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TEXAS Birds
ANNUAL

Volume 14 2018
Table of Contents

Golden-cheeked Warbler, Black-capped Vireo, Painted Bunting (Photos by Cheryl Johnson) **and Aplomado Falcon.** (Photo Elaine R. Wilson, www.naturespicsonline.com) **are all "at risk" species in need of monitoring. See article on page 33.**

Front Cover: Golden-fronted Woodpecker. Art by Lynn Delvin

EDITOR'S INTRODUCTION[1]

In the last *Texas Birds Annual* I wrote about the threats to birds from cats, automobiles and window strikes. While these are direct threats to birdlife an indirect threat, recently in the news, is plastic. The first survey of the amount and types of plastic in the Gulf of Mexico uncovered concentrations approaching the highest reported in the world. It puts the waters off Louisiana on par with the Mediterranean and Black Seas as well as the mouth of China's heavily-polluted Yangtze River. It's not as bad as the Pacific Gyre or the river of garbage recently discovered in the Caribbean but it's pretty bad.

Single use plastic is a serious threat to the environment breaking down into nanoparticles that ultimately get into the food chain. Recently in Texas Supreme Court ruling against the cities of Laredo and Austin and their plastic bag ban makes you wonder what it will take to get the plastics out of the system? Plastic bottles are a problem as well. Several years ago I participated in a Boy Scout cleanup at San Antonio's Olmos Park and was astounded that we extracted two dump truck loads of plastic bottles in only a few hours! In eleven states beverage containers have a deposit on them. This has a measurable impact on the amount of litter along their roadways and in parks. So what can we do? Here are four easy actions everyone can take.[2]

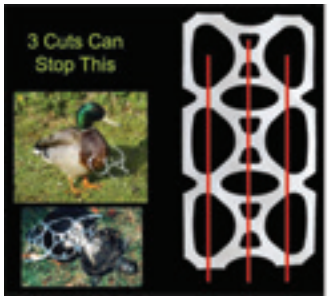
At least forget the straw
Bring your own shopping bag
Use refillable water bottles
Cut your 6 pack can holders

This issue of *Texas Birds Annual* features exciting rare bird sightings and birding events. Hopefully everyone searching for birds or enjoying such events brought their own reusable water bottle and picked up any plastic bags found along the roadways and birding trails. Not only does it look bad, but we owe it to the birds…

Happy reading…

Jack Clinton Eitniear
Editor/*Texas Ornithological Society Publications*
Email/ jclintoneitniear@gmail.com

[1] Editor's views are just his and not those of the TOS Board or organization.
[2] In 2015, plastic consumption worldwide totaled 300 million metric tons. Every piece of single use plastic we can live without helps!



PRESIDENT'S MESSAGE.....

I am sure you are well aware, 2018 has not been a good year for environmental and wildlife protections. From the delisting of the Black-capped Vireo to an interpretation of the Migratory Bird Treaty Act that weakens its protections significantly, I frequently find myself feeling helpless, hopeless and depressed. And then I go birding and at least for a while, all is right with the world. We as birders know that in addition to being great fun, birding gets us out in nature and that is good for the body, mind and soul.

Fixating on all the negative things going on in our country seems to come naturally to me. Focusing on the positive things takes some conscious effort, but when I do that, I find hope and inspiration. A few of these positive experiences and amazing people I have encountered over the last year include:

- Seeing more young members at TOS meetings – Justin Bosler and Kendra Kocab are two great examples. I know there are more young members out there, and I look forward to meeting them in the future, hopefully at a TOS meeting.
- Seeing Seth, a very young birder in Austin (~6 years old), with his parents at a Travis Audubon Purple Martin party for the second year in a row and seeing his interest in and excitement about birds and his growing knowledge of them. He is following in the footsteps of other amazing TOS members such as Jesse Huth, Delaney Kempf, and Christian Walker who were fortunate to discover birds at a young age.
- Learning about the interesting and critical research underway by graduate students and researchers such as Rebekah Rylander at Texas State University (urbanization effects on Black-crested Titmice), Dr Mieke Titulauer and Denis Perez at Borderlands Research Center at Sul Ross State University (Baird's and Grasshopper Sparrow wintering survival and habitat use), and Jim Ray with his ongoing Purple Martin migration research.
- Seeing and feeling the excitement among TOS Board members as we voted to provide financial support to these researchers, money that is made possible by the financial support of our members.
- Working with people who persevere in the face of natural disasters such Hurricane Harvey – Debra Corpora and Colleen Simpson work tirelessly to restore the habitats that were impacted by the hurricane. Martha Mcleod continues to engage her young students in nature and birds after her outdoor lab was destroyed.
- Watching Susan and Don Schaezler continue to provide a safe and amazing sanctuary for birds at Warbler Woods even as health issues make it more challenging than normal.
- Working with people like Mary Belle Meitzen who love their land and donate it to TOS to be preserved and shared with many birders.
- Working with people like Brent Smith (son of Gerald Smith of Tyler) in East Texas to donate his father's collection of bird records to the TOS archive so that this rich history of the bird life and birding in Texas can be made available to researchers and others interested in knowing more about birds and birding in Texas.
- Learning from people who have devoted their whole life to birds – Cliff Shackelford, David and Mimi Wolf, Dr Dean Fisher, Cecilia Riley, Kelly Bryan, Rich Kostecke, and John Karges to name a few. These folks have worked in

a variety of ways to help our birds, and we have all benefited from their commitment to making the world a better place for birds and birders.

(Wow! I realize I could keep going because there are many other people who have inspired me and continue to inspire me. In the interest of letting you get to the rest of the articles in this publication, I'll stop here with my examples.)

As hard as it is at times to be someone who cares about birds, other wildlife, and our planet, I am proud to be that person. I can't imagine not fighting for these things that I hold so dear to my heart. Thankfully I know many of you feel the same way. It is an honor to be a part of this wonderful community and to get to interact with and learn from so many inspiring birders and conservationists.

I don't necessarily feel qualified to give advice, but I'll leave you with a few thoughts and ask a few things of you. Never stop doing what you can to protect our birds and the habitats they require to survive. There are many, many ways of getting involved. Pick a way that works for you and engage, maybe even pick a way that challenges you to go beyond your comfort level. Step up and be a leader in the good fight. Engage and educate non-birders about our birds every chance you get. In addition to increasing your life list or your county list, see how many converts you can add to our birding/conservation family. It's a great feeling to have someone tell you how much birding has added to the richness of their life and thank you for introducing them to birds. Consciously take the time to contemplate the good things that are happening and the inspiring people in your life. Make a list of the people who have inspired you and then reach out to those people and thank them for making a difference for you. This will benefit you and the people on your list. Take respite in nature often—get out and enjoy the birds frequently, even in the summer! And remember that you are part of a group of people who care as deeply about birds as you do. You are not alone, and you do make a difference. Taking action and focusing on the people who inspire us will get us through the hard times.

I'll leave you with a quote from *The Bird* by Colin Tudge,

"Nature is wonderful – it is the center of everything – and if you take a serious interest, it changes your life. The word jargon, meaning meaningless jabbering, comes from the French for the twittering of birds. But in truth, the twittering of birds is never meaningless. The birds twitter for a reason – and it won't be a frivolous reason. As you become more aware, you start to get a feel for the reasons for things. All nature acquires meaning. You realize then that simply to be alive and aware in such a world as this is a privilege.

After that – well, life can never be the same again."

Oh, maybe one more that inspires me frequently—a poem from a past President of TOS, Lynn Barber in *Extreme Birder*,

"The meaning of each day is rarely found in words.

The essence of each day is wrapped up in its birds.

Their being and their songs, their beauty and their flight,

Days spent with birds. Days filled with light."

Now, take a break from the worries of the world and enjoy the articles about birds that follow. And feel free to reach out to those who contributed articles to thank them for taking the time to write up their experiences and share their knowledge. We can't produce *Texas Birds Annual* without them!

Shelia Hargis
TOS President
Shelia.hargis@gmail.com

ELEGANT TROGON OBSERVED AT PANTHER CANYON NATURE TRAIL

Photo Jeffrey Jackson.

By Joseph Hood

An Elegant Trogon, an extremely uncommon bird in Texas, continued in the trees and shrubs adjacent to Panther Canyon Nature Trail- Landa Park in New Braunfels in Comal County, Texas on the afternoon of February 6, 2018. It was observed and photographed for over an hour by numerous individuals as it flew short distances from branch to branch. Although it was primarily silent, I heard it call for a few seconds with a vocalization that might best be described as "clucking". I also observed it feed on ligustrum berries in a tree adjacent to the trail. Many thanks to Dennis Cooke, who first spotted the Elegant Trogon on the afternoon of 2-6-2018 as well as the numerous other individuals who have reported and documented the bird since it was first observed by Jane Azzaro on January 27, 2018.

According to the Cornell Lab of Ornithology, "Elegant Trogons are one of the most sought-after birds by bird watchers in the U.S. They breed regularly in only four mountain ranges in Arizona: the Atascosas, Chiricahuas, Huachucas, and Santa Ritas. They also are rarely reported in the southwestern mountains of New Mexico..." South of the United States, the range of the Elegant Trogon extends from northeastern Mexico in Nuevo León and Tamaulipas, south to Oaxaca ("Coppery-tailed Trogon"); and, disjunctly, from southern Guatemala south to northwestern Costa Rica ("Elegant Trogon").

In regard to the diet of the Elegant Trogon, The Cornell Lab of Ornithology states, "Elegant Trogons are omnivorous, eating mainly insects and fruit. They eat a wide variety of insects, in particular grasshoppers and caterpillars, particularly in the breeding season. Other foods include cherries, grapes, figs, chokecherry, and buckthorn. Compared to the diet of birds that frequent the upper canopy, the Elegant Trogon's diet contains a large proportion of animal matter. Trogons, especially males, forage in oak trees and fruit-bearing plants as well as dead or dying trees.

Both parents deliver insects such as grasshoppers, caterpillars, butterflies, leafhoppers, dragonflies, bees, and wasps to their young."

According to the TOS Handbook of Texas Birds (Lockwood and Freeman, 2nd Ed., 2014), the Elegant Trogon is "casual (in Texas). Texas has six documented records, including 3 well-documented occurrences from Hidalgo County. The remaining three are sight records from the Chisos Mountains. Timing of occurrence: The occurrences in the Lower Rio Grande Valley are from September and January, plus a long-staying individual present from 14 January to 12 May 2005 in Weslaco. The Trans-Pecos records are from April, June, and one from November into January..." Counting the Elegant Trogon that was first documented in Panther Canyon in New Braunfels on January 27, 2018, there have been 7 records of Elegant Trogon in Texas.

Joseph Hood
jhood001@austin.rr.com

Photo David Duane Wilson

CASUAL BIRDER ALMOST DIDN'T REPORT GOLDEN-CROWNED SPARROW THAT TRIGGERED RARE BIRD ALERT

By Joel Williams

Golden-crowned Sparrow.
Photos Byron Stone

Triggering a "Rare Bird Alert" is something that this low-budget, marginally competent birder never imagined he would do. I don't often travel long distances to add to my life list, and don't have a fancy scope or other gear, but I do love to get out into nature and do some casual bird watching.

I unwittingly caused that "Rare Bird Alert" on Dec. 11, 2017, while taking a few days off work. That day, I decided to make one of my occasional visits to the 124-acre Warbler Woods Bird Sanctuary in Cibolo, a half-hour away from my home in San Antonio.

After hiking around and enjoying the beautiful place with its excellent paths, I found a site there called the "Old Barn." The bird feeders in this area, along with dripping water hoses and seed scattered on the ground attracted a lot of birds, including some that aren't common in the city. So I sat behind a bird blind there and enjoyed watching all the activity around me, with the help of my trusty binoculars and bird book.

I also had a camera with me and ended up getting good images of two birds: a White-eyed vireo and one that looked like a sparrow with yellow feathers on top of its head. I couldn't figure out what kind of sparrow it was, because the one it looked like in the book was not supposed to be in Texas. It was supposed to be way over on the West Coast, and not anywhere near Texas, according to its range map in my *National Geographic Guide to the Birds of North America*.

As I was leaving Warbler Woods and reporting the birds I had seen that day in the visitor log they keep by the entrance, I almost didn't report the mysterious sparrow. But then I read the description in my book one more time and noticed that it said "Casual in east in winter." So I realized that it was a Golden-crowned sparrow *(Zonotrichia atricapilla)*, even if it didn't belong here.

I thought that Warbler Woods might like to know that an out-of-the-ordinary bird was on their grounds, so I used my phone to take a photo of the bird from the screen on my camera and posted it on Twitter, tagging @SusanWarbler, the sanctuary's Twitter handle.

Pretty soon, a direct message came in from Susan Schaezler of Warbler Woods:

"Help—where was it?? Looks like Old Barn?"

That night I learned about eBird, Rare Bird Alerts, and the Texas Bird Records Committee, which asked me to file a formal report on their website and to send the actual photos from my camera after Susan put me in touch

with them. Eric Carpenter with the bird committee told me that there were only 39 accepted records of a Golden-crowned Sparrow in Texas, so this was an extremely rare bird for this area.

Another unexpected feat that I was oblivious to until Susan told me: I had seen all four North American "Z" sparrows (genus *Zonotrichia)* that day at Warbler Woods. Those were the Golden-crowned, White-crowned, White-throated, and Harris's.

The next morning, as a result of the Rare Bird Alert, 16 people were waiting at the Warbler Woods gate to get in and see the Golden-crowned sparrow, said Susan, who started calling me "Famous Joel." People kept coming, some of them from many miles away.

Since I thought some publicity could help Warbler Woods get more of the ongoing support that this sanctuary surrounded by development deserves, I contacted a couple of friends in the news business. They did stories about the Golden-crowned sparrow and the excitement it was causing among bird watchers. The TV story and the newspaper article both included interviews with me, the most unlikely of rare bird spotters.

In April, four months after I first reported this bird, it was still being spotted daily at Warbler Woods and people were still coming to see it. Nobody knows how it ended up a half a continent away from where it belonged, but it apparently didn't mind spending the entire winter at Warbler Woods. In the spring, I started hoping it somehow would find its way to its spring/summer breeding range in the tundra and shrublands of western Canada and Alaska.

Maybe someday I'll report another rare bird. Who knows? Maybe someday I'll buy a fancy scope. Meanwhile, I'm thankful to this Golden-crowned Sparrow for the excitement and a renewed passion for birding. And we should all be thankful for those like Warbler Woods owners Don and Susan Schaezler for preserving some of the ever-shrinking habitat that keeps the world around us diverse and beautiful.

Joel Williams
jcwl@outlook.com

Texas Birds Annual Staff

Jack Clinton Eitniear ..... Editor
Bron Rorex, Jimma Byrd, Susan Foster, Kent Rylander .....Copy Readers

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SEEING PURPLE IN POINT COMFORT

By Bob Friedrichs and Brent Ortego

It was February 16th, the first day of the 2018 Matagorda Bay Birdfest in Palacios. Bob was meeting a group of 16 people at 6:30 a.m. to escort them from Palacios to the Powderhorn Ranch in Calhoun County. The group was to meet Daniel Walker, Texas Parks and Wildlife biologist and ranch manager at the gate at 8 a.m. Bob knew that 16 people, even with Daniel leading the tour, would keep him busy so he wanted to travel light. Binoculars and scope were necessities, and lunch and water were pretty important. Bob almost always brings his camera to obtain 'doc shots' of unusual birds, especially those that might be flagged in eBird, but he knew that his Aunt Mary would be on the Powderhorn trip and would have her Canon 7D fitted with 100-400 MM lens. So, he made the decision to leave his camera at home.

The Powderhorn tour went very well. The group saw 80 species of birds and had good looks at American Alligator and Sambar Antelope. Lunch at the old ranch house was very enjoyable but all too soon it was time to tell Daniel "thanks for a great tour" and to head back to Palacios. It turned out that everyone on the tour wanted to go in different directions, so Bob bid them good luck and started back to Palacios by himself.

Driving across the causeway from Port Lavaca to Point Comfort, Bob thought, '*you know I haven't checked the old causeway road in a while*'. It can sometimes have American Oystercatchers, Common Loons, Common Goldeneye and perhaps Sandwich Tern, unusual for the winter. So, after clearing the causeway, Bob turned onto the old causeway roadbed on the south side of Highway 35. It is about a 1-mile stretch of asphalt road bed that is badly potholed and washed-out in places. The road ends at Lavaca Bay since the old wooden causeway is long gone, having been destroyed by Hurricane Carla.

Old Highway 35 causeway approach where Purple Sandpiper stayed from February 16th to May 2nd. View from west looking back toward Point Comfort. Photo by Brent Ortego.

But the road can be good birding. There is the mostly protected, shallow pocket of Lavaca Bay to the south with exposed oyster reefs at low tide and clearer water that can attract divers. Down at the west end where the road ends, mud flats and oyster shell bars can be good for terns, gulls and shorebirds. And there are a couple of short concrete rip-rap groins running perpendicular to the road.

As Bob drove slowly down the old roadbed, he noted Ruddy Turnstones, some Red-breasted Mergansers foraging in the shallow clear water, and a Spotted Sandpiper. No fishermen today; strange because this is a popular spot with bank fishermen, even though there are signs warning about possible mercury contamination in the fish. Anyway, about one third of the way down the old road, there is a short concrete rip-rap groin. Bob glanced over and noted a shorebird, perhaps 10 yards away. Doing a **huge** double-take, he knew this bird was different; short, stocky, dark gray, streaked flanks, medium length down-curved bill with yellow-orange base, orangish legs. The only thing this could be was a Purple or Rock Sandpiper, both extremely good birds for Texas! Bob turned to reach for his camera to get the obligatory doc shots. ***But it wasn't there***! What a knucklehead! Bob had left the camera at home!! He chided himself once again, '*never*

leave the camera at home, or in the car, or…. Somehow rare birds know when you don't have the camera with you. So, what to do? In the past Bob has had some success digi-scoping through one side of his binoculars. This bird was close enough and remaining fairly still, so it could work. Bob raised the binoculars and focused on the bird and then quickly positioned the camera 'eye' of his iPhone over the objective of the binocular. Seems clear. Snap a few shots…zoom the phone camera and snap a few more. In the end, Bob managed a half dozen decent 'doc' shots.

Purple Sandpiper digi-scoped from vehicle with iPhone7 and 8x42 Swarovski EL binoculars on February 16th; range approximately 5 yards. Photo by Bob Friedrichs.

After a little more study through binoculars and of his digi-scoped pics, Bob is almost certain that the bird is a Purple Sandpiper and sends a quick Texbirds post to alert the birding community. At this point, Bob decides to risk driving to Palacios and back to retrieve his camera and 'big' lens. It's an hour round trip, but this bird seemed content and there were no people around to flush it, so it was 'pedal to the metal'.

Arriving back at the old causeway road in Point Comfort at 4:30 p.m., Bob quickly refinds the rare sandpiper and proceeds to blast away with his camera, burning electrons so fast that smoke seems to rise from the camera. Okay, so that's an exaggeration but this really was a Purple Sandpiper and it was here in Point Comfort, Calhoun County, Texas! And he did take hundreds of photos.

The next couple of days were pretty exciting. Bob notified the Matagorda Bay Birdfest participants and many of them got to see the bird. He sent more updates and photos to the birding community in Texas and the 'lister' stampede toward Point Comfort started to gain momentum. Bob also sent photos to experts to try to ascertain age and sex of the bird. Based on plumage and bill length, speculation was that the bird was a young male but Purple Sandpipers are generally thought to be monomorphic (sexes have the same plumage) so it's tough to be sure without having the bird in hand to take wing, tail and culmen measurements.

Point Comfort Purple Sandpiper on February 16th. Photo by Bob Friedrichs.

Brent and Dora Ann Ortego saw the Purple Sandpiper on Sunday, February 18th. Brent is the eBird reviewer for Calhoun County so it was important that he observe and document the bird. He ultimately reviewed and approved well over 200 eBird reports for the Purple Sandpiper. Dora Ann assisted with photography during the review process and two of her photos are included in this article.

Point Comfort Purple Sandpiper eating worm on February 18th. Photo by Dora Ann Ortego.

Brent told Jessica Priest, Senior Reporter at the Victoria Advocate about the bird. She called to interview Bob and subsequently wrote a very nice article about the Point Comfort Purple Sandpiper, published in the February 21st edition.

Purple Sandpiper in Point Comfort, Texas on February 16, 2018. Photo by Bob Friedrichs.

The Purple Sandpiper is a shorebird that breeds on the tundra of northern Canada including around Hudson Bay. They normally winter along the wave-washed, rocky shores of the North East, further north than most other sandpipers. Purple Sandpipers, though rare are regularly reported on the east coast down to Florida. In the winter, Purple Sandpipers eat gastropods like small snails, crustaceans and insects, and apparently marine worms in Texas (See photo on bottom of previous page). A 2012 estimate suggests that there are 16,000 Purple Sandpipers in North America.

The Second Edition of the Texas Ornithological Society (TOS) Handbook by Lockwood and Freeman says that Purple Sandpiper (*Caladris maritima*) is a "*very rare winter visitor on the immediate coast and accidental inland and in the early spring".* In fact, Purple Sandpiper is a review species for the Texas Bird Records Committee (TBRC). According to TBRC, there have been 26 previously accepted records of Purple Sandpiper in Texas, the last of which was in 2012 when 3 birds were reported. If accepted by TBRC, the Point Comfort Purple Sandpiper will be the 27th for Texas.

Purple Sandpiper in Point Comfort on April 13th, 2018. Note molt progression. Photo by Bob Friedrichs.

Many of these previous Purple Sandpipers have been found on jetties or rip-rap along the coast much like in Point Comfort. Some of the previous Purple Sandpipers have stayed for extended periods of time. For example, a Purple Sandpiper found at South Padre Island in Cameron County on November 26th, 2009, and accepted by the TBRC, stayed until May 26th, 2009; an incredible 6 months! Interestingly, John Maresh, who grew up in Point Comfort and was introduced to birding in high school by the late Doris Wyman of Port Lavaca, also found a Purple Sandpiper along the old causeway roadbed in Point Comfort in November of 1996. Additionally, Brush Freeman had a Purple Sandpiper in Port O'Connor on February 7th, 2006.

The Point Comfort Purple Sandpiper was not a lifer for Bob or Brent. Bob's first Purple Sandpiper was at the Surfside Jetty (UTC 106) on December 22nd, 1976. According to TBRC records, that bird only hung around for 4 days. Brent observed one previously on the East Coast.

Many people enjoyed the Point Comfort Purple Sandpiper. eBird records alone indicate that over 261 people saw the bird and submitted a report, along with many excellent photographs. This kept Brent busy reviewing and approving all those eBird reports! Most reports were from Texans, but there were also some from winter Texans, 'listers' from New Mexico, other adjoining states and even a few visiting birders from abroad. Harry Forbes and Bob had the pleasure of showing the Purple Sandpiper to Rich Barchet who was visiting from eastern Washington state.

Purple Sandpiper in the company of Ruddy Turnstones and a Sanderling. Photo by Alex Lamoreaux

So, on April 13th, Harry, Rich and Bob had to work a bit harder for the sandpiper. There was a strong south wind and tides were higher than normal, covering the rip-rap that the Purple Sandpiper favored for foraging. We searched for an hour on the south side of Highway 35, along the old causeway road bed without success. We then decided to get lunch and casually bird the quieter, more protected north side of the highway. While not really expecting to find the bird here, we were very pleasantly surprised to find it foraging with some Least Sandpipers and a Sanderling along the shell beach, on the north side of Highway 35. Other chasers had similar results when encountering strong south winds.

Bob and Brent continued to periodically check on the Point Comfort Purple Sandpiper, watching and photographing it at least 6 additional times. Other birders logged eBird posts and photos of their successful chases throughout March and April.

The Purple Sandpiper likely encountered many hazards during its journeys between wintering and breeding grounds. In Point Comfort alone, hazards included fishing line, fishing tackle, plastic and toxic chemicals, not to mention predators, cars and people. Photo by Dora Ann Ortego.

According to eBird records, Alex Lamoreaux from Miami, who was in Texas leading birding trips for Wildside Nature Tours, was the last person to see and photograph the Point Comfort Purple Sandpiper. With Alex's permission, his photo of the bird on May 2nd is attached. It is very interesting to compare Bob's photo from February 16th to Alex's photo from May 2nd. The bird had molted from basic to almost full breeding plumage, showing more strongly patterned face, breast and flanks, and some rufous on the back as well as darker legs and bill. This excellent photograph by Alex might make it possible to identify this individual to subspecies, but the authors will leave this task to the shorebird experts.

Purple Sandpiper on May 2nd, 2018. Note significant molt progression when compared to the February 16th photo. Photo by Alex Lamoreaux.

For 2-1/2 months the Point Comfort Purple Sandpiper delighted all who came to see it and many added it to their year list, Calhoun County, Texas, or even Life lists. We wish the Point Comfort Purple Sandpiper 'safe travels' and hope that it will choose to visit us again!

Point Comfort Purple Sandpiper enjoying a day at the beach! Photo by Bob Friedrichs

Bob Friedrichs
bird.fried@gmail.com

Brent Ortego
brentortego@hotmail.com

VICTORIA COUNTY HUMMINGBIRDS 1995–2010

By Brent Ortego, Ross Dawkins, Sumita Prasad and Bron Rorex

Buff-Bellied Hummingbird. Photo by Dora Ann Ortego

Have you ever wondered if the hummingbird at your feeder was the same bird you saw yesterday, last week, month or year? We have all heard of stories of a hummingbird showing up for the season, goes to "its" traditional feeder spot, and hovers as if to ask, "where is my feeder?" You hurriedly grab a feeder and fill it with sugar water because **YOU KNOW THAT IS YOUR RETURNING HUMMINGBIRD. . . or is it?**

We share with you banding data from 18,442 birds during a 16-year (1995 – 2010) hummingbird banding project in Victoria County. Recapture information is partitioned by: month, individuals with at least one month of residency, and by all birds. Ruby-throated Hummingbird (*Archilochus colubris)* banding is also partitioned into 3 periods during each month to better describe its occurrence. Recaptures of birds from our banding station which were found elsewhere are also discussed.

Our take-away from the project is that there are many more hummingbirds in the region than we were aware when we started the project, which makes the likelihood of **YOUR hummingbird** being the same as last year questionable! However, many hummingbirds do return for additional years (0.1 – 22%, depending on species and season in Victoria County), and some individuals have amazing survivorship for being one of the tiniest travelers of the world. Bird communities are complex. Many factors affect survivorship, residency, movements, migration, and recapture. Capture techniques are not perfect. They do not catch all birds. Recapture rates should be considered as minimum frequencies of use of our Study Area. An example of one missed recapture that could easily have been repeated many times follows . . .

We banded a Broad-tailed Hummingbird (Selasphorus platycerus) one winter and recaptured the bird multiple times that season. The bird departed in the spring, and we looked forward to next winter when we hoped to catch the bird again. A Broad-tailed was spotted with a band during the next fall on an adjoining property. Obviously, we thought it was our bird and we looked forward to recapturing it. This 2nd winter recapture, unfortunately, did not happen. That winter, Brent regularly studied feeder usage by video-taping them. One of the video sessions from late winter recorded a banded Broad-tailed. Was this our bird from next door that flew in to take a quick sip? Likely. How many birds have we missed because the birds learned to avoid the nets/traps?

. . . . .

Victoria County occurs at a biological crossroads at the junction of the South Texas Brushlands and the eastern forest in the Coastal Prairie of Texas. It winters 8 species of hummingbirds with regularity and potentially 3 of these species breeds. Buff-bellied Hummingbird (*Amazilia yucatanensis*) has been documented to nest while Ruby-throated and Black-chinned (*Archilochus alexandri)* Hummingbirds occur in small numbers during summer. No evidence has been found to date that either of these *Archilochus* species has successfully produced young.

WHY VICTORIA COUNTY

Simply put, Brent lives here and the Ortego family and adjoining friends owned enough land to support the study.

When we initially started studying the hummingbirds in Victoria County, it was just a casual curiosity of the status of the resident hummingbirds. As we gathered data, it became obvious that this county was more diverse than previously thought and there were enough hummingbirds to support a study on their year-round status. We chose to use banding as our main study tool because hummingbirds are small, very quick, challenging to identify and nearly impossible to count. As an example, we were able to catch 41 Buff-bellied Hummingbirds during the first year of banding when we initially thought there were only 2-4 individuals in the area (Ortego and Rorex 2016). Our study was conducted under Dr. Ross Dawkins Master Bird Banding Permit #22280. Craig Zalk was a major asset as a bander and as a friend who bought 4-acres next door to the Ortego property to assist studying hummingbirds. Members of our primary banding team were Brent Ortego, Shaun Ashbaugh, Maggie Baker, Susan Beree, Charlie and Olivia Brower, Brad Lirette, Robert & Kay Lookingbill, Sue Ortego, Sumita Prasad, Bron Rorex, Suzie Ross, Glenn Swartz, and Craig Zalk.

