

SUMMER WITH THE SEABIRDS

The life of a Maine Coastal Islands National Wildlife Refuge Island Researcher

Archive 2016 – December to May

Welcome!

Welcome to the Maine Coastal Islands National Wildlife Refuge Island Researcher blog! Here you'll find posts and multimedia projects created by island researchers spending the summer on the refuge's many islands. Please check back often for updates!

Archive for December, 2016

Northern Saw-whet Banding at Petit Manan Point

Posted in [Saw-whet Owls](#), tagged [FOMCI](#), [Maine Coastal Islands NWR](#), [MCINWR](#), [Saw-whet Owls](#) on December 1, 2016

For the third consecutive year, Maine Coastal Islands National Wildlife Refuge collaborated with partners and volunteers to band northern saw-whet owls at Petit Manan Point unit (Sept 28-Nov 6, 2016). The Refuge has identified the peninsula of Petit Manan NWR and islands like Metinic Island as important stopover sites, especially for hatch year birds making their first migration.



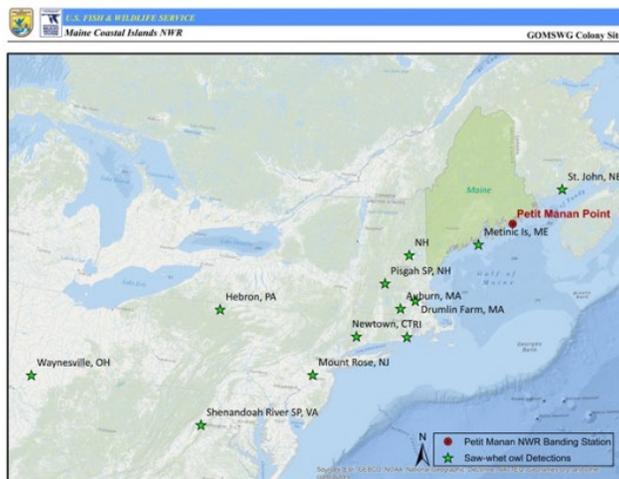
Northern saw-whet owls breed in the boreal and northern hardwood forests of the US and Canada and migrate to lower latitudes for the winter, with the northeastern population having a cyclical increase in reproductive success and subsequent migration irruption every 4-5 years. The autumn of 2016 was one of those "irruption" years, and was a busy one at Petit Manan Point. The banding station operated 6 nets on 30 nights (265 hours) and captured 431 owls. The two busiest nights for migration were October 14 and October 27, when 66 and 73 owls were caught respectively. Nets were open daily from sunset to

sunrise weather permitting, and audio lure of saw-whet calls was played to attract owls to the nets. In addition to capturing saw-whets, 6 barred owls were banded and released at a distance away from the Point.

Barred owls are usually thought of as year-round residents, with a territory size of at least a square mile per owl. During years when prey populations result in reproductive pulses of saw-whet owls, the same abundant prey also result in more young barred owls being produced. These young barred owls then disperse to find vacant areas where they settle in as permanent residents. During this autumn dispersal, barred owls are often captured at saw-whet owl banding stations, sometimes while attempting to prey on the much smaller saw-whet owl.

| Year | Owls Banded | Foreign Recaptures | Capture Rate (Owl/Hour) |
|-------------|--------------------|---------------------------|--------------------------------|
| 2011 | 182 | 5 | 2.17 |
| 2014 | 56 | 0 | 1.49 |
| 2015 | 285 | 1 | 0.95 |
| 2016 | 431 | 1 | 1.62 |

The Petit Manan Point station is part of Project OwlNet, a continental network of more than 125 banding stations. Several saw-whet owls banded at Petit Manan Point from 2011-2016 have been recaptured at other stations in the eastern US (Figure 1). Saw-whet owls outfitted with small radio transmitters (nanotags) in 2014 traveled by Metinic Island and St. John, New Brunswick during migration that year. Project OwlNet is responsible for much of what is known about saw-whet migration routes and timing.



Volunteers and partners make this project successful! Dave Brinker, of Maryland DNR and the founder of Project OwlNet (www.projectowl.net), initiated the current Petit Manan Point station in 2014. Adrienne Leppold of Maine Dept. of Inland Fisheries and Wildlife is the co-director of the Petit Manan saw-whet owl netting effort. Adrienne assists with all local details of station operation throughout

the owl season. Each autumn, Dave comes up to Maine to set up the station and get it operational while training a volunteer bander that will be on site all season.

In 2016, Dave recruited volunteer Nate Weyandt to run the station. Nate is from Latrobe, PA and just worked a greater sage-grouse research project in Utah. His main hobbies include fishing and bird banding. This was the first year he captured owls and thoroughly enjoyed it, especially because they are difficult to see in the wild otherwise. Nate was joined by volunteers Ed Conrad and Caroline Jordan for the last 3 weeks of the season after operating a passerine migration banding station at the Schoodic Institute. Ed banded saw-whet owls on the Refuge in 2011, when we first documented the importance of the Petit Manan peninsula to bird during migration. We now hope to establish a permanent migration station at Petit Manan Point. In 2016, 27 volunteers contributed a total of 750 hours to this project.

Thanks to the generosity of the Friends of Maine Coastal Islands NWR, the banding crew had a wonderful house to stay in after long nights of banding. The Wehr family donated the house to the Friends group, and who will soon transfer the property to the Refuge. The Wehr house was an immense improvement to living in the cramped banding station travel trailer with no running water. Without the Wehr house, it would have been very difficult to attract volunteers for an extended amount of time. Thanks so much to all of the Friends, volunteers, and partners for making this season possible!

Archive for August, 2016

[That's all, folks!](#)

Posted in [Eastern Brothers 2016](#), tagged [FOMCI](#), [Maine Coastal Islands](#), [MCINWR](#) on August 7, 2016

Our summer has come to a close here on Eastern Brothers, and we're finding it hard to say goodbye. This season has been very successful on many fronts, especially with black guillemot chick survival and fledging rate. From just last year, hatch success has increased 20%, nests with surviving chicks has increased 22.5%, and abandon nests has decreased by 20.8%! These number are very encouraging, also due to the fact that small mammal trapping has been a huge success this year compared to those previous.

The majority of our black guillemot chicks are fledging and are being seen floating around the intertidal with their parents, although we sort of feel like their parents after spending so much time with them.



A black guillemot fledgling showing off its full-grown wings

The terns have officially left the island with their fledglings, a sign that their southern migration has begun. They'll fly all the way to South America to fatten up during the winter months, making their way back up north to start all over again. We've had a high of three nesting pairs with 8 successful fledglings this season, and hope to see the same return with some more friends to get this island full of terns like Petit Manan!



A tern fledgling trying out his alarm call on Eastern Brothers (photo cred: Steve M.)

We hope you all have enjoyed keeping up with us this summer! We can't wait to see what the future holds for The Brothers and our other island neighbors.

Signing off,

~Nate & Dawson, EBI 2016

Archive for July, 2016

Fishing Woes in Troubled Waters

Posted in [Petit Manan 2016](#), tagged [Arctic Terns](#), [Butterfish](#), [Climate Change](#), [Common Terns](#), [Fish](#), [Fish and Wildlife Service](#), [FOMCI](#), [Gulf of Maine](#), [Hake](#), [Herring](#), [Lumpfish](#), [Maine Coastal Islands NWR](#), [Ocean Warming](#), [Overfishing](#), [Petit Manan Island](#), [provisioning](#), [Sandlance](#), [Stickle-Back](#) on July 25, 2016

Recently on Petit Manan Island we have been conducting chick provisioning studies. The purpose of these observations is to determine what prey species are being fed to tern chicks in order to see how prey composition is related to tern chick survival rates. We also record the time of the feedings, which chick is being fed, and the size of each prey item. Over the last decade the fish diversity on Petit Manan has increased. Although it allows us to see new and exciting fish species, it is not a positive sign for the terns. Increased feedings of invertebrate species such as moths, dragonflies, and other insects are also not great signs. Invertebrates and some fish are not as nutrient rich as herring and similar fish species, making them less beneficial for tern chicks. In 2006, common tern feedings consisted of 95% herring. Data from more recent years show that herring has dropped to 25% in 2010 and 34% in 2013 for

common terns. Other fish species, such as hake and sandlance, have increased in feeding frequency. Although we do observe feedings of herring, hake, and sandlance, a large proportion of the feedings have consisted of tiny invertebrates and low quality fish species. Throughout the summer we have seen a total of 14 fish species, two aquatic marine invertebrate species, and at least 2 terrestrial invertebrate species being fed to chicks.



Herring and Hake, respectively

Species like butterfish, lumpfish and three-spined stickleback are not high quality prey items because often tern chicks are unable to swallow the fish. Butterfish are disc-shaped, and often they are too wide for chicks to swallow. Lumpfish are a rough, round fish species that chicks can only eat when the fish are very small. Sticklebacks, as their name implies, have spines on their back that catch in the chicks' throat when being swallowed. We often find them uneaten near nest bowls.



View from Chick Provisioning Blind

Some of the factors that are believed to be causing these changes in fish composition are ocean warming and overfishing. Over the last two years ocean warming has been affecting seabird populations on both the Atlantic and the Pacific Ocean. Seabirds are **indicators** of marine ecosystem health. Tern breeding pairs have been decreasing on Petit Manan Island for at least the past seven years, and this season marked the first time the total count of tern nests dropped below 1,000. As recently as 2009 Petit Manan was home to 2,500 pairs of terns. This could be indicating that the food availability in the Gulf of Maine is failing, and the terns are not able to find enough prey to be able to reproduce after their migration. To get a sense of what prey species are available to seabirds, we can use our provisioning data as a sample of the prey availability in the waters around Petit Manan Island. Also we can look at provisioning data to see how the **rapid warming of water in the Gulf of Maine** is affecting prey populations; in particular the herring population.

Using data from all of Maine Coastal Islands NWR and Project Puffin islands, we can learn what is happening in the Gulf of Maine system. This data will assist in monitoring the effects of a warming Gulf of Maine on the marine food web and what this means for the future of our seabirds and fisheries in Maine.



Butterfish and Three-Spined Stickleback, respectively

I have really enjoyed doing these studies because it is exciting to watch the chicks' daily activities and often the time goes by quickly. For our provisioning studies, each person has a blind that they spend time making observations from every other day. Returning to this specific area every other day is a great way to allow us to see the progress of the chicks and allows us to get to know each chick's habits. These studies also allow us to see many different fish species as the terns bring them to feed their chicks. This is another great part of the job because it helps us work on our fish identification skills.

