Far Afield: Newfoundland

Vol. 44 No. 4, March/April 2022

BIRD WATCHER'S DIGEST

Species Profile

Colima Warbler

Julie Zickefoose

My Search for the Perfect Bird Bath

Scott Weidensaul

Singing a Different Song

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BIRD WATCHER'S DIGEST

MARCH/APRIL 2022

Letters from Readers

August Is Not Dull

To the Editor:

I looked forward to reading the September/October 2021 issue of *Bird Watcher's Digest*. That was until I started to read Scott Weidensaul's "A Breath of Fresh Air."

I don't know what part of eastern Pennsylvania Mr. Weidensaul grew up in. I grew up and have lived about two miles (as the crow flies) from the Delaware River, which is the eastern border of the state. I find his description of August as dull to be incorrect.

My backyard is loaded with American goldfinches, cardinals, blue jays, mourning doves, catbirds, eastern screech-owls, Carolina wrens, chipping sparrows, red-bellied woodpeckers, and many others. I find this colorful array anything but dull. Besides the colors, there is a lot of chirping, peeping, squawking, cawing, and screeching.

In August the year we moved to this house I found my target bird of indigo bun-

ABOUT OUR COVER ARTIST— MICHAEL OBERHOFER

Title: *Colima Warbler*

Michael Oberhofer, a native of Australia, an award-winning artist, has been painting nature and bird life for the past 28 years. He is a member of the Society for All Artists (SAA) and Artists for Conservation (AFC), and was selected for the Birds in Art exhibition at the Leigh Yawkey Woodson Art Museum in Wausau, Wisconsin, in 2001 and 2003. His talent covers a broad swath of nature, including some magnificent mammals, including lions, orangutans, and kangaroos. In addition, he has illustrated an entire field guide to the birds of the United Kingdom for **whatbird.com**.

He started painting for the Mitch Waite Group team in 2012, with the introduction of their app iBird UK and Ireland. Michael was one of the first artists to do all his painting in Photoshop using a digital Wacom tablet, making him a perfect fit for the iBird app, which, along with its associated website **whatbird.com**, specializes in unusually high-resolution illustrations. Oberhofer's attention to detail is extraordinary, as can be seen above in the field mark layer of this month's cover art, which is one example of the 964 species found in the app iBird Field Guide to Birds of North America for the iPhone, iPad, and Android devices.

ting. I previously had searched everywhere the bird was reported to be but had never found one. Standing on the back patio one August evening I heard the sound I had been waiting for. There he was singing from the top of the tallest tree as he does most years.

Sorry, I have to disagree: August is anything but dull in my eastern Pennsylvania yard.

Barbara Brookman
Erwinna, Pennsylvania

Regarding Map Accuracy

Editor's note: In the November/December 2021 issue of BWD, *we published a letter from a reader who pointed out that the least bittern range map in the July/August issue failed to indicate her locale, where the species does, indeed, occur. Since then, I have received about a dozen letters noting that various species maps similarly weren't quite precise. I'm sorry for the inaccuracies, but in making our species maps, we use various published range maps, including from up-to-date field guides and various Cornell Lab of Ornithology websites. Hard as we try—and we do try hard—our maps must be considered approximate, not exact. We encourage all* BWD *readers to report the bird species seen in their neighborhoods and elsewhere via eBird in order to improve what is known about various ranges of all North American bird species.*

BY PAUL J. BAICICH

Seabird Hotspot Discovery

For many decades, bird researchers and conservationists have been challenged by the mysteries of seabirds. By default, studies were historically limited to accessible nesting sites and nearby feeding areas. But many seabirds would spend most of their life cycles at sea, coming close to shore only for nesting and only when they were old enough.

Migration routes, moreover, were a conundrum, with hardy seabirds sometimes traveling thousands of miles across state and international waters. In the process, they were invariably exposed to increased human impacts in the oceans—overfishing, bycatch, pollution (from plastic to oil). The exact migration routes, over vast oceans, were often simply presumed.

Far-pelagic information was essentially unavailable, and the work necessary to resolve these mysteries was often hampered by national jurisdictions and the lack of universally recognized mechanisms with which to work.

Fortunately, last August, a real breakthrough was announced. An impressive team of almost 80 authors published a study in *Conservation Letters*, a publication of the Society of Conservation Biology. It is a work that may mark a serious change in our view of birdlife at sea.

"Multispecies Tracking Reveals a Major Seabird Hotspot in the North Atlantic" revealed that millions of seabirds spend winters in the North Atlantic in a 220,000-square-mile hotspot southeast of Greenland and east of Newfoundland.

By analyzing more than 2,000 seabird movement records from the winter season collected from the BirdLife Seabird Tracking Database, these researchers have estimated that between 2.9 million and 5 million seabirds of more than 20 species converge in an area of ocean about

An Atlantic puffin carrying food.

the size of France. These birds originate from scores of colonies in 25 large marine ecosystems from both the North and South Atlantic. Their concentration illustrates a first-time discovery of this magnitude in high seas. In the words of the authors, it is an "important hotspot of unexpected extent and temporal stability."

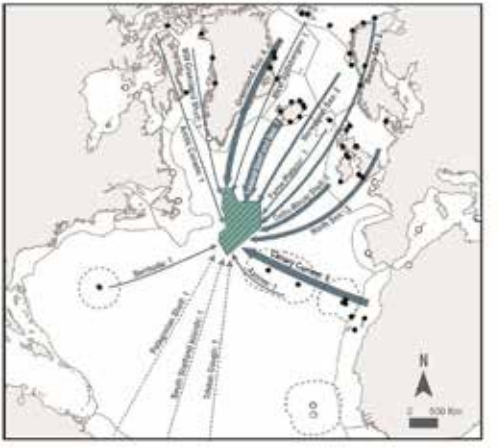
This discovery has been facilitated through advances in biologging technology. Tracking individuals with bird-attached devices is becoming an indispensable tool guiding these efforts. The researchers combine tracking, life cycle, and known population data to arrive at a satisfying conclusion. The primary species found in this zone—Atlantic puffins, dovekies, common murres, thick-billed murres, and black-legged kittiwakes—collectively make up more than three-quarters of all North Atlantic seabirds. The information provided by this study is exciting and could be instrumental in helping biologists and policy makers prioritize seabird conservation efforts, now and in the future.

This breakthrough discovery comes at the right time, since there is a crying need to find important marine areas to counteract the recent declines of threatened seabird species.

How many other such marine hotpots are there yet to be discovered across our vast oceans?

Munitions and Switchgrass

Switchgrass (*Panicum virgatum*) is a perennial, warm-season bunchgrass native to North America. It is one of the more dominant species of the tallgrass prairie, but it is found across much of North America along moist roadsides, stream



TERRA COMMUNICATIONS/*CONSERVATION LETTERS*

banks, and woodlands.

Switchgrass is often used for soil conservation, forage production, and for other uses, even in some biomass and marginal heat production. When it comes to our birds, switchgrass is used for cover, especially for game birds such as pheasants, and for nesting. Its seeds are also consumed by all sorts of birds, from waterfowl to sparrows.

In the past few years, however, switchgrass has been found to play another potential role: when genetically modified, it can "clean up" explosive residue.

Yes, you read this correctly.

RDX, a synthetic chemical commonly used as a military explosive, is the culprit. It is often found on military live-fire ranges, in munitions dumps, and even in minefields. It dissolves easily in water and is prone to spread contamination beyond its original source-site. "Particles [of RDX] get scattered around, and then it rains," said Stuart Strand from the University of Washington. "Then RDX dissolves in the rainwater as it moves down through the soil and winds up in groundwater. And, in some cases, it flows off base and winds up in drinking-water wells."

Beyond that, removing RDX is a reoccurring problem, especially at decommissioned military bases newly made available for general public use, such as parks, refuges, and more.

Fairly recent exploration by researchers from the University of Washington with colleagues from the University of York in the U.K. has revealed the use of modified switchgrass to remove these toxic chemicals at contaminated sites. Indeed, the switchgrass, with the addition of two key genes from bacteria, is capable of breaking down RDX.

In their work, reported last spring in *Nature Biotechnology*, the international team of researchers reported that once grown, the grass degraded RDX to nondetectable levels. Their three-year study at three military locations showed impressive detoxifying potential. The switchgrass, they found, can degrade RDX at a rate of 27 kilograms per hectare.

This is particularly important since RDX is toxic, but its removal from impacted training ranges is logistically challenging and normally lacking in cost-effective and sustainable solutions.

Using switchgrass in these circumstances is not a permanent solution in terms of restoring habitat for birds—mixed prairie grasses are better—but it may be the ideal first step for serious detoxification.

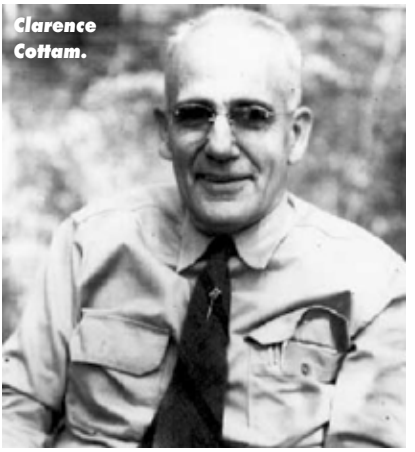
The work continues.

A Quiet Anniversary and DDT

We can end this Quick Takes by recognizing a little-appreciated anniversary in bird and conservation history. It was 75 years ago this spring that a "preliminary report" appeared on insecticide experiments and evaluation. During World War II, DDT had proved to be an efficient means of preventing the transmission of such diseases as typhus, associated with fleas; and malaria, associated with mosquitos. And DDT was about to become the most widely used insecticide of its time, but its negative impacts had not yet been revealed.

Major field investigations were made in Maryland and Pennsylvania, where the studies included the impact of DDT on insects, mammals, amphibians, fish, and, of course, birds. Major work was conducted at the U.S. Fish and Wildlife Service's Patuxent Research Refuge, in Bowie, Maryland.

In 1946, scientists Clarence Cottam and Elmer Higgins published an article on DDT and wildlife. Dr. Cottam, a longtime Fish and Wildlife Service biologist and eventual assistant director, led the publication in the *Journal of Economic Entomology* and also had the service itself publish it as "DDT: Its Effect on Wildlife and Fish" (Circular 11).



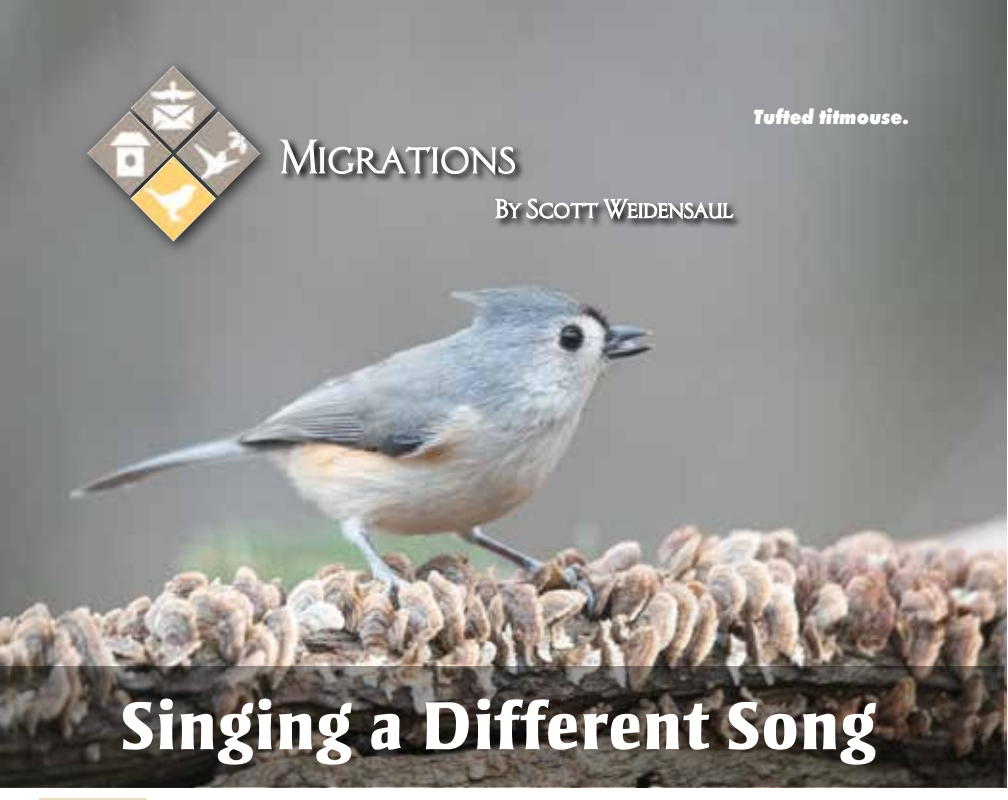
Clarence Cottam.

At least as early as 1945, Cottam, along with his friend Rachel Carson, had become openly alarmed by the abuse of new chemical insecticides. For advice on *Silent Spring*, Carson relied heavily on Cottam, among other close colleagues.

To assert that Clarence Cottam was a stalwart supporter of Carson and her environmental concerns would be a gross understatement. One of Cottam's favorite jabs at the excessive use of pesticides was, "Scalping the patient to cure the dandruff."

Some 75 years ago, Rachel Carson might not have used those same words, but she clearly concurred in spirit with Clarence Cottam.

Paul J. Baicich is a co-author of The Crossley ID Guide: Waterfowl*, his most recent of book.*



Tufted titmouse.

MIGRATIONS

By Scott Weidensaul

Singing a Different Song

I'm living in a world that doesn't sound quite right. It's like one of those sci-fi movies where the protagonist wakes up in a world that is close to normal, but not *exactly* right, where a few little details are suspiciously off-kilter. In my case, it's not alien body-snatchers or an alternate dimension. I just moved 500 miles north, and the birds don't sound the same.

Not all of them, of course. But I noticed the difference first with the tufted titmice. Having lived my whole life in the mid-Atlantic, I always relished the first loud, clear *peter-peter-peter* of the titmice on the earliest mild days of late winter. Once we relocated to New Hampshire, where titmice were a constant at our feeders all winter, I was puzzled when not a *peter-peter* did I hear the following spring. There were, however, a lot of oddball, slightly down-slurred *cheer! cheer!* calls I first assumed were—what, maybe cardinals? Though they didn't sound right for a redbird, either.

Binoculars in hand, I slipped into the woods to hunt down one of the singers and was shocked to find the "cardinal" was really a titmouse. Since then, I've heard a lot of variations coming out of our local

Northern cardinal, male, vocalizing.

BRUCE WUNDERLICH (2)

titmouse mouths, but most commonly a single-note song, and never a classic *peter-peter*—regardless of the time of day, which is in itself interesting.

Researchers have catalogued between 8 and 20 song types in this species, grouped into three broad themes. What are termed Class I themes are the typical, two-note *peter* songs and their variants, which researchers in North Carolina, studying titmice in the 1980s, found were almost invariably the first songs of the day, and made up three-quarters of the song types sung in the first three hours after daybreak.

Well, clearly our New Hampshire titmice, at least those here along the Maine border, do not subscribe to the ornithological journals. Even at daybreak, and after three springs, I still have yet to hear a classic, two-note *peter* song. But what my local TUTIs lack in—what, *peter*-oscity?—they make up for in vocal variety. I've heard some very strange vocalizations. They do have a two-note song, for example, but it's sort of a *chew-whit, chew-whit*, somehow breathier and wispier than what I'm used to.

I'd forgotten how much I missed that lifelong auditory signpost of coming spring until this past year, when I made a

Bobolink, male.

trip back to Pennsylvania to visit family. I stepped out of the car at my mother's house on an April morning and was riveted to hear a *peter-peter-peter* that left me with an unexpected lump in my throat.

Oh, and the actual northern cardinals around our home in New Hampshire? They also have a noticeably different quality to their songs compared with those I grew up among in the mid-Atlantic. The *Cheer! Cheer! Cheer!* elements of the song are slower and subtly bi-syllabic, lacking the sharp emphasis I expect from a cardinal, more of a *two-eer, two-eer, two-eer* sound. But that's just on our patch, along our little dirt road. A few miles away, along the edge of a pick-your-own fruit farm we visit, the cardinals sound, well, normal to my Pennsylvania-tuned ear.

None of this is really surprising, however initially disconcerting it may be to a birder who has marinated in the auditory soup of a particular region's birdsong for many decades, only to find himself in a new song-scape.

There is a lot of variation in birdsong, and even though you might not be able to identify as individuals all the song sparrows in your neighborhood, rest assured the song sparrows themselves can do so. Avian dialects are, in a sense, regional commonalities that span all that individual variation. Dialects have fascinated ornithologists for years, varying as they do across space and time. White-crowned sparrows have been the gold-standard research subject

BILL MCDONALD

Black-capped chickadee.

ADOBE STOCK

in this field, since they have myriad distinct regional dialects (sometimes referred to as "regiolects") across their range, especially on a north-south gradient from California to Alaska. The divisions between them can be sharp-edged, and the area they cover remarkably small. Scientists have chronicled 10 distinct dialects just in the San Francisco Bay area, for instance, though development has squeezed some into near-oblivion, like the Lake Merced dialect, or eliminated them completely, like a historic form from the Presidio.

Mourning warblers have four main regional dialects, one on Newfoundland, one in Nova Scotia, and much broader eastern and western dialects with an intergrade zone between them, in the upper Great Lakes and southwestern Ontario. Although black-capped chickadees have a surprisingly uniform *FEE-bee-bee* song across the species' vast range, there are striking exceptions, like the islands of Martha's Vineyard and Nantucket off the Massachusetts coast, where instead of *FEE-bee-bee* the birds sing two-part, monotone songs, sometimes alternating a low version with a higher-pitched version. Even tiny Chappaquidick Island, barely six square miles and separated from Martha's Vineyard by only 200 yards of water, has its own unique chickadee dialect. The same goes for black-cappeds in parts of the Pacific Northwest and, maybe most strangely, Fort Collins, Colorado.

Speaking the local lingo can have huge consequences for a

White-throated sparrow, singing Old Sam…something.

bird. Bobolinks develop hyperlocal dialects that might span just a few huge, interlocking hayfields. Immigrant male bobolinks often join such colonies, and they quickly pick up a few of the local song types, but their mating success rarely equals that of native speakers.

