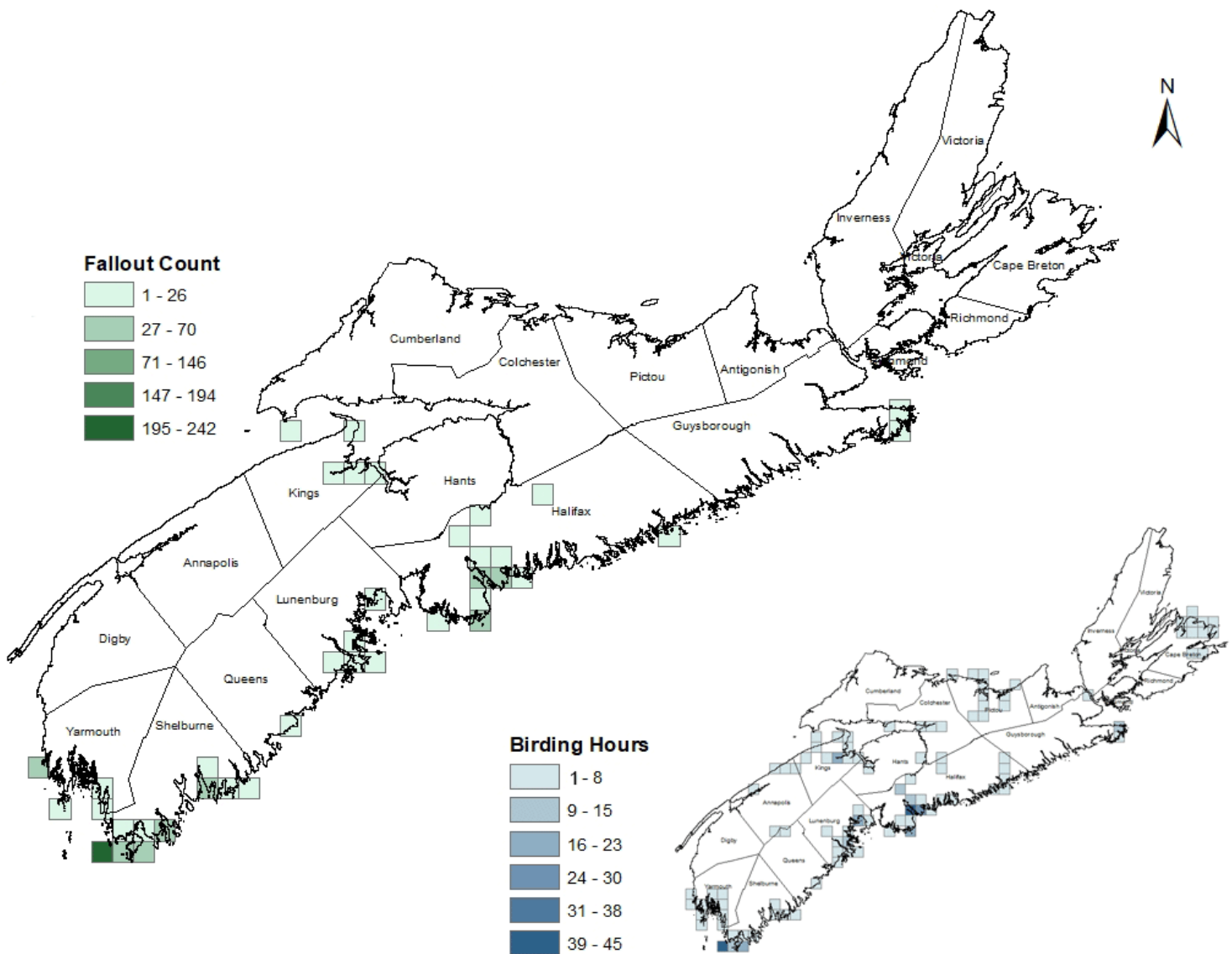


Figure 1. These maps created from eBird data show where vagrant birds were detected (Fallout Count) and which locations were birded (Birding Hours) during the period of October 27-29, 2017. The “Fallout Count” total per square represents how many vagrants were reported in that 10 km by 10 km square. Species that could already have been present in numbers like Yellow-rumped Warbler, Orange-crowned Warbler and Ruby-crowned Kinglet that could have been involved in the fallout were not included in the “Fallout Count” to ensure that the map was representative of fallout birds only. Very few fallout birds were reported away from the Atlantic Coast initially, and most of those were reported after October 27, which could suggest that they had moved from their original arrival locations. The “Birding Hours” total per square represents the total birding hours within each 10 km by 10 km square. It is apparent that the counties of Annapolis, Kings, Colchester, Pictou and Cape Breton were birded, but lacked obvious evidence of a fallout arrival. For the most part, birds that had been entrained in the weather system landed at the very first opportunity, which would have been Nova Scotia’s Atlantic Coast. With the winds and the arrival direction of birds on October 26 being approximately s.s.e., the counties in the “wind shadow” received far fewer birds.

Bon Portage Island Arrivals

The birds reported during the 1998 and 2017 fallouts are compared in Table 1. It is important to note that the 1998 event occurred about 2 weeks earlier (11 Oct) than the 2017 (27 Oct) event. Perhaps the most glaring difference between the two years at BP is the number of Gray Catbirds – very few in 1998,

but a large number in 2017. Data from eBird seems to suggest that the push of Gray Catbirds out of Florida occurs after mid-October, which explains why there were fewer of them in 1998. Factors influencing the relative abundance between fallouts of Common Yellowthroat and American Redstart don’t seem as obvious.

Scarlet Tanager at West Head Rd, Shelburne. Nov 11.
Photo by Bill Crosby.

Advances in technology, such as miniaturization, that were only a dream in 1998, gave us the opportunity to track movements of certain birds after their arrival on BP. Banding staff of the Atlantic Bird Observatory fitted 15 of the fallout birds with tiny radio transmitters that send a unique identification number to the Motus Wildlife Tracking System, which logs an approximate location of the transmitter. This automated radio telemetry system has good coastal coverage on mainland Nova Scotia and south through to Virginia, with fewer towers all the way to South America.

The radio-tagged birds included one Golden-winged Warbler, one Hooded Warbler, four Indigo Buntings, one Orange Crowned Warbler, two Summer Tanagers, three White-eyed Vireos, two Yellow-billed Cuckoos and one Yellow-throated Vireo. Both Yellow-billed Cuckoos left during the night of October 27, followed by the Golden-winged Warbler the next morning, two of the Indigo Buntings on the night of October 28, the Hooded Warbler late in the day on November 1, and one of the Summer Tanagers on the night of November 2.

Province-wide Reports

From late October into November, birders were busy checking the best migrant traps for fallout birds. An attempt at quantifying the number of birds that arrived to Nova Scotia is found in Table 2.

Of the 2067 individuals in Table 2, about 42% were from *Shelburne*, 22% from *Halifax*, 18% from *Yarmouth* and 7% from *Lunenburg* – other counties had fewer reports. The percentage from *Halifax* is likely inflated by an uncertain amount since total birding hours there were about twice as high as *Shelburne*. Many of the birding hours in Halifax were likely at inland locations and at locations where fallout birds had already been reported, so an attempt to normalize the percentages has not been attempted. The total number of species recorded in each county also suggests that the bulk of the birds arrived in *Shelburne* – 46 for *Shelburne*, 36 for *Yarmouth*, 35 for *Halifax* and 29 for *Lunenburg*.