-Jimmy and Jill

Metinic Depature

Posted in [Metinic 2016](#), tagged [dowitchers](#), [Metinic Island](#), [Ruddy turnstone](#), [shorebirds](#), [Sunset](#) on July 24, 2016

We're coming to a close here on Metinic. Most of our tern chicks are flying around or landing near the water's edge. We've taken down most of our productivity plots, since we can't monitor chicks that can fly out when we get close. The guillemot chicks get closer to fledging every time we check the burrows.

Shorebirds are becoming more and more plentiful, with dozens of short-billed dowitchers and semipalmated sandpipers flitting around the north end of the island every day. Several whimbrels have taken up residence atop the hill by the gull colony and a few semipalmated plovers, least sandpipers, ruddy turnstones, and yellowlegs have been gleaning the tide line for food.



Short-billed dowitchers use their long bills to probe deep into the seaweed



Ruddy turnstones got their name from their habit of flipping small rocks to seek food

It's the time of year for berries, and the island is covered in raspberry bushes in full fruit. A few early blueberries can also be found growing low to the ground. On one of our birding trips through the woods, we came across a bountiful clearing rife with raspberries. It was a great spot for a snack break.



Snack time!

We'll be heading back to the mainland on Tuesday. It's been a great summer out here of monitoring birds, racking up bird species (still at 96), and chasing sheep. The weather has generally been fantastic, and the sunsets continue to be beautiful. It's bittersweet to leave, but as the terns depart, so must we.



Sunset from the tern colony

So long, and thanks for reading!

-Mark and Helen



Metinic 2016 crew banding an arctic tern

Living on an island

Posted in [Eastern Brothers 2016](#), [Uncategorized](#), tagged [FOMCI](#), [Maine Coastal Islands NWR](#), [MCINWR](#) on July 23, 2016



A sunny afternoon overlooking Eastern Brothers

As we're adjusting to our first week back from break, we thought to talk a little bit about how it is living on a seabird island for the summer. Although checking burrows, surveying for alcids, and keeping the island predator free takes up a majority of our time, we still find time to enjoy all the coast of Maine has to offer.

One would think being stationed on a small island would become somewhat monotonous, but we find that the little things keep it lively and help pass the time. When the weather cooperates, we enjoy taking walks around the island looking for more species to put on our list, mainly migrating songbirds and shorebirds.



Chestnut-sided warbler



Magnolia warbler

However, on those foggy or rainy days (sometimes lasting for a few days), we turn to books and cooking. Dawson is a trained chef when it comes to whipping up a batch of delicious Polish pancakes.



A pancake waiting to be flipped

We also have identified a variety of wildflowers that are dispersed throughout the island, filling in the wet meadows and the sunny hillsides.



Slender Blue Flag (*Iris prismatica*)



Blue Marsh Bellflower (*Campanula uliginosa*)

Since we're roughly 5 miles off the mainland, the temperatures rarely rise above 70 with a constant cool ocean breeze. However, on the days where the wind dies down and the sun's out, the ocean water (~56 degrees) is quite refreshing.



Nate meditating in mid-air



Dawson mid-flip and dangerously close to a belly-flop

Lastly, we always end our days, usually cleaning up from dinner and watching the sunset and the moon rise. However the day goes, it always seems to end in a beautiful sunset overlooking the Englishmen Bay.





A glowing full moon captured with our spotting scope

~Nate & Dawson, EBI 2016

To Catch a Predator

Posted in [Ship Island 2016](#), [Uncategorized](#), tagged [FOMCI](#), [great horned owl](#), [owl](#), [Predator](#), [raptor](#) on July 21, 2016



Armed to the teeth: by the end of our owl adventures, there were 15 padded leg-hold traps on perches stationed around the island. Not all of them worked out so well, though; the owl actually perched on the taller trap on the left without triggering it!

Most people who do bird work get into a rigidly defined schedule. More often than not, it involves waking up early– often hours before sunrise– and going to bed early to accommodate for our early-bird hours. Seabird work here on the Refuge is a bit nicer, with our day officially starting at a relaxing 7:00 am. For the past few weeks, however, the Ship Island crew has had to turn our schedule topsy-turvy, thanks to a dastardly nocturnal visitor: a **great-horned owl**.

Kelby first spotted the owl on an inauspicious morning in late June. We tossed up a first round of traps that very day, but the owl didn't return for almost two weeks! When it *did* return, we knew it had discovered the tern colony from the number of bodies left behind. Over the next few weeks, we gradually increased nighttime monitoring, starting with midnight trap checks and escalating until we had somebody present in a blind during every single hour of the night.

Thankfully, our efforts paid off. At 12:17 am on 7/21, as I was tucking myself into bed after the 9-12 blind stint, I received a phone call from Kelby: we captured the owl!



Handling raptors is a *bit* different than handling little seabirds. For one, terns don't have knives on their feet...

Our adult and fledgeling terns face predation from various birds of prey, and not all of them are equally problematic. We have near-daily predation events from nearby nesting **peregrine falcons**, which accounts for dozens of casualties over the course of the season. This doesn't seem to disturb the terns outside of the five minutes or so that the falcon is present, however. The same goes for **merlin**, **northern harrier**, and even the occasional **Cooper's hawk** that finds its way out to Ship.

Terns and other seabirds have evolved a colonial defense against aerial predation, accomplished by banding together to evade capture in spectacular dread flights or by chasing off the predator altogether with brutal dive-bombing and excrement-shooting tactics. Nocturnal predation, however, is a different game altogether; the adult terns panic when they are threatened by a predator they cannot see, and will simply leave the colony for the night if they feel unsafe. If an owl is visiting for consecutive nights, fattening up on a steady diet of tern chicks and fledgelings, the adults will eventually decide not to return the next morning at all. That leaves the entire year's worth of chicks to starve and fall victim to plundering by gulls.



Built to kill: with long talons, powerful feet, and a toe configuration that can rotate to restrain prey, owls are well-adapted to surprise prey under the cover of darkness.

It turns out that this *particular* owl has been visiting more than just Ship Island for its nighttime escapades. A brief trip to Trumpet Island revealed at least five gulls recently killed, and we have heard nighttime disturbances from the birds nesting on nearby East and West Barge Islands as well. Even though we will only be able to see the positive effects of apprehending the owl here on Ship, we can rest easy knowing that the threat to the other nearby seabird colonies has been mitigated.



What happens next? Our big "friend" spent the night here on Ship but was picked up promptly the next morning. It will spend the rest of the week in a fancy flight cage with a local wildlife rehabilitator until it's time to drive far, far inland. The owl will be released at a lush forest camp teeming with plenty of non-seabird prey, where he can live out his days hunting *responsibly*.



Roger hurried out for an early-morning pickup. Here, he pushes the boat off with the owl (left) safe on board.

That's all for now. We'll have one last update on island news within the week. Closing is on 7/26 (!), but work will continue right until the end.

Meredith, Ship I.

Bonus bird fact: the great-horned owl's closest North American relative is actually the striking snowy owl. While they may seem quite different at first glance, they share many morphological and ecological similarities. This even includes those striking "horns"; if you see a snowy in the right wind, you might catch a glance of its miniature ear tufts.

Venturing Fledglings, Leach's Storm-Petrels, and a Roseate Tern on Metinic

Posted in [Meticnic 2016](#), [Uncategorized](#), tagged [Fledglings](#), [FOMCI](#), [Leach's Storm-petrel](#), [Message in a bottle](#), [Meticnic Island](#), [roseate terns](#) on July 17, 2016

More tern chicks are fledging with each passing day here on Metinic! It is great to walk out into the colony and see the chicks take off into the air rather than running to the tall grass for cover, especially after a couple of weeks of limited food coming in. Some of the older chicks are starting to venture out into the intertidal and over the water; we even saw a fledgling way down at the very southern end of the island when we walked down there one afternoon.



A fledgling watching us carefully. It took off as soon as we got closer.

The chicks aren't the only ones venturing out. This week during a provisioning stint, Mark spotted a roseate tern resting on a rock in the intertidal! While this tern appeared to only be passing through and not a resident, this is still exciting because they are federally endangered, and so it is nice to see that they are at least in the area. This brings our island species list up to 96!



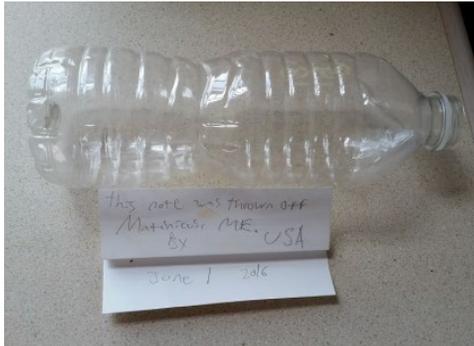
The roseate tern Mark spotted on the right, and a common tern on the left. Roseate terns have a longer bill and tail than the Arctic and common terns. Their bill is also mostly black and their body is paler in color than the other terns.

Earlier in the week we spent an afternoon searching for Leach's storm-petrel burrows. Previously, we had been doing this by smelling holes along the old rock walls as the petrel burrows give off a distinct scent that is described to be like old musty books. After reading on a previous blog that the petrels could also be found by playing their call from our phones and listening for a response from the birds, we were able to find even more burrows. So, a big thank you to our friends on Petit Manan Island for that suggestion, it seems to work well! If you're curious what a Leach's storm-petrel sounds like, here is a link to website with audio recordings of them: [Click here to get to the website](#). We do have petrels burrowing underneath our house, so it is funny to hear this at night and periodically during the day!



One of the entrances to a Leach's storm-petrel burrow along the old rock wall.

I'll leave you with a fun thing happened this week as I was walking along the shore back to the house from checking burrows. I came across a plastic water bottle that looked like it had something inside it, and to my surprise, it was a message in a bottle! It's true that you never know what you'll find working out on the Maine coastal islands! I will email whoever sent it out to let them know where we found it!



Other than our continued provisioning, productivity, and guillemot burrow checks, that's about it for this week!

- Helen

Why band birds?

Posted in [Uncategorized](#) on July 11, 2016



How many chicks do you count in this nestcam still?