Hummingbird banding was in its infancy when we began this study in 1995. Little training and banding tools were available to work with hummingbirds. We started slowly, attended workshops, and improved our techniques as we progressed.

STUDY AREA

The Study Area is known by multiple names. It is Brent and Dora Ann Ortego's home of residence. "Land of OZ" (Ortego-Zalk) was frequently used because Craig Zalk bought the adjoining lots. "Hummer-rific Raisin" was used because it became a special place for hummingbirds. The Study Area was situated in the 90-acre Coleto Bend West Subdivision bordering Coleto Creek one mile below the Coleto Creek Reservoir in western Victoria County. The subdivision was comprised of about 30 landholdings, which supported primarily live oak forest in the uplands and riparian forest bordering drains. The occupied lots are mostly mowed while the undeveloped ones have dense brush understories. The subdivision was a forested island bordering a creek surrounded mostly by brushy rangeland.

The Study Area was comprised of three adjoining 2-acre lots, all bordering a resaca of Coleto Creek. About ¼ of the area of the lots were outside of the floodplain. Elevation changed 25 feet from the top of the property with the house to the lowest elevation at the resaca. The change in elevation created a "cold sink" which greatly lowered temperatures on the property during winter. Since cold air is denser, it would sink to the lower elevations of the Study Area during calm nights. During normal humiditities, temperatures differences were typically 6 degrees. During low humidities, temperature differences were as much as 10 degrees. This meant that during a night of minimum freezing (32 degrees Farenheit) at the top of the property, temperatures ranges from 22 – 26 degrees F in the lower areas. Sugar water typically starts freezing at 28 degrees F. Freezing sugar water occurred during about 10 nights each year. Feeders had to be moved to indoors after sunset and returned at daybreak during those conditions.

The lot with the house contained mostly open-park like settings with scattered trees, flower beds bordering the house and at the base of many of the trees, and 1-acre of lawn. The two undeveloped lots contained 1.5 acres of dense brush and 2.5 acres of dense woodlands.

CAPTURE TECHNIQUES

Traps were the main capture method from summer 1995 through spring 1999. Traps

worked by placing a feeder within one of various forms of cages which had an opening for hummingbirds to enter. When the hummingbird entered the trap, a person would close it remotely. The bird would be extracted, measured, banded, and released. Three traps were typically set to capture birds during banding. Trapping was done opportunistically when Brent was at home.

Mist-nets (https://en.wikipedia.org/wiki/Mist_net) were used for most captures starting in the fall of 1999. Mist-netting was conducted 3 days per week from 2001 – 2010 from March through May and August through October when many birds were migrating. Netting effort shifted to once every 2-weeks from June – July, and November – February when little migration was occurring.

Mist-nets were deployed in senderos that were about 2 yards wide and 10 yards apart in a grid pattern in dense brush. They were also placed along woodland edges. Within the senderos, hummingbird feeders were spaced at about 5 yard intervals. The brush was comprised of local riparian species: cedar elm (*Ulmus crassifolia*), green ash (*Fraxinus pennsylvanica*), hackberry (*Celtis laevigata)*, mesquite (*Prosopis glandulosa*), roughleaf dogwood (*Cornus drummondii*), sweet pecan (*Carya illinoinensis*), and various vines. Nectar producing flowers from Turk's-cap (*Malvaviscus arboreus)*, red sage (*Salvia coccinea)* and morning-glory (*Ipomoea spp.*) were common from May through October. Brush was maintained at a height less than 9 feet to minimize the number of birds that would fly over the nets.

Feeders were initially deployed near the house. The number of feeders used varied depending on the demand by the hummingbirds. There were typically at least 12 feeders when used with traps, prior to the fall of 1999 in area of shaded lawns and extensive flower beds. The number of feeders increased with the creation of senderos and the use of mist-nets on adjoining land. From 2003 thru 2010, 75 feeders were maintained in a 1.5-acre dense brush thicket from November thru February to support wintering hummingbirds. Fifty feeders were used from

Dense Turk's-Cap Occurred on Several Senderos

March – May, and August – October to support migrating hummingbirds. Thirty feeders were maintained during June and July.

RUBY-THROATED HUMMINGBIRD

Male Ruby-Throated Hummingbird

The Ruby-throated Hummingbird is primarily a common to abundant migrant through Victoria County. Peak abundance occurs from late August through the 3rd period of September in the fall (47% of banded), and mid-April to the 1st period of May in the spring (19% of banded). Individuals are uncommon to rare during June and the first 2 periods of July when 0.07% of captures occurred. No observations of newly fledged young have been observed, leading to the belief that if breeding occurs in the county, it is a rare event. A few individuals linger until November each year but only 3 have been known to survive/stay through the winter. Lack of wintering Ruby-throated might be related to their lower capability of dealing with colder temperatures.

Ruby-throated banding data were separated into 3 periods of each month to better describe their occurrence. The vast majority of the 3700 recaptures occurred within one week of banding. Less than one percent of the Ruby-throats were recaptured one month after banding, and only 23 of 16,000 individuals were recaptured the year following banding. This is much different than the site fidelity of the other species using the site where typically 15% were recaptured one year after banding.

One oddity noticed when compiling our data was that males consistently lingered longer than females during migration. We do not know why this would occur, especially in the spring when considering there is a generally accepted assumption that the first males to arrive on the breeding grounds are able to obtain and defend the better territories. One possible cause in the delay of departure we are analyzing is that males weigh less than females and may not be as fit for long distance migration, thus requiring longer to acquire suitable fat loads.

Males Linger More Frequently than Females - 18% vs. 12%

Ruby-throated Hummingbird Chronology of Occurrence in Victoria, Tx

[Each Month Is Divided into Three Periods]

	MALE		FEMALE		
Month Segment	**Banded**	**Percent Recapture**	**Banded**	**Percent Recapture**	**Percent of Banded**
Jun-1	2	0	4	0	0.04%
Jun-2	1	0	1	100	0.01%
Jun-3	1	0	0	0	0.01%
Jul-1	0	0	1	0	0.01%
Jul-2	0	0	0	0	0.00%
Jul-3	18	50	11	0	0.18%
Aug-1	221	23	107	18	2.00%
Aug-2	579	23	284	21	5.40%
Aug-3	925	24	674	17	9.95%
Sep-1	1478	18	1384	15	17.80%
Sep-2	779	19	571	11	8.40%
Sep-3	993	18	862	13	11.54%
Oct-1	627	13	502	11	7.03%
Oct-2	363	11	324	12	4.28%
Oct-3	54	15	36	0	0.56%
Nov-1	49	18	24	13	0.45%
Nov-2	10	20	4	25	0.09%
Nov-3	2	50	2	0	0.02%
Dec-1	3	67	3	33	0.04%
Dec-2	1	100	0	0	0.01%
Dec-3	0	0	0	0	0.00%
Jan-1	1	0	1	0	0.01%
Jan-2	2	50	0	0	0.01%
Jan-3	1	100	0	0	0.01%
Feb-1	0	0	1	100	0.01%
Feb-2	0	0	1	100	0.01%
Feb-3	0	0	0	0	0.00%
Mar-1	20	25	2	50	0.14%
Mar-2	223	25	34	27	1.82%
Mar-3	676	16	230	10	5.64%
Apr-1	198	16	187	9	2.40%
Apr-2	476	11	431	7	5.63%
Apr-3	618	17	583	10	7.47%
May-1	271	13	725	8	6.20%
May-2	61	5	335	7	2.46%
May-3	3	0	53	0	0.02%
TOTAL	**8656**		**7428**		**99.66%**

LONGEVITY

Twenty-three of 16,084 Ruby-throated banded were recaptured at least one season after banding. Eight Ruby-throateds were at least 1-year old at the time of last recapture, seven 2-years old, three 3-years old, three 4-years old and two at least 5-years old.

FOREIGN RECAPTURES

Ruby-throated Hummingbirds breed throughout eastern North America and many migrate through Texas enroute to their southern winter grounds or their northern breeding areas. Thirteen individuals out of the 16,084 banded in our Study Area were recaptured elsewhere or were banded out of Victoria County and recaptured in the Study Area. While field guides display where species breed, migrate, and winter, it is a much greater connection to understanding this species' movements when we held a bird in the spring, released it, and that same bird was captured 2 months later in Georgia. Or, the situation where Bron Rorex banded a young bird in Rockport, Texas, and 9 years later was recaptured in Victoria County. Documenting a 9-year old hummingbird of any species is very rare.

Banded in Victoria County

1. Adult female banded on 4/8/2002 and recaptured on 6/3/2002 in Rutledge, GA, by Rusty Trump
2. Young male banded on 8/23/2002 and recaptured on 6/4/2004 at Tomcat Hill, IL, by Cathie Hutchinson
3. Adult female banded on 9/11/2005 and recaptured on 9/28/2010 at Wabash, IN, by Carl Favorite.
4. Adult female banded on 10/6/2005 and found dead during summer 2006 at Sherman, CT.
5. Adult female banded on 5/3/2006 and recaptured on 4/29/2007 at Comfort, TX.
6. Young female banded 9/21/2006 and recaptured in August 2007 at Clarkridge, AR, by Gary Peterson
7. Young male banded 10/5/2006 and recovered in May 2007 at Withee, WI, by Dan Corey.

Banded Elsewhere

1. Young female banded by Bron Rorex on 8/26/2001 in Rockport, TX, and recaptured in the Study Area on 8/29/2010.
2. Young male banded by David Heinicke on 10/8/2002 at Angleton, TX, and recaptured in the Study Area on 10/13/2002
3. Adult banded by Linda Beall on 5/26/2005 at Tunica, LA, and recaptured in the Study Area on 3/30/2006.
4. Young female banded by Cathie Hutchinson on 9/6/2005 in Illinois and recaptured in the Study Area on 5/8/2006.
5. Young male banded by Charlie Brower on 9/18/2006 at Sweeny, TX, and recaptured in the Study Area on 9/3/2007
6. Adult female banded by Wayne Laubscher on 8/31/2008 at Coburn, PA, and recaptured in the Study Area on 10/6/2009

BLACK-CHINNED HUMMINGBIRD

Male Black-Chinned Hummingbird

The Black-chinned Hummingbird is a year-round resident of Victoria County. Like the Ruby-throated Hummingbird, this species is uncommon to rare during summer and no physical evidence of nesting has been obtained. The closest known area of this species to breed is in neighboring Goliad County. Peak months of Black-chinned abundance are August, September, and April, and peak months to linger are November through February. This species is the 3rd most abundant species to winter in the county.

Black-chinned Hummingbirds Banded in Victoria County
[Band Return Rate Calculated for Individuals Caught After 1 Month]

MONTH	TOTAL BANDED	% CAUGHT 2+ TIMES	% CAUGHT > 1 MO	1+ YR AFTER BANDING % BAND RETURN[1]
JULY	20	10	10	0
AUGUST	78	19	8	67
SEPTEMBER	85	9	1	0
OCTOBER	30	23	13	75
NOVEMBER	29	55	48	14
DECEMBER	35	83	66	43
JANUARY	20	65	45	33
FEBRUARY	5	80	80	50
MARCH	22	36	23	60
APRIL	45	13	2	100
MAY	16	13	0	0
JUNE	8	38	25	100
TOTAL	**393**	**29%**	**18%**	**45% (8% all birds)**

[1] Calculated by dividing the total band returns 1+ years after banding by the # caught >1 month after banding, unless otherwise specified. As an example, 45% of the total 18% of the recaptures which were caught >1 month after banding were caught 1 or more years later. Only 8% of the total bird banded were caught 1 or more years later.

LONGEVITY

Seventy-one of the 393 banded Black-chinned were re-caught at least 1-month after being banded (**18%**). Thirty-two of these were recaptured one year after banding which made a band recapture rate of **45%** for birds which lingered at least one month. We used **lingering for at least one-month as a standard for calculating banding recaptures** to avoid the band return rate being diluted by birds primarily passing through. Migrants staying only a few days have little or no reason to return if they did not remain for an extended period.

Of the 32 birds recaptured 1-year after banding, 11 were caught 1 year after banding, 9 caught after 2 years, 4 caught after 3 years, 5 caught after 4 years, 2 caught after 5 years and **one caught after 9.5 years.** The 9.5-year-old was caught 52 times during her various visits to our banding station, and she was one of the last birds recaptured (12/31/10) during this study. Like the old Buff-bellied, she tended to be consistently caught at one locale.

Of the 32 birds recaptured 1-year after banding, 11 were caught not more than 1 year after banding, 9 caught not more than after 2 years, 4 caught not more than after 3 years, 5 caught not more than after 4 years, 2 caught after 5 years and **one caught after 9.5 years.**

FOREIGN RECAPTURES

1. Adult female banded at Leakey, TX, on 7/11/2004 and recaptured on 8/27/2004 in the Study Area.
2. Young female banded in the Study Area on 10/9/2005 and recaptured by Nancy Newfield on 1/4/2006 at Grand Point, LA.
3. Adult female banded in the Study Area on 10/5/2006 and recaptured by the authors at Comfort on 6/28/2008.
4. Adult male banded in the Study Area on 5/17/2008 and recaptured by the authors at Comfort on 5/18/2008.

ANNA'S HUMMINGBIRD

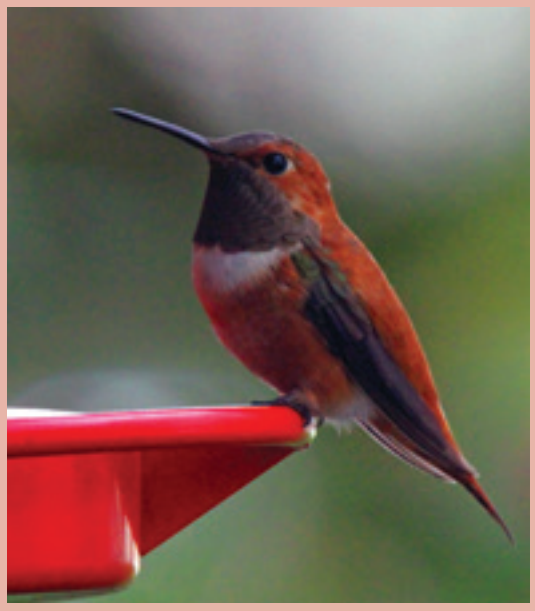
The Anna's Hummingbird (*Calypte anna*) is a rare species in Victoria County. Thirteen Anna's were caught in the Study Area: 5 in November, 6 in December, and 3 in January. Only 3 were caught more than once. One individual lingered for 42 days, one lingered for 27 days, and the only other one caught twice lingered for 7 days.

BROAD-TAILED HUMMINGBIRD

The Broad-tailed Hummingbird is an uncommon migrant and winter resident in Victoria County. Thirty-one Broad-tailed were banded and 61% of these individuals were caught at least twice. Sixteen of the 19 Broad-tailed recaptured were caught more than 1 month later with 5 individuals at least one year later. The oldest recapture recorded was 2 years and 9 months.

Broad-tailed Hummingbirds first arrived in the Study Area from 9 October through 30 March with November/December being the peak period of arrival. Forty-five percent of individuals were initially banded during these two months. Highest use of the Study Area occurred from December through February when 67% of the banded birds were present.

RUFOUS HUMMINGBIRD



Male Rufous Hummingbird

The Rufous Hummingbird (*Selasphorus rufus*) is a regular winter resident in Victoria County. It was 2nd in abundance during winter in our Study Area. We found that individuals arriving in August and September tended not to linger. Less than 8% of 41 birds caught prior to October in the fall stayed longer than a month after banding. With the earlier migrants not lingering, Brent stopped chasing Rufous off site for fear land owners would blame the banding as the reason the bird left. Those arriving later in the fall had a high probability (50%) of wintering in the area. The few (6) new birds arriving in March infrequently wintered, and these birds were thought to be migrating north.

Forty-three of the 265 banded Rufous returned in following winters. Twenty of these only returned for one more winter, 11 for two, 7 for three, 1 for four, 2 for five, and 2 for six winters.

Rufous Hummingbirds Banded in Victoria County
[Band Return Rate Calculated for Individuals Caught After 1 Month]

MONTH	TOTAL BANDED	% CAUGHT 2+ TIMES	% CAUGHT > 1 MO	1+ YR AFTER BANDING % BAND RETURN
Aug	17	24	0	0%
Sept	24	21	8	50%
Oct	29	52	48	21%
Nov	63	79	67	19%
Dec	80	75	51	46%
Jan	28	79	50	50%
Feb	18	78	44	50%
Mar	6	17	17	100%
TOTAL	**265**	**65**	**46%**	**35% (17% all birds)**

FOREIGN RECAPTURE

The young female banded by Don Mitchell in Wisconsin was recaptured by our team on 1/21/2002. It was the only foreign Rufous recaptured during our project.

ALLEN'S HUMMINGBIRD

Male Allen's Hummingbird

The Allen's Hummingbird (*Selasphorus sasin*) is an uncommon to rare species in Victoria County. Allen's arrive from 18 August to 2 April with 67% occurrence during November and December. They depart from 18 August to 3 April with 60% of the birds departing in January – March.

Forty-six Allen's were captured during this study. Thirty-five Allen's were caught at least twice, with 10 of these recaps not staying one month. Of the 25 Allen's which were caught after one month, 10 (40%) returned the following winter. The oldest bird we handled was 2 years and 8 months old.

The Allen's is extremely difficult to separate from the more abundant and similar appearing Rufous in the field. Typical features used in identification are the shape of tail feathers which vary by age/sex of the bird. Many birders presume the Rufous/Allen's they see during winter is a Rufous, which is likely incorrect part of the time. We documented that 17% of the 311 Rufous/Allen's Hummingbirds that were caught in Victoria County were Allen's.

CALLIOPE HUMMINGBIRD

Male Calliope Hummingbird

The Calliope Hummingbird (*Selasphorus calliope*) is an uncommon to rare species in Victoria County. We caught 29 Calliopes from 3 September – 27 March. December was the most frequent (28%) month of arrival. Departures occurred from 9 October – 21 April with March being the most frequent (27%) month of departure. We recaptured 66% of the birds, with 12 staying at least one month. Only 1 bird returned after a winter. This individual spent 4 winters with our team and lived at least 3 years and 5 months.

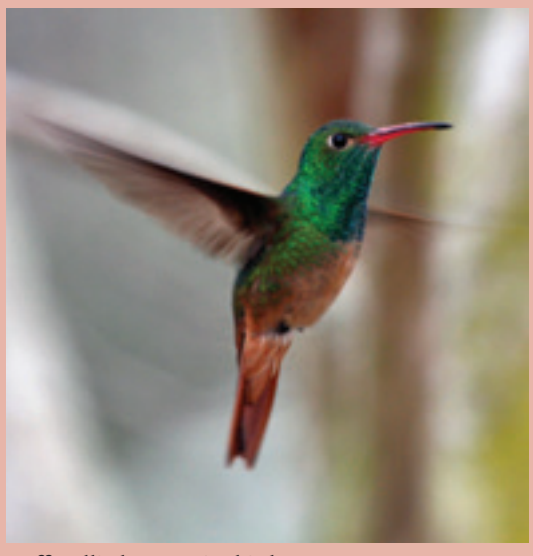
One of the banded Calliopes from the Study Area was recaptured in Houston the following year by Craig Zalk. We do not know why this individual did not return to the Study Area. Our conjecture was that our Study Area is a place for only tough hummingbirds. The meek need to find somewhere else to spend their winter. With large numbers of Buff-bellied and Rufous patrolling the main concentrated area of feeders in a 1.5-acre zone, small timid hummingbirds will be unsuccessful in competing for food at preferred locations.

BROAD-BILLED HUMMINGBIRD

Young Broad-billed Hummingbird 2/25/2006

The Broad-billed Hummingbird (*Cynanthus latitrostris*) is a very rare species in Victoria County. Two individuals were captured during the study. One was caught in February 2006 and the other December 2010.

BUFF-BELLIED HUMMINGBIRD



Buff-Bellied Hummingbird

The Buff-bellied Hummingbird is a regular occurring species in Victoria County today. The species only occurred 8 months of the year during the early 1990's and recently

fledged young were only observed after June. The species started wintering with regularity starting in 1997 and rapidly increased to be the most abundant wintering hummingbird in the county by 1999. Sightings of fledged young in early spring and summer started occurring in mid-2000 which is similar to what occurs in the Lower Rio Grande Valley.

During the Study, we observed that the Buff-bellied Hummingbird has 3 major periods of concentration. The species was abundant during **spring, prior to 15 May,** coinciding with the advent of Turk's-cap blooming in the area. The Turk's-cap is one of the main woodland flowers of the Central Coast. It appeared the Buff-bellied will linger at sites of major food availability in high concentrations, like our Study Area which contains at least 50 feeders, until the blooming of Turk's-cap. The Buff-bellied then disperse to breed in settings of much less competition for food and space even though food availability appears to be less.

The 2nd period of concentration starts in August and lasts until November. This species does a complete wing molt during this period and needs high concentrations of food to accomplish this. Once the molt is complete in late fall, and Turk's-cap blooms decline, a small percentage of individuals will leave the Study Area and migrate to their winter home.

The 3rd period of concentration is the winter. The Study Area has served as a winter home for about 40 individuals each winter. Much of this has been related to the availability of feeders and suitable brushy habitat. Even though there is an average of about 2,000 Shrimp Plant flowers per day during winter, it is feeders that carry the population. After this project was completed, Brent reduced the number of feeders available to the birds because he was no longer banding, and it was laborious work to maintain 75 feeders twice a week. Brent initially maintained 50 feeders at the end of the project, reduced it to 30 feeders for a couple of years, then 12 feeders, and during the 2017 season, 6 feeders. Buff-bellied were counted following this Study by participating in the Victoria Christmas Bird Count. Buff-bellied tally from 2010 to 2017 were as follows: 40, 39, 28, 16, 9, 7, 4, 2. The brush and shrimp plants were still there, but there were only 6 feeders during the last count.

Buff-bellied Hummingbirds Banded in Victoria County
[Band Return Rate Calculated for Individuals Caught After 1 Month]

Month	Total Banded	% Caught 2+ Times	% > 1 Mo	1+ Yr % Band Return
July	18	61	56	40
August	250	68	37	55
September	403	59	30	63
October	155	54	32	48
November	68	76	62	55
December	50	86	72	61
January	30	73	53	63
February	10	70	60	100
March	107	47	26	71
April	234	52	26	79
May	228	54	32	85
June	26	54	54	64
Total	**1579**	**59%**	**35%**	**65% (22% Of All Birds)**

LONGEVITY

From 1995 -2010, 1,579 Buff-bellied were **banded**. This species was the most abundant resident hummingbird species during the study, and we were able to obtain numerous recaptures:

- 937 (59%) Buff-bellied were **recaptured**
- 548 (35%) Buff-bellied were recaptured at least **one month** after banding
- 354 (22%) Buff-bellied were recaptured **one year** after banding

Thirty-five Buff-bellied survived at least 5 years with the oldest Buff-bellied observed being 10 years and 6 months. The 10-year old Buff-bellied was initially banded as an adult male on 11/18/1997 and last recaptured on 12/5/2006. Like the old Black-chinned reported previously, this bird was only caught at one site.

It is a rare event for a hummingbird to live past 5 years. We developed a Survivorship Chart (Fig. 1) using our banding data to demonstrate this probability for Buff-bellied Hummingbird. This chart was earlier published in Texas Birds Annual 12:81-89 (Ortego & Rorex 2016).

We plotted total banded Buff-bellied we knew were alive each 6-month period on the chart. For those individuals that were recaptured at the Study Site at least one month after original banding 1.7% were still alive at 5.5 years. This species has a relatively high mortality during the first two years and then mortality slows down during years 2-5. If the bird makes it to 5 years, mortality rate declines even further. By then, the individual is very good at avoiding predators and seeking necessary resources. The routine it has developed is very conducive for surviving.

FOREIGN RECAPTURES

Fairhope, AL was the furthest east one of our Buff-bellied was recaptured. Another recapture occurred a little closer in Picayune, MS. One bird was recaptured in New Orleans 5 years after banding by Nancy Newfield, and we returned the favor when we caught one of her birds in the Study Area 11 months after banding.

One of the more entertaining events was a male we banded during fall 2002 that was later recaptured at a banding station by Dave Patton in Lafayette, LA. This bird spent the winter there and when it left in the spring, we recaptured it two weeks later. The bird left for the summer and we were able to catch it during the following fall. After leaving the Study Area in the fall, it returned to the same

Figure 1. Buff-Bellied Hummingbird Survivorship Chart for Years Following Banding.

feeder in Lafayette to spend the winter. We were alerted when it left during the spring and we recaptured this same individual on 11 March, roughly 2 weeks after it left its winter home. **WOW! What demonstration of site fidelity at both ends of its range!** Researchers seldom capture migratory birds at both ends of their range to demonstrate that for some species/individuals, birds will follow the same route and winter/breed in the same exact locations.

SUMMARY OF BAND RETURN RATES FOR VICTORIA COUNTY HUMMINGBIRDS

	Total	% Caught	% Caught	1+ Yr after Banding
Species	**Banded**	**2+ Times**	**> 1 Mo**	**% Band Return**
Ruby-throated	16,084	14	0.3	47 (0.1% of all birds)
Black-chinned	393	29	18	45 (8% of all birds)
Anna's	13	23	8	0
Broad-tailed	31	61	52	31 (16% of all birds)
Rufous	265	65	46	35 (17% of all birds)
Allen's	46	63	54	40 (22% of all birds)
Calliope	29	66	41	8 (3% of all birds)
Broad-billed	2	50	0	0
Buff-bellied	1579	59	35	65 (22% of all birds)

Most species have strong site fidelity if they stayed at least one month at our Study Area. Anna's and Calliope Hummingbirds appeared to be exceptions.

Dense Brush Winter Habitat with Spaced Feeders Supported Most Hummingbirds. [Poles are 10 Ft Tall].

WINTER STUDY

We operated mist-nets one morning every 2 weeks (November – February) from 1999 – December 2010. We initially had very positive responses by hummingbirds to the number of feeders. During 4 winters from 1995-99, we used traps near the house, in an area with 12 hummingbird feeders bordering woods and flower beds. We averaged catching 14 hummingbirds each winter. During the 1999 – 2000 winter we placed 30 feeders in mostly brush habitat next door on my neighbor's property. We caught 29 hummingbirds that winter. Encouraged by the success, Craig Zalk bought the lot next door to assure access, and we maintained 50 feeders the next winter. We caught 62 hummingbirds and these results energized the crew. During the 2 winters within 2001 -2003, we maintained 70 feeders and averaged catching 99 hummingbirds. If we stopped there, it would have been a wonderful story, showing that hummingbird numbers are directly related to the number of feeders. However, we continued. We mist-netted adjacent to feeders each winter from 2003 – 2010 and caught 118, 110, 160, 132, 89, 76, 109, and 69 (2 months) hummingbirds. Our crew was running on "high octane" when we caught 160 one winter. These high numbers did not last, and bird numbers declined afterwards despite our efforts of maintaining 75 hummingbird feeders twice per week and keeping brush from growing higher than our nets. Rufous numbers declined to about ½ of its peak of 39 in subsequent years and Black-chinned dropped to about 6 each winter from an earlier high of 30. Communication with other banders in eastern United States indicated that those 2 species declined in their areas as well.

Even though there was disappointment in the decline from 160 hummingbirds, catching an average of 100 wintering hummingbirds in an area as small as 2-acres is an amazing feat. With suitable habitat like the dense brush

2005-2006 Winter Banding Board. Alpha-Numeric Code is the Bird Band "Number". Blue Numbered Bands were for birds caught more than once during season. Red # = Indivduals caught more than once/Total Individuals Captured

and a large amount of food (feeders spaced at 5-yards intervals), high concentrations of hummingbirds can be maintained during winter in Victoria County. While we would like to say the hummingbirds only used our Study Area, they obviously did not. At least 2 neighbors in the subdivision maintained winter feeders and not surprisingly, most of their hummingbirds we were able to observe had bands. We also occasionally observed hummingbirds in forested areas feeding on insects bordering the Study Area. Our high concentration of feeders likely fed birds for a considerable distance with the bulk of the birds being in the vicinity of the feeders.

HABITAT PREFERENCES

Habitats at net sites were identified during the 2006-2007 winter banding season to investigate if there was any hummingbird species habitat selection. Habitat availability was mostly dense brush <9 ft in height followed in availability by live oak (*Quercus virginana*), mesquite, and black willow (*Salix nigra*) which were mostly taller than 20 ft. Net sites with trees tended to be open underneath.

During this 2006-2007 winter season, we caught 132 individuals representing 8 hummingbird species and recaptured them 269 times for 401 capture events. There were 56 Buff-bellied, 35 Rufous, and 11 Black-chinned with lesser numbers of 5 other species.

