SUMMER WITH THE SEABIRDS

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

Archive 2019 – May, June, July and August

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 May, 2019

More Eggs on Metinic!

Posted in Metinic 2019, tagged Common Tern, Eggs, Metinic 2019, Metinic Island, scrapes on May 31, 2019

Hello everyone!

It's Mary again. I am excited to announce that we have been seeing more and more eggs! Today I found the most eggs we have seen yet: a total of 10 new eggs!

While walking around I have also seen many scrapes. It is interesting to find an egg laid next to an old Popsicle stick, because that means there were eggs in that same spot last year. I am curious if it is the same birds laying in the same spot, or if it is two separate birds that had the same idea of a good laying spot.

Another exciting announcement is that I saw my first tern sitting on her egg. Finally, I was able to mark an egg with a flag to begin working on the species ratio. This egg was marked with a blue flag, as it was a Common Tern sitting on this egg. If it is an Arctic Tern sitting on the egg, then we mark it with an orange flag. We have had a relatively constant number of terns on the island the last few days – our estimates are around 550 to 650 terns (they are really tough to count). We still only have Common and Arctic Terns but we are hoping to see a few Roseate Terns!

We finally had some sun today, which meant it was laundry day for me! If you are curious how I wash my clothes with no running water, an old refrigerator drawer and a 5-gallon bucket, let me know! I am happy to post about what it is like living on the island and accomplishing little tasks like laundry, showers and dishes.

Check in soon to hear how many more eggs we find!

Best, Mary

(Photo below: Common Tern sitting on her egg)

(Photo Below: Ever wonder how small a tern egg is? Check out this gorgeous little egg!)

The Tern Tribune: Terns Preparing to Nest on Ship Island

Posted in Uncategorized on May 30, 2019

Greetings from Ship Island!

I am Bobby Brittingham, born and raised in Portland, Maine. I am finishing my last semester of undergraduate degree in wildlife ecology at the University of Maine this fall (go black bears!). A few of my hobbies include wildlife photography (I will be sure to post some photos with each blog post), kayaking, hiking, experimenting with new recipes for cooking, enjoying a good book or movie, sewing, traveling to national parks (hoping to go to all of them in my lifetime!), solving jigsaw puzzles/crossword puzzles, and shooting hoops at the nearest basketball court.

I have had a lot of previous research fieldwork jobs with mammals big and small, and with reptiles/amphibians previously through UMaine. However, I have been eager to have a bird-focused job for a long time so I feel extremely blessed to found such a unique position here on Ship Island. Especially with a focus on a bird species that provides meaningful and crucial data for the management of common terns going forward.

We finally have a working computer to let everyone know what the terns are up to! Our terns are taking their time this year (could be due to last year's problems of predation from owls on Ship) in comparison to the other islands. We have had usually at most between 200-300 terns at once each morning (numbers have varied due to the weather). They have been digging many scrapes to begin the nest building process which is exciting to see! Colin and I are hopeful to see eggs within the next few days, as we are doing our best to provide the best and safest habitat for our guests as it is only a matter of time before eggs are laid!

Colin and I will keep you updated on our terns, especially for big events such as the first eggs, first chicks, etc. Look out for any posts that contain the title "The Tern Tribune" and you'll know that the news is coming live from Ship Island! Feel free to reply with any questions about Ship Island, as I would be happy to tell you more about the amazing work we get to do!

-Bobby Brittingham

(Left: View of nesting beach. Middle: Gull chick and egg from our gull and eider nest survey on the adjacent Trumpet Island. Right: Other visitors make their way to the island besides terns!)

Ship Island Prepares for Terns

Posted in Ship Island 2019 on May 30, 2019

(Photo Above: A pair of mallards we beleive to be nesting somewhere on ship island.)

Hi all before I begin, I figured I would introduce myself. My name is Collin and I am from the meterowest area of Massachusetts where I study wildlife biology at Framingham State University. This is my second field position, but my first position being able to work with birds which is an interest of mine. I am also working with one other tech named Bobby who will introduce himself in his own post.

We have just finished our first week here on Ship Island, and the primary focus has been preparing the island for the arrival of the terns who have been rather late compared to past years. We have yet to find our first nest or egg. Preparation has largely been in the way of preemptive predator control. Due to the

fact that too much predation on a colony can cause them to abandon their nests even if eggs are present which is a huge loss.

(Photo above: Goshawk trap which is used for catching owls. Acts like a heart trap for birds. That wood pole would hold the doors open, and when a owl perches on that pole the trap collapse's safely trapping the owl for release on the mainland.)

. A specific focus has been setting live traps for owls such as our foot hold traps, and goshawk traps(new this season). Another predation control method we have implemented was to make our two observation blinds displeasing to perching predators. We have achieved this by trying rolls of chicken wire on top of the blinds to form almost a bouncy uneven surface that will hopeful deter the perching of predators.

(Photo above: Our homemade chicken wire perch deterrent on top of a blind.)

Other tasks have also included keeping gulls off the beach mostly by just walking these areas constantly. Gulls are worrisome since they like to eat tern eggs and hatchlings by the "beakfull".

We hope to be able to report our first nests and eggs any day now.

First Eggs on Metinic

Posted in Metinic 2019, Uncategorized, tagged Eggs, Foul weather, Maine Coastal Islands National Wildlife Refuge, MetinicIsland, scrapes, Terns, USFWS on May 29, 2019

Hi everyone!

This is Mary reporting from Metinic Island. I am happy to announce that we had our first eggs on Sunday! We have been monitoring closely to see whether it is Common or Arctic terns sitting on each of the eggs. It is nearly impossible to tell the different eggs apart by appearance alone, so we have to watch closely to see who sits on the scrape. It is very exciting to think that soon there will be little chicks replacing the eggs!