The reason dialects develop is perhaps the most fascinating element of this whole topic. Songbirds are seemingly born with an innate template that recognizes the basic song of its species, which the chick must hear during a very short, so-called sensitive phase as a youngster. It memorizes the adult song, but when it tries to sing, the result is babbling, much like a preverbal human infant. (In many ways, in fact, the process of song-learning in songbirds is very similar to speech development in small children, and has informed our study of human speech.) As the young bird practices its subsongs, as the babblings are known, they coalesce more and more along the structure of the memorized adult song. The process isn't completed until the following spring, however, when "song crystallization" takes place and the bird sings the full adult tune.

Because nothing in nature is perfect, little mistakes, substitu-

BILL MCDONALD

tions, and hiccups occur in this process. This causes the individual variation I mentioned earlier, but because everyone's learning from the same, ever-so-slightly-evolving songbook, broader geographic variations emerge, too. They can become especially pronounced when there is an element of geographic isolation, like those island chickadees.

And just as in humans—like the unlamented Valley Girl speech affectation of the 1980s, or more recent "vocal fry" or "creaky voice" that's gained popularity especially among many young American women—avian dialects and song patterns can move and shift as populations adopt new ways of singing. The most striking example of this is the way white-throated sparrow songs have changed in a matter of decades, and across much of their continental range.

Most whitethroats famously sang (take your pick) *Old Sam Peabody Peabody Peabody* or *Oh sweet Can-a-da Can-a-da Can-a-da*, two introductory whistles followed by a triplet. Sometime between 1960, when the last Canada-wide survey was conducted, and 2000, a new form with a doublet ending—*Oh sweet Can-a Can-a Can-a*—emerged west of the Canadian Rockies. By 2004 half the whitethroats to the east in Alberta were singing the new form, and by 2014, all of them were. Five years after that, the doublet ending had reached Quebec, and it seems to be continuing its march east.

How did it spread so far, so fast? Researchers from the University of Northern British Columbia and Laurier University proposed an interesting hypothesis. Using geolocators to track migration, they noted that sparrows from both the western source population, where the doublet emerged, and those from regions where the new song form has taken hold all winter together in the southern Plains—and whitethroats sing on the wintering grounds. That's when a young bird is babbling its way to adulthood, open to examples around it. What's more, other scientists have shown that young birds seem especially keen on incorporating new and unusual elements into their songs.

Isn't that the way it usually goes? A musical fad gets started among the kids, it sweeps the land, and all of a sudden everyone's singing a new tune. Dialects are yet another way that birds and people are more alike than we sometimes think.

Author and researcher Scott Weidensaul's newest book, A World on the Wing*, is a* New York Times *best seller. He lives in southern New Hampshire.*

SPECIES PROFILE

A Big Bend Adventure: The Colima Warbler

Lee Hoy

Colima warbler.

Warbler enthusiasts thrill at the prospect of seeing 20 or more species in a short period of time while birding in a relatively small area, such as one of the hotspots at High Island, Texas; Fort Jefferson in the Dry Tortugas of Florida; Magee Marsh, Ohio; or Point Pelee National Park in Ontario.

The Colima warbler opts for solitude and spectacular desert views among the Chisos Mountains of Big Bend National Park, so seeing it at the only place it nests in the United States requires a special trip. Eschewing the traditional crowds of spring migration at warbler hotspots, the Colima warbler beckons the intrepid birder into the higher elevations of the park. The search for the Colima warbler has been dubbed "The Death March," due to the elevation gain of approximately 1,700 feet in the first three miles of Pinnacles Trail. The steep switchbacks and rocky trails make finding this bird one of the most physically challenging birds in the American Birding Association (ABA) area.

I have made this hike 15 to 25 times (I've lost count) in the past few years, every spring and early summer, to share this drab but delightful warbler with birders and photographers. While the hike is challenging, the well-hydrated and thoughtfully paced can make the hike to Boot Canyon without too much difficulty.

LEE HOY

Roland Wauer, who served as Big Bend's chief park naturalist for many years and is the godfather of the Colima warbler, records the earliest sighting of the species in the Chisos Mountains as March 14. And while Colimas can linger on the breeding grounds until late September, they become much more difficult to find after they stop singing. When planning an adventure to Big Bend National Park to see the Colima, the best time for finding the birds is mid-April to mid-June.

The Colima warbler breeds in the Chisos Mountains every year despite ecological challenges, including threats of drought, wildfire, and limited breeding habitat. In 2020, a wildfire began near the South Rim and burned more than 1,300 acres, closing access to much of the Colima's habitat. While fire is a natural part of the West Texas landscape, the long-term impacts of this fire have yet to be determined. This fire burned through one of my favorite locations for finding the Colima warbler, which is near the intersection of the Boot Canyon Trail and the Juniper Canyon Trail. When the trails were reopened in May 2021, I was able to locate a Colima

foraging along the edge of the burned area, and a greater pewee sitting on top of a burned tree was a pleasant surprise.

There are not many species that the observant birder might confuse with a Colima warbler high in the Chisos, but Virginia's warblers migrate through from mid-April through late May. These two species are similar in appearance and even hybridize in the Davis Mountains to the north of Big Bend. Other than Virginia's warbler, the Colima is distinct among the species found in the habitat.

Colima warblers prefer a mix of oak, juniper, Mexican piñon, and Arizona cypress trees with a grassy and/or shrubby understory. These birds are ground nesters, and their nests can be found in leaf litter or under fallen logs, clumps of grass, or overhanging tree roots. If

LEE HOY

Colima Warbler

Leiothlypis crissalis

What to Look and Listen For

The Colima isn't going to win an award for the most visually appealing of the North American warblers, but the colors and patterns are fitting for its breeding habitat. The mostly brownish-gray bird has a gray head with a dominant white eye ring and a cinnamon-rufous crown patch that the patient observer will often see. The breast is mostly gray, and in certain light you might see a yellowish-olive wash, with a whitish or pale gray belly. The back is olive-brown, and its buffy brown flanks transition to beautiful yellowish undertail coverts. Females and immatures are similar and perhaps a bit duller and more brownish, but not likely discernibly different in the field.

In the Chisos Mountains in Big Bend National Park, Texas, males will often sing from the top of oak, pine, and juniper trees, especially in the morning. Birders are wise to hike up to the proper habitat early, since singing Colimas are easier to find. While the basic song is a simple trill, the last two notes are a descending slur. This ending helps separate the Colima song from other trills in the Chisos Mountains. In particular, the Bewick's wren's song includes several trills and can confuse those unfamiliar with both songs.

Where and When to Look

In the Chisos Mountains, Colima warblers have been reported as early as mid-March and as late as September; however, the best time for finding them is mid-April through mid-June. After mid-June, temperatures

can be uncomfortably high even in the higher elevations, although there are, on occasion, rather cool temperatures even in July and August. The birds are most frequently found at elevations above 5,000 feet, up to the base of Emory Peak, the highest point in the Chisos, at around 7,800 feet. Unusual weather, drought, and post-breeding dispersal can lead to sightings at lower elevations.

Feeding Behavior

Colimas forage actively but steadily, mostly in oak trees. The foraging style is methodical and generally easy to follow as they forage on the ground and at all heights of the tree. Occasionally they sally out after insects. Their diet changes seasonally, but while breeding, it primarily consists of spiders and insects, especially butterflies and moths (including larva), and wasp eggs.

Breeding Behavior

Colima warblers typically begin to arrive on breeding grounds in mid- to late April, but some occasionally arrive as early as mid-March. The female builds a simple but well-hidden nest on the ground under clumps of grass, such as Mexican feathergrass; under fallen logs; at the base of trees or rocks; and under roots in shady locations. Nesting begins in May, and usually three or four eggs are laid. Only the female incubates, for about 12 days. Both parents feed the young, which fledge after 11 days or so. Finding a nest can be a challenge due to the fact they are often on steep slopes in the Chisos Mountains. A recent study reported a population of Colima warblers hybridizing with Virginia warblers in the Davis Mountains near Fort Davis, Texas.—L.H.

Colima warbler.

you are lucky enough to see a Colima warbler flying to the ground, please be cautious of approaching the potential nest site, as ever-watchful Mexican jays will predate the eggs and young. Other potential predators of eggs, nestlings, and adult birds include Cooper's and sharp-shinned hawks, skunks, bobcats, gray fox, and snakes.

During dry years, Colimas utilize the choicest habitat, and secondary locations less so. I have had years where, following good spring rains, I could find several singing males along the upper switchbacks on the Laguna Meadow Trail. But 2021 was a very dry spring, and singing males were few even in the upper reaches of Laguna Meadow Trail (at least the portion that was accessible during the wildfire). This spring will be an interesting season to determine the initial effects of the 2020 wildfire on the upper-elevation species, which include not only the Colima warbler but also the blue-throated mountain gem, band-tailed pigeon,Cordilleran flycatcher, and others.

The most common question I get as a birding guide in Big Bend is, "Do I really have to make the hike up to see the Colima warbler?" The answer, unfortunately, is: most likely. I have had only two Colimas

The Chisos Mountains of Big Bend National Park.

in locations I would consider down low for the species. The best bet for finding one in lower elevations is after post-breeding dispersal, such as the time my wife and I made an unplanned August trip to Big Bend for lunch at the Chisos Mountains Lodge restaurant.

During lunch, she stated that she really wanted to see a bear up close, so I suggested we head to the trailhead for the Lost Mine Trail. During the hot Texas summers, this trail is not nearly as busy as some others, and bears are often seen around the trailhead. Across the road from the trailhead, I saw a Colima warbler foraging at the top of trees, and the bird flew right toward us. After a moment of viewing it, and being in wonder at my wife seeing her lifer Colima at a lower elevation, we were quickly distracted by a large male black bear wandering into view. As great as this sighting was, it is hardly the norm!

So, what would I suggest for those hoping to experience the adventure of finding a Colima warbler in the upper reaches of Big Bend National Park? First, I recommend planning a trip between mid-April and mid- to late June. During April and May, lodging must be booked well in advance, so short-notice

LEE HOY (2)

trips are tough to plan. With regard to weather, you never know what the temperature might be during this period. I have even had it sleet on me during a late-April backpacking trip to search for Colima nests to film for the PBS *Nature* special "Big Bend: The Wild Frontier of Texas." May and June are statistically the warmest months in Big Bend, but morning temperatures are usually quite pleasant, as are the shady canyons in the Chisos Mountains. It is best to wear long pants, long sleeves, and a wide-brimmed hat to keep the sun off your skin and help you keep cool on warmer days.

Staying well-hydrated is of extreme importance due to the very dry climate, and many visitors to Big Bend have suffered due to dehydration. I recommend the use of a strap-on-back water reservoir with a straw over a water bottle, as it is best to sip water often rather than drink a lot at once.

The two trails that head into the higher elevations are Pinnacles and Laguna Meadow Trails. Pinnacles is steeper but with much more shade, and my preferred route up, as you will get to the better Colima warbler habitat more quickly,

Male, female, adult, and juvenile Colima warblers are nearly identical in the field.

LEE HOY

and in the shade if you depart early enough. A departure in pre-dawn darkness with the use of a headlamp is highly recommended. By doing so, you won't waste a lot of time birding on the lower stretches of the trail, since most species you will see or hear can be easily seen around the park lodge and on the lower trails. Also, using a headlamp or flashlight often reveals the eyes of a Mexican whip-poor-will roosting on the ground or a branch, and you may well hear elf owls calling in the dark, too.

Once you reach the Pinnacles backcountry campsites, you have reached the location where I generally hear or see my first Colima warbler of the day. They like the very steep draw on the left of the trail, but they can be difficult to see from this vantage. It is preferable to continue hiking up to the better habitat rather than spend a lot of time in this location, as you might never get a look at the singing bird even if you have heard it well. Past the Pinnacles campsites begins the preferred habitat for Colimas, and you should be diligent in listening and looking for the bird. Due to loose rocks and occasional steepness of the trail, trying to look around as you hike can be challenging, so

The trail to Colima warbler habitat climbs high into the Chisos Mountains.

it is best to stop, scan, and then move on for your safety.

Continuing up the switchbacks until you reach Pinnacles Pass, you will have gained almost all the elevation you will need to get to Boot Canyon. The next half- to three-quarters mile of the trail isn't the most productive for the Colima warbler, but it does afford beautiful views of Boot Rock. Continue hiking until you come to the Boot Canyon cabin, used by park rangers and maintenance employees. From this location to a short way past the Juniper Canyon Trail intersection is my favorite spot for great looks at the Colima warbler. I find that if you are patient and spend an hour or more at this intersection, you will see many of the high elevation species of the Chisos.

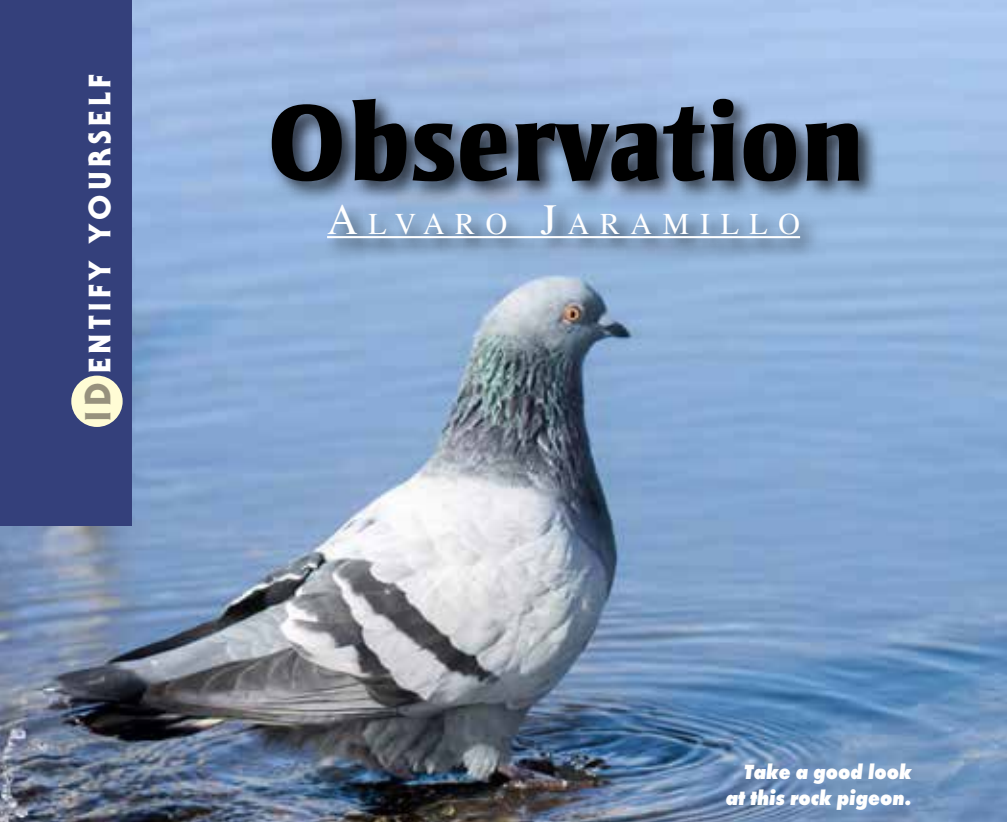
The first Colima warbler specimen collected at Big Bend was in 1928, by Frederick Gaige, and since then, this special species has been providing a true adventure for birders and photographers seeking to get a glimpse. Big Bend National Park is renowned for having recorded more bird species than any other national park, but make no mistake, the pinnacle of its birding list is the small but alluring Colima warbler.

LEE HOY

Lee Hoy lives near Fort Davis, Texas, at 6,143 feet. He is the owner/operator of Big Bend Birding and Photo Tours, and instructs photography workshops for Wildside Nature Tours to global destinations. Learn more at ***LeeHoyPhotography.com****.*

Observation

ALVARO JARAMILLO



Take a good look at this rock pigeon.

This topic started as a post on social media, and I noticed it garnered a bit of interest. I will begin with a version of the original post and expand from there. The photo of the rock pigeon above is where it all begins...

Hear the author read this article in our digital edition!

A bit about observation: What is it and how do you actually do it? My experience is that birders are good at watching birds and looking for birds, but they often do not really observe. Look in detail and take time—with a single bird. This is what makes you gain context for any birding you do after the observation. What you learn or solidify from a good, long, close look—at anything—makes you better at spotting shape, pattern, similarity, and difference in any observation you make later on.

A couple of days ago I saw this rock pigeon at the local harbor, and it looked particularly attractive, particularly classic. When you look at this photo intently, there are some things that stand out. Do you ever think of a pigeon as an amazing flying machine,

ALVARO JARAMILLO

like a falcon? Look at those wings! That is a massive stack of long primaries, like a Samurai sword of a wing on this rather pudgy and short-legged bird. But it is not stocky-pudgy—it just looks like that; it is all muscle. You can see it in the bulk and thickness of that body. One does not tend to think of pigeons as having a neck, but look! They do! Then the head, that little, tiny bill is almost ridiculously small. Only rock ptarmigan has a look like that—almost a chickadee bill on a larger head! And that white base of the bill, the cere, that is just plain weird. Why do the neck feathers, the iridescent ones, look wet? Well, they are pointed feathers, not wide, giving that "hackle" look.

Then there is the plumage. Yes, it is gray and black. But look closer: The gray of the head is darker than the back and matches the dark gray of the primaries. This is unusual: The primaries are not black, but they are gray. The tail has a broad black band, and it is darker than the back. And how about those two black bars on the wings? It is almost like having black wing bars, but if you compare these to a bird with proper wing bars, you will see that these bars are on a different set of feathers; the dark is on the base, while "normal" wing bars are at the tips of feathers.

In short, there is a lot going on here—on a bird that most birders tend to ignore. But each bird, particularly a common bird, is the one that trains you to observe. Once you do this a lot it becomes super quick. An experienced observer sees and notes all of this quickly, sometimes very quickly. But if you never sit with a bird and give it time, it is difficult to take in all of this, let alone quickly.

That was the original post, and it reminded me of a comment that could have been made by Al Batt, but scholars attribute it to baseball manager Yogi Berra. (Only outside of birding circles is Mr. Berra more well known for his quotes than Mr. Batt.) Yogi said, "You can observe a lot by just watching." I agree.

