COLORADO BIRDS

QUARTERLY JOURNAL OF COLORADO FIELD ORNITHOLOGISTS | VOL 55 NO.2 SPRING 2021

FROM THE EDITOR

Springtime brings with it a sense of optimism, and now more than ever are we in need of that positive energy! As the days lengthen and migrants return, we can all reflect on the challenging year that is, hopefully, behind us, and start to imagine a post-pandemic lifestyle.

In this issue, you'll enjoy not one but TWO News From The Field reports. Thanks to Dean Shoup for his willingness to plow through a backlog of sightings to help make the information in this journal more timely! In addition you'll read about strategies for identifying large brown shorebirds, learn about the surprising relationship between Pine Siskins and Catalpa trees and delve into the intricacies of sparrow vocalizations. There's plenty of CFO News as well, including an ambitious, post-pandemic plan to host a series of CFO-led, shorebirding field trips this fall.

It's all part of CFO's dedication to the study, conservation and enjoyment of Colorado's birds, and it wouldn't be possible without your membership, generous giving and active participation.

–Peter Burke

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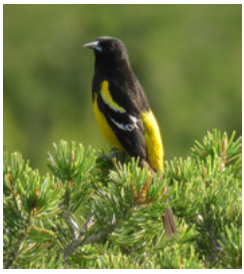

On the cover: Scott's Oriole, Las Animas County. 31 May 2020.
Photo by David Dowell.

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**Dates indicate end of current term. An asterisk indicates eligibility to serve another term.*

PRESIDENT'S MESSAGE

These are exciting times!

CFO's online programs have generated considerable engagement with hundreds of online participants and hundreds more post program views on our YouTube Channel. These include our quarterly speaker series, annual meeting and virtual birding skills workshops. If you haven't seen any of these programs, or if you would like to watch again, visit the CFO YouTube channel or find links on the CFO website in the Follow CFO section. Our next speaker will be part of CFO's annual membership meeting in July 2021.

Remember when we used to go on actual field trips? CFO field trips, along with just about every other form of social gathering, were put on hold due to COVID-19 restrictions. But the vaccine rollout has been impressive, and it gives us cause to be optimistic that we will once again go birding together! Look for updates in the coming months about available CFO field trips!

In other news, I'm happy to announce that CFO has four new board members! Forrest Luke, based in Craig, Colorado, has joined us and will serve on the Conventions Committee. Greg Osland will serve on the Communications and Competitions Committees. Greg is based in Fort Collins and recently retired as a Professor of Marketing from Butler University (Indiana). Many of you are already familiar with Bryan Guarente and his insightful COBirds posts about predicting weather-related bird migration. In addition to his work as an associate scientist for University Corporation for Atmospheric Research (UCAR), Bryan specializes in online education technology and will serve on the Communications Committee. Rachel Hopper has served on the Colorado Bird Records Committee (CBRC) and will succeed Mark Peterson as Chair of that important committee. Mark has served CFO in many capacities for more than 10 years and will maintain his association with the CBRC, continuing his work to improve the CBRC website and reporting process. And lastly, Don Marsh has agreed to serve as the CFO liaison to Western Field Ornithologists.

If you haven't already, please consider participating in the inaugural Colorado Birding Challenge on May 8! This unique event promises to be a lot of fun and will raise needed funds for conservation of grassland birds. If you are unable to compete in the Big Day challenge to see the most species within a single county, you can still participate in the field as a non-competing team or individual, or you can show your support by sponsoring one or more of the registered teams! Visit cobirds.org/CFO/COBC and select "make a pledge" from the menu on the left.