The weather here on Metinic can get a little nasty sometimes. We got rain all afternoon and through the evening yesterday. The wind can really pick up here too, one day last week the average wind speed was 31 mph! Due to the sensitivity of the terns, it is important that we pay close attention to the weather. Disturbing the colony when the weather is bad, especially when there are chicks, can cause the terns to waste unnecessary energy. On days like this, we limit the number of times we enter the colony and in severe cases we do not enter at all.

Check back in with us soon! Hopefully there will be more eggs and some nice weather here on Metinic!

Petit Manan Island – Bird Metropolis

Posted in Petit Manan Island 2019, Uncategorized,

tagged alcid, aves, biology, bird, conservation, FOMCI, gull, Island, Maine, Maine Coastal Islands, Maine Coastal Islands National Wildlife Refuge, Maine Coastal Islands NWR, MCINWR, Migration, nature, Petit Manan, puffin, razorbill, research, scicomm, science communication, seabird, USFWS, Wildlife, wildlife biology on May 24, 2019

A new breeding season has begun here on Petit Manan Island. You take a step out the front door on a chilly morning, and the sky and ocean are filled to the brim with life. Little yellow songbirds- like Magnolia Warbler (*Setophaga magnolia*) and American Goldfinch *(Spinus tristis)*- are darting around the grasses. You hear a familiar song from a Savannah Sparrow (*Passerculus sandwichensis*) broadcasting his availability to the available females. A white bird swoops towards your head with a sharp call – it's a Common Tern (*Sterna hirundo*), establishing its territory and assuring a predator free environment for its young. And you look out at the sea – it is covered with little charismatic birds: Atlantic Puffins *(Fratercula* artctica), Razorbills *(Alca* torda), and Black Guillemots (*Cepphus grylle*) – the poster children for the island breeding colonies across the Atlantic.

My name is Hallie, and I have lived far from any form of civilization for quite a long time. I have been working with birds for a little over 5 years now, often in locations so remote that your best company often becomes the wildlife around you. Petit Manan, in a way, is my first time living in a metropolitan area in years – but instead of humans, its birds. There is the main crazy downtown here – Puffin Point, as we call it, which would be the avian equivalent to Manhattan. And then there is the lawn – Puffin Point's suburbia – where you will find all of the terns scattered about fiercely guarding their nests. And out in the more rural suburban zones, you get the Laughing Gulls (*Leucophaeus atricilla*) and various songbirds. There is even a community underground: Leach's Storm Petrels *(Oceanodroma* leucorhoa) which burrow deep down underneath the soil, right next to the roly-polies and the salamanders. The island is hustling and bustling with life, even at the dead of night, just like Times Square.

Puffin Point

Here in bird city, love is in the air. I have quite enjoyed watching all of the different species of bird court one another. The terns are very playful – one will come back with a fish and flash it off to all of the birds around it, enticing them to chase it during a magnificent display of airborne agility. Sometimes the bird will give it to a potential mate, or sometimes it will devour the fish for itself. The puffins are gentler – you will often see two mates nuzzling their bills against one another's, or a male trying to catch the attention of a female by nodding his bill within her sight. And then there's the guillemots, which will race around the female, dive head first into the water, and make high-pitched, almost song-bird like calls.

Every species of bird here establishes themselves differently: but they all have the same goal in mind. Right now on Petit Manan Island, its finding a mate, finding a place to nest, and getting started securing the future generations of their species. It is quite a magical time, and as chaotic as a metropolitan area can be, the island with its seabirds has its charm.

Terns of Metinic – Update

Posted in Metinic 2019, Uncategorized on May 24, 2019

Hello everyone!

Mary here giving you an update of the terns here on Metinic. With each passing day we have been seeing more and more birds arriving. Our estimate as of today is between 550 and 600 birds. Currently we have Common and Arctic terns, no Roseate terns have been spotted yet.

In recent days, the birds have been copulating and beginning to make scrapes. It should be any day now that we start to find more scrapes and EGGS! Fingers crossed they start laying very soon.

Check in soon, because hopefully we will have eggs!

Best,

Mary

(Photo above: Common Tern making a scrape. They do this by pushing their chest into the ground and pushing away the dirt with their feet).

(Photo below: Same two Common Terns. Here you can see the feet action (and a cute tern bum!)

Maine Coastal Islands NWR-Metinic Island Meet and Greet!

Posted in Metinic 2019, Uncategorized, tagged biology, Birding, Birds, conservation, Introduction, Metinic 2019, refuge, seabirds, Terns, Wildlife on May 24, 2019

Hello everyone!

I just wanted to give a quick introduction- my name is Brandon, and I'm one of the seabird technicians for the summer! A little bit about me- I graduated this May from Lees-McRae College with a degree in Wildlife Biology, a Concentration in Wildlife Rehabilitation, and Minors in Criminal Justice and Emergency Medical Services. I've been an avid birder for the last 3 years or so, and I spent last summer working at Monomoy NWR where I first realized that although I loved birds of all shapes and sizes, my passion was definitely seabirds! That's what brought me here this following summer to work for the Maine Coastal Islands National Wildlife Refuge. I am currently working on Metinic Island, but I'll be shifting around a little bit come early June, so for now I'll be looking forward to updating you to all the happenings on Metinic Island, but later in the season don't be surprised if you find me saying "Hi!"again from PMI, which is where I'm scheduled to move to in another week or so!

Metinic Island Crew 2019

Posted in Uncategorized on May 23, 2019

Hello!

My name is Mary Negri and I will be one of the technicians living on Metinic Island this summer. I am originally from Falmouth, MA and I just graduated from Unity College here in Maine with a B.S in Wildlife and Fisheries Management.

I become an avid birder beginning in high school, and my fascination with them has only continued to grow through my years in college. In addition to birding I am also an artist. Most of my recent work has been hand-painted ceramics and linoleum cut prints. I try to have some variation in my pieces, but most of them are of birds! I also enjoy reading, photography and fly-fishing.