On that same half-hour of birding at the harbor, I was also able to look at and concern myself with some deep study of a few other species. As you would expect around the parking lots, there were common urban birds about in addition to pigeons. There was a mixed flock of blackbirds and starlings, always a favorite of mine, as I find them to be a group of birds that are almost always ignored, and yet are complex—even outrageous—when you hear and see their singing or display behavior.

Don't Dismiss the Starling

Like the pigeon, the European starling is a species birders

often ignore. In fact, they are often derided and disparaged, partly because they are non-native species, but also because of their abundance, commonness, and urban habitat. I have heard them called flying rats and all sorts of names meant to dismiss them. My favorite bird in the world is the one I am looking at currently! At that minute it was a European starling.

See my photo on the facing page. In fall and winter, starlings are all pattern. By spring they come into more color but lose the pattern. At all times their shape is there for anyone to take in, and it is an unusual shape: plump, yet sleek. I am not sure how they can pull this off, but they do. I think that they look somewhat sleek because they have some parts that are long and accentuate lines that move along the axis of the body.

First, that bill is long and pointed—unusual for a songbird. Only meadowlarks show something similar. It's not quite a needle of a bill, but long, and how it interfaces with the forehead makes it look as if it is a linear continuation of the head. If starlings had short thick bills, they would not look as sleek as they do. The bill helps. Another part that accentuates length is the wing. Like the pigeon on the previous page, these are amazing wings—sharp and long. Each primary feather is stacked in an obvious and well-spaced manner, as on a falcon. In other words, it is a wing that is built for speed. We do not think of starlings as masters of flight, but study them flying over at some point and compare them to other birds their size. They are muscular and quick, can turn on a dime, and have no undulation. They mean business and move quickly. On the other hand, the tail on a starling is super short, almost ridiculously so. Compare the starling photo to an American robin or a house finch and look at their tails compared to the rest of the body size, or head size. The starling has a very short tail. That short tail and the thick, muscular body are what give the bird its plump aspect. This is no ballerina.

If you focus on the starling's plumage, there are so many things going on here that it is hard to make sense of it—other than to marvel at the beauty of the detail—almost like a priceless, pointillistic art piece. To break it down, there are base colors and feather tip colors, and they are acting in concert here. You think of a starling as a black bird, but the black is so veiled with white

Check out this European starling.

ALVARO JARAMILLO

and buffy tips that it hardly shows. It is there as the base color. Not only that, the black looks shiny, oily, and this is from the iridescent nature of the black. There is a hint of green on the shoulder above the wing bars, and a hint of violet in the neck, while the crown and flanks show a green tone, too. These iridescent tones will dominate the black coloration of the starling once spring rolls around.

A fun fact about starlings is that their plumage change from this speckled look to the iridescent black of spring does not happen through a change of the feathers in a molt. Instead, each one of these feather tips wears away, revealing the underlying color. They will become blacker and blacker as the winter progresses! Only a few of our birds use this method of plumage change; they tend to be birds of open country rather than forest.

Returning to plumage study of the starling, scan from front to back, from face, to neck, to back, to belly. It is interesting to see that all of the feathers have a pale tip. These are brown or buff-toned on the crown, nape, and back, but white on the face and underparts. The final plumage features to notice are on the wings. Each covert, secondary, tertial, and primary is bordered by a crisp, buffy fringe. Not only that—and you can see this on the tertials especially—note the dark feathers above and to the

left of the wing tip. They also make clear that there is a black fringe immediately next to the buff, and this accentuates the buffy edges to each feather. It is not as simple a pattern as it first seems. Again, all of these fringes wear off by spring, and then the wing looks dark. If you ask me, the time to really enjoy a starling is in the fall and early winter, before all of the tips and fringes wear off. Yes, the shiny colors of the spring bird are attractive, but these patterns you see on the bird in the photo…well, there is nothing really quite like it.

European starlings are introduced birds, urban birds, perhaps not too exciting for you. However, they are here, they are accessible, and they are common. To learn to truly observe and to pay attention to plumage patterns, your best teachers are the birds that are common and easy to see. A Virginia rail has a lot to offer in terms of pattern, colors, and interesting shape aspects, but how often do you get to see them walking around in the open for long periods of time? It happens to the lucky, but not often. A starling on a lawn or a rock pigeon in a parking lot happens all the time. Your teachers could be house finches, goldfinches, mallards, killdeer, ring-billed gulls...there are lots of species you can see commonly and well. A good subject is key to learning to observe.

Look With Intention

The process of paying attention and observing is not instinctive; you have to work at it. Basically, you must look with intention. Look at two levels: first as a distant and general view, almost as if squinting to not see the colors. Look at form, shape, and relative sizes of parts of the bird. Then look in detail at feathers, at patterns, at colors. You can do this deliberate look as a sweep, from the bill back through the head, body, wings, and tail. Some scanning must be quick, as the bird moves and gives you different views, and such quick scans are for shape, and also for general patterns. Then, if you can, scan slowly to see pattern, colors, and details.

There have been efforts in the North American birding community to recognize a dichotomy of those who identify birds by detail, and those who do it by impression. This dichotomy could not be further from the truth. Both of these ways of looking at things happen in conjunction, and they should, since it is more fun for you to look at something at multiple levels. It

is a better game for your brain to play, in a sense.

The process of observation and paying attention is, in short, something you do with intention. Say to yourself, "Okay, let me really pay attention to this grackle," and then you scan and look, take in what the bird has to show you. Write down a note of something or two that the bird taught you, or something you had never noticed before. Any time you see something that strikes you as interesting, well that is a check mark in your list of wins! You now know something you did not know earlier, and you would not have seen without intentional observation. Nothing can give so much satisfaction as realizing that in your personal explorations and observations you are picking up new details. It is so clear in such times that you are learning. And there is nothing as fun as that! Go out there and just look; you might see something!

Alvaro Jaramillo is the author of several bird books and has a fun time guiding birding and nature tours. He lives with his family in Half Moon Bay, California.

ALVARO'S ADVENTURES
birding & nature tours

BIRD LIKE A GIRL

By Bryony Angell

Women Birding Guides: A Growing Trend

Andrea Molina, Ecuador.

Readers, meet your next international birding trip leader. She's a country national of a birding hotspot with years of experience. She might not only be your guide but your tour operator and driver, too. She's the new face of international birding travel.

Florencia Ocampo of Birding with Me (Uruguay **birdingwithme.com**), Eliana Ardila Kramer of Birding By Bus (Colombia, **facebook.com/birdingbybus**), Tati Pongiluppi of Brazil Birding Experts (Brazil, **brazilbirdingexperts.com**), and Andrea Molina, who guides through Neblina Forest Birding Tours (Ecuador, **neblinaforest.com**) are four women leading birding trips in their respective natal countries.

The experience of birding in these countries is as different as the women themselves. Uruguay is brand-new to birding, while Ecuador's birding economy is 30

JAN LLOYD

years old. Brazil's vast landscape means a guide might be a regional specialist, while a guide in a smaller country might cover the whole terrain.

All four women are committed to bird conservation and visitors who revere those birds. They share why it's important to resume birding travel.

Q How is the birding distinct in your country?

Florencia: Uruguay is small with a low population density. The distances are short and you spend less time in the car and more in the field. We have different environments that exist in neighboring countries, like patches of Atlantic Forest from Brazil in the Northeast and fragments of the Misiones rainforest from Argentina in the North. We have coastline and lagoons, even islands with nesting terns.

We do not have endemic species, but we have species restricted to small areas where the behavior of the birds is easy to see. The near-threatened straight-billed reedhaunter is a target bird easily observed, recorded, and photographed. Here, it jumps out of the reeds, where elsewhere it behaves more cryptically.

Andrea: Ecuador opened up to birding tourism over 30 years ago and is now established as a

Eliana Ardila Kramer, Colombia.

ELIANA ARDILA KRAMER

destination for both serious and beginner birders. The area of Mindo was the start of birding tourism. Before, it was a place for bird research and study. It's only an hour away from the capital, Quito; it can be a day trip for a family; and the birds are easy to see, with hummingbird feeding stations and banana feeders for the tanagers, honeycreepers, and euphonias. You can see 30 species of hummingbirds in a single location.

Tati: The majority of birding guides in Brazil are also scientists. I worked as a conservation biologist for BirdLife International before becoming a guide. And there is a small number of domestic birders. Only about 16 percent of nature guides in Brazil are women, and most of


Florencia Ocampo, Uruguay.

us specialize in a few regions rather than the whole country. I live in Espiritu Santo, in the southeast of Brazil, and guide in this area, the Pantanal, and the Northeast.

Eliana: Not only do visitors fall in love with the birds, but with Colombians. Colombians are some of the most welcoming, happy, and respectful people you will ever meet. It is in our culture to be nice to others, to help you out if you need something, to make you feel like family.

Q How does the birding tourism you lead impact the local communities and natural areas where you take visitors?

Tati: When we stay in a lodge that is local and family owned, versus a big hotel, and employ people from the local community, they see the economic value of the wild birds.

Andrea: We visit homes and properties that are managed by locals. These are people who see potential with their property. In a lot of cases, it's the women who initiate it because they are the ones at home noticing the birds. [Birding ecotourism] creates a new way to make money, even part-time. Plus, their kids can do something beyond farming. It gives women independence in their own homes.

Florencia: International visitors can influence a landowner's mindset. One family in the north was already developing ecotourism on their property. Their cattle were previously free-ranging, degrading the nearby forest. They now rotate their cattle grazing after learning the importance of habitat restoration for the local birds.

Eliana: Learning about the culture of the place we are birding is a win for the birds. One example: If we are visiting a part of Colombia where coffee is important for culture, learning about the impacts of coffee-growing on the farmers, habitats, and birds will give the

SEBASTIAN MARTINEZ

visitor a better understanding of why Bird Friendly Coffee is so important. Birders then see why it is so beneficial to pay extra for a coffee that is shade-grown and pays the farmers a fair amount.

Q How does being a female guide influence your experience guiding and the experience of your clients? What makes you different as a woman leader?

Andrea: Some women clients have told me that they are embarrassed to admit they haven't seen a bird when they are with a male guide, birding as a group. Not with me, however.

Tati: Women clients feel comfortable talking to me about body issues, like requests to go to the bathroom in the bush. In one situation, it wasn't the bathroom, it was swimming. I had a couple on a private tour and we took a lunch break during the peak heat of the day. I invited them to come swimming with me. The husband declined but the wife joined me. She told me that in 20 years of birding with her husband, this was her first time going to the beach, and that it was because of me, their female guide, inviting her! I'm a driver, which is unusual for a woman in Brazil. I recently also became a mother to a (now one-year-old) daughter, balancing my profession.

Florencia: I am fortunate that

Tati Pongiluppi, Brazil.

TATI PONGILUPPI

in Uruguay I do not experience a disadvantage as a solo female birding guide. I cannot say the same for my experience guiding in neighboring countries, however. I am a tour operator, guide, and driver in Uruguay, where in other countries it's more difficult to do all three because of prejudice.

Eliana: I've been on mixed (multigender) tours as both a client and a guide, so I can share different perspectives. Men seem on a mission to see as many birds as possible, while women like to slow down to see both the bird and its behavior. As a tour leader, I plan accordingly to even out the itinerary. I have

learned to get to know my guests ahead of time, learn what they like and expect, and then show it to them on the trip!

Q What is the conservation situation in your country?

Florencia: Important Bird Areas (IBAs), national parks—Uruguay is late to conservation in this way. Even though Uruguay signed the International Convention for Biodiversity in 1992, the country's first protected area wasn't established until 2000! At that same time, some state schools began offering careers in ecotourism. Yet our culture does not have a conscience for conservation; it's not integrated into (general) education. With few government-protected areas, conservation is reliant on private land ownership, if the owner is interested. The rate at which we are losing these areas is amazing, year to year. We need more bird watchers coming here.

Tati: We're in one of the worst times for conservation. The government (of Jair Bolsonaro) is bad-mouthing conservation nongovernmental organizations. Patrolling and enforcement in parks is reduced, and the government is giving companies access to natural areas without any environmental assessment. Climate change has made the rainy season much shorter now, too. Many areas of the country are burning.

Andrea: Ecuador's Ministry of Tourism recognizes that ecotourism is part of the whole that supports the country. Birders can visit both national parks run by the government and private preserves run by the Jocotoco Foundation, which preserves specific areas and involves local people in protecting species. It is different from ProAves in Colombia. [Colombia's bird conservation organization, ProAves, operates ecolodges in its privately owned preserves across Colombia]. Here, the lodges in buffer zones like the Amazon basin are not supported by a single organization or agency. And there is still pressure for production, logging, and mining.

Eliana: One upside of Colombia's recent history is that a lot of [natural] areas are still intact. Areas formerly controlled by guerrilla groups are now possible to visit, and some former guerrillas—including women—are training to be birding guides. Those same areas need to be protected while birding tourism is getting established.

Q How can birder tourists impact bird conservation before, during, and after a trip to your country?

Florencia: Visitors can say something to the owners of the places we visit, either while there,

or write a note of appreciation. What was great about the stay? What could be better? The owners need to pay their bills, and need to know the positive connection between what they are trying to do and the birders who come only a few times a year.

Andrea: Spread the word that Ecuador is safe, with great infrastructure, established ecotourism, and that we are more than the Galapagos.

Tati: Visitors can share what they saw, what drew them to Brazil, what's great about this country, and that it's safe. I encourage donating to American Bird Conservancy, which supports many bird conservation projects here.

Eliana: Colombians are waiting eagerly for visitors to return! I show a love for my country that I hope is contagious. When I finished my last tour, all nine guests said they could not wait to come back.

Q What is your biggest personal dream as a guide, doing what you do?

Tati: I desire to have a positive impact on conservation through birding tourism, offering a great experience with Brazilian nature, involving local communities in our process, and supporting conservation actions.

Florencia: I am positive that ecotourism can change local attitudes toward nature, especially the next generation. Imagine a child seeing dozens of people carrying cameras, scopes, and binoculars, and making such a big deal just to see the birds he takes for granted? It is my dream to inspire such environmental consciousness among locals.

Eliana: I'm on a mission to show the world that Colombia is safe and welcoming. I left the country when I was nine, but it's in my heart. The image Americans still have of Colombia is hard for me to see. Doing these tours shows visitors what's possible in Colombia.

Andrea: I already live my dream. What I have done already as a woman is more than I expected as a child. My dream is for more women to have the chance to live as I do, stay single, choose to not have kids, and not be criticized or judged [for these choices]. My dream is for women all over the world.

These interviews were conducted via Zoom, email, and phone call, and edited for clarity. You can reach each of these women via her own or company name online or on social media.

Bryony Angell writes and birds from western Washington state. Birding culture is her beat; read more of her work at ***bryonyangell.com****.*

BIRDERS QUESTION MARK

BY MARK S. GARLAND

Q I found your discussion of the varied nesting activity of great horned owls in your March/April 2021 column of *BWD* to be very interesting, especially because of an experience I had a few years ago. In April 2018 my husband and I were staying in an RV park in Arizona, and we were surprised to find a great horned owl had a nest on a palm tree in the middle of a small golf course there. We were told that the owl had nested there several previous years. This year she had only one chick. It was already quite hot during the day, and it was interesting to observe how they moved around to the shady side of the tree during the afternoon. Meanwhile, the male roosted in a nearby pine tree. I've attached two photos which you might like to share with readers. Thank you so much for your column, which has enhanced my appreciation, knowledge, and enjoyment of birds.

Valerie G.
Helena, Montana

A Thanks for sharing this observation. I think we could have a column every issue focusing solely on great horned owls! They're our country's most widespread and conspicuous species of owl, found in almost every habitat, and nesting in a remarkable variety of settings. Owls, in general, fascinate people. Their nocturnal behavior and haunting vocalizations create an aura of mystery, which has led to a wide variety of myths and legends in the folklore of people all around the world. In many parts of the US, the old folklore suggested that the call of an owl ominously portended some impending tragedy. Today I find that almost everyone gets excited by the call of an owl, or, to an even greater extent, the sighting of one.

Q I have been a casual birder for a long time, but during the isolating times of COVID I started paying closer attention to birds. We have had barn swallows nest on our property for many years, but I just recently noticed that we have other species of swallows here, too. I enjoyed watching their acrobatic flights, and by the end of

Great horned owl nest in a palm tree.

VALERIE G.

summer I was getting good at identifying them. Then suddenly in October it seemed like all of the swallows were tree swallows. What happened?

Steve B.
Newburgh, New York

All swallows feed primarily on flying insects, and when the weather turns cold in the fall, the number of insects in the air drops to almost nothing. Swallows head to warmer places where there will still be plenty of airborne insects. While flying insects compose the largest portion of a tree swallow's diet, this species is willing and able to switch its diet and feed on small fruit. This allows tree swallows to linger longer than other swallows in areas when the flying insects become scarce. Tree swallows are one of just a few types of birds that are able to digest the complex fats that make up the slippery substances that we call wax. Plants in the genus *Myrica*, specifically bayberry and wax myrtle, are favorites of tree swallows in the fall. These plants are often loaded with small, waxy, pale blue fruits. Near my home in Cape May, New Jersey, these plants dominate the dunes and other coastal habitats, and we sometimes see huge flocks of tree swallows descending into these shrubs in the fall after most of the other swallows are long gone. Tree swallows will also eat the little fruit of poison ivy, unaffected by that plant's oils that irritate us so badly.

Eastern wood-pewee.

Q I've offered suet feeders for years and recently replaced a suet block I purchased from a birding store with a package of a cheaper brand. The previous block was devoured, lasting only a week or two or so; the replacement now sits virtually untouched. My question: Do birds have taste buds? Do they prefer some foods over others by taste?

Gene W.
Winnipeg, Manitoba

A I had to do some research on this one. Science describes the sense of taste as the presence of gustatory receptors that react to chemical stimuli. Most of us call those "gustatory receptors" taste buds. Birds do indeed have taste buds, though many fewer than humans possess. This is a very valuable sense, since it can prevent the ingestion of foods that might be spoiled, toxic, or otherwise dangerous. Perhaps the replacement suet block just tasted bad, but it might even have been spoiled. Experiments have shown that within a species, some individuals will select certain tastes that others will avoid, implying that the sense of taste varies from individual to individual, just as it does with humans.