Species that were recorded into December included White-eyed Vireo, Blue-headed Vireo, Red-eyed Vireo, Blue-gray Gnatcatcher, Ruby-crowned Kinglet, Hermit Thrush, Gray



Catbird, Nashville Warbler, Common Yellowthroat, American Redstart, Northern Parula, Yellow-throated Warbler, Wilson's Warbler, Summer Tanager, Scarlet Tanager, Rose-breasted Grosbeak, Baltimore Oriole and Indigo Bunting. A full list with numbers will be provided in the winter 2017/2018 issue of NS Birds.

Geographic Extent - Eastern North America

While the majority of vagrants arrived in Nova Scotia, many of the same species were reported during a similar time from New Brunswick south to Cape Cod and even Bermuda. The Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) is a computer model that can forward or backward trace the trajectory of a hypothetical air parcel at various altitudes over a particular time frame. Runs of HYSPLIT show that the final destination of the storm-brought birds could have varied substantially depending on when and where they left from.

NEXT PAGE: Table 1. This table compares the species counts at Bon Portage Island during the 1998 and 2017 fallouts. The numbers are combined daily estimates for the three days prior to (8-10 Oct 1998; 24-26 Oct 2017) and following (11-13 Oct 1998; 27-29 Oct 2017) the fallout with duplicates removed. The "Arrivals" column represents an estimate of the vagrants, calculated by removing the counts prior to the fallout from the counts after the fallout. The "%" column relates to the percentage of the total that each species' "Arrival" count represents. The "N" column can be compared between years to assess differences in relative species composition.

Table 1	Bon Portage I. 1998				Bon Portage I. 2017			
Species	8-10 Oct	11-13 Oct	Arrivals	%	23-25 Oct	26-29 Oct	Arrivals	%
Yellow-billed Cuckoo	0	3	3	0.3	1	14	13	4.0
Chimney Swift	0	0	0	0.0	0	1	1	0.3
Eastern Wood-Pewee	0	1	1	0.1	0	3	3	0.9
White-eyed Vireo	0	1	1	0.1	0	16	16	5.0
Blue-headed Vireo	2	3	1	0.1	1	1	0	0.0
Yellow-throated Vireo	0	5	5	0.4	0	6	6	1.9
Philadelphia Vireo	0	3	3	0.3	0	1	1	0.3
Red-eyed Vireo	2	180	178	15.6	0	35	35	10.9
Ruby-crowned Kinglet	11	22	11	1.0	1	10	9	2.8
Gray-cheeked Thrush	0	0	0	0.0	0	1	1	0.3
Swainson's Thrush	0	0	0	0.0	0	7	7	2.2
Hermit Thrush	0	0	0	0.0	1	6	5	1.6
Gray Catbird	0	10	10	0.9	1	80	79	24.5
Ovenbird	4	20	16	1.4	0	5	5	1.6
Northern Waterthrush	0	4	4	0.4	0	1	1	0.3
Golden-winged Warbler	0	1	1	0.1	0	1	1	0.3
Tennessee Warbler	0	6	6	0.5	0	0	0	0.0
Black-and-white Warbler	0	22	22	1.9	1	1	0	0.0
Orange-crowned Warbler	0	0	0	0.0	1	2	1	0.3
Nashville Warbler	0	0	0	0.0	0	1	1	0.3
Connecticut Warbler	0	2	2	0.2	0	0	0	0.0
Mourning Warbler	0	1	1	0.1	0	0	0	0.0
Common Yellowthroat	11	125	114	10.0	0	5	5	1.6
Hooded Warbler	0	8	8	0.7	0	10	10	3.1
American Redstart	0	91	91	8.0	0	3	3	0.9
Cape May Warbler	0	1	1	0.1	0	2	2	0.6
Northern Parula	0	52	52	4.6	0	12	12	3.7
Magnolia Warbler	2	14	12	1.1	0	4	4	1.2
Bay-breasted Warbler	0	1	1	0.1	0	1	1	0.3
Blackburnian Warbler	0	2	2	0.2	0	3	3	0.9
Chestnut-sided Warbler	0	13	13	1.1	0	1	1	0.3
Blackpoll Warbler	8	6	0	0.0	0	9	9	2.8
Black-th. Blue Warbler	5	2	0	0.0	0	1	1	0.3
Yellow-rumped Warbler	57	190	133	11.7	1	16	15	4.7
Yellow-throated Warbler	0	4	4	0.4	0	14	14	4.3
Pine Warbler	0	0	0	0.0	0	3	3	0.9
Black-th. Green Warbler	0	13	13	1.1	0	4	4	1.2
Palm Warbler	3	19	16	1.4	0	2	2	0.6
Wilson's Warbler	0	0	0	0.0	0	1	1	0.3
Summer Tanager	0	0	0	0.0	0	2	2	0.6
Scarlet Tanager	0	31	31	2.7	0	2	2	0.6
Baltimore Oriole	0	0	0	0.0	0	3	3	0.9
Rose-breasted Grosbeak	0	1	1	0.1	0	3	3	0.9
Blue Grosbeak	0	27	27	2.4	0	0	0	0.0
Indigo Bunting	0	255	255	22.4	0	29	29	9.0
Individual Total	105	1139	1039		8	322	314	
Species Count			33				39	

Nova Scotia 26 Oct–30 Nov			
Species	Count	Species	Count
Yellow-billed Cuckoo	42	Tennessee Warbler	10
Black-billed Cuckoo	2	Orange-crowned Warbler*	92
Common Nighthawk	1	Nashville Warbler	6
Chimney Swift	4	Common Yellowthroat*	39
Eastern Wood-Pewee	17	Hooded Warbler	22
White-eyed Vireo	80	American Redstart	13
Yellow-throated Vireo	26	Cape May Warbler	19
Blue-headed Vireo*	13	Northern Parula*	61
Philadelphia Vireo	2	Magnolia Warbler	16
Red-eyed Vireo	98	Bay-breasted Warbler	1
Marsh Wren*	4	Blackburnian Warbler	6
Blue-gray Gnatcatcher	2	Chestnut-sided Warbler	3
Ruby-crowned Kinglet*	55	Blackpoll Warbler	22
Veery	1	Black-throated Blue Warbler	9
Gray-cheeked Thrush	2	Palm Warbler	20
Swainson's Thrush	18	Pine Warbler*	30
Hermit Thrush*	38	Yellow-rumped Warbler*	438
Wood Thrush	1	Yellow-throated Warbler	33
Gray Catbird*	310	Prairie Warbler	4
Yellow-breasted Chat*	12	Black-throated Green Warbler	20
Baltimore Oriole*	34	Wilson's Warbler	11
Ovenbird	6	Summer Tanager	38
Northern Waterthrush	1	Scarlet Tanager	26
Golden-winged Warbler	3	Rose-breasted Grosbeak	67
Blue-winged Warbler	4	Blue Grosbeak	6
Black-and-white Warbler	16	Indigo Bunting	263
Count Total 2067			

Table 2. The data for this table were entirely sourced from eBird and span the period from October 26 – November 30, 2017. This date range was selected to ensure greatest geographical coverage by birders at the risk of counting later arrivals like Orange-crowned Warblers. The species listed are the ones whose numbers appeared to show an arrival during the fallout. The counts represent a combination of the highest counts for each species for each location.