This summer I look forward to gaining experience in the field. I have never banded before, so I am very excited to learn such a valuable skill. Additionally I am excited to learn more about terns and their behaviors, while also protecting the colony and working to help them succeed.

This summer has already started out amazing, so check in often to hear about what we are up to on Metinic, how the terns are doing, what birds we have been seeing, and what it is like to live on an island for the summer!

Best,

Mary

Archive for June, 2019

Tern Tribune: Terns Return to Ship

Posted in Ship Island 2019, tagged Blue Hill Bay, census, Nests on June 28, 2019

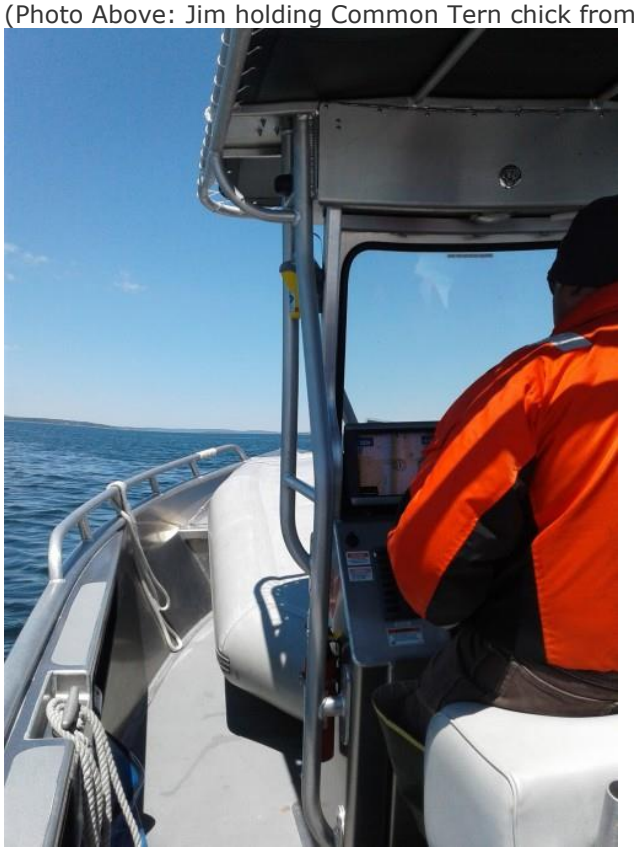
Hi folks,

I know it's been a while since I have posted an update from Ship Island. As you know from reading Ship's past posts that our tern numbers where very low. In fact when I went on my break we had only 9 active nests here on Ship. This Monday I returned to Ship to find that the number of active nests has more than quadrupled to a total of 67 with the very likely possibility of there being more laid as I write this. This is a very exciting time for Ship, and we are expecting a few chicks by the end of this week.

(Photo above: Common Tern incubating one of the many newly found nests)

I also got to help conduct a census of several islands in the blue hill bay which took most of Monday. It was a wonderful day on the boat with nothing by sunny skies, and the day got better when we found over 200 nests on a tiny island called connery nub. I even got to see my first tern chick of the season. We believe these the birds normally nest on Ship, but for some reason they were more comfortable nesting there. The hope is that if the nests that we have now succeed then possibly next season more terns will choose to nest on Ship.

(Photo Above: Jim holding Common Tern chick from Connery Nub.)



(photo above: Jim driving boat around the Blue Hill Bay.)

In the next week I hope to be able to report our first hatchlings here on Ship island.

-Collin

Chick it out!

Posted in Petit Manan Island 2019, Uncategorized, tagged biology, chicks, conservation, Fish, FOMCI, GOMSWG, Maine Coastal Islands National Wildlife Refuge, Maine Islands, nature, Productivity, research, seabirds, tern, Terns on June 27, 2019

Hello hello all amazing and wonderful seabird fans!

Hallie here, writing from the currently gloomy and rainy but still wonderful Petit Manan Island!

It has been a very exciting week here on the island! We completed our GOMSWG census as Brandon highlighted, and we had a total of over 1400 tern nests, 640 Laughing Gull nests, and 47 eider nests! In addition, we already have over 47 Puffin nests, 54 Black Guillemot nests, 20 Leach's Storm Petrel nests, and even a handful of Razorbill nests!

Common Eider ducklings

Arctic Tern chick with egg-tooth (the white calcified bit on the end of its bill)

But if you are wondering the specific reason why I cannot wipe a smile off of my face — it is because our chicks have begun hatching! After a period of incubation specific to every species, the chick will begin the long and tiring journey of hatching. Chicks have a specialized calcified bump on the ends of their bills called an egg tooth, of which they use to slowly chip away at the eggshell from the inside, making their way around until they hatch. For most individuals, hatching takes around 12-48 hours, and they emerge looking like cute little fuzz-balls with little flipper feet — and trust me, its adorable.

4 day old Savannah Sparrow chicks!

From the point of hatching on, for all chicks on the island including the cute little Savannah Sparrow chicks pictured, the job for the parents arguably becomes harder. The chicks not only still require periods of incubation, but they also need to be fed multiple times a day, sometimes even multiple times an hour! We have been finding some chicks increasing in weight by over 300% in a 24 hour period! They honestly grow up so quickly.

For the next few weeks here on PMI, we will be monitoring the productivity and development of our tern chicks, doing provisioning where we will identify fish that the parents are feeding their chicks, collecting fecal samples to look at what the adult birds are feeding themselves, and banding chicks with 2 bands that we can use to re-identify them in later years. Today, if we are lucky, we may even band our first puffling — something that I have honestly dreamed of doing ever since I banded my first bird 4 years ago!

Until next time, bird nerd friends!

Devon and I celebrating his first banded Arctic Tern chick!