Hey again from Ship Island, where the summer's swelter presses ever-onward. Since our first hatching on 6/16, the crew here has put out over 500 bands on emerging chicks, but even this is just a small fraction of the total number of young birds growing up on Ship. With an average overall clutch size of 2.35 and over 680 breeding pairs of terns, there could be over 1,600 chicks swarming Ship Island right now! ...And that's *ignoring* all of the non-seabird species our tiny chunk of land in Blue Hill Bay plays host to. Of course, it's just about impossible to catch and band them all; after barely 24 hours of life, the downy chicks will start making their first forays away from the nest bowl, making them quite difficult to locate and catch.

Lately, tern wrangling hasn't been the only bird research conducted at Ship! Last week, we had a guest researcher and technician from the University of Maine come ashore with mist nets in tow. They are pursuing an ambitious project looking at character displacement and niche partitioning in multiple populations of coastal sparrows, from generalists like **song sparrow** (*Melospiza melodia*) and **Nelson's sparrow** (*Ammodramus nelsonii*) to specialists like the rapidly-declining **saltmarsh sparrow** (*Ammodramus caudacutus*). We had a great few days of intellectual exchange; Kelby got to learn all about passerine capture and handling, and our guests had the chance to get immersed in an aggressive common tern colony!



We were very excited to learn that this male Nelson's sparrow was not the only of his kind on Ship; he has a mate, and a nest that has fledged at least two young!

No matter what kind of biological research with wild bird you are conducting, be it conservation/management, behavioral ecology, population demography, migration dynamics, or otherwise, there is one core action taken with the birds that is a constant across all of these disciplines: **banding the bird.**

With this in mind, I thought I'd take a moment to answer the single most common question I'm asked by laypeople when doing fieldwork: "*why do you band birds in the first place?*"

Like many questions, this one has both a short answer and a much longer answer. In its simplest form, bird banding serves one fundamental purpose: **permanently mark an individual within a population.**

An individual is typically marked with a federally-issued metal band that contains a unique combination of numbers (for example, most Ship Island bands this year lie somewhere between 1332-71600 and 1332-72000). Different countries issue different types of bands; here at Ship, we have resighted several common terns originally banded in Argentina. They have a totally different band format! There are hundreds of bird banding stations placed across the United States, Canada, and the neotropical wintering grounds of our many species; collaborative data collection from all of these stations gives us a detailed view of where birds are moving.

Federal bands aren't even the only ones that you can use to mark birds; different varieties of **field-readable bands** allow researchers and birdwatchers alike to gather data on a bird without having to recapture it. A couple examples: the Refuge's **Arctic terns** (*Sterna paradisaea*) receive metal field-readables with an alphanumeric code; numerous seabirds and waterfowl are labeled with colored field-readables with numbers or letters; songbirds everywhere are given colorful plastic color-bands in unique combinations to distinguish individuals.



We were able to read this common tern's band number from the blind using a camera, and learned that the bird was first banded on Ship Island in 1998!

These applications only brush the surface of all the research and management activities enabled by bird banding. If you think long enough about it, many more ideas spring to mind: hunters report banded ducks that they have taken; birders everywhere go out of their way to report field-readable bands; recapture data allow us to positively determine a bird's age. The possibilities are nearly limitless, and all stem from the simple application of a small metal ring to a bird's leg.

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Back to the birds for me, now. The common terns on Ship are getting ready to fledge, and work presses ever onward.

Meredith @ Ship I.

Rainy with a chance of rain

Posted in [Eastern Brothers 2016](#), [Uncategorized](#) on July 10, 2016

Although the majority of the first half of our field season has been nothing but blue skies and sunshine, this past week has given us enough rain for the whole summer. However, the terns and guillemots don't seem to mind much. They're growing more and more everyday; the terns chicks from nest # 2 already have most of their primaries in! While the guillemots may not be as further developed as the terns are, we're finding at least a dozen new chicks every time we check the burrows; we almost have as many chicks as we have burrows (67 chicks and 73 burrows!).



Dawson checking out the wings of a healthy black guillemot chick.

Now that we have all of our tern chicks hatched (8 in all), we have started our provisioning surveys. These are conducted 4 times a week for 3-hour stints at a time, recording the species of fish that the adults bring in to feed the chicks. The most common fish that are being brought in are sandlance and herring.



Healthy "A" and "B" tern chicks from nest # 3.

We're also beginning to see a wide variety of early migrants on the island, from shorebirds to raptors. Notable sightings include: spotted sandpiper, killdeer, semipalmated sandpiper and northern harrier. We're adding more species to our running list everyday, with the northern harrier making it 43. The upcoming week is our break off the island, and we plan to do a lot of hiking and exploring around the area, taking advantage of the sun coming our way. We're excited to see how much our chicks grow when we get back!

~Nate and Dawson, EBI 2016

Fledging in the Rain

Posted in [Metinic 2016](#), tagged [Arctic Tern](#), [Fledglings](#), [Weather](#) on July 10, 2016

We've got tern fledglings on Metinic! After a few breezy days of large chicks jumping up and flapping, some have finally gotten airborne. While not as sleek or acrobatic as their parents, the somewhat pudgy fledglings are still capable fliers. They are still returning to their nests to get fed, but then fly off instead

of running into the grass with the smaller chicks. Even as our first chicks take to the air, more chicks keep hatching, so we'll continue to be busy for the next few weeks.



These arctic tern chicks are from nests 5 feet apart. One is ~18 days old, the other ~3 days old. Arctic terns fledge at around 21-24 days.



An arctic tern flies in with a small hake for a small chick.

As if to make up for the splendid weather we've had most of the season, the dreary fog and rain has finally been keeping us inside. It's best to keep off the tern colony when it is cool and wet so the parents can keep their chicks warm and dry instead of flying at us. The weather has given us a good opportunity to catch up on data entry and stay warm around the wood stove, at least whenever we aren't heading off persistent colony-bound sheep.



The wood stove is a welcome sight upon returning from chasing sheep in the rain.

During breaks in the dismal weather, we've gotten out to check on our growing guillemot chicks. They're starting to get pretty big and hiding deep enough in their burrows that it has become a bit of a challenge to get some of them out to weigh them and measure their wing chord. While wedged in the rocks with my arm deep inside an active guillemot burrow, I spotted our first whimbrels of the season on the beach. That brings our island species list up to 95 with a passing puffin spotted during provisioning. We're hoping to reach 100 species before the end of the season, and it certainly seems within reach.

Until next time!

-Mark

The Chicks are Here!

Posted in [Petit Manan 2016](#), tagged [Arctic Tern](#), [Birding](#), [Black Guillemot](#), [chicks](#), [Common Tern](#), [Common Terns](#), [Eggs](#), [Gulf of Maine Seabird Working Group](#), [Leach's Storm-petrel](#), [Maine](#), [Maine Coastal Islands](#), [MCINWR](#), [Petit Manan](#), [razorbill](#), [seabird](#), [seabird conservation](#), [tern](#) on July 9, 2016

Petit Manan Island is in peak hatching season! The small, delicately speckled brown tern eggs are disappearing and being replaced by similarly patterned fluffy chicks. The oblong, white-brown spotted black guillemot eggs are opening up to reveal all-black downy chicks. Where once we were seeing large, gleaming white puffin eggs, now chicks with long grey down and white bellies are hiding quietly in their burrows. We even have found one razorbill chick (see photo below)! The only seabird still solely in the incubation stage are the Leach's storm-petrels.



One question that I often get asked is, why do some seabirds only ever hatch one chick (think puffins, razorbills, storm-petrels), while others can rear multiple chicks (terns, guillemots, etc)?

In general, seabirds have small clutch sizes compared to birds of other groups like most waterfowl, game birds, and some perching birds. This is because seabirds, unlike the groups mentioned previously, tend to have long life spans. This means it is not quite as critical for seabirds to have a successful nesting season their first breeding season or every year of their life in order to replace themselves in the population.

Other bird species may only get one chance to successfully reproduce if annual adult survival is low due to high depredation of adults and/or other factors.



But why lay only one egg instead of two or even three? There are multiple factors that influence seabird clutch size, and still many questions to be answered. Chick rearing is very energetically demanding for the parents, from egg formation to providing enough food for growing chicks. Right from when birds arrive on the breeding grounds, food availability is critical. After long migrations or rough winters, seabirds need to be able to find enough resources near their breeding colony to allow them to be in proper condition for breeding. Limited food resources during this period of time can cause birds to lay smaller clutch sizes, or even not nest at all.



This still does not answer our question why puffins and other species only lay one egg, in both good and bad food years. For species with one egg clutches, it is more beneficial for the long-term survival and breeding success of the adults to raise only one chick at a time. Raising two chicks would probably not be impossible during good food years, but the energetic costs on the parents might make this not worthwhile in the long run. So puffins, razorbills, and many other seabirds prefer to take things slow, laying only one egg per season.

Currently, we have found 17 black guillemot chicks, 15 Atlantic puffin chicks, one razorbill chick, and a few hundred tern chicks!

-Jill



Provisioning, Growing Chicks, and New Species on Metinic

Posted in [Meticnic 2016](#), [Uncategorized](#), tagged [4th of July](#), [developing feathers](#), [Great cormorant](#), [Lesser yellowlegs](#), [Maine](#), [Meticnic Island](#), [Northern fulmar](#), [Productivity](#), [provisioning](#), [Semipalmated plover](#) on July 4, 2016

Hello everyone! The main focus on Metinic this week was our chick provisioning watches. Essentially what happens is we are watching to see what the adults are feeding their chicks. To set this up, we select a number of nests in good visibility from our blinds and mark them with numbered and color-coded tongue depressors. We then find the chicks that belong to each nest, band them, and then color a specific part of their body according to the hatch order and corresponding nest. The first chick to hatch is called the "A" chick and is colored on top of its head. The second chick to hatch is called the "B" chick and receives color on its chest. The third chick to hatch is called the "C" chick and is colored on its back.



One of our provisioning nests. The color on top of the "A" chick's head corresponds to the color on the tongue depressor. When the egg hatches, the "B" chick will get the same color on its chest.

During each provisioning stint we watch each nest for adults coming in with food for the chicks. We record the nest number, the arrival time of the adult, which chick receives the food, the departure time of the adult, the number of prey items, and the species of prey brought in and its size. Prey size is determined based on the bird's bill length. For example, a fish can be recorded as 1 bill length or 1.5 bill lengths; size is measured to the closest quarter of a bill length. All of this is often determined within a few seconds as the adults swoop in and the chicks gobble down the food quickly. Each provisioning stint lasts 3 hours and we try to total at least 12 hours a week each. All of this information will give us an idea of the amount of food coming in and its quality.