** The species annotated with an asterisk (*) warrant comment. Due to the increase of birding activity during the days following the fallout, unusually high counts of certain species could have been partly the result of more effort combined with the individuals from the fallout. There were already some Blue-headed Vireos in the region, but most were reported in early October. The Marsh Wrens were found at least two weeks after the fallout, so their arrival dates are uncertain. Counts of Ruby-crowned Kinglets, Hermit Thrushes, Gray Catbirds, Baltimore Orioles, Blackpoll Warblers, Orange-crowned Warblers, Common Yellowthroats, Northern Parulas, Palm Warblers, Pine Warblers and especially Yellow-rumped Warblers likely include individuals that were already present before the fallout, but clear increases in these species were observed at Bon Portage Island, so numbers should be presented here.*

Bermuda

Many of the vagrant bird species that were found in Nova Scotia during the fallout were also reported from Bermuda on and after October 27. Similar arrival times here and in Bermuda could be explained by differences in wind speed within the storm system. The British Overseas Territory serves as a late fall migration stop-over or even a wintering area for many species of warblers, tanagers, grosbeaks and buntings, but a clear arrival of species from these groups was still detected by local

eBirders and banders. For example, Eastern Wood-Pewees are very uncommon on the island in October, but 32 were brought there by the weather event.

Eastern US & New Brunswick

Obvious spikes in reports on or soon after October 27 of White-eyed Vireo and Yellow-throated Vireo and slight rises in reports of Yellow-throated Warbler, Black-throated Green Warbler, Blue-gray Gnatcatcher, Blue-headed Vireo, Indigo

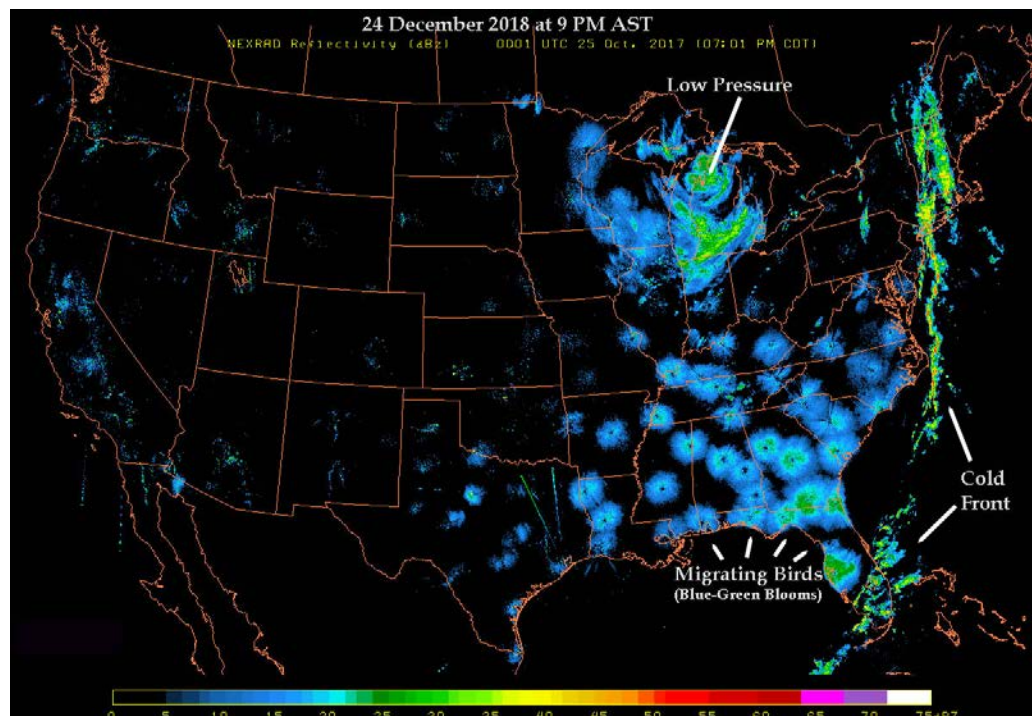
Bunting, Northern Parula and Summer Tanager came from New Brunswick to Cape Cod, with many continuing into December and a few into January. Red-eyed Vireo, Yellow-billed Cuckoo, Hooded Warbler, Gray Catbird, Philadelphia Vireo, Pine Warbler, Rose-breasted Grosbeak and Scarlet Tanager were only reported from e. Maine through to NS during the first few days after the fallout. Certain species that arrived in large enough numbers were noted re-orienting and heading south, evidenced by abnormally late reports in areas south of Nova Scotia such as Indigo Bunting, Northern Parula and Yellow-billed Cuckoo. Species that arrived in NS in very small numbers likely will not allow for regional analysis due to the resultant small sample size and certain species' numbers being masked by birds already present.

Weather Analysis

With very few exceptions, the birds involved in the 2017 fallout were nocturnal migrants that take flight 1-2 hours after sunset and gain altitude in search of favourable weather conditions. The most important of these conditions are wind direction and wind speed, with a tail wind or light wind preferred. In eastern North America, the ideal spring winds are from the south or southwest ahead of a cold front, and in the autumn, from north or northwest behind a cold front. Most small songbirds, like warblers, fly below 500 metres above ground level, while larger songbirds, such as thrushes, will climb to 1,500 metres or more in search of ideal conditions. As weather conditions change through the night, birds will adjust their flying altitude up or down. Less is known about other meteorological conditions, like temperature and cloud cover, which can also affect the altitude of migrating birds. Precipitation, at any time of the night, usually causes the birds to land as soon as possible. Otherwise, songbirds generally begin their descent to land 1-3 hours before sunrise. Sometimes nocturnal migrants can be seen flying for a couple of hours after sunrise if they have been blown off course or need to search for suitable feeding habitat – this is known as morning flight.

This section deals with three different times zones: Atlantic Daylight Time (ADT), Eastern Daylight Time (EDT) and Greenwich Mean Time (GMT). Daylight Saving Time being in effect during late October when the fallout event occurred,

Figure 2: Radar Imagery at 8 PM EDT on 24 October 2017 (Source map from http://www.pauljhurtado.com/US_Composite_Radar/)



results in ADT are at GMT - 3:00 and EDT are at GMT - 4:00.

A preliminary analysis of the weather conditions contributing to the fallout of 2017 was proposed by Team Bird Cast at the Cornell Lab of Ornithology shortly after the event (www.birdcast.info - search for "neotropical transport"). They noted a cold front extending just offshore of the southeast coast of the United States while intensive nocturnal migration was in progress during the early evening of 24 October. These conditions are shown in the radar map above (Fig. 2), where bird migration is indicated by blue-green blooms and rain by irregular shaped green and yellow.

It is thought that birds departing from the southeast coast of the United States were entrained in a stalled frontal system offshore, and having no place to land, flew downwind with the system. In this way, they ended up as storm-driven vagrants in New England and the Canadian Maritimes.

Figure 3 illustrates the reflectivity of radar targets over Jacksonville, Florida at 8 PM EDT on 24 October. The overall bloom shape of the echoes indicates strong bird migration. With echo densities as high as 25 decibels, the number of birds in the air would be approximately 600 per cubic kilometer in some areas. Note also the precipitation to the southeast which appears to include at least one thunderstorm cell (the red spots). This precipitation is part of the cold front that extended up the east coast that night.

Figure 4 shows the radial velocity of the radar targets. Green indicates the targets moving toward the radar while red indicates those traveling away from the radar. The intensity of the colours specifies the speed (in knots) at which the targets are moving in relation to the radar. The gray area is where targets have a zero-velocity relative to the radar. The angle of the boundary between

the green and red areas indicates the direction of movement of the targets. Hence, the migration over Jacksonville that night was heading to the southeast, out to sea towards the cold front.