Each winter I notice that berry-eating birds, such as robins and cedar waxwings, choose the fruits of some plants right away, and feed on others only when the preferred ones are gone. I imagine it must have something to do with taste.

Q I had an interesting situation at my backyard feeders in late August. An eastern wood-pewee showed up at the feeders for several days. It was flycatching from the shepherd's hooks, but as I watched more closely, I noticed that the bird also appeared to be defending the feeders by attacking the other birds that came to

BRUCE WUNDERLICH

feed. I watched even more closely and noticed that it was attacking only certain species. American goldfinches, house finches, and northern cardinals were allowed to feed, but blue jays, black-capped chickadees, tufted titmice, and white-breasted nuthatches were being driven away. I can understand the hostilities toward the blue jay, since they are known nest raiders, but the others are kind of puzzling. Can you shed any light on this behavior?

Paul S.
Akron, Ohio

Once again I'm driven to the research literature. I discovered that eastern wood-pewees are known to be aggressive toward other species, especially when they are singing. The breeding season would almost certainly have been finished by late August, but individuals of this species will often sing all summer long, right up to the time that they leave for their winter territories in tropical America. One study conducted in 1988 documented 17 species that eastern wood-pewees physically attacked. It's also documented that they display territorial behavior during migration and on the wintering grounds, unlike most neotropical migrant songbirds.

So, the behavior you noticed has been documented previously, but that doesn't answer the question "Why?" When it comes to any bird behavior, "what" is easy to answer, but "why" is much more difficult. Without any definitive way to answer that question short of crawling into the brain of the pewee, I'm left making a guess. I'll start by guessing that the pewee wasn't defending the feeders, per se, but defending the air space around the feeders, places it might hunt the flying insects that are its primary food. What's the difference between the species that the pewee attacked and the ones that it didn't? Since pewees feed on insects, and (at least in part) so do the black-capped chickadees, tufted titmice, white-breasted nuthatches, and blue jays, the ones that your pewee was attacking, perhaps it recognized those birds as potential competitors for insect food resources. American goldfinches, house finches, and northern cardinals are primarily seed eaters, and therefore not competitors for the pewee's food. Can I swear that this is correct? Of course not, but I think it's a plausible guess.

Mark S. Garland is a naturalist who leads birding and nature tours to many parts of the world. He also leads workshops and teaches Road Scholar programs in his home region of Cape May, New Jersey. Email questions to him at ***questionmark@birdwatchersdigest.com****.*

The Hummingbirds of Costa Rica

JIM BURNS

Violet sabrewing, male.

It's a cold and rainy winter's day here in Arizona, and I'm working in front of a roaring fireplace. Not to worry, though, because I've just gotten an email from Costa Rica Gateway with a proposed itinerary for our next trip to the closest, safest, most reasonable place outside these United States to experience a spectacular birding adventure.

Most North American birders, when they begin to expand their birding horizons beyond the continental United States, invariably end up with a guide to Costa Rican birds in their hands. And they are immediately drawn to the exotic shapes and outrageous colors of tropical families such as toucans, trogons, and motmots. Sooner or later, though, they'll stop short in a section with quite familiar shapes and colors, drawn in by the tantalizing array of common names assigned to this large family—names that drip off the tongue and fire the imagination: Sicklebill! Sabrewing! Woodnymph! Mountain-gem! Goldentail! Tropical hummingbirds that will have you thumbing your cell phone for the number of your travel agent.

North America hosts 16 regularly occurring hummingbird

species, and all but one of them are labeled "hummingbird," with just a preceding descriptive adjective or person's name. Costa Rica boasts more than 50 hummers, and the names of more than half of them would give no hint, were it not for the accompanying images, that they belong to the beloved family of tiny, flying jewels that fascinate and amaze us. Fairy! Emerald! Coquette! Snowcap! Hermit! Costa Rican hummingbirds were apparently labeled by poets.

What Costa Rica's hummingbirds add to our perception of North America's most well-known and frequently photographed family of birds is variety, the spice of any birding life. A few Costa Rican hummers measure six inches in length—larger than Rivoli's, our largest; and several measure three inches— smaller than Calliope, our smallest. Costa Rica's hummers are more colorful than ours, and they combine those colors in smashingly unexpected patterns. Additionally, because they sport wild and crazy bill structures, tail extensions, or head plumes, some of these tropical gems usually end up at the top of Costa Rica first timers' "want lists."

In multiple birding trips to Costa Rica, we now have seen 47 of that country's hummingbird species. Of those 47, some that I have not yet photographed well

Purple-throated mountain-gem, male.

JIM BURNS (2)

remain on my target list, but two that I have nailed are species we and our guide agree are truly unique, even among Costa Rica's plethora of hummer bounty: the black-crested coquette and the snowcap. For our opportunities to see them, we thank our guide, Steven Easley of Costa Rica Gateway, and the small purple blooms of the verbena plant called porterweed, that grows ubiquitously in hedgerows throughout the country. Both species are small (three inches), fast (both have been described as beelike in flight), and somewhat local in their distribution along the foothills on the Caribbean side of the country. The former is remarkable for its structure, the latter for its colors.

Black-crested coquette, male, at verbena.

Coquette and Snowcap

The male coquette rocks a head crest of wiry black feathers, a few long enough to extend beyond its nape, and these match the dark color of the throat, malar area, and breast. But, catch this guy face-to-face, reflecting the sunlight, and that black throat pops into a fluorescent lime green gorget below the bill, and a glowing forest green shield appears above it—a true OMG moment. The belly is white, speckled with large golden-brown hearts! These accoutrements are all the more spectacular for their presentation on such a small package.

Snowcap.

The male snowcap is normal hummerish in form, but its plumage is total eye candy. Though it sports only two colors, one of them is nearly unique. Let's call it burnt raspberry. It covers the entire body except for a large frontal shield, and it shifts and morphs with each move the bird makes relative to the angle of light. It can darken almost to black on the belly or lighten almost to rufous

Blue-throated goldentail.

gold behind the eye. In a fleeting glimpse, a male snowcap is just a dark streak…except for that shield. Did I mention the shield is, yes, snow white, hence the bird's common name. A birder could not concoct this color combination even if using verbena for "dream enhancement," as some indigenous people are said to do.

Other Jewels

Because the majority of Costa Rica's hummer species are fairly widespread, and almost every ecolodge has a hedgerow of verbena, hummingbird observations are relatively frequent and easy. Our first green hermit, our first blue-throated goldentail, and our first violetears (both green and brown), were seen at verbena. The green hermit bill is so long and decurved the bird has been called the whimbrel of the hummer family! The blue-throated goldentail, like many hummingbirds, shows both its salutary colors only when the light is right, and the violetear males both have large patches of dark neon blue feathers below the eye extending across the nape. For hummingbird aficionados, these four birds alone are worth the price of a plane ticket.

Top Hotspots

For birders who would prioritize hummingbirds in Costa Rica, three stops are a must. The first of these is the beautiful La Paz Waterfall Gardens, an easy two-hour drive north of San José, where native flowers and multiple feeders attract 26 species of hummers. The other two are ecolodges: the Arenal Observa-

JIM BURNS (3)

Green hermit.

Rufous-tailed hummingbird, male.

tory Lodge near La Fortuna, and Rancho Naturalista near Turrialba. It is no coincidence that both have extensive verbena hedges and extensive hummingbird lists. At Arenal we have tallied 16 hummer species, and at Rancho, 14 while standing on the deck with feeders overlooking the purple verbena flowering below.

Darned Rufoustails!

The one problem with Costa Rica's extensive verbena plantings is that there is always a rufous-tailed hummingbird in attendance. This is the most widespread and common Costa Rican hummer, but also the most aggressive (again, perhaps no coincidence), notorious for chasing away the more avidly sought, less common, or less combative species, much to the chagrin of visiting birders. Aptly named and eye-catching itself, this hummer cost me a couple days on trips as it persistently drove off smaller magenta woodstars, green thorntails, and scintillants at flowers I had staked out with my camera.

Costa Rica is famous for its volcanoes and, as students of avian evolution might suspect, it boasts a hummingbird with three subspecies, one for each of its three highest volcanic areas. The three volcano hummingbird races, with gorgets ranging from scarlet through rose to purple, are designated by the names of the mountain district they inhabit. All are reminiscent of our rubythroat.

Usually the most memorable bird sightings are ones made in combination with special people or special adventures. Fittingly, my wife Deva's best Costa Rican

Fiery-throated hummingbird.

JIM BURNS (4)

hummingbird memory is of her first fiery-throated hummingbird, spotted as she hiked from a trailhead at 11,000 feet in the Cerro de la Muerte down to the Savegre Lodge, at 7,200. The fiery-throated is a high-altitude species often considered Costa Rica's "best" hummer, with its spectacular array of forecrown, throat, and breast colors. Picture a flame burning brightest red in the center, fading out to orange, then yellow to green around the edges. And the bird's breast and crown are iridescent blue—all this seen only if the light is just right. And on Deva's hike down to Savegre, it was.

Thinking about the fiery-throated is the perfect antidote for a rainy, cold winter's day in Arizona as we plan our next Costa Rican adventure. It's going to include a lot of habitat for the white-tipped sicklebill, the one specialty hummer there that we've missed: green with dark-streaked white underparts and an extraordinary bill. The bill is short but sharply downcurved 90 degrees to its tip, allowing it to occupy a special niche feeding on heliconia species with tubular blossoms curved to exactly match the shape of its marvelous bill. This is textbook evolutionary symbiosis.

Since I don't have a photo yet, you'll have to search the internet for it. But maybe we'll see you in the field in Costa Rica looking for it!

Jim Burns is an outdoor nature writer/photographer based in Scottsdale, Arizona. He has contributed many photos and several articles to Bird Watcher's Digest*, and he hopes to return to Costa Rica if and when the pandemic reaches endemicity. You can view more of his work at* **jimburnsphotos.com**.

Black-bellied hummingbird, male.

Brown violetear.

Scintillant hummingbird, male.

Long-billed hermit.

Green violetear.

Cinnamon hummingbird.

Plain-capped starthroat, male.

JIM BURNS (13)

Green thorntail, male.

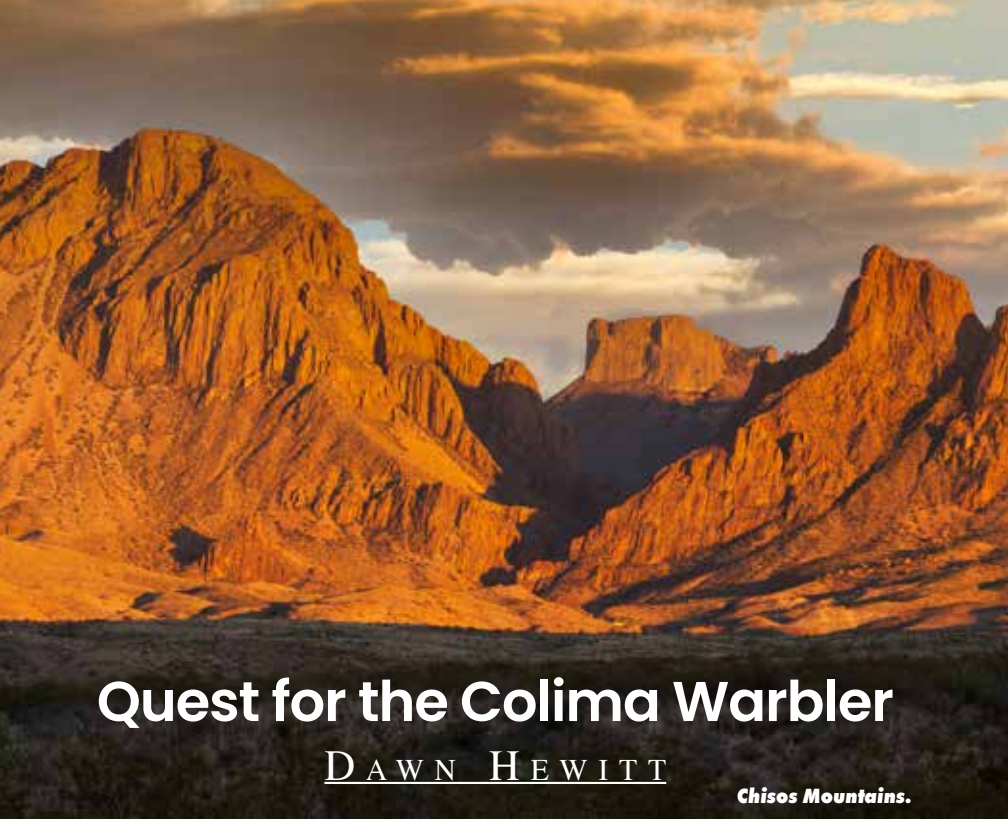
Violet-crowned woodnymph, male.

Green-crowned brilliant, female.

Green-fronted lancebill, male.

Magenta-throated woodstar, male.

White-necked jacobin, male.



Quest for the Colima Warbler

Dawn Hewitt

Chisos Mountains.

It was early spring 1994, and at that time, I didn't know that professional birding guides existed. I did know, however, that the Colima warbler existed, and nested in one location in the United States: Big Bend National Park in western Texas. I had recently purchased a small pickup truck with a camper shell, and to break it in, I decided to take a three-week trip to see that bird. A twin-bed futon fit neatly between the wheel wells in the back, with my camp stove, water jugs, hiking boots, and other camping accoutrements tucked in beside. It was a great vehicle for solo, low-budget road trips. That's my style.

From my home at the time in Bloomington, Indiana, I headed first to Dallas to visit an old college friend. From there, it was my intention to drive across Texas just for fun and so I could say I had done it. From experience I can verify that Texas is incredibly wide and mostly desolate. Stopping to visit a few irresistible landmarks, including the Odessa Meteor Crater, it took me the better part of two long days to get to the entrance of Big

The Chihuahuan Desert of Big Bend National Park.

TIMOTHY MINNICK (2)

Bend. My intention was to spend a few days in one of the campgrounds there before the eight-day, seven-night backpack I planned to go up into the Chisos, find and enjoy the rare warbler, head down the other side, hike across the rolling desert south of the Chisos, then back up the east side of the mountains into Boot Canyon for a second chance at the bird in case it skunked me the first time, and then back to my truck.

But the best laid plans… I arrived at the park headquarters mid-afternoon on a Friday, and all the campgrounds and other designated campsites in the park were full for the next two nights. If I was going to stay in the park, I needed to start backpacking immediately. The ranger helped me pick a route and advised me on where to park. I sped there aiming to get a few miles from the road before dark, threw my gear into my backpack, and headed for the hills on a historic mining route. Huge metal buckets that a century ago dangled from overhead cables and carried ore to distant railroads lay abandoned along the trail.

I didn't snag any lifers during that trek, but that's probably because my focus switched to survival: After my first breakfast on that trail, I realized that I didn't have nearly enough water for the weekend. I wasn't sure I had enough to


Black-tailed gnatcatcher.

get back to my truck. Surely there was a spring somewhere not far from the trail… No. By Sunday morning, I was kind of desperate, hot, and thirsty. I had a few more miles to hike to finish the loop and get back to my vehicle. My water was gone, and I was in the desert scrubland. I could see the road, and the trail was not direct. So, I decided to take the shortest path, cutting across off trail. Bad idea. The brush was impenetrable in places. It was getting hot. Luckily, I happened upon one of those old ore buckets, and it had water in it! Rainwater that had collected and evaporated hundreds of times. Water that wildlife sipped, bird poop landed in, insects laid eggs in. But it was water, and I was thirsty. I filled my water jugs and drank. Good thing my guts are made of iron; I suffered no consequences from drinking that water—other than to make it alive back to my truck. I drove straight to a campground's general store, bought a gallon of orange juice and drank the whole thing.

That night, over-supplied with water, I camped in a designated roadside campsite—which had no facilities. No problem. I know how to leave no trace. Texas bluebells were still blooming along the roadside, and in the desert scrubland I got my first lifer of the trip: black-tailed gnatcatcher! I spent a few days exploring the vast park—among the largest in the Lower 48, staying

at campgrounds or wherever campsites were available. In the Rio Grande Village Campground, I spent a while watching a roadrunner carrying a snake as if it didn't know quite what to do with it. Eventually it hopped onto the hood of a car at a nearby campsite, then onto the roof, and then onto the branch of a tree above the car! It had a nest up there! That was the first of many greater roadrunners I encountered in the park.

Zone-tailed hawk.

JIM BURNS (2)

At another campsite, a vermilion flycatcher caught my eye—not a lifer, but a species I had seen only a few times prior. Lots of birds fell into that category: band-tailed pigeon, Inca and white-winged doves, golden-fronted and ladder-backed woodpeckers, black and Say's phoebes, black-crested titmouse, violet-green swallow, canyon wren (one of my favorite songs), rock wren, curve-billed thrasher, black-throated sparrow, canyon towhee, rufous-crowned sparrow, spotted towhee, and pyrrhuloxia stick in my memory, but there were lots more.

Santa Elena Canyon, on the west side of the park, is dramatic, with tall, sheer cliffs on the Mexico side of the Rio Grande. I got two lifers there: a zone-tailed hawk soaring high in the sky, and broad-tailed hummingbird. I heard that little bird's distinctive metallic trill (made by its wingtips) before I saw it!

Finally it was time to set out on my longest-ever solo-backpacking trip, and time to find that Colima. At dawn before I

Pyrrhuloxia, female.

BRUCE WUNDERLICH

set out, I hiked about a mile from a main road to a historic ranch house to stash a gallon jug of water—where dozens and dozens of other hikers had done the same thing. Were there really that many people hiking in this area of the park at this time, or had many simply forgotten to pick up their water—or maybe died of dehydration before they got that far?

No matter. I parked at the foot of the Chisos near the national park lodge, and with food to last nine days, several days' worth of water, a tent, a sleeping bag, a tiny cookstove, and not much else strapped to my back, I headed up into the land of the Colima warbler. Twenty-eight years later, I don't remember the hike being too challenging. I remember the spectacular, foreign-to-me scenery, the change in habitat and temperature with elevation, and the bear-proof boxes at each campsite for food storage. I spent two nights in the Chisos, day-hiking in between and listening intently for a sound I knew well from recordings I had nearly worn out on my drive from Indiana to Texas.