Besides the provisioning watches, we have also been continuing our productivity monitoring. It is amazing to see just how quickly our chicks are growing up! Right now the majority of them are in the process of replacing their downy fluff with feathers. Another interesting thing to observe is the range in development. A few of the chicks have mostly feathers and seem like they will be fledging soon, while others haven't even hatched yet!



One of the older chicks in our productivity plots showing off its feathers. It is getting so big!

Provisioning and productivity take up the majority of the week, but Mark and I decided to take one afternoon to head down to the southern end of the island to see if we could spot any new species to add to our island list. As we were walking along one of the southern cobble beaches we came across a bird washed up on shore. At first glance it looked like a small gull, but as we got a closer look we discovered that it was a tubenose. Upon further observation and investigation, we were able to ID it as a Northern fulmar! Our species list is now up to 92 with the addition of a great cormorant, lesser yellowlegs, and a semipalmated plover!

That's about it for this week, we will be celebrating the 4th of July with our seabirds! So far, we have been enjoying the various firework shows going on miles across the water on the mainland, and who knows, we may even break out the small grill this evening!

Have a happy 4th of July!

Helen

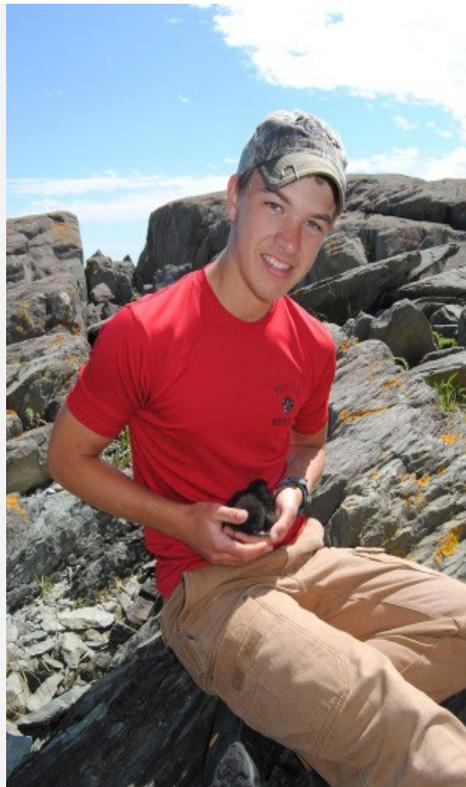
Archive for June, 2016

Guillemot Chicks

Posted in [Eastern Brothers 2016](#), [Uncategorized](#) on June 29, 2016

Hello from the island!

This past week has been by far the most exciting and most busy we've had yet. Black guillemot chicks have started to hatch, finding new ones every time we conduct our burrow checks. Every three days, we check one half of the island for our marked burrows, looking for the presence of eggs or newly hatched chicks. If there are chicks present, we have to fish them out of their burrows (sometimes when the mom is in with them!) and take measurements. The first measurement taken is weight, and for that we have a special scale in which we clip a "bird bag" (fancy term for a small drawstring cloth bag) to a cylinder scale and record its weight on how far the indicator goes. The newly hatched chicks only weigh roughly 30 grams, but don't let that fool you; we came back to a chick just three days later and it nearly tripled in weight! The next measurement we take is wing chord, or the length from the most prominent point of the wrist joint to the most prominent point of the longest primary feather. This is taken using a special ruler, but it's easy enough to record. After the measurements are taken, and if the chick is big enough, we place a size four US Fish and Wildlife Service metal band on its right leg using a pair of modified pliers specifically made for banding birds. The bands don't interfere at all with any of the birds daily functions, and makes it rather easy to identify the specific bird from exactly what burrow and what year it was found if it were to be captured or re-sighted in the future.



Dawson holding his 1st banded black guillemot chick on Western Brothers.

Our tern chicks have also grown considerably since our last post, more than tripling their weight and starting to get their primary feathers! But that's not the half of it, we have five more healthy chicks! They are all very well fed by their parents, who really don't care for us handling their babies, constantly diving and pecking our heads (and pooping on us if we're lucky). However, the chicks don't make it very easy for us to find them; they often hide in the vegetation around the nest and blend in rather well, so searching for them is a very careful and mindful process. When we do find them, they get weighed the same way the guillemots do but do not get their wing chord recorded, simply due to the fact that it would be impossible for all the other islands to record that much data- there's only 7 terns for us to measure, compared to Petit Manan with over 1,000 breeding pairs! (an average of three eggs per nest, you can imagine why!)



The "C" chick in nest # 1 posing for the camera.

As our chicks are growing more each day, there's always someone that wouldn't mind snacking on them, and here at Eastern Brothers that's our new visitor: the peregrine falcon. We first were confused when woken up by the terns going crazy on Saturday morning, chipping and calling from one of the ravines. We weren't quite sure what they were on about, but after getting to one of our morning survey points, we found a dead adult black guillemot predated on by the falcon.



The peregrine falcon perched on Eastern Brothers Island in a ravine close to the alcid decoys.

We observed it flying from island to island with the terns fearlessly dive bombing it the whole way until it eventually left. We've seen it two other days after that, but it has been driven off the island quicker and quicker each time with no additional signs of predation. We're hopeful that the terns keep on driving it away until eventually it moves on.



A black guillemot chick we found with a fish caught and drying on its bill! A rather odd sight, but we later safely removed it so it wouldn't interfere with feeding.

Until next week,

~Nate and Dawson, EBI 2016

Our Nocturnal Neighbors: Leach's Storm Petrels

Posted in [Petit Manan 2016](#), [Uncategorized](#), tagged [Acoustic Monitoring](#), [Black Guillemot](#), [conservation](#), [Leach's Storm-petrel](#), [Maine](#), [Maine Coastal Islands](#), [MCINWR](#), [National Wildlife Refuge](#), [Petit Manan](#), [Petit Manan Island](#), [Petrel](#), [PMI](#), [seabird](#) on June 28, 2016

Petit Manan Island is well known for its seabird inhabitants, most notably our Atlantic Puffins and Arctic Terns. However, a total of eight species of marine birds return yearly to nest on Petit Manan Island. Most of these birds have conspicuous nests, such as the terns and Laughing Gulls which lay their eggs on the ground's surface. The Alcids, such as Puffins, Black Guillemots, and Razorbills, lay their eggs in burrows or rock crevices, but the adults are still easily observed on the rocks and surrounding waters. But Leach's Storm-Petrels, the smallest seabird denizen of Petit Manan, are a little bit trickier to detect.



Jimmy holding an adult Leach's Storm Petrel that was grubbed from a nearby burrow

Leach's Storm-Petrels differ from the other seabirds on PMI in a variety of ways. Taxonomically, they are the only species representing a group of seabirds called the Tubenoses to be found on PMI. Also, they are nocturnal and nest in often long, twisting sod burrows. The burrow entrances are smaller than the size of a fist, and tucked underneath rotting logs, debris and rocks. These life history traits make observing storm-petrels quite the challenge, and prevent accurate estimations of breeding pairs on nesting islands.

This summer we have been testing a new methodology to survey for active storm-petrel burrows. Instead of just reaching as far into each burrow to feel for birds and eggs, we have been playing a recording of storm-petrel vocalizations outside of each potential

burrow entrance. The results have been extremely exciting! The birds have been responding with their strange, goblin-giggling call from deep within their burrows. But more importantly, this method has allowed us to find more birds than just by feeling in the burrows. In fact, 63% of the storm-petrels we located only because we heard them – their burrows did not allow us to reach them. Overall, 93% of the adults we located using both methods responded to playback. Hopefully this monitoring technique will provide new insights into Leach’s Storm Petrels nesting on Maine coastal islands!

-Jill

Golden Tern Chicks, Geolocators, and Guillemots

Posted in [Metinic 2016](#), tagged [Arctic Tern](#), [Black Guillemot](#), [Geocator](#), [Herring Gull](#), [International Guillemot Appreciation Day](#), [Metinic Island](#) on June 26, 2016

It’s been a beautiful week on Metinic, with the warm sun providing for excellent hatching weather. More tern chicks show up every day in our plots and some of the older ones are getting their first wing feathers. Of the dozens of chicks in our plots, the color and pattern can vary considerably from sandy tan chicks with only a few black spots to almost snowy white speckled with dark streaks.



We call these arctic tern chicks the “Silver and Gold Siblings”

We made the most of the weather early in the week to continue our trapping efforts, with a special focus on one particular bird. In 2010, Refuge staff placed geocator data loggers on the legs of several arctic terns to track their annual journey from breeding grounds in Maine to their winter range in the waters around Antarctica. The geocator measures the amount and timing of sunlight to determine the location of the bird. Most of the loggers were retrieved in 2011 or 2012, but a few were still missing. Luckily, Helen and I spotted this bird in May, and figured that it was breeding here. On Wednesday, Refuge staff Brian, Michael, Linda, and Sara came out to the island to locate and catch the bird. Between the six of us, we sat in our five blinds and watched for the bird. We quickly found the bird and its nest, but trapping efforts were to no avail. After a fruitless attempt on Thursday, Brian and Michael came back out on Friday and finally managed to catch the bird after a few hours of waiting with a bow net. It appears that the nest is being attended by three adult terns, which is unusual, but may account for the difficulty of

catching the bird if it's only spending a third of the time on the nest. The geolocator was removed and the bird released. Hopefully, the data on the geolocator can be retrieved and we can see where the bird has been!



The geolocator on the tern's leg before it was removed

While the Friday tern trapping stint was ongoing, Helen and I went out to check on black guillemot burrows on the northwest side of the island in advance of hatching. June 27th is International Guillemot Appreciation Day, traditionally around when the first chick hatches. Guillemots, relatives of puffins, nest in rock crevices all along the Maine coast. We located several rocky burrows with eggs and a few with adults attending. Between the burrows, a few gull chicks were running around near their nests atop the rocks.



An adult black guillemot incubates its eggs in a rock crevice



Herring gull chick. Both herring and great black-backed gulls breed on Metinic.

At the southern end of the cliffs, we were checking a last couple of rocks when we were surprised to find our first guillemot chicks a few days early!



Black guillemot chicks are covered in dark gray downy feathers

Have a happy Guillemot Day!

-Mark

The terns are coming, the terns are coming!!

