Biolink

OFFICIAL NEWSLETTER OF THE
ATLANTIC SOCIETY OF FISH AND WILDLIFE BIOLOGISTS

Inside this issue...

BioLink Information

The ASFWB Newsletter is published twice a year. Articles and opinions do not necessarily reflect the views of the Society or its members.

Thank you to all who contributed to this issue!

Do you have a research project, wildlife topic, upcoming event, photo, story, or anything else that you would like to see included in BioLink? If so, email one of our newsletter editors! We are always looking for content ideas and photos from our membership!

2020-2021 ASFWB Executive

ASWFB Spring Seminar 2021

We thank all those who attended the virtual Spring Seminar, April 21, 20201. The theme was *Citizen Science*. We had a diverse panel of speakers from across the Atlantic provinces, highlighting the amazing work being undertaken not just by researchers, but by volunteers from all walks of life. We thank our speakers, Catherine, Rosemary, John, Lori, Danielle, Sean, Shayna, Robert, and Delaney for taking the time to share their projects with the ASFWB community.

Do you have an idea for the next spring seminar? Please let us know!

Connect with us Online!

You'll notice the recent uptick in social media activity on our accounts. This is thanks to Sarah Cusack, our volunteer Social Media Coordinator. Sarah is a recent graduate of the Forestry and Environmental Management Faculty at UNB, currently working with the Canadian Rivers Institute. If you have an event or interesting news-bite – please send it along to Sarah at scusack@unb.ca

Check us out online!

www.asfwb.ca

Atlantic Society of Fish and Wildlife Biologists (ASFWB)

@asfwb_atlantic

@ASFWB_Atlantic

Photo credit: Danielle Horne

Become A Member

Regular Membership: $20/year
Student Membership: FREE!

To renew or become a new member, visit www.asfwb.ca or contact the Society's Treasurer, Ed Torenvliet (ed.torenvliet@gnb.ca) for other payment options.

Your membership supports:

- Hosting the Annual General Meeting,
- Disbursement of the ASFWB Research Grant,
- Scholarship Contributions

We hope to see you at our Fall Seminar in October 2021!

A Boost for Citizen Science Volunteer Opportunities

Submitted by Nicholas Knutson (MTRI and partners)

The *Kespukwitk Volunteer Engagement Committee* is a collaborative that supports volunteer and citizen science programs while increasing public reports of sensitive and at-risk species.

To make it easier to find the right environmental volunteer opportunity, we'll soon be launching a website! This website will have information about all the opportunities in Kespukwitk and will be available to all organizations that would like to join our collaborative. Stay tuned for the launch this summer!

Some of the opportunities you'll see on the website are:

1. The official launch of the new **Nova Scotia Herp Atlas**! Help us learn about the abundance and distribution of herps in the province. To help make this initiative a success, please upload your observations, including photos and audio, to iNaturalist and join our project "Nova Scotia Herp Atlas 2021". With each observation, we learn more about the distribution and abundance of Nova Scotia's herps, and get closer to a completed atlas which will play a key role in conservation of these species in the province. HerpsNS@gmail.com.

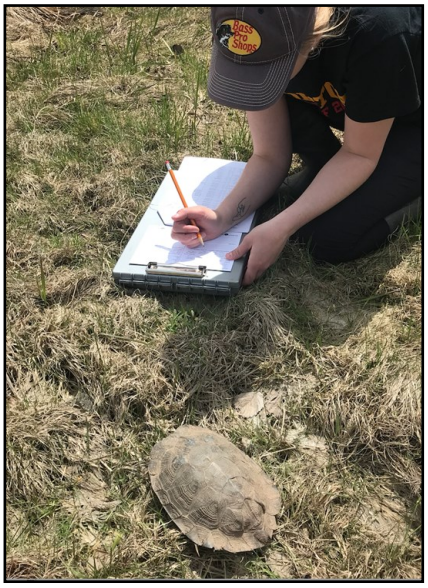
2. The **Aerial Insectivore Conservation Program** offers several ways to help support Chimney Swifts, and Barn, Bank, Cliff, and Tree Swallows. Contact: marswifts@birdscanada.org or 506-227-9202.

A) Sign up for National Roost Monitoring on May 26, May 30, June 3 and June 7, with an additional optional count on May 22 to catch the "early birds". Volunteers follow a national protocol and report the total number of swifts seen entering each surveyed roost each night. These surveys are conducted at active roosts across Canada as part of annual efforts to track the Canadian Chimney Swift population.