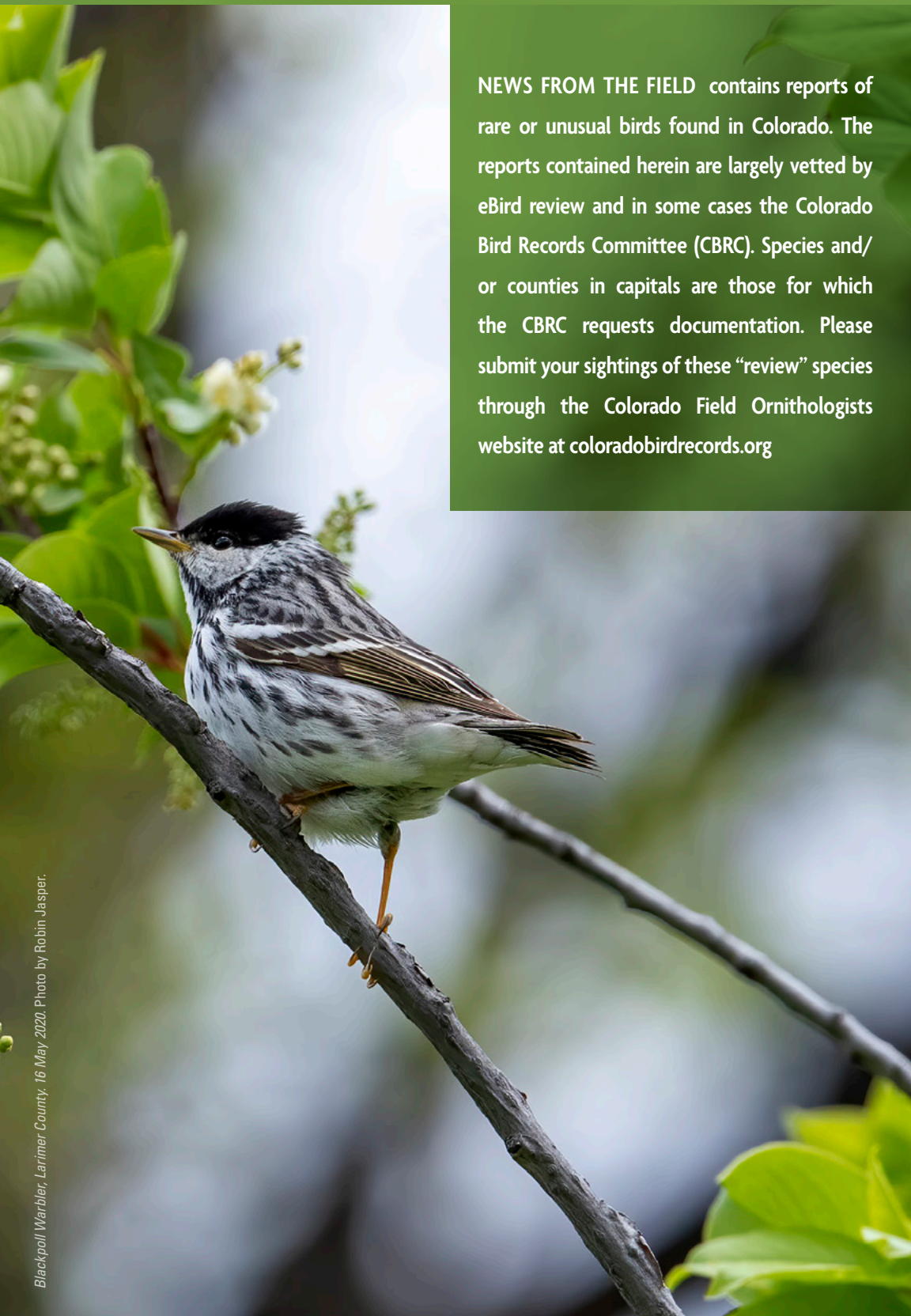
-Nick Komar

CFO PRESIDENT

Spring 2020
March-May

BY DEAN SHOUP

NEWS FROM THE FIELD contains reports of rare or unusual birds found in Colorado. The reports contained herein are largely vetted by eBird review and in some cases the Colorado Bird Records Committee (CBRC). Species and/or counties in capitals are those for which the CBRC requests documentation. Please submit your sightings of these "review" species through the Colorado Field Ornithologists website at coloradobirdrecords.org



Blackpoll Warbler, Larimer County, 16 May 2020. Photo by Robin Jasper.

SEASON OVERVIEW

In the list of reports below, county names are italicized, and the following abbreviations are used: CG – Campground; CR – County Road; et al. – and others; m.ob. – many observers; NA – Natural Area; NM – National Monument; Res. – Reservoir; OS – Open Space; SP – State Park; SWA – State Wildlife Area; TNC – The Nature Conservancy

March kicked off the spring season warmer and wetter than normal including at least two storms that brought snow late into the month. Some locations across the foothills recorded over two feet of snow with Metro Denver getting five to ten inches. April was cooler and drier than normal for the Denver area. April experienced an upslope flow with heavy snow across the foothills and plains from the 12th through 13th and from the 15th through 16th. Just over three feet of snow were recorded in Boulder during this time. May started out warm and dry with a series of cold fronts across northeastern Colorado during the second week. Typical warm weather followed, with the exception of a strong southwesterly downslope flow resulting in high temperatures on the plains including storms producing hail, heavy rain, and gusty winds at times. Temperatures warmed back up close to 90 degrees Fahrenheit by the end of the month.

Due to statewide travel restrictions, lockdowns, and closures related to the spread of the coronavirus pandemic, eBird data seemed to skyrocket with many birders getting out more often and with more emphasis on local patch birding. Tucker Gulch, a local neighborhood patch in Golden, proved to be very productive for local birders with many highlights reported. Many hybrid species were documented across the state and have been included. Very rare to the state, a small group of Black-bellied Whistling-Ducks were found and photographed. Also notable were reports of Eurasian Wigeon and American Black Duck. Mexican Whip-poor-will were found in multiple locations, raising the question of this species status in the remote locations where it was found. Cassin's Finch had a great season along the Front Range, with many more reports than in recent years. Lucy's Warbler data was off the charts with many sightings from previously unknown locations. It was also a great year for Mourning Warbler, as a wave of reports came in mid-May. Rare to the state, a Louisiana Waterthrush was seen, as well as a brief visit from a Connecticut Warbler. These are just a few of the many interesting sightings this season.