Posted in [Eastern Brothers 2016](#), [Uncategorized](#) on June 20, 2016

We can't believe how far the tern and guillemot colonies on Eastern Brothers Island have come along in just three weeks! This week has been beautiful almost everyday, sunny and high 60's! This amazing weather has allowed us to spend full days in the field and monitor the colonies, both tern and guillemot. Now for the exciting news... we have our first tern chicks! Our first nest has two healthy chicks, and we're preparing to band them mid this week.

The process of hatching can be thought of in three stages. First, the adult will incubate the eggs, providing much needed warmth for development. Second, the egg will begin "staring", which means fractures on the surface of the egg will become visible (sort of resembling a star, hence "staring"). Lastly, the chick will poke a hole in the egg, which we call "pipping". Once this happens, the chick will most likely be hatched within 24 hours. Our second nest has both a pipping and staring egg, so we are expecting more chicks in the next couple of days!



Our first tern chick, marked with a green sharpie on its head to distinguish it from its siblings

This week has also been a first for both razorbill and Atlantic puffin sightings on the island! Although we haven't yet seen them land on the island, the razorbills are here almost daily, flying around and floating close to the decoys. Only one puffin was seen so far, floating and diving in the water just below both the razorbill and puffin decoys on the southern end of Eastern Brothers. We've also had a massive increase in common eider creches. A creche is a group of eiders (usually female) that float along with and protect a group of ducklings. They can be anywhere from just one hen and one duckling to several of each; the largest we've seen has been 13 hens, 20 ducklings and 2 males, totaling 35 eiders. It's surprising watching the ducklings dive and forage all on their own, they're still so tiny!

The old abandon sheep herders cabin located just a short walk from our current cabin is home to a number of barn swallows, where we found our first active nest!



A barn swallow nest with 4 healthy eggs, covered with gull feathers they've gathered to keep them warm

Not all our time is spent looking at birds, however; sometimes we gotta eat! The other day, we noticed a lobster boat with the crew checking their pots very close to the island. We were told no crew on the Brothers have ever flagged down a boat and bought fresh lobster, so we naturally took that as a challenge. After a few minutes of waving our hats in the air, they came a little closer and they told us they had lobster to sell. That was all we needed to hear, as we ran to our inflatable raft and hopped in the water, quickly rowing out to their boat. We bought two fresh 1 1/2 pound soft shells and came back and boiled them up for lunch. That and having so many island firsts this week has made it the highlight of the season!



Nate holding our catch of the day

Until next week,

~Nate and Dawson, EBI 2016

New Life on Metinic

Posted in [Meticnic 2016](#), [Uncategorized](#), tagged [Arctic Tern](#), [Banding](#), [chicks](#), [Common Tern](#), [Head-bill](#), [Maine](#), [Matinicus Rock](#), [Meticnic Island](#), [Puffins](#), [Savannah Sparrow](#), [seabird](#), [Spotted Sandpiper](#), [Trapping](#), [wing chord](#) on June 19, 2016

The beginning of the week started out slow and rough as the weather was not cooperative. High winds made it so we could not go out to the tern colony as we wanted the adults to stay on their eggs and keep them warm from the howling winds. Finally the weather broke Tuesday afternoon and we were able to do some trapping and banding of adult terns. We do this by selecting a couple of nests, replacing the eggs with wooden ones so they do not get damaged, and placing a chicken wire trap over the nest with the door open. When the adult walks into the trap, they step on a trigger platform that closes the door. As the adult sits in the trap incubating the wooden eggs, we walk up and take it out of the trap through a hole in the top. The adult is then placed in a bag where it is weighed using a spring scale. We then band the bird and measure its wing chord and head-bill length before it is released to return to incubate its eggs which we have switched back to the real ones.



A common tern checking out the trap



Measuring wing chord length



Measuring head-bill length

Wednesday we headed over to Matinicus Rock to help them with their tern census. It was nice to get out to another island to see what was going on there; plus we got to see Atlantic puffins, razorbills, and common murrens, three species that do not nest on Metinic.



Atlantic puffins on Matinicus Rock

The next day it was our turn to census! With the help of a few guests, we were able to count 608 nests in our colony of arctic and common terns! We did this just in the nick of time as we came across multiple hatched chicks with more popping up every day! The rest of the week was spent securing our productivity plots which are circles of fencing surrounding a number of nests. When the chicks within the plots hatch, we record the hatch date and band them. Every time we visit the plots, we weigh the chicks and keep track of how they are doing until they fledge.



Pipping arctic tern egg



A hungry chick waits to be fed

Throughout the week we have also come across savannah sparrow chicks and fledglings, and spotted sandpiper chicks running around on the rocks. An identifying characteristic of spotted sandpipers is they bob their rump up and down as they walk; it is funny to watch the tiny fuzzy chicks do this as well! We are looking forward to more chicks showing up in the upcoming weeks!



A tiny spotted sandpiper chick

Until next week,

Helen

An Exciting Tern of Events on Ship!

Posted in [Ship Island 2016](#), tagged [Common Tern](#), [Ship Island](#) on June 17, 2016



An unsuspecting common tern parent walks calmly into a trap to incubate a clutch of wooden dummy eggs.

As the summer starts to pick up so does the tern activity here on Ship. At the end of last week we had some visitors from the Student Conservation Association come to help us put up new productivity plots before our island is overrun with new tern chicks. The productivity plots contain 6-11 nests of varying sizes in different areas throughout the colony. These are put up so that when the chicks hatch we will be able to monitor their growth for the rest of the season. As of today we have a total of 6 productivity plots!



Adult common tern in one of the productivity plots.

This week we've also been trapping adult terns for banding and or recapturing. This is done by swapping out the eggs in nest with fake wooden eggs (we don't want a parent to accidentally break their own

eggs). We then place a wire treadle trap over the nest and set the trap. To set the trap we stick a wire attached to the treadle into the sliding door. Then we go hide (usually in one of our blinds) so the terns don't see us, but so we can also see the trap. You can tell if the terns can see you because they will give you dirty looks and yell a lot. From there it's a waiting game. Some trapping stints were more successful than others, just like some birds were more cooperative than others.



After banding, the tern is released to resume tending its nest- now with the real eggs safely back in the nest bowl!

Wednesday was the Gulf of Maine Seabird Working Group (GOMSWG) census day and our friends from the Student Conservation Association came to assist us in that as well. It was a successful census and a gorgeous day to do it on. During the census we also had a visit from a peregrine that we've been seeing on a regular basis. It came earlier this week and hung out on the back of our island. The peregrine allowed us to get fairly close, which was when we noticed it was pretty badly injured. Even though peregrines are a predator of common terns we hope it is able to recover.



The peregrine falcon (*Falco peregrinus*) is listed as an endangered species in Maine.

Finally one of the most exciting things began to happen yesterday as we were putting up our last productivity plot. Yes that's right, you've probably guessed it, it's what we've all been waiting for. WE

HAVE TERN CHICKS!! Two chicks hatched while we were putting up the final plot yesterday. This morning during our nest checks we found four more healthy chicks that were fully fluffed out and we were even able to band them!



We hope to have even more babies running around our island within the next few days!

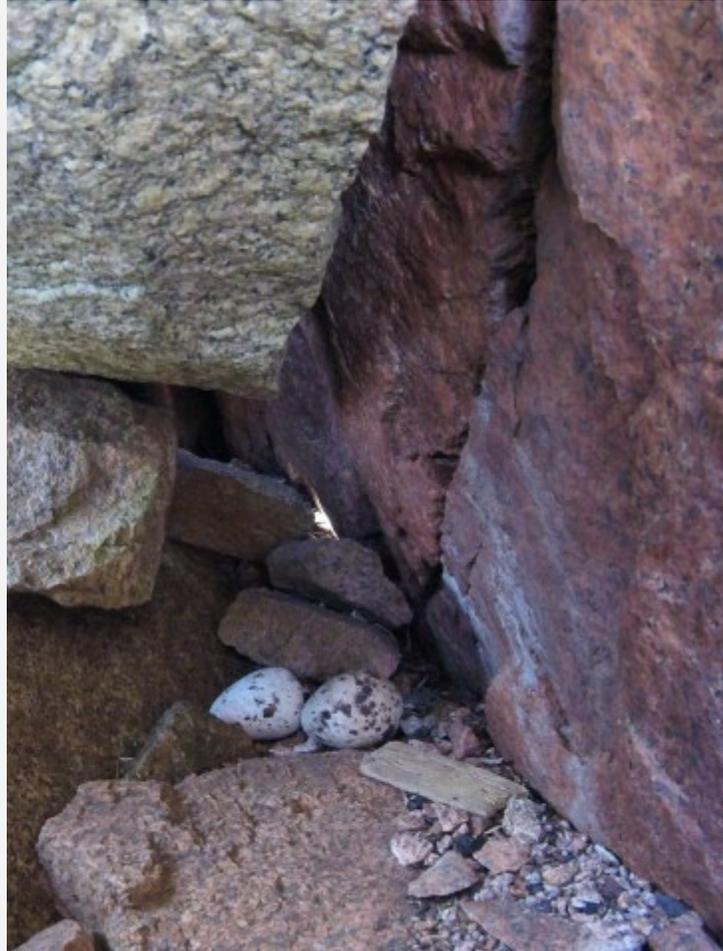
Till next week.

Kelby Leary @ Ship Island

It's Time for a Marine Debris-fing

Posted in [Petit Manan 2016](#), [Uncategorized](#), tagged [Maine Coastal Islands](#), [marine debris](#), [micro-plastics](#), [Petit Manan](#), [plastic](#), [pollution](#), [razorbill](#), [recycle](#), [reduce](#), [reuse](#), [seabirds](#) on June 14, 2016

As our fifth week comes to an end on PMI, the island is looking more and more like a seabird colony. More Arctic and Common Terns appear every day, and so do their nests. Last week our first Atlantic Puffin, Razorbill and Black Guillemot eggs were found!



Our first Black Guillemot eggs in a rather cavernous rock crevice

But this week I'd like to talk about something that is more ever present than the seabirds themselves- marine debris. It's found all over Petit Manan- some so old that the ground has reclaimed it and the vegetation grows through it. It finds itself lodged between rocks impossible to retrieve, and even ends up in the burrows of the birds we are trying to protect. Although the islands on Maine Coastal Islands NWR are closed to the public during breeding season, trash still lines the shores as a constant reminder of our everyday impact.



Buoys are a common item to wash ashore on Petit Manan, as well as plastic water bottles, chewing tobacco tins, rope, and bleach jugs. Some of this seems common to local boaters, but the majority of marine debris actually comes far inland and makes its way down through rivers.