B) Participate in Roost Surveys at active roost chimneys throughout the season (May to September), following the National Roost Monitoring Protocol. The results of these surveys can help differentiate between spring and fall roosts, identify potential threats to roosts as they arise, and prioritize sites for conservation action.

C) Conduct Presence/Absence surveys: locate potentially suitable nest or roost sites (e.g. open chimneys and barns) and monitor these sites during the migration and breeding periods to determine if/how they are being used by swifts and swallows.

D) Does your property host swifts or swallows? Request a free Bird-friendly Property sign to recognize your efforts as a swift or swallow steward.



3. Clean Annapolis River Project's **Wood Turtle Monitoring** and Stewardship project is focused on supporting the recovery of the Wood Turtle, listed as threatened federally and provincially, in the Annapolis River watershed. Volunteers assist with visual surveys, which helps to gather mark-recapture data, and identify sites where CARP can focus on engaging landowners in stewardship practices. Volunteers also assist with nesting surveys, and nest monitoring in the case where anti-predator guards are placed over nests. Contact: carp@annapolisriver.ca.

4. Kejimkujik Seaside is looking to build a **Piping Plover volunteer program**. People can learn how to safely monitor Piping plovers and contribute to the information being collected on these endangered birds. Participate in conservation efforts while walking our beautiful stretches of white sand beaches and observe the Piping plover as it finds a mate, builds a nest and raises young. Contact: pc.benevolekeji-kejivolunteer.pc@canada.ca.

5. If you're more of an inland soul, you can climb the fish ladder in **Kejimkujik's volunteer fishing program**. Fill out your angler diary, contribute to Brook trout monitoring and help remove invasive Chain pickerel from our waterways. Contact: pc.benevolekeji-kejivolunteer.pc@canada.ca.

6. **Survey birds in Southwest Nova Scotia** and help us learn about the complex ecosystems on coastal islands. No experience is necessary, training will be provided. Contact: nick.knutson@merseytobeatic.ca.

New Findings of Seaweed Balls in Nova Scotia

Authors: Mary Kennedy (Bedford Institute of Oceanography (retired)), Gary W. Saunders (University of New Brunswick), David J. Garbary (St. Francis Xavier University)

Acknowledgements: Thanks to Jim Reid for sharing his findings and for collecting a few samples.

In December of 2020, a local beach walker noticed unusual balls of seaweed in and amongst the normal seaweed wrack. This led to posting of photos on Facebook., which led to a visit to the area by another beach walker but who posted to iNaturalist (https://inaturalist.ca/observations/67316740).

Figure 1. Point Michaud 2020-07-27; Conrad's Beach 2020-12-30; closeups of two balls

Seaweed balls are one of many growth forms produced by unattached seaweeds, and even fragments of salt marsh plants. These golf-ball to baseball sized structures are not typically single species, but are aggregations of different seaweeds that become entangled together (Fig. 1). As tides and waves move the balls in shallow waters and on sandy beaches, they can accumulate more material and the rolling on the shore maintains their shape. Branches of algae at the surface of the balls may be viable; however, the continuous abrasion by sand will limit the growth of all but the toughest of free floating 'aegagropilous' species such as *Ahnfeltia plicata* and *Desmarestia aculeata.* The Nova Scotian balls from Conrad's Beach had ten identifiable species -- a mixture of red, green and brown algae (Fig. 2). None of these are rare but may require specialist knowledge and a microscope for identification. A report of balls from Kingsburg Beach by MacKay (1906) mentions *Dictyosiphon foeniculaceus, Ectocarpus sp., Chordaria flagelliformis, Laminaria digitata* with specimens of nearly every other local species of seaweed. The balls will eventually break down by getting tossed up into the wrack or covered with sand or sinking into deeper waters. It is unclear the extent to which the balls are formed subtidally and then get deposited on the beach where sand abrasion continues to shape them, or if actual growth is occurring while the balls are in the intertidal zone.

The reports of seaweeds balls in Nova Scotia are all from the Atlantic coast of the province from Point Michaud Beach in Richmond County to Kingsburg Beach in Lunenburg County. There are no reports of seaweed balls on coasts of the Gulf of St. Lawrence. This may be lack of observation; however, the reduced tidal amplitudes may not produce the same wide beach topography as on the Atlantic coast. In addition, the colder waters of the Atlantic coast may be more conducive to the growth of the primary species in the balls.