Surface winds just off the coast of Jacksonville, were north at 8 km/hr. These were ideal initial conditions for migration. As birds approached the cold front, the winds shifted to southwest with wind speeds increasing to up to 33 km/hr. While conditions were no longer ideal for movement to the southeast, they would not seem to be extreme enough for a large diversion of birds toward New England and the Canadian Maritimes.

To better understand weather conditions on the evening of 24 October, a HYSPLIT model was employed. Figure 5 shows the forward trajectories over 48 hours of parcels of air over Jacksonville, Florida, at 11 PM EDT on 24 October.

As indicated in the map and bottom panel of Figure 5, parcels of air and hence, the birds flying in them, at surface level and up to at least 500 meters altitude, would have reached the intended destination in the Bahamas by 2 PM EDT (18:00 GMT 25 Oct) on 25 October. On the other hand, a parcel of air at 1500 meters altitude would have reached Shelburne County in Nova Scotia at 9 PM ADT (00:00 GMT 27 Oct) on 26 October. What was different at 1500 meters over Jacksonville that would have brought birds to Nova Scotia in less than 48 hours?

As illustrated in Figure 6, winds offshore of Jacksonville at 1500 meters were strong from the southwest compared to the light north winds at the surface.

This suggests that birds at 1500 meters were entrained in the cold front and continued downwind until they reached the shores of Nova Scotia.

However, the HYSPLIT model suggests that birds leaving Jacksonville below 500 meters would have been carried to the Bahamas, remaining in northwest winds as the cold front moved further offshore. Why, then, did the birds at 1500 meters not descend by 1000 meters? In a study of a similar fallout in 1998 (McLaren et al. 2000), the authors suggest that convection currents may have played a role in trapping the migrants at higher altitudes. It was noted earlier that thunderstorm cells could be seen on the radar offshore of Jacksonville, indicating that birds may have been lifted by updrafts and carried northeast until there was no alternative other than flying downwind.

The result of HYSPLIT models for Charleston, South Carolina, indicated a similar pattern to that of Jacksonville, with the estimated arrival time of birds in Nova Scotia being a little after 10 PM ADT on 26 October in Lunenburg.

Observers at a banding station on Bon Portage Island, *Shelburne*, reported the first arrivals early during the evening of 26 October. This is earlier than indicated by the forward trajectories of the HYSPLIT models, but some variation of reality compared to the models is likely, given that birds entrained in winds require some movement relative to the wind to maintain stability.

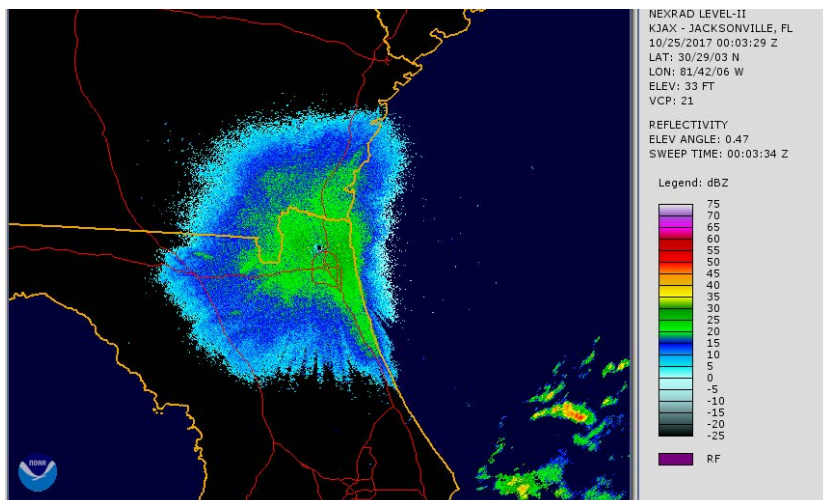


Figure 3: Base Reflectivity Showing Intense Migration at Jacksonville, Florida at 8 PM EDT on 24 October 2017 (Source NOAA)

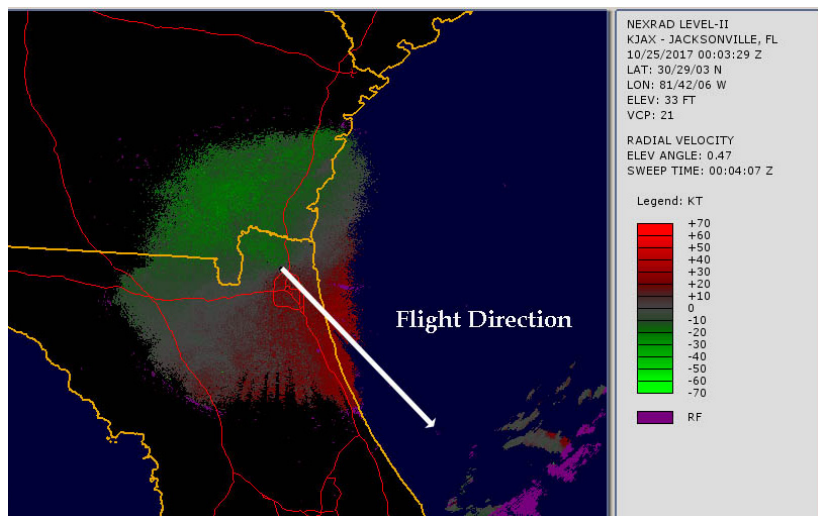


Figure 4: Base Radial Velocity at Jacksonville, Florida at 8 PM EDT on 24 October 2017 (Source NOAA)

Backward trajectories from Bon Portage Island were run for a 72-hour period before the observed arrival of vagrants. The results of this modeling are graphed in Figure 7. The model indicates that a possible origin of the birds to first arrive on Bon Portage Island was the west coast of Florida on the Gulf of Mexico, near Tampa. The arrival time on Bon Portage Island was about 8 PM ADT after a 48-hour trip at 1500 meters altitude.

The upper panel of Figure 8 shows the reflectivity of radar targets over Tampa, Florida at 8 PM EDT on 24 October 2017. High density migration is even more widespread than at Jacksonville. One can see a line of thunderstorm cells to the south, southeast, and east of the Tampa area.

The lower panel of Figure 8 indicates that the direction of migration at Tampa was to the south southeast.

