



the ***Pileated Press***

Western Maine Audubon, *a chapter of Maine Audubon*

Box 832, Farmington, ME 04938

- Our Fall Talks -

All talks take place on Wednesday evenings at 7:00 at Thomas Auditorium, Preble Hall, UMF. They are free and open to the public.

September 11 – Through A Lens: The Fine Art of Bird Photography

Speaker: Nick Leadley

Birds make for incredibly interesting photographic subjects, providing unique and ever changing opportunities for creative images. In this presentation you will learn techniques to improve your avian photographs through field techniques, equipment choices and ways to approach birds respectfully.

Since 2004 Nick Leadley has been practicing the art of bird photography, starting in his own backyard. Since then he has travelled to Ecuador, the Galapagos Islands, Great Britain, Svalbard and throughout the United States to capture images of birds. A Registered Maine Guide, he operates Touch The Wild, a gallery located in Rangeley during the summer and fall months. He also offers bird photography workshops in Maine and Florida throughout the year. He is the editor of the self-published book “Gavia - Tales From Loon Country”, which pairs his photographs of Common Loons with written submission from the world over about these amazing birds. The book will be available for purchase and signing by the author after his talk. For more information about the book go to: <http://www.touchthewildphotos.com/book>



Photo Credit: Nick Leadley

October 9 – Insects in Decline in Maine?

Speaker: Sarah Haggerty

Several studies in recent years have documented significant declines in insect populations in various parts of the world (Hallmann et al. 2017, Lister & Garcia 2018, and Sanchez-Bayo & Wyckhuys 2019). If this phenomenon is widespread it could have important cascading impacts on ecosystem function. Maine Audubon, Maine Entomological Society, and MDIFW are interested in potentially exploring this question by compiling and examining existing data on insect populations in Maine.

A logical first step is to review available insect data that might be valuable for evaluating long term population trends in Maine, so we've reached out to over 150 entomologists and ecologists across the state to gather data and partners for this endeavor. Data we are looking for would be in two primary forms: 1) continuous long-term time series data, or 2) historical baseline data that could be replicated using similar methods. Once we determine what data that are available, the next step would be to determine if additional data are necessary to provide a fuller understanding, and if so, to explore options for coordinated data collection. This could include Citizen Science, graduate students, or other means for data collection. Finally, data would need to be analyzed to determine if any temporal trends in Maine insect populations can be detected.



Photo Credit: Alvesgaspar

The project is in the introductory stage, but we have received a great deal of interest already, and I look forward to sharing some insights with you in October.

Sarah Haggerty is a Conservation Biologist/GIS Manager for Maine Audubon in Falmouth. Sarah attended Bowdoin College for her undergraduate Biology degree, and received her Master of Science degree in Wildlife and Fisheries Conservation from the University of Massachusetts at Amherst. Between her undergraduate degree at Bowdoin and her return to Maine, she worked with various government agencies and non-profits in the realm of wildlife and fisheries conservation. This included raptor surveys with the U.S. Forest Service in Washington State, fisheries work with the California Department of Fish and Wildlife, and land protection with a local land trust in Massachusetts. Prior to her return to Maine, Sarah worked for a decade in a variety of capacities with the Massachusetts Natural Heritage & Endangered Species Program.

November 13 – USING TRAIL CAMERAS TO STUDY WILDLIFE BEHAVIOR

Speaker: Janet Pesaturo

A trail camera is a rugged, weather-proof camera that can be mounted and left in place for long periods of time. It triggers to take photos or videos when an animal passes in front of it. This one-hour talk followed by book sale and signing, will introduce trail cameras – how they work and how to set them up – and then discuss smart camera placement so that you too can capture photos and videos that reveal the secret habits of animals. These “camera traps” are taking wildlife research by storm because they are a noninvasive way to literally shed new light on the private lives of wild creatures. But you don't need to be a scientist. Anyone with curiosity, persistence, and an inexpensive trail camera can study cutting edge animal behavior topics. Join us to learn how. Many of Janet's own photos and videos will be featured in this presentation.



