

North Country Notes



The Newsletter of the Laughing Whitefish Audubon Society
Marquette and Alger Counties, Michigan

February 2020

A Steep Decline in North American Breeding Birds By Jeff Towner, Chair, Laughing Whitefish Audubon Society

A recent study published in *Science*, the journal of the American Association for the Advancement of Science, paints a dire picture of the current state of avifauna in Canada and the United States. The broad outlines of this and other studies have been corroborated by six other research organizations including Cornell Lab of Ornithology, American Bird Conservancy, Environment and Climate Change Canada, U.S. Geological Survey, Bird Conservatory of the Rockies, Smithsonian Migratory Bird Center, Georgetown University. A summary was also published on the Audubon Society website.

This is the first study to undertake an accounting of the net population changes across a total of 529 breeding bird species in the United States and Canada. The studies found that the United States and Canada combined have lost approximately 2.9 billion birds since 1970, an approximate 29% loss from the baseline figure. This represents more than a quarter of the total populations of our birds existing in 1970. These estimates are considered conservative, since they included only breeding populations. Ninety per cent of the losses occurred from just twelve families of birds, including sparrows, warblers, finches, blackbirds and swallows, and including not only rare and endangered species, but also common and widespread species within those families. These declines have occurred in nearly every habitat type and species group.

The study published in *Science* also used a network of 143 weather radars (NEXRAD) across the contiguous U.S. to estimate long-term changes in nocturnal migratory passage of avian biomass through the airspace in spring from 2007 to 2017. Analysis of the NEXRAD data indicated a similarly steep decline in nocturnal passage of migratory biomass, a reduction of $13.6 \pm 9.1\%$ since 2007. Reduction in biomass passage occurred across the eastern U.S. These losses, coupled with past losses portend a possible continent-wide collapse of the North American avifauna.

The declines are attributed to a number of factors, including habitat loss and degradation, domestic cats and other invasive species, collisions with glass and industrial infrastructure like cell towers, wind turbines and power lines, and exposure to pesticides and other toxics.

In addition, climate change, or global warming, is destroying or altering habitats and entire ecosystems across the continent and the world. These changes no doubt will have ongoing effects on birds and other plants and animals for decades and perhaps centuries to come. Audubon has developed a tool to predict bird species that could be affected by county under several warming scenarios. For example, if there is an average rise of 1.5 degrees Celsius, Marquette County could lose three high vulnerability species, including Trumpeter Swan, Spruce Grouse, and Black-throated Green Warbler. (A rise of 1.5 degrees is considered imminent if nothing is done to

curb global warming.) There are also a predicted 52 moderate vulnerability species, 66 low vulnerability species, and 45 stable species. The numbers are similar for Alger County.

When faced with such losses people often experience an understandable feeling of helplessness. One wonders: “What can I do as one person?” However, there are many things that we can all do as individuals and collectively. In our daily lives we can make windows safer for birds, keep cats indoors or choose not to keep a cat, plant native plants, avoid the use of pesticides, avoid single-use plastics, and watch birds and share what we see. In addition, as individuals we can

contact elected officials and urge them to support important federal environmental laws such as the Migratory Bird Treaty Act, the Endangered Species Act, and the National Environmental Policy Act. We can sign petitions, contribute to organizations that are fighting to protect birds and the environment, and become active in organizations, such as the Audubon Society or others that match our interests and concerns.

Citation: Rosenberg, K. V. et al. 2019. Decline of the North American Avifauna. *Science* 365(6461). doi: [10.1126/science.aaw1313](https://doi.org/10.1126/science.aaw1313)

Mackinaw Raptor Fest, April 3-5, 2020

Ann Joyal

Hosted by Mackinaw Straits Raptor Watch the festival is held in Mackinaw City, and it includes activities such as raptor watching, waterbird migration, owl research, speakers, live birds of prey, field trips, dinner and awards.

The keynote Speaker is Dave Cuthrell on “Red-shouldered Hawk Nesting in Michigan.” There are multi-day sessions on raptor watching, waterbird migration, owl research, live birds of prey and birding field trips. Field trips include Late Winter Birding in the Eastern U.P., and even a trip.

For more information, lodging, and prices, visit <http://mackinawraptorfest.org/>.