Observations on iNaturalist can only be assigned scientific names by the community if the subject of the photo is obvious. In the case of the balls there were many species all tangled together and many had such small fragments that microscopic examination is required for identification.

During the mid-summer (2020-07-27) similar seaweed balls were reported as being seen on the beach near Point Michaud. While photos were taken, no samples were collected (Fig. 1). An extensive search of the beach by one of us (DJG) in the following week did not find any additional balls, but based on a conversation with a local naturalist, the phenomenon is apparently common. A previous collection from the site was examined, had a mix of species, although only *Ahnfeltia* and *Corallina* could be identified.

Following the advice of Gary Saunders, UNB, these balls were dried (placed on a cookie sheet under a heat pump in the kitchen – very scientific!). Once dry a couple of the balls were added into the herbarium at the Nova Scotia Museum. Two of these balls were sent to UNB where they were examined in detail.

The iNat observation was revised to include the following note: 'One of the balls was examined and 10 different species of seaweed were observed. *Desmarestia aculeata* (morphospecies; there are two genetic groups in our flora) was by far the dominant component, but was knitted together by smaller amounts of *Ahnfeltia plicata*. Along with seaweed, other biological matter was observed including fir needles.

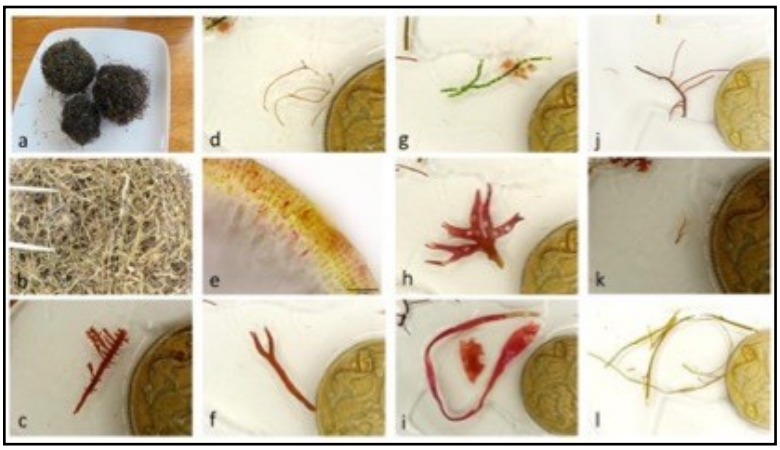


Figure 2. **a.** Three seaweed balls from Conrad's Beach with the largest being 3cm in diam. **b.** Detail of seaweed ball showing entangled branches of seaweed. **c.** *Ptilota serrata* (red fern). **d.** *Corallina officinalis* (common coral weed) **e.** *Colaconema endophyticum (*no common name). **f.** *Polyides rotunda* (discoid forked weed). **g.** *Chaetomorpha linum (*green thread). **h.** *Chondrus crispus (*Irish moss). i. *Coccotylus truncatus* (no common name). **j.** *Ahnfeltia plicata (black scour weed).* ***k.*** *Chaetopteris plumosa (no common name).* ***l.*** *Desmarestia aculeata (acid kelp; horsehair weed).*

Community Bat Reports Leading Bat Conservation

Submitted by Lori Phinney (MTRI)

Regional Bat Reporting

Atlantic Canada was historically a place where people would see bats out and about on summer evenings, perhaps while sitting out on the patio, during a campfire or even roosting in their attic or barn. Now it is all too common to hear "I haven't seen a bat in a years." Since the invasion of the fungus that causes the disease White Nose Syndrome, many youth haven't experienced the sight of a bat circling around a street light scooping up all the insects in sight.

With the near disappearance of bat populations, community science has led the way in monitoring and identifying where bats are persisting in the wake of serious declines. In 2013, a bat reporting platform was launched to capture Nova Scotia sightings of bats. This includes the website www.batconservation.ca and provincial Species at Risk reporting Hotline 1-866-727-3447. More recently, an Atlantic-region reporting and information hotline at 1-833-434-BATS (2287) was established to collect sightings from all four provinces.

Nova Scotia Bat Trends

Through the reporting efforts of Nova Scotians, we have developed a database with over 4,500 sightings to date. The Mersey Tobeatic Research Institute and partners are using these sightings for bat monitoring, research and education purposes. These sightings have allowed us to develop a greater understanding of local bat populations. For example, we have been able to use reports to identify significant maternity colonies. We have identified a handful of landowners that have maternity colonies ranging from 10 up to 100 individuals on their property. The reports we receive we have also used as a proxy of population trends. Since 2016, the number of reports of single and 2-5 individual bats has increased. Public reports have also allowed us to learn new things about bats. For example, there has also been a surprising number of reports of bats using patio umbrellas as summer roosts, with over 100 sightings to date in Nova Scotia.