GOMSWG Census on PMI

Posted in Uncategorized on June 20, 2019

Hey everyone,

It's been a busy couple of days on Petit Manan Island. We've been working hard with a trusty team of amazing volunteers and other staff members from the mainland to complete our annual GOMSWG census. All this means is that we work to canvas the island from one end to the other counting and marking tern nests with popsicle sticks. The reason that this is important for us to do is that it allows us to get an excellent idea of how many nesting pairs of Common and Arctic Terns we really have here on PMI, and we can then compare this data to that of other years to see how our birds add up.

Overall, we had an excellent census, and although we're still working on finalizing all of the data (there's a lot of counting to do!) we hope to be able to share the numbers with everyone soon. In the meantime I would really like to give a HUGE shout out to everyone who came out to help us with census- the mainland staff- and especially to our volunteers, who willingly gave up two days worth of their own time just to brave the poop missiles and flying beaks to count some tern eggs with us! It really shows you that census is not just a time for collecting a bunch of data, but also a chance to meet new people and build connections with others who also share a wild passion for conservation.

Thanks again to everyone, and we'll update you again soon!

Brandon

GOMSWG Census on Metinic Island

Posted in Metinic 2019, tagged #GulfofMaineSeabirdWorkingGroup, Arctic Terns, Common Terns, Eggs, GOMSWG, Nests, scrapes, Terns on June 19, 2019

Good evening everyone,

It has been a while since I have posted and I wanted to update you on what we have been doing here on Metinic. Yesterday we completed the Gulf of Maine Seabird Working Group (GOMSWG) Census! In other words, yesterday was the most exciting day of the season because we got to find out how many birds we have nesting on the island!

The GOMSWG census is completed by carefully walking across the entire colony, while counting every single nest found and the number of eggs in each nest. Every nest we find is marked with a popsicle stick. Doing this allows us to calculate our error after the census by comparing the number of marked nests (with popsicle sticks) to unmarked nests (without popsicle sticks). It is important to get an idea of how many nests were missed during the census to provide a more accurate estimate of birds nesting on the island.

While it may seem simple to walk around the island counting nests, in reality it requires great attention to detail, patience and cooperation among the whole group. The colony is divided into a grid system. This allows us to walk in a line across each grid, to insure we cover every inch of the colony. Terns also nest on cobble beaches where the eggs blend in with the rocks. (At times it feels like the most difficult game of ISpy ever played).

Michael wearing his tern protection (Photo by: Mary Negri)

The terns do not appreciate us walking around their eggs and they make their presence known. It is impossible to get through the census without get pooped on or dive bombed by a tern at least once. To protect ourselves we wear rain coats or old shirts, and flags on our hats. To an outsider looking in we must look absolutely ridiculous, but I would rather wear a flag on my hat than get hit in the head by an angry tern (trust me – it hurts!).

The Metinic GOMSWG Census 2019 crew. From left to right: Austin, Eddy, Nick, Michael, and Brian (Photo by: Mary Negri)

In total we discovered that we have 831 nests (or pairs of terns). Therefore, we have approximately 1,662 birds inhabiting the island for the breeding season. It is hard to believe that by the beginning of August every single bird will have left the island to travel South to their wintering grounds!

Every day on Metinic is a new adventure – I am excited to see what the rest of the season holds!

All the best,

Mary

P.S. Chicks will be hatching soon – stayed tuned!

Who Else Nests on Metinic Island?

Posted in Metinic 2019, tagged Black Guillemots, Burrows, Common Eiders, Eggs, Herring Gulls, Leach's Storm-Petrels, Metinic 2019, Metinic Island, nesting, Nests, savannah sparrows, Seabird Nesting Island, Song Sparrows, Spotted Sandpipers on June 11, 2019

Good morning everyone!

Life is busy here on Metinic. The terns have been creating more scrapes and laying more eggs by the day. It seems there is an egg everywhere you look! Walking around the colony reminds me of going on an Easter egg hunt, except you have to walk VERY carefully.

In addition to the terns, there are several other birds that nest on the island. Over the past couple weeks we have seen nests from Herring Gulls, Common Eiders, Spotted Sandpipers, Savannah Sparrows and Song Sparrows. One of my favorite parts about seeing each nest is the variation in the size of the eggs. There are eggs that are almost as large as your palm, like those of the Herring Gulls and the Common Eiders. Then there are eggs that are no bigger than the tip of your finger, such as the eggs of the Savannah Sparrows and the Song Sparrows. All of the eggs have variety of neutral colors and patterns that help to camouflage them from predators. It is incredible to see the attention to detail that birds have. Each nest is created in its own special way, and it is easy to see the time and energy that each bird puts into building their nest!

There are other birds that nest on the island, but they do not build the typical nest one would think of. These birds lay their eggs inside of small, hard to reach burrows. Some of the burrows are located in the rocks along the coastline. These burrows are home to Black Guillemots that will nest in a crevice no larger than your fist! Finding these burrows can especially difficult. I am amazed at how these birds can fit themselves into such a small space. I am even more amazed by the past technicians who have been able to locate these tiny nesting spots!

Last night we spent some time locating Leach's Storm Petrel Burrows. Many of their burrows are made inside of the rock walls on the island. However, these small seabirds will also dig themselves burrows under down trees, large boulders, inside of small dirt mounds and even under our cabin. Believe it or not, we hear these small birds every night under our kitchen floor! Leach's Storm Petrels are nocturnal, so locating their burrows requires going out on a late night adventure! We find each burrow by playing the "purr" calls of these birds. Then if we hear a response, we try to narrow down where the call is coming from so we can mark the entrance of the burrow. Once the burrows are located, we can go back in the daylight and use a burrow scope to look inside of the burrows and see what activity is going on. A burrow scope is a long, snake-like camera that we can use to see inside of the small burrows.