Buff-bellied did not appear to have a habitat preference. The high density (56) of this species on the available 1.5 acres might have influenced this lack of preference. The species was caught at all sites roughly in proportion to their presence. Ruby-throated appeared to select for the more open areas bordering live oak. Black-chinned were more frequent at mesquite and willow sites. The dense brush appeared to be the preferred area for the *Selasphorus* species group. Habitats are typically selected for their availability of food, security from predation, protection from abuse from competing species, and thermal conditions. Food availability might not have been much of an issue affecting habitat selection since all sites had feeders and there was only one net site which had flowers during winter. However, there could have been different availability of insects at sites which serves as an important food. Security from predators and abuse from competitors could have been an issue. There were 91 Buff-bellied and Rufous patrolling the property. These two species tended to dominate any site they chose to occupy within the Study Area. More timid species were attacked as soon as they approached feeders.

Percent Habitat Availability and Selection in Victoria County.
[Bold # = Preference]

Habitat =	**Willow**	**Live Oak**	**Mesquite**	**Brush**
Availability	7	24	16	53
Ruby-throated	5	32	5	59
Black-chinned	10	21	33	36
Broad-tailed	0	13	0	87
Rufous	7	13	8	72
Allen's	13	0	0	87
Calliope	8	0	8	84
Buff-bellied	8	30	19	43

FLOWERS AND RAINFALL

We have noticed that during wet seasons, we appeared to catch less birds, and during drier seasons, we caught more birds. During wet years, many homeowners have asked where all the hummingbirds were. Our normal reply had been they were feeding on the many flowers across the landscape that were produced following rains.

To investigate this relationship, we looked at rainfall and catch rate of the only year-round resident, Buff-bellied Hummingbird, and pure migrant, Ruby-throated Hummingbird, from 2004 - 2008. Total captures of Buff-bellied and Ruby-throated were higher during drier years and lower during wetter years. Thus, despite high numbers of hummingbird feeders being maintained on site each year, these two species of hummingbirds

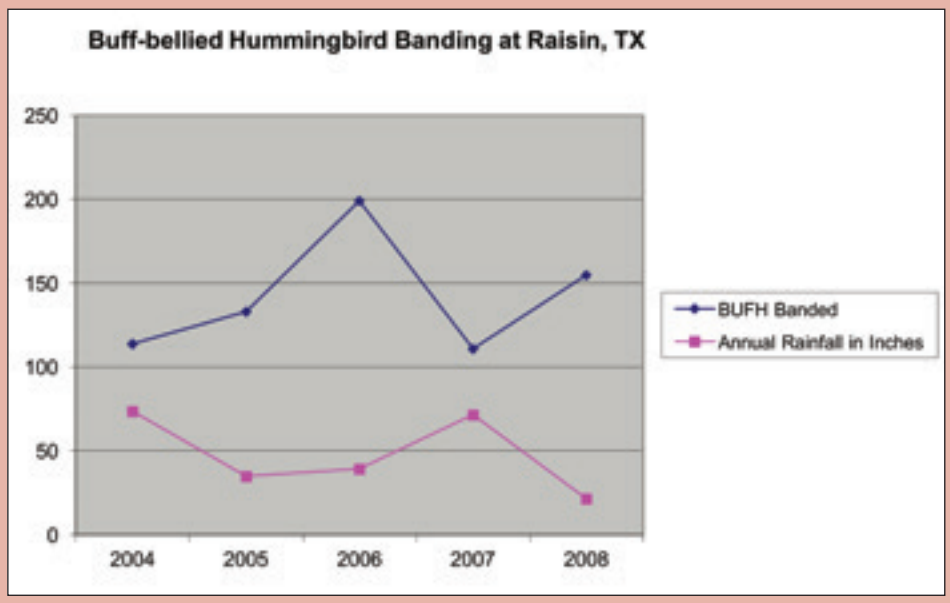


Figure 2. Comparison of Annual Precipitation Rates to Capture Rates of Buff-Bellied Hummingbirds in Victoria County, Tx.

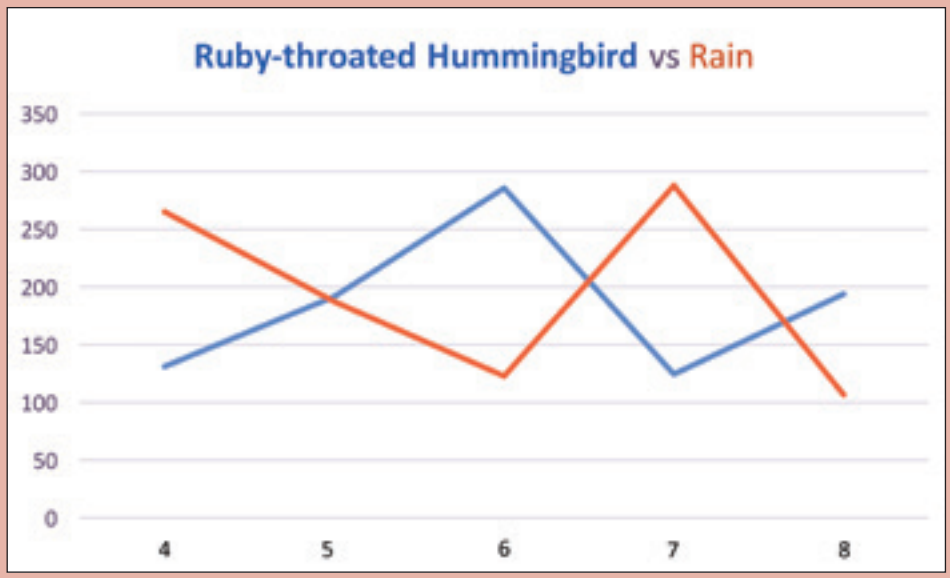


Figure 3: Catch rates of Ruby-Throated Hummingbirds vs. Rainfall in Victoria County, Tx, from 2004 -2008.

were caught at lower numbers during wetter years. This was presumably due to higher availability of flowers and insects across the landscape during wetter years.

While we have primarily emphasized woody cover and hummingbird feeders, native flowers are a major conspicuous part of the habitat from spring through fall. They provide an abundance of insects and nectar. This served as an attractant to the Study Area. The feeders provide a much larger and more dependable supply of nectar even though they are not as conspicuous.

Most spring and fall there are an abundance of flowers. Shrimp plant (*Justicia brandegeana*), red sage, pink mint (*Stachys drummondii*), and coral bean (*Erythrina herbacea*) are common to abundant in spring. Turk's-cap starts blooming in mid-May at about the same time Buff-bellied disperse to breeding grounds. Morning-glory start blooming during summer and can become very abundant. Red sage maintains a presence all year. Shrimp plant starts blooming again in the fall and will be the only significant flower present from November through April.

We counted every flower in bloom on 25 dates between fall 2009 – through December 2010 to document the density and diversity of flowers which can occur in Victoria County, and in turn might influence the presence of hummingbirds.

Numerous Morning-Glory, Turk's-Cap, and Red Sage on Sendero October 2006.

Victoria County Banding Station Flowers during Fall/Winter 2009 and 2010

Species	Average #	Peak #
Texas Lantana *Lantana urticoides*	3	20
Fire Bush *Hamelia patens*	25	170
Petunia *Ruellia caroliniensis*	71	701
Red Morning-Glory *Ipomoea coccinea*	253	4700
Red Sage *Salvia coccinea*	259	2311
Shrimp Plant *Justicia brandegeana*	437	2710
Turk's-cap *Malaviscus arboreus*	776	2768
Sharp-pod Morning-Glory *Ipomoea cardatotriloba*	1709	15,630
	3500	18,000

Ruby-Throated feeding on Turk's-Cap

. . . . .

Victoria County is not viewed as a special county for abundance and diversity of hummingbirds when compared to coastal counties, or West Texas mountains. However, our study showed that with management of habitats and provision of large numbers of sugar water feeders, sizeable numbers of hummingbirds representing 8 species can be attracted to relatively small sites. If the hummingbirds are seeking seasonal residency, there is a high probability they will stay and return in future years.

Ortego, Brent, and Bron Rorex. 2016. The Buff-bellied Hummingbird in Victoria County. Texas Birds Annual 12:81-89.

Brent Ortego
brentortego@hotmail.com

ENDANGERED SPECIES: PART 1. THE GLOBAL PERSPECTIVE

By Jack Clinton Eitniear

We have all heard the term "endangered" but how many of us really know what it means? Even without any clarification it signifies that the species population, at some level, is "at risk"of extinction. There are many lists of birds at risk. Some, like the Texas list also include species that are at risk ONLY in a single State. As you can imagine at the State level the lists can vary greatly. For example, Missouri lists the Northern Harrier *Circus cyaneus* as endangered while Texas does not. In Texas many of these "at risk" species are not declining throughout their total range but are only rare in Texas; often being common further south in Mexico. In addition to lists at the State and Federal level other non-geopolitical criterion, like trade, can be the basis of an endangerment list. The often quoted Convention on International Trade in Endangered Species CITES list (the actual lists are referred to as appendices) deals with species that are being negatively impacted by trade. The most popular list at the national level is the USFWS Endangered Species Act List (ESA) which includes all species of flora and fauna that after review have been determined to be at risk (classified as Threatened or Endangered). While it does include species not found in the United States its impact is greatest as it relates to species that do occur in the USA. At international level several lists exist but the one with the greatest impact is the Birdlife International/IUCN list. The International Union for the Conservation of Nature and Natural Resources uses the resources of non-profit organization Birdlife International to determine avian species that should be included on its "red list". The Birdlife/IUCN Red List is the official international list of "at risk" species. The category level of such species is constantly under review and can change as new information becomes available. An example of this is the Bearded Wood-Partridge *Dendrortyx barbatus* in Mexico. A Mexican endemic species, it was believed to only occur in the cloud forest of northeastern Mexico. Due to the rapid destruction of this habitat the species was uplisted from Threatened to Critically Endangered in 1994. I led a team of field biologists in 1997 that encountered the species in disturbed riparian habitat and more northerly oak forest. Due to our discovery that the species was more flexible in its choice of habitat and had a greater range, hence the numbers were greater, the species was downlisted to Vulnerable in 2000.

For all lists the criterion under which species attain their labels is important and often complex. We have all encountered field guides that use the terms rare, uncommon, common when encountered, common etc. The better guides define these terms. For example one could say that a species is rare

2016	Vulnerable
2012	Vulnerable
2008	Vulnerable
2005	Vulnerable
2004	Vulnerable
2000	Vulnerable
1996	Critically Endangered
1994	Critically Endangered
1988	Threatened

The Red List History of the Bearded Wood-partridge in Mexico.

if only after a week in the field in suitable habitat are you likely to observe the species. Endangerment lists need more than just definitions but clearly detailed criterion for their decisions for listing one species as more "at risk" than others. In this article I would like to discuss the Birdlife/IUCN Red List. In *Texas Birds Annual* 2019 we will continue the discussion with the Texas List as the topic.

Following are the categories for the Birdlife/IUCN Red List. Criterion for including a species in any of these categories can be found at http://datazone.birdlife.org/species/spcredcrit

EXTINCT (EX) - A species is Extinct when there is no reasonable doubt that the last individual has died. A species is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the species's life history.

EXTINCT IN THE WILD (EW) - A species is Extinct in the Wild when it is known only to survive in captivity or as a naturalized population (or populations) well outside the past range. A species is presumed Extinct in the Wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the species's life history.

CRITICALLY ENDANGERED (POSSIBLY EXTINCT) CR (PE) - This is not an official category of the IUCN Red List, but a tag applied by BirdLife (and under review by the IUCN Red List) to identify those Critically Endangered species (see definition below) 'that are likely to be extinct, but for which there is a small chance that they may still be extant, and hence they should not be listed as Extinct until local or unconfirmed reports have been discounted, and adequate surveys have failed to find any individuals (see below for further details).

CRITICALLY ENDANGERED (CR) - A species is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see *IUCN Red List Criteria*) and it is therefore considered to be facing an extremely high risk of extinction in the wild.

ENDANGERED (EN) - A species is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see *IUCN Red List Criteria*), and it is therefore considered to be facing a very high risk of extinction in the wild.

VULNERABLE (VU) - A species is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see *IUCN Red List Criteria*), and it is therefore considered to be facing a high risk of extinction in the wild.

NEAR THREATENED (NT) - A species is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.

LEAST CONCERN (LC) - A species is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant species are included in this category.

DATA DEFICIENT (DD) - A species is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A species in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of species in this category indicates that more information is required and acknowledges the possibility that future

research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a species is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the species, threatened status may well be justified.

With the creation of the internet, information on the status of species can more easily be communicated and discussed.

What would have required countless letters, telephone calls, and personal meetings is now achieved in a brief time period utilizing the *Birdlife online Forums*. The following is from the Birdlife online Forums. I chose species that occur in Texas as examples. I encourage all readers to reference the criterion (see URL above) and join the forum that discusses birds of your geographical region or interest.

WELCOME TO BIRDLIFE'S GLOBALLY THREATENED BIRD FORUMS.

BirdLife's Global Species Programme continually collates up-to-date information on Globally

Threatened Birds from the published literature and from a worldwide network of experts. This is used to evaluate the status of each species using the IUCN (International Union of the Conservation of Nature) Red List categories and criteria.

New information on the population or range size and trends of a species, or the threats impacting it, may indicate that a species warrants uplisting or downlisting to higher or lower categories of threat. In such cases, BirdLife's Global Species Programme continually collates up-to-date information on Globally Threatened Birds from the published literature and from a worldwide network of experts and organisations.

In these discussion forums, topics describe the current status of particular species, new information that has become available, the proposed new Red List category that this information suggest is appropriate, and a request for comments or further input.

The purpose of the forums is to provide an opportunity for both professional and amateur birdwatchers and conservationists to contribute information on Globally Threatened Birds relevant to the assessment of their threat status and their conservation. Contributors can also suggest new species whose status may need reviewing.

Anyone wishing to receive email alerts regarding BirdLife's Globally Threatened Bird Forums can sign up at www.birdlife.org. You will then be able to receive updates regarding these Forums and the Red List Decisions that will be put forward to the IUCN regarding birds. You will have the option to remove yourself from the list by contacting a member of BirdLife's Red List team directly.

The forums enable users to provide new information, and to view the information

and comment provided by other contributors. 'Postings' (e.g. 'New survey results') are linked by subject in 'Topics' (e.g. 'Spoon-billed Sandpiper – uplist to Critically Endangered ?'), which are grouped in 'Forums' (e.g. 'Threatened Asian Birds'). You can either read and contribute postings on the website, or receive and reply to postings entirely through email.

All messages are 'moderated' by the forum moderator to help guide the process most efficiently and to ensure that inappropriate material (e.g. 'spam'/junk messages) is excluded from the discussion.

Each year, the revisions that have been decided upon from input through the forums will be submitted to the IUCN Red List. New categories become official when the Red List is updated and released later in the year. Contributors who supply information that is used will be explicitly acknowledged. To read the forums consult http://feeds.feedburner.com/BirdlifesGloballyThreatenedBirdForumsNorthAmerica

Some current forum topics on birds that inhabit our region include……

Lark Bunting. Photo Mark Lockwood

LARK BUNTING (*CALAMOSPIZA MELANOCORYS*): REVISE GLOBAL STATUS?

Currently listed as **Least Concern** Lark Bunting (*Calamospiza melanocorys*) breeds from southern Canada through the Great Plains of U.S.A. to east New Mexico, northern Texas and west Oklahoma. It is present year-round in the southern part of its breeding range, but in the non-breeding season this becomes the northern part of its range, with the species also occurring south into northern Mexico, including Baja California. During the breeding season it is found in short-grass prairie, with scattered shrubs and bare ground, while in the non-breeding season it occupies desert scrub, weedy fields and open farmland.

While the species remains common in parts of its range, it is thought to have undergone declines as a result of the degradation and loss of its habitat due to agricultural conversion, overgrazing and the absence of natural herbivores and fire regimes. Pesticides for controlling grasshoppers can also have a serious impact on the species.

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan and The State of North America's Birds 2016 we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey to assess more recent trends over the period relevant to the Red List. Having completed this review, Lark Bunting appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Rosenberg suggests the species has undergone a population reduction of 86% between 1970 and 2014. Assuming

a constant rate of decline this would equate to a reduction of 36.0% over 10 years. Short term trends from Sauer instead show that the species may have undergone a non-significant annual increase of 1.43% (5.28% increase to 2.40% decrease) between 2005 and 2015. This equates to an increase of 15.3% (67.3% increase to 21.2% decrease) over 10 years. This suggests that declines may have been historical, and in fact the population may be doing better now.

However, Rosenberg and colleagues do predict a future half-life for the species of 16 years, and this would equate to a decline of 35.3% over 10 years. This would meet the threshold for **Vulnerable**, but the current trend from Sauer does appear to contradict this. Therefore, we request any further comment and information about the current trends for this species, but in the absence of any information it may be precautionary to list the species as **Near Threatened** under criterion A3cd, as there is the potential for rapid future declines, but there is uncertainty over the rate of such declines.

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding/resident] = 2,010,000km^2; Extent of Occurrence [non-breeding] = 2,520,000km^2).

Criterion C – Rosenberg *et al.* (2016) estimates the population size to be 10,000,000 mature individuals. This is far too large to warrant listing under this criterion.

Criterion D – The species's range and population size are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Lark Bunting potentially warrants uplisting to **Near Threatened** or even **Vulnerable**

Henslow's Sparrow. Photo Greg Lasley

HENSLOW'S SPARROW (*PASSERCULUS HENSLOWII*): REVISE GLOBAL STATUS?

Henslow's Sparrow (*Passerculus henslowii*) is a migratory New World Sparrow of North America, currently listed as **Near Threatened** due to suspected moderately rapid declines, although there have been positive trends noted recently. During the breeding season it occurs in northern and central U.S.A. from Minnesota south to Kansas and northern Oklahoma across to New Hampshire, as well as just into southern Ontario, Canada. In the non-breeding season it moves southwards occurring in states along the Gulf Coast of U.S.A. and along the Atlantic Coast as far north as South and North Carolina. It predominantly occurs in open areas, occupying native prairies and grassland in the breeding season, and avoiding areas encroached by woodland. In the non-breeding season, however, it is more tolerant of wooded areas, occurring in open pine forest as well as on prairies, and is most common in pine forest meadows containing wiregrass, *Aristida stricta*, and broomsledge, *Andropogon virginicus*.

The key threat to the species appears to be the degradation of its habitat, both in the

breeding and non-breeding range, with grassland lost to agriculture, natural succession of vegetation due to fire suppression, urbanization and wetland drainage. Additionally, there is evidence for pesticides having an impact on several species that commonly associate with Henslow's Sparrow, and so this could be another potential threat, although its impact on this species in particular is uncertain.

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan and The State of North America's Birds 2016 we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey to assess more recent trends over the period relevant to the Red List. Having completed this review, Henslow's Sparrow appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Current estimate of the population reduction between 1970 and 2014 to be 10%, which would equate to only a reduction of 2.8% over three generations (11.7 years) assuming a consistent rate of decline. However, we know that the species was declining rapidly, but has since begun to stabilise and potential begun to increase too since the creation of large areas of undisturbed habitat through the Conservation Reserve Program. Short term data (2005-2015) fits far closer to a three generation period in fact shows a non-significant annual 2.68% increase (6.85% increase to 2.35% decrease), although this is flagged as having an important data deficiency. This would roughly equate to an increase of 36.3% (117.1% increase to 24.3% decrease) over three generations.

Therefore, the species no longer appears to approach the threshold under this criterion, and as such would not warrant listing as such. The likelihood is that this has been the case for some time, especially as increases have been noted for 5 years.

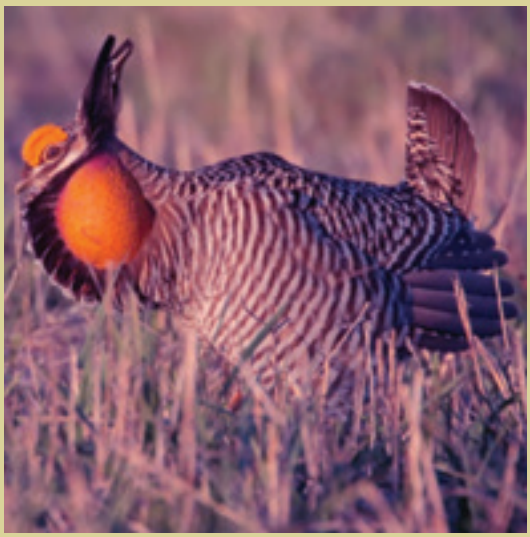
Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding] = 1,670,000km^2; Extent of Occurrence [non-breeding] = 1,500,000km^2).

Criterion C –Current estimate of the population size 390,000 mature individuals. This is too large to warrant listing under this criterion.

Criterion D – The species's population size and range are too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Henslow's Sparrow potentially warrants downlisting to **Least Concern**.



Greater Prairie-chicken. Photo Greg Lavaty

GREATER PRAIRIE-CHICKEN (*TYMPANUCHUS CUPIDO*): REVISE GLOBAL STATUS?

Greater Prairie-chicken (*Tympanuchus cupido*) originally was thought to occur in

natural prairies from central Alberta (Canada), south through central U.S.A. and into Texas. Now, however, it is no longer found in Canada, and only remains in scattered patches, predominantly in mid-western U.S.A. Loss of its habitat is thought to have played a key role in declines in this species, including the extinction of subspecies *T. c. cupido*, and continued habitat fragmentation may lead to reduced genetic variance within subpopulations. The species still also suffers from hunting pressure, and the introduced Ring-necked Pheasant (*Phasianus colchicus*) may be acting as a competitor to this species. As a result, the species was considered to be undergoing a rapid decline, and the species is currently listed as Vulnerable.

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey to assess more recent trends over the period relevant to the Red List. Having completed this review, Greater Prairie-chicken appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A –We do not have a clear population trend. Looking at data collected for the North American Breeding Bird Survey, between 2005 and 2015 the species has undergone a recent non-significant annual increase of 9.13% (0.80% decrease to 18.88% increase). This would equate to a 322.7% increase over three generations (16.5 years) (12.4% decrease to 1,635% increase).

Sauer provided historical year by year records, and so we could extrapolate population trends for any three generation period. Three generations ago (pre-2018) is approximately 2001. Therefore, we can extrapolate the trends between 2001 and 2015 to 2018 in order to estimate the population trend over the past three generations. Between 2001 and 2015 the population has been, in general, increasing with a significant, estimated annual increase of 8.77% (2.66%-16.07%) (Sauer *et al.* 2017). This would equate to an increase of 300% over three generations (54.2-1,069%). Therefore, the species would not even approach the threshold for **Vulnerable** under this criterion, and from the data held it likely has not warranted listing as such for some time. However, these population trends may be as a result of targeted conservation action. If the removal of these actions could mean the species would meet the thresholds for listing as **Vulnerable** within 5 years then the species could warrant listing as **Near Threatened Criterion B** – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence = 1,990,000km^2).

Criterion C –Current estimate the population size is 750,000 mature individuals. This is too large to warrant listing under this criterion.

Criterion D – The species's population size and range are too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Greater Prairie-chicken potentially warrants downlisting to **Least Concern**.

Eastern Meadowlark. Photo Cheryl Johnson

EASTERN MEADOWLARK (*STURNELLA MAGNA*): REVISE GLOBAL STATUS?

Currently listed as Least Concern, Eastern Meadowlark (*Sturnella magna*) has a very large range from south-east Canada, though eastern and southern U.S.A., Mexico, Central America, Cuba and into northern South America from Colombia across to northern Brazil. It inhabits grasslands and a range of pastureland habitats and as such it can be impacted by agricultural practices. Degradation of land to intensive agriculture, as well as grazing and trampling by livestock may be contributing to declines, and early mowing can lead to the destruction of nests and/or the mortality of young and incubating adults. Pesticide use may also be impacting the species, and it is very sensitive to disturbance such that if a female is flushed from her nest she will likely abandon it.

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 (North American Bird Conservation Initiative 2016) we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey to assess more recent trends over the period relevant to the Red List. Having completed this review, Eastern Meadowlark appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A –We put the population reduction between 1970 and 2014 at 77%. This would roughly equate to a decline of 35.7% over three generations (13.2 years). Partners in Flight also gives a half-life for the species of 23 years, which would roughly equate to a decline of 32.8% over three generations. This appears to be an ongoing trend as short term (2005-2015) data shows an annual decline of 3.05% (2.29-3.56%), which would roughly equate to a reduction of 33.6% (26.3-38.0%) over three generations. This meets the threshold for **Vulnerable** (reduction of 30% over three generations). Using population size estimates from Partners in Flight approximately 65% of the global population is found in U.S.A. & Canada. If we assume here that the populations outside of U.S.A. & Canada are stable, then the overall rate of decline over 3 generations would be c.24% (c.18.5-c.28%) based on short-term trends.

Therefore, even if the entire population outside of U.S.A. & Canada is stable the species is likely undergoing a moderately rapid decline, which could be approaching the threshold for **Vulnerable** under this criterion. If, however, the population trends from U.S.A. & Canada are representative of global trends, then it could meet the threshold for **Vulnerable**. We therefore request any further information regarding population trends

from outside of U.S.A. & Canada, but in the absence of this it is proposed that the species is listed as **Near Threatened.**

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding/resident] = 24,400,000km^2; Extent of Occurrence [non-breeding] = 19,800,000km^2).

Criterion C –Current estimate the global population size to be 37,000,000 mature individuals. This is therefore far too large to warrant listing under this criterion.

Criterion D – The species's population size and range are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Eastern Meadowlark potentially warrants listing as **Near Threatened**, although we request further information about population trends throughout its range to see whether it could warrant listing under a higher threat level

Common Grackle. Photo by Cheryl Johnson

COMMON GRACKLE (*QUISCALUS QUISCULA*): REVISE GLOBAL STATUS?

Currently listed as Least Concern, the Common Grackle (*Quiscalus quiscula*) is found solely in North America, with the vast majority of its range in U.S.A. and Canada. In the south of its range it is resident, but other populations will make short to medium range movements. It may have originally occupied wooded habitats near watercourses, but with the intensification of agriculture and clearance of woodland the species can now be found in a range of habitats including rural and residential areas.

It is common to abundant throughout its range and it will feed on agricultural produce to such an extent that it is considered a major pest, and as such it is under control measures in some areas. The roost sites for the species can also hold the fungus *Histoplasma capsulatum*, which can cause the lethal human respiratory disease histoplasmosis. This has been used as a justification for the killing of large numbers of roosting birds.

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey to assess more recent trends over the period relevant to the Red List. Having completed this review, Common Grackle appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Partners in Flight put the overall population reduction between 1970 and 2014 at 54%. This would roughly equate to a reduction of 25.7% over 3 generations (16.8 years). Rosenberg proposed a half-life of 33 years (i.e. the population is predicted to halve in 33 years). This would equate to a population reduction of 29.7% over 3 generations. Year by year records, and so we can extrapolate trends for any three generation period. Three generations ago is approxi-

mately 2001. Therefore, we can extrapolate the trends between 2001 and 2015 to 2018 in order to estimate the population trend over the past three generations. Between 2001 and 2015 the population has been, in general, decreasing with a significant, estimated annual decrease of 1.40% (1.11-1.68%). This would equate to a reduction of 21.1% (17.1-24.8%) over three generations, which does not approach the threshold for Vulnerable sufficiently to warrant listing under criterion A2.

Some extrapolated trends over three generations that include both time in the past and in the future do imply a reduction that approaches the threshold for Vulnerable. For instance, data from 2005-2015 show an annual decline of 1.87% (1.47-2.26% decline) (Sauer *et al.* 2017). This would equate to a reduction of 27.2% (22.0-31.9% reduction) over 3 generations. However, some more recent annual declines appear to be lower, and so declines of this rate are not suspected to continue into the future.Therefore, the species appears to approach the threshold for Vulnerable under this criterion (reduction of 30% over 3 generations), and so would warrant listing as **Near Threatened**.

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding/resident] = 12,100,000km^2; Extent of Occurrence [non-breeding] = 5,510,000km^2).

Criterion C – The population size of the species, based on Partners in Flight is 69,000,000 mature individuals.This is far too large to warrant listing under this criterion.

Criterion D – The species's population size and range are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Common Grackle potentially warrants uplisting to **Near Threatened**

Chuck-will's-widow. Photo Mark Lockwood

CHUCK-WILL'S-WIDOW (*ANTROSTOMUS CAROLINENSIS*): REVISE GLOBAL STATUS?

Currently listed as Least Concern, Chuck-will's-widow (*Antrostomus carolinensis*) is a migratory species of the Americas. It breeds in south-east Canada and eastern U.S.A. preferring wooded (particularly deciduous and mixed) habitats, although it will venture in suburban areas, pasture and open areas (Straight and Cooper 2012, Cleere and Kirwan 2018). It overwinters from southern U.S.A., through eastern Mexico, Central America, the Caribbean, and into northern South America.