In late March, there aren't a lot of birds in the Chisos Mountains. I remember white-throated swift, ladder-backed woodpeckers in a recently burned area, a lifer Mexican jay(!), but not much else. The

area I thought would be primo for Colimas was roped off, protected for peregrine falcon nesting. Peregrine falcon nesting! I found a comfortable seat nearby and spent several hours watching that cliff face, but didn't see a single falcon—and no Colima warbler. That's okay. I'd be back up in these mountains a few days later for a second chance.

I hiked down the back side of the Chisos, retrieved my stashed water jug, hiked across the desert for a few days, finding water at a spring near the trail as the ranger promised I would, watched the Milky Way against a pitch-black sky, listened to coyotes, ate reconstituted freeze-dried beans and rice, and watched a few black-tailed jackrabbits—what great ears! It was an amazing experience—camping alone in the desert. Awesome is an overused word. But truly, I was in a state of awe.

But next, it was back up into the mountains, into Boot Canyon, for my second and final shot at the Colima. I was determined, on high alert. My ears and eyes were peeled. The problem was, I was there a month before the Colima warbler arrives. In 1994, there was no eBird, no internet to tell me that if I wanted to find a Colima warbler at Big Bend, my best bet would be to arrive in mid-April through early May.

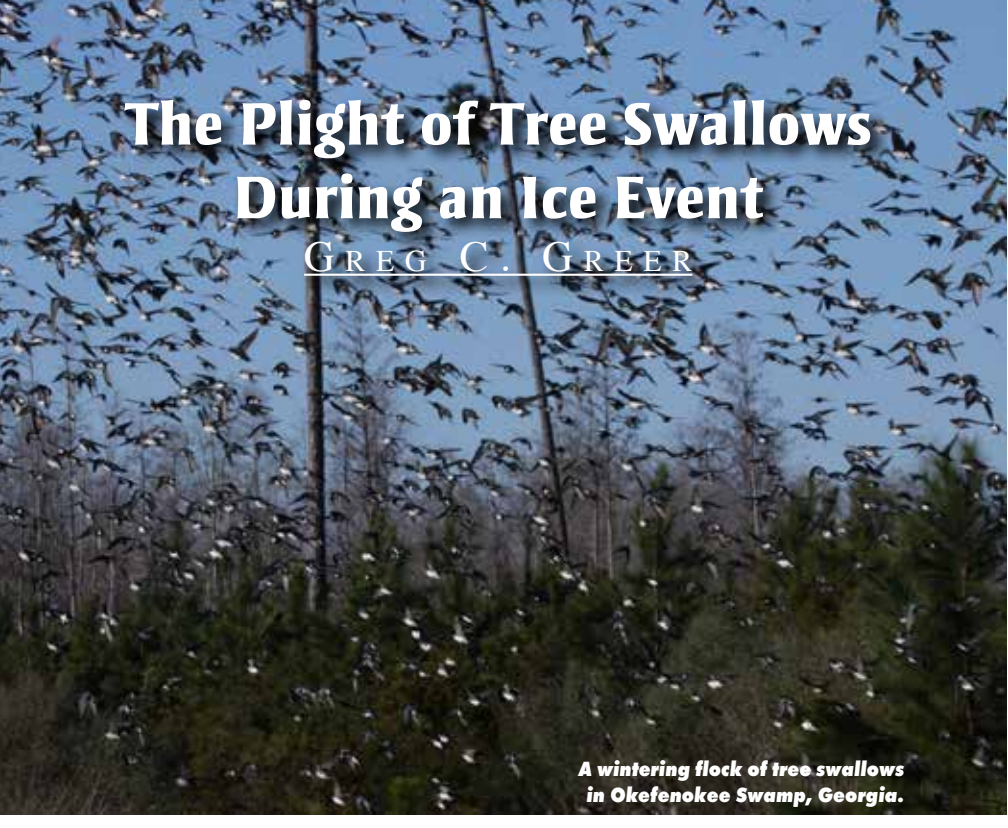
I drove from Indiana to West Texas to find a bird, and I failed. It was disappointing, sure. But I learned something important about birding the year prior on a solo trip to backpack in southeastern Utah—a trip that I routed through some spectacular birding hotspots in Kansas (Quivira National Wildlife Refuge and Cheyenne Bottoms Wildlife Area). The waterfowl there was as thick as I'd ever experienced, and so was the mud on the dirt roads. But it was there that I happened upon my lifer prairie falcon hunting a prairie dog colony, and I realized that just getting out and looking for birds is as rewarding as finding target species. My trip to Big Bend was a highlight of my life, even if I got skunked on the Colima warbler.

I'm hopeful that I'll get that Colima someday, although the climb into the Chisos will be significant this time. Adding that bird to my life list will be a thrill anticipated for decades. It will be a thrill almost as exciting as being there looking for it.

Dawn Hewitt is the editor of Bird Watcher's Digest *and* Watching Backyard Birds. *She started birding in 1979.*

The Plight of Tree Swallows During an Ice Event

Greg C. Greer



A wintering flock of tree swallows in Okefenokee Swamp, Georgia.

My wife and I have traveled the US in our motor home. During our travels, there have been many incredible wildlife sightings, including great bird observations. Of course, as with all observations, there are some that are not so pleasant but very significant to record and publish. In early January 2018, I had a couple of days of concerning, even disturbing, observations during unusual weather.

We were visiting Georgia's Okefenokee Swamp Park. The park is within the Okefenokee National Wildlife Refuge, and the habitat is a mosaic of lowland swamp, bog, marshland, and sandy ridges of long-leaf pine. On January 3, we experienced an ice storm that completely covered and coated all vegetation, including tall long-leaf pines—all the way down to the blades of grass on the edges of the road. It also coated shrubbery, including wax myrtles, native hollies, and other fruit-producing shrubs, which brings me to the purpose of this article.

An ice event this far south is not a common winter occurrence, and thus, in this area countless thousands of tree swallows were overwintering as they regularly

Ice storm, January 2018, in South Georgia.

do. This species is extremely numerous during winter, and large flocks find the necessary foods—abundant insects and small fruit, lots of water, and accommodating roosting sites.

The unusual ice event of early January 2018 brought the tree swallows together in what is best described as mega-flocks—flock sizes beyond anything that I have ever encountered elsewhere in my lifetime of birding. Due to complete icing of all vegetation in the area, the tree swallows could not find adequate food. The energy-rich fruits they depend on were laden in a thick coating of ice—impenetrable to the bill of an insect-eater.

Due to the frigid temperatures, insects were not available either. It was obvious that many birds were desperately hungry, and big flocks roosted on the entrance road to the park. The black asphalt of the roadway apparently held heat above the ambient temperature, and it is possible that the swallows sought the warmth to meet their thermal needs, rather than expending energy on food that was simply not available.

Tree swallows roosting on the road into Okefenokee Swamp Park.

GREG C. GREER (3)

One of many dead tree swallows lies on a road after an ice storm in southern Georgia.

Many vehicles slowed down as they approached the large, dark mass of birds on the road. Most, but not all. I observed a few drivers—I will give them the benefit of the doubt—that did not notice that the large, dark mass comprised living, struggling birds. The road mortality was considerable.

At one location, I collected more than 20 dead tree swallows that were in perfect condition, at least on the exterior. I donated these birds to the ornithological study-skin collection at a South Georgia University, providing relevant collection data, including the location, date, and unusual weather.

During this two-day period, I observed well over 100 dead tree swallows, and those were the ones on the roadway. I am certain there were substantial numbers of others on the road margins and in taller vegetation.

I hope to see many more flocks of tree swallows, but never again in circumstances similar to that of early January of 2018.

Greg Greer is a nature photographer and retired naturalist, spending a few months each year in Marietta, Georgia, but mostly traveling the US in his motor home.

GREG C. GREER (2)

Hungry and cold, tree swallows roost on the road after an ice storm.

Dwelling on the Dark Side

Eli J. Knapp

Eastern phoebe nest.

"Hope is the thing with feathers," Emily Dickinson once famously penned in a poem ostensibly about birds. I couldn't agree more. But, as my wife and I learned the hard way one summer, feathers are the things with mites. And lice. And bloodsucking blowfly larvae. All of these nasty little parasites can make feathers—and the birds they belong to—seem a lot less hopeful. This rarely mentioned dark side that our feathered friends possess presented us with an unexpected puzzle one summer. It began ever so innocently when a pair of eastern phoebes decided to nest on our back porch over the grill one June.

I've always enjoyed phoebes. As a born and raised northeasterner, phoebes have proven a consistent and grounding presence in my life throughout the topsy-turvy transitions that accompany passage through high school, college, and grad school. I've watched them build nests in precarious places and overcome all manner of obstacles, faithfully raising brood after brood. So now, attempting to raise my own brood in a far-from-perfect location, I was thrilled to watch phoebes select my nest to attach one of theirs.

But my wife, Linda, was far less thrilled. Especially after she swept the porch one day only to discover miniscule mites

parading across her hands and clothes. A day or two later she discovered an archipelago of itchy bites across her abdomen.

"The nest has to go!" she declared one morning while demonstratively scratching her stomach.

"Can't," I replied. "It's got eggs."

Right away, despite my wife being a casualty, I knew I'd won this debate. The presence of phoebe eggs ultimately pitted Linda against herself rather than me. Oozing empathy for creatures large and small (with notable double-standards, like for the lives of mites, of course), she could not and would not deprive a pair of phoebes of their eggs. Besides, disturbing the nest of a native migratory species would be illegal. Linda knew I'd won it, too, but was not about to go down quietly.

"Well, *you* can at least clean up the mess underneath the nest!" she said, spinning on her heels. I had expected this laborious demand and already prepared a counterargument.

"Not until the young fledge," I quipped dismissively, trying to conceal my ignominious grin. "Otherwise," I added, "it's a total waste." It was an unintended but pretty cool pun. Unfortunately, Linda was too sour to notice it.

WIKI COMMONS

When it comes to the darker side of nature, I often fail to notice it, too. Instead, when I'm teaching and opening the door of ornithology for others, I tend to focus on the beautiful parts and the harmonious way species work together, like the way hummingbirds so efficiently pollinate flowers in exchange for a snack. These seemingly winsome parts of nature, as I often read in student journals, uplift their spirits, gladden their hearts, and never fail to rejuvenate them.

It has been said that we see with what is behind our eyes rather than what is in front of them. I'm convinced this is why my students—regardless of what I emphasize in the field—continually dwell upon the uplifting and hopeful side of nature. They dwell on it because they need it. There are demands on their time. They are overscheduled. And many, especially those with family sharing the cost, feel pressure to perform well. The one constant in their lives—social media—promises to connect them. But in reality, it offers them an unparalleled opportunity to endlessly compare themselves to others and inevi-

WARNING:
Graphic image of predation on page 65.

tably fall short, leaving them isolated, unhappy, and in need of something real. Nature, with breezes and birdsong and fragrant blossoms, offers just that: something uplifting and palpable. Subconsciously, they want it. And so, when I lead them into nature, that's what they see: wonderfully happy animals leading wonderfully happy lives. Lives they want for themselves.

But the darker side—the army of mites feasting on fledgling blood—is always lurking just beneath the surface. And sometimes the mites kill the defenseless hosts altogether. And it's not just the invertebrates to blame. Every spring, brood parasites, like cowbirds and European cuckoos, sabotage other species. Surreptitiously, they drop their eggs into other species' nests. As if programmed for a life of crime, their eggs hatch earlier and their fledglings grow faster. With this head start, these blind, pink fledglings then perform an unspeakable evil: siblicide. That's right. Their very first act toward their nestmates is murder. The baby cuckoo, featherless and fatherless, somehow manages to hoist the host eggs over the edge to fall to their doom on the forest floor below.

Not that the host parents

A female common yellowthroat tends two fledgling brown-headed cowbirds.

WIKI COMMONS - BILL THOMPSON/USFWS

are blameless themselves. While they're being cuckolded, they're likewise cuckolding others, sleeping around with their neighbors, a behavior that ornithologists have politely euphemized as "extra-pair copulation." Even the very songs of our most beloved birds are much more than they seem. They're certainly not wearing out their syrinxes for me. What they're doing, rather, is engaging in a seasonal bout of braggadocio. They're boasting about their looks, their heavily contested real estate, all the while warning the neighbors that while it's okay to ogle, they'd better keep out. Aren't I fine?! Check out my crib! Keep out!

Much like in human societies, the darker side only rarely demands attention. Predators and parasites prefer the opposite, lurking unnoticed in the shadowy recesses. Sometimes you have to go looking for the bad guys and their misdemeanors. But eventually, if you look hard enough, you will find it. Because it's always there. The web of life is built on one unfailing truth: some species have to die for others to live. And those that don't die from a swift, merciful attack will often die more slowly and pitifully from the ravages of disease or starvation.

To human eyes, some species hold the moral high ground, eating organic, free-range, vegetarian diets. But others, like the morally debased Cooper's hawk, are villainous, eating nothing but meat, treating our quaint little bird feeders like

sanguine slaughterhouses.

All the great naturalists noted the dark side, and some even fixated upon it. Perhaps the most preeminent of all, Charles Darwin, wrote:

"We behold the face of nature bright with gladness, we often see superabundance of food; we do not see, or we forget, that birds which are idly singing round us mostly live on insects or seeds, and are thus constantly destroying life; or we forget how these songsters, or their eggs, or their nestlings, are destroyed by birds and beasts of prey."

Ever cognizant of nature's duality, I face a daily conundrum when teaching ornithology. Which aspect of nature should I emphasize? Do I perpetuate the sanitized version? Or level the playing field giving the dark side its due? The temptation to keep it clean is exceptionally strong. Some of our most beloved nature writers have done just that. Ernest Thompson Seton, for example, wrote stories that seemed like credible natural histories of wildlife. In reality, they were anything but. Animals were anthropomorphized and given noble codes of conduct. His books, including *The Biography of a Grizzly*, turned these great bears of the West into teddies. With grizzlies as heroes, people naturally became the antagonists, often villainous to the core. Seton turned the tables. For his readers, nature was simply following its innocuous script. The dark side was the willful menace of humans, particularly hunters with their deadly array of traps, poison, and guns. Had Seton penned *Little Red Riding Hood*, the evil villain would not have been the wolf.

Authors like Seton may have escaped uncriticized if their books were intended for entertainment alone. But soon enough, they started popping up in curricula across the nation. Seton defended his writings, claiming wild animals needed personalities if they were to be valued. But criticized they were, by none other than Teddy Roosevelt, a wildlife lover to the core. Roosevelt called these cuddly nature sanitizers "nature fakers," claiming they did far more harm than good.

I have a niggling hunch that if Roosevelt enrolled in my ornithology course, he'd call me a nature faker as well. For that, I'm guilty as charged. But unlike Seton, my reluctance to brighten the darkness isn't because I'm worried nature won't be valued. My reluctance is for the sake of students themselves.

A Cooper's hawk predates a ground squirrel.

JIM BURNS

They'll encounter the dark side in time. I don't want to push them too soon—especially those that are already teetering off the proverbial edge. Filling their plate too much, I fear, might make some never want to eat again.

Darwin was similarly reluctant to publish *Origin of Species* back in 1859. Natural selection is a cold, hard truth. Sometimes it seems altogether too cold and hard. Nature is predicated upon competition with success for the few and death—often grisly and unspeakable—to the many. The larvae of ichneumon wasps are injected into unsuspecting caterpillars and then eat them from the inside out. The males of some mantises are beheaded and cannibalized by the female they've just inseminated. Even the opossum, that odd ratlike

marsupial we sometimes see in our headlight beams, often bears 20-odd young despite having only 13 teats. That means one-third of her young starve straight away. Such brutality is wired into the rhythms of the natural world. In *Origin*, Darwin wrote:

"It may not be a logical deduction, but to my imagination it is far more satisfactory to look at such instincts as the young cuckoo ejecting its foster-brothers, ants making slaves, the larvae of ichneumonidae feeding within the live bodies of caterpillars—not as specially endowed or created instincts, but as small consequences of one general law, leading to the advancement of all organic beings, namely, multiply, vary, let the strongest live and the weakest die."

Nature's brutality is why Darwin adopted Herbert Spencer's memorable term, "survival of the fittest." And it's also why he was at times overwhelmed not only by nature's beauty but also by its constant carnage. Not long after his daughter Anne's death, he wrote: "There seems to me too much misery in the world."

That's the risk inherent in overplaying, or even just playing, nature's dark side. Some of us, many of us, already have too much strife in our lives. We are saturated with evil and despair on every side. Suicide bombings. Deadly shootings. Pandemics. Car accidents. Climate change. More often than not, dismal reports and bleak forecasts are all the news. Usually, thank heavens, our desensitized minds subconsciously ignore it. But sometimes we accidently ingest one spoonful too many, allowing the bleak midwinter to enter our bones. This is why I don't play up the dark side. I'm simply following Yoda's advice.

"When you look at the dark side," the little sage from *Star Wars* said, "careful you must be. For the dark side looks back."

When the dark side of life looks back are the times we need the brighter side of nature. It's when we need the bright, colorful, innocent birds looking in at us from our feeders. It's when we *don't* need their mites or any of their other promiscuous, predatory, and parasitic ways, for that matter. We need nature as Ansel Adams photographed it and as Albert Bierstadt painted it. Uplifting and as a safe haven, an Edenic place where deer winsomely frolic, and the birds sing for us like they did for Snow White. We need it in such times for refuge and respite.

I am often overcome by beauty in nature. But as I've

aged, I've also grown a twisted fascination with its dark side. Gradually, with every added rib cage and corpse I stumble upon in the fields and forests, I've become convinced there's beauty even in that—a deeper, more visceral beauty that feels more like an adrenalized awakening. It fires a different set of dendrites and activates another part of my brain.

I've hiked in grizzly country. I know what it's like to be lower on the food chain and am aware of what these sometimes anthropomorphized teddy bears are truly and horribly capable of. It's this knowledge—that I can round a bend and be turned into trail mix—that has made my few encounters with these creatures so memorable and heart stopping. These are the times of feeling absolutely alive with incomparable beauty packed into each protracted moment. In being an actor on a stage with an unknown ending. In meeting other life that is truly wild. This is why a zoo, regardless of how well managed and regardless of how large the enclosures are, can never hold a candle to uncaged and unscripted wild encounters. There is beauty in a world without boundaries.