Golden-winged Warbler, Jefferson County. 9 May 2020. Photo by Dave Prentice.

Sedge Wren, Weld County. 16 May 2020. Photo by Zach Schiff.

Prothonotary Warbler, Jefferson County. 12 May 2020. Photo by Rob Raker.

BLACK-BELLIED WHISTLING-DUCK: Six photographed at Blaine Park, Otero, 18 Apr (Susan Dietrich Schneider); two previous records.

Wood Duck: One at Jack's Pasture, *Archuleta*, 19 Apr (Kathy Mihm Dunning). Earliest county record.

Blue-winged x Cinnamon Teal (hybrid): Several reports of this hybrid combination in *Adams, Arapahoe, Boulder, Jefferson,* and *Larimer,* 22 Mar – 25 May (m.ob.).

Blue-winged x Northern Shoveler (hybrid): One at Big Johnson Res. & Bluestem Prairie OS, *El Paso*, 17 – 25 Apr (Alan Versaw).

Cinnamon Teal x Northern Shoveler (hybrid): One at Big Johnson Res. & Bluestem Prairie OS, *El Paso*, 11 Apr (David Tønnessen, Bill Maynard, Tyler Stewart).

EURASIAN WIGEON: One at Merino ponds (private), Logan, 16 Mar – 4 Apr (Glenn Walbek, m.ob.). One at Forest Lake Park, *El Paso*, 4 Apr (Chris McReynolds).

American Wigeon x Mallard (hybrid): One at Baxter Lake, *Weld*, 5 Mar (Steven Mlodinow).

Mexican Duck: One at Devereux Road and Two Rivers Park, *Garfield*, 28 Mar (Jack Bushong, Ryan Bushong). One at Brush Hollow Res., *Fremont*, 12 Apr (Dale Adams, Joel Adams). One at Alexander's Meadow and Pond, *San Miguel*, 26 Apr (Charles Price). One at Stewart's Pond, *Weld*, 28 – 29 Apr (Steven Mlodinow).). One at CR X48, *San Miguel*, 14 – 30 May (Eric Hynes et al.). One at McKenzie Springs Dr., *San Miguel*, 15 May (Glenn Dunmire). One at Fountain Creek Regional Park, *El Paso*, 17 – 29 May (Tyler Stewart, m.ob.). One in Louisville, *Boulder*, 22 May (Jack Bushong).

Mallard x Mexican Duck (hybrid): Reports in eight locations from *Arapahoe, Boulder, Costilla, Eagle, and Fremont*, 15 Mar – 26 May.

AMERICAN BLACK DUCK: One at Weld CR 50 wetlands, *Weld*, 20 Mar (Steven Mlodinow).

Mallard x Mexican/Mottled Duck (hybrid): One photographed at Reflection Pond, *El Paso*, 30 Apr (Landon Geotz).

Ring-necked x Greater Scaup (hybrid): One at Lagerman Agricultural Preserve—Lagerman Res., *Boulder*, 5 Mar (Steven Mlodinow).

Ring-necked x Lesser Scaup (hybrid): One at Stewart's Pond, *Weld*, 20 Mar (Steven Mlodinow). One at Prewitt Res. *Washington*, 23 Mar (Steven Mlodinow).

Surf Scoter: One adult male, which continued through the summer into early fall was at Animas River—Huck Finn Pond & Hatchery area, *La Plata*, 26 – 31 May (Ryan Votta, m.ob.).

White-winged Scoter: Three at Baseline Res., *Boulder*, 18 Apr (Christian Nunes).

Black Scoter: One at Monument Lake, *El Paso*, 18 Mar (Terence Berger).

Long-tailed Duck: Many reports from *Adams, Arapahoe, Bent, El Paso, Jefferson, Larimer, Pueblo,* and *Weld*, 1 Mar – 14 May (m.ob.).

Bufflehead x Common Goldeneye (hybrid): One at Walker Road Gravel Pond, *Douglas,* 1 Apr (Hugh Kingery). Returning bird from previous year.

Common x Barrow's Goldeneye (hybrid): One photographed at Matthew T. Glasser Res., *Broomfield*, 5 Mar (Chipper Phillips).

Red-necked Grebe: One at Pueblo Res. SWA—Turkey Creek, *Pueblo*, 11 – 15 Mar (Brandon K. Percival, Chris Knight). One at Big Johnson Res. & Bluestem Prairie OS, *El Paso*, 13 – 14 Apr (Tyler Stewart, m.ob.). One at Cherry Creek SP, *Arapahoe*, 25 Apr (Joey Negreann). One at Hohnholz Lake CG & SWA, *Larimer*, 30 May (Joe Kipper et al.).