The species appears to be threatened by a range of factors including the degradation of its habitat for urban development, and the species's habit of utilising roads for dust baths etc. at night mean it is at risk from collisions with cars (see Straight and Cooper 2012). Changes in habitat may also be bringing the species more into contact with competitors such as Eastern Whip-poor-will. As the latter's range alters it may potentially be causing indirect impacts on Chuck-will's-widow, although there is little direct evidence for this currently (see Straight and Cooper 2012), and Eastern Whip-poor-will itself is thought to

be declining rapidly (Rosenberg *et al.* 2016). Chuck-will's-widow is also very sensitive to disturbance, and could be affected by pesticide use as it is insectivorous, and will feed over pasture (see Straight and Cooper 2012).

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 (North American Bird Conservation Initiative 2016) we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey (Sauer *et al.* 2017) to assess more recent trends over the period relevant to the Red List. Having completed this review, Chuck-will's-widow appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Rosenberg *et al.* (2016) suggest a population reduction of 63% between 1970 and 2014. This would equate to a decline of 31.6% over three generations (16.8 years). More current trends from Sauer *et al.* (2017) show an annual decline of 1.73% (1.01-2.44%) between 2005 and 2015. This would equate to a decline of 25.4% (15.7-34.0%) over three generations.

Sauer *et al.* (2017) do also show year by year records, and so we can extrapolate trends for any three generation period. Three generations ago is approximately 2001. Therefore, we can extrapolate the trends between 2001 and 2015 to 2018 in order to estimate the population trend over the past three generations. Between 2001 and 2015 the population has been, in general, decreasing with a significant, estimated annual decrease of 1.86% (1.33 to 2.40%) (Sauer *et al.* 2017). This would equate to a reduction of 27.1% (20.1-33.5%) over three generations, and ongoing declines appear to be at a similar rate.

Therefore, rate of decline likely approaches the threshold for Vulnerable under this criterion (reduction of 30% over three generations). Therefore, the species likely warrants uplisting to **Near Threatened** under criteria **A2ace+3ce+4ace.**

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding/resident] = 3,570,000km^2; Extent of Occurrence [non-breeding] = 7,160,000km^2).

Criterion C – Rosenberg *et al.* (2016) estimate the population size to be 5,400,000 mature individuals, and so this is far too large to warrant listing under this criterion.

Criterion D – The species's population size and range are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Chuck-will's-widow warrants uplisting to **Near Threatened**

Chimney Swift. Photo Greg Lasley

CHIMNEY SWIFT (*CHAETURA PELAGICA*): REVISE GLOBAL STATUS?

Chimney Swift (*Chaetura pelagica*) is a migratory species, breeding in eastern North America from southern Canada to the Gulf Coast states of U.S.A., and occasionally in California and Arizona. It winters in northwestern South America, and while the exact range is uncertain it is thought to occur in Colombia, eastern Ecuador, Peru, northwest Brazil and northern Chile (see Chantler and Boesman 2018).

When breeding the species is commonly associated with urban environments, because of its nature of nesting in chimneys, although it will use other nesting sites such as in hollowed out tree trunks, and will forage over a range of habitat types (see Chantler and Boesman 2018). Its association with chimneys may have historically allowed the population to expand, but in recent times the number of available chimneys has decreased as a result of the demolition of old buildings, the capping of old chimneys, and even through chimney sweeps removing nests from chimneys (despite the species being protected by federal law) (see COSEWIC 2007, Steeves *et al.* 2014, Chantler and Boesman 2018). Logging of old-growth forest may also reduce the number of breeding sites for the species (see Steeves *et al.* 2014). Additionally, the use of DDT in the 1950s to control insect populations may have caused a shift in Chimney Swift diet, although the long term impact of this on the species is uncertain (Nocera *et al.* 2012, Steeves *et al.* 2014). The key threat though is thought to be the ongoing loss of potential nesting sites (although this may not be the case for all populations; Fitzgerald *et al.* 2014), and the species is currently listed as having undergone a moderately rapid decline, such that it is listed as Near Threatened (see BirdLife International 2018).

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 (North American Bird Conservation Initiative 2016) we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey (Sauer *et al.* 2017) to assess more recent trends over the period relevant to the Red List. Having completed this review, Chimney Swift appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Rosenberg *et al.* (2016) suggest that between 1970 and 2014 the species underwent a population reduction of 67%, which would equate to a decrease of 33.3% over three generations (c.16 years). Partners in Flight also gives the species a half-life of 27 years, which would equate to a population reduction of 33.8% over three generations.

Short term data (2005-2015) from Sauer *et al.* (2017) shows an annual decline of 2.71% (2.32-3.09%) for the species. This would equate to a reduction of 35.7% (31.4-39.6%) over three generations. Sauer *et al.* (2017) do also show year by year records, and so we can extrapolate trends for any three generation period. Three generations ago is approximately 2002. Therefore, we can extrapolate the trends between 2002 and 2015 to 2018 in order to estimate the population trend over the past three generations. Between 2002 and 2015 the population has been, in general, decreasing with a significant, estimated annual decrease of 2.68% (2.38 to 3.00%) (Sauer *et al.* 2017). This would equate to a reduction of 35.3% (32.1-38.7%) over three generations. The threshold reduction size for listing as Vulnerable is 30% over three generations, and so the species warrants listing as **Vulnerable** under criteria **A2acd+3cd+4acd**.

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding] = 8,580,000km^2; Extent of Occurrence [non-breeding] = 5,380,000km^2).

Criterion C – Rosenberg *et al.* (2016) estimate the population size to be 7,700,000 mature individuals. This is far too large to warrant listing under this criterion.

Criterion D – The species's population size and range are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Chimney Swift potentially warrants uplisting to **Vulnerable**

Cerulean Warbler. Photo Greg Lavaty

CERULEAN WARBLER (*SETOPHAGA CERULEA*): REVISE GLOBAL STATUS?

Cerulean Warbler (*Setophaga cerulea*) is a wide-ranging migratory songbird of the Americas. It breeds in North America, in southern Ontario and Quebec (Canada) and throughout central and eastern U.S.A., and migrates to spend the non-breeding season in northern and and western South America, as far south as Bolivia (see Curson *et al.* 2018). The species breeds in mature deciduous forests (see Curson *et al.* 2018), and overwinters in submontane forest on the eastern slope of the Andes, and occasionally in adjacent lowlands, plantations and secondary forest (Curson *et al.* 2008).

The species is impacted by several threats, but foremost among them is habitat loss and degradation. This is driven through conversion of land for urban and agricultural development, as well as disease impacting key tree species (see Buehler *et al.* 2013). As a result, the species has been thought to be undergoing a rapid decline, and as such is currently listed as Vulnerable under criterion A (see BirdLife International 2018).

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 (North American Bird Conservation Initiative 2016) we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey (Sauer *et al.* 2017) to assess more recent trends over the period relevant to the Red List. Having completed this review, Cerulean Warbler appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Rosenberg *et al.* (2016) estimate the population reduction between 1970 and 2014 to be 72%, which roughly equates to 26.8% over three generations (10.8 years). Short term population trends from Sauer *et al.* (2017) show an annual decline of 1.31% (3.70% decrease to 1.83 increase) between 2005 and 2015. This would equate to a reduction of 13.3% (33.4% decrease to 21.6% increase) over three generations, which does not approach the threshold (>30%) for Vulnerable under this criterion.

Even when looking at year by year records from Sauer *et al.* (2017), the species's rate

of decline has not met or approached the threshold for Vulnerable (reduction of 30% over three generations) since 2008, and so the rate of decline has been below the threshold for Vulnerable for some time. Therefore, the species should no longer warrant listing as such under this criterion.

Partners in Flight do estimate the half-life of the species to be 26 years (Rosenberg *et al.* 2016), though, which would equate to a decline of 25.0% over three generations. Therefore, it may be precautionary to propose listing the species as **Near Threatened** under criterion **A3c**.

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding] = 2,540,000km^2; Extent of Occurrence [non-breeding] = 4,130,000km^2).

Criterion C – Rosenberg *et al.* (2016) estimate the population to be 570,000. It is not clear whether this refers to mature individuals or all individuals, but either way it would be too large to warrant listing under this criterion.

Criterion D – The species's population size and range are too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Cerulean Warbler potentially warrants downlisting to **Least Concern** based on current information, but because of the potential for moderately rapid declines in the future it is instead proposed to list the species as **Near Threatened**

BELL'S VIREO (*VIREO BELLII*): REVISE GLOBAL STATUS?

Bell's Vireo (*Vireo bellii*) is a migrant passerine, breeding across central and south-western U.S.A., and through northern Mexico; while it overwinters in southern Baja California (Mexico), along the western coast

Bell's Vireo. Photo by Cheryl Johnson

of Mexico and into Guatemala, El Salvador and Honduras, and rarely into Nicaragua (see Brewer 2018). It occurs in arid areas, particularly inhabiting dense shrub and scrubby vegetation as well as second-growth forest (see Brewer 2018).

The species has experienced a degree of habitat loss and degradation as a result of many different drivers, including agricultural and urban expansion, flood control measures, and sand and gravel extraction. Habitat modification has also allowed for the spread of Brown-headed Cowbirds (*Molothrus ater*), which has led to reductions in the breeding population of south-western U.S.A. (Kus *et al.* 2010, C. McCreedy *in litt.* 2016). Invasive species have also impacted the species, with invasive vegetation impacting the species's habitat and the Polyphagus Shot Hole Borer indirectly affecting habitat suitability as this invasive weevil species farms fungi which can cause the death of host trees (Leathers 2015, B. Kus *in litt.* 2016). These threats are thought to have been the driver of potentially rapid declines, and as such the species is currently listed as Near Threatened under criteria A2bc+3bc+4bc (see BirdLife International 2018).

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of

North America's Birds 2016 (North American Bird Conservation Initiative 2016) we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey (Sauer *et al.* 2017) to assess more recent trends over the period relevant to the Red List. Having completed this review, Bell's Vireo appears to warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Rosenberg *et al.* (2016) suggest that between 1970 and 2014 the species underwent an increase of 38%. Short term data from Sauer *et al.* (2017) show a significant annual increase of 2.63% (1.15-4.29%) between 2005 and 2015, which would equate to a 37.6% increase (1.51-67.6%) over three generations (12.3 years). The species's trend may have even been stable since 1980 (Sauer *et al.* 2008 *per* Kus *et al.* 2010). The U.S. contains c.76% of the population, and so the Mexican population would have to have undergone extremely rapid declines over the same period for the species to at least approach the threshold for Vulnerable, and this is not considered to be likely. Therefore, the species does not warrant listing under this criterion.

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding/resident] = 4,930,000km^2; Extent of Occurrence [non-breeding] = 1,380,000km^2).

Criterion C – Rosenberg *et al.* (2016) estimate the global population size to be 5,900,000 mature individuals. This is far too large to warrant listing under this criterion.

Criterion D – The species's population size and range are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Bell's Vireo does not approach the threshold for Vulnerable under any criteria and as such would warrant listing as **Least Concern**.

Bachman's Sparrow. Photo Greg Lavaty

BACHMAN'S SPARROW (*PEUCAEA AESTIVALIS*): REVISE GLOBAL STATUS?

Bachman's Sparrow (*Peucaea aestivalis*) is endemic to U.S.A. occurring on the coastal plains and Piedmont of south U.S.A. The species is generally found in lowland pine woodland, although it may also occur in clear-cut areas with grassy undergrowth and even grasslands away from pine (see Rising 2018). Timber harvesting, habitat fragmentation and fire suppression are all thought to have contributed to the species's disappearance from the northern part of its range, and it is now uncommon in the south of its range too. Urban development is additionally thought to be impacting the species, especially as it could prevent the restoration of the fire regimes suitable for the species (P. Taillie *in litt.* 2016). The species also has been

reported to suffer mortality as a result of collisions with communications towers (Longcore *et al.* 2013), and it suffers disturbance in parts of its range due to birdwatchers. As such the species has been thought to have undergone a moderately rapid decline and it is currently listed as Near Threatened under criterion A2c (see BirdLife International 2018).

Following the publication of Partners in Flight (PiF) Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 (North American Bird Conservation Initiative 2016) we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Red List Categories and Criteria. As the PiF data are long-term trends (1970-2014), where possible we have also used data from the North American Breeding Bird Survey (Sauer *et al.* 2017) to assess more recent trends over the period relevant to the Red List. Having completed this review, Bachman's Sparrow appears to potentially warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – Rosenberg *et al.* (2016) show a population reduction between 1970 and 2014 of 76%, which would roughly equate to a reduction of 30.2% over three generations (11.1 years for this species) assuming a constant rate of decline. Short term data (2005-2015) from Sauer *et al.* (2017) show an annual decline of 3.58% (1.65-5.56%), which would equate to a decline of 32.5% (16.9-47.0%) over three generations, although it is noted that there is data deficiency in this dataset, and when looking between 2007 (three generations ago) and 2015 the decline is non-significant (annual decline of 2.68% [6.78% decrease to 1.41% increase], roughly equating to a reduction of 26.0% [54.1% decrease to 16.8% increase]). Partners in Flight does also provide a half-life (time for the population to halve) for the species, though, of 24 years (Rosenberg *et al.* 2016), which would equate to a future decline of 27.4% over three generations.

Therefore, the species at least warrants retaining as **Near Threatened** under this criterion but under an expanded criteria string of **A2ac+3c+4ac**. Depending on further comments on the confidence we can have in recent population trend data from Sauer *et al.* (2017) it could even warrant listing as **Vulnerable**. This would potentially warrant being under the same criteria string – **A2ac+3c+4ac** – because even though future declines based on the half-life in Rosenberg *et al.* (2016) suggest a decline of <30% (over 3 generations), the threats that are driving current declines appear to be continuing and it may be precautionary to suspect that declines would therefore continue at a similar rate into the future.

Criterion B – The species's range is far too large to warrant listing under this criterion (Extent of Occurrence [breeding/resident] = 1,650,000km^2; Extent of Occurrence [non-breeding] = 1,150,000km^2).

Criterion C – Rosenberg *et al.* (2016) estimate the population size to be 190,000 mature individuals. This is too large to warrant listing under this criterion.

Criterion D – The species's range and population size are too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Bachman's Sparrow at least warrants having an expanded criteria string under a listing of Near Threatened, and potentially warrants uplisting to **Vulnerable**

Allen's Hummingbird. Photo Greg Lavaty

ALLEN'S HUMMINGBIRD (*SELASPHORUS SASIN*): REVISE GLOBAL STATUS?

Currently listed as Least Concern, Allen's Hummingbird (*Selasphorus sasin*) comprises two subspecies. One is migratory, breeding in coastal western U.S.A. from Oregon to California, and wintering in central Mexico. The other is resident to the extreme south-west of California and extreme north-west of Mexico, as well as adjacent offshore islands (see Altshuler *et al.* 2018). It generally occurs in scrubland and bushy slopes, as well as into open woodland (Altshuler *et al.* 2018), while garden plants and artificial feeders may be bringing the species into more urbanised areas (Clark and Mitchell 2013).

Partners in Flight list the two key threats to the species as climate change and urbanisation (Rosenberg *et al.* 2016), although from Clark and Mitchell (2013) it appears that these threats are currently being offset by the increase in available nectar for the species directly as a result of human activities. Thus, while these threats may be the most important for the species, it is unsure whether they are having an impact.

Following the publication of Partners in Flight Landbird Conservation Plan (Rosenberg *et al.* 2016) and The State of North America's Birds 2016 (North American Bird Conservation Initiative 2016) we have reviewed the new information held in these publications, particularly regarding population trends. This has allowed us to reassess the species outlined in these publications against IUCN Categories and Criteria. As the data presented come from long-term trends (Partners in Flight trends come from between 1970 and 2014), where possible we have also used data from the North American Breeding Bird Survey (Sauer *et al.* 2017) to collate more recent trends. Having completed this review, Allen's Hummingbird appears to potentially warrant a change in Red List status. Therefore, we present here our reassessment against all criteria for the species.

Criterion A – The information regarding the population trend appears to be very contradictory. Rosenberg *et al.* (2016) estimate the population reduction between 1970 and 2014 to be 83%, which equates to a reduction of 43.3% over three generations (14.1 years). Partners in Flight also estimate the half-life of the species to be only 17 years, and so this would roughly equate to decreases of 43.7% over three generations.

Short term (2005-2015) data from Sauer *et al.* (2017) also suggests a rapid decline, with annual declines of 4.11% (1.58-6.95%). This would equate to declines of 44.7% (20.1-63.8%) over three generations. Sauer *et al.* (2017) do also show year by year records, and so we can extrapolate trends for any three generation period. Three generations ago was approximately 2004. Therefore, we can extrapolate the trends between 2004 and 2015 to 2018 in order to estimate the population trend over the past three generations. Between 2004 and 2015 the population has been, in general, decreasing with a significant, estimated annual decrease of 4.10% (1.81 to 7.03%) (Sauer *et al.* 2017). This would equate to a reduction of 44.6% (15.4-64.2%) over three generations.

This data alone would appear to suggest that the species clearly warrants uplisting to Vulnerable under this criterion. However,

surveys between 1980 and 2000 by Howell and Gardali (2003) found the population of this species to be stable over that time period at least. Clark and Mitchell (2013) even suggest that the main impacts of human activity, e.g. introduced species and artificial feeders in urbanised areas are leading to population increases; and they suggest that declines based on the Breeding Bird Survey data may be a result of artifacts of survey technique.

Therefore, it is not clear what the species's trend really is, and we request further information and insight to better assess the species against this criterion.

Criterion B – The species's range is too large to warrant listing under this criterion (Extent of Occurrence [breeding/resident] = 214,000km^2; Extent of Occurrence [non-breeding] = 456,000km^2).

Criterion C – Rosenberg *et al.* (2016) estimate the population size to be 1,700,000 mature individuals. This is far too large to warrant listing under this criterion.

Criterion D – The population size and range of this species are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, Allen's Hummingbird potentially warrants uplisting to **Vulnerable**, although there is contradictory evidence that suggests the population may be stable (at least up to 2000) or even increasing

PAINTED BUNTING (*PASSERINA CIRIS*): REVISE GLOBAL STATUS?

Painted Bunting (*Passerina ciris)* is a migratory songbird that breeds in southern and eastern U.S.A. and northern Mexico, overwintering from central Mexico south through Central America, as well as in southern Florida (U.S.A.) and parts of the Caribbean (see Brewer 2018). It inhabits scrub habitat

Painted Bunting. Photo by Cheryl Johnson

in the west of its breeding range, but in the east is found in coastal plain agricultural land (Lowther *et al.* 1999).

The key threats that the species faces appear to be loss and degradation of its habitat through agricultural intensification, and anthropogenic developments, as well as capture for the cagebird trade (Lowther *et al.* 1999, Iñigo-Elias *et al.* 2002, Phillips Lynch 2004). Individuals are not only trapped for local markets but they also pass into international trade, being sold to Europe, Asia and South America (Ramos 1982, Iñigo-Elias 1986, Iñigo-Elias *et al.* 2002). The impacts of these threats had been thought to be severely impacting the species and data from continental U.S.A. and north-east Mexico suggested that the population may have declined by as much as 55% over 30 years (Iñigo-Elias *et al.* 2002, Rich *et al.* 2004). This led to the species being listed as Near Threatened (BirdLife International 2018).

However, recent evidence suggests that its popularity as a cagebird may not be impacting the population as severely as previously thought (G. Butcher *in litt.* 2016). Instead,

population declines may have been quite slow, or indeed non-significant (see Rosenberg *et al.* 2016, Sauer *et al.* 2017), and Partners in Flight have now removed the species from their Yellow Watch List (Rosenberg *et al.* 2016 cf. Rich *et al.* 2004). Therefore, we have reassessed the species here against all criteria to see whether it warrants a change in Red List status.

Criterion A – The North American Breeding Bird Survey shows a non-significant decline of 0.14% per year for the period 2005-2015 (Sauer *et al.* 2017). Even if this were statistically significant, extrapolating this would equate to a decline of only 1.8% over three generations (13.2 years). Partners in Flight estimate the decline over 44 years (1970-2014) to be 9% (Rosenberg *et al.* 2016). This may then equate to a decline of 2.8% over three generations.

This data only comes from continental U.S.A., however this does represent the majority of the species's breeding range. Therefore, the global rate of population decline is unlikely to approach the threshold for Vulnerable under this criterion.

Criterion B – The species's range is far too large to warrant listing under this criterion.

Criterion C – Partners in Flight estimate the population at 12,000,000 mature individuals in continental U.S.A. out of a total of 14,000,000 (Rosenberg *et al.* 2016, Partners in Flight 2018). Thus the population size would be far too large to warrant listing under this criterion.

Criterion D – The species's population size and range are far too large to warrant listing under this criterion.

Criterion E – To the best of our knowledge, there has been no quantitative analysis of extinction risk conducted for this species. Therefore, it cannot be assessed against this criterion.

Therefore, the species does not approach the threshold for **Vulnerable** under any criterion and it is proposed that Painted Bunting be downlisted to **Least Concern**

Great Black-backed Gull. Photo Greg Lavaty

GREAT BLACK-BACKED GULL (LARUS MARINUS): UPLIST TO NEAR THREATENED OR VULNERABLE?

This discussion was first published as part of the 2017 Red List update. At the time a decision regarding the status of several was pended, but to enable potential reassessment of these species as part of the 2018 Red List update this post remains open and the date of posting has been updated.

Great Black-backed Gull (*Larus marinus)* is currently considered Least Concern on the basis that it was not thought to approach the thresholds for Vulnerable under any of the Red List criteria. It has a very large, trans-Atlantic distribution, being found from the Great Lakes, U.S.A. and the east coast of U.S.A. and Canada, coastal Greenland, Iceland, Faroe Islands, Svalbard, U.K., Republic of Ireland, the west coast of mainland Europe, Scandinavia, Estonia and coastal European Russia. The population size is also large, with 118,000-133,000 pairs estimated in Europe alone. Therefore, the species would still not qualify for any category other than Least Concern under criteria B, C or D.

The species may, however, now be suffering a significant decline. Using data from the European Red List of birds (BirdLife International 2015), information provided by A. Bond *in litt.* (2016) and information from Hario and Rintala (2016), Wilhem *et*

al. (2016), Bond *et al.* (2016), Ronconi *et al.* (2016), Washburn *et al.* (2016) and Mittelhauser *et al.* (2016) it has been calculated that this species is currently declining overall at a rate of 30-35% over a 3 generation period (36 years). Therefore, the species would seem to warrant listing as Vulnerable under criteria A2+3+4.

However, the causes of these declines are not certain. Several threats have been identified, including; collision with offshore windfarms (Bradbury *et al.* 2014); coastal oil spills and other kinds of pollution (BirdLife International 2015), although organochlorine contaminants do not appear to have an effect on chick condition and reproductive output in this species (Pekarik *et al* 2016); and the species may be caught as bycatch in fisheries (Anderson et al. 2011, Žydelis et al. 2013) as well as being deliberately hunted (Bregnballe *et al.* 2006). Reduced prey availability may also be impacting this species, with moratoria on certain types of fishing, and changes in fishery target species meaning that there may be reduced discard and hence less available prey (Boertmann and Frederiksen 2016, Mittelhauser *et al.* 2016, Wilhelm *et al.* 2016). Landfill closure could lead to further loss of potential foraging sites (Mittelhauser *et al.* 2016). In North America, increased predation rates by mammals and large birds of prey such as Bald Eagles, *Haliaeetus leucocephalus*, may be an additional threat (Mittelhauser *et al.* 2016); and on Sable Island in particular it has been suggested that gull declines on the island may be in part due to habitat changes (Ronconi *et al.* 2016).

Historically the species underwent a marked population increase and range expansion southwards between the 1930s and 1975, as well as spreading north to Spitsbergen. In the Nearctic, the breeding range has also extended southwards considerably since mid-20th century; it first bred in Maine in 1928, Massachusetts in 1931, New York in 1940, the Great Lakes in 1954, and New Jersey in 1966. In New England the population increased from 30 pairs in 1930 to 12,400 in 1972 (Burger *et al.* 2017).

It is possible therefore that the subsequent declines documented above represent an adjustment to previous lower levels following a human-mediated increase, and could be considered to form part of a long-term fluctuation (as previously discussed for European Herring Gull in 2015). It may therefore be appropriate to consider listing the species as **Near Threatened** although the raw data suggest listing as Vulnerable. Were this to be the case, the population should continue to be monitored closely and were it to show no sign of stabilisation it should then be listed in a higher threat category.

We would therefore welcome any comments and further information regarding this proposed uplisting, particularly around the likely drivers of the recent decline. This will help us to determine whether the species warrants uplisting to **Near Threatened** or **Vulnerable** under criterion **A2abcde+3bcde+A4ab**

Lesser Prairie-chicken. Photo Greg Lavaty

LESSER PRAIRIE-CHICKEN (*TYMPANUCHUS PALLIDICINCTUS*): DOWNLIST FROM VULNERABLE TO NEAR THREATENED?

This discussion was first published as part of the 2017 Red List update. At the time a

decision regarding the status of several was pended, but to enable potential reassessment of these species as part of the 2018 Red List update this post remains open and the date of posting has been updated.

Lesser Prairie-chicken, *Tympanuchus pallidicinctus*, is currently listed as **Vulnerable** under criteria A2bcd+3bcd+4bcd on the basis of long-term and rapid population declines (BirdLife International 2017). It is endemic to U.S.A., occurring in the states of Kansas, Colorado, Oklahoma, Texas and New Mexico; and historically possibly into Nebraska as well (e.g. Wolfe *et al.* 2007). Recent population estimates from 2015 place the population in the range of 22,000-44,000 individuals, most occurring in Kansas (McDonald *et al.* 2015). A re-evaluation of population trends by Garton *et al.* (2016 [*per* C. Hagen *in litt.* 2016]) suggests that over the preceding 48 years there had been a measurable decline in population, but this may not be to the same degree as previously thought. Over that 48 year period it was found that the abundance may have declined on average by 49% at an average rate of annual decline of 1.7% per year (Garton *et al.* 2016 [*per* C. Hagen *in litt.* 2016]). Such declines are as a result of habitat conversion (Wolfe *et al.* 2007) and historically due to market hunting (Wolfe *et al.* 2007); although recreational hunting for Lesser Prairie-chicken is now closed in most of the states where it occurs, and is no longer considered to be a significant threat to the species (Van Pelt *et al.* 2014). However, since 1995, most populations of Lesser Prairie-chicken have stabilised or increased as a result of a variety of conservation measures being enacted (C. Hagen *in litt.* 2016).

To meet the threshold for **Vulnerable** under criteria A2+3+4 would require this species to be have undergone and continue to undergo declines in the range of 30-49% over 3 generations or 10 years, whichever is the longer (IUCN 2012). The generation length for this species is currently listed as 5.5 years, and hence the time period used should be approximately 16.5 years – a time period over which most of the populations have been stable or increasing. Conservatively assuming that the annual figures shown above have been continuous over the 48 year period would roughly equate to a decline of 20-25% over 3 generations. Therefore, even taking this conservative assumption the rate of decline would not be sufficient for listing as **Vulnerable** anymore and the species would warrant downlisting. However, the removal of conservation measures would likely mean that the species would decline once again and would likely again warrant listing as **Vulnerable**. Therefore, it is proposed that this species be listed as Near Threatened under criteria A2bcd+3bc+4bc on the basis that it has undergone historic declines that have meant the species qualified as **Vulnerable**, and these are now only prevented from continuing as a result of continued conservation efforts.

Listing species on the Red List has become a dynamic process with status assessments often made on an annual basis. Many threatened species occur over a very large area often inaccessible due to ownership, remoteness and/or safety reasons. Once these obstacles are overcome the status of the species may change. Rather than "just guessing" recently a category called "data deficient" has been created. Taxonomic splits have also caused additions to the list as one or more of the new species is an "at risk" species. In conclusion to fully understand why a species is called "endangered" requires some investigation as to the criterion being used.

EXAMPLE OF SOME OF THE "AT RISK" LISTS.

The Partners in Flight *Watch List*
https://www.partnersinflight.org/species/

Audubon's *priority bird species*
Audubon.org

Texas list of non-game listed birds[1]
https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/listed-species/birds.phtml

Texas Conservation Action Plan: Species of Greatest Conservation Need
https://tpwd.texas.gov/landwater/land/tcap/sgcn.phtml

USFWS Endangered Species
https://www.fws.gov/endangered/

American Bird Conservancy *Watch List*
https://abcbirds.org/wp-content/uploads/2017/02/SoNAB-ENGLISH-web.pdf

CITES (Convention on International Trade in endangered Species of wild flora and fauna)
https://www.cites.org/eng/disc/species.php

Jack Clinton Eitniear
jclintoneitniear@gmail.com

[1] *Current under significant revision*

NEW TEE SHIRT ARTIST PROFILE... LYNN DELVIN

Lynn Delvin, 2018

Lynn Delvin is a graduate of the arts program at Western Michigan University. Lynn developed an interest in birds and particularly owls at an early age. Books that include his work include the *Michigan Breeding Birds Atlas,* and *Los Buhos Neotropicales/Neotropical owls* as well as various magazines , including numerous issues of *Texas Birds Annual* and the *Bulletin of the Texas Ornithological Society.* His art can often be viewed at art shows, including ARTPRIZE, in southern Michigan.