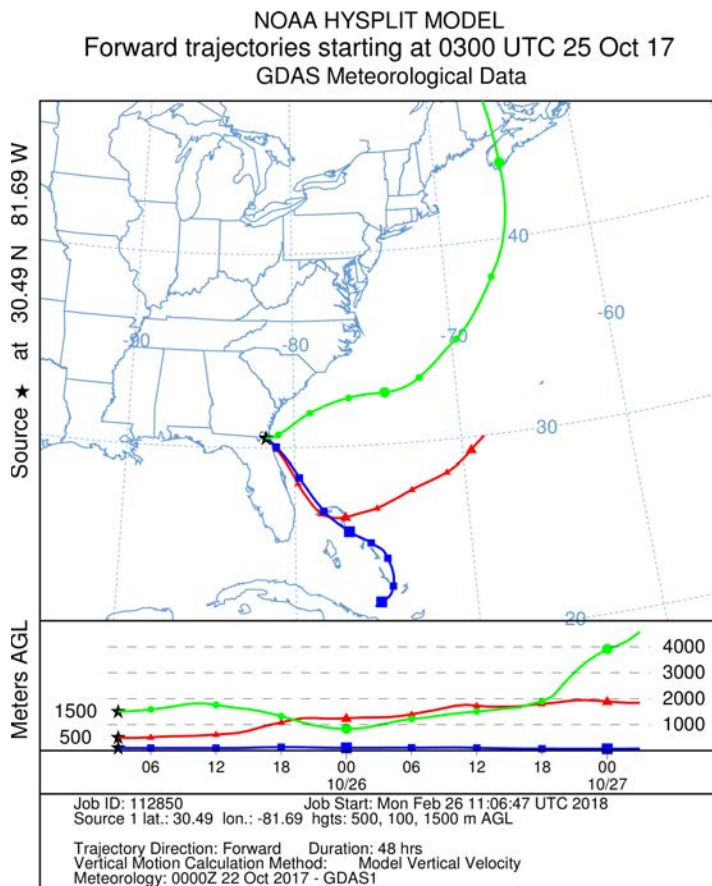


Figure 5: NOAA HYSPLIT Model, Forward Trajectories Starting at 11 PM EDT on 24 October 2017. Time and date in GMT.

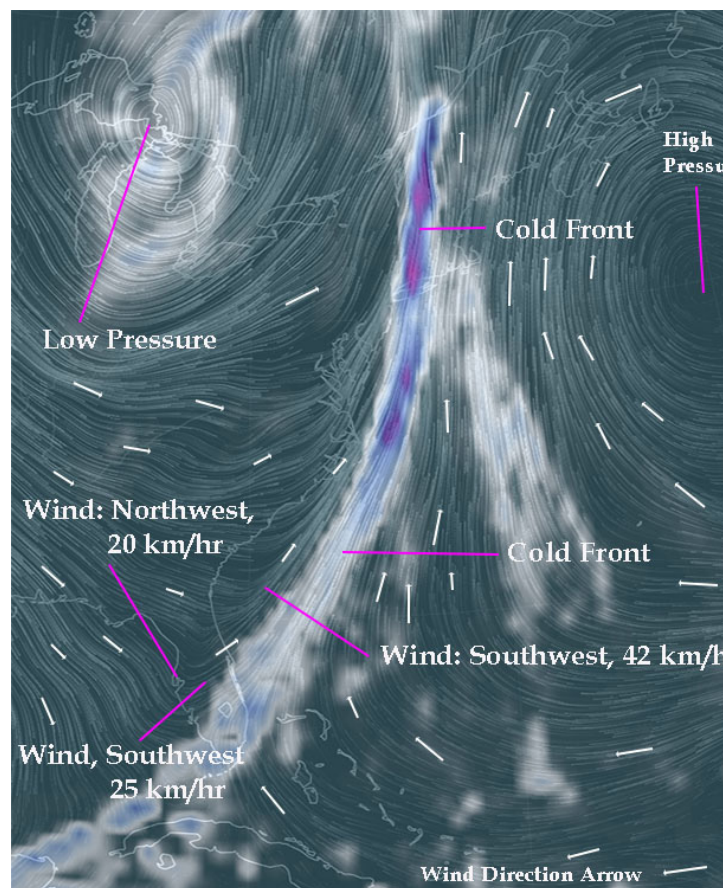


Figure 6: Winds at ~1500 Meters Altitude on 24 October 2017 at 8 PM EDT (Source: nullschool.net)

When examining the forward trajectories computed by the HYSPLIT models for Tampa in Figure 9, one notes a similar pattern as for Jacksonville. Birds flying below 500 meters would reach their destinations in Cuba and Honduras while birds at 1500 meters were taken to Nova Scotia.

Note also that there is only a one-hour difference in the arrival times in Nova Scotia between the forward and backward trajectories (Figures 9 and 7). As with Jacksonville, one can ask what kept the Tampa area birds from staying at lower altitudes to maintain a seasonably appropriate flight direction? The radar image for Tampa (Fig. 8, upper panel) also shows thunderstorms, which suggests that migrant birds could have been lifted by updrafts.

A Tampa area origin for the vagrants found by birders in the days after their arrival in Nova Scotia provides a better fit for the species of birds to be expected in late October than a more northerly origin such as South Carolina, Georgia, or perhaps even northern Florida. The forwards and backwards HYSPLIT models clearly show how entrained birds could have been carried along from the Tampa area to Nova Scotia and

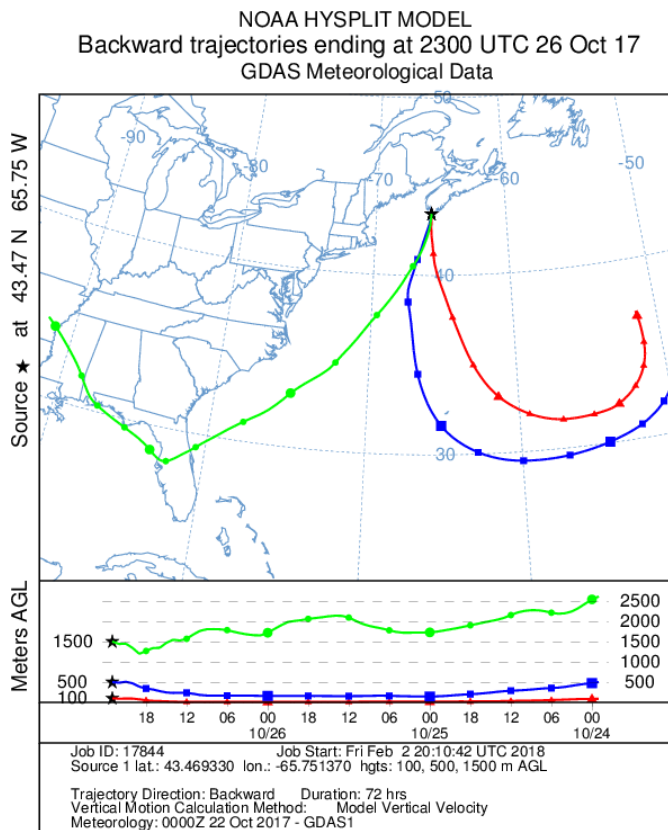
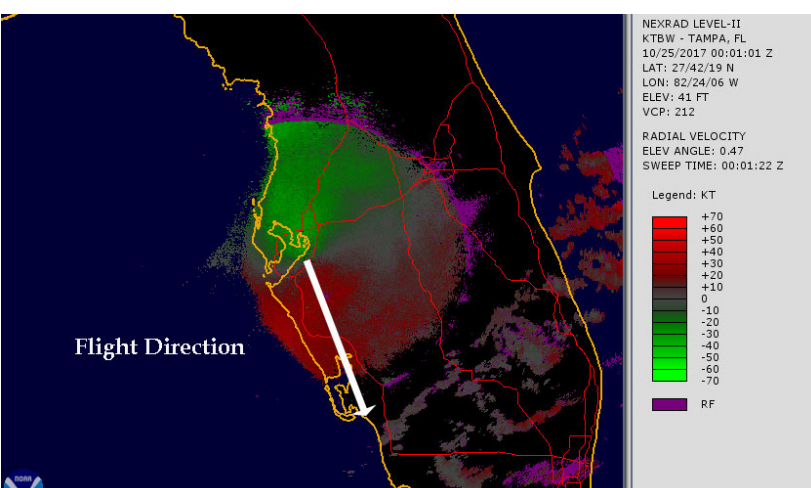


Figure 7: NOAA HYSPLIT Model, Backward Trajectories Ending at 8 PM ADT on 26 October 2017. Time and date in GMT.