Western x Clark's Grebe (hybrid): One at Walden Res., *Jackson*, 9 May (Steven Mlodinow). One at Smith Res., *Jefferson*, 20 May (David Bailey).

MEXICAN WHIP-POOR-WILL: One at Oak Creek Grade Road, *Fremont*, 6 – 31 May (Jerry DeBoer, m.ob.), continued through August. One at McBride Canyon—Fisher's Peak Ranch (TNC permission only land), *Las Animas*, 16 May (Christian Nunes). Two audio recorded at Crazy French Ranch—Pearl Spring area, *Las Animas*, 21 – 31 May (Greg Levandoski, Jason Beason, Kathy Mihm Dunning, Christopher Pague).

Black-and-white Warbler, Jefferson County. 16 May 2020. Photo by Dave Prentice.

Blackburnian Warbler, Adams County. 16 May 2020. Photo by Dave Prentice.

Black-bellied Whistling-Duck, Otero County. 18 April 2020. Photo by Duane Nelson, 1st sighting Susan Dietrich.

Blackburnian Warbler (female), Larimer County. 14 May 2020. Photo by Nick Komar.

Bell's Vireo, Sedgwick County. 23 May 2020. Photo by David Dowell.

Black-throated Blue Warbler, Jefferson County. 3 May 2020. Photo by Dave Prentice.

Black-throated Blue Warbler, Jefferson County. 2 May 2020. Photo by Rob Raker.

Gray-cheeked Thrush, Yuma County. 15 May 2020. Photo by David Dowell.

Canada Wabler, Kiowa County. 3 May 2020. Photo by John Malenich.

Grace's Warbler, Pueblo County. 23 May 2020. Photo by Bez Bezuidenhout.

Great Crested Flycatcher, Yuma County. 18 May 2020. Photo by Bez Bezuidenhout.

Painted Bunting, Otero County. 11 May 2020. Photo by David Dowell.

Black Swift: Six at Pueblo Res.—Rock Canyon area (below dam, south of river), *Pueblo*, 25 May (Brandon K. Percival).

American Golden-Plover: One at Lower Latham Res. area, *Weld*, 23 Apr (Cole Sage, Shawn Mason).

Piping Plover: One at Cobb Lake (private), *LARIMER*, 6 May (Josh Bruening). Other reports from *Bent, Crowley, Kiowa,* and *Otero,* 7 Apr – 28 May.

Snowy Plover: One at Arapahoe Bend NA, *LARIMER*, 13 Apr (Lori Pivonka, Dave Farmer). One at Puett Res. *SWA*, *MONTEZUMA*, 16 – 17 Apr (Kathy Mihm Dunning, Erik Hendrickson). One at Rio Blanco *SWA*, *RIO BLANCO,* 28 Apr (H. David Chapman, Kathy Mihm Dunning). Other reports from *Bent, Crowley, Kiowa,* and *Otero*, 7 Apr – 28 May.

Whimbrel: Many reports from *Adams, Arapahoe, Boulder, Crowley, Delta, Denver, Douglas, El Paso, Elbert, Kiowa, Larimer, Logan, Prowers, Pueblo,* and *Weld,* 20 Apr – 17 May.

Long-billed Curlew: A season high count of 22 at Cabin Res., *Dolores*, 16 Apr (Kathy Mihm Dunning).

Ruddy Turnstone: One at Upper Queens/Neeskah Res., *Kiowa*, 14 May (Steven Mlodinow).

Sanderling: One at Totten Res., *Montezuma*, 17 Apr (Kathy Mihm Dunning, Erik Hendrickson); first and only county record.

Mew Gull: One at Dunes Res., *Adams*, 11 Mar – 4 Apr (Adam Vesely).

GLAUCOUS-WINGED GULL: One at Robert Benson Lake, *Larimer,* 1 Mar (Nick Komar, Jay Breidt). One at Warren Lake, *Larimer*, 1 – 6 Mar (David Tønnessen, m.ob.).

Herring x Glaucous-winged Gull (hybrid): One at Warren Lake, *Larimer*, 1 Mar (David Tønnessen, Joshua Smith). One at Horseshoe Res., *Larimer*, 3 Apr (Joshua Smith). One at Pueblo West Gravel Pit, *Pueblo*, 9 – 10 Mar (Chris Knight, Brandon K. Percival).