How You Can Help: Landowner Spotlight

One of the best ways you can help bats is to monitor a maternity colony through an emergence survey. This involves counting bats as they exit their roost just after sunset to feed on thousands of insects. Bats can be found roosting inside a bat box, attic, barn, shed or various human-made structures. You could even find them in natural structures like trees, snags, rock crevices and so on. If you find a group of bats roosting on your property during the summer, it is most likely a maternity colony which consists of female bats raising their young, called pups.

In Shelburne Co., located in southwest Nova Scotia, one colony of bats has been monitored by the homeowner since before White Nose Syndrome spread to Atlantic Canada. Pre-2011, this colony had 224 individuals regularly roosting inside the homeowners' attic and a bat box. After 2011, numbers declined as low as 2 individuals in 2014 but over 40 individuals have emerged during surveys in recent years.

How to Report a Bat Sighting

To report a bat sighting in any of the four Atlantic provinces and to ask any bat-related questions, call 1-833-434-BATS (2287). This is operated by the Canadian Wildlife Health Cooperative in partnership with each province. They provide accurate and up-to-date information on bat-related topics such as bats in buildings, health concerns and more. Bats sightings in Nova Scotia can also be reported to this number as well as www.batconservation.ca and the provincial Species at Risk Hotline 1-866-727-3447. This is operated by the Mersey Tobeatic Research Institute and Nova Scotia Department of Lands and Forestry.

Photo Credits :

Top Left – Bat report to www.batconservation.ca in Yarmouth Co., Nova Scotia by Janine Doucet-d'Eon (also photo credit to her).

Bottom – Maternity colony of bats persisting since the invasion of WNS to Atlantic Canada (photo credit Jason Headley).

Top Right – Landowner who monitors for bats on their property by conducting evening emergence counts and working with MTRI to use acoustic bat detectors. Bats have used their bat box and attic for years with >40 individuals since the spread of white nose syndrome (photo credit Lori Phinney).

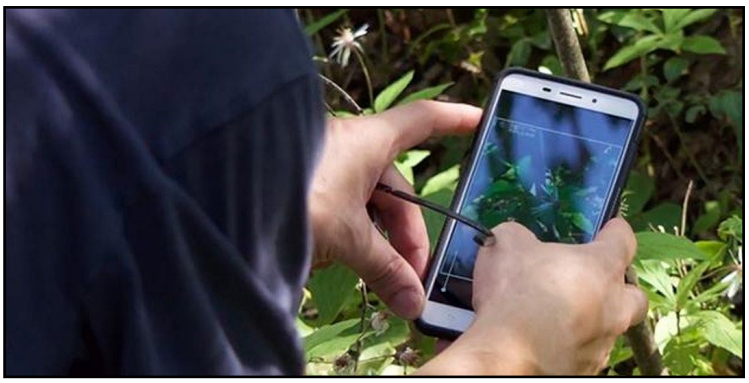
City Nature Challenge - The Maritimes

Submitted by Mary Kennedy and CNC organizing committee

Local organizers of the 2021 City Nature Challenge (CNC) are inviting biologists, their family, friends, and neighbours to participate as they join 16 other Canadian cities in documenting the natural world. To participate, all you need to do is create a free account through iNaturalist.ca or download the free iNaturalist app and go outside between April 30 and May 3 to take a photo of a plant, animal, fungus, or other life form that you see. The CNC is part of a friendly international collaboration designed to connect people to nature while helping scientists to inventory wildlife species around the globe.

The seven Maritime areas participating in the CNC include 3 from NS (Halifax Regional Municipality, Cape Breton Regional Municipality, and The Valley-Kings/ Annapolis counties); 3 from NB (Fredericton, Westmorland, and Charlotte Counties); and one from PEI (Charlottetown/Summerside). These areas join more than 325 cities and metropolitan areas from more than 40 countries registered to participate in this year's event.