Figure 8: Base Reflectivity (UPPER and Base Radial Velocity (LOWER) at Tampa, Florida at 8 PM EDT on 24 October 2017 (Source NOAA)

the strong radar reflectivity in the area suggests heavy migration over a wide front. Nonetheless, the HYSPLIT models also indicate the possibility of multiple origins of vagrants from the East Coast of the United States from Florida to South Carolina where meteorological conditions were similar on the evening of 24 October.

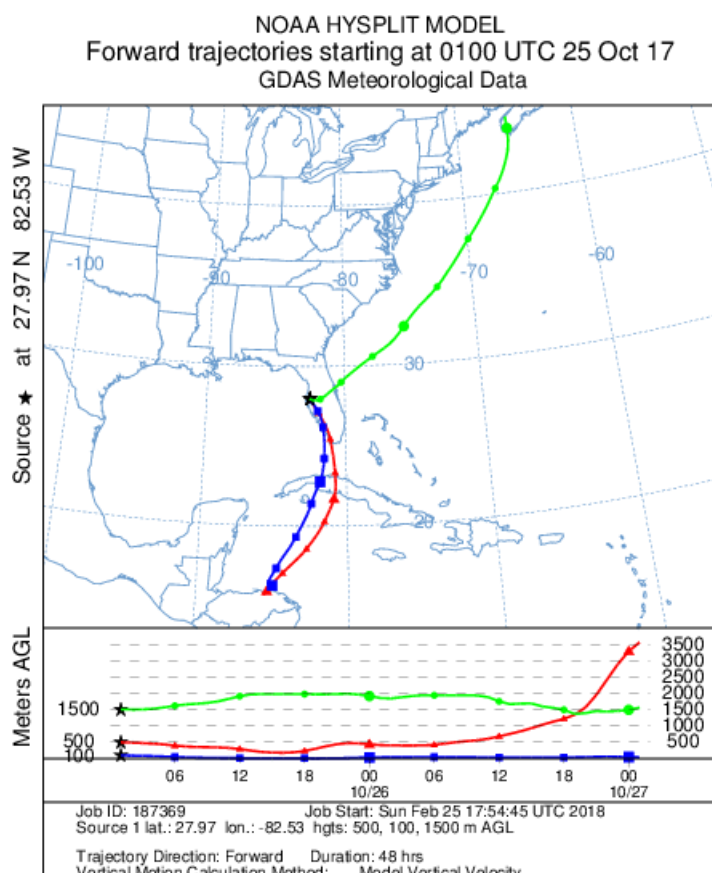
It was nineteen years between the massive fallouts of southern vagrants in Nova Scotia (1998 and 2017). What were the unusual conditions that these two events might have shared? Cold fronts extending the length of the United States east coast are not that rare, nor are upper air winds that are stronger and crosswise to surface winds. The common factor in 1998 and 2017 appears to be strong updrafts that trapped birds in the upper level crosswinds until they were over the ocean and had no choice but to continue flying downwind. Given the configuration of the east coast of North America, a downwind strategy for birds well offshore may have an evolutionary basis. Rather than struggling against headwinds and crosswinds in attempting to return to the coast, birds may have better chances of surviving by letting winds carry them to the eastward-extending land masses of Nova Scotia and Newfoundland.



Unreported Species

The eBird frequency and abundance graphs for Florida, the likely origin of the vagrants, and species-specific migration routes, may offer explanations for the lack of certain species in the fallout. Early migrants such as Louisiana Waterthrush, Prothonotary Warbler, Kentucky Warbler, Cerulean Warbler, Canada Warbler and Bobolink had mostly already left the U.S. by late October. Swainson's Warblers and Yellow Warblers migrate through Florida, but do so in relatively low numbers. Mourning Warblers and Yellow-breasted Chats take an entirely (former) or partly (latter) westerly route during fall. Kirtland's Warbler's population is so small that it was simply a matter of low numbers that it didn't show up here. Bicknell's Thrush and Warbling Vireo are uncommon in Florida, especially in late October. Prairie Warbler is quite interesting because it is as abundant as Northern Parula through Florida during migration, but most of Florida is within the winter range of Prairie Warbler. The abundance of Prairie Warblers in Cuba is relatively stable from the second week of October on, suggesting that not many are leaving Florida during that time.

Figure 9: NOAA HYSPLIT Model, Forward Trajectories Starting at 9 PM EDT on 24 October 2017. Time and date in GMT.



Concluding Remarks

The winter 1999 issue of Nova Scotia Birds (Vol. 41, issue 1) dubbed the fallout of October 11, 1998, as the “Great Fallout”. Numbers of assumed vagrants recorded in that event totalled 2243 (McLaren et al., 2000). The 2017 total of 2067 (Table 2), while not directly comparable to the 1998 total due to the longer time window, does suggest that both events involved a similar number of birds. The large geographic extent of the 2017 event meant that finding the vagrants took more time. The 1998 data was boosted by the 813 birds observed on Seal I., a location that was not surveyed in 2017. If the October 2017 fallout was a first for you, consider it on par, in terms of numbers of individuals, with the “Great Fallout” that you’ve been hearing stories about for years.

Acknowledgements

We would like to thank Jason Dain for the creation of the map (Fig. 1) and Dr. Ian Folkins, Department of Physics and Atmospheric Science, Dalhousie University, for providing some initial guidance with the weather analysis. We appreciated the helpful comments to drafts of this paper provided by Eric Mills, David Bell, Mark Dennis, Ian McLaren and Jamie McLaren.

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From Top to Bottom:

Gray-cheeked & Swainson’s Thrush at BPI. October 27.

Photo by David Bell.

Yellow-throated Warbler at Chebogue Pt., Yarmouth.

Nov 1. *Photo by Joan Comeau.*

White-eyed Vireo at BPI. Oct 28.

Photo by Ronnie d’Entremont.

Yellow-throated Vireo at Deveau Shore Rd., Digby,

Nov 2. *Photo by Simon d’Entremont.*





Figure 1. Tropical Kingbird on the Cleveland Rd, Rockville, Yarmouth, 24 Oct 2017. This was the initial photo that shows the vibrant yellow undersides, large bill and brownish underside of a notched tail. Photo by Ervin Olsen.

Nova Scotia's First Tropical Kingbird

Alix d'Entremont

Field Encounter

A kingbird was initially found by Ervin Olsen at the southern end of the Cleveland Rd, Rockville, *Yarmouth*, at about 10:30 am (Fig. 1). Noticing the vibrant yellow underparts compared to recent Western Kingbirds on Cape Sable Island, he circulated photos to Mark Dennis, Johnny Nickerson and myself. The large beak, vibrant yellow underside and lack of white outer vanes to the outer tail feathers meant that it was either a Couch's Kingbird (*Tyrannus couchii*) or Tropical Kingbird (*Tyrannus melancholicus*). Nearby birders were called, and I arrived first, but the kingbird was not present on the Cleveland Rd. I then drove around the area until I found it at about 11:10 am on the Chebogue Pt. Rd, about 400 m from its previous location. It was sallying from the utility wires and even landing on the ground. Paul Gould and Laurel Amirault arrived, but the bird kept flying southwards and ended up about 1.9 km south of its initial Chebogue Pt. Rd. location by the time Mark Dennis, Sandra Dennis and Mike MacDonald arrived. Until this time, the bird had never vocalized. Mark played calls of both Couch's and Tropical Kingbird and finally the bird was heard and recorded. While in the field, comparisons were made between the calls of the kingbird and those on the Sibley Birds of North America app, and it was concluded that it was a Tropical Kingbird. Ronnie d'Entremont arrived shortly after and was also able to see it. I e-mailed to the Nova Scotia Rare Bird Alert which allowed a few more birders to add this Nova Scotia first to their lists that day. Many birders looked, but there were no confirmed sightings during the following days.