Great Gray and Great Horned Owl. Acrylic, Colored Pencil and Graphite Pencil-ARTPRIZE 2018

From: Los Buhos Neotropicales; Diversidad y Conservacion

2018 *Texas Birds Annual* Cover

Frontispiece BTOS 2015

Frontispiece BTOS 2016

WILD MUSCOVY DUCK MANAGEMENT AT THE SOUTH TEXAS BORDER

By Jack Eitniear, Raul Delgado, Tom Miller and Danny Perales

According to Dr. Tim Brush's book "Nesting Birds of a Tropical Frontier" the wild Muscovy Duck was first recorded in Texas in 1984, which explains why the 1974 Oberholser tome "Birdlife of Texas" makes no mention of it. While most sightings in the 70s and 80s were between the Starr County cities of Fronton and Salineno documentation by Marc Woodin in 1997 at a site upriver from Laredo, in Webb County, provides encouragement that the population is more widespread than in just Hidalgo, Starr and Zapata counties.

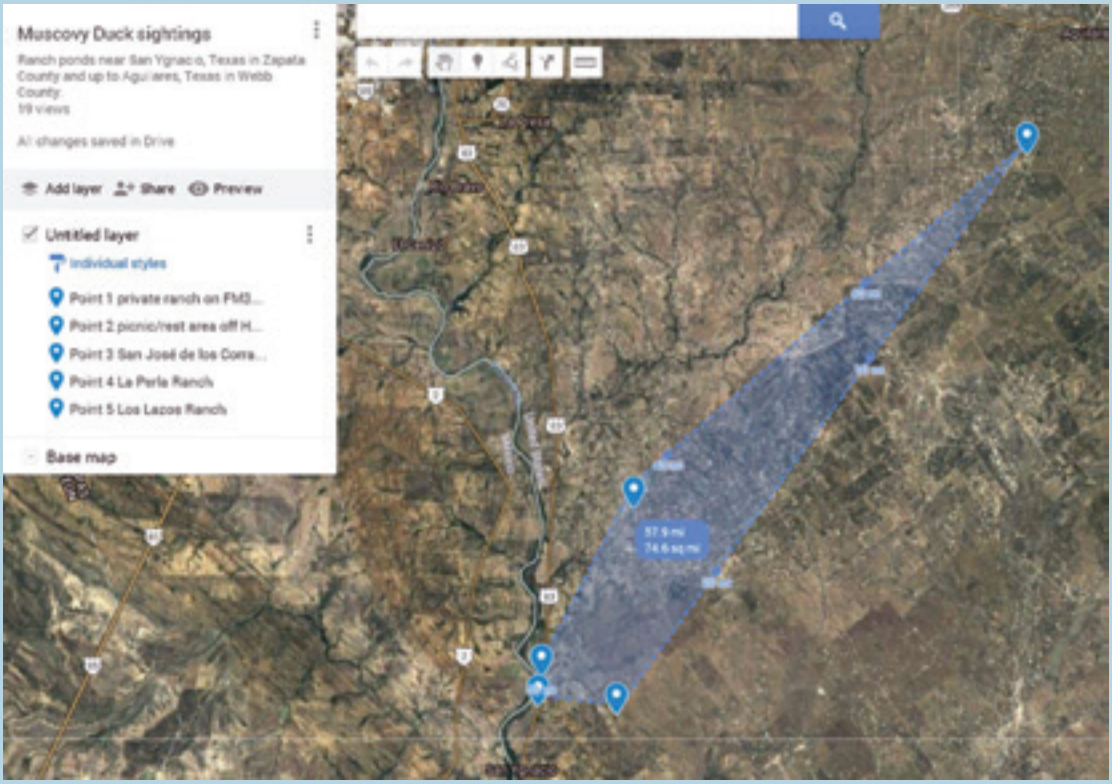
The rare and highly-prized neotropical Muscovy is a large black duck with white markings. It has been a recent sensation at sightings during the last two Laredo Birding Festivals, organized by the Rio Grande International Study Center, Monte Mucho Audubon Society, and Laredo Convention & Visitor's Bureau.

Prior to being photographed during the Festival at two ranches near San Ygnacio in Zapata Co., the Muscovy was known to make its northernmost home in Mexico's tropical rivers, ponds, and marshes.

This past spring, the MMAS and RGISC spearheaded the Muscovy Duck Project with area ranchers to establish nesting boxes at these ranches with the hopes that these ducks will roost and hatch, to increase their population numbers in our region.

Should the Muscovy establish itself here, it would be a significant development for Laredo and our greater region among the birding world, with birders sure to come from all over the United States to witness this rare avian gem.

Most people think of the Muscovy Duck as a "park duck" of variable colors. These domesticated relatives of the wild Muscovy have overpopulated areas throughout the southern United States prompting the USFWS in 2010 to pass a number of regulations clarifying what one can do with the wild population versus the feral domesticated variety. The first clarification was to determine that Muscovy Ducks in *Hidalgo, Starr and Zapata Counties were wild birds therefore protected by the Migratory Bird Treaty Act (MBTA)*. Added to the list of native waterfowl that can be harvested in Texas, muscovies in these three counties are placed in the "other" category in terms of hunting during waterfowl season. You need to check the current hunting rules but I believe you can shoot six birds daily during the season. Muscovy Ducks in Texas counties (other than those three) are considered an exotic invasive species. <u>These birds have no protection under the MBTA</u>. It is , however, illegal to possess and/or release both the wild and domesticated Muscovy ducks without a permit. The exception is that <u>you can possess the domesticated variety if you are raising them for food.</u> You can not even legally have one as a pet unless it was obtained prior to March 1, 2010. In summary. ALL Muscovy Ducks in *Hidalgo, Starr and Zapata Counties* are considered wild and protected under the



Recent sightings of Wild Muscovy Ducks in the Upper Rio Grande Valley. Google map by Raul Delgado.

Wild Muscovy Ducks photographed in the border region of South Texas. Photos Raul Delgado

A flock of 15 Wild Muscovy Ducks in nearby Mexico. Photo Ebird

The public can observe a nesting Wild Muscovy Duck at the Lamar Bruni Vegara Environmental Science Center in Laredo

Muscovy Duck project supporters at the Lamar Bruni Vergara Environmental Science Center duck exhibit. (left to right) Lucia Juarez, Jack Eitniear, Tim Miller, Raul Delgado and Miguel Pena.

Eduardo Carrera Executive Director of DUMAC discussed their past efforts with Muscovy Ducks in Mexico.

(Top and bottom right) Boxes at Santa Maria Land and Cattle Ranch in San Ygnacio, Texas. (bottom left) Javier Arambula , at Los Corralitos Ranch, just north of San Ygnacio. Javier is a 100% Texas vaquero and has seen Muscovy Ducks on the ranch for many years now. We are glad to have him on the team.

Tom Miller and Juan Tovar constructing boxes.

The attached photo file with Tom Miller and one of his staff: Juan Tovar is his name.

Jason Alvarez with his parents (Omar and Beatrice) and his Muscovy nest boxes.

MBTA. You can legally hunt them during the waterfowl hunting season with the appropriate license and endorsements. ALL Muscovy ducks outside those three counties are considered exotic and invasive. To control the spread of this domesticated strain it is illegal to possess them except if being raised for food.

In recent years Webb County has become a popular birding destination especially for the Morelet's Seedeater (formerly the White-collared Seedeater) and the Red-billed Pigeon.

In addition to these two highly-prized species, the Green Parakeet, Plain Chachalaca and Altamira & Audubon's Orioles are frequently observed; although they are more common in the Lower RG Valley. On May 9-10 of this year representatives and supporters of the Rio Grande International Study Center (RGISC), Monte Mucho Audubon Society, Center for the Study of Tropical Birds, Inc. (CSTB), and Ducks Unlimited Mexico met at the Lamar Bruni Vegara Environmental Science Center in Laredo, in an effort to add the wild Muscovy Duck to establish a management plan, and secure permission from ranchers to place nesting boxes within their property.

The meeting featured a presentation by Eduardo Carrera the Executive Director of Ducks Unlimited :Mexico (DUMAC). Years ago DUMAC placed thousands of Muscovy Duck nest boxes throughout northeastern Mexico in hopes of increasing the duck's population. They also began an educational program in the schools focusing on the duck and the value of its habitat. Their efforts likely are the reason that more muscovies are being sighted in the region and likely the source of our muscovies. To promote the species along the border nest boxes are being placed at suitable sites mainly near rancher's stock ponds. Nesting boxes are being made by members of the Monte Mucho Audubon and local Eagle Scout Jason Alvarez with donations from Home Depot. Ranch hands are given binoculars and asked to note any muscovies being sighted. This recently paid off as Muscovy Project Volunteer Javier Arambula reported that 1 mature Muscovy & 2 small ducklings were seen in his ranch pond. Ponds are also equipped with motion detector gamecams to document any visits by the ducks when observers are not present. Finally an educational exhibit at the Lamar Bruni Vegara Environmental Science Center in Laredo allows the public to see a pair of wild muscovies obtained from a breeder in North Dakota who is working to keep the wild strain pure in captivity. Anyone interested in contributing to or just keeping updated on the project is encouraged to join the WILD MUSCOVY DUCK MANAGEMENT PROJECT-LAREDO, TEXAS Facebook page.

Jack Eitniear
jclintoneitniear@gmail.com

Raul Delgado
rcdelg@gmail.com

Tom Miller
tmiller@laredo.edu

Danny Perales
danper@yahoo.com

STATUS OF THE RED-VENTED BULBUL IN HOUSTON TEXAS AND REPORT OF THE ANNUAL CENSUS EFFORTS OF THE HOUSTON AUDUBON SOCIETY

By Fred Collins, Kendra Kocab, and Megan Ahlgren

Photo by Kurt Hillman

Red-vented Bulbuls are native to the Indian sub-continent from Pakistan east to Bangladesh, Assam and Myanmar, and south to Sri Lanka. They were first reported in the Houston area in 1958 and remained something of an enigma in Houston through subsequent decades, occasionally reported in *American Birds* or the *Spoonbill*. Most were reported in or near the Heights, a neighborhood just west of Downtown Houston and north of White Oak Bayou. Since the bird was not pictured in any North American field guide, few observers recognized the species. Records for Red-vented Bulbul increased with the advent of eBird in 2002. This citizen-science database allows observers to easily report sightings of native and exotic bird species. John Berner, regional reviewer for eBird in Harris County, made a pioneering decision to include bulbuls in the regular Harris County list. This action dramatically increased reports beginning in 2010. David Sibley's second edition 2014 field guide included the species, and awareness of the bird became more universal. Bob McFarlane, who has conducted urban bird surveys for twenty years in Houston, has documented the bird's spread into the Montrose area within the last five years. Based on this information, the authors decided to initiate a Houston Audubon Citizen Science Project to complete annual censuses of the increasing population of this long-time established exotic species. The first census took place in 2016, and the results were published in the Texas Ornithological Society's *Texas Bird Annual*. This report may also be found under Red-vented Bulbul in the Bird Gallery of Houston Audubon's website.

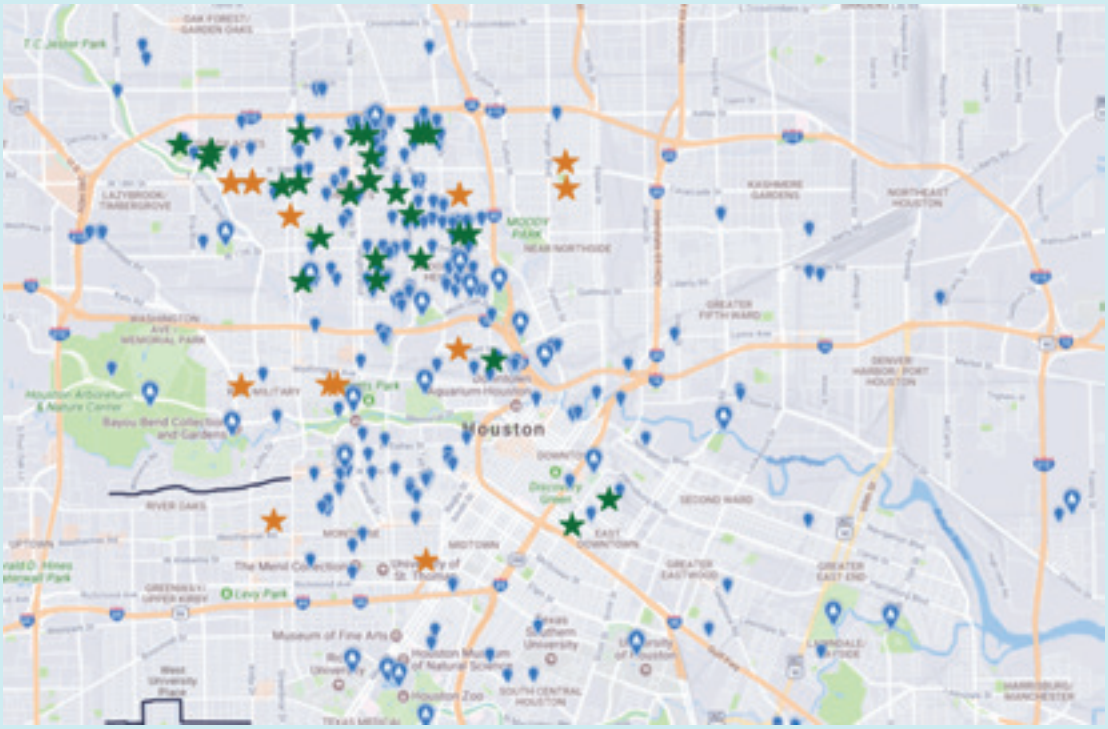
We have been pleasantly surprised at the interest that Houston Audubon members, local Heights residents and birders from across the state have displayed. Many local Heights residents who are not self-described birders, but who are familiar with bulbuls, have joined our ranks. We have been further delighted by birders from Austin and Dallas who have made the survey one of their annual projects. We are thankful for their participation and express our sincerest gratitude.

For the census, a series of routes approximately two miles in length are covered from 7 to 9 AM in early June. We include routes in areas where bulbuls are known to occur as well as in areas with no previous bulbul reports. This will help us determine whether eBird data accurately portrays the distribution of Red-vented Bulbuls. It will also allow us to document the potential spread of bulbuls outside of the Heights.

The map below shows Red-vented Bulbul reports. The blue markers are eBird reports, including sightings from the 2016 and 2017 censuses. The stars represent 2018 census sightings. Green stars are in areas where bulbuls are known to occur, while orange stars are in areas with no reports prior to the 2018 census. The two black lines represent routes in River Oaks and West University, which are of particular interest and will be discussed below.

All routes in close proximity to the Heights have produced bulbul sightings every year. This includes routes with no reports prior to the census. One can conclude then that there was not an absence of bulbuls in those areas, but rather a lack of observers.

This lack of observers could also explain our findings in the Near Northside neighborhood east of the Heights. The neighborhood is almost identical to the Heights except for its socioeconomic circumstance. A route was established here in 2018 where there were no previous bulbul sightings. Participants found a total of 3 bulbuls at 2 locations during the 2018 census. These observations are similar to some routes in the Heights, which might indicate that the population is comparable throughout the Near Northside neighborhood. Neighborhoods further east have socioeconomic circumstances that have so far



precluded them from being incorporated into the survey. Limited eBird data from these areas suggest a bulbul population similar to the Heights throughout the Kashmere Gardens, Greater Fifth Ward and Northeast Houston neighborhoods. If that speculation is correct, the core population in Houston would be double that which is currently known.

The two black lines in the map above represent the River Oaks and West University routes. These areas are of particular interest because they appear to have good habitat but no bulbuls have been reported prior to or during the census. River Oaks has a much lower house-to-lot size ratio than the Heights, but otherwise has similar characteristics. While no bulbuls have been detected on that route, two bulbuls were sighted on a different route at the eastern edge of River Oaks during the 2018 census. However, that area has a higher house-to-lot size ratio and commercial development nearby. West University is another area similar to the Heights in all habitat characteristics. We also are aware of several bird watchers that reside in this neighborhood. It is the route furthest away from the core population, which may account for its apparent lack of bulbuls. We will continue to include these routes in order to document the potential spread of bulbuls beyond the Heights.

The table below summarizes the census routes and number of bulbuls detected each year.

Bulbul Survey by Year				
Route	**Location**	**2016**	**2017**	**2018**
1	Heights	4	0	2
2	Heights	6	12	14
3	Heights	2	0	4
4	Heights	2	5	4
5	Heights	1	1	4
6	Heights	3	5	6
7	Heights	1	7	4
8	Heights	6	2	3
9	Heights	2		
10a	Heights		4	3
11	Rice Military	2	0	9
12	Sawyer Heights	0		
12a	Sawyer Heights		0	4
13	River Oaks		0	0
14	Montrose		4	0
15	Montrose		2	2
16	Montrose		0	2
17	West University		0	0
18	Oak Forest		0	0
19	Memorial Park		0	0
20	East Downtown			4
21	Heights			7
22	Near Northside			3
Total by Year		**29**	**42**	**75**

= Route not surveyed

= No bulbuls reported in any year

The first year (2016), 21 participants covered 11 routes in the Heights and the area immediately south of I-10. They detected 29 bulbuls or ~1.31 bulbuls per mile. In 2017, 36 participants covered 18 routes in the Heights, Montrose and River Oaks. They detected 42 bulbuls or ~1.16 bulbuls per mile. In 2018, 41 participants covered 21 routes in the Heights, Montrose and River Oaks. Near Northside was also included for the first time. The survey detected 75 bulbuls or ~1.78 bulbuls per mile.

While 2018 data might seem to suggest an upturn in the population, it is likely an artifact of our census methods and increasing experience of the observers. However, there could be a population increase. Our census began in 2016. Weather events in April and May of that year produced torrential rain at the peak of nesting season which could have depressed recruitment to the population. 2017 was probably a productive year, but our census would not pick up population recruitment since it corresponds to the height of

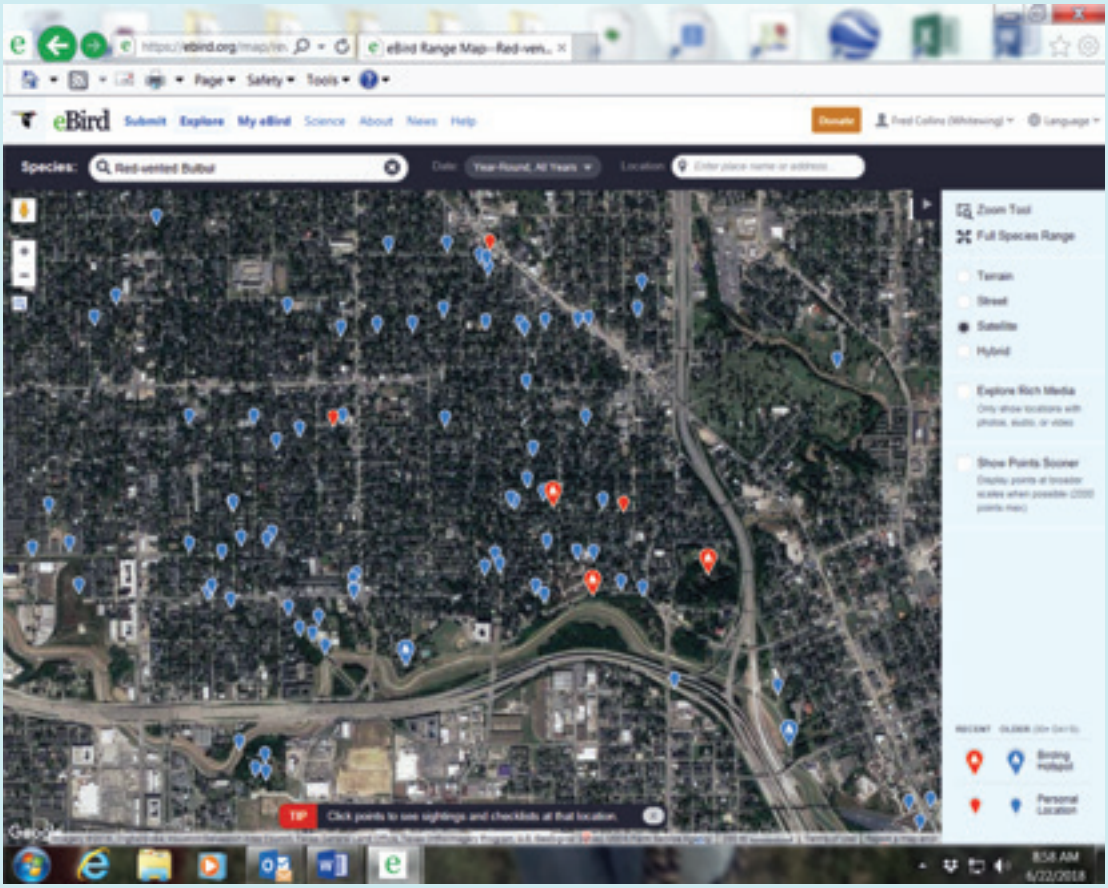
nesting. If significant recruitment did occur in 2017, it was not likely evident until July or August. Tropical Storm Harvey hit in late August of 2017 and juvenile birds were probably able to cope with those four days of heavy rain. The Heights area was not as affected by subsequent flooding as other parts of Houston. Also, the cold weather this past winter seems to have had a positive impact on many fruiting trees which produced well this spring, providing ample food for the bulbul population. Several family groups were noted on the 2018 survey, suggesting a successful reproductive year and the potential for dispersal of young bulbuls from the core population.

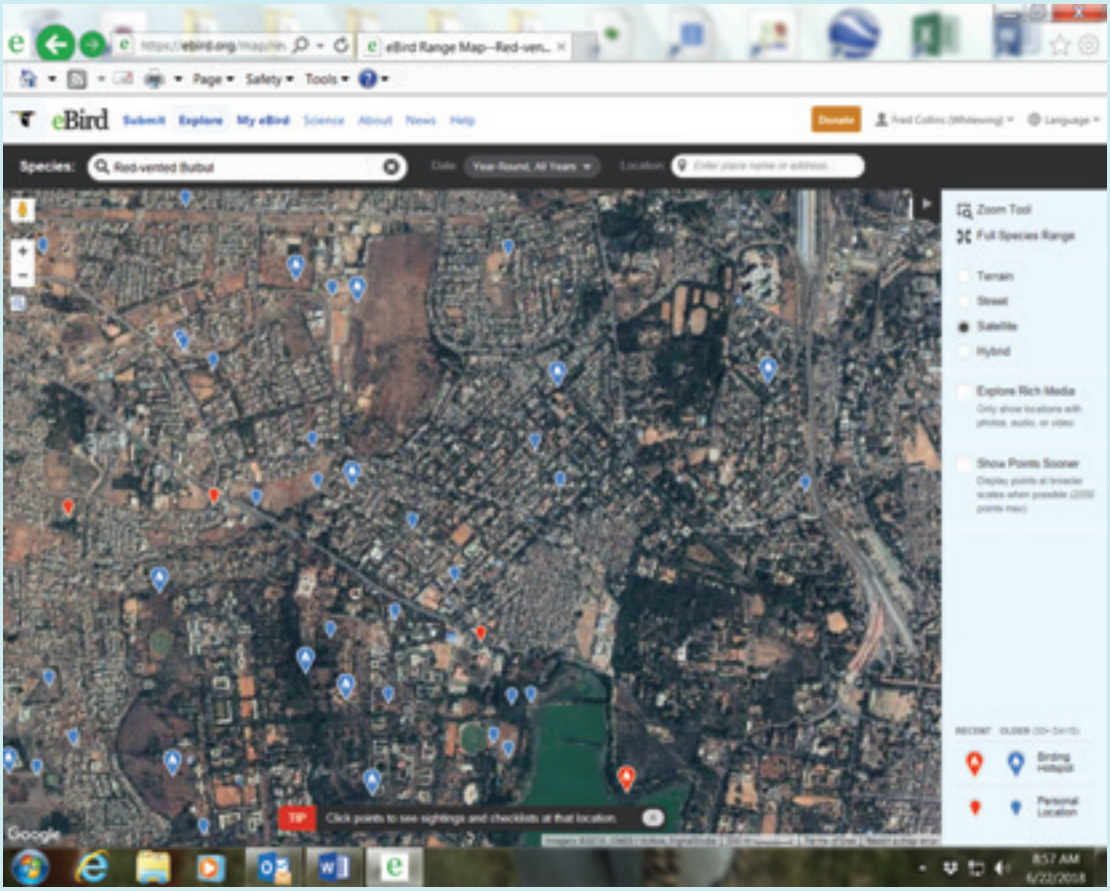
Is the habitat in the Heights saturated and producing the birds that are moving into other neighborhoods? Does the species have a potential to spread beyond the old neighborhoods near downtown Houston? These are important questions, and only long-term survey data will shed light on the answers.

It is interesting to compare eBird maps of Red-vented Bulbuls from the center of their distribution in India to the Heights. Looking at India, you will see that Red-vented Bulbuls are uniformly distributed throughout the subcontinent. The heaviest concentrations of sightings are in urban areas. Since the Indian subcontinent is the core range of the species and the heaviest frequency of sightings are in or near urban centers, one could infer that these areas are saturated habitats that produce excess birds for dispersal and population recruitment.

Below is the eBird map of Red-vented Bulbuls showing approximately 6 square miles in the Heights area. Notice the density within the core area.

The map below shows approximately 6 square miles in the Mysuru, Karnataka urban area in southern India. Notice that the reported population here is similar to the Heights.





If we look at individual points in India, we see observations are very similar to those in the Heights. There are often 1-4 birds but seldom more than 10. In sum, these similarities could indicate that the habitat in the Heights is saturated or at optimal density. Based on eBird observations, the Heights seems to be capable of supplying surplus birds to disperse into surrounding habitats.

Red-vented Bulbuls in India have the densest concentrations in urban areas with lower densities in more rural areas. Is this an artifact of observer frequency, or do bulbuls prefer urban habitats? Such a preference might help explain the lack of dispersal outside the developed areas of Houston. Bulbuls may require a high concentration and diversity of exotic plants, which are more often found in older urban neighborhoods in Texas.

The censuses have produced some interesting data beyond bulbul sightings. We asked survey participants to tally all the birds observed on their route in 2017 and 2018. While all routes did not submit complete lists, those that did show possible implications which can be examined as we accumulate a larger data set.

The survey area has a surprising variety of breeding hawks: Cooper's, Red-shouldered, Broad-winged, Swainson's and Red-tailed Hawks. Broad-winged, Swainson's, and Red-tailed are somewhat surprising. Broad-winged Hawk is an unusual breeder this far south. It is also not a typical urban bird. Swainson's and Red-tailed Hawks are typically found in open pastures and fields instead of urban environments.

The number of White-winged Doves is significant. Both years we tallied about 1300, which is likely a conservative number. There are also large numbers of Rock Pigeons and Mourning Doves. The large numbers of doves in the area provide a seemingly endless supply

of prey. They probably buffer nest predation of bulbuls and other passerines.

Blue Jays are among the ten most numerous species on the surveys. They are major nest predators and certainly impact the avifauna. So far, the number of Blue Jays on a route does not appear to have an effect on the number of bulbuls. Crows are uncommon in the surveyed urban areas.

Brown-headed Cowbirds are native nest parasites which appear to be uncommon in the survey area, with only three individuals reported in 2018. Why they are so uncommon is difficult to understand. Northern Cardinal is one of the ten most common species, with 92 reported in 2018. That population alone would seem to provide for a greater presence of cowbirds. The lack of cowbirds may be advantageous for bulbuls, since they would likely not have innate defenses against them. It may be, too, that cowbirds do not recognize them as potential hosts. A Bronzed Cowbird was also reported in 2018, a new species for the surveys.

Fruit is a significant part of the diet of Red-vented Bulbuls. They come into direct competition with Northern Mockingbirds and American Robins in this regard. European Starlings also feed on fruit during portions of their annual cycle, which include the spring and early summer breeding season. Consequently, it is interesting to note the numbers of these four species on the routes. One route just north of Loop 610 has yet to find bulbuls, despite suitable bulbul habitat and its proximity to other Red-vented Bulbul eBird reports. This route has also reported the largest number of competing frugivorous birds. This might well be coincidence, or it could be a factor in the Red-vented Bulbul's distribution.