LWAS Funds Two Avian Research Grants for 2020-2021

Ann Joyal

Thanks to the generous donations to our grant fund, LWAS was able to award two Avian Research grants for 2020-2021. Rachel Weisbeck graduated from the University of Washington and is working on her M.S. in Biology at NMU. She will use the grant monies to help fund her study of “Rates and Impacts of Blood Pathogen Infections in Black-capped Chickadees.”

Emily Griffith comes to NMU from the University of Florida and will use her grant funds to help with her research on “Evaluating Sex Differences in Ultraviolet Coloration of the Long-eared Owl.” Her study will increase the knowledge of the ability of birds to see in the ultraviolet spectrum and that ability’s biological significance.

Checks for \$500 were presented to both recipients at the recent February 12th membership meeting. Appropriately, the program at that meeting was presented by last year’s research grant recipient, Carly Paget on her research on the Common Loon in Seney National Wildlife Refuge.

LWAS Contributes to Bog Walk Reconstruction and Other Projects

Ann Joyal

Laughing Whitefish Audubon Board members who birdwatch at Presque Isle Park have noted the poor condition of the second observation platform on the Bog Walk. The wooden walkway was warped and in one place it was raised several feet. The observation platform was also shaky. We contacted the Superior Watershed Partnership since they have done several trail-maintenance and trail-building projects in the National Forests. LWAS agreed to pay for the materials and in 3 days a crew from the Watershed Partnership was able to repair and stabilize both the walkway and the observation-platform. Since many of the materials could be reused, the cost to LWAS for this project was \$1500. It is a great improvement to the Bog Walk path!

The money for this project was made available through “extra donations” from our members when they renewed their annual membership. Donations were also used to purchase binoculars and bird-watching guides for the Environmental Biology class at Marquette Sr. High School and for a \$500 scholarship to the Michigan Audubon’s Young Birders’ Camp.

Thanks to all of our members for their generous extra contributions. If you have an idea for a project that LWAS might help sponsor, please contact our president, Jeff Towner, at Chielenstowner@msn.com or our secretary, Ann Joyal, at ajoyal@nmu.edu.



Spring Fling April 24-26, 2020 at Whitefish Point Bird Observatory

Ann Joyal

This year marks the 32nd annual Spring Fling at Whitefish Point Bird Observatory and activities include a banquet and keynote address by Michael Kielb: Natural History of Darien Panama: Searching for a Harpy Eagle

Seminars and tours are offered on Reducing Avian Collisions with Communications Towers, Warbler ID, and U.P. Birding. There are also guided bird walks and evening owl flights as well as pre- and post- field trips on “Birding in Paradise” and “Searching for the Spruce Grouse”

For complete information, prices, and lodging visit <https://wpbo.org/spring-fling/>

LWAS Programs March 11, 2020 – April 8, 2020

- **March 11, 2020 (Wed) 7:00 p.m. “Restoration Efforts to Benefit Migratory Birds in Delta County ”**

ROOM: Peter White Library Community room

PRESENTER: Joe Kaplin

This program will feature Joe Kaplan’s efforts to improve migratory bird habitat in Delta County, including his partnership with the US Forest Service to improve habitat at Peninsula Point.

- **April 8, 2020 (Wed) 7:00 p.m. “Oh, the Places You’ll Go”**

ROOM: Peter White Library Community Room

PRESENTER: J.D. Phillips

Birding takes you to many places you would otherwise never visit. In this talk, J.D. will survey some of those places—from the extraordinary to the exotic to the just plain bizarre. He will focus on birds, of course, as well as other wildlife; and the presentation will be limited to locales within the U.S.

THERE ARE NO PROGRAMS FROM MAY-AUGUST.

Bird Photography: Which Exposure Mode is Right for You?

Brian Zweibel

The technological advancements in photography could hardly be imagined by photographers using slow film with manual focus, non-stabilized lenses just 20 years ago. Go back further and cameras did not even have built-in meters. Photographers had to use an incident meter to determine a proper exposure, then dial-in the settings manually. Everyone had to know how to use manual mode!