With a master's degree in conservation biology and a Level III CyberTracker certificate, Janet Pesaturo teaches wildlife tracking and camera trapping at Winterberry Wildlife in Massachusetts. She is the author of “Camera Trapping Guide: Tracks, Sign and Behavior of Eastern Wildlife” and chronicles her nature discoveries and adventures in a blog at WinterberryWildlife.OurOneAcreFarm.com. She manages the popular Facebook group “Trail Camera Photos and Videos” where anyone can share their own material or simply follow along and enjoy other postings.

- President's Column - Nancy Knapp

Photo Credit: Burt Knapp

I am writing this just as summer is officially getting under way. As our long and cool spring prolonged the blooming of the flowering trees and plants, it also brought slowly back all the wonderful spring birds with a parade of warbler's. One day I found a bird on the ground outside our back door and after much searching through the bird book discovered it was an oven bird, that lusty singer in the woods whom I assumed I would never actually see. Sad for the bird but a treat for us to be able to study the markings up close.

All this contemplation of birds flitting here, soaring there made me wonder about feathers, that amazing garb of all our "feathered friends", helping us to identify them in so many ways-color patterns, flight characteristics, survival skills. Below I share with you some of the things I have learned in my study of feathers.

We have 3 interesting talks scheduled for the fall and hope to see you all there. Do note, unfortunately, the change in room once again. We continue to try to bring you a variety of pertinent topics and speakers. I am always open to hearing your comments and suggestions.

Nancy Knapp

- Articles -

Feathers: wardrobe for survival or fashion statement, by Nancy Knapp

How much do you know about feathers? I realized that I knew very little except that we pay a lot of attention to their colors to identify birds. So, I did some searching and here is what I found.

Feathers are very old. The existence of feathers millions of years ago has been documented by fossils found in Germany of a bird/reptile like creature that lived 150 million years ago as well as some from China which may be even older. Feathers began as simple filaments and developed through time to become the complex organisms birds have today with specific functions, shapes and characteristics. Researchers think that feathers on birds existed for millions of years before the dinosaurs began to use them for flight. Initially, feathers were too weak to be used for flight. Was their function to attract a mate? for warmth? To recognize their own kind? We do know through analysis of fragments that coloration was present in these very early feathers.

Feathers now are structurally sophisticated, more so than an airplane wing. Birds have 7 types of feathers: wing, down, tail, contour, semiplume, bristle and filoplume. Starting from a central shaft a series of slender barbs extend, each sprouting ever smaller barbules which grasp like tiny hooks to create a structural network which is both light and strong. The bird can make the connectors effortlessly separate and then slip them back as when preening. The development of this barb and hook system remains a mystery.



By: Illustrators Andrew Leach and Jeff Szuc

The diversity in feathers comes from the evolution of this branching structure to serve different functions. Downy feathers have flexible long barbules that trap air and heat next to the bird's warm body. Wing feathers have uniform wind proof surfaces with a stiff leading edge and long and flexible trailing edge. Contour feathers cover the bird's body with an overlapping pattern, the fluffy part tucked underneath. Tail feathers are arranged in a fan shape for steering in flight. Some feathers close to the body have no hook structure and are fluffy insulation. Some feathers are simply bristles which protect the eyes and face.

Colors

All the glorious colors which birds manifest are related to pigments in their feathers and structural features, sometimes to both systems working together. There are 3 groups of pigments: carotinoids, melanins and porphyrines. Carotinoids, obtained by eating plants, produce the reds of the cardinal, yellows of goldfinches and orange hues. Melanins occur as tiny granules of color in both the skin and feathers. Colors range from blacks to reddish-browns and pale yellows and also provide extra strength to the feathers. Porphyrines produce a range of colors including pinks, browns, reds and greens. Other methods of coloration include refraction. Light is refracted by proteins in a feather. The refracted light becomes visible as an iridescent display changing with the angle of sight. Tiny air pockets in the barbs can scatter incoming light; this produces the blue color of bluebirds and indigo buntings. Feather structure can also reflect light in the ultraviolet range which birds can sometimes see when humans can't. This expanded color range probably helps with identification.