In the first three weeks on Petit Manan, my co-workers and I collected 840 gallons of trash from the shore. This in addition to the 10 tons of marine debris that refuge boat operator, Jim Fortier, and local Maine volunteers remove annually from Petit Manan Point. Some of our most frequent items include disposable plastic water bottles and other single-use plastic bottles. One afternoon I counted to see just how many water bottles we were picking up, and it averaged out to two water bottles every minute. And they just keep coming ashore.

This isn't just an aesthetic problem. Marine plastics are a growing problem, especially for our seabirds. Plastics don't biodegrade or decompose into new material, but they do break down. They continue to break down until they become so small that you cannot see them anymore, these are called micro-plastics. These tiny plastics end up being eaten by seabirds, either because their food already has micro-plastics in it, or because of their feeding strategy like those who skim the surface of the water.

Last year the Oceans and Atmosphere Business Unit of Australia released a study warning that by 2020 99% of seabird species will have been found to consume plastics, and of those species 95% of the individual in each species will have consumed plastics. This news spells disaster for seabird species. Consumption of larger plastic items can lead to obstruction of the bird's digestion system and death, while eating smaller plastics takes up space in the birds' stomachs reducing their food intake and leads to

decreased health conditions and starvation. This has also been shown to reduce the survival of fledgling and juvenile seabirds.



This image shows all of the marine plastics that were extracted from a single Albatross upon its death. Image courtesy of [Tim Zim](#)

So marine debris is a real problem, and if nothing is done it is projected to only get worse. In the 11 years from 2015 to 2026 we are expected to create as much plastic, as all the plastic that has been produced since its creation. Fixing this is not just a matter of watching your trash on beach trips, but to reconsider what you buy and how you dispose of your waste. The majority of marine debris comes from trash that is transported from far inland areas by rivers.

So my challenge to all you seabird lovers out there is to make a positive change in your life. Take the time to clean up and collect recyclables in an area, because you never know if that trash will make it to the ocean. Use your consumer power and switch from disposable water bottles to a reusable one – by not supporting goods sold in plastic containers you are lessening the demand for those goods in the future. Practice the waste management hierarchy- reduce, reuse, and recycle before ever sending something to the landfill.

Thanks for all your help in protecting in the seabirds we love!

For more information check out these links!

- [10 Ways to Reduce Plastic Pollution by the NRDC](#)
- [Marine Debris Fact Sheet by NOAA](#)
- [Ocean Trash by National Geographic](#)
- [Great Pacific Garbage Patch by National Geographic](#)
- [How Plastics Affect Birds by International Bird Rescue](#)

Till next time!

-Morgan

Tern nests, Two Bush, and a Woolly Weekend

Posted in [Metinic 2016](#), tagged [Metinic Island](#), [Sheep](#), [Terns](#), [Two Bush Island](#) on June 12, 2016

Things are getting busy on Metinic. Common and arctic tern eggs typically hatch after about three weeks, so we've been making preparations before we have an abundance of chicks scurrying around. Based on when the first egg was found, we're anticipating the first chick to pop out before next weekend. Ahead of hatching, we will conduct a census of the colony, which in turn has several precursors that we have been working on this past week.

As we have two species of terns on the colony, it is important to determine an approximate ratio of these two species. Nests cannot always be reliably told apart without looking at the bird attending. Arctic terns tend to nest higher on rocks and usually only have two eggs, while common terns typically nest in grassy areas between the rocks and will have a complete clutch of three eggs. However, exceptions abound. Perched up in the blinds, we sit and watch as adult terns fly in to their nests. Then we note the locations of a few nests and run down to place a colored flag near the nest: red flags for arctic, blue flags for common. Based on the 152 nests we flagged, it appears that we have a pretty even split, with arctic terns slightly more prevalent.



Red and blue flags blowing in the breeze around arctic and common tern nests

Another task before the census is the placement of predation nest markers. While we will also be monitoring nests for predation in our productivity plots later in the season, these markers allow us to note egg predation early in the season and outside of the densest parts of the colony. Tongue depressors are painted, and then placed around nests in the colony, denoting the number of eggs in the nest when placed. These will be collected during the census and any nests with fewer eggs than written on the stick will be noted as likely depredated.



This two egg nest marker will be easy to spot with its brilliant chartreuse top

Metinic isn't the only island in the area with breeding seabirds. On Wednesday, we went along with Refuge staff to nearby Two Bush Island. The shrubby vegetation around a small lighthouse serves well to conceal a few eider nests, while some guillemots likely nest in the rocky ledges. On our way back, we circled Crow Island to check on an eagle nest. Two adults were around, but we couldn't see any eaglets from the boat.



Two Bush Island lighthouse surrounded by thick brush

This weekend is the annual Metinic Island sheep shear. We helped to drive most of the sheep from across the island to a corral on the southern end, where they are processed. Watching the shearing in action, it is really amazing how much wool some of these sheep have grown. Hopefully some of that wool will be

made into warm layers so that those wearing it can be as cozy as the sheep out here off the coast of Maine.



Sheep from the drive waiting to get sheared along with a few that had already been

Until next time!

Mark

Eastern Brothers Island

Posted in [Eastern Brothers 2016](#), [Uncategorized](#) on June 10, 2016

It's week two out here on Eastern Brothers and seabird activity is ever increasing! We've had a season record of 180 black guillemots, 29 common eiders and 7 common terns. This year is an island record for tern nests, totaling three with three eggs each, which is one more pair than they had observed last year; one of the males in the third pair is even banded, meaning he's returned from a previous year and made Eastern Brothers home!



Our third pair of common terns keeping each other company by the decoys

As one of our main objectives here being monitoring black guillemot productivity, we've been actively searching for their burrows. Guillemots lay their eggs in small cracks and crevasses on the steep slopes of the island, so burrow searching is usually an intense all-day effort. It's our job to get our hands dirty and meticulously check every crevice for their eggs (it's surprising how little space they need to raise their chicks, sometimes a powerful LED flashlight is even needed just to see their eggs!) They typically lay two eggs, which are about the size of an Easter egg and are white with specks of brown. We've mainly been finding them on the southern end of Eastern Brothers, but our most recent searching efforts have discovered them on just about every spot on the island. So far, we've marked 29 burrows, but we expect these numbers to triple as more pairs take refuge and lay their eggs.



A black guillemot incubating her eggs in a burrow on Eastern Brothers

Although this is a seabird island at heart, it's also the temporary home for many migrating songbirds, including: savannah sparrow, magnolia warbler, cedar waxwing, and Eastern Wood-Pewee. The island is also home to a variety of marine life, such as harbor seals and harbor dolphins; we even saw a Great White Shark going after a school of fish close to shore!



A savannah sparrow on the lookout



A lazy harbor seal pup soaking up the sun

More to come next week,

~Nate and Dawson

Breeding season in full swing on Ship Island

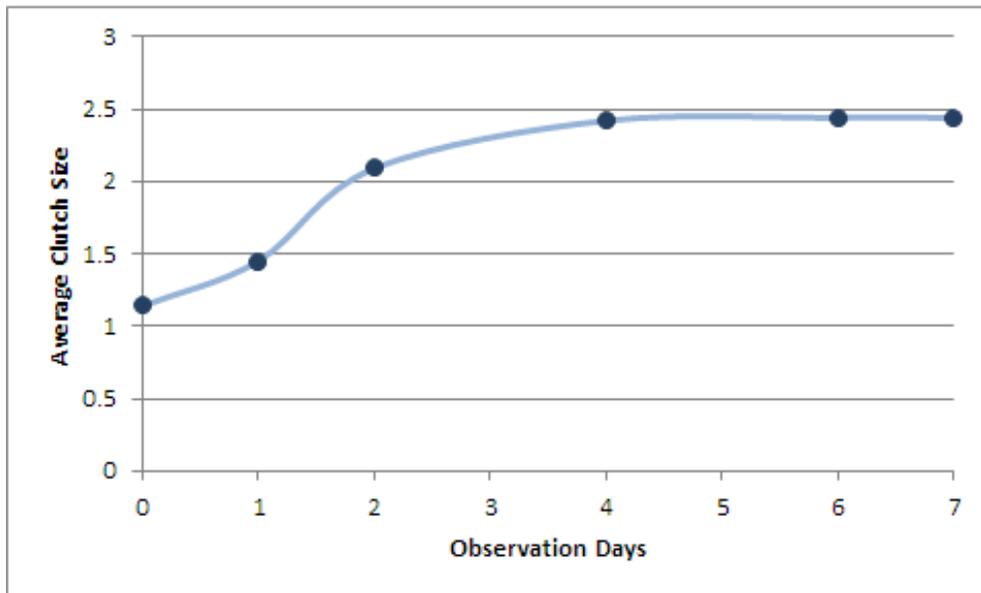
Posted in [Ship Island 2016](#), [Uncategorized](#), tagged [biology](#), [Birding](#), [Common](#)

[Tern](#), [conservation](#), [Eggs](#), [fieldwork](#), [Maine Coastal Islands](#), [nesting](#), [nwr](#), [seabirds](#), [Ship Island](#), [wildlife photography](#) on [June 7, 2016](#)



A banded common tern (*Sterna hirundo*) returns to the nest for incubation. This image was remote-triggered on a hidden camera, toward which the terns are very tolerant!

Common tern activity levels on Ship have made an about-face, going from mostly quiet to positively booming! For the past 10 days or so, the birds have been active virtually all day long, courting their partners and tending their nests. At the time of writing, well over 150 nests have been established on the island. Of 100 nests being monitored for early-season predation, only 4 have been lost– and 3 of the 4 were taken out by the highest tide of the month. If you're more of a visual learner, check out the figure below; a legend is available by rolling your mouse over the chart. If you want, you can even **click to zoom in** on any of the images.



In simple terms: things are going well. Breeding **savannah** and **song sparrows** have begun to hatch, as have the **common eiders**, **gulls**, and **double-crested cormorants** on our neighboring islands. It should be a matter of days before our nesting **spotted sandpiper** fathers will escort their chicks to safe foraging, as well.

Between seal pups, tern eggs, and the numerous fuzzy chicks emerging all around us, we have plenty to observe at Ship. Later this week we hope to establish our productivity plots for the season and begin adult trapping efforts in order to band new birds recapture known individuals. Our projected first hatch date is June 19th, so knock on wood and stay posted for the big news in a couple of weeks!