The above image was the ultimate exposure challenge. A high-contrast bird was flying in front of radically different backgrounds in rapidly changing ambient light. The background consisted of pale blue sky, sunlit snowcapped peaks, shadowed woods, and more. In addition, the sun was peaking in and out between fast-moving clouds. No auto-exposure mode was going to get the job done, so I switched to manual mode, and spun the shutter dial wildly back and forth as the sun came and went. Today's bird photographers have it relatively easy, but few are taking full advantage of their cameras' advancements. Let's explore the various exposure modes and determine which one(s) are right for you.

Manual Mode (M)

Manual mode provides precise control but is a relatively slow process in many situations. You, the photographer, have full control and make all of the exposure decisions. You set your desired shutter speed and aperture along with a corresponding ISO to make a proper exposure. All of this pushing of buttons and turning of dials takes time while birds are often moving fast. Manual is an excellent mode in consistent light, for birds in flight, and any time a subject is moving rapidly past changing backgrounds. You determine the exposure, then set it and forget it, unless the light falling on your subject changes. Manual, however, is tedious at best in rapidly changing light and you must be keenly aware of subtle changes in light intensity. You will have to make regular exposure adjustments as the sun grows higher (or lower) in the sky and when clouds move in to block the sun temporarily.

Manual Mode with Auto ISO (Ma)

There is technically no Ma exposure mode on your camera—I just made that up. It is simply manual mode set in conjunction with auto ISO. Interestingly enough, Nikon users have been touting the benefits of Ma mode for some time now, while you never hear mention of it in Canon circles. Ma does indeed work with Canon cameras, too. As you might suspect, in Ma mode the photographer sets both the desired shutter speed and aperture while the camera sets a corresponding ISO to make a proper exposure. Beyond that Ma behaves exactly like an auto-exposure mode and, thus, exposure compensation may be necessary (see next section). Unfortunately, dialing-in exposure compensation is not direct dial and requires an extra step. Worse yet (for Canon users, anyway) the exposure compensation only shows in the viewfinder while in the process of setting the compensation. Activate the shutter and the compensation amount disappears from the viewfinder. I have no firsthand experience with this technique with

Nikon but have read it works much the same as Canon. In all reality, Ma is just another auto-exposure mode.

Auto-Exposure Modes

With the arrival of in-camera metering systems, various auto-exposure modes became available. It is important to remember that when working in any auto-exposure mode, it is the camera that is making at least some of the exposure decisions for you. The in-camera meter makes exposure choices based on the assumption that the area covered by the meter averages to a mid-tone. That is one HUGE assumption! In many instances, the photographer will have to make decisions to input exposure compensation to help the camera come to the right exposure. The amount of compensation necessary depends on a wide variety of variables. The necessary compensation is affected to varying degrees by the tonality of your subject and background, your camera manufacturer, as well as the light intensity and direction at the time of exposure. The meter can even vary between different models from the same manufacturer. In essence, the photographer has to become intimately familiar with how their camera responds in a variety of situations. Despite it being exceedingly difficult to dial-in exposure compensation while tracking a fast-moving bird, one of the auto-exposure modes might be right for you, especially in rapidly changing light.

Program Mode (P)

Program mode is the most automated of the auto-exposure modes. You are responsible for selecting your ISO. The camera then chooses a shutter speed and aperture for you. It will tend to set a faster shutter speed and wider aperture when longer lenses are mounted. With a wide lens in the same light, a slower shutter with a smaller aperture is chosen. I almost never use program mode for bird photography, but it is useful when using flash as main light in low light or nighttime situations. Check your camera's manual or experiment to test but, in most instances, the camera will set a wide aperture and 1/60 of a second as the slowest shutter when a flash is mounted.

Aperture Priority Mode (Av in Canon, A in Nikon)

For the past quarter century or more, Av mode has been the auto-exposure gold standard for bird photographers. Using Av certainly made a lot of sense when we were stuck using slow films. I would load my film and set the ISO to 100 in-camera to match the film. ISO 100 would rarely result in a fast shutter speed, unless working nearly wide open and in full sun. Most of the time, I would set the widest available aperture, such as f/4 or f/5.6. The camera would then meter the scene as a mid-tone, leaving me stuck with whatever slow shutter speed resulted. In Av it is easy to stop the lens down for additional depth of field, should you be photographing a bird at point blank range, or attempting to get two individuals both in sharp focus. This, however, results in an even slower shutter speed. Today this is less of an issue since we can simply increase the ISO as needed when the light starts to fade, or we desire a bit faster shutter speed for fast action. Today I recommend Av as the best auto-exposure mode for anyone who is not happy with the high ISO noise performance of their camera and for those still shooting film (yes, there are still a few out there).