Needless to say, my wife's mite-bitten body healed up just fine. And all the baby phoebes crammed in the ratty nest eventually beat the odds. In one anxious two-hour span, all four built up the requisite courage, spread their stubby little wings, and took off. I wonder if they have, like some of my students, realized that life is far more than it first seemed. I'm wishing that I could have warned them about the dark side, about Cooper's hawks and house cats. About how foul and nasty nature really is. But I'm guessing, from their cramped and competitive time in the nest, they already learned it. I wonder if they're looking like parasite-free, healthy adults, or if they're still covered in mites. If so, hope isn't yet lost. In time, they'll discover puddles and dust baths, too.

Yes, nature is red in tooth and claw. At times it seems exceedingly dark. But I'm convinced that hope can take on many colors. So, I'm going to keep focused on its brightest shades, and continue preaching that hope is the thing with feathers, even the nasty ones riddled with mites.

Eli J. Knapp is a professor of biology at Houghton College, in Houghton, New York. His most recent book is Dead Serious: Wild Hope Amid the Sixth Extinction.

Derry and the Birds

KATIE LUCKINI

Red-bellied woodpecker, female.

CLAUDIO BACINELLO

Derry Pyles was a crazy son of a b*#$%. He was one of the least likely and most devoted friends I will ever have. And toward the end, boy, did he love his beautiful f*#$%^& birds.

We met in an unlikely place, a four-week-long school for truck drivers in Clarksburg, West Virginia. I was a 30-year-old wayward scholar, looking for a job as far from academic philosophy as I could find; and Derry was a 55-year-old block layer with a hell of a lot of stories. Now, I've had some adventures over the years; I've even thought of myself as "storied" now and then. But I have never stopped a pal on her way out the door by saying, "Did I ever tell ya about the time my motorcycle buddy

almost drowned in a cow?"

Derry had stories. There were years of cocaine dealing, stints in prison, a few years as a marine, some far-fetched tales of head-butting with the Hells Angels, a lot of women, a few marriages, and a childhood of alternating abuse and country-boy shenanigans. All of this bubbled up from a well so deep that I only ever saw the surface of it. By the ordination of whatever strange alchemy decides these things, we hit it off. We hit it off like two giggling kids in the back of the school bus.

Derry traced our friendship to the day my Jeep broke down after class. He says I looked from him to the puddle under my water pump and said, "What am I going to do?" The way he says it implies my eyes are large and scared, my voice shaking.

And then he says, recalling, "I just knew I wasn't going to leave you there."

This is very sweet, and very Derry. But I didn't say any such thing. The pump had been dripping for a week, and I knew exactly what I was going to do: fill a few milk jugs, drive home a bit too fast, and finally spend an evening fixing the darn thing. In hindsight, I can see how a man with an estranged daughter my age might forget that we were here driving big rigs together and project a little daughterly helplessness into my face.

A few weeks after we left school, I got a job hauling steel and Derry got a job hauling gravel. I puttered around the Northeast in my "covered-wagon," ferrying coils and ingots from ports to mills and mills to piers, learned to hate Connecticut, and listened to all the novels I'd wished I had time to read in grad school. Derry, meanwhile, ricocheted down the back roads of West Virginia in a top-heavy little "dump-bucket" that was half the size and carried twice the weight.

We texted occasionally, but hadn't seen each other in months when he got in an accident. Three years later, when Derry died, he still had a newspaper clipping folded neatly in his wallet. It seems he was driving past his own house with 75,000 pounds of gravel, when a woman in a small Hyundai pulled out in front of him.

He tried to swerve out of her way, clipped the front of her car, flipped his truck onto its side and slid over an embankment, ending up suspended over Uffington Creek, the reporter wrote.

Derry, like the redneck jungle cat he was, climbed out the window unscathed. In the newspaper photo you can see him in the background. He is leaning against a wrecker, surveying the destroyed guardrail and rear


American goldfinch.

wheels of his truck sticking out of the treeline with the poker-straight posture he'd learned in the military. He looks thoughtful. The article ends by saying that Derry had "likely saved the woman's life with his quick steering maneuver."

The accident is not significant because Derry was hurt, but because a few days later he was still "a bit sore," and figured he "may as well go get checked out." When he did, they found the cancer.

Derry was a hoarder, not the worst you'll ever see, but enough that he was embarrassed to have people over. So, when he started radiation and spent most of his days at home, he became harder to get ahold of than ever. I, however, was stubbornly devoted to my driving-school chum, and eventually wheedled the story out of him. His throat was raw from radiation and scopes; he could hardly eat or swallow solid food. There was a tumor on his esophagus too large to remove, and doctors were aggressively trying to shrink it to an extractable size. The ponytail he'd had since high school was coming out in clumps, and he was exhausted. I coaxed his address out of him on the pretext of sending a card, made chicken soup, and showed up on his doorstep.

He was at an appointment, so I left a bag of mushy groceries on his stoop. But before I left, I noticed the giant squirrel-proof globe feeder hanging outside his only window.

Derry's health deteriorated rapidly. Surgeons removed the tumor in his throat, taking nearly a foot of his esophagus

CLAUDIO BACINELLO

with it, and paralyzing his vocal cords in the process. He went from poker-straight posture to question-mark contrapposto, and began his new life of chronic pain and decreasing mobility. For months he had to spend 18 hours a day lying down, attached to a feeding tube pump. His only companions were the television and that bird feeder. And unlike Wicked Tuna and The Western Channel, the feeder didn't show reruns.

Derry had always liked birds. We talked about them at school, where a comically large flock of killdeer would ebb and flow across the gravel lot while we tried to back between cones. He kept chickens off and on for years, and seemed inordinately attached to them. And when he finally let me in his house, he would show me the feathers he had collected on his walks in the woods. The gift bag of food seemed to have broken him, and he began to let me visit and bring him odds and ends. Usually he just asked for some beer, or Kleenex, or more birdseed. One day I brought my field guide so we could identify the birds that came to his feeder. He was so tickled I gave it to him for his birthday.

He was not an easy man to help. The depression that comes with chronic pain would lead to strings of snarky texts. Why didn't I visit more? Why didn't I leave him the f*#$% alone? I'm out of f*#$%^& bird food! And then, suddenly the clouds would break. "Oh my! I've got a red-headed woodpecker on my feeder!!" And then, "My woodpecker is back. Been there for at least ½ hour!!! A shame because I haven't refilled feeder. Friggin' sparrows have almost cleaned it out. Lol" [1]

He loved goldfinches especially, so I got him a thistle feeder.

"I had all 3 flavors of my birds yesterday at one time!" [2]

I bought him a suet feeder to try and bring in more "peckerwoods," his second favorite. After I hung the suet cage, it stormed for three days. I got a tirade of texts about my d*#@ feeder scaring all his birds away. There was no use arguing; I just had to wait for the sun to come back out.

"I'm so happy!! The cardinals are enjoying the suet with vigor!"

"Huzzah!"

"Ten to the four!"

The birds were the best show on television. He recounted their antics to me like a soap opera. There seemed to be two female cardinals and only one male, and that caused endless speculation. "That god*@#$

1 It was probably a red-bellied woodpecker.

2 Probably goldfinches, cardinals, and since sparrows did not count as birds to him, a titmouse.

Northern cardinal, male,

sparrow was back, chasing the other birds away and stuffing his d*@# face." One day a flock of muscovy ducks waddled up from the river (who knows where they had come from), and he called every animal control number he could find and then me, terrified that they'd be hit by cars.[3] Every goldfinch was a revelation.

He lived alone in the country, near the river, with a yard surrounded by forest. It was a dangerously isolated place for someone so frail to live. But it was where his stuff was, and where he wanted to be. And it was a good place to watch birds. If we saw a hawk, he would burrow into his mounds of stuff and bring out a military-grade scope. If I pointed out a towhee under a hedge in his backyard, the next time I visited I would see seeds and cereal spread beneath it.

Relentless rotations of chemo, radiation, pneumonia, hospitalization, exhaustion, and depression wore on him. He grew less mobile, could spend less time walking in the woods, then walking, then standing. He stubbornly refused nearly every form of help I offered—notable exceptions being beer, lawn-mowing, and bird-feeder filling. I was not qualified to judge the depth of his need, nor to fill any corner of it with relief. I could rub his back when it spasmed under his surgery scars, I could drive him to the pain clinic, and I could listen to his stories. When I wheeled him into his doctor appointments, they asked

if I was his caretaker? Family member? We settled on the title of honorary niece. The nurse would nod uncertainly, and we would settle into the waiting room, where, on my phone I would show him bird videos on YouTube to distract him from the pain while we waited for his medication refills. He somehow found the strength to compliment the backside of every nurse who walked past, and once again we giggled like schoolchildren.[4]

When Derry passed, I brought the feeders I had given him home and hung them in a corner of my backyard. The birds ignored them. I put the field guide, which now smelled close and smoky like Derry's house, on my mantel and ignored it, too. The world was gray with winter, and the birds and I felt like brooding. He didn't make it to his 60th birthday. His fridge was full of rotten food I'd bought him that he hadn't been well enough to eat. I left him alone too much. I should have checked on him sooner. Surely I could have crammed another d*@# bird feeder in front of his window. Something.

But like everything, brooding gets old. It matures from the heavy immobilizing cloud into the tidal pangs that color life but let you move through it. One day I leafed through the old field guide and found all of Derry's feathers tucked into the pages, each next to the plate of the bird he thought they belonged to. I finally got around to resituating the feeders in the center of my yard, and the birds stopped ignoring them at once. In a rush of vitality, they coursed out of the ether and into my world, continually surprising me with the variety my little neighborhood plot can sustain. And every time—really, every freaking time—I see a new bird I think, "Derry would be so happy." Then I think, "Derry would think I'm a sap."

But I'll be damned if the first time I saw a goldfinch in my backyard—not in a field, or in the countryside, or any of the hundreds of places I'd seen them before—it wasn't a f*@#$%^ revelation.

Katie is a bird-watching dilettante from Morgantown, West Virginia. She has been a singer, a philosopher, a truck driver, a bicycle mechanic, and currently sells Farm and Business Insurance. Go figure.

*3 "The dumb f***s are just laying down in the road!"*
4 Despite his trach tube, and in spite of chronic walking pneumonia, he would take a deep breath, and propose to the pharmacist in a whisper. She would laugh and he would turn to me, "You tell her—tell her she could do worse."

BY BRUCE WUNDERLICH

Gear for Birdtography

Bruce and his rig.

Ansel Adams once said, "The single most important component of a camera is the twelve inches behind it."

I think the point Adams was trying to make was that no matter what camera you are using, the photographer behind the camera makes the most critical decisions that determine the outcome of your images. I often have been asked, "You take great pictures; what camera do you use?" Or sometimes people will say, "That's a great photo! You must have a great camera." Sure, we all want top-of-the-line camera gear for our birdtography, but that doesn't ensure that we take award-winning photographs. I wish it were that easy, but you don't need the most expensive gear to capture great bird images.

While the gear is essential, knowing how to use it is even more important. But since I have been asked so many times about what equipment I use, this column will answer that question, and why I have chosen my equipment.

Northern harrier, female.

BRUCE WUNDERLICH

Lenses

Let start with the glass. Most professional photographers will tell you that good lenses are more important than a great camera. Do you need an expensive prime lens to take great bird images? Fixed-focus lenses generally contain higher-quality glass, and so produce sharper images than zooms. While we would all love to shoot with prime lenses, exceptional photos can be created for a fraction of the cost. My go-to lenses for birds are the Tamron 150–600mm G2 (retails for around $1,300) and the Tamron 100–400mm (retails for about $800).

When I first started photographing birds, I was using a 70–300mm zoom lens. Zoomed to 300mm, it is sometimes possible to get close enough to birds for a satisfying image, but it's not easy. A smaller lens like that, or like the Tamron 100–400mm, can be excellent for photographing birds at your backyard feeder. For birds in the wild, however, even the magnification provided by a 600mm lens is not always enough. If I have good light on birds just a bit too far away, I will also use a 1.4 teleconverter with my Tamron 150–600mm, expanding my reach to 850mm.

Tripods

While the Tamron 150–600mm lens is not as heavy as a big, 600mm prime lens, it still can

Red-breasted nuthatch.

be difficult to hold steady for an extended length of time. So, a good, sturdy tripod is an essential tool for bird photography. My tripod is the Induro CLT303L Classic Series 3 Stealth carbon-fiber tripod. When choosing a tripod, make sure it's rated to hold the weight of your camera and your heaviest lens. Also, make sure it is tall enough to put your camera at your eye level without extending the center post. Some tripod manufacturers list their tripod's maximum height as the tripod height with the center post fully extended. Raising the center post adds instability to your tripod and does not take full advantage of the support you are looking for from the tripod. Look at the specs closely before buying a tripod, and verify the height with the center post down. My personal preference are tripods with twist-locking, rather than latching, leg extensions for easy setup and durability.

Gimbal Head

The key to using a tripod for bird photography is the tripod head. If you are serious about bird photography, you would be wise to invest in a quality tripod and a gimbal head. Most long telephoto lenses used in birdtography are

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Northern pintail, male.

simply too heavy for extended handheld shooting. A gimbal head is designed to support a camera and lens as they rotate around their combined center of gravity, providing for nearly effortless lens movement, which is particularly useful when tracking moving birds. With a gimbal head on your tripod, you can quickly move your camera to track the bird's movement left and right as well as up and down. Conventional tripod heads don't operate so smoothly or responsively, especially when they bear the weight of a long lens. I use the GKJr Katana Pro gimbal tripod head made in the USA by ProMediaGear. This smooth-working gimbal is well constructed with aircraft-grade aluminum alloy, and it weighs only 2.4 pounds. Its sealed ball bearings make for the smoothest-moving tripod head I have ever used.

One of the most significant advantages of using a tripod and gimbal head is that it allows you to position your camera ready to shoot with minimal movement, so as to avoid scaring the birds with the motion of bringing your camera up to your eye.

Blinds

Sometimes the only way to get close to the birds is to be hidden from them. When I am engaging in bird photography, I usually wear camo or earth-tone clothing, avoiding bright colors. (I will wear a bit of bright orange during hunting season.) In general, anything I can do to keep from alarming the birds, or even to make myself nearly invisible to them, will allow me a closer vantage. I also carry a camo blanket and a pop-up camo-print blind—like a small tent—in my car. When it comes to blinds for photography, be careful to choose one that has room for you to sit comfortably and have your camera on a tripod at eye level.

And the Camera?

My go-to camera for birdtography is the Nikon D850 DSLR, which is a full-frame camera with a 45.7 megapixels sensor. This camera has performed well for me in low light, and the large sensor gives me plenty of room for cropping images in post-production while retaining image sharpness. My backup camera is the Nikon D500 DSLR. The D500 is a crop-sensor camera with a 20.9-megapixel sensor, and has also given me some satisfying images. There are many fantastic cameras on the market today, and most will deliver excellent bird images—if you learn how to use them. I shoot with the Nikon D850 and D500 because I started out using Nikon cameras, so all my lenses are Nikon mounts. I have to admit that some of the new Canon mirrorless cameras are piquing my interest, but as I write this column, I haven't investigated them fully.

BRUCE WUNDERLICH

The Most Important Equipment

Is this a complete list of all the gear I use for birdtography? No, but it includes the essential pieces.

What is *the* most important piece of equipment for birdtography? It's the brain! All cameras and camera gear have limits, but the brain is infinitely creative. Use your mind and keep experimenting. Learn from everything you do, including from your mistakes and failures!

Bruce Wunderlich is the production director and a contributing photographer for Bird Watcher's Digest *and* Watching Backyard Birds. *His award-winning photography has appeared in numerous publications. Follow Bruce on Instagram @ Bruce_Wunderlich.*

TRUE NATURE

BY JULIE ZICKEFOOSE

A male Baltimore oriole enjoys a bath.

My Search for the Perfect Bird Bath

I have spent the summer and fall of 2021 thinking about water and small birds. It would be fair to call it an obsession, a quest. And that quest is to build a better bird bath. I believe that, of all the attractants we can lay out for birds, water is the most elemental and has the widest potential to bring in the most species: woodland birds that have no use for feeders. Anyone can attract a titmouse, finch, or sparrow with food. But water? Water brings in the warblers!

Hear the author read this article in our digital edition!

My pivotal encounter with a wild bird—the one that sparked my passion—was with a blue-winged warbler bathing in a shallow forest pool in a five-acre woods behind my childhood home in Richmond, Virginia. I was attracted by the sound of its fluttering wings, and I crawled close enough to see, naked-eye, the fine black bandit mask on its chrome-yellow face. I didn't yet know what I was seeing, but I would rush to the library to find out. I was eight years old when it all clicked into place in my mind. It would be birds that I had to know more about, birds—especially warblers—

Bay-breasted warbler.

JULIE ZICKEFOOSE (2)

that moved me, from that shining moment on.

And I remember so vividly hunkering down near a forest pool at Rancho Naturalista, in the Central Highlands near Turrialba, Costa Rica. Though it's been decades, I can still see the gleaming white outer tail feathers of a purple-crowned fairy shuffling and flashing like a deck of cards as the big hummingbird dipped straight down into a clear, shallow forest pool, rose up, did a quarter turn, then dipped again. And again, until it had completed a circle by quarters. And when the fabled snowcap arrived to bathe, the whole world stopped and my ears rang. This tiny mote of amethyst with a white diamond on its forehead dipped, turned, and rose, dipped, turned, and rose. It was just a little pool in a forest stream, but it held a most powerful magic, one that played out every afternoon when the fairies of the cloud forest came to refresh themselves.

And so, through the years, I've sought to recreate these experiences in my own garden. Back in the late 1990s I was sent a small, rectangular molded-plastic pool, meant to look like granite, that was equipped with a pump that recirculated water from its basin to a fountain

Rose-breasted grosbeak, male, at the Magnificent Bird Spa.

only four inches high. It was very lightweight; the basin was only two inches deep, and the surface was nicely irregular. The manufacturer, Avian Aquatics, a fine company now long out of business, wanted me to try it out and give feedback on its performance. I placed the little pool in my shady flower garden, surrounded by cardinal flower and columbine. The constant trickle and splash of the recirculating water drew goldfinches within an hour, and we were off to the races.