So to recap – there are many different bird species that nest on Metinic! Living here during the breeding season is a magical experience. I feel especially grateful to have been chosen to work on this incredible island!

Today on Metinic it is raining sideways and the wind is blowing at over 20 mph. Needless to say, it is data entry day! Hopefully tomorrow we will be able to get back outside!

All the best,

Mary

Song Sparrow Nest and Eggs (Photo by Mary Negri)

Savannah Sparrow Nest and Eggs (Photo by Mary Negri)

Spotted Sandpiper Nest and Eggs (Photo by Mary Negri)

Herring Gull Nest and Eggs (Photo by: Mary Negri)

Common Eider Nest and Eggs (Photo by Mary Negri)

Tern Trapping on PMI

Posted in Uncategorized on June 11, 2019

Yesterday we began our adult tern trapping efforts here on PMI. It was a beautiful sunny day for the biologists to come out and visit and help train everyone on trapping and handling the birds. Tern trapping is personally one of my favorite aspects of the research we get to conduct here on PMI. With the help of the biologists we were able to catch 12 birds in total, 10 of which were common terns and 2 arctic terns. We were as efficient as possible splitting into teams of 2 to set and monitor traps. We used both treadle and bow net traps and set traps all around the house on terns nesting in the yard, beside the house, along walkways and even under the solar panels. Treadle traps have a trap door with a trigger pad that is set off when a tern enters the trap and steps on the trigger. Bow net traps are spring loaded traps which are like a hoop that springs over the tern when it lands near its nest. We learned how to use the traps and the best techniques for catching the terns and then got right to work setting out traps.

Sunrise before a busy day of trapping

Tern Trapping is a careful process as we need to ensure that the terns and the eggs they are incubating are not endangered by any of our research. To ensure the safety of the precious tern eggs we replace the eggs with fake wooden eggs before placing a trap over the nest. We also have to be diligent about how long we may be disturbing the terns and preventing them from incubating. Because of this we will only

trap on a specific nest for 30 minutes before moving to a new location. We hope we can capture the birds in less than 30 minutes but sometimes the terns get spooked and decide not to go into these metal contraptions we have placed around their nest. The terns are much smarter than you think and after being trapped for many years some of the terns are too smart for our simple traps. When we do catch a bird we go to the trap to remove the bird before it gets stressed out or can injure itself. We then place the bird in cloth bags to keep them calm. Then we bring the bird to the banding station to process the bird to collect important data before we release them.

Of the terns we were able to capture, 6 were recaptured birds which had previously been banded all across Maine's coastal populations and even a bird that was originally banded in Canada! We had another 6 birds that had never been captured before which meant that we were able to band them. Banding our first terns of the year was a great experience and everyone was equally excited to handle the birds including interns holding their first bird ever to highly experienced interns. When banding we also take several precautions to ensure the safety of the birds while also allowing us to handle and collect data from each bird we catch. The first data we collect while the bird is still calm in the bag is their weight. Terns on average weigh about 100-120 grams and to put that in perspective that's about the same weight as a bar of soap. We then remove the bird from the bag and hold the birds in a position known as grip which keeps the birds gentle wings tucked into its body. Then we take measurements of the birds wings and bill and either record existing bands or put new bands on the bird if it doesn't have any.

Hallie banding our first Arctic Tern of the season!

It is an exciting process and the data we are collecting is a vital component to the research we do here on the island. Trapping and banding the terns allows us to better understand yearly changes in morphology, enhance resighting efforts, and help track the birds across their lifespan.

Signing off for now,

Jimmy

Tern Tribune: Unwelcome Plants

Posted in Ship Island 2019, Uncategorized, tagged garlic mustard, Invasive Plants on June 10, 2019

(Picture above: Tern Decoys)

It has almost been 3 weeks since Bobby and I began working on Ship Island. Unfortunately, we are still not seeing as many terns as we should, and we don't have a good explanation as to why. As Bobby explained last Thursday the refuge came out and installed a sound system and decoys in an attempt to lure more terns to Ship Island. In the meantime the past week we spent a considerable amount of time implementing invasive plant control on Garlic Mustard (seen in the picture below).

(Photo above: Garlic Mustard. Photo Cred: Maine Dept. of Agriculture Conservation and Forestry)

This work is very familiar to me since all last summer I worked as a invasive plant control intern out in southern CO for the San Luis Valley National Wildlife Refuge Complex. Garlic Mustard is a particularly nasty invasive since it is also allelopathic meaning it releases chemicals that can inhibit the growth of other plants surrounding it allowing it to grow out of control and take over huge areas of land that could otherwise been used by native plants that provide a service to the ecosystem. The method of control that we implemented with the refuges help last Tuesday was to first pull all flowering plants, and spraying the area where the plants where pulled with extra strength vinegar which will hopefully kill any seeds that could be dormant in the soil. We also sprayed little roseate that would turn into flowering plants the following year. Bobby and I spent the next day scouring the island further to find as many of the plants that we could. We were pleased to find that the infestation at least this year was confined to only a few areas on the island instead of spread out. The work can be difficult at times trudging through fields of Cow Parsnip and stinging nettle both which can leave painful rashes on the skin, but trudge on we will.

The Tern Tribune: Eggs Are Here, But The Crew Is Scrambling To Get The Birds To Stay

Posted in Ship Island 2019, tagged Bird Research, Birds, Common Tern, Common Tern Egg, Common Tern eggs, Egg, Maine Coastal Islands National Wildlife Refuge, Maine Islands, seabird conservation, seabird nesting habi, Seabird Research, seabirds, Ship Island, Tern eggs, Terns on June 9, 2019

(A few of our first of hopefully many eggs on Ship!)

Hi folks!