A fuzzy creche of six common eider (*Somateria molissima*) chicks escorted by two hens! We hopefully theorize that the small number of adult birds escorting this creche is due to rampant nesting success of all the other eider hens out there on Trumpet and East Barge Islands.

As if all these babies weren't enough, spring migration somehow persists on Ship. Our long-awaited **Nelson's sparrow** (easily identified by its song, which sounds remarkably like a match being lit) has finally taken up residence on the island, along with an **alder flycatcher** that can be heard singing daily; the vocalization (a burry "fee-beeh!") of this bird is just about the only thing that sets it apart from its doppelganger, the willow flycatcher.

In birding parlance, focusing in on a single area to frequently document its species is known as "working a patch", and that's certainly what every Maine Coastal Islands seabird crew does. Because a daily birdwalk is part of our essential duties, we become very familiar with what species to expect on a daily basis and can quickly recognize oddities. In working our teensy patch called Ship Island, we have managed to document some 68 birds, including such bizarre wintertime lingerers as **long-tailed duck**, **Bonaparte's gull**, and even a single **black-legged kittiwake**! And that isn't even mentioning all of the freshly-molted warblers that continue to stream through in their alternate plumage.



That's the news from Ship Island this week. Hopefully our industrious tern colony will continue to grow despite gloomy weather! In the meantime, we'll be counting birds and huddling in the warmth of our tiny cabin when it gets too miserable out.

Bonus bird fact: did you know that the scientific name of the **common eider**, *Somateria molissima*, literally translates to "very soft woolbody"? An apt name, considering how the seaducks are prized for their luscious down! And if you've ever had the pleasure of feeling an eider's feathers, you'll know this to be true.

Until next time!

Meredith Miles @ Ship Island

An Eventful Week on Metinic

June 5, 2016 by MCINWR

While the terns have been settled on their nests incubating eggs, we had an eventful week here on Metinic Island! The excitement began on Tuesday when a multi-agency group of biologists interested in common eiders came out to take blood samples from the hens for their ongoing genetic population analysis. Mark and I got to learn about common eider biology and assist with the capture of 38 hens,

which was quite fun! We caught them by either using a dip net after flushing them off of their nests, or we simply snuck up on them and picked them up off of their nests. We found that you have to be quick to catch them, but once caught, they are quite easy to handle. Each hen was then banded, and a small blood sample was taken before releasing them to tend to their nests again. Throughout the remainder of the week, we have also been spotting a number of eider creches with the largest being made up of 23 hens and 28 ducklings!



Here is a hen that was just banded



Now a small blood sample is taken



Here I am with the hen ready to be released!

The next couple of days were spent climbing around the rocky coast of the island searching for black guillemot burrows. These alcid like to nest in holes and crevices in the rocks, so once we found one with either an adult or an egg in it; we marked the entrance with spray paint so we can relocate the burrows for our egg assessments and growth rate monitoring of the chicks when they hatch.



A burrow we marked with blue spray paint



A black guillemot egg found in the burrow

Some of the island's sheep managed to escape our first round-up and had been wandering around in the tern colony, running the risk of them trampling the eggs. Our efforts to chase them off of the colony were becoming too numerous, so we decided to do a second round-up and drive to the southern end of the island. After the round-up, deputy refuge manager Brian Benedict was checking the fence to make sure it was working and came across a popped weather balloon with its parachute deployed. Attached to the parachute string was an envelope with a message asking whoever found the balloon to mail the accompanying measuring device back to the National Oceanic and Atmospheric Administration (NOAA). That just goes to show you never know what you'll find working out on the Maine coastal islands!



Mark with the NOAA weather balloon

That just about wraps up another exciting week on Metinic! We are looking forward to the next coming weeks as more nests and possibly more chicks show up! We are also hoping to add to our bird species list, we are at 82 now!

Until next time,

Helen

Posted in [Meticin 2016](#), [Uncategorized](#) | Tagged [Black Guillemot](#), [Common Eider](#), [Meticin Island](#), [Weather balloon](#)

Archive for May, 2016

Eastern Brothers Island 2016

Posted in [Eastern Brothers 2016](#), [Uncategorized](#) on May 31, 2016



First week on the Island and already so much has happened! There are just two of us here on this small 17 acre island off the coast of Jonesport, ME, but it feels a whole lot bigger. We arrived Thursday by boat, where we hauled all our gear into our small 12 x 10 cabin, our home for the next 12 weeks. With limited solar power and no running water, there's definitely an adjustment period. Every morning we set our alarms for around 6:30. At 7:00, we record the weather, including wind, temperature, visibility and sea conditions. We then make a walk around Eastern Brothers (walking across the bay or rowing our boat, depending on the tide) and conduct a morning bird survey. We've already had a high of 184 Black Guillemots and 7 common terns, which is promising for this season. After we've finished, we have breakfast which is cooked on a small two burner propane stove (oatmeal and cranberries has been our go-to). Next, we go out to our observation blinds on both Eastern and Western Brothers to watch for tern and alcid activity (alcids are a family of birds which include Atlantic puffins and razorbills). The terns are here daily, letting their presence be known if you get too close to their nests (we've already found a nest with 3 eggs and another with 2, hoping the other pair will nest soon!). It's not unusual to watch as the male brings back fish for the females who are sitting on nests. We have yet to see any alcids, but we're not discouraged because it's still early in the season. The weather here has been warm mostly sunny, giving us excellent views of all this island has to offer. Keep up with us and

tune in next week and for the next 12 weeks, this is looking to be a great field season off the coast of Maine!

~Nate and Dawson

Nesting on Metinic

Posted in [Meticinic 2016](#), tagged [Arctic Tern](#), [Garter Snakes](#), [Killdeer](#), [Meticinic Island](#), [Nests](#), [Purple Sandpiper](#) on May 29, 2016

The nesting season is ramping up on Metinic! We found our first tern egg on Wednesday and more nests have popped up every day since.



Two egg Arctic Tern nest atop a boulder

Elsewhere on the island, we've found Common Eider, Herring Gull and Great Black-backed Gull nests. Some of the island's birds are further along and already have chicks. At least one eider clutch has already hatched, with the three ducklings sticking close behind their mother as she cut through the waves. On our first trip to the southern end of the island, we came across half a dozen Killdeer chicks darting around the marsh while several Canada goose goslings swam across a protected cove with their parents.



Killdeer chicks can run soon after they hatch. They also look like cotton balls on stilts.

Metinic is unusual among Refuge seabird islands in that it hosts a permanent terrestrial predator: garter snakes. Though generally small, these snakes could pose a threat to diminutive tern chicks, so we do our best to catch any near the colony. When caught, they often release a musky smell that fades from clothing after a few hours. These snakes then take a one way trip to the mainland, where they can get their fill of rodents, away from nesting seabirds.



This snake and two others are now spending their days near Rockland.

Between stretches of fog and steering sheep away from the tern colony, we managed to find some time to continue our shorebird monitoring efforts. People up and down the Atlantic coast are curious about shorebird numbers and movement, so we do our best to keep an eye out for birds on the rocks and beaches. It's also a good way to get our species list up. Two American Oystercatchers and a Purple Sandpiper helped to get our list up to 81 this week.



Shorebirds can often be found in mixed-species flocks. This Purple Sandpiper was noticeably smaller than the Black-bellied Plovers and Ruddy Turnstones it was with.

Until next time!

-Mark

[An Egg-cellent Week on PMI](#)

Posted in [Petit Manan 2016](#), [Uncategorized](#), tagged [Common Eider](#), [Common Tern](#), [Eggs](#), [Fish and Wildlife Service](#), [Maine](#), [Maine Coastal Islands](#), [Nests](#), [Petit Manan](#), [petit Manan National Wildlife Refuge](#), [Savannah Sparrow](#), [seabirds](#) on May 27, 2016

This week Petit Manan welcomes the remainder of our crew- Shelby and Jimmy! And with them they brought nesting terns and beautiful weather!



The view from the top of Petit Manan Light. We keep track of Alcid populations by counting them from the top of the Light twice a day!

As our second week on Petit Manan comes to a close, we have given up our reign of the island to the birds. No longer can we go to the outhouse in the middle of the night without hearing the territorial “ka-ka-ka” of Common Terns before they swoop towards our heads. Where once we could walk freely there are now hidden nests and incubating mothers that we must be careful not to disturb. And we couldn’t be more excited!



One of four Common Eider nests we have found this week. Many more Eiders nest on neighboring Green Island.



While searching for red-backed salamanders, I found this year’s first Savannah Sparrow’s nest hiding under a rotting log!



And finally the one we've all been waiting for... the first tern egg of the season! Since then we have found three more nests, but without the safety in numbers of the whole colony nesting, these terns may have abandoned their egg so not to be targeted by Peregrine Falcons.

We hope to have another Egg-cellent week, as next we begin checking rock crevices and artificial burrows for Atlantic Puffin, Razorbill, and Black Guillemot eggs!

Until next time here is a bit of wisdom, "I value my garden more for being full of blackbirds than of cherries, and very frankly give them fruit for their songs." -Joseph Addison

Best,

Morgan



Petit Manan Seabird Researchers 2016 – Shelby, Jimmy, Jill, & Morgan

Updates from Seal Cove

Posted in [Ship Island 2016](#), tagged [Common Tern](#), [HarborSeal](#), [Ship Island](#) on May 26, 2016



The first common tern egg of (hopefully) many.

It seems as though Wednesdays are the most eventful days here on Ship Island. Last Wednesday was spent scouring the island for Garlic Mustard plants. This Wednesday was a whirlwind of events. Not only did we find our very first tern nest but it also contained our first egg! Along with that our island supervisor Meredith spotted a roseate tern while we were sitting in the blinds.

Aside from this tern excitement we had two seal encounters right on the shores of our island! I found this so exciting because usually when observing the seals we must do so with a spotting scope to see them on the East and West Barges. However during our blind observation on Wednesday we had an adult seal haul out on to our beach and spend a little time sunning itself.



Adult western Atlantic harbor seal on Ship Island tern beach (*P. vitulina concolor*)

In our area we have two species of seals, western Atlantic harbor seals, and grey seals. The best way to tell them apart is by looking at their heads. Harbor seals have more of a smaller dog nose with not much of a neck and grey seals have larger 'horse like' faces and a more pronounced neck. The seals I've most often observed were the western Atlantic harbor seals on East Barge. This is also what we had come visit us Wednesday morning. Later in the day when all the work around the island is complete is when I enjoy observing our seals- mainly because right now is their peak pupping time (mid May to July), so we seem to have new pups arriving everyday. On this ever so faithful Wednesday evening I got the privilege of observing a very new harbor seal mom with her pup (I could tell he had just been born as some of the birthing organs were still attached).