The continuation of this annual survey should build a database which will allow research into this exotic species' role and evolution into the Texas avifauna. It may also provide insight on the impacts of future exotic bird introductions. We hope you will consider joining the survey next year. . .Mark your calendar now: **JUNE 1, 2019.**

Fred Collins
FCollins@pct3.com

OVERWINTER SURVIVAL AND HABITAT USE OF BAIRD'S AND GRASSHOPPER SPARROWS IN THE MARFA GRASSLANDS OF TEXAS

By: Mieke Titulaer, Denis J. Perez, Fabiola Baeza, Louis A. Harveson

Grassland birds that winter in northern Mexico and southern United States are declining faster than any bird guild in North America. Habitat loss and degradation are thought to be the main causes, yet knowledge on the specific drivers of these population declines, and the winter ecology of grassland birds, is lacking. This knowledge is essential to inform conservation strategies and management practices aimed at improving population trends for these birds.

Baird's Sparrow (*Ammodramus bairdii*) and Grasshopper Sparrow (*Ammodramus savannarum*) are two grassland-obligate species that breed in the Northern Great Plains and overwinter in the Chihuahuan Desert. They have lost between 70–80% of their total population since 1966, for which they were identified as birds of conservation concern by the U.S. Fish and Wildlife Service, species of greatest conservation need by the Texas Parks and Wildlife Department's Texas Conservation Action Plan, and Chihuahuan Desert priority birds by the Rio Grande Joint Venture.

In order to determine limiting factors for Baird's and Grasshopper sparrows on the wintering grounds, and obtain knowledge on their winter ecology such as habitat use and preferences, Borderlands Research Institute (BRI) started monitoring overwinter survival and habitat use of Baird's and Grasshopper sparrows in the Marfa grasslands in December 2016. In March 2018 we completed our second winter of investigating winter survival and habitat relationships of Baird's and Grasshopper sparrows. We are now preparing for a third field season, made possible by a generous donation from TOS.

The project is part of a larger monitoring effort lead by Bird Conservancy of the Rockies (BCR), aimed at identifying limiting factors for Baird's and Grasshopper sparrows throughout their full annual cycle. BCR and partners are monitoring three wintering sites in northern Mexico and three breeding sites in the US and Canada. Our study site in Marfa is the fourth winter site and it is unique in that it is the only winter site in the U.S.

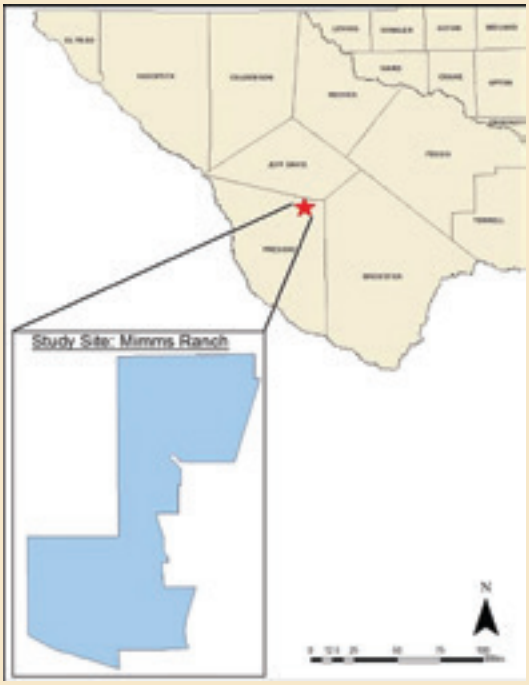
Baird's sparrow (left) and grasshopper sparrow (right).

METHODS

We follow the methodology developed by Bird Conservancy of the Rockies (BCR) for three sites in Mexico: Janos (Chihuahua), Cuchillas de la Zarca (Durango) and Valle Colombia (Coahuila), within the Chihuahuan Desert in Mexico. This will allow us to compare results across the study sites.

Study Site

Our study site is the Mimms Ranch, located in the Marfa Grassland Priority Conservation Area. The ranch is owned and operated by the Dixon Water Foundation since 2008. It encompasses 4,390 ha divided in 30 rotationally grazed pastures of approximately 105 ha grazed by 180-190 cattle, and one 858.3 ha pasture that is continuously grazed by 30 cattle.



Location of the Mimms Ranch.

Bird Captures and Monitoring

In the winters of 2016-2017 and 2017-2018, we captured, banded, and radio-tagged Baird's and Grasshopper sparrows. We captured the birds by flushing them into mist-nets with the help of 7-15 volunteers (many of them TOS members).

Graduate researcher Denis Perez removes a sparrow from the mist net.

Each bird was tracked and located once a day at different times of day between 0730 to 1800 h from mid-December through mid-March. We used triangulation to circle the birds and obtain their true location and not a location influenced by human disruption. Once located, we marked the location with a GPS unit. We recorded whether the bird was detected by sight or signal and noted the status of the bird (alive, dead, seen in good or bad condition). If a transmitter was found on a dead bird, we looked for signs of depredation such as blood, feathers, tracks, or a damaged or chewed transmitter. If any signs were found, we would attempt to identify the cause of predation. An extensive effort was made to locate birds that went missing (walking, driving, and searching by plane). Once a bird went missing, we scanned for its frequency every day for a week in different places throughout the ranch, and then once every week thereafter, until the expected life span of the transmitter had passed. At the end of the season, efforts were made to recapture all birds in order to take off the transmitters and assess the condition of the birds (conditions such as tattered feathers or skin irritation).

Position of the radio-transmitter.

Habitat Data

On the ground vegetation surveys were conducted using visual estimates of ground cover within a 5-m radius plot, recording percent cover of grass, forbs, Russian thistle (*Salsola*), shrubs, bare ground, and other cover (litter, rocks, etc.). In addition, we recorded average height of grass, forbs, and shrubs as well as the relative percent cover of the three most dominant grass genera. We collected vegetation data across a grid of points spaced every 100 m throughout the study area. We also collected vegetation data for a minimum of 20 locations per bird.

Baird's and Grasshopper sparrows depend almost entirely on granivory during the winter. In December 2017 we collected soil seed bank samples to determine seed availability in the study area. We collected samples in bird points and random points to explore the role of seed abundance in habitat preferences and movement patterns.

Overwintering grassland birds depend on vegetation for thermal cover. In February 2018 we placed 80 temperature loggers (iButton® DS1921) in bird locations and random locations, to explore the role of microclimates in movement patterns and winter survival. Temperatures were recorded every 10 min from early February to mid-March with an accuracy of 0.5 ºC.

In January 2018 we used a sense FLY eBee Plus fixed-wing UAS (drone) outfitted with a Sensor Optimized for Drone Applications (SODA) with red, green, and blue (RGB) camera to collect imagery of the study area. We obtained 2-3 cm/pixel resolution imagery that will be used to map the study area and quantify shrub density, because a previous study found that winter survival of Baird's and Grasshopper sparrows is lower with an increase in shrubs.

PRELIMINARY RESULTS

We radio-tagged a total of 66 (40 Baird's and 26 Grasshopper Sparrows) and 78 (48 Baird's and 30 Grasshopper Sparrows) in the winters of 2016-17 and 2017-18, respectively, for which we collected 1,855 and 2,321 bird locations (Table 1). For these birds we collected vegetation data in a total of 837 and 1,148 plots, and we collected vegetation data in 420 (rotational grazing) and 714 (427 rotational and 287 continuous grazing) grid points, for 2016-17 and 2017-18 respectively (Table 1).

Table 1. Number of radio-tagged sparrows, number of bird locations, and number of vegetation plots surveyed for bird locations and grid points in 2016-17 and 20117-18.

	2016-2017	2017-2018
# tagged	66	78
# bird locations	1,855	2,321
# veg points -birds	837	1,148
# veg points - grid	420	704 (424 Rot - 284 Cont)

In 2016-17, we had three confirmed mortalities (2 Baird's and 1 Grasshopper Sparrow). In 2017-18 there were 21 confirmed mortalities (11 Baird's and 10 Grasshopper Sparrows). Survival through the end of the season (mid-March) or to the end of the transmitter life-span (40-55 days) was confirmed for 29 birds (17 Baird's and 12 Grasshopper Sparrows) in 2016-17, and 33 birds (20 Baird's and 13 Grasshopper Sparrows) in 2017-18.

We calculated home range size at 95% (the whole area that the birds use, excluding outliers) and core area size (where birds spend most of their time) at 50% of the utilization distribution that we estimated with fixed kernel density estimators with the least squares cross validation smoothing parameter. Home range size was variable, ranging from 1.0 to 54.9 ha in 2016-17, with an average of 7.6 ha (±10.2; Table 2). In 2017-18 home ranges were smaller, varying between 0.7 and 27.4 ha with an average of 4.4 ha (± 4.7; Table 2). The average core area size was 1.0 ha (± 2.1) in 2016-17 and 0.8 ha (± 0.8) in 2017-18 (Table 2).

Figure 5 shows all bird locations for both seasons. The locations where birds were initially captured are marked with red arrows. This shows that birds moved more in 2016-17 compared to 2017-18, which explains why home ranges were larger in 2016-17. We hope that by adding another field season to the project, we will gain more insight into the factors that influence these differences in movement between years.

The vegetation data show that, averaged over two winters and grazing systems, Baird's Sparrow locations contained 45% grass, 42% bare ground, 0.1% shrub, 0.5% forb cover, 0.4% Salsola, and 12% other cover. Average grass height was 19 cm and average forb height 21cm. Grasshopper Sparrow locations contained an average of 40% grass cover, 46% bare ground, 0.2% shrub cover, 1% forb, 1% Salsola, and 12% other cover. Average height was 22 cm for grass and 23 cm for forbs. In general, birds seemed to prefer areas with more grass cover, taller grass, fewer shrubs, and less bare ground compared to the overall study site.

Preliminary analysis of the soil samples indicates that seed abundance is higher in bird locations compared to random points, especially in the rotationally grazed system. This might indicate that birds select for areas where seed resources are high when this is possible.

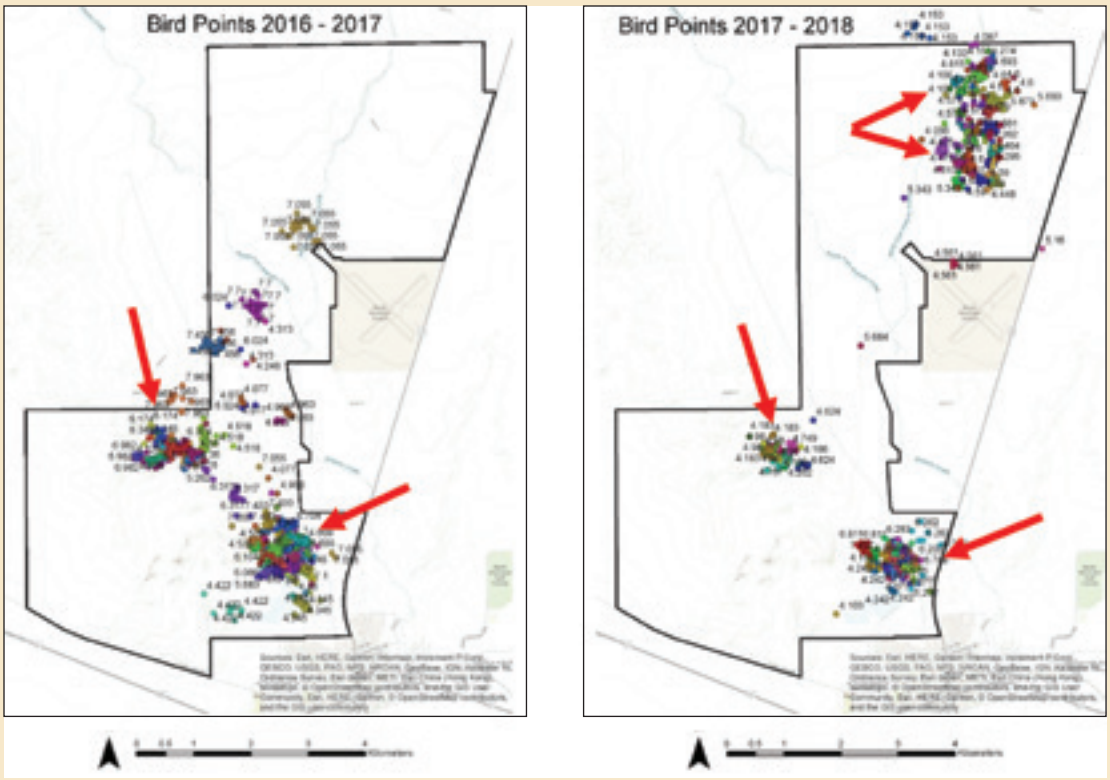
The temperature data indicate that minimum daily temperatures are lower in short compared to tall grass, which may imply that mortality of birds that do not have access to tall grass on cold days could be higher.

CONCLUSION

The project is still ongoing and the results presented here are only preliminary results from partially analyzed data. However, these are the first estimates of winter home range size of Baird's and grasshopper sparrows in west Texas. The results indicate the home range sizes are variable between years, which

Table 2. Size of home range and core are in 2016-17 and 2017-18.

	Home Range (95%) ha		Core Area (50%) ha	
	2016-2017	**2017-2018**	**2016-2017**	**2017-2018**
Mean	7.58	4.38	1.04	0.83
Minimum	1.04	0.68	0.18	0.14
Maximum	54.93	27.42	11.46	3.50
SD	10.16	4.87	2.05	0.78



All bird locations for 2016-17 and 2017-18. Red arrows indicate initial capture locations.

highlights the need for long-term studies to determine how home range size relates to specific conditions that vary from one season to the next.

The results indicate that Baird's and grasshopper sparrows prefer sites with dense grass cover and taller grass, and that they avoid bare ground and shrub cover. This is in agreement with what we know of the ecology of these species. Further analysis must indicate how variation in vegetative cover influences mortality rates.

The results of this study will be combined with the data from three other sites in Mexico, and three sites on the breeding grounds, to develop full annual cycle models to determine where in their annual cycle these species are most limited.

Mieke Titulaer
mieke.titulaer@sulross.edu

WHOOPING CRANE SURVEY RESULTS: WINTER 2017–2018

By Matthew J. Butler and Wade Harrell

The U.S. Fish and Wildlife Service estimated the abundance of Whooping Cranes in the Aransas-Wood Buffalo population for the winter of 2017–2018. Survey results indicated 505 Whooping Cranes (95% CI = 439.2–576.6; CV = 0.069) inhabited the primary survey area (Figure 1). This estimate included at least 49 juveniles (95% CI = 42.0–58.0; CV = 0.085) and 183 adult pairs (95% CI = 160.0–209.7; CV = 0.069).

Recruitment of juveniles into the winter flock was 10.8 chicks (95% CI = 9.7–11.9; CV = 0.056) per 100 adults. The precision of this year's abundance estimate achieved the target set in the Whooping Crane inventory and monitoring protocol (i.e., CV < 0.10).

This season (winter 2017–2018) the U.S. Fish and Wildlife Service continued to use a Quest Kodiak aircraft but shifted surveys from December to late-January through early-February. The Kodiak aircraft has better visibility than the Cessna used in the past, which improves survey data and results in a more accurate population estimate. The U.S. Fish and Wildlife Service intends to continue using the Kodiak, or other aircraft with improved visibility, for future surveys.

Evidence over the last few years from migration reports and telemetry data indicated that not all Whooping Cranes arrive on the wintering grounds along the Texas coast by mid-December as past data had suggested (see page 19 in Whooping Crane inventory and monitoring protocol). This required the U.S. Fish and Wildlife Service to move

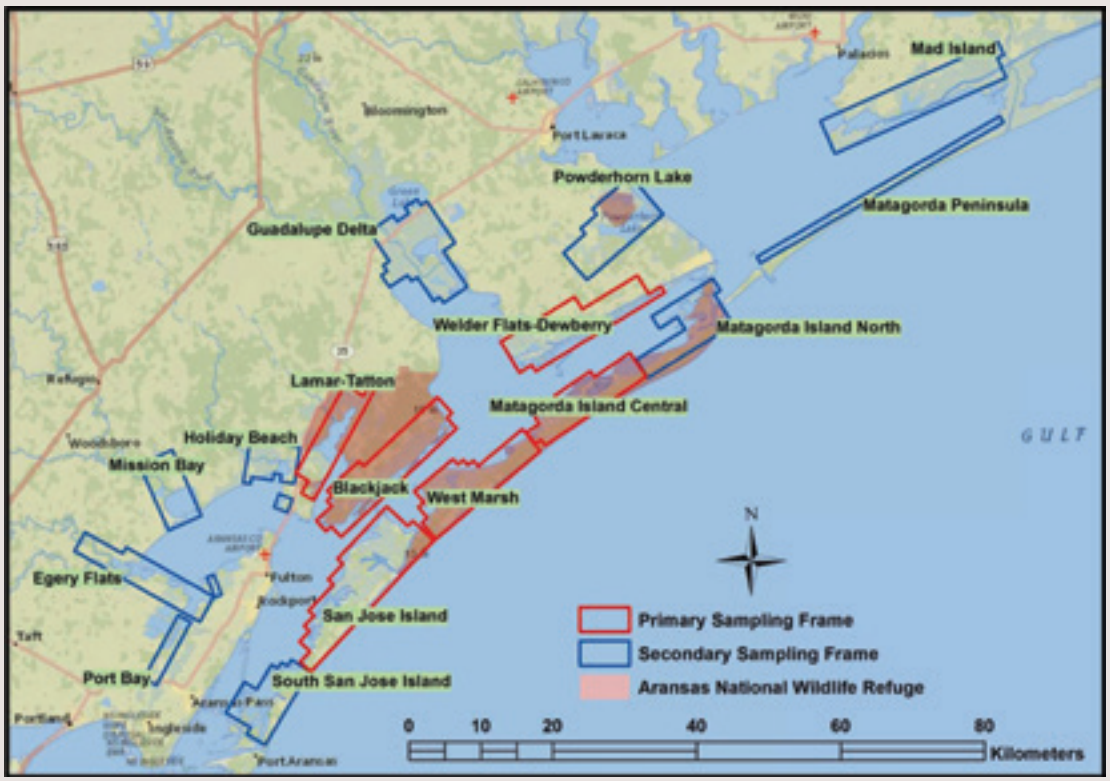


Figure 1. The sampling area used to monitor whooping crane abundance on their wintering grounds along the Texas coast of the Gulf of Mexico, USA.

surveys later in the winter (i.e., January or February) to obtain more complete estimates. Although this past winter's estimate from the early February survey is 17% greater than the past winter's estimate obtained in December, this does not mean that the Whooping Crane population experienced above average growth (Table 1; Figure 2). Instead, the winter 2016–2017 abundance estimate from December was likely not capturing the entire Whooping Crane population, given that some birds had not completed migration yet. The U.S. Fish and Wildlife Service intends to continue conducting future survey during late-January through early-February in order to maximize the proportion of the population within the primary survey area.

During winter 2017–2018, the primary survey area (approximately 153,950 acres; Figure 1) was surveyed multiple times during January 31 through February 5, 2018. San Jose Island and West Marsh were surveyed four times and Blackjack, Lamar-Tatton, Matagorda Island Central, and Welder Flats-Dewberry were surveyed three times. During the same period, the secondary survey area (approximately 169,300 acres; Figure 1) was surveyed to monitor ongoing expansion of the Whooping Crane's occupied winter range. Due to poor weather conditions, only six of the secondary survey areas were surveyed. Matagorda Island North was surveyed on February 1, 2018 and South San Jose Island, Port Bay, Egery Flats, Mission Bay and Holiday Beach were surveyed on February 4, 2018.

In anticipation of needing to move surveys later into the overwintering period and to train new observers, the U.S. Fish and Wildlife Service conducted test surveys in early March during winters 2015– 2016 and 2016–2017. These tests were conducted with the Kodiak aircraft (Figure 2). Using data from early March 2016, the U.S. Fish and Wildlife Service estimated the abundance of Whooping Cranes as 463 (95% CI = 392.0–549.2; CV = 0.095) for the winter of 2015–2016 (Table 1). Using data from early March 2017, the U.S. Fish and Wildlife Service estimated the abundance of Whoop-

Table 1. Preliminary whooping crane abundance estimates for the Aransas-Wood Buffalo population on their wintering grounds, winter 2011–2012 through winter 2017–2018.

Survey year[a]	Survey month	Aircraft	Abundance[a]	CV	95% CI LCL	95% CI UCL	No. assumed beyond primary survey area[b]
			Earlier in Winter				
winter 2011–2012	January	Cessna	254	0.126	198	324	13
winter 2012–2013	December	Cessna	257	0.186	178	362	22
winter 2013–2014	December	Cessna	304	0.078	260	354	6
winter 2014–2015	December	Cessna	308	0.067	267	350	6
winter 2015–2016	December	Cessna	329	0.073	293	371	9
winter 2016–2017	December	Kodiak	431	0.101	371	493	6
			Later in Winter				
winter 2015–2016	March	Kodiak	463	0.095	392	549	8
winter 2016–2017	March	Kodiak	489	0.116	428	555	6
winter 2017–2018	February	Kodiak	505	0.069	439	576	21

[a] Estimated whooping crane abundance in the primary sampling area using aerial surveys and hierarchical distance sampling. CV = coefficient of variation, CI = confidence interval, LCL = lower confidence limit, and UCL = upper confidence limit.

[b] Provides our best understanding of the number of whooping cranes, at the time of the aerial surveys, that were outside of the primary survey areas. This information was based on data from Texas Whooper Watch, Ebird reports, the whooping crane GPS tracking study, and aerial surveys conducted in the secondary survey areas.

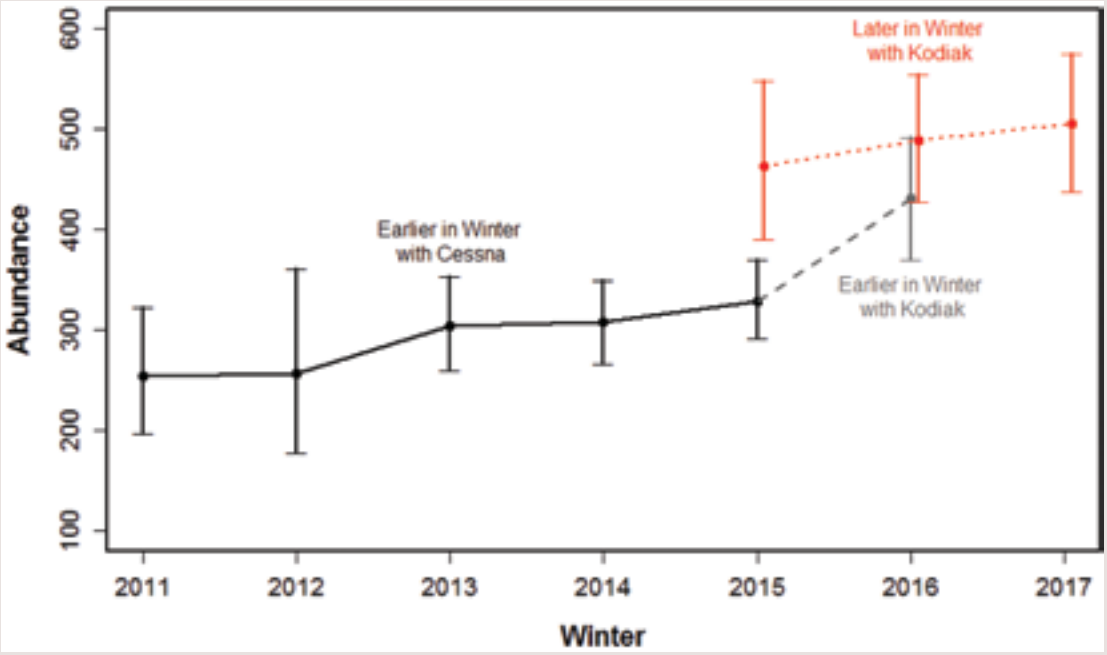


Figure 2. Surveys conducted by from the Cessna aircraft were likely biased low due to reduced visibility. The Kodiak provides for improved visibility and moving surveys later into the overwintering period allows for a greater proportion of the population to complete migration.

ing Cranes as 489 (95% CI = 428.6–555.1; CV = 0.116) for the winter of 2016–2017 (Table 1).

During March 2017 (winter 2016–2017), the primary survey area was surveyed three times during March 1 through March 3, 2017.

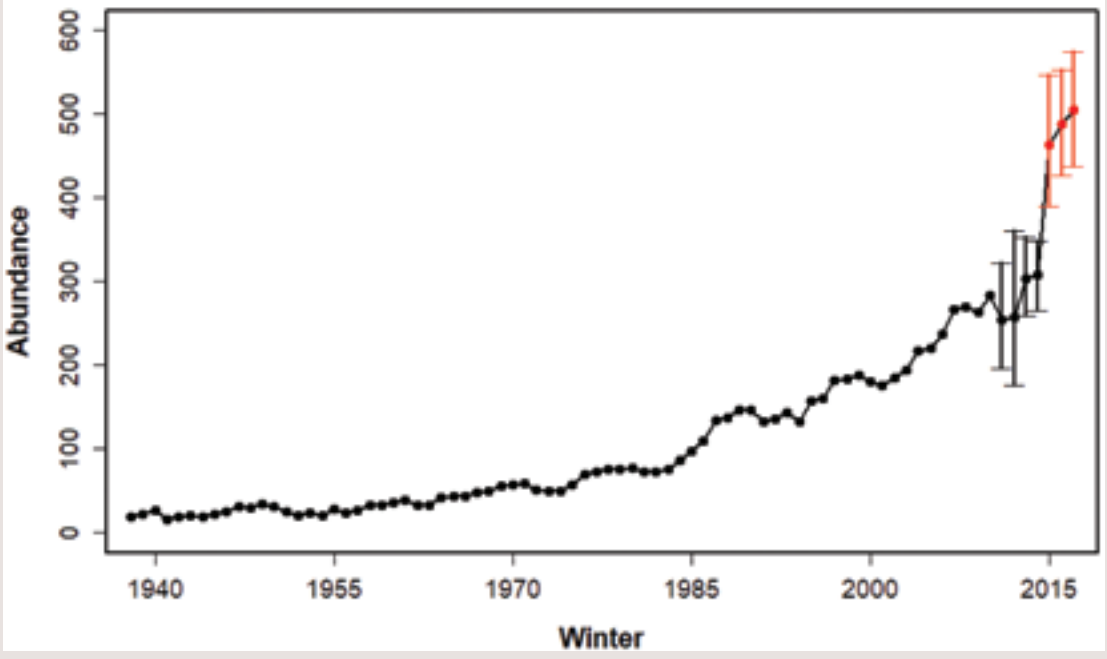


Figure 3. Time-series of whooping crane abundance estimates for the Aransas-Wood Buffalo population beginning in winter 1938–1939. Starting in winter 2011–2012, the precision of abundance estimates were displayed as 95% confidence intervals and during years prior, precision was unknown. In winter 2015–20167 (red), the USFWS began using a Quest Kodiak aircraft later in the overwintering period. This resulted in estimates that are more accurate because it allowed for improved visibility and a larger proportion of the population to complete migration.

During March 2016 (winter 2015–2016), the primary survey area was surveyed multiple times during March 2 through March 4, 2016. Blackjack, Lamar-Tatton, and West Marsh were surveyed three times and San Jose Island, Matagorda Island Central, and Welder Flats-Dewberry were surveyed twice during March 2016. None of the secondary survey areas were surveyed during these times.

The long-term growth rate in the Whooping Crane population has averaged 4.55% (n = 76; 95% CI = 1.86–7.09%) prior to adjusting survey timing in winter 2015-2016. After adjusting survey timing to later in winter, the average growth rate is 4.44% (n = 2). Therefore, the long-term growth of the Aransas-Wood Buffalo Whooping Crane population continues (Figure 3) and estimates of growth are likely unaffected by the methodological changes in the aerial survey.

For each of the late-winter test surveys, recruitment of juveniles into the winter flock was underestimated. For the winter of 2015–2016, we estimated 5.4 juveniles per 100 adults in March and 13.0 juveniles per 100 adults in December. For the winter of 2016–2017, we estimated 3.1 juveniles per 100 adults in March and 13.1 juveniles per 100 adults in December. By March, most of the characteristic tawny plumage of juvenile Whooping Cranes has been lost making it difficult to distinguish juveniles from adults. Thus, in an attempt to conduct the surveys during a period in which most individuals have arrived in the primary survey area plus maintain the ability of observers to distinguish between juveniles and adults, the U.S. Fish and Wildlife Service conducted the winter 2017–2018 surveys during late- January through early-February.

During the survey periods, some Whooping Cranes were observed outside of the primary survey area. These data were based on information from Texas Whooper Watch, Ebird reports, the Whooping Crane GPS tracking study, and aerial surveys conducted in the secondary survey areas.

Tables 2 and 3 provide our best understanding of Whooping Cranes outside the primary survey areas during each survey period. Some birds may have been missed. It is impossible to be certain that individuals did not move between these locations and to/from the primary survey area during the survey period.