Photo and Sonogram Analysis

This tyrant-flycatcher is most similar to Couch's Kingbird and is best distinguished from that species by voice. The best morphological differences between the two are relative bill length and wing shape (Stouffer & Chesser, 1998). The ratio between culmen length and wing length shows very little overlap (Pyle, 1997) and is extremely useful with good quality photos showing the bill and



Figure 2. This photo of the Chebogue Pt. Tropical Kingbird on 24 Oct 2017, was used in bill length from nares $\div$ wing ratio calculation which produced a result of 0.196. The length of the bill is very apparent in this photo.

Photo by Mark Dennis.

wing as colinear. Pyle (1997) gives bill from nares (nostrils) $\div$ wing ratios from birds in the hand of 0.128-0.147 for Couch's and 0.143-0.183 for Tropical. These measurements done digitally on two photos of the Chebogue Pt. kingbird (Fig. 2) result in ratios of 0.196 and 0.182, which are closer to those quoted for Tropical and are supportive of the identification. It must be noted that measurements taken from a photo will be less accurate than those measured in the hand, which would explain why the Chebogue Pt. bird's ratios fall outside the range stated by Pyle (1997). Similar measurements were completed on multiple photos of both species from the Macaulay Library with no overlap between species, lending confidence to this manner of digital measurement and the use of ratios.

Alderfer and Dunn (2014) state that the differences in outer primary tip spacing on the folded wing are only helpful in separating Couch's (even spacing) from Tropical (uneven spacing) in adults. The outer primary tip shape of the Chebogue Pt. kingbird best fits that of a hatch-year individual (Fig. 3).

The species pair of Tropical and Couch's Kingbirds are best identified to species by voice (Stouffer & Chesser, 1998). Tropical Kingbird calls are high-pitched twitters while those of the Couch's are either a clear, whistled 'pip' or a breezy overslurred (rising then falling in pitch) 'breer' (Pieplow, 2017). The calls heard in the field matched the third twitter in 'calls #1_TX' of the Sibley Birds of North America Android app. See Figure 4 for sonogram of the Chebogue Point Kingbird.

Figure 3. The rounded primary tips shown in this photo of the Chebogue Pt. Tropical Kingbird match the shape of those of a hatch-year bird depicted in Pyle (1997) – very different from the notching seen in after-hatch-years (most extreme in males).

Photo by Alix d'Entremont.

Previous Reports

The only other report of this species in Nova Scotia was of a large yellow-bellied kingbird on 18 July 1976 by Robie Tufts (Nova Scotia Birds, 1977, Vol. 19, issue 1, p. 60), but the identification process did not consider Couch's Kingbird. In 1976, Couch's Kingbird was considered a subspecies of Tropical and only re-gained full species status after the publication of Traylor (1979). Because this historical report did not include subspecific identification, it must be for a Tropical/Couch's Kingbird.

Range and Vagrancy

The bulk of its distribution is outside of the USA where it ranges from Mexico to central Argentina. The Tropical Kingbird's breeding distribution is slowly moving northward and it now breeds extensively in southeastern Arizona and is beginning to breed in south Texas (Stouffer & Chesser, 1998).

The Tropical Kingbird is migratory in both extreme northern and extreme southern portions of its range, but birds breeding in Texas appear to be sedentary. There is regular dispersal of



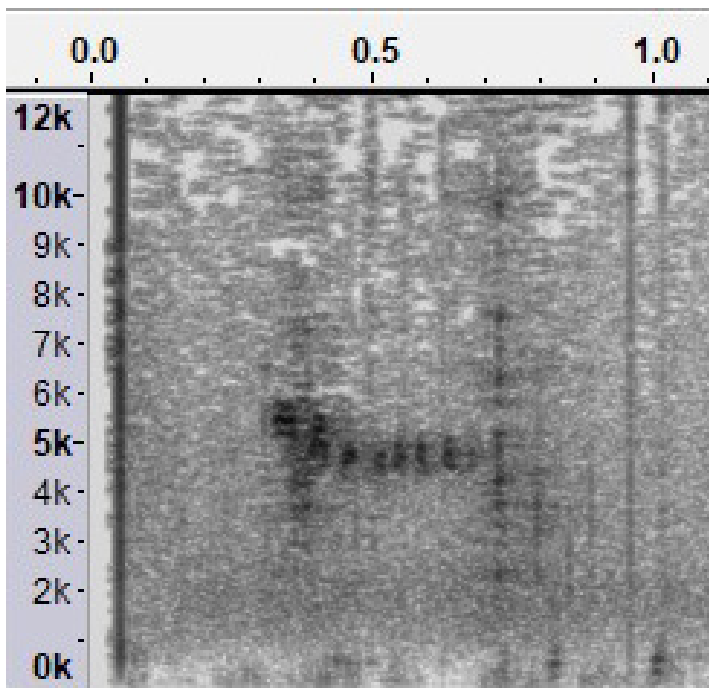


Figure 4. This sonogram of the recording of the Chebogue Pt. Tropical Kingbird, created in Audacity 2.0.6, shows a call of 0.33 seconds in length. The horizontal axis represents time in seconds while the vertical axis represents frequency in hertz. The time between the centre of each note varies from 0.034 to 0.061 seconds, slower than the ‘breer’ and faster than the ‘pip’ of Couch’s Kingbirds. The Chebogue Pt. kingbird’s call lies between 4000 and 6000 Hz, matching sonograms for Tropical Kingbird in Xeno-Canto, whereas the ‘breer’ of the Couch’s from Xeno-Canto has a wider frequency range of between 2000 and 5000 Hz. These comparisons were all made between the loudest partial which was typically lowest in frequency (see Pieplow, 2017 pp. 20-22 for more information on partials of complex sounds).
Sound Recording by Alix d’Entremont.

a small number of individuals to the Pacific Coast of North America, mostly of immatures and mostly in California, during the non-breeding season. Most arrive between mid-Sep to mid-Nov and of those identified subspecifically, all but one have been *T.m. satrapa*, individuals of the northernmost population (Stouffer & Chesser, 1998).

Those arriving to eastern North America could be northern breeding *T.m. satrapa* and thus part of the same population that disperses to the West Coast; or could be reverse migrants from the South American migratory population that intended on flying south to higher latitudes during austral spring (our fall) but instead flew north, or “overshoots” during austral fall (our spring), similar to the vagrancy pattern seen in Fork-tailed Flycatchers (Mlodinow, 1998).

More information on morphology as well as moult and wear rates of the various populations of Tropical Kingbird combined with excellent photos could provide evidence for defining provenance of vagrants.

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The Need for More Citizen Science Volunteers

Andy de Champlain

There's a pattern to a person's birding. It starts with the spark of curiosity, when, for example, you first see a pretty songbird singing outside. "What is that?" you wonder. In time, you purchase a field guide and binoculars and go looking for more birds, different birds, and maybe start a list. Later, you might invest in a better camera and join a group, like the NS Bird Society. Now you have new skills, a fun hobby and likeminded friends to share your experience with. What's next?