The tiny pool had some issues, primarily stemming from the low volume of water it held. With less than a gallon to spare, birds bathing enthusiastically could splash it nearly dry. Nightly freezing in springtime was an issue. I found, thanks to the high traffic, that I needed to scrub and refill it every morning. But the birds were hooked on it, and so was I. I had a pair of indigo buntings all that July and August who arrived to soak each afternoon at 3:10 sharp.

Perhaps because it was so small and nonthreatening, juvenile birds seemed to find the bath irresistible. I started a list, because it was just too good. I added prairie, bay-breasted, Tennessee, and blackpoll warblers; chestnut-sided and black-throated blue warblers; red-eyed, white-eyed, and yellow-throated vireos, and then an immature mourning warbler. I'd never seen anything

A blue jay, a mourning dove, and a rose-breasted grosbeak at the spa.

JULIE ZICKEFOOSE (2)

like it. Bath bird No. 25 that fall was a Lincoln's sparrow. Over the next few falls and springs, it became clear that this bath was a Lincoln's sparrow magnet. It just goes to show you there's a parade of rare migrants slipping through unnoticed—until you offer them trickling water! Perhaps the very things that made it so labor-intensive—its small size and volume—are what made it so attractive to the small warblers and sparrows.

Thanks to this little recirculating pump and pool, I was sold on moving water as a bird attractant. It wasn't long before I moved up to the Magnificent Bird Spa, a circular bird bath with recirculating pump and an eight-gallon reservoir beneath it. At the time I bought it—almost 30 years ago—it represented quite an investment, priced north of $300. But I had a feeling it would be a game-changer in my bird-attracting efforts. The whole thing is shaped like a big flowerpot with a saucer on top. Water bubbles up out of a flat, rocklike fixture in the center, from a small recirculating pump in the reservoir below. The eight-gallon reservoir gives me a few days' grace period between thorough scrubbings and refills. Like the tiny Avian Aquatics fountain, it is spectacularly popular, which means it gets dirty fast. And it's a rather big deal to clean and refill. It takes me a good 25 minutes of scrubbing with a wire brush,

A chipping sparrow and a Swainson's thrush enjoy the bird spa.

Comet cleanser, and a running hose to get it sparkling clean and fit for use again. In the hot summertime, I do this every four days without fail. My Magnificent Bird Spa is still in service, but I dread the day that big reservoir, made of brittle fiberglass, resin, and concrete dust, cracks and disintegrates, or the day that I accidentally drop the basin and bust it to smithereens. At the first hint of freezing weather, I drain it, clean it one last time, and hustle it away to the garage for the winter.

Like the Avian Aquatics fountain, the Magnificent Bird Spa has long been out of production, and I'm sorry to say there is nothing remotely like either one of them now available. I get inquiries from people every time I write about the spa. I've been looking for something like it for a couple of decades. I haunt garden centers and wild bird stores, but I've found nothing I want to take home. Garden center offerings tend to be wickedly expensive, terribly heavy, too deep, too cute, or all of these at once. I don't want a sculpture of a little girl, a cartoon frog, or a fat concrete Tweetybird on my bath. All I want is something that imitates the shallow forest pools that throw light

JULIE ZICKEFOOSE

in my memory. It needs to be simple, unostentatious, easy to take apart; easy to clean and put back together.

And, because I couldn't find one, I set out to create my own bird fountain, building on what I'd learned from these two wonderful products—and from the birds themselves. I drew on my understanding of bird psychology to make the fountain as inviting as possible to smaller birds like warblers, vireos, tanagers, and even kinglets. Over the summer of 2021, I sourced parts and assembled a recirculating bird fountain that exceeded my highest expectations for the birds it might attract. The more I fine-tuned it and watched the birds respond, the more I realized that I had something really special. Those who follow my social media accounts know that I post freely about the things that bring me joy. There's not much I've done around the place that has delighted me more than this little contraption, but despite a growing clientele of terrific birds at the new fountain, I have published not a single photo, written not a word. I guess I was keeping it to myself until I got it just right.

Space constraints won't permit me to explain how to build this fountain here. I think it's best conveyed in an instructional video: a new venture for me. I had a blast making the video; it was like inviting everyone to my backyard! I've created a PDF to accompany the video, with photos and instructions for exactly what you'll need to build the perfect bird fountain. Because of the work I've put into my invention, there's a modest fee to access the video and PDF. (I no longer have a publisher for my books, and haven't been able to give public lectures, so it was high time to get creative and diversify.) I think you'll enjoy the video, and I can guarantee you'll have lots of fun making your own bird oasis at a very reasonable cost. The whole thing can be constructed without tools for under $60, but oh, the bang for the buck! I hope you'll be intrigued enough to check out my bird fountain, which I named the WarblerFall, and treat yourself to a parade of small, happy bathers in your own backyard. Find out more at **warblerfall.com**. Thanks for taking a look!

Julie Zickefoose is a naturalist, artist, and author of five books, the latest of which is Saving Jemima: Life and Love with a Hard-luck Jay. *Find out what she's up to on Instagram, Facebook and her blog,* ***juliezickefoose.blogspot.com****.*

'Virgin Births' and Reader Observations

By the time you read these words, you will likely be aware of those so-called "virgin births" of two California condors. It was all over the news and the internet. I cannot resist making a comment on the event, however, if only because I have been making jokes about parthenogenesis for more than two decades in my "How Birds Do It" talk, which I have given at bird festivals all over North America.

In the presentation, in the section on avian mating strategies, e.g., males with harems, females with harems, females raising young unassisted by males, all certainly involve copulation between the sexes. I show a PowerPoint slide of a tom turkey with the caption, "Whatdya mean…you don't need me anymore…" I refer to the somewhat rare phenomenon of some breeds of domestic turkey in which the females, without a mate, can produce not only fertile eggs but ones capable of hatching offspring. I was never able to explain how it can happen, but this recent observation of parthenogenesis occurring not only in wild birds but also in a large-bodied endangered species—the California condor—is encouraging scientists to take a much closer look at the phenomenon of "immaculate conception."

In case you missed it, here is the story of the condors in a nutshell...errr, eggshell. Perhaps no other bird species on Earth has been watched and tracked by biologists as much as the California condor. Once down to a mere 22 individuals left in the wild on the entire planet, all of them were trapped and placed into a captive breeding and reintroduction program. Naturally, the mating success of each individual was recorded in a studbook: mates and matings, production of offspring, release into the wild, and so on.

DNA paternity tests are now routine with almost all captive breeding projects involving endangered species, and Califor-

BRUCE WUNDERLICH

California condor 54 hatched in 2004 and lives in the wilds of Arizona.

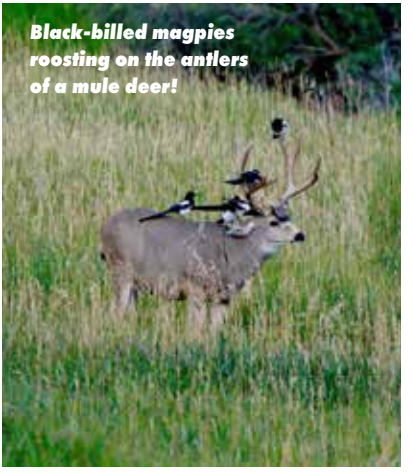
nia condors are no exception. When examining condor DNA data recently, the biologists got a wee surprise upon discovering that two condors, SB260 and SB517, had not been sired by a father and instead had acquired all of their DNA from their respective mothers. After considering various explanations, the biologists could settle on only one option: the two female condors had basically fertilized their eggs without sperm from a male.

Now, as someone who actually did his master of science research on the artificial insemination of falcons, American kestrels to be specific, I had discovered that the females of these small raptors have the ability to store sperm in their oviducts for up to 12 days. At that time, I also knew that larger birds, like domestic turkeys, could achieve even longer periods of sperm storage—around 30 to 35 days. So, I immediately wondered whether these two female condors had miraculously stored sperm in their bodies from some earlier copulations with male condors. But I also know that DNA paternity tests do not lie. Neither of these two "virgin-produced" male offspring had DNA in their genetic makeup to indicate that they were produced from copulations between their respective mothers and any males whatsoever.

Apparently, parthenogenesis also occurs in chickens (as frequently as 40 percent in one variety bred specifically for that purpose), and it has been documented in lizards and snakes, as well as sharks, rays, and other bony fish, in both captive and wild environments. Not in mammals, though, because we need both a sperm and an egg to join to produce an embryo.

To be honest, parthenogenesis is not the best way to be born or hatched. Neither of those two male condors lived very long; one was small even as an adult, and the other had spinal and related walking issues. Whether these problems resulted from their origin will never be known, but suffice to say that many creatures conceived this way, known as parthenotes, experience health and survival issues—which is really a shame. Wouldn't it be incredible if many of the females in today's population of 500 condors could just produce healthy young without all that courtship effort and chance of infertility?

Because genetics was not one of my best subjects in university, I will not endeavour to explain how parthenotes are produced. However, if you wish to read more about parthenogenesis and its occurrence in the California condor, I highly recommend that



NEAL HUTCHISON

you peruse an excellent article on the subject by Sarah Zhang in *The Atlantic*, **tinyurl.com/CaCo-parthenogenesis**.

Reader Observation

A dear friend of mine, Neal Hutchison, living in Fernie, British Columbia, hung up his rifle a few years ago in favor of a camera and is now using his well-developed patience and incredible eyesight to take some great pictures of wildlife in the Kootenay Valley. On a recent visit with him, he showed me an amazing photo of a male mule deer adorned with several black-billed magpies on its antlers. He suggested to me that the birds were likely consuming the very fine and soft membrane called velvet, which eventually dries out and is sloughed off. Neal further explained that deer at this stage commonly rub their antlers on small saplings to shed the velvet.

Comment

I had never heard of magpies perching on the antlers of deer previously, so I perused the *Birds of the World* species account published by Cornell Laboratory of Ornithology to learn more about it. Surprisingly, while I discovered that these highly intelligent corvids are extremely opportunistic foragers, eating everything from dog feces to pheasant eggs, I could find no mention of them consuming velvet from deer antlers in the account. I was aware, of course, of their penchant for perching on the backs of large ungulates such as moose and deer to eat large numbers of ticks and other ectoparasites. With some further research, I learned that the velvet being shed from deer antlers is supplied by a rich supply of blood and nutrients in the form of phosphorous, calcium, and protein. And thus, Neal is totally correct in surmising that the clever magpies were specifically consuming the velvet as a valuable food source.

Correction

In my September/October 2021 column, I wrote the following: "According to studies, the chisel-like bills of average-sized woodpeckers hammer into wood at the rate of 16

times a second—that's nearly a thousand blows a minute! Some liken the rate of fire of a woodpecker to a machine-gun, a sound that thankfully 99.99 percent of us are familiar with only on our TV and movie screens. But not just as fast as a machine-gun—doubly fast! That is an impact velocity of about 1,300 miles per hour! In short, the bird's head travels more than twice the speed of a moving bullet."

Well, those words caught the attention of Hans Laue of Parksville, British Columbia, who defines himself as both a bird watcher and a physicist. This is what he wrote to me: "Assuming that a woodpecker's bill moves 5 cm (roughly) when hammering into a tree, for a total of 10 cm for the in-and-out motion, hammering 16 times per sec means the tip of the bill moves 16x10 cm = 1.6 m per sec. So, the average speed of the tip is 1.6 m/s. Ignoring pauses between strikes and assuming a constant acceleration during each strike, the speed on impact would be 2x1.6 m/s = 3.2 m/s or 3.2 x 3.6 = 11.5 km/h = 7.2 mi/h, not 1300 mi/h as in the article. 11.5 km/h is twice the speed of a fast walker, roughly. I guess the beak's quick ham-

mering does not translate into a greater speed because the distance moved is not that great."

To his added credit, Hans provided even more detailed calculations in a later email, which are much too complex to repeat here.

He also added this comment: "Obviously, it matters a lot how hard the wood is. For soft or rotten wood, which often seems to be the target of woodpeckers, the stopping distance may well be greater than 1 mm. I have seen pileated woodpeckers cause sizeable pieces of wood to fly. If the sizes of those pieces are indicative of the stopping distance, then in those cases the stopping distance could be several cm."

Comment

Normally, I do not like to parrot the interpretations of other writers without examining the actual published study in a peer-reviewed journal. I tried mightily to find the original study in this case, but without success. And I have to admit that at the time I was totally convinced that a bird's beak could indeed travel at "twice the speed of a moving bullet." Moreover, that report had been repeated on several science-based websites. However, after Hans's email, I looked a wee bit harder and at least managed to connect with the scientist who had done the study, Dr. Sam Van Wassenbergh of the University of Antwerp in Belgium. It turns out that he has not yet published the woodpecker bill-speed data. I passed on Hans's calculations to him, and here is his response: "Hans will be close with his estimate of 3.2 m/s. The fastest I measured was around 7 m/s for a black woodpecker, but during drumming I expect the hits to be slightly less violent and thus lower speed. But it is still very impressive to see them hit the tree at a typical bicycle rider's speed!"

I am very grateful to both Hans and Sam for setting the record straight and teaching me not to believe everything I read on the internet even if it is often repeated. In my defense, I can only say that while genetics was not a strength of mine, I almost failed physics in high school, and it also prevented me from becoming an automotive engineer to design and drive racing cars. And…you know something? That was a good thing. Watching birds and writing about them is a much safer activity!

David M. Bird is a retired professor of ornithology. Visit his website, ***askprofessorbird.com****.*

Birding Newfoundland's Terra Nova National Park

A spring visit to Labrador and Newfoundland, Canada's easternmost province, can be enigmatic to visiting birders. Daybreak occurs well before 4 a.m., and daylight lasts beyond 9 p.m. One day might be foggy and rainy, the next sunny with a welcome 65 degrees. Although much of the province has a latitude similar to Paris and Vienna, its boreal landscape is stark and stunning.

Newfoundland's coastline and heartland are full of contrasts. You'll encounter hundreds of fjords and sounds that shelter tiny fishing villages, rolling hills studded with rocks and arctic tundra, bogs and barrens encircled by stands of stunted black spruce, and landscape dotted with countless pristine lakes and brooks. Avian species that travel the Atlantic Flyway to their northern breeding grounds will find a rich habitat across Newfoundland.

Birders come to Newfoundland to enjoy the return of songbirds racing to breeding grounds along the brushy riverbanks of the wind-swept North Atlantic landscape. And, they come to see one of the largest seabird rookeries in the Maritime Provinces at Cape St. Mary's Ecological Reserve near the village of St. Bride's, roughly 100 miles (160 kilometers) southwest of the capital at the tip of the Avalon Peninsula. Here, 70,000 seabirds swirl about the coastal cliffs, where nearly 12,000 pairs of northern gannets breed

and nest atop rocky promontories. Visitors can watch and photograph this amazing scene from an eye-level vantage point just yards away from the gannet colony. Nearby on rocky ledges and outcrops, thousands of common and thick-billed murres, razorbills, and black guillemots huddle together, nesting side by side.

But the seabird extravaganza is only one of Newfoundland's springtime pleasures.

Birders also head to Terra Nova National Park, roughly 170 miles (270 km) northwest of Newfoundland's capital, St. John's, on the Trans-Canada Highway (T-Can). Terra Nova is the perfect spot to begin your search for boreal species and migrants that arrive after a long flight to stake out a breeding territory among the bogs and wetlands of far eastern Canada. You'll hear wonderful songs from species that pass quietly along the East Coast of the United States, searching for the perfect breeding spot among the park's many brooks and rivers as their springtime serenades reach a crescendo.

Many of these songbirds have flown tremendous distances from Central and South America on their migratory flights to reach

ADOBE STOCK (3)

Blackpoll warbler.

their northern breeding grounds. Blackpoll warblers, a common spring species in the spruce and fir forests of the park, have one of the longest migratory flights of all wood warblers, roughly 1,800 miles (2,900 km) from northern Brazil.

Terra Nova, a 99,000-acre preserve located across Clode Sound from the Bonavista Peninsula, has a bird checklist of more than 380 species that includes five woodpecker and fifteen warbler species. The park's diverse species also include several flycatchers and vireos, white-winged crossbills, Lincoln's sparrows, and American woodcocks.

To plan for a visit to this large park, go to the website of the Heritage Foundation of Terra Nova National Park at **hftnnp.ca/map** and download a detailed PDF version of the park map. This map will help you find sites noted below, ones that are highlights of the park. Once you reach the park visitor center and headquarters, talk with park staff, which includes several keen birders who can let you know which species have already arrived, which new arrivals to watch for, and the most active areas to visit in the park.

The Trans-Canada Highway bisects the park and gives access to various trailheads, campgrounds, and areas of Terra Nova where you'll find good birding spots. In general, the northern half of the park seems to have more deciduous trees, which draw greater numbers and a wider variety of species. You'll find dense alder and willow thickets along many of the pathways and roadsides, natural magnets for warblers and boreal residents. During an early spring visit, you'll see a variety of lichensand mosses, including the unique caribou lichen, an ivory-colored lacy ground cover along trails and treeless bogs.

Birding at Water's Edge

Shortly after entering Terra Nova National Park on T-Can, you'll see a sign for Dunphy's Pond Trail pointing west to the southern edge of the park. While the trail is roughly 6 miles (9.6 km) round-trip, if you take a short walk along Dunphy's Pond Trail, you soon see Juicey's Pond, where you're likely to find several warbler species around the pond's edges. However, your time might be better spent at Sandy Pond,

just over a half-mile (0.8 km) farther north along T-Can.

The Sandy Pond Trail is a roughly 2-mile (3.2-km) loop, an easy trek around a picturesque pond with several spongy bogs along the way. While mainly a black spruce forest habitat, alder thickets along the pond edges draw yellow-rumped and magnolia warblers, ovenbirds, and hermit thrushes to forage among them. Sandy Pond is a popular summer playground with a boardwalk and boat rental, but concessions are closed until the first week of July, so you'll be undisturbed during a June visit.