Table 2. Whooping cranes documented outside of the primary survey area during surveys conducted in winters 2015–2016 (March 2016) and 2016–2017 (March 2017); secondary survey areas were not surveyed with aircraft.

Survey	General area	Data source	Adults	Chicks	Total	Notes
March 2016	Matagorda County (near Palacios, Texas; Mad Island secondary survey area was not surveyed)	Ebird (https://ebird.org/view/checklist/S27998254)	1	0	1	Single adult reported 6 times on March 4, 2016.
	Aransas County (near Holiday Beach, Texas; Holiday Beach secondary survey area was not surveyed)	Ebird (https://ebird.org/view/checklist/S27956661)	2	0	2	Adult pair reported on March 3, 2018.
	Aransas County (Lamar, Texas; Goose Island State Park)	Ebird (https://ebird.org/view/checklist/S27936638)	1	0	1	Single Adult reported on March 2, 2016.

Table 2. (Continued)

Survey	General area	Data source	Adults	Chicks	Total	Notes
March 2016	Aransas County (Lamar, Texas; residential area)	Ebird (https://ebird. or g/view/checklist/ S27970555)	4	0	4	Six separate reports of between 2 and 6 whooping cranes. The median count is used.
March 2017	Aransas County (near Bayside, Texas; Egery Flats secondary survey area was not surveyed)	Ebird (https://ebird. or g/view/checklist/ S34932387)	1	0	1	Single adult reported on March 2, 2017.
	Aransas County (Lamar, Texas; Goose Island State Park)	Ebird (https://ebird. or g/view/checklist/ S34943383)	2	0	2	Adult pair reported on March 3, 2017.
	Aransas County (Lamar, Texas; residential area)	Ebird (https://ebird. or g/view/checklist/ S34925402)	3	0	3	Three separate reports of 3 whooping cranes.

Table 3. Whooping Cranes documented outside of the primary survey area during January 31 through February 5, 2018. Aerial survey of Matagorda Island North, Port Bay, South San Jose Island, Egery Flats, Mission Bay and Holiday beach secondary survey was conducted once during the survey period.

General area	Data source	Adults	Chicks	Total	Notes
Matagorda Island North (secondary survey area)	Aerial survey	6	1	7	One adult pair with a chick and two adult pairs detected once on February 1, 2018.
Nueces County (Port Aransas, Texas; Nature Preserve)	Ebird (https://ebird. org/view/ checklist/ S42139183)	2	0	2	One adult pair reported multiple times between January 10, 2018 and February 25, 2018.
Matagorda County (near Palacios, Texas; Mad Island secondary survey area was not surveyed)	Ebird (https://ebird. org/view/ checklist/ S42392179)	2	0	2	Adult pair reported on January 31 and February 2, 2018.
Calhoun County (near Magnolia Beach, Texas; Powderhorn Lake secondary survey area was not surveyed)	Ebird (https://ebird. org/view/ checklist/ S42440371)	2	1	3	Adult pair with a chick detected on January 31, 2018.

Table 3. (Continued)

General area	Data source	Adults	Chicks	Total	Notes
Aransas County (Lamar, Texas; Goose Island State Park and residential area)	Ebird (https://ebird.org/view/ checklist/S42432598)	5	1	6	Ten separate reports between 2 and 10 Whooping Cranes. The median count is used.
Briscoe County (near Silverton, Texas)	Ebird (https://ebird.org/view/ checklist/S42594130)	1	0	1	Single adult reported with large flock of sandhill cranes on February 8, 2018.

The data and results presented in this report are preliminary and subject to revision. This information is distributed solely for the purpose of providing the most recent information from aerial surveys. This information does not represent and should not be construed to represent any U.S. Fish and Wildlife Service determination or policy.

Matthew J. Butler
matthew_butler@fws.gov

Wade Harrell
wade_harrell@fws.gov

TOS SPONSORED ADULT TEAM

At 6am on May 9, 2018 the Birders at the Bend team set out in Colorado Bend State Park. Entered in the State Parks category of the Great Texas Birding Classic and sponsored by Texas Ornithological Society, the team members had fun seeing what species might turn up. Inland state parks have a tough time competing with coastal parks in terms of species diversity but it's still worthwhile to get together to bird for conservation and highlight local state parks.

We enjoyed sharing the antics of fledgling Blue-gray Gnatcatchers with hikers on the Gorman Falls trail. Three very noisy babies were stacked up in a row on the limb of an Ashe Juniper, begging for food. A nearby parent was busily attending. When offered our binoculars for closer views, the two hikers enthusiastically checked out the birds. Simple acts can bring people closer to birds and nature.

For several years Zone-tailed Hawk have nested in CBSP. This year was no exception. We were pleased to first hear the ZTHA and later have everyone get a sighting of the birds.

Birders at the Bend—Daniel Hodges, Jimma Byrd, Richard Redmond, Johana Huff.

We attempted to cover most habitats in the park over the course of the day.

There were no big surprises in terms of species but good numbers of some favorites like Painted Bunting, White-eyed Vireo, and Yellow-billed Cuckoo. Two Wood Ducks flying up from the shady enclave of Gorman Creek was a treat!

Team members were Richard Redmond, Daniel Hodges, Jimma Byrd and Johana Huff. We appreciate the sponsorship of TOS in the 2018 GTBC.

Submitted by Jimma Byrd

TOS-SAYBC SENIOR CHICKADEES

Teamwork Made All yhe Difference!

Right to Left: Delaney Kempf (Captain), Marie Johnson, Nicholas Siller, Jordan Rochlitz, Alaina Blue Adult Mentor: Tom (Mr. Tom) Inglet

Thanks to the Kempf, Johnson, Siller, Rochlitz, and Blue families for their support!

Thanks to Land Heritage Institute and Mitchell Lake Audubon Center for preserving habitat for all the wonderful birds we saw.

Thanks to *Texas Ornithological Society* for Team Sponsorship.

DELANEY KEMPF (SENIOR TEAM CAPTAIN)

This year's Birding Classic was very bittersweet for me. As I'm now 18, this will be my final year as the captain of this amazing team. Our team this year was literally the dream team! Each and every young birder had different bird-related interests, and we were all able to come together and rely on each other's strengths. From puzzling out the difference between Red-eyed and Yellow-throated Vireo calls to intensely separating Baird's, Western, and Semipalmated Sandpipers, we all learned something new and had an incredible time doing so.

Finding a favorite experience from this day is nearly impossible. Was it when while walking along a creek bed we had a Barred Owl directly above us ask; "Who Cooks For Youuuuu?" Or was it when we nearly overturned the car we were in after a member of our team located a beautiful Louisiana Waterthrush? Maybe it was seeing literally thousands of shorebirds congregating in a pond and trying to sort them all out. I don't think it's possible to pick a favorite moment, so I'll just say that the entire day was filled with great birds, great friends, and many wonderful memories.

The rain caused a pause in the birding, but it didn't dampen these birders' enthusiasm!

Birding the Brush Country at Land Heritage Institute: Where ARE Those Turkeys?

ALAINA BLUE ("BLUE" TO HER FRIENDS)

This year's Classic was my last one before I move out of state, and it was probably the best yet. I've always believed in ending things with a bang, and this year was no exception: our species count ended up in the triple digits, which we haven't done since I've been a part of the SAYBC! I've grown a lot as a birder, and I was actually able to identify most of the songs and calls I heard -- Yellow-throated Vireo, Olive Sparrow, Orange-crowned Warbler, Ash-throated Flycatcher -- which has definitely been a weak spot of mine in past years. I couldn't have asked for a better GTBC, and I'm glad I was able to share it with my team.

MARIE JOHNSON

When weather threatened to put a damper on my team's scheduled day of birding for the Great Texas Birding Classic, I started to worry we would spend the better half of the morning counting Vultures drying their wings, Scissor-tailed Flycatchers sitting on wires, Doves cooing in branches, and Mockingbirds guarding their territories. I was surprised rather, to hear both Yellow-throated and White-eyed Vireos, a Barred Owl clearly calling so well it sounded like a recording, Northern Bobwhites, and many other birds. Thankfully my teammates and I had spent time learning the calls of birds. In the rain, this turned out to be quite important. We also saw more birds than I would expect to be flitting about in the rain. During the worst of it, we saw both Brown-crested and Great-crested Flycatchers and quite a few other birds.

When the rain let up, the birds came out for the second half of our day. As a team, we were initially setting our team goal to be at least 86 birds. We wanted to break last year's record. However, one of my team-mates, a constant voice of optimism, said we should go for 100! This sounded like a crazy goal, but onward we went. I know they say, "don't count your chickens before they hatch," but later, when our team captain, Delaney, gave us our total with about an hour to go, it was a whopping 98! This was exciting news! We resolved to bird like we had never birded before. We had broken our record, but we were not going to stop there! This is where being able to identify peeps became critical. Another one of my team-mates was fantastic at identifying peeps. We set up the scope and let him go to

work. We were thrilled to end the day with 104 birds.

There were several personally exciting birds over the course of the day. That Barred Owl hooting was a personal highlight I will not soon forget. As we were hiking through poison ivy and along a drop-off to a river, I was doubting the traction of my boots when suddenly, we heard its clear call and looked at each other, mouths agape. It was such a surprise in the day. It made it fun. We also had a great view of a gorgeous male Bullock's Oriole. I also really enjoyed watching the dainty Wilson's Phalaropes pirouette while feeding. And finally, being able to spot a Louisiana Waterthrush for my team made me feel pretty good.

I learned so much at this year's Great Texas Birding Classic. I learned the importance of looking at every single bird in a flock and knowing your shorebirds. I also recognized the importance of working together towards a common goal using each team member's strength. Finally, I learned how very important encouragement from members of your team are to being successful.

JORDAN ROCHLITZ

This Great Texas Birding Classic is one I know I will never forget. I was privileged with great teammates, and I learned so much. Though the weather was not ideal, we saw a total of 104 species, beating our previous record of 85. There were so many new experiences that day, but there were definitely some that stood out. For instance, as we were hiking along the river trail, we heard the hoot of a Barred Owl, which was a call I had only heard recordings of. It was amazing, even if we never actually saw the bird. The river trail was beautiful, and the canopy of leaves provided a nice cover from the rain.

After birding at the Land Heritage Institute, we drove to the Mitchell Lake Audubon Center (stopping for birds along the way of course). At Mitchell lake, we picked up the majority of our birds, including the Hudsonian Godwit (a new bird for my life list). At the polders, we ran into countless swallows and peep sandpipers, both of which proved to be difficult to identify. On the bright side, I learned a lot about peep identification, and we managed to add a few more birds to our list. The funniest birds we saw during our visit, in my opinion, were the Wilson's Phalaropes. I enjoyed looking out over the pond to see dozens of little spinning phalaropes.

One thing that was also comical, was the fact that we saw turkey tracks, feathers, and scat, but never an actual turkey. The junior team even had turkeys cross the road right in front of them, but we never once saw a living turkey (we'll just have to get them next year). I'm not sure if I could choose one sin-

Who IS that birder in the pink raincoat?

What Sandpiper is THAT? Peeps, Dowitchers, and Godwits, oh my!

gle thing that was my favorite, but I definitely loved being outside with others who enjoy birding and working as a team to identify and spot birds. It was a great learning experience, and such a joy. I had an absolute blast, and can't wait until next year!

NICHOLAS SILLER

This was my first Texas Birding Classic and it yielded all of our team with an amazing day of birding! I have been birding for just under a year, so seeing 104 species in a day was astounding. The day was well organized with our birding ranging from the Land Heritage Institute to Mitchell Lake. Through some periodic rain, both places proved to be successful birding spots and I was able to see a lifer Louisiana Waterthrush and some lifer peeps. I am grateful for the opportunity to participate in the Classic and it was a great way to get to know other birders in the San Antonio Young Birders Club. The Texas Birding Classic was a great way to bird during spring migration and I would enjoy participating in it next year.

Teamwork is what it's all about—AND Fun!

BIRDING WITH PURPOSE FOR A GREAT CAUSE: THE GREAT TEXAS BIRDING CLASSIC!

Left to Right: Eric Buhler, Craig Davis (Captain), Patsy Inglet (Adult Leader), Theophania (Nia) Johnson, and Luke Johnson.

Thanks to Christie Davis, Miriam Buhler, and Amy Johnson, for their help and photographs.

Thanks to Land Heritage Institute and Mitchell Lake Audubon Center for preserving habitat for all the wonderful birds we saw.

Thanks to Bexar Audubon Society for Team Sponsorship.

Patsy Inglet (Adult Leader)

Don't forget to LISTEN to those songs and calls!

This year the Junior Team was sponsored by **Bexar Audubon Society** and consisted of four team members. However, the smaller team did NOT diminish the number of birds the team was able to see and identify! This team had done its homework on bird songs and calls and was rewarded with an even bigger list than last year.

CONGRATULATIONS to a great team of young birders. You were a joy to work with!

CRAIG DAVIS (JUNIOR TEAM CAPTAIN)

The 2018 Great Texas birding classic was a great experience for me. I am the leader of the junior team, but I still have a lot of work to do. We went to Land Heritage Institute in the morning to identify song birds and then later to Mitchell Lake Audubon Center to look for water birds. Going to both of these places allowed us to get more species than last year. I was surprised to get so many species because of the constant drizzle and the bad lighting where everything was a silhouette. Since sight wasn't the greatest, we tried to identify calls instead.

This year, Mrs. Patsy really wanted to focus on calls. I used online classes on the Cornell Lab of Ornithology web page including feeder bird identification and feeder bird songs. Last year, all I could count by call were turkeys. This year, we identified many birds by call. Some of them were Painted Buntings, White-eyed Vireos, Woodpeckers, and House Finches. I am going to keep learning more calls and get even better for next year, when I will be new to the senior team. Mr. Tom is the leader of the senior team and is also encouraging his team to learn calls.

My favorite birds that we saw were two Indigo Buntings in the same tree as a Painted Bunting. Some things that were funny were seeing a Black-bellied Whistling-Duck in the top of a tree and a Black Vulture trying to balance on a wire, but it wasn't working out very well for him. This trip was very fun and educational and I am looking forward to next year.

ERIC BUHLER

The first place we went was Land Heritage Institute . I went in the car and saw a Bronzed Cowbird on a power line. We worked as a team. Then we went on the trail and saw a vesper sparrow. I was walking and scared it because it was on the ground in the grass. Then we saw 4 Mississippi kites! I spotted a Baltimore oriole it was hopping around in the tree next to the barn. We went a little and heard a roadrunner. It sounded like a whimpering dog.

On the way to Mitchell Lake we saw a Painted Bunting! It had a green back a purple head and a red bottom. Then we saw a Swainson's Hawk. We saw it up close. We saw an Indigo Bunting. I only saw the wing tip. We arrived at Mitchell lake I saw Ruby-throated Hummingbirds, a lot of them. I saw 5. Then we saw an American Avocet it had an orange head and black wing. In the water we saw a pile of pelicans! Then we got in the car and saw 150 pelicans flying up in the sky! I had a fun day.

LUKE JOHNSON

STOP! I hear a bird up there!

Participating in The Great Texas Birding Classic was so fun! First, we went to the Heritage Land Institute, and later, Mitchell Lake Audubon Center. I loved finding all those cool birds. At first, I felt like I would not be any help at all; but eventually, it all turned out great! Our team captain was really helpful because he could identify the birds with which I had trouble. Because of the rain, we were expecting there to be very few birds. Thankfully, the sun came out and there were hundreds of birds! We saw 85 species in that one day!

Before we left the Heritage Land Institute, something really funny happened. While we were scanning the trees to look for birds, we saw a large bird perched high in a tree. It was a Black-bellied Whistling Duck! We later learned that the scientific name for Black-bellied Whistling Duck means "duck in tree". My favorite part of the day was when we were leaving the Heritage Land Institute and I saw my favorite bird for the first time, a Pyrrhuloxia! I had been waiting to see that bird forever. Another big highlight was when we went to Mitchell Lake and saw a Hudsonian Godwit!

I had a very good time at my birding classic!

THEOPHANIA (NIA) JOHNSON

In the weeks before the Great Texas Birding Classic, I had spent a lot of time birding with my family. Even though I had practiced identifying birds and studying, when I first met up with my team, I was feeling shy about spotting birds and speaking up. After a little while, I felt like I could speak up and point out birds.

I was most excited to see Orioles; and, the Scissor-tailed Flycatchers flying in groups above us was so pretty. I also really loved getting an up-close view of a Yellow-Crowned Night Heron. Mrs. Inglet was very nice, and was patient with us while we worked on identifying each bird we saw. I really liked it when she let me control the scope all by myself. At the end of the day, we were treated to seeing a beautiful huge flock of American White Pelicans soaring in the sky!

Overall, my team was a great team to be on. We all worked together; and, by the end of the day, I felt like they were my friends. I had such a great time and was really surprised how many birds we ended up finding together.

Let's GO! So many birds, so little time.

Looking forward to the Great Texas Birding Classic in 2019!!

THE TOS FINCHTASTIC 4 AND THE TOS OUTSTANDING OSPREYS

Two TOS-sponsored birding teams from Fulton Learning Center recently competed in the Great Texas Birding Classic. Team names and members are listed below:

- The TOS Finchtastic 4 – Kade Alston, Cannon Chapman, Talon Kenfield, and Hudson King (sponsored by Texas Ornithological Society) competed on Monday, April 30th
- The TOS Outstanding Ospreys – Kaleb Conner, Anthony Diaz DeLeon, Keaton Solis, and Chase Waggoner (sponsored by the Texas Ornithological Society) competed on Friday, April 20th

The kids are competing against other young birders across the state of Texas in the "Roughwings" division of the GTBC which is sponsored through Texas Parks & Wildlife Dept. I am extremely proud of our youth teams that learned so much in a shortened school year because of the hurricane. It is unbelievable to me how much these teams of students blossomed and pushed themselves to be ready for this tournament. I beamed with pride watching the students working cooperatively using field guides, having group discussions, and sharing their ideas on all of our Roughwings trips. A lot of credit goes out to our team mentor Bron Rorex Carrier from the Texas Ornithological Society who has volunteered her time weekly to teach our students about our local avian life. She has been doing this selflessly for 9 years with me.

The 22nd annual Birding Classic is taking place between April 15 – May 15, 2018. It has been called the world's biggest, longest and wildest birdwatching tournament. The mission statement of the Classic is: To increase appreciation, understanding, and conservation of birds through education, recreation, nature tourism, and conservation fundraising. The birding program at FLC has been set up to mirror those same goals of increasing appreciation, understanding, and conservation of birds through the education of our youth.

By Martha McLeod, 5th Grade Science Lab Instructor, Fulton Learning Center

OYSTERCATCHERS AND YOUTHFUL YELLOWLEGS

Three students from Rockport-Fulton Middle School competed in the Great Texas Birding Classic on Wednesday, April 18th, 2018. The team chose to compete in a statewide division of the Birding Classic and could therefore compete alongside their birding mentors. Team members included 6th graders Laila Flowers, Michael Jones, Brody Karl, plus Aransas Bird & Nature Club mentor Bron Rorex Carrier, and FLC science teacher Martha McLeod. The three Rockport-Fulton Middle School students have been involved in the ACISD birding program for 3 years in a row. These students also have volunteered their time almost EVERY Wednesday morning at 7:00AM throughout the ENTIRE school year to tutor younger team members on the 4th and 5th grade teams.

The Texas Ornithological Society sponsored the entry fees for this team in the competition this year, and they called themselves "Oldtime Oystercatchers and Youthful Yellowlegs."

Competitors in this category could only log bird species seen and heard from sunrise (7:00AM) until noon. The team therefore began their day at 6:20AM so that they could travel to Port Aransas and be staged and ready to begin counting as soon as the sun came up. All team members had to see and identify birds together with team work.

A grand total of **94 bird species** were documented in the Port Aransas, Packery Channel, and Corpus Christi areas in a 5 hour period of time. Woo hoo!!!

By Martha McLeod

TOS GREEN JAY CARDINALS AND TOS PENGUINOS

The students from Trevino Elementary (ECISD), Edinburg, TX participated in the Great Texas Birding Classic on Saturday, April 28, 2018. Trevino fielded 2 teams. We began our experience at Quinta Mazatlan in McAllen, TX during rain with hummingbirds fluttering about us near the main office. A Gray Hawk was finally identified thanks to a spotting scope that was donated to us by Eagle Optics. Quinta is a small, but beautiful treasure of a birding Center.

With a few species under our belt we proceeded to Santa Ana National Wildlife Refuge. We of course had to go to their tower and rope bridge, but not before we had already identified numerous species right at the visitor center. We were able to spot various species just out the back door to the visitor center in the trees and then along the entrance way. The Altamira Oriole nest was just where it always is and we were treated to an Altamira Oriole standing on the uppermost branch of the trees as we walked by. Almost as if it were surveying its kingdom. Chachalaca's had of course acted as trumpeters to our arrival as we crossed into the park itself. The lakes and ponds afforded us several grebes and ducks, with the added bonus of a Grooved-bill Ani that just happend to drop by and a Clay-colored Thrush that was checking out to see what all the commotion was. Ten bird crazed kids can be pretty noisy when they get excited.

Estero Llano Grande was our next stop with the excitement brimming when we spotted Ruby-throated Hummingbirds just off the visitor center deck. I checked in and the kids checked out all the shore birds. Of course the Eastern Screech-Owl was where it always seems to be during daylight hours, in its box on the way to the lookout at alligator lake.

Last stop was the Edinburg World Birding Center, another small jewel of South Texas. Spotted a couple more species here to grow our list and called it a day.

What a whirlwind of a day!

I was so proud of the students' stamina and their use of field guides and apps to help them out during the day. They really had mastered the apps. Some of them still prefer to use the books, while most of them gravitate toward the apps because that is where education seems to be going, the use of technology in the classroom. I also had a couple of kids that know many birds by sight because they have been in the GT birding camp every summer for the last couple of years. Thanks to you and your support I hope to continue to have students participate in the GTBC for years to come.

Victor Cantu
Trevino Elementary
National Blue Ribbon School
Edinburg CISD

TOS THE BURROWING OWLS GLIDERS TEAM 2018

Left to right: Lisi Clarke, Linnaea Clarke, Sebastian Casarez, Cody Logue (Photo courtesy by Sandra Casarez)

Photo Courtesy by Sandra Casarez

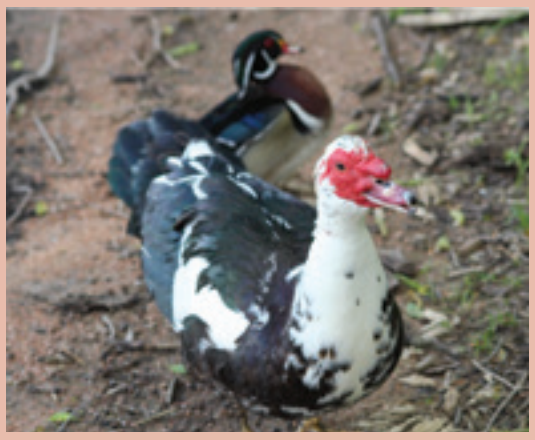
Photo Courtesy by Ranetta Clarke

TEAM CAPTAIN SEBASTIAN CASAREZ

I was excited to participate in this year's Great Texas Birding Classic in the Gliders Team category with my friends Cody, Linnaea, and Lisi! I would like to thank my teammates for being a part of the TOS The Burrowing Owls Gliders Team. They were AWESOME! We had so much fun birding during the GTBC competition. We birded all over the Greater Austin area. I was happy that the weather brought us a good birding day. My highlight bird was watching some Wilson's Phalaropes spinning in Hornsby Bend Ponds. My team and I would like to thank Texas Ornithology Society (TOS) for sponsoring our team. We are looking forward in participating next year! Happy Birding!

TEAMMATE CODY LOGUE

I thoroughly enjoyed this year's Great Texas Birding Classic. It was my first time to ever really get involved with professional birders, and I definitely learned a lot. I enjoyed watching birds that I had never seen before, even though they made their homes only a few miles from my house. My favorite part of the Birding Classic was seeing my first Painted Bunting. Before, I had only seen them in pictures. Because of their bright colors, they are one of my favorite types of birds. Also, I enjoyed photographing a beautiful Wood Duck who was constantly being guarded by a half-bald Muscovy Duck. I look forward to participating in next year's Birding Classic!



Domesticated Muscovy Duck & Wood Duck. Photos courtesy by Cody Logue)

We were amazed with all the different species of birds we were able to see right in our area.

Sebastian was a patient and knowledgeable teacher, he was respectful of the birds and their habitat and showed us clearly his love for the art. Sebastian is dedicated to learning and expanding his knowledge. One of my favorite birds out of more than one hundred types that Sebastian pointed out, was the male house finch, which has such pretty red coloring.

It was a wonderful and rewarding experience and now that I learned more about birds I am further aware of their presence in our environment and pay closer attention to their individual characteristics. We can identify birds by their external anatomy, flight patterns and different songs and eating habits. Each species is easily identified because of "family" resemblance but there are no two birds identical just like there are no two identical snowflakes.

A big thank you to Sebastian for opening our eyes to the world of birds!

TEAMMATE LINNAEA CLARKE

I have had an amazing adventure with the Great Texas Birding Classic group. It is wonderful to have such dedicated partners that have the Bird Book memorized backwards and forwards. This experience gave me a new appreciation for birds. I use to pay little attention to them but now in my daily life I'm able to look up in the sky or listen in the trees and have a new appreciation for birds and their voices. Thanks so much for this opportunity!

TEAMMATE LISI CLARKE

Sebastian, leader of Burrowing Owls invited us to accompany him in the May 2018 event. This event encouraged us to give special attention to another part of God's creation.

Photo courtesy by Ranetta Clarke

TOS DALLAS ZOOM: OUR FUTURE LOOKS BRIGHT!

Dallas Zoo youth birding teams won regional first places in Texas Parks & Wildlife's *Great Texas Birding Classic* for the third year in a row. They competed alongside 100 teams from across the state. Our teams documented 75 species and counted 1000+ individual birds on a 12-hour birding marathon fueled by an insatiable hunger for birds…and Rice Krispies Treats.

Youth participation was made possible

by generous support from the Texas Ornithological Society (TOS). Known as "TOS Dallas Zoom," the team is made up of an elite birding commando squad of 11 to 16-year-olds who volunteer as Dallas Zoo Jr. Zookeepers and Conservation Guides. They practiced for months—sharpening visual acuity, exercising auditory discernment, mastering taxonomic order, and crafting precision descriptions such as, "See that tree; see it? The green one. Over there!"

Armed with binoculars, field guides, Cheetos, and hawk-like vigilance, they set their sights on seeing 80 species in one day. They competed one week late this year and learned that eastern screech-owls fledge the week before. They also ran into access issues at some of their favorite birding spots in Dallas County and so, all things considered, they were very proud of the 75 species they were able to document.

They enjoyed a long day together, had a lot of fun, and bore witness to what must be the most compelling drama in all of natural history—the spectacle of avian migration. They documented bird species and population densities and submitted their observations to the global ornithological database, eBird.

The competition encourages birding as a source of life-long learning and enrichment and supports wildlife conservation. TOS's support and sponsorship will help fund bird habitat conservation projects statewide.

Courtney Jonescu recruited this stellar team. The **Texas Ornithological Society** (TOS) provided generous support. **Ben Jones** made practices rigorous and fun.

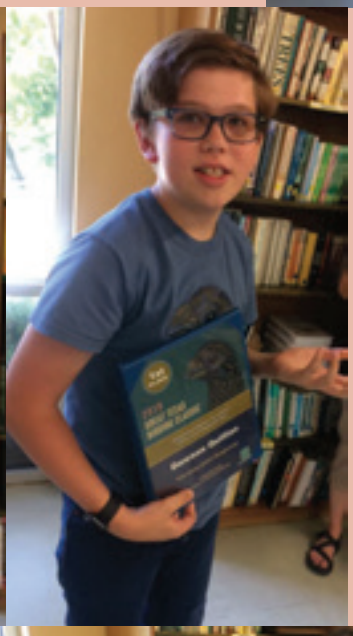
Susi Rinck chaperoned all day long, again for the third year in a row, and she still doesn't even really like birds.

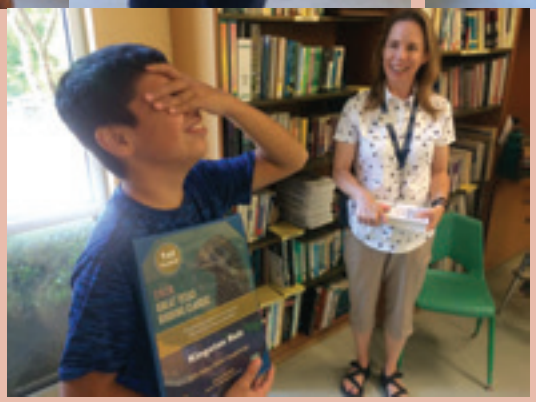
Have you seen this report? 40% of the

world's bird species are in decline. https://www.allaboutbirds.org/2018-global-report-40-of-worlds-birds-are-in- decline/ To turn this tide like we did for bald eagle, California condor, and whooping crane, we have to fight for every species. TOS DALLAS ZOOM is our next generation of bird conservationists.