Glaucous Gull: One at Prewitt Res., *Washington*, 1 Mar (Norm Lewis). One at Warren Lake, *Larimer*, 1 – 17 Mar (m.ob.). One at North Poudre Res. #6, *Larimer*, 6 Mar (Nick Komar). One at Aurora Res., *Arapahoe*, 14 Mar (Diane Roberts). One at Pueblo Res.—South Marina area, *Pueblo*, 14 Mar (Dina Baker, Leslie Coleman, Graham Ray, Mark Yaeger). One at Cherry Creek SP, *Arapahoe*, 15 – 22 Mar (Mitchell Bailey). One at Topminnow NA, *Larimer*, 21 Mar (Robert Beauchamp). One at Big Johnson Res. & Bluestem Prairie OS, *El Paso*, 4 Apr (Jim Merritt, Tyler Stewart, Alan Ketcham).

Least Tern: One at James M. Robb Colorado River SP—Pear Park section, *MESA*, 11 – 20 May (Denise & Mark Vollmar, m.ob.). One at Neegronda Res., *Kiowa*, 14 May (Steven Mlodinow). One at Red Lion *SWA*, *Logan*, 28 May (Norm Lewis).

ARCTIC TERN: One at Walden Res., *Jackson*, 9 May (Steven Mlodinow).

Pacific Loon: One at Pueblo Res. SWA—Turkey Creek, *Pueblo*, 11 – 15 Mar (Brandon K. Percival, Chris Knight). One at Pueblo West Gravel Pit, *Pueblo*, 25 Mar (Brandon K. Percival, Chris Knight).

YELLOW-BILLED LOON: One at Standley Lake Park, *Jefferson*, 14 Mar – 2 May (Donna Stumpp, Peter Ruprecht, m.ob.).

NEOTROPIC CORMORANT: One at Lake Hasty, *Bent*, 3 – 28 Apr (Duane Nelson). One at Cañon City—Valco Pond, *Fremont*, 12 Apr (Joel Adams, Dale Adams).

YELLOW-CROWNED NIGHT-HERON: One at First Creek at Green Valley Ranch, *Denver*, 6 – 8 May (John C. Breitsch, m.ob.). One at Cherry Creek Valley Ecological Park, *Arapahoe*, 9 – 12 May (Rajikumar Manikandan). One at Pueblo City Park, *Pueblo*, 27 May (Brandon K. Percival).

Glossy Ibis: One at Zink's Pond, *La Plata*, 19 Apr (James Beatty). One at Pastorius Res., *La Plata*, 22 Apr (Kathy Mihm Dunning). One at CR 55 near Iliff, *Logan*, 23 Apr (Glenn Walbek). One at Lake Creek Village Wetlands, *Eagle*, 24 Apr (JoAnn Potter Riggle). One at Pueblo Res.—North Picnic Road., *Pueblo*, 26 Apr (Chris Knight, Brandon K. Percival). One at Chalk Cliff Fish Hatchery, *Chaffee*, 1 May (Trey Rogers). One at Highway 6 and CR 57, *Washington*, 3 – 6 May (Nick Moore, David Dowell).

Glossy x White-faced Ibis (hybrid): One at Clear Spring Ranch, *El Paso*, 18 – 21 Apr (Julie Frost, m.ob.).

One at Lower Latham Res. *Weld*, 20 – 22 Apr (Diane Roberts, Timo Mitzen). One at Boulder Res., *Boulder*, 23 Apr (Luke Pheneger). One at Weld CR 59 wetlands, *Weld*, 28 Apr (Steven Mlodinow). One at Chaffee CR 163 pond, *Chaffee*, 11 May (Cole Sites). One at Running Deer & Cottonwood Hollow NA, *Larimer*, 24 May (Jay Breidt).

BLACK VULTURE: One photographed at Cañon City—Arkansas Riverwalk Trail, *Fremont*, 10 May (SeEtta Moss). One at Wheat Ridge Greenbelt, *Jefferson*, 20 May (George Mayfield).

ZONE-TAILED HAWK: One at Pathfinder Park, *Fremont*, 12 May (Mark Peterson).

Red-tailed Hawk (Harlan's): One at Rio Grande Trail—Snowmass, *Pitkin*, 27 Mar (John Anderson); rare subspecies for West Slope. One at Gateway Cottonwoods, *Mesa*, 27 Apr (Coen Dexter, Brenda Wright, Mike Henwood, Kathy Mihm Dunning).

Williamson's Sapsucker: One at CR 28 near Monte Vista, Rio Grande, 11 Mar (Joy Lake). One at Buckles Lake Road, *Archuleta*, 20 Mar (Kathy Mihm Dunning); early and rare for county. Other early March reports from *Boulder, Chaffee, Douglas, El Paso, Jefferson, Larimer, Pueblo,* and *Teller*, 7 – 31 Mar. Early April reports were also prevalent this year with reports from nineteen counties.

Yellow-bellied x Red-naped Sapsucker (hybrid): One at Cañon City Riverwalk, *Fremont*, 7 Mar (Roger Massey).

Western x Eastern Wood-Pewee (hybrid): One at Tamarack Ranch SWA, *Logan*, 22 May (Ben Sampson).