Male Blackburnian Warbler throat and chest feathers contain carotenoid pigments: Kevin J. McGowan from "How Do Birds Make Colorful Feathers?"

This amazing and complex system has evolved over many years to produce the variety, beauty and strength of feathers in our birds today. Wow!

Sources: **National Geographic Magazine**; "The Evolution of Feathers", Feb 2011

TheCornelllab Bird Academy, "Everything You Need to Know About Feathers" <https://academy.allaboutbirds.org/feathers-article/>

TheCornelllab Bird Academy, "How Do Birds Make Colorful Feathers?" <https://academy.allaboutbirds.org/how-birds-make-colorful-feathers/>

Fungi, by Jason Hawkins

What are fungi? Why do they exist and how are they utilized? These are important questions as more light is shed on the mysterious and magical mycological manifestations that seem to appear from nowhere. Fungi are Earth's great decomposers, creating soil and making nutrients available to vegetation. The majority of plants have symbiotic "mycorrhizal" relationships with fungi and their roots. These obscure builders and designers of the world around us are the primary stewards and mediators of many biological cycles. Fungi are critical to the continuance of all life, placing fungi at the center of any discussion on microbes, plants, or animals.

From the first flush of spring Oyster Mushrooms to the charm of Chaga in winter, with all other magical fungal moments in between, each season provides opportunities to witness the fruiting bodies of fungus here in Western Maine. We have a great region to keep enthusiasts and beginners alike exploring and entranced. It is not only humans who seek out fungi. I have personally witnessed red and gray squirrels, chipmunks, birds, slugs, and insects consuming mushrooms, and have heard accounts of other animals feasting on fungi.



Photo Credit: Jason Hawkins

Mushrooms can be found in just about any environment where there are plants, trees, and moisture. They inhabit coniferous forests, deciduous forests, meadows, swamps, and also pop up in compost piles, wood chips, sawdust, and other organic substrates which provide incubating environments for them to flourish.

Many of the mushrooms fruiting around us are edible and/or medicinal, with scientifically proven anti-tumor and immune-enhancing properties. There are literally thousands of fungi and more being discovered. Some delicious and/or medicinal fungi I have collected in our bioregion include: *Pleurotus ostreatus*, the Oyster Mushroom; *Hypomyces lactiflorum*, the Lobster Mushroom; *Calvatia gigantea*, The Giant Puffball;

Hericium americanum, Lion's Mane; *Boletus bicolor*, Bicolored Bolete; *Agaricus arvensis*, Horse Mushroom; *Stropharia rugosoannulata*, King Stropharia; *Lactiporus sulphureus*, Chicken of the Woods, and more. My favorite edible mushroom so far is *Macrolepiota procera*, the delectable Parasol.

Local medicinal mushrooms include *Trametes versicolor*, Turkey Tail; *Ganoderma tsugae*, Reishi, and the highly researched and commonly known *Inonotus obliquus*, or Chaga. All these edible and medicinal mushroom gifts provide a great excuse to explore the great outdoors. Of course we always want to be mindful about harvesting sustainably so the fungus can continue their life cycles.

The mushrooms we harvest for food and medicine are only the fruiting bodies of the organism which also includes a vast underground network of mycelium, the vegetative part of fungus consisting of a mass of branching and thread-like hyphae. These mycelium obtain nutrition from metabolizing non-living organic matter. Mycelium is sometimes referred to as Nature's "World Wide Web".

The Audubon Society has great fungal reference books and there are others which provide great descriptions, along with color photos and poisonous lookalikes to be aware of. For more in depth studies and science of Mycology, I suggest reading "Mycelium Running" by Paul Stamets, "Radical Mycology" by Peter McCoy, and the books by a local Maine mycologist Greg Marley who writes specifically about mushrooms found in our region.