Bobby from Ship Island here, as the cleverly constructed title suggests, we have eggs here on the island! A total of 13 eggs in 12 nests, which gives us hope that the birds are willing to nest for the breeding season on the island. Whenever Colin or I find a nest with an egg, we turn the egg to stand up, that way when we check the egg later on we can tell if it has been incubated (the egg falls back on its side from the tern sitting on it) or if it has not (egg is still standing up). However, the number of terns that have been showing up since the last blog post has not been ideal. We have not seen more than 50 terns at once on the island for the past week and a half, at this time last year for contrast, there were **519 breeding pairs**. It has become crunch time as we are using our final method to attract the terns back, creating our own tern colony.

This is done with two simple props, audio of a tern colony through multiple speakers, and using wooden decoys of terns (bird manikins essentially). These both simulate that a real colony is on the island and that it is safe to nest for the breeding season. Although it reminds me of The Truman Show in some ways, this method is the best bet to have the terns stay and nest immediately to allow them to be raising young in time for their migrations later in the summer. To paraphrase Princess Leia from Star Wars, the tern decoys may be our "only hope left", but Colin and I are waiting confidently for our feathered friends to return. Don't stop believin' in Ship Island!

(Terns and the decoys, can you spot the difference?)

Come Meet the 2019 Bird-Nerds of Petit Manan Island!

Posted in Petit Manan Island 2019, Uncategorized, tagged biologists, biology, conservation, Fish and Wildlife Service, FOMCI, Introduction, Maine Coastal Islands National Wildlife Refuge, Maine Coastal Islands NWR, MCINWR, meet the staff, nature, Petit Manan Island, petit Manan National Wildlife Refuge, PMI, puffin, research, researchers, seabirds, staff, tern, USFWS, wildlife biologist, wildlife biology on June 2, 2019

Come meet the 2019 Petit Manan Crew!

Hello all! My name is Hallie Daly, and I am one of the lucky bird-nerds that gets to call PMI their home for the summer. I have been working with wildlife for about 9 years now, having started my obsession when I was just 13 years old. I graduated from the University of California, Davis in 2017 with my degree in wildlife, fish, and conservation biology. I have been lucky enough to have worked internationally on a variety of conservation projects in Romania, the United Kingdom, Guyana, the United States, and most recently American Samoa, with everything from plants, large carnivores, squirrels, bats, and birds. Coming to work with the USFWS at PMI is such an exciting opportunity for me, as I have never worked with a breeding colony of seabirds before! Aside from enjoying wildlife, you can often find me backpacking the John Muir Trail in California, reading books about paleontology, painting, and making horrible puns! I have so much to learn and am so excited to apply my knowledge and skills from my past experiences towards the conservation of these beautiful birds.

Hallie with a Eurasian Skylark in Aberdeen, Scotland

Hi everyone! My name is Jimmy Welch and I am the supervisor here on PMI for the summer. I am a returning intern and was first a research technician in the summer of 2016 here on PMI. I have since worked with prairie dogs in New Mexico, sea turtles in North Carolina and researched scavengers and small mammals in Maine. I've also recently graduated from the University of New England in May 2019 with a degree in Animal Behavior and Environmental Science. I decided I wanted to come back to work for MCINWR and I was lucky enough to be able to return to my favorite island, PMI! I am really excited for the field season and the opportunity to work with such amazing seabird species again. I hope to utilize my previous experience on the island and my diverse field work background to make it a great summer for the PMI crew and all of the wonderful birds here on PMI.

Jimmy with two black guillemot chicks on PMI 2016

Hey everyone, my name is Devon Jobe and I'm one of the newest researchers working with the USFWS here on Petit Manan Island! I am a rising second-year student at the University of Maine, and am majoring in both Wildlife Ecology as well as Forestry. That being said, this is only my first real position in

my field of study and is a totally new and awesome experience for me! I feel so lucky to have been given the opportunity to be part of such an exciting project working with breeding seabirds, and I can say with confidence that it is shaping up to be the most interesting introduction into the field of Wildlife Ecology I could have hoped for! I still have a lot to learn but I'm looking forward to doing it here on PMI.

Devon at Wildland Firefighter Training.

A Look Through PMI's Spotting Scopes

Posted in Petit Manan Island 2019, Uncategorized, tagged Arctic Tern, biology, bird, conservation, FOMCI, GPS, Maine Coastal Islands National Wildlife Refuge, Maine Coastal Islands NWR, Maine Islands, MCINWR, Migration, nature, ornithology, Petit Manan, Petit Manan Island, petit Manan National Wildlife Refuge, research, scicomm, science communication, sterna paradisaea, Tagging on June 2, 2019

Hello from Petit Manan Island, once again!

The breeding season here on the island has really taken *flight* since our last post, with the majority of the tern colony having laid eggs, as well as the Puffins, Guillemots, and even some Razorbills! I guess one could say that it is off to an *egg*-cellent start!

We have been focusing the majority of our efforts every morning on re-sighting birds that have been previously caught and banded either by biologists here at MCINWR, or at other colonies along the Atlantic coastline. We even are lucky enough to occasionally spot birds that were banded along their wintering grounds in Brazil and Argentina. But why is it that re-spotting these birds is so important?

One of the terns we work with, the Arctic Tern (*Sterna paradisaea*), is quite the world traveler. Once they finish breeding in Maine or along other locations across the arctic, they leave to embark on one of the longest migrations in the bird world, eventually ending up in Antarctica! One bird, tagged and tracked from the United Kingdom, was recorded to have migrated 59,650 miles in **one year**, making it the longest migration that has ever been recorded. Let me put this straight – this is the equivalent to the bird flying around the world twice, and then adding on another 10,000+ miles. Considering these terns live to upwards of 30 years, this bird will travel farther in its lifetime than most people.