The primary objective of iNaturalist (and the City Nature Challenge) is to connect people with nature. One does not need to be a taxonomic expert to participate. It is free, easy to use, and available to anyone with a smartphone or a camera and computer. As soon as you upload your photos, a community of experts from around the world will help you to identify what you've seen. This is a great opportunity for amateur naturalists to learn, and for biologists to share their knowledge by helping identify observations made by the public. One does not have to encounter a moose in order to share an observation – one can upload photos of scat or footprints. iNaturalist.ca is connected with NatureServe Canada and species of



conservation concern automatically have their location information obscured.

A secondary goal of iNaturalist is to compile research grade species distribution information. In addition to collecting temporal and geographic information, iNat requires evidence of presence before being flagged as research grade – this means that a photo or sound recording must be provided that can verify the presence and taxonomic name assignment. These research grade observations can help further research into the natural world by providing long-term, good quality data on a wide range of taxa that is easily accessible to researchers.

The CNC may also be viewed as an opportunity to train people to be on the lookout for certain species as they explore throughout the year. If you're a professional, could your research program benefit from having citizen scientists keep an eye out for certain taxa? Example – an iNaturalist project has been set up to highlight observations of green crabs https://inaturalist.ca/projects/nova-scotia-are-green-crabs-everywhere. Currently there are 320+ observations of *Carcinus maenas* from coastal areas around NS.

If you're a professional biologist or even an experienced amateur, you can even help out from the comfort of your own home. In preparation for the CNC, take a moment to visit iNaturalist.ca and use the EXPLORE function to view current content. Select your taxon or area of choice and move around on the map. Are there identifiable gaps that could be filled by you and other local experts.

The City Nature Challenge is a great excuse to get outdoors, to explore areas, to observe nature, to share observations or knowledge, and to have fun. Join iNat today and start sharing your observations - spread the word!

Gray Tree Frog Mark and Recapture
A Citizen Science Study

Submitted by Shaylyn Wallace (Nature Trust of New Brunswick)

Since 2017, the Nature Trust of New Brunswick (NTNB) has been completing a mark and recapture study of Gray Treefrogs (Hyla versicolor) at the Hyla Park Nature Preserve. This area was protected in the 1990s, due to the presence of this species and other special habitat features. At the time, the preserve represented the most north-eastern range of the species which were thought to be extremely rare. Monitoring the population for possible declines was a high priority for the NTNB and its volunteers as the property was mainly protected for the Gray treefrogs. The objective of this study was to estimate a population size of the Gray treefrogs within the nature preserve to monitor and understand population fluctuations.

To complete the survey, citizen scientists were recruited to search for gray treefrogs once a week in June and the beginning of July. With the permission of the Department of Energy and Resource Development and proper training given to surveyors, volunteers captured the frogs and brought them to a marking station. To avoid invasive techniques of marking (ie. Toe clipping), NTNB opted to use photoidentification. Captured Gray treefrogs were photographed in a lightbox to capture the unique black dorsal pattern on their back, making them easily distinguishable (Figure 1). Gray treefrogs have the ability to change their colour, sometimes making them hard to photograph. To avoid this, volunteers placed frogs in a light-coloured container to allow them to change colour and be easily photographed/identified.

The first two field seasons were preliminary surveys to help critique and improve the survey method. In 2019 the citizen scientists had created a method that resulted in 141 individuals being caught and 54 individuals being recaptured. Recaptures were identified using the Wild-ID program in the program R studio. Based on the survey in 2019 the population estimated is approximately 240 if a 1:1 sex ratio is assumed.

The project is currently active, and will continue to monitor and gather population trend information of Gray Treefrogs in Hyla Park.

COSEWIC Reviews Status of Four Avian Species Found in Atlantic Region

Originally published by Birds Canada on January 22, 2021

Original Author: Dr. Richard D. Elliot, Co-chair, COSEWIC Birds Specialist Sub-Committee

In November 2020, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) met virtually to assess the status of 40 wildlife species, including four avian species found in the Atlantic region, Red Knot (*Calidris canutus rufa*), Lesser Yellowlegs (*Tringa flavipes*), Canada Warbler (*Cardellina canadensis*), and Leach's Storm Petrel (*Oceanodroma leucorhoa*).

COSEWIC is an independent advisory panel to the Minister of Environment and Climate Change Canada. COSEWIC assesses the status of wildlife species and makes recommendations, which the government considers in determining which species receive legal protection under Canada's Species at Risk Act.

Red Knot

COSEWIC assessed the status of three distinct populations of the rufa subspecies which breed in Arctic Canada separately, as they overwinter in distinctly different areas where they are subject to different local threats. All are exposed to similar threats on migration along the eastern coast of North America, including harvesting of Horseshoe Crabs (whose eggs are an essential food source for northbound migrants) in Delaware Bay, and disturbance and predation from increasing falcon populations.