For a great panoramic view of Newman Sound and the rolling hills of Terra Nova, drive straight across the T-Can from Sandy Pond and head to Ochre Hill Trail. The trail, a 2 ½-mile (4-km) linear easy walk, will give you a taste of the boreal forest, which you'll experience at many points along the park's trails. Beyond Ochre Hill Trailhead, walk uphill to the end of the gravel road. The 360-degree view is just a few feet from the parking lot, atop some large flat rocks.

You'll find a premier birding spot not far away at the village of Terra Nova on the banks of the Terra Nova River. Driving north from Ochre Hill, watch for a junction and sign that points due west to Terra Nova village, a destination with clusters of

Newfoundland and Labrador

Newfoundland and Labrador is the easternmost province of Canada. Its compound name is derived from the island of Newfoundland and the continental region of Labrador. Labrador has been part of Newfoundland since 1809, but its border with Quebec was disputed until 1927. In 1948, Newfoundland became the tenth Canadian province, and in 2001, the province was renamed to Newfound and Labrador, abbreviated NL. About 94 percent of the province's population lives on Newfoundland, but 71 percent of the province's landmass is in Labrador.

Ovenbird.

JIM BURNS (2)

summer cottages. The distance from T-Can to the village is 10 miles (16 km), the first 5 miles of which are gravel. Approaching the village, note a huge sand dune where vacationers zip downward on cardboard sleds.

After descending a hill into town, take Loop Road to the bridge that spans the river. You are at the site of the Trans Canada Trail, a continental pathway that starts near St. John's, Newfoundland, and continues to Inuvik, Yukon, near eastern Alaska. In Terra Nova, the trail is an old railbed that has been transformed into a hiking and snowmobile pathway.

The spruce and fir trees, alder thickets, and other vegetation on both ends of the bridge will give you plenty of birding action. In early June, the calls of songbirds defending territory and attracting a mate are nonstop. One crisp morning amid the chasing and singing, I watched pine grosbeaks, fox sparrows, and purple finches hopping among the treetops while calling in all directions. A Wilson's warbler and a yellow warbler doggedly chased each other through the thickets

If you go...

A good home base to explore Terra Nova National Park is Glovertown, a small town north of the park that has grocery stores, gas stations, restaurants, a bank, and ATMs. For lodging, find motels at **glovertown.net/tourism/accommodations.aspx**. Robin's Donuts is a local favorite eatery.

Cape St. Mary's Ecological Reserve hosts many thousands of seabirds along Placentia Bay southwest of St. John's. Nearest lodging to the reserve is located at the village of St. Bride's, only about 5 miles (8 km) from the seabird colony. St. Bride's has a restaurant and a convenience store with gas pump. The solo restaurant, Da Bird's Eye, serves homemade specialties, especially fish 'n' chips. Two modest lodging options are: Capeway Inn (**thecapeway.ca**, 709-337-2028) and Bird Island Resort (**birdislandresort.com**, 709-337-2450).

A very helpful trip-planning resource is available at the Newfoundland tourism website, **NewfoundlandandLabrador.com**. Request or download a free copy of the most recent Traveller's Guide and a Traveller's Map.

Air Canada, Delta, and United Airlines offer flights to St. John's from several US cities.

Car ferry service is available from North Sydney, Nova Scotia, to Channel-Port-aux Basques, Newfoundland, and a seasonal service is available from North Sydney to Argentia (closest entry to Cape St. Mary's Ecological Reserve to view seabird colonies). Find schedules and rates at **marine-atlantic.ca/en/index.asp**.

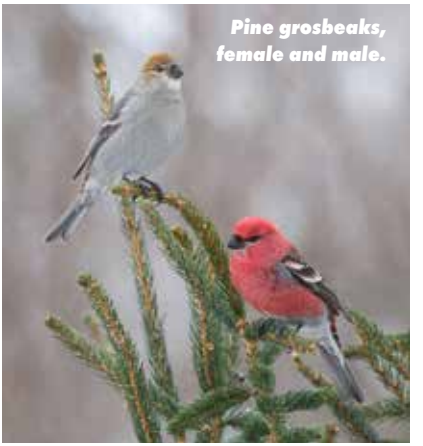
in a territorial showdown.

Walking along the riverbank, covered with thickets and spruce, you'll surely have an abundance of Wilson's, yellow, magnolia, palm, black-and-white, blackpoll, and yellow-rumped warblers, with a sprinkling of fox sparrows, boreal chickadees, kinglets, American goldfinches, tree swallows, and, perhaps, even a rusty blackbird.

Just before reaching the park's visitor center and Newman Sound campground, watch for a burn area on the east side of the road. A forest fire destroyed the spruce-fir forest roughly a decade ago, and the site has slowly recovered with vigorous stunted new growth. Just past the burn area, watch closely for a turnoff to a small parking lot. Here, you can walk the pathway through the bare trees to search for woodpeckers.

Although nowadays there might be slight signs of birdlife, in the past all six woodpecker species on the park's checklist have been found in the burn area, including American three-toed and black-backed. You'll cross a gushing stream laced with alder thickets and blooming northern willow-herb and might spot a hermit thrush or yellow warbler along the way. The path through the burn area is about a mile (1.6 km) in length.

Probably the best spot to begin birding and exploring Terra Nova National Park is at the Newman Sound visitor center, campground, and warden station, 24 miles (39 km) north of the park entrance. The campground complex is a major destination for visitors and has many amenities.



Pine grosbeaks, female and male.

BILL MCDONALD

Expect to spend some time on the Coastal Trail that skirts a portion of Newman Sound, especially the section north of the campground. Accessed at the end of the campground road, if you walk northward on the trail, you'll find several spots where small brooks flow into the sound and birding can be quite lively in the early morning hours. A stroll through the campground will usually bring several species such as boreal and black-capped chickadees, Canada jays, and singing black-throated green warblers.

Northern Terra Nova Sites

While much of the park is nearly inaccessible wilderness without roads or trails, several great bird-

Boreal chickadee.

ing spots are easily found within the park. Two you'll want to visit are Southwest Brook and Louil Hill trails. A third, the Terra Nova River bridge near Glovertown, is north of the park boundary.

As you drive north of the visitor center on the T-Can, watch for signs for Southwest Brook Trail, a pathway that connects two picnic sites that are about 2 miles (3.2 km) apart. Both picnic sites are clearly marked on the highway. The track begins at Southwest Brook and parallels this sparkling stream for over a mile (1.6 km). Spend some time in the small meadow where you're apt to find olive-sided flycatchers and very vocal blue-headed vireos in the balsam firs and white birches, and several warbler species in the alder thickets that line both sides of the stream.

Walking streamside, you're likely to find palm, magnolia, mourning, black-and-white, yellow-rumped, and black-throated green warblers before crossing the stream and skirting Alexander Bay near the northern picnic site. The dense vegetation around the site can be especially active as birds forage amid the spongy wetlands with brushy black spruce, ferns, mosses, and willow thickets.

Near the northern edge of the national park, turn east on route 310 from the T-Can toward Maladay Head campground and the town of Eastport. Less than a mile (1.6 km) along route 310, watch on your right for the trailhead for Louil Trail. This 2 ½-mile (4-km) trail loop wanders through an old burn area with a mix of younger spruce, balsam fir, and white birch stands. You'll want to focus on the several hundred yards of the trail before it leads into the forest, where you'll be surrounded by tall and very dense alder and willow thickets as well as northern willowherb.

Early in the morning you'll be amazed at the dawn chorus of birds across this impressive alder meadow with a small stream at midpoint. You'll surely find Wilson's, yellow, palm, and black-throated green warblers, as well as plenty of northern waterthrushes, American redstarts, and singing fox sparrows.

Drive on to the Maladay Head campground, which is closed in June. Park near the entrance booth and walk uphill a few hun-

BILL MCDONALD

dred yards to the campground. The tall trees around the campsites will give you the best opportunity to find flycatchers, such as yellow-bellied and olive-sided. You might also find, or at least hear, ruffed and spruce grouse at the edges of the campground.

To find one of the best birding sites in the area, continue north on T-Can past the park boundary toward the town of Glovertown. You'll soon reach the Terra Nova River, and after crossing it, immediately turn right into a parking area next to the river. In addition to river frontage, this rich habitat includes several ponds, an open wet field, several small meadows, and lots of dense thickets and vines. A track follows the riverbank away from the T-Can, your pathway to a great morning of birding.

Most of the region's breeding warblers can be found along the river's floodplain, with most singing alongside fox sparrows, pine and evening grosbeaks, both Swainson's and hermit thrushes, as well as golden-crowned and ruby-crowned kinglets.

This is a good spot to find a belted kingfisher, swamp sparrows, and three vireo species: blue-headed, Philadelphia, and red-eyed. In the spongy open field near the T-Can, listen for the *peent*ing of American woodcocks. Wood ducks can often be spotted along pond edges, and watch for

Olive-sided flycatcher.

JIM BURNS

families of American black ducks. You can easily fill a morning wandering through the Terra Nova River corridor.

You'll find a deeply satisfying springtime birding adventure in the Terra Nova National Park region, where songbirds are easily seen and often approach at very close range. The rich boreal habitat for these breeders includes lakeshores, rivers and brooks, rolling hills blanketed with black spruce, and vast spongy bogs. These habitats have few predators and all the essentials for successful breeding in a northern latitude: dense cover, plentiful insects, and abundant water.

Jerry Uhlman is an inveterate traveler and birder. He has written two Virginia bird-finding guides and numerous magazine articles, including frequent contributions to Bird Watcher's Digest.

Cape St. Mary's Revisited

MIKE POTTER

Atlantic puffins.

More than 30 years after my first visit to Cape St. Mary's Ecological Reserve in Newfoundland, eastern Canada (described in my July/August 1994 *Bird Watcher's Digest* article), my wife, Jane, and I again experienced those renowned seabird-nesting cliffs on a 2018 trip. We enjoyed over two weeks on "The Rock," as the island is known, and Cape St. Mary's was the highlight. It was well worth the drive to its location on the Avalon Peninsula in the southeastern part of the province. We spent an entire day there, and what an immersive experience!

On arrival, we were greeted by some fog, but happily the sun broke through and stayed. Plus, there were the sounds and sights: the constant calling of many nesting pairs, and birds wheeling through the sky and plummeting into the ocean for food. The northern gannets were the highlight—such elegance, with their pale-yellow heads and blue orital rings around lemon eyes. These are large birds, with a wingspan of up to six feet. They are excellent fliers and make dramatic dives head-first after fish, sending up sprays of water as they break the surface.

At the time we were there in late June, nests were established, although few young were yet visible. There was much work being done to add material to existing sites, with grass, seaweed, feathers, and even bits of rope being carried back. There was still pair-bonding behavior, such

Northern gannets fence at their nest.

MIKE POTTER (2)

as the endearing fencing (bills rubbed together vertically) and mutual preening. There were also occasional squabbles over real estate—not surprising given the close quarters of the dense colony. An excellent, if somewhat dated, book on the northern gannet and other sulids is simply titled *The Gannet,* by Bryan Nelson. It was published in 1978 by Buteo Books, now based in Virginia, and is still available from them (**buteobooks.com**).

In addition to gannets, other species were in evidence at Cape St. Mary's. The charismatic razorbills, a member of the auk family (alcids), were intriguing, especially when one nearby raised its head and opened its large bill to reveal a salmon-colored mouth lining. Some black-legged kittiwake pairs already had tiny chicks, while others were still incubating eggs. Common murres were abundant, with a few thick-billed murres to be seen. The steep cliffs packed with so many birds made for an unforgettable sight.

After Cape St. Mary's, we made a stop to see Atlantic puffins at the well-known and easily accessible site in Elliston on the Bonavista Peninsula. There were plenty of black guillemots here, too. An iceberg or two still floating offshore notwithstanding the late date added to the Newfoundland ambience.

We headed across the island to the west coast, on the Gulf of St. Lawrence. Here was Gros Morne National Park, where

Razorbill.

I worked for Parks Canada in 1984 as a seasonal naturalist. My supervisor was Blake Maybank (since passed), a well-known figure in the birding community ofAtlantic Canada. Gros Morne is recognized for its warblers. We saw magnolia, blackpoll, black-and-white, and black-throated green warblers, as well as northern waterthrush. Even the robins are different in Atlantic Canada, and at Berry Hill Pond we saw the form with black on the nape and upper back.

Other rewards of our time in Gros Morne included great black-backed gull, common eider with young, and pine grosbeak. Rock ptarmigan is a specialty of the area, often found on the summit plateau of Gros Morne Mountain itself, but, alas, I did not see any when I made a return climb of that landmark.

Newfoundland is a large island, with an area of more than 40,000 square miles (more than 100,000 square kilometers), ranking as the sixteenth-largest island in the world and fourth-largest in Canada. And of course, there are many good bird-watching locations in addition to these few I have mentioned. Happy birding on The Rock!

MIKE POTTER (3)

Mike Potter, a former Parks Canada naturalist who began his career in Atlantic Canada in 1983, enjoys watching and photographing birds throughout North America and beyond. Visit his website at ***michaelwpotter.ca****.*

Spotted sandpiper.

Northern waterthrush.

SPOTLIGHT ON KANSAS

Except for its irregular northeastern border, the Sunflower State is a wide rectangle that includes the geographic center of the Lower 48 States (near Lebanon). The state is equidistant from the Pacific and Atlantic oceans, but numerous rivers and reservoirs provide plenty of birding habitat. The western two-thirds are considered to lie within the Great Plains, with a generally flat or rolling grassland landscape, where bison and Native Americans were once numerous. Eastern Kansas is more hilly and wooded. Despite its reputation, Kansas is not flat. Elevation gradually rises to thewest, and its highest point is Mount Sunflower, at 4,039 feet. The western third of the state has a semi-arid steppe climate, while the eastern two-thirds is considered humid continental. The state is prone to severe weather, including severe thunderstorms and an average of more than 50 tornadoes per year. The Kansas Bird Records committee claims 483 species reported in the state; eBird reports show 458.

Birding Festival

- Prairie-Chicken Festival, Hays, April 7–10, 2022, **tinyurl.com/P-CFH**

Resources

- Natural Kansas: **Naturalkansas.org**
- Kansas Birding: **Kansasbirding.com**
- Kansas Ornithological Society: **KSBirds.org**
- State checklist: **ksbirds.org/checklist/KansasChecklist.pdf**

American bison roam on the rolling plains of Kansas.

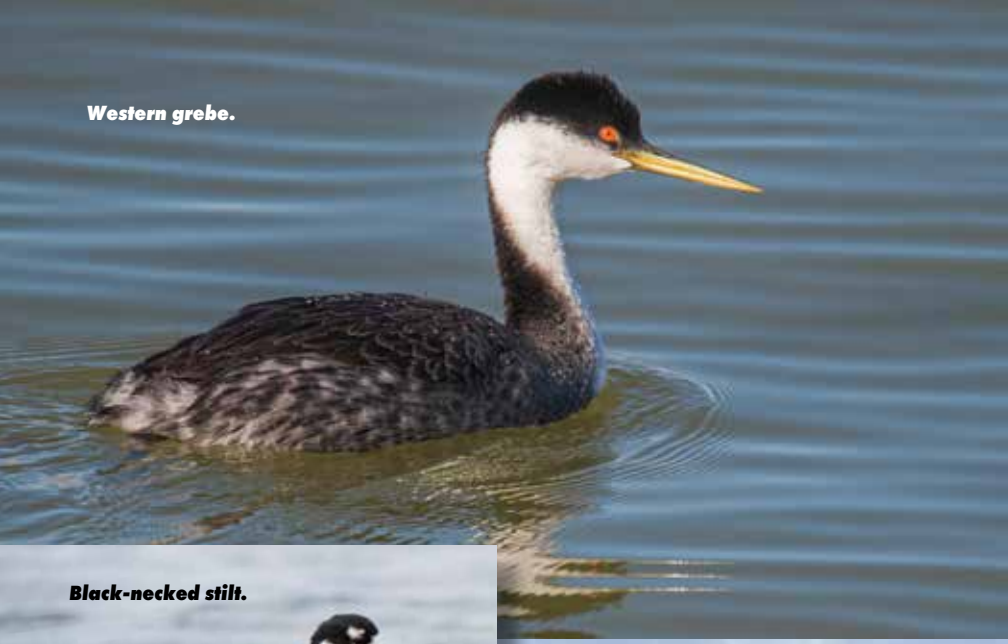
ADOBE STOCK (2)

Birding Hotspots

1. Cheyenne Bottoms Wildlife Area
2. Elkhart Cemetery, shelterbelt, and waste-treatment plant
3. Baker Wetlands and Clinton Lake, Lawrence
4. Neosho Wildlife Area
5. Marais des Cygnes WA
6. Perry Lake
7. Quivira National Wildlife Refuge
8. Shawnee Mission Park
9. Rocky Ford State Fishing Area
10. Shawnee State Fishing Lake
11. Scott State Park
12. Clark State Fishing Lake

Must-see Birds

- ❏ Geese: snow, Ross's, greater white-fronted, cackling
- ❏ Trumpeter swan
- ❏ Cinnamon teal
- ❏ Prairie-chicken: greater, lesser
- ❏ Grebes: eared, western



Western grebe.

Black-necked stilt.

Say's phoebe.

Ferruginous hawk.

- ❏ Cormorants: double-crested, neotropic
- ❏ American white pelican
- ❏ Least bittern
- ❏ Little blue heron
- ❏ Yellow-crowned night-heron
- ❏ White-faced ibis
- ❏ Mississippi kite
- ❏ Hawks: broad-winged, Swainson's, ferruginous
- ❏ Crane: whooping, sandhill
- ❏ American golden-plover
- ❏ Sandpipers: upland, buff-breasted
- ❏ Black-necked stilt
- ❏ Godwits: Hudsonian, marbled
- ❏ Gulls: Franklin's, Iceland, glaucous
- ❏ Least tern
- ❏ Burrowing owl
- ❏ Common poorwill
- ❏ Chuck-will's widow
- ❏ Red-headed woodpecker
- ❏ Say's phoebe
- ❏ Scissor-tailed flycatcher
- ❏ Bell's vireo
- ❏ Sedge wren
- ❏ Sprague's pipit
- ❏ Towhees: eastern, spotted
- ❏ Sparrows: Cassin's, clay-colored, Henslow's, LeConte's, Harris's
- ❏ Buntings: lark, painted
- ❏ Dickcissel

BRUCE WUNDERLICH (4)