And this is why re-sighting birds is so incredibly important! It not only gives us information like how old the bird is or potentially where it was born, but we can also piece together the puzzle of exactly where each bird travels to during these super long and intense migrations, and more importantly gives conservationists a better idea of which land to protect in order to assure that these birds are around for years to come. Definitely makes waking up at 5 am every morning only to sit in a tiny box for 3 hours a little bit better!

Pictured left to right: A sleepy Common Tern that we identified as an individual banded in Nova Scotia in 2013; Puffin nap time makes re-sighting bands a difficult but adorable job; an Arctic Tern with 2 bands that we identified as an individual born here at PMI in 2016

Happy band re-sighting!

Best,

Hallie

June 1, 2019 by MCINWR

Good evening everyone!

Nesting is well under way here on Metinic. While all the terns are pairing up, it is possible to see a few that are trying to be the envy of the whole colony. How you might ask? Well they flaunt some forage fish of course!

I enjoy watching as a tern will bring a fish onto the point and move all over the place, showing it off to as many other terns as possible. They really know how to make their neighbors jealous!

Forage fish are the main food source for terns. What are forage fish exactly? Well they are species crucial to the connection of the marine food web. Sometimes referred to as "Wasp-waist" species, these fish connect the abundance of zooplankton and phytoplankton in the ocean to the abundance larger predatory fish. Basically forage fish eat the small stuff (zooplankton and phytoplankton) and then larger fish (and seabirds) eat the forage fish. Without forage fish, there would be a large gap in the marine food web.

Monitoring forage fish species that the terns are bringing to their chicks will be crucial once they hatch. A few years back, there was a low abundance of Atlantic Herring (their favorite food), and instead a large abundance of Butterfish. The only problem was that the tern chicks were not capable of swallowing the Butterfish. Despite the large abundance of fish, sadly many tern chicks starved that year.

In recent years, especially in Maine, forage fish abundance has been a widespread issue. Outside of the seabird world, Atlantic Herring and other forage fish are used by people in various ways. However, the most common use for these fish is as bait, especially for Lobster. Many Lobstermen will tell you that while there are other baits that work, Atlantic Herring works the best as lobster bait. That has created a competition between Lobstermen and the seabirds for herring.

There are several papers that have been posted on the important role that forage fish play in seabird producivity. However, one paper has rung true for many seabird species across the globe. The motto of that paper is "One third for the birds". Basically, one-third of the maximum prey (forage fish) biomass should be saved for the birds to consume. Increases in human uses of forage fish has made this a complicated situation. If you would like to read the paper for yourself here is the link: https://archimer.ifremer.fr/doc/00056/16770/14307.pdf

With all that being said, fish are key to seabird survival! Therefore we need to monitor which species the terns are bringing back to their chicks. (There is a whole other rabbit hole to go down about how we can use seabirds as indicators for the health of fisheries but I'll save that for another time).

By the way, I have marked a total of 25 eggs so far, with 6 nests identified as Arctic Terns and 5 as Common Terns (one of which has 2 eggs!). I am hoping to have the rest of the nests marked by species in the next few days.

All the best,

Mary

(Photo below: Common Tern with Hake)

(Photo below: Common Tern with Hake)

Posted in Metinic 2019 | Tagged Atlantic Herring, Common Tern, Forage Fish, Hake, Neighbors, Productivity

Archive for July, 2019

Thank you FOMCI!

Posted in Petit Manan Island 2019, Uncategorized, tagged acadia explorer, atlanticat, FOMCI, friends, friendship v, Maine Coastal Islands, Maine Coastal Islands National Wildlife Refuge, Maine Coastal Islands NWR, MCINWR, Petit Manan Island, petit Manan National Wildlife Refuge, puffin, razorbill, support, tern, thanks on July 15, 2019

Hello from Petit Manan Island, this is Hallie again!

I just wanted to write a blog post to give a shout out to the Friends of Maine Coastal Islands! I was lucky enough to get to talk to most of you briefly the other day while you were enjoying the island from the Acadia Explorer — but I did not get the chance to give you all a massive THANK YOU for everything that you do for the refuge. Work like this would not happen if it weren't for your support. The work that we are doing out here is so incredibly valuable — the seabirds are benefiting tremendously, as well as all of the young scientists who get to learn from the refuge biologists and the abundant wildlife on these islands. Personally, this is an experience that I will be remembering for the rest of my life, and an experience that is helping me take the next steps towards being the scientist and conservationist that I aspire to be one day!

Thank you all so much again for taking the time to sail out here to PMI and give us a warm hello, as well as for all of the endless support! (And especially to Carol for all of the vegan treats she sends our way each week!)

With Many Thanks,

PMI

The Tern Tribune: Common Tern Chicks Cover the Coast!

Posted in Ship Island 2019, Uncategorized, tagged chick, chicks, Common Tern, Common Terns, cute chicks, Eggs, hatch date, hatching, Productivity, Productivity Plot, tern, Tern Conservation, Tern Productivity, Terns on July 13, 2019

Hello everyone, this is Bobby writing to you from Ship Island with some breaking news.

The bird word must have gone around, because as of Thursday, July 11th, **321** nests have been found and marked with more being discovered every day! The chaos on the tern nesting beach area is beginning; the eggs laid in late June have begun to hatch this week. Soon our island will be filled with extremely adorable fuzzy chicks who love to run and hide in whatever grass or shelter they can find!

One of the first chicks on Ship, easily one of the softest objects one could ever hold.

These toddler-like chicks are extremely curious and will wander away pretty far from their nests if given a chance. With them running around all over, it can be difficult to tell how the colony chicks are doing health wise and how many of these chicks are surviving to adulthood. This is answered through a protocol that all of the islands perform known as productivity plots. This may sound like a fancy term, but essentially Colin and I determined a group of nests with eggs that were laid earlier in the season (in our case in late June) that neighbored each other and constructed fencing around them to enclose this area.