Alder Flycatcher: Reports at 11 locations from *Kit Carson, Lincoln, Logan, Phillips, Sedgwick,* and *Yuma*, 3 – 27 May (m.ob.).

Cordilleran Flycatcher: One at Roxborough SP, *Douglas*, 1 Apr (Carol Cameron); unusually early.

Black x Eastern Phoebe (hybrid): Two at Platte Canyon Res., *Douglas*, 29 Mar – 31 May (Diane Roberts, m.ob.). One at Clear Creek Trail—Golden to I-70, *Jefferson*, 17 Apr (Aaron Shipe). Four at Chatfield SP—Audubon Center & Trails, *Jefferson*, 20 Apr – 23 May (Reed Gorner, m.ob.).

Vermilion Flycatcher: One at Palmer Park, *El Paso*, 7 – 11 Apr (m.ob.). One at Higbee Valley Road, *Otero*, 26 Apr – 22 May (David Tønnessen, m.ob.).

Great-crested Flycatcher: One at Upper Queens/Neeskah Res., *Kiowa*, 2 – 8 May (David Dowell, Steven Mlodinow, m.ob.). One at Melody Tempel Grove, *Bent*, 3 – 8 May (David Dowell, m.ob.). One at Higbee Valley Road, *Otero*, 8 May (Josh Lefever). One at Lamar Community College, *Prowers*, 13 May (Dorothy Russell). One at Springs at Sandstone Ranch, *Weld*, 21 May (Jeffery Collins). One at Oxbow SWA, *Otero*, 23 May (Eric DeFonso). One in Pueblo, *Pueblo*, 31 May (Chris Selvig).

Scissor-tailed Flycatcher: One at Standley Lake Park, *Jefferson*, 2 May (Donna Stumpp). One a Higbee Valley Road area, *Otero* 10 – 11 May (Will Anderson et al.). One at Conifer Community Park at Beaver Ranch, *Jefferson*, 17 May (Q.P.).

White-eyed Vireo: One at Runyon Lake SWA, *Pueblo*, 17 – 25 Apr (Evan Carlson, m.ob.). One at Cañon City Riverwalk, *Fremont*, 28 Apr (Jerry DeBoer, Joel Adams). Two at Two Buttes SWA, *Baca* 2 – 9 May (Steven Mlodinow, m.ob.). Three at Melody Tempel Grove, *Bent*, 6 – 8 May (Brandon K. Percival, m.ob.). One at Adams Open Space—Fountain, *El Paso*, 7 – 17 May (Tim Leppek, m.ob.). One at Chico Basin Ranch, *El Paso*, 8 – 16 May (John Bruder, m.ob.). One at Manitou Lake Marsh & Rookery, *Teller*, 15 – 18 May (Scott Schaum). One at Pawnee NG—Norma's Grove, *Weld*, 17 May (Gene Rutherford, Shawn Mason). One at Sand Canyon, *Baca*, 21 May (Joey Kellner).

Yellow-throated Vireo: One at Sands Lake SWA, *CHAFFEE*, 12 May (Coles Sites, Sally Waterhouse). Other reports at 17 locations from *Boulder, Denver, Fremont, Jefferson, Kiowa, Larimer, Prowers, Pueblo, and Sedgwick*, 20 Apr – 23 May (m.ob.).

Blue-headed Vireo: One at Dixon Res., *Larimer*, 29 Apr (Lori Brummer, m.ob.).

Philadelphia Vireo: One at North Table Mountain Park, *Jefferson*, 1 – 7 May (David Bailey, m.ob.). One at Prospect Ponds NA, *Larimer*, 15 May (Jim Nachel). One in Ovid, *Sedgwick*, 22 May (Loch Kilpatrick). One banded at Chico Basin Ranch, *El Paso*, 23 May (Colin Woolley).

Steller's Jay x Woodhouse's Scrub-Jay (hybrid): One at a private residence in Rivers Divide, *El Paso*, 8 Mar – 23 May (Amy Lunde).

Black-capped x Mountain Chickadee (hybrid): One at Pueblo Res.—Rock Canyon area, *Pueblo*, 3 Mar (Chris Knight).

PACIFIC WREN: Continuing from winter; one at Bear Creek Lake Park, *Jefferson*, 6 – 15 (Bill Schreitz).

Winter Wren: Continuing from winter; one at Wheat Ridge Greenbelt, *Jefferson*, 1 – 14 Mar (m.ob.). One at Lee Martinez Park, *Larimer*, 2 – 18 Mar (Josh Bruening, m.ob.). One at Boulder Creek—University of Colorado campus, *Boulder*, 18 – 21 Mar (Will Anderson, Peter Burke). One at Grey Rock Trail, *Larimer*, 31 Mar (Greg Levandoski). One at Cañon City Riverwalk, *Fremont*, 17 Apr (Joel Adams, Dale Adams). One at Ft. Collins City Park and Sheldon Lake, *Larimer*, 10 May (Edward Raynor).