Lesser Yellowlegs, Photo credit: Rosemary Curley

Annual surveys confirm that the small rufa population overwintering in Tierra del Fuego (at the southernmost tip of South America) continues to decline sharply, dropping by 73% over the past three generations to about 7500 adults. Thus, COSEWIC again assessed its status as Endangered.

Numbers of rufa Red Knot that overwinter along the coasts of the southeastern U.S., Gulf of Mexico, and islands in the Caribbean are also declining steeply, at rates of about 33-84% over three generations. With only about 9300 adult birds, this population was also assessed as Endangered.

A third rufa population overwinters on the northeastern coast of South America. Although difficult to survey, its numbers appear to be stable at about 19,800 adults. With many continuing threats to this population, it was assessed as Special Concern.

Lesser Yellowlegs

Substantial population declines of this delicate, medium-sized shorebird have been documented by the Breeding Bird Survey and International Shorebird Survey. Key concerns include the loss of freshwater and intertidal habitats used on migration and in winter, and hunting for sport and subsistence. Additional emerging threats linked to climate change include increased risk of drought in breeding areas, coastal flooding, and greater severity of hurricanes during fall migration. These ongoing threats, coupled with continuing population declines, were key factors in COSEWIC's first assessment of Lesser Yellowlegs as Threatened.

Canada Warbler

This species was designated as Threatened by COSEWIC in 2007 on the basis of substantial population declines documented by the Breeding Bird Survey. However, numbers have increased steadily since 2012, with an overall growth of 46% over the past decade. This welcome increase reflects the success of several conservation efforts, especially on its wintering grounds in the northern Andes. However, significant threats persist, most notably clearing of forests in South American wintering areas for livestock farming and other agriculture, prompting COSEWIC to designate Canada Warbler as Special Concern.

Leach's Storm-Petrel (Atlantic Population)

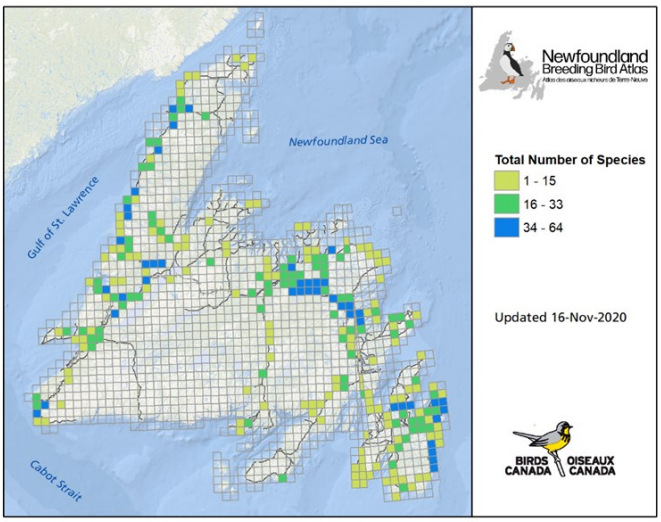
COSEWIC assessed the Atlantic population of Leach's Storm-Petrel for the first time, recommending a status of Threatened. Breeding numbers have declined by about 54% over three generations (44 years), with steeper losses in recent years. Many factors are contributing to these declines, including gull predation and expanding Atlantic Puffin colonies that displace storm-petrels from preferred nesting habitat. Despite these declines, the overall population remains large and widespread, with about 5 million Leach's Storm-Petrels breeding in Atlantic Canada.

Citizen Scientists "Rock" the First Year of the Newfoundland Atlas

Submitted by Catherine Dale (Bird Studies Canada)

Launching a new breeding bird atlas is always a challenge – but it's particularly tricky to do in the midst of a pandemic.

Early last winter, the Newfoundland Breeding Bird Atlas (https://nf.birdatlas.ca/) was gathering momentum, with plans for an official launch event and community workshops across the island. But in March, everything changed: people were asked to stay home, national parks and other outdoor spaces were closed to the public, and NL closed its borders to everyone except residents.



Birds Canada put citizen science surveys on hold, and for a few months, it seemed unlikely that any Atlas data collection would happen in 2020. Even when surveys slowly began to resume, we encouraged volunteers to avoid travel and instead asked them to survey their own backyards and neighbourhoods.