Next, after inevitably learning about the plight of some of the birds, you start to care, and wonder what you can do to help. As a birder, how can you be proactive? This is the time to get engaged with some of the citizen science programs, and do some birding with real purpose.

The selection of citizen science programs discussed below are standardized and depend on volunteer birders to gather important data in the long term about birds and their behaviour. The more counts made, and the longer the record of years, the more valuable the census series becomes as a scientific record. The information is used by governments, scholars, non-government organizations and other interested groups for research and conservation purposes. While eBird does contribute enormously to our knowledge of birds, especially when doing stationary counts and using breeding codes, it is not a replacement for the structured monitoring efforts detailed here. Websites and/or contact information are listed for each program. Programs affiliated with Bird Studies Canada have their titles annotated with (BSC) and can be found online at their website www.birdscanada.org.

Project FeederWatch^{BSC}

Beginning on the second Saturday of November and running for 21 weeks, Project FeederWatch, in partnership with Cornell, is one of Bird Studies Canada's most popular citizen science programs. To participate, sign up online and your kit will be sent to you; then you choose a count site, an easily visible area of your yard. For two consecutive days per week (or less often – leave minimum five non-count days between your count days) record the maximum number of each species seen in your feeder area. More details on how to count are available in your kit and on the website; e.g., you would count predatory birds attracted by your feeder birds, but not overflying Canada Geese. Finally, you submit your data to the website.

pfw@birdscanada.org

www.feederwatch.org

Project NestWatch^{BSC}

This program gets Canadians involved in the collection of data for the purpose of long-term monitoring of nesting activity. To participate, register online; read about how to locate and monitor nests; seek out the nests in your area; monitor them throughout the breeding season, and submit your data.

projectnestwatch@birdscanada.org

Photo by Ronnie d'Entremont

Maritimes Swiftwatch^{BSC}

Volunteers can help by counting Chimney Swifts at roost sites during spring and summer, searching for and reporting new nest and roost sites and even promoting good stewardship of swift habitat.

506-364-5196

marswifts@birdscanada.org

North American Breeding Bird Survey^{BSC}

Each June, skilled birders follow assigned roadside survey routes, which are 39.4 km long, and make 50 stops ideally spaced 800 metres apart. For three minutes at each stop, the observer, sometimes with one or two assistants, identifies and records all birds heard and seen.

Peter Thomas

Peter.thomas@canada.ca

Maritimes Marsh Monitoring Program^{BSC}

To better understand and protect these important and fragile ecosystems, the Maritimes Marsh Monitoring Program aims to monitor all marsh birds, including waterfowl, migratory game birds, and other wetland-associated species to track long-term population trends and assess overall marsh health.

Dr. Laura Tranquilla

506-364-5047

ltranquilla@birdscanada.org

Atlantic Canada^{BSC} and Cape Breton Nocturnal Owl Surveys

One evening per year between April 1 and May 15, volunteers go out after sunset to run an assigned survey route with the purpose of collecting data on Barred, Great-horned and Northern Saw-whet Owls as well as less common species (Long-eared and Boreal). The routes consist of ten stops which are 1.6 km apart (in NS); participants play owl calls, listen for replies, and record the results.

akouwenberg@birdscanada.org - mainland NS

myerss@eastlink.ca - Cape Breton

Maritimes Piping Plover Conservation Program^{BSC}

This program works with volunteers and partners to conserve beach ecosystems, reduce threats to plovers, and support recovery in Nova Scotia and southeastern New Brunswick through monitoring, protection, and stewardship.

Sue Abbott

sabbott@birdscanada.org



All counts matter: Most FeederWatchers see low numbers of “predictable” birds. These counts are the heart of FeederWatch. Pine Siskin at feeder in Queens, May 21, 2016.

Photo by Andy de Champlain.

The Christmas Bird Count (CBC)^{BSC}

Preparation and sign up for the CBC starts each November. For each count circle (a defined area in a region), a date is chosen between Dec 14 and Jan 5, and teams of birders go out and record species numbers on checklists, along with other information about weather conditions, time in the field and distance traveled.

David Currie

david_currie@ns.sympatico.ca

Great Backyard Bird Count^{BSC}

For a four-day period in February, participants in any location spend a minimum of 15 minutes birding, and then they simply tally the numbers and species of birds observed and submit results to eBird. This provides a very useful ‘snapshot’ of where the birds are.

gbbc@birdscanada.org

www.birdcount.org

Canadian Lakes Loon Survey^{BSC}

Participants have worked since 1981 to track Common Loon reproductive success by monitoring chick hatch and survival rates on three dates during June, July and August. Participants also work as stewards within their communities.

volunteer@birdscanada.org

Nova Scotia Nature Trust Birds Eye View

The program provides opportunities to get out bird watching on Nature Trust Conservation Lands and lands being considered for protection in order to increase knowledge about the bird species using them.

Karen McKendry

karen@nsnt.ca

<http://nsnt.ca/ourwork/campaigns/birdseyeview/>

Landbird Species at Risk in Forested Wetlands

Report your incidental (casual) observations or conduct formal surveys for Canada Warbler, Olive-sided Flycatcher and Rusty Blackbird in forested wetland habitat in Nova Scotia.

Dr. Cindy Staicer

landbirdSAR@merseytobeatic.ca

<http://landbirdsar.merseytobeatic.ca/>

Atlantic Canada Shorebird Survey

Are you a birder who regularly visits coastal areas and is interested in shorebirds? New volunteers are needed for many important shorebird sites throughout Nova Scotia; see list of sites below*. Volunteers survey sites several times a year during shorebird migration using a simple standardized protocol, record their data, and submit it annually. You don't have to be an expert birder, although familiarity with common shorebird species is important. This program is organized by CWS and has been running since 1974.

*ACSS Sites Requiring Volunteers (By County)

Antigonish

Antigonish Harbour, Mahoneys Beach, Pomquet Beach

Cape Breton

Dominion Beach Provincial Park, Glace Bay Bird Sanctuary, South Bar, Lingan Beach, Schooner Pond Beach

Cumberland

Lusbys Marsh/John Lusby Saltmarsh

Guysborough

New Harbour Cove

Hants

Windsor Causeway-Falmouth Connector

Inverness

Cheticamp Beach

Kings

Evangeline Beach

Richmond

Pointe Michaud

Shelburne

Apple Island, Cape Sable (Hawk Flats), Matthew Lake, Cape Sable Islet, Crow Neck, Sand Hills Beach Provincial Park

A map of existing survey sites is available here (<https://www.birdscanada.org/birdmon/prism/showroutes.jsp>) but sites that aren't currently part of the survey can be added. Contact Julie Paquet (julie.paquet2@canada.ca) for more information.



ERRATUM:

[Note: The cardinal, grosbeaks and buntings were inadvertently left out of the summer season 2017 issue. For the record, both our regularly breeding Northern Cardinal and Rose-breasted Grosbeak were found in numbers and places similar to those recorded in this fall season. Single 'overshooting' Blue Grosbeaks were found on both BPI and along Landsdowne Rd.,

Pict, June 3. A male Indigo Bunting at Victoria Bch., *Anna*, June 3 was also an 'overshoot', but another near the New Minas sewage lagoons July 9 (SLH) might still have been hoping to find a mate.]



**NOVA SCOTIA
BIRD SOCIETY**

Nova Scotia Bird Society

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Halifax, NS B3H 3A6
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