SEDGE WREN: One at Front Range Land & Livestock, *Weld*, 16 May (Zach Schiff).

Carolina Wren: One at Lamar Community College, *Prowers*, 11 Apr – 2 May (Steven Mlodinow). One at Green Heron Slough (south of Bent CR HH near CR 16), *Bent*, 28 Apr (David Suddjian, Karen Strong).

Gray-cheeked Thrush: Reports at 12 locations from *Baca, Bent, Crowley, El Paso, Larimer, Lincoln, Prowers, Pueblo, Weld,* and *Yuma*, 5 – 21 May (m.ob.).

Wood Thrush: One at Upper Queens/Neeskah Res., *Kiowa*, 2 May (David Dowell). One at Chico Basin Ranch, *El Paso/Pueblo*, 9 May (Rebecca Laroche, Kristy Melton, Cody Bear, Samuel Richards). One at a farm yard, *Prowers*, 14 – 17 May (Jane Stulp). One at Thompson Ranch (private), *Lincoln*, 16 May (Glenn Walbek). One at Animas River—Huck Finn Pond & Hatchery area, *LA PLATA*, 29 – 31 May (Ryan Votta, Melissa May); first county record.

Varied Thrush: One at Melody Tempel Grove, *Bent*, 4 May (John Malenich, Jessica Miller).

Bohemian Waxwing: 64 at Poudre Canyon Road, *Larimer*, 18 Mar (Joe Kipper). 100 at Colorado State Forest—Moose Visitor Center, *Jackson*, 22 Mar (Nick Komar, David Wade). 60 at Gould, *Jackson*, 22 Mar (Nick Komar, David Wade). 5 near Walden, *Jackson*, 26 Mar (James McCall). One at Power Trail, *Larimer*, 4 May (Gage Strong). 12 at Sombrero Marsh & Pond, *Boulder*, 9 May (Duwayne Worthington).

PURPLE FINCH: One at Fort Collins—Maple and Fishback, *Larimer*, 20 Mar (David Wade).

Cassin's Finch: Abundance and frequency of this species much higher than in recent years (eBird data). During the week of April 15th, totals were 3,808, compared to 801 in 2018, 665 in 2016, and 375 in 2019. Many reports along the Front Range were common.

Common Redpoll: One at Daisy Pass Trailhead, *Gunnison*, 10 May (Drew Kelly).

Golden-crowned Sparrow: One at Grand Junction Wildlife Area, *MESA*, 5 Mar – 7 Apr (Mike Henwood, m.ob.). One at Sand Creek—Havana St. to Westerly Creek, *DENVER*, 19 Apr – 5 May (Jake Shorty, m.ob.). One at Boulder Community Garden, Boulder, 30 Apr (Richard Trinker, m.ob.). One at Pleasant View Marsh, *Boulder*, 5 May (Ernest Crvich).

BAIRD'S SPARROW: One at Rawhide Energy Station/ Hamilton Res., *Larimer*, 26 May (Josh Bruening).

Savannah Sparrow: One in Silverton, *San Juan*, 24 Mar (Kathy Mihm Dunning). Early date for elevation.

EASTERN TOWHEE: One at Chico Basin Ranch, *El Paso/Pueblo*, 5 – 16 May (Dan Stringer et al.) One at Mitchek Ranch (private), *Cheyenne*, 7 May (Norm Erthal et al.) One at Tamarack Ranch SWA, *Logan*, 16 – 31 May (Jesse Casias, m.ob.).

Spotted x Eastern Towhee (hybrid): One at Flagler SWA, *Kit Carson*, 2 May (David Dowell). One at Wray Fish Hatchery, *Yuma*, 16 May (Jack Bushong, Ryan Bushong). As many as 10 at Tamarack Ranch SWA, *Logan*, 21 – 23 May (Will Anderson et al.).

EASTERN MEADOWLARK: One at Neenoshe Res., *Kiowa*, 22 May (Steven Mlodinow).

Scott's Oriole: One at Colorado River SP—Fruita section, *Mesa*, 13 May (David Price). Two at CR 177.9 near Kim, *Las Animas*, 19 May (Eric DeFonso). One at Clark Hill, *Las Animas*, 31 May (David Dowell).

Rusty Blackbird: Reports at seven locations in

Douglas, Eagle, El Paso, Jefferson, and *Pueblo*, 1 Mar – 22 Apr (m.ob.).

Worm-eating Warbler: One at a farm yard, *Prowers*, 22 May (Jane Stulp). One at Upper Queens/Neeskah Res., *Kiowa*, 7 – 17 May (Brandon K. Percival, m.ob.).

LOUISIANA WATERTHRUSH: One at Spring Park, *Larimer*, 22 – 24 Apr (Matthew DeSaix, Jessie Reese, m.ob.); six previous records.