TOS DALLAS ZOOM is **Kaela Adkins**, **Preslee Hilliard, Dawson Quillian, Kingston Ruiz, Emersen Van Horn, Evan Jansen**, **Christian Hernandez**, **Jon Ritter von Weber-Hansberg**, **Elias Vasquez,** and **Miranda Rinck**. These young conservationists will make you proud. They're our future.

Dallas Zoo—Let's Create A Better World for Animals.





TOS-SAN ANTONIO ZOOTEAM

Thank you for sponsoring the San Antonio Zoo for The Great Texas Birding Classic. The birding competition was very exciting and it made me appreciate birds on a whole new level. Prior to the competition, I did not have a lot of background knowledge or experience in birding. However, I have gained new skills that facilitate spotting birds and identifying them. The competition helped me learn about various bird species that are commonly found around my area. I had a very supportive, patient and experienced team that helped me grow as a birder. By having a chance to compete, I have become closer friends with my team, since we appreciate wildlife and want to secure their future. Along with making new friendships, the team also got a chance to explore the outskirts of the San Antonio Zoo where we found more bird species. One of the most exciting bird species my team found was the Green Heron and the Neotropic Cormorant. We also found a hummingbird's nest in a small tree above the riverside.

Since the competition, I have gone birding with my family and friends at various national parks around the country. It is interesting to see the wide variety of bird species in different regions. By using the birding skills I gained from the competition, it was easier to identify birds that were not native to Texas. My family has always enjoyed nature and camping, so it was easy to find people who would support and encourage my birding interest. The San Antonio Zoo always has quality birding equipment that encourages employees and volunteers to go birding in the park nearby. Also, the San Antonio Zoo takes volunteers a couple times a year to go birding at Mitchell Lake. Because of the support received, I have many resources that help me further develop my birding interest and skills. Again, I am thankful for the sponsorship of my team because this experience has changed the way I interact and view the beautiful birds of Texas and around the country.

Thank you,
Chelsea Alvarez

BIRDING CLUB AT UNITED HIGH SCHOOL, LAREDO, TEXAS

L to R—Frank de Hoyos, Irene Sanchez, Javier Vazquez, Pete Hernandez

Dear TOS,

My name is Javier. Last year I joined the Birding Club at United High School, Laredo, Texas. I was not sure what to expect but I learned so many things that I will carry them with me for the rest of my life. One thing that I enjoyed the most was participating in the Great Texas Birding Classic. We trained all year in spotting birds and using our guides to identify the birds. Our sponsor kept a record of previous years' number of species seen throughout the year and we had added new species to that list. We felt we could be the new champions of total species seen during the year. Our grand finale event would be the GTBC. We got an early start—6:30 am, and dashed to many places looking for night jars and owls. Sadly, only a Lesser Nighthawk was recorded and we had to move on to other sites

Team TOS n TERNs and Sponsors

we had scouted. We had set our goal at 100 species and the first 50 were recorded within three hours. We were excited! We finally had a chance to try to beat the school record. I personally wanted to spot a Cedar Waxwing, my favorite bird. We had spotted it several times earlier in the year and knew they would not be around very much longer. At two different stops I kept hearing a soft high-pitched Zzzzz-sound whistle. I was optimistic, but didn't say anything because I wasn't sure—perhaps I was just imagining it could be Cedar Waxwings. Finally, at one of the stops, I could hear the trilled whistle sound so clearly that I ventured out just a bit from my group. What I saw was the most exciting thing that I

was not expecting. There must have been at least 50 Cedar Waxwing on a Salt Cedar tree. I immediately called the rest of the group and we were amazed as to how many there were. I will never forget that experience and am grateful that I got to be part of this event. I know, that our leader was a little upset that I spent so much time trying to get the perfect picture of my awesome find. It was worth it though, because I have a picture of this exciting moment on my first year of birding!

On behalf of our club and our school, I would like to thank TOS for sponsoring our team to participate in the Great Texas Birding Classic. It was the perfect event to end our senior year. We were successful in setting the new record for number of species seen during the year for the UHS Birding Club and I hope to continue my birding while at Texas A&M, College Station.

Sincerely,
Javier Vazquez
United High School—TOS n Terns

6TH ANNUAL "BIRDS OF THE BRUSH" ART CONTEST AND 2018 LAREDO BIRDING FESTIVAL HIGHLIGHTS

Birds of the Brush Art Contest at Laredo Center for the Arts. Photo courtesy of Eugene Ruiz.

Photo courtesy of Julie Kelly.

Birds of the Brush Art Contest at Laredo Center for the Arts. Pictured are the High School Category winners.
Photo courtesy of Eugene Ruiz.

Birders out on the field. Photo courtesy of Julie Kelley.

Birds of the Brush Art Contest at Laredo Center for the Arts. Best in Show winner, Francisco Garcia, is a high school student that beat out over 430+ entries. Photo courtesy of Eugene Ruiz.

Birders at a local Laredo park during the 6th annual Laredo Birding Festival. Photo courtesy of RGISC.

Birds of the Brush Art Contest at Laredo Center for the Arts. Pictured are the Community-Amateur Category winners. Photo courtesy of Eugene Ruiz.

Birds of the Brush Art Contest at Laredo Center for the Arts. Danny Gunn, Sr. (RGISC Board Member), Tricia Cortez (RGISC Executive Director), and Rosie Santos (Laredo Center for the Arts Director) present the winners for the High School category with their prize package. Photo courtesy of Eugene Ruiz.

Laredo Birding Festival Farewell Banquet. This year's LBF keynote speakers was Dr. Drew Lanham of Clemson University. Photo courtesy of Eugene Ruiz.

TEXAS LIST INCREASES TO 649!!!!!

The TBRC has officially added White-crowned Pigeon and Great Black Hawk to the state list. A White-crowned Pigeon was found injured near the Galveston Ferry (Galveston County) on 7 Oct 2017 while the Great Black Hawk was a surprising bird on South Padre Island (Cameron County) on 24 Apr 2018. The acceptance of these 2 species brings the State List to 649 in good standing.

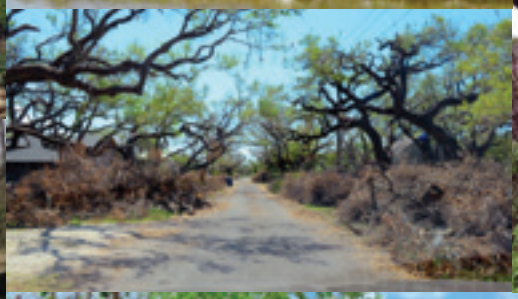
White-crowned Pigeon. Photo Wildlife Center of Texas.

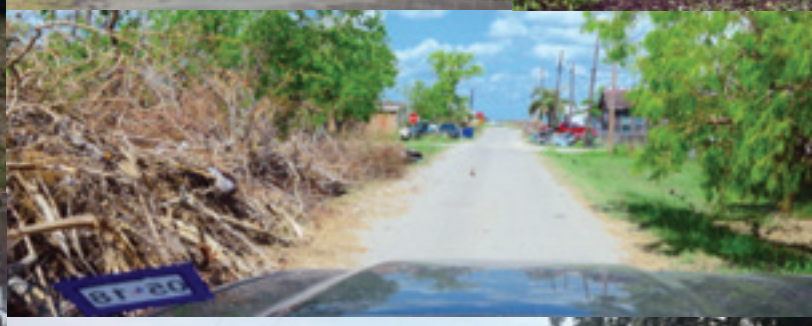
Great Black Hawk. Photo Riley Wynay












HURRICANE HARVEY HITS THE TEXAS COAST…BIRDING SITES IMPACTED

Rockport ……
All of Aransas County birding sites are open, but some have ongoing repairs.
Goose Island State Park - Two thirds of the park is open. The fishing pier, and road leading to the pier are closed. The State is in the design phase, and hope to rebuild this area within the next year
Tule Marsh East/Demo Garden—This site lost many big trees in the back. The boardwalk is open. Aransas County is waiting on FEMA funds to finish work on the pavilion. TOS donated $6000 to build a privacy fence next to the trail, and to plant new understory native plants. This work should start in the next 2 months.Provided by Deb Corpora

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Port Aransas…
Known as a popular place to bird watch or just enjoy the scenery, the Port Aransas Nature Preserve suffered extensive damage from Hurricane Harvey.
Colleen Simpson, Manager of the Nature Preserve said "We have over $3.5 million dollars worth of damage here that includes the break in the bulkhead and rock revetments and all of the board walks we lost. It's an expensive recovery."
From http://kristv.com/news/local-news

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Take a last look at the mess left from Hurricane Harvey at the Birding Center. Contractors are preparing to start debris removal within the Nature Preserve today. Measures are being taken to remove the man-made debris and dead vegetation mixed up around it with as little impact to the ecosystem as possible. This is the first visible step in our rebuilding process! The Birding Center will remain open but access will be blocked to the boardwalk area as it and the rest of the debris is removed. We look forward to the new boardwalk and tower that will come thanks to the @rebuildtexasfund, @texasparksandwildlifedepartment and many others who have supported the Nature Preserve as we recover. By Cheryl Moore Johnson

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Lake Jackson…
The Gulf Coast Bird Observatory is located next to the Buffalo Camp Bayou in Brazoria County. The bayou overflowed about a week after Hurricane Harvey and the 34 acres property stayed flooded for about three weeks. Luckily our newer main building is elevated but it still received damage to the subfloor. The Field house and garage workshop, that houses staff and visiting biologists, was flooded for about a week, and is now totally gutted. Several trail bridges were lifted up by the flood waters and moved. Our outdoor bathrooms, pump house, and the pavilion was covered in a layer of slimy mud. Of course flowerbeds, and some vegetation, were affected by flood water. The Neotropic Bird Sanctuaries at Quintana faired really well and were spared any real damage. Water has been off to the water features, but hope to have that going again soon. By GCBO

TAXONOMIC CHANGES[1] .....

Cinnamon-rumped Seedeater (*Sporophila torqueola*) and Morelet's Seedeater (*Sporophila morelleti*). Photo Jack Eitniear.

WHITE-COLLARED SEEDEATER (*SPOROPHILA TORQUEOLA,SENSU LATO*) HAS BEEN SPLIT INTO TWO SPECIES:

Cinnamon-rumped Seedeater (*Sporophila torqueola*, *sensu stricto*) and Morelet's Seedeater (*Sporophila morelleti*). The latter is now the only species of tanager "Sporophila" which regularly breeds in the continental United States. It reaches the northern end of its range along the Rio Grande in southern Texas; from there, its range extends south along the Gulf and Caribbean coasts to the southern end of its range in western Panama. It is also found on the Pacific slope from there north to Oaxaca.

Henslow's Sparrow. Photo Greg Lasley.

THE SPARROW GENUS *AMMODRAMUS* HAS BEEN SPLIT.

As a result, North America now has only one species in the genus, while South America has an additional two.

Grasshopper Sparrow (*Ammodramus savannarum*)

Baird's Sparrow (*Ammodramus bairdii* → *Centronyx bairdii*)

Henslow's Sparrow (*Ammodramus henslowi* → *Centronyx henslowi*)

LeConte's Sparrow (*Ammodramus leconteii* → *Ammospiza leconteii*)

Seaside Saprrow (*Ammodramus maritima* → *Ammospiza maritima*)

Nelson's Sparrow (*Ammodramus nelsoni* → *Ammospiza nelsoni*)

Saltmarsh Sparrow (*Ammodramus caudacuta* → *Ammospiza caudacuta*)

Downy Woodpecker. Photo Michael Patrikeev.

THE WOODPECKER GENUS *PICOIDES* HAS BEEN SPLIT.

North American species are now as follows, in this sequence.

American Three-toed Woodpecker (*Picoides dorsalis*)

Black-backed Woodpecker (*Picoides arcticus*)

Great Spotted Woodpecker (*Dendrocopos major*)

Downy Woodpecker (*Picoides pubescens* → *Dryobates pubescens*)

Nuttall's Woodpecker (*Picoides nuttallii* → *Dryobates nuttallii*)

Ladder-backed Woodpecker (*Picoides scalaris* → *Dryobates scalaris*)

Red-cockaded Woodpecker (*Picoides borealis* → *Dryobates borealis*)

Hairy Woodpecker (*Picoides villosus* → *Dryobates villosus*)

White-headed Woodpecker (*Picoides albolarvatus* → *Dryobates albolarvatus*)

Smoky-brown Woodpecker* (*Picoides fumigatus* → *Dryobates fumigatus*)

Arizona Woodpecker (*Picoides arizonae* → *Dryobates arizonae*)

Strickland's Woodpecker* (*Picoides stricklandi* → *Dryobates stricklandi*)

LITERATURE CONSULTED[1]

ABA Blog 2018 AOS Supplement is out! Michael Retter 21 June 2018 http://blog.aba.org/2018/06/aos2018.html

R. Terry Chesser, Kevin J. Burns, Carla Cicero, Jon L. Dunn, Andrew W. Kratter, Irby J. Lovette, Pamela C. Rasmussen, J. V. Remsen, Jr., Douglas F. Stotz, Benjamin M. Winger, and Kevin Winker. 2018. Fifty-ninth Supplement to the American Ornithological Society's Check-list of North American Birds 135: 798–813 http://www.americanornithologypubs.org/doi/pdf/10.1642/AUK-18-62.1?code=coop-site

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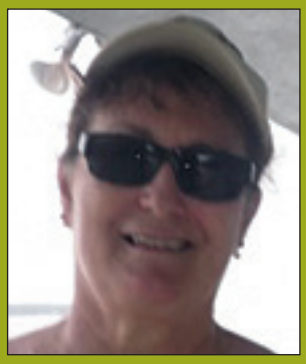

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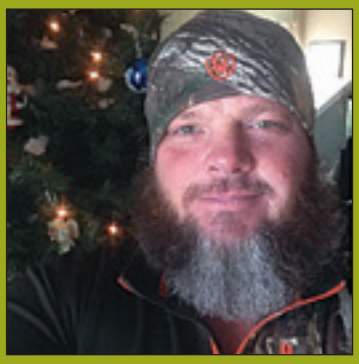

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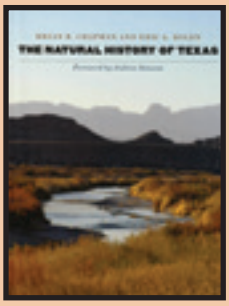

The Natural History of Texas
By Brian R. Chapman and Eric G. Bolen
Texas A&M University Press, 2018
390 pages, $50 hardcover

The Natural History of Texas takes on the ambitious challenge of describing the diverse natural state of Texas with its twelve natural regions spanning 269,000 square miles of habitat from the Great Plains to the sub-tropics and from the East Texas Piney Woods to the Chihuahuan Desert.

The scope and breadth of the book limit the depth that the authors might delve into any particular subject or region, and yet they have done an excellent job of balance in providing a enormous array of information in an innovative format. The target audience for the book would range from the accomplished amateur naturalist to the aspiring naturalist in providing a comprehensive sampler of Texas natural history from which the reader might choose to delve more extensively in other readings.

The introductory chapter begins with a well-crafted exploration of the early naturalists who roamed Texas in the 19th and early 20th centuries and served to define the seminal natural history of Texas. The authors then proceed to frame a discussion on how ecological boundaries were originally established which concludes with an explanation of their use of a modified version of Gould's natural regions of Texas. The chapter includes a clarion call on the current challenges to our natural resources (mostly human induced) while also underscoring that in the latter 20th century the natural sciences have been consistently de-funded and increasingly denigrated as "soft sciences", not producing the commercial or quantitative outcomes of other scientific disciplines. They finish the chapter with recognition of natural history focused organizations (ex. National Audubon Society) who provide trained naturalists (i.e.citizen scientists) to supplement academically trained scientists in gathering data (ex. Christmas Bird Counts – kudos to Birders!) and furthering the cause of protecting our endangered natural resources.

Each of the eleven succeeding chapters focuses on one of the natural regions of Texas and explores the flora, fauna and geology of the region. Beginning with an overview of the region, the region is then divided into its major vegetative zones with an overview of the flora, fauna, and major topographical features of that zone. The authors do a wonderful job of proffering a diverse range of material without overwhelming the reader, mostly by highlighting what is unique to that zone. They also offer short atypical sections on highlighted topics particular to that region such as finding the fossil bones of California Condors in the Trans-Pecos or the Lost Maples, a relict species in the Hill Country. These sections provide fun facts with which to regal your friends with your personal knowledge. Each chapter concludes with an important synopsis of the conservation threats and challenges particular to that natural region.

Peppered throughout the book, "Infoboxes" tender interesting information on subjects ancillary to the main narrative of exploring the natural resources of that particular region. For example, in the introductory chapter, the "Infoboxes" provide biographical vignettes of some of the major naturalists who contributed to the current body of knowledge about Texas natural history. The "Infoboxes" can be read as the reader progresses through the chapter or read independently at a later time, as the "Readings and References" section at the conclusion of the book provides a handy reference to their location.

The authors conclude the book with other handy reference tools that are both comprehensive and easy to use. Appendix A offers a listing with a species description of the official natural symbols of Texas (ex. State bird, Mockingbird). Appendix B provides a listing of species (presumably those referenced in the book?) by common name with accompanying scientific names, and a Glossary of terms follows. The authors organized the "Readings and References" section in an innovative fashion by eschewing specific footnotes and instead listing the source references under the chapter/section headings in the book. I think the technique works effectively as a way too quickly review the reference material that maps to a topic of interest to the reader, even at a later date.

In summary, I find this book a great addition to the Texas naturalist's library. The authors have creatively organized the vast array of Texas natural history in a manner that is enjoyable and not overwhelming. The well written text can be consumed in one continuous reading, or the reader might choose to consume it one chapter individually over time. Additionally, the book serves as a handy reference to be utilized when a particular topic piques your interest or memory at a later date. The authors' big ambitions were matched

by their noble effort in performing a great service to Texas natural history with the release of this book. I'll end with one of their highlighted quotes, ***"It may be the naturalists who save us in the end, by bringing us all back down to earth."*** (Robert Michael Pyle, 2001) So study up, naturalists, your mission lies before you.

Book review by Lonnie Childs

Birdlife of the Gulf of Mexico
by Joanna Burger
Texas A&M University Press, 2017
776 pages, $75 hardcover

Joanna Burger is one of the foremost ornithologists of our day. A professor at Rutgers University, she has studied many aspects of bird populations and behavior. Often her study animals have been the same colonial nesting birds that inhabit the Gulf of Mexico region. Not only is she a fine scientist, but she is also someone who knows birds personally and appreciates their aesthetic qualities as much as any bird watcher. To top that all off she is a fine writer. If you have not read her book ***The Parrot Who Owns Me***, you have missed a real gem.

Her current tome is an encompassing review of the birds of the Gulf of Mexico, a vast and overwhelming topic which she covers brilliantly. The book has 776 pages and more than 900 illustrations. It is printed on high quality paper and is well bound. Published by TAMU Press, it weighs in at six pounds!

Burger's stated objective of the book "…is to provide an overview of the avian status and trends in the Gulf of Mexico region." To do this she examines the avian assemblages in the region, describes the major stressors influencing avian abundance and examines the special and temporal trends using 29 indicator species. To accomplish this, she utilized published sources which are listed in 59 pages of references. The book includes an extensive index which makes the entire volume very user-friendly as a reference source.

The 29 indicator species were chosen by the author arbitrarily, but represent the variety and diversity of birds which utilize the Gulf in a significant way during their life cycle. Some species are resident, some migratory, some abundant with centers of distribution in the Gulf, others threatened or endangered which utilize the Gulf habitats during only a portion of their annual cycle. I was impressed with the thoughtfulness of the list and how at least one species seems to represent every type of utilization by birds in the Gulf waters and borders. Examining the status of these indicator species allows one to observe population trends, distribution, abundance and effects of contaminants, disease, and habitat loss and restoration efforts for these species which extrapolates to the Gulf birdlife as a whole.

The indicator species accounts are detailed and include a good deal of analysis of available data sets like colonial bird surveys, Christmas Bird Counts, Breeding Bird Surveys or other targeted censuses. Some of the indicator species are Mottled Duck, American Flamingo, Magnificent Frigatebird, Double-crested Cormorant, Brown Pelican, several waders including Reddish Egret, Osprey, Clapper Rail, Whooping Crane, several plovers and sandpipers including Piping Plover and Knot, Laughing Gull and several terns, Red-eyed Vireo, Swainson's and Wood Thrush and Seaside Sparrow. These accounts each make for interesting reads for the conservationist or bird watcher.

A chapter is also devoted to Indicator Species Groups and Unique Resources. It extensively covers (1) pelagic species, including summaries of occurrences and data by type and season, (2) migratory hawks, which includes data from Florida, Texas, Veracruz and Cuba, (3) wintering waterfowl, (4) migrating and wintering shorebirds, (5) nesting colonial birds, (6) Nearctic-Neotropical migrants, which includes a broad range of data on timing, location and habitat use, (7) details of Neotropical migrant use of offshore platform observations, (8) analysis of CBC data, (9) species presence in National Wildlife Refuges, (10) post Deepwater Horizon indicators, (11) eBird citizen science data for the indicator species.

The final chapter focuses on population health, trends, habitat management and habitat recovery.

While the book may not be a typical summer vacation page-turner and might be a handful if not at a desk, it is an easy read and will enlighten you about the many species addressed. It will also make you a bit more appreciative of the wonderful bird resources in the Gulf, right on Texas' doorstep. You will also gain some pride in knowing that the Texas Ornithological Society is actively engaged in some of the efforts to preserve, protect and hopefully allow these wonderful birds to prosper into the next century.

Book review by Fred Collins

Birds of Prey of the West
By Brian K. Wheeler
Princeton University Press, 2018
360 pages, $26.67 flexibound

Birds of Prey of the East and ***Birds of Prey of the West*** are the most comprehensive and authoritative field guides to North American birds of prey ever published.

Written and lavishly illustrated with stunning, lifelike paintings by leading field-guide illustrator, photographer, and author Brian Wheeler, these guides depict an enormous range of variations of age, sex, color, and plumage, and feature a significant amount of plumage data that has never been published before. The painted figures illustrate plumage and species comparisons in a classic field-guide layout. Each species is shown in the same posture and from the same viewpoint, which further assists comparisons. Facing-page text includes quick-reference identification points and brief natural history accounts that incorporate the latest information. The range maps are exceptionally accurate and much larger than those in other guides. They plot the most up-to-date distribution information for each species and include the location of cities for more accurate reference. Finally, these guides feature color habitat photographs next to the maps. The result sets a new standard for guides to North America's birds of prey. -Lavishly illustrated with stunning, lifelike paintings -Written and illustrated by a leading authority on North American birds of prey -Depicts more plumages than any other guide -Concise facing-page text with quick-reference ID points -Classic field-guide layout makes comparing species easy -Unique color habitat photographs next to the maps

North on the Wing
By Bruce M. Beehler
Smithsonian Books, 2018
246 pages, $16.96 hardcover

The story of an ornithologist's journey to trace the spring migration of songbirds from the southern border of the United States through the heartland and into Canada.

In late March 2015, ornithologist Bruce M. Beehler set off on a solo four-month trek to track songbird migration and the northward progress of spring through America. Traveling via car, canoe, and bike and on foot, Beehler followed woodland warblers and other Neotropical songbird species from the southern border of Texas, where the birds first arrive after their winter sojourns in South America and the Caribbean, northward through the Mississippi drainage to its headwaters in Minnesota and onward to their nesting grounds in the north woods of Ontario. In North on the Wing, Beehler describes both the epic migration of songbirds across the country and the gradual dawning of springtime through the U.S. heartland - the blossoming of wildflowers, the chorusing of frogs, the leafing out of forest canopies - and also tells the stories of the people and institutions dedicated to studying and conserving the critical habitats and processes of spring songbird migration. Inspired in part by Edwin Way Teale's landmark 1951 book North with the Spring, this book - part travelogue, part field journal, and part environmental and cultural history - is a fascinating first-hand account of a once-in-a-lifetime journey. It engages readers in the wonders of spring migration and serves as a call for the need to conserve, restore, and expand bird habitats to preserve them for future generations of both birds and humans. Illustrated by John T. Anderton.

Bird Guide of North America
By Jonathan Alderfer
National Geographic Children's Books, 2018
208 pages, $15.29 paperback

Fly into the world of birds in the most complete guide for kids to North America's birds, featuring range maps, cool facts, fun activities, and detailed descriptions and drawings by Jonathan Alderfer, one of the country's top avian experts and artists.

Kids can soar with peregrine falcons or hop with backyard sparrows or sing with robins in the pages of this engaging guide, perfectly leveled for kids just discovering these fascinating feathered friends. With beautiful photography and habitat snapshots, lots of the fun facts kids love, plus interactive birding activities and crafts, the newly updated and expanded guide is the perfect

way to bring the fun and amazement of beautiful birds to junior birders. The guide features profiles of 50 of North America's most popular birds--including how and where they live and tips about how to spot, hear, and attract them--as well as mini-profiles of another 100 birds, for coverage of 150 bird species in all.

The Ascent of Birds
By John Reilly
Pelagic Publishing, 2018
340 pages, $24.95 hardcover

An overview of the latest scientific research on bird evolution and behavior. Delve deep into the evolutionary history of charismatic bird species, from the largest ratites to the smallest hummingbirds. Illustrated with maps, diagrams and color plates. When and where did the ancestors of modern birds evolve? What enabled them to survive the meteoric impact that wiped out the dinosaurs? How did these early birds spread across the globe and give rise to the 10,500-plus species we recognize today - from the largest ratites to the smallest hummingbirds? Based on the latest scientific discoveries and enriched by personal observations, ***The Ascent of Birds*** sets out to answer these fundamental questions.

Birds Coloring Book
By Kim Jones
Independently published, 2018
62 pages, $7.99 paperback

Over 20 stunning adult coloring patterns *Perfect for relaxation and stress relief *2 copies of each image, for two chances to color! *Stunning designs, from Kim Jones The perfect gift for bird lovers.

Bird Note
By Emily Poole
Sasquatch Books, 2018
225 pages, $16.80 hardcover

If you don't have ***BirdNote*** broadcast from a public radio show near you, you are missing a real treat. The broadcasts are two-minute vignettes that incorporate intriguing stories about birds and their sounds, along with key elements that illustrate how their lives interact with ours. BirdNote began in 2004 as a project under the auspices of Seattle Audubon and was launched on the air in February 2005. Now the shows can be heard daily and via podcast. They can be found in more than 200 markets across the country, reaching an estimated audience of 1.3 million. You can find more information on the effort here: https://www.birdnote.org/about

Transforming a collection of these tightly-packed two-minute audio-shows into a book of 100 entertaining and informative short essays was probably an inevitable outcome of the project. And it seems to have worked! ***BirdNote: Chirps, Quirks, and Stories of 100 Birds*** (2018, Sasquatch Books) has been edited by Ellen Blackstone, serving as team writer, photo and web editor, and associate producer, with illustrations by Emily Poole. While the short essays have been written by many of ***BirdNote***'s creative staffers, they are not provided full credits in the book. You have to follow a link printed at the end of the collection, on page 201, to discover who, exactly, wrote what.

Each of these brief essays reveals some aspect of the life, habits, or vocalizations of a particular species. Some of the essays titles alone are compelling:

- A Crossbill's Beak Does the Job
- Why Birds Stand on One Leg
- Leaping Sandhill Cranes
- Stork and Babies
- Earthworm, a Superfood in Cold Storage
- Cattle Egret - You've Got a Friend in Me

- Why is Bird Poop White?
- Eurasian Collared-Doves' Sense of Direction
- Everybody Knows a Mallard
- Carrier Pigeons go to War

With such a book, such a project, the question always arises: Who is the audience? The answer seems simple—almost anyone! The stories are interesting enough to cross otherwise important age, gender, region, and education barriers. Anyone with curiosity about birds will probably enjoy the contents. In that sense alone, the book is a success.

Still, some of the fun of listening to the birds on the original broadcasts is lost in the transformation to text. Predictably, those broadcast segments that depended heavily on the sounds of the highlighted bird species—sounds provided by the Cornell Lab of Ornithology—did not make it into the book.

At heart, the book inspires the reader to care about the natural world and the lives of birds, helping the reader to appreciate and protect these wonderful creatures.



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The Greater Prairie-chicken was considered to be undergoing a rapid decline, and the species is currently listed as Vulnerable but should the Greater Prairie-chicken potentially warrant downlisting to Least Concern ??? See the article on page XX for details.

Photo Greg Lavaty

TEXAS BIRDS ANNUAL

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