Our intrepid atlassers rose to the challenge magnificently. The online database began filling with bird sightings from cities, towns, and villages all over the island. And as public health restrictions began to relax and people ventured farther afield, data trickled in from some of the more remote atlas squares. In total, during the first year of the Atlas, 98 registered participants spent more than 1300 hours surveying for birds, collecting data in 275 atlas squares and reporting breeding evidence for 145 species across Newfoundland.

Highlights from our first summer included the discovery of a Rough-legged Hawk nest (with 5 eggs) on the Avalon Peninsula. We were also excited about the sighting of a female Wood Duck with 2 ducklings in Deer Lake, where successful clutches of this species are uncommon, and a report of a male Rock Ptarmigan actively courting two females on the Burin Peninsula, where the species has only been recorded twice.

In southwestern Newfoundland, counts of "budworm warblers" were high – not surprising considering that spruce budworms were literally dripping off the trees in late summer. Tennessee, Bay-breasted, Cape May, and Blackburnian Warbler populations are known to increase during the periods of plentiful food provided by spruce budworm outbreaks; this summer, Bay-breasted Warblers were seen for the first time in 11 years in Barachois Pond Provincial Park. Even more exciting, when males were captured for banding, they showed physiological signs of breeding.

Over the last few weeks, signs of spring have started to appear in Newfoundland, and some of our hardier migratory bird species have begun trickling in. Atlassers all over the island are excited to get back out there for the second year of data collection.

"Atlassing gives me a reason to explore new areas," says Assistant Atlas Coordinator Jenna McDermott. "It's also a great opportunity to really watch what's going on with the birds I know and love!"

This summer, we hope to be able to explore some of the more remote corners of Newfoundland and welcome atlassers from the other Maritime provinces (public health guidelines permitting). But while you're waiting to book your trip to the Rock, you can keep up with the latest Atlas news and events by following us on Facebook or Instagram (@NLbirdatlas)!

Rough-legged Hawk nest, Avalon peninsula. Photo credit: Alvan Buckley.

A Tribute to Daryl Lloyd Guignion, 1942-2021

Adapted from Salt Wire, Published February 11, 2021

The Atlantic Society for Fish and Wildlife Biologists lost a great ally and friend early this year. Daryl Guignion was born in the Gaspe and came from a modest background. He developed a strong work ethic as a young boy, working alongside his father and brother cutting pulpwood, working the farm, and later, working in copper mines in Murdochville. He inherited his mother's gentle nature and she encouraged him to do well in school.

He became the first in his family to get a university degree, completing his BSc at Mount Allison University. Daryl spoke often about the influence of Dr. Hinrich Harries at Mt. A in encouraging a holistic view of the environment and developing a passion for field work. Wilfred Carter encouraged Daryl to do his Masters Degree at Laval University and he completed his Masters research project studying eider ducks in the St. Lawrence estuary. His Gaspe wilderness background came in handy when he spent a summer on an isolated island. He had many stories of harrowing trips in a small boat going to and from Brandy Pot Island, and eating gulls' eggs when there were no other supplies.

Daryl taught for over 40 years at the University of PEI in the Biology Department, and influenced many who work in the field of wildlife biology in the Atlantic region today. Daryl cherished his years at the university and spoke often of how well he was treated, from cafeteria staff, custodians, and maintenance workers to lab technicians, secretaries and fellow professors. Daryl taught a variety of field courses and his students recall field trips to parts of PEI most of them had never visited - canoe trips to wetlands, snowshoeing, visits to old growth hardwoods and sand dune ecosystems. Some remember when he told them to lie on the beach at the Conway Sand Hills, close their eyes, and listen to the waves and the birds to fully experience and appreciate the beauty of the natural world around them. Daryl took students to the Atlantic Society of Fish and Wildlife Biologists annual meeting every year and they have lasting memories of hikes in Fundy National Park and of climbing Gros Morne Mountain.

His legacy is visible throughout Prince Edward Island. Daryl sat on countless environmental committees both in PEI and across the country. One that was especially important to him was the 1985 National Parks Centennial Citizens Committee. He was able to visit national parks across Canada and in working with people from various backgrounds, he finally gained the confidence in his abilities and knowledge. He often pointed to that Committee as being a turning point in his life. Daryl may have been quiet but could be formidable when he was passionate and determined about something. He would often speak of his involvement in the development of the Island Nature Trust, the protection of Greenwich, and the Morell River Conservation Zone as perhaps his most proud achievements. Although Daryl spent time in most of the rivers in PEI, the Morell River held a special place in his heart. He took pride in his involvement in the salmon restoration program for over 30 years and assisted in the collection of salmon up to this past fall. He also took great pride in the development of two technical manuals for watershed management on PEI and two Atlantic salmon strategies which continue to provide guidance for river restoration in PEI.