Golden-winged Warbler: One at Tucker Gulch, *Jefferson*, 7 – 16 May (Torrance Wells, m.ob.). One at Clear Spring Ranch, *El Paso*, 13 – 14 May (Alan Ketcham, m.ob.). One at Watson Lake, *Larimer*, 14 – 16 May (Edward Raynor). One at Dixon Res., *Larimer*, 27 May (Skylar Bol et al.).

Blue-winged Warbler: One at Higbee Valley Road, *Otero*, 7 May (Luke Pheneger, Tracy Pheneger). One at Two Buttes SWA, *Baca*, 8 – 21 May (Joey Keller et al.). One at Cañon City Riverwalk, *Fremont*, 9 – 12 May (Jerry DeBoer, m.ob.). One at Clear Spring Ranch, *El Paso*, 10 – 16 May (Tyler Stewart, m.ob.). One at Cherry Creek Valley Ecological Park, *Arapahoe*, 13 May (David Hill, Cynthia Madsen).

Black-and-white Warbler: Many reports from *Adams, Arapahoe, Baca, Bent, Boulder, Broomfield, Chaffee, Denver, Douglas, El Paso, Fremont, Jefferson, Kiowa, Kit Carson, La Plata, Larimer, Lincoln, Otero, Prowers, Pueblo,* and *Weld*, 5 Apr – 27 May (m.ob.).

Prothonotary Warbler: One at Two Buttes SWA, *Baca*, 25 Apr (Jesse Casias, Christine Oblak). One at Pastorius Res., *La Plata*, 4 – 6 May (David Dunford, m.ob.). One at Prospect Pond NA, *Larimer*, 5 – 8 May (Joshua Keller, m.ob.). One at Sands Lake SWA, *Chaffee*, 6 May (Tyler Wilson). One at CF & I Lakes (restricted access), *Pueblo*, 9 May (Mark Peterson). One at Tucker Gulch, *Jefferson*, 9 – 12 May (Michael Lester, m.ob.). One at Brainard Drive Pond, *Broomfield*, 13 May (Chipper Phillips). One at Walden Pond Wildlife Habitat, *Boulder*, 31 May (Kim Mauritz).

Tennessee Warbler: Many reports in 22 counties from 19 Apr – 30 May (m.ob.).

Lucy's Warbler: 12 at Yellowjacket Canyon/G Road area, *Montezuma*, 27 Mar – 15 May (Kathy Mihm Dunning); earliest arrival date for known breeding location. Six at Ismay Grove, *MONTEZUMA*, 31 Mar – 11 Apr (Kathy Mihm Dunning). Two at Ismay Bridge, *MONTEZUMA*, 11 Apr (Kathy Mihm Dunning). Three at McElmo Road: Pullout between MM7 and MM8, *MONTEZUMA*, 21 Apr (Kathy Mihm Dunning). Two at Gateway Cottonwoods, *MESA*, 22 Apr – 30 May (Eileen Cunningham). Three at Jim's Cabin, *MONTROSE*, 6 May (Coen Dexter, Brenda Wright). One at Gypsum Valley, *SAN MIGUEL*, 9 May (Eric Hynes). One at Chico Basin Ranch, *PUEBLO*, 16 May (John Drummond). Five at Canyon of the Ancients NM—Pleasant View, *MONTEZUMA*, 24 May (Glenn Dunmire). Three at Canyon of the Ancients NM—Dove Creek, *DOLORES*, 24 May (Glenn Dunmire). The CBRC states that any birds outside Yellowjacket Canyon are subject to review. Hence, some reports from Montezuma County are reviewable, but not all.

Nashville Warbler: Many reports from *Baca, Bent, Denver, El Paso, Jefferson, Kiowa, Larimer, Montrose, Otero, Prowers,* and *Pueblo*, 19 Apr – 30 May, (m.ob.).

CONNECTICUT WARBLER: One at a farm yard, *Prowers*, 29 May (Jane Stulp).

MOURNING WARBLER: One at Twin Lakes, *Boulder*, 5 May (Dan Zmolek, Leslie S.). One at a farm yard, *Prowers*, 6 – 10 May (Jane Stulp). One at Melody Tempel Grove, *Bent*, 8 May (Glenn Walbek). One at CF & I Lakes (restricted access), *Pueblo*, 9 May (Mark Peterson). One at Lamar Community College, *Prowers*, 10 May (Kara Carragher, Brandon K. Percival, Joey Kellner, Norm Erthal, Lisa Edwards). One at Clear Creek Trail—Golden to I-70, *Jefferson*, 15 May (James McCall et al.). One at Hale Crossroads, *Yuma*, 16 May (Ryan Bushong, Jack Bushong). One at Hale Ponds, *Yuma*, 16 May (Jack Bushong, Ryan Bushong, David Dowell). One at Wray Fish Hatchery, *Yuma*, 16 May (Jack Bushong, Ryan Bushong). One at