What surprised me most though was this new mother promptly lead her new pup into the ocean. This is surprising because everything I've read about harbor seals says the pups can't swim till at least an hour after birth, and here this moms bringing her pup in minutes after birth. Almost immediately after entering the water our new mom brought her pup further into the water (toward Ship I.). This was in order to bring her pup further away from the other seals. So I packed up my things and headed back to the cabin assuming the days excitement was over. Upon returning to the cabin I saw that Meredith had left on a photography adventure. A few minutes after that I received a text from stating there was a pup on our shore. Sprinting to meet her, she showed me what she had found: sure enough sitting atop the seaweed was a pup.



Newborn western Atlantic harbor seal pup on back side of Ship Island (*P.vitulina concolor*)

Shortly after looking at the pup longer, and seeing a small piece of umbilical cord, I realized this was the seal pup I had been watching only 20 minutes prior. Meredith and I proceeded to sneak away as not to scare off the mother wherever she may be. Most of the time mothers don't leave their pups because they need to be together for 4-6 weeks so the pup can nurse. Pups can also be vulnerable to some predators. After dinner Meredith and I went along the islands edge to check up on our young visitor. What we found

was his mother hauling out of the ocean to retrieve her new baby. We quickly snuck away so we didn't disturb them, thus ending another successful Wednesday on Ship Island.

Till next week,

Kelby

Leary

Ship Island Crew Member

Things are Beginning to “Tern up” at Metinic!

Posted in [Metinic 2016](#), [Uncategorized](#), tagged [Arctic Tern](#), [Black Guillemot](#), [Black-throated green warbler](#), [Common Eider](#), [Common Tern](#), [Maine](#), [Maine Coastal Islands](#), [Metinic Island](#), [Ruddy turnstone](#), [USFWS](#) on May 22, 2016

Hi all! Helen here! My first week with the seabirds on Metinic Island has been full of exploring, birding, and learning new things! We started out the week by rounding up all of the resident sheep and driving them to the southern end of the island where we put up an electric fence to keep them out of the tern colony for the season. We did this just in time as both the arctic and common terns have returned and are actively seeking out mates and nesting sites. We have begun observing the terns from the blinds and have watched them settling in throughout the week. We have seen the terns landing on the ground, evaluating various potential nesting sites, and showing courtship behaviors such as the males presenting the fish they caught to females.



Common terns checking out the area!

The terns aren't the only ones settling in for the season, the black guillemots are courting and seeking out burrows in the rocks as well. We have also observed a number of common eider nests with eggs! We even saw one hen with three ducklings today, which is early for them. We are expecting to find many more eider nests in the coming weeks as they are still displaying courtship behaviors. To

prepare for the arrival of the chicks, we have begun setting up snake plastic as a means of predator control. Metinic has a population of garter snakes who enjoy feeding on the seabird eggs and hatchlings, so we set out black plastic that the snakes will be attracted to because they create a warm place for them to hide. We will periodically check the plastic and gather any snakes into a bucket to release them on the mainland.



A hen common eider on her nest, they have excellent camouflage!



Freshly laid eider eggs

Along with setting up and preparing for the upcoming season of seabird chick monitoring, we have been keeping track of our other feathered friends on the island. Every day we start out with our morning point counts then spend the day exploring around and recording any additional bird species seen/heard, and we end the day with shorebird counts right before sunset. So far, Mark and I have recorded 71 different species! Metinic is a great location to support a variety of birds as the island includes rocky coast, open field, forest, wetland, shrub, and pond habitats. We are looking forward to adding to our list as the season progresses!



Black-throated green warblers are very common in the island forest!



Ruddy turnstones on the shore

Until next week,

Helen

[Early season on Ship Island](#)

Posted in [Uncategorized](#) on May 20, 2016

Happy spring migration from the Ship Island crew of two! As the common terns begin to establish the breeding colony and initiate courtship, we've been busy making sure the island is ready for them; in

short, this means lots of invasive vegetation control. Typical plant culprits include black bindweed (*Polygonum convolvulus*) invading the brand new gravel nesting areas and garlic mustard (*Alliaria petiolata*), which we struck hard with the help of some mainland visitors.



Garlic mustard flowering stems can be plucked by hand, but the young florettes left behind need to be blasted with vinegar.

After our push against the invaders, we've been able to turn our focus to observing the wildlife around us, which includes numerous passage migrant birds on their way home from the tropics, in addition to resident breeding birds and neighboring seals. These early weeks will be filled with anticipation as we wait for the terns to start nesting, but in the meantime there is plenty to see and do. So far, we've documented 40 different species to visit Ship, plus a bonus hybrid Mallard x American Black-duck!



Many passage migrants are only here for a single day before they take off again to continue their nocturnal migration. Here, a chestnut-sided warbler (*Setophaga pensylvanica*) gleans a precious insect meal to refuel.

Since we don't have too much in the way of tern nesting progress to report, we thought we would provide a quick introduction to this year's Ship Island dream team. First off is our lovely Island Technician:



Greetings from Ship Island!!! My name is Kelby Leary (Yes that's me in the photo above). I was born and raised in central Maine and I've always loved being outdoors. I just finished my first year in the wildlife ecology program at The University of Maine and working on Ship Island is my very first field position. This is also the most time I've spent on the ocean as the area I am from is pretty heavily forested. I'm excited to learn more about all the animals that frequent the island as well as gain valuable field skills. In this first week prepping for the colony we haven't been too insanely busy so we've had some time to really get to know the island. So far my favorite things to do in my free time on the island are watch the seals on the neighboring barges (I'd also never seen a seal in real life before moving to the island) and sitting on the beach watching the sandpipers.

And your friendly neighborhood Island Supervisor:



Hi everyone! I'm Meredith Miles, and I've been spending my time since graduating from Bates College last year hopping from field job to field job around the world. My work has recently taken me to Alaska, Peru, and Oklahoma, but I couldn't be more psyched to be returning to beautiful Maine for the summer. This season I am most excited about getting an insider view of seabird breeding season behavior and gaining a deeper understanding of the ecology of this amazing bird group.

We'll update soon with more news from our tiny paradise. Happy spring!

Meredith and Kelby, Ship I.

[PMI is at It Again!](#)

Posted in [Petit Manan 2016](#), [Uncategorized](#), tagged [Arctic Terns](#), [Birding](#), [Common Terns](#), [Downy Woodpecker](#), [Leach's Storm-petrel](#), [Maine](#), [Maine Coastal Islands](#), [MCINWR](#), [Migration](#), [Petit Manan](#), [PMI](#), [Predator](#), [Puffins](#), [Summer](#) on May 20, 2016



Hey folks! Jill and Morgan here! It's been a surprisingly beautiful first week on Petit Manan Island; let's hope it's a sign for the whole season! The island has been lively thus far with approximately 200 prospecting Common and Arctic Terns, but we're expecting many more to come! Although PMI isn't the largest of islands, it still receives a good deal of visitors, especially early in the season when birds are migrating North – we've seen 61 species thus far! Not all our guests have been of the bird variety though; we also stumbled upon a juvenile Grey Seal on our rocky shores earlier in the week!



Downy Woodpecker sighting!

The start of the season means preparing the island for all the work to be done in the months ahead. This means setting up observation blinds, for band resighting and future monitoring of foraging habits and chick health, as well as collecting marine debris, building burrows for Black Guillemots and Atlantic Puffins, and marking potential Leach's Storm-petrel burrows. Daily Alcid counts from the top of the Petit Manan Light have also begun. On a windy day it can get rather cold up there, especially for Jill, who hasn't quite gotten used to the Downeast summer having just returned from a seabird job in the Galapagos!



Can you spot the Leach's Storm Petrel burrow? We've been searching the island for these small holes in the ground this past week, and we have found 170 potential burrows!

As we prepare ourselves for the research season ahead, the birds are doing the same. The puffins and guillemots are seeking out rock crevices and other sufficient and creative hiding spots for their burrows. The male terns are attracting their mates with a Sandlance dowry. The Common Eiders are seeking out areas of high vegetation to form their nests. And the Peregrine Falcons, Merlins, and gulls lurk about hoping to catch a bite to eat with all these new dining options in town.



The Atlantic Puffins have already begun choosing burrows!

Till next time, here's a joke to hold you over – Why did the Puffin have a stomach ache? Because it had Alcid Reflux!

Best,

Morgan & Jill

[A New Season on Metinic](#)

Posted in [Meticinic 2016](#), tagged [Birding](#), [Blind](#), [Meticinic Island](#), [Sheep](#) on May 15, 2016

Hello everyone! Mark here, back for another amazing summer with the seabirds. After last summer on Ship Island, I've made my way to Metinic Island for the 2016 field season. Metinic is a larger island, stretching for about two miles north-south. The Refuge owns much of the northern end of the island as well as a swath of forest in the center. Metinic lies about five miles off the mainland coast south of Rockland.

It is still early in the season, so the terns, both Common and Arctic, have only arrived in the past week. They have been around most mornings, but then fly off to build up their strength for breeding by gorging themselves on fish. The most important things to do without the birds around involve setting up the

island for the season. Much of my time over the past few days has involved the not-so-glamorous cleaning and organizing of the cabin and camp area.

With the help of Michael, one of the Refuge Biologists, the observation blinds were set up around the colony area. There are five blinds, so it took quite a bit of effort by the two of us to get them all up.



Three blinds up, one in progress

Another construction project involved putting up the majority of a seasonal electrified fence. Metinic Island is home to several dozen sheep. These sheep graze down the vegetation on the north end all winter, allowing for the low grassy terrain favored by nesting terns to persist. The fence, once completed, will keep the sheep out of the colony during the breeding season, where they could possibly damage nests.



What are ewe doing over there?

It hasn't been all manual labor. As part of the biological work, we keep track of all of the bird species that use the island, both as a residence and as a migration stopover. As of this morning, with a windblown

Eastern Kingbird, we've recorded the presence of 59 bird species on and around the island this season. Only a few days in, I can tell that this is going to be a great island for birding.



A flock of dapper Harlequin Ducks



Baltimore Orioles aren't what you normally expect to see on a rocky beach

Until next time!

-Mark