The journey was always more important to Daryl than the destination itself. He had a quiet, positive approach and tended to see the best in people. He believed that fostering relationships was just as important as carrying out research, and enjoyed talking with landowners in their kitchens as he carried out work across PEI. Daryl was known for his generosity–he shared his knowledge willingly and with anyone who would listen. Even after his retirement, Daryl continued to work with watershed groups to improve habitat and populations of fish and wildlife. Daryl received much recognition and many awards and was particularly proud of his National Recreational Fisheries Award received in 2012. The recognition was appreciated, but Daryl's greatest wish has always been for Islanders to continue the fight and work to protect and restore our environment for future generations. The best way to remember Daryl is to plant a red oak tree.

Daryl will be dearly missed by all who knew him. The ASFWB Executive sends its sincere condolences to Daryl's family and friends.

Donations in memory of Daryl can be made to Island Nature Trust (https://www.islandnaturetrust.ca/) or the Daryl Guignion and Ian MacQuarrie Graduate Scholarship in Science at UPEI (https://go.upei.ca/donate/)

ASFWB Fish and Wildlife Research Grant

The ASFWB Fish and Wildlife Research Grant was established in the fall of 1994 to assist members who are conducting or supervising wildlife or fisheries research in Atlantic Canada. The grant provides funding up to **$500 annually for research projects**. Any aspect of fish and wildlife research will be considered, but projects with applied management goals will receive priority. Applicants must be members of the ASFWB. Projects that are largely government sponsored or funded are not eligible for this award.

Applications are CLOSED (**Deadline is March 31 each year**).

For more information or **TO APPLY**, visit: http://asfwb.ca/the-asfwb-wall-of-fame/asfwb-fish-wildlife-research-grant/

Supporting Students in Atlantic Canada

ASFWB members have always been committed to helping advance the careers of Atlantic Canadian students in the field of biology. To this end, ASFWB has been integral in setting up scholarships that directly support top biology students at three universities in Atlantic Canada.

The David J. Cartwright Memorial Scholarship was established in 1991 at the University of New Brunswick, to honour David J. Cartwright who was a member and strong supporter of the ASFWB for many years and contributed to wildlife management in Atlantic Canada. The Cartwright scholarship is for students entering the final year of Forestry (Wildlife Option) or Science (Biology Option). The Donald G. Dodds Scholarship was established in 2010 at Acadia University with preference for graduate students in the Biology Department, though honours and undergraduate students are considered. Potential candidates for all scholarships should have combined scholastic ability with a demonstrated interest in biology and/or wildlife management. Disbursement is approximately $1000/ year.

Funds are currently being raised for the Gilbert R. Clements Scholarship at Holland College for graduating students entering the University of Prince Edward Island Wildlife Conservation Program. If you would like to support our students, consider making a donation –we're almost halfway to our goal! Contact Holland College today! https://hollandcollege.com/foundation/how-to-make-a-gift.html

Below are the most recent recipients of the award and scholarships

DATE	STUDENT	AWARD/ SCHOLARSHIP
2020	Emma D'Costa	ASFWB David J. Cartwright Memorial Schol-
2020	Elizabetha Tsitrin	ASFWB Donald G. Dodds Scholarship
n/a	**FUNDS BEING RAISED**	ASFWB Gilbert R. Clements Scholarship
2020	Courtney Burk	ASFWB Fish and Wildlife Research Grant

You can donate to our student scholarships online at **www.asfwb.ca**

Recent Literature

Heading to the field and need some reading material? Keep up to date with fish and wildlife research publications from Atlantic Canada and beyond. Paste the "dio" provided into your internet browser.

Andrews, S.N., T. Linnansaari,, R.A. Curry, and S.A.Pavey. 2020. Winter ecology of striped bass (Morone saxatilis) near its northern limit of distribution in the Saint John River, New Brunswick. Environmental Biology of Fishes 103: 1343–1358. https://doi.org/10.1007/s10641-020-01027-x

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Salt marsh copper (*Lycaena dospassosi*)
Photo credit: JL Zahavich

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Winter tracks in Nova Scotia. Photo credit: Danielle Horne

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