Colin (pictured) and I constantly had terns going at our heads to protect their nests while we constructed productivity plots. This one very nicely went feet first to our heads instead of the usual sharp bill first.

This keeps the chicks from our nests of focus from running all over the beach getting into trouble, that way we can determine how many chicks are surviving to adulthood and the size increases of each chick from each nest within our plots. To determine which chick is which, we put stylish metal BBL bands on their right legs that give them a unique identification number for life in a large online database. Colin and I then check each nest in each plot every morning to monitor the eggs and chicks. I am not a parent, but I imagine how I feel when we look for the chicks every morning it is similar to the stressful situation of a parent trying to find their misplaced kids, as Colin and I are really attached to our chicks in the plots. It has been amazing to see the transformation from egg to chick, and soon from chick to fledgling. Watching them grow up has been so special for Colin and I, and we can't wait to see each chick's journey continue. More updates coming soon!

One of the many chicks hatching this weekend, this one hatched within the hour before this photo with a big world to explore!

A Look Into Plumage and Coloration

Posted in Petit Manan Island 2019, Uncategorized, tagged animal coloration, biology, bird, bird feathers, carotenoid, coloration, FOMCI, Guillemot, laughing gull, Maine Coastal Islands, Maine Coastal Islands National Wildlife Refuge, Maine Coastal Islands NWR, MCINWR, melanin, murre, nature, Petit Manan, petit Manan National Wildlife Refuge, plumage, Puffins, seabird, USFWS on July 9, 2019

Hello friends, Hallie here from Petit Manan Island!

Life here on Petit Manan is going so well. Our tern chicks are hatched and getting close to fledging, our pufflings are fluffier and plumper than ever, and we even have our first black guillemot and razorbill chicks.

One of the cool things about working on such a small island like this is when you have a new avian visitor, *you notice*. We are up to 110 bird species recorded on Petit Manan Island this season, which is remarkable in itself. We have had everything from warblers to short-billed dowitchers to even a least bittern, a small bird that you typically find in marshlands on the mainland. And as well, we have had a lot of birds with interesting plumage show up to the island — like this Common Murre.

Leucistic Common Murre next to Razorbill and Atlantic Puffin

Common Murres are usually a dark chocolate brown, which is produced by melanin. This bird, however, is silvery-grey — a result of a genetic mutation that inhibits melanin production. This result is called leucism, which is similar, yet very different to albinism. Regardless, it makes up for a stunning result — this bird very well may be one of the more beautiful I have ever seen. Whether or not male or female common murres also think so is up for debate — hopefully this bird's unique plumage will not inhibit it from procreating in the future.

Melanin is one of many ways birds color themselves. The laughing gulls here use melanin to create that dark mask during the breeding season, which they use to deter other laughing gulls from their nests. You also often see birds with darkened wing-tips, like the terns, in which the melanin is used to strengthen the feathers and make them more durable.

Adult Atlantic Puffin showing the orange-red carotenoid coloration in the bill and eye

But what other colors do we see here on PMI that have significance in birds? Since we have been catching puffins this last week, I have been captivated by the bright orange feet and bills that the puffins display during the breeding season. Puffins, and many other birds, get this rich orange-red color from carotenoids — a color they metabolize directly from their food. Puffins use the intensity of this color to show potential mates and rivals how fit they may be. The brighter their bills and feet, the better at fishing and raising a chick they may be! You can also see melanin in the feet and the mouths of black guillemots!

Next time you see a color in a bird, its worth asking exactly why it is that way. Often even the most subtle of colors on a bird have such an immense meaning. I will be doing the same — sitting here wondering why we get tern chicks in two different colors. Any ideas?

Common Tern chicks from the same nest showing the two different plumage colorations

Archive for August, 2019

Tern Tribune: If You Like It Then You Should've Put a Band On It

Posted in Ship Island 2019, tagged banded birds, Banding, Bird Banding, chick, chicks, Common Tern, Terns on August 5, 2019

Greetings from Ship Island!

Bobby Brittingham here! As my time is coming to a close on Ship Island, I wanted a chance to post one more educational blog about our work before a farewell blog!

You may or may not have heard about "bird banding" before, it is an extremely common form of essentially tagging and releasing birds. Using specialized pliers, a small metal "C" shaped band is clamped shut around a bird's tarsus (leg-like the shin bone equivalent to humans).

BBL size 2 band, with the identification number, these are the bands used on all of the birds on Ship.

The banding database provides a lot of information on each bird, where they have been seen, where they nest, where they migrate, or even if the bird is alive, as long as the bird's band is seen and read correctly by another researcher. These bands are essential to distinguishing one bird from another to perform

other research procedures or to distinguish which bird belongs to which nest. On Ship we had very late nesting, so Collin and I have been banding as many chicks as possible with our limited time so that these birds can be identified on where they go over the next year.

Collin banding with specialized pliers, one of Collin's first banded birds!

Bands vary in size and number of letters based on the size, type of band, and/or species of the bird. For the common terns on Ship Island, a single size 2 "BBL" band is placed around their right leg; these bands each have a unique 9 digit number. These bands are then entered in an online database through the United States Geological Survey (USGS), and the "status" of a bird can be updated by individuals all over the world. For example, a tern was banded on Petit Manan this summer, and it has already been spotted by another researcher in Venezuela all the way in South America!

The chicks do not mind the bands as long as they're put on correctly. When they are put on right, they even look stylish!

For me personally, it is the most fun protocol we perform out here, nothing beats the feeling of getting to meet hundreds of chicks that I have the privilege to watch over every day on this island. Not only that, but it is crucial for research purposes. With the late nesting that occurred this year on Ship, it will be interesting to see where these birds could have possibly gone earlier this year by resightings of the chicks that we band this summer. Be on the lookout for one more blog from the Ship Island crew later this week!