There is exciting cutting edge research regarding the ability for Fungi to remediate pollution, clean oil spills by literally eating petroleum, filtrate water systems, and more. Mushrooms may literally save the world!

I hope this small amount of information inspires people to explore the world of Mycology, releasing any apprehensions. Magical moments await with the pursuit of wild mushrooms. As we humans increasingly reflect on our interconnectedness and impacts of habitats and ecosystems around us, let us not forget the importance of developing an awareness of the fungal world. There are good reasons to investigate and study how fungi fit into the intricately grand puzzle of the natural world.

- Articles continued -

Rangeley Lakes Birding Festival, by Pam and Tom Mauzaka

We felt the RLBF would be a unique way to explore the nearby boreal habitat, see new species, and improve our birding skills by learning from experienced guides. We were not disappointed! Because of its altitude and comparative isolation, Rangeley is a premier birding destination for rare and sought after species in New England. For example, by late spring warblers had finished their long migrations and were already nesting in abundance. The guides differentiated by call, behavior, and markings so we could identify individuals. The planners intentionally limited the group to only 68 participants so the experience would be more intimate. Guides could answer questions quickly and make sure everyone saw what was being discussed. The weather was perfect and the scenery spectacular! In the afternoon when birds were less abundant, our guide helped us learn to identify various tree species and wild flowers.

The weekend began with a reception to meet and greet and get instructions for the following two days. Rangeley Lake Heritage Trust led the planning with Maine Audubon and Freeport Wildbird Supply as co-sponsors. The event was dedicated in memory of John Bicknell, a local birder who was the passion behind the Mingo Springs Trail and Bird Walk.

Participants chose from a variety of trips guided by local birding experts, Doug Hitchcox, Derek Lovitch, Nick Leadley, Pete McKinley, Steve Hale and their knowledgeable assistants. They included a "Boreal Blitz" van driven excursion to the Height of Land and other less known spots along Route 16 and 17 and guided walks on the famous hot spot, Boy Scout Road, Perham Stream, Mingo Springs Golf Course Trail and a hike up Saddleback Mountain. There was also a loon cruise on Sunday on Rangeley Lake guided by Kevin Sinnett. A few of the memorable sightings were the Bicknell's thrush (both seen and at least four others heard), a yellow-bellied flycatcher, numerous warblers including blackpoll and breeding blackburnians, eagles and a Sandhill crane.

On Saturday evening there was a social hour at the Rangeley Inn followed by an award ceremony of the John Bicknell Conservation Award, which was presented to Carson Hinkley of Madrid. Carson is the landowner and caretaker for the Perham Stream Birding Trail which is nestled between the Perham and Orbiton Streams in Madrid. It is an incredible asset for the birding community as well as local conservation. Carson meticulously cares for the trail and keeps diligent logs of all the bird species seen here. After the ceremony, the keynote speaker was Doug Hitchcox of Maine Audubon discussing the Maine Bird Atlas.

According to David Miller, the Executive Director Of RLHT and one of the chief planners of the event, "The first annual birding festival was a big success and brought over \$8000 directly to local businesses. They have already set next year's dates for June 5-7 and will include a kayak/canoe birding trip. The website <http://rlht.org> has a link to a Birding in Rangeley page to guide you to some of the best birding in the Western Mountains of Maine."

- Have you been wondering -

Western Maine Audubon, our chapter here, is one of several chapters of Maine Audubon in Falmouth. Your dues go to MA to support their work and a percentage of that is given to us. We use that money to support our speakers, newsletter, etc. It is very important to become a member of MA in order to support our work here. We independently plan all our speakers and other activities. MA is trying to become more inclusive of the entire state, reaching out to the chapters to hear of local concerns and activities. Your financial support of MA goes primarily towards conservation and education. Thank you for becoming a member to help us continue our programs.

- Changes -

We welcome new Board Member, Camilla Cai.

John Slack has assumed position of Secretary.

Western Maine Audubon Officers

President, Nancy Knapp 778-6285

Treasurer, Pam Mauzaka 684-3781

Secretary, John Slack 860-0442

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