Shutter Priority Mode (Tv in Canon, S in Nikon)

Shutter Priority is now my default exposure mode. When going for a drive or a walk and not knowing what subject I might encounter, I select shutter priority with auto ISO. I set the shutter speed I desire, generally around 1/1,000 of a second in good light, and allow the aperture and ISO to be selected by the camera. In general, my Canon cameras will choose the widest available aperture and then increase the ISO as needed when I have a long lens mounted. With the excellent noise performance of today's modern digital cameras, I have the flexibility to obtain the shutter speed I need instantly when I suddenly encounter fast action. Fast shutter speeds are mandatory whether photographing bathing shorebirds, spinning phalaropes, or wave chasing Sanderlings. In these instances, I am willing to sacrifice a bit of extra noise to obtain a faster shutter (near 1/2,000 of a second to freeze most fast action).

Shutter priority with auto ISO can also be used to hold back the shutter speed when creating intentional motion blurs. Depending on the speed of the subject and the desired effect, I can spin the shutter dial to quickly get to a slow shutter. The ISO will go to the lowest setting and the lens will stop down the aperture to get me to the desired speed. When shooting action at slow shutter speeds, it is critical to track precisely while holding the lens as steady as possible. Note, I had used a menu function to lock out ISO 100 for the hovering sandpiper image. Otherwise ISO 100 would have been selected at f/20.

I use shutter priority in one more way. When using fill flash, I use Tv to hold the shutter speed back to about 1/500 of a second. Unfortunately, I find that adding a flash to the mix with auto ISO makes the camera behave unpredictably. I never know what aperture will be selected, which I find totally unacceptable. Insert ISO safety shift, which has been an available feature in the custom function menu of most Canon DSLRs for a number of years. I set ISO 100 and enable ISO safety shift in Tv mode. Due to the low ISO, the lens will almost always need to open up to wide open to get to 1/500. If opening the aperture wide open still results in an under-exposure, then the ISO will be increased automatically. Remember, in Tv mode it is you who selects the shutter speed and the camera that selects a corresponding aperture value to get a correct exposure.

Holding the shutter speed back has several benefits when using fill flash. While 1/500 isn't blazing fast, it is fast enough to freeze most action. In good light you will not need an overly high ISO, so the noise levels will be low. The final benefit of a slower shutter speed is that the flash will use less power and recycle more quickly, giving a nice kiss of light in more consecutive images. Today I use fill flash mostly in bright conditions to reduce shadows. On overcast days, I prefer the natural look of even lighting.

How does all of this relate to my shooting preferences? Today, it means most of the time you will find me working in shutter priority with auto ISO since I am willing to deal with some noise in favor of full control of the shutter speed. The exception would be that I choose manual metering when my subject's movement takes it in front of backgrounds of varying tonality. In bird photography, seconds count, so I choose to utilize whichever mode will most quickly and accurately get me to and keep me at the correct settings.

Laughing Whitefish Audubon Society Membership Form

Dues support the newsletter, programs, & local birding activities. Donations are tax-deductible.

Your name (or gift-recipient's name): _____

Street: _____

City, State and Zip: _____

Phone: _____ Email: _____

Address _____

(E-mail addresses are not given to other groups or commercial entities)

Annual Membership fees (please check one)

Gift membership - \$15 Regular membership - \$15 OR Student - \$5.00

How would you like to receive your newsletter? (check one) e-mail or postal service

Additional donations:

\$_____ General Expenses for club projects

\$_____ Research/Conservation Grant to fund birding research/conservation in the
UP

FOR GIFT MEMBERSHIPS please supply your name and the recipient will be notified of your gift: DONOR NAME: _____

Mail this form, along with your check (payable to LWAS) to:

Ann Joyal, 346 W. Crescent St. Marquette, MI 49855 (ajoyal@nmu.edu or 906-226-6749)

c/o Beth Olsson
5 Arrowhead Dr.
Marquette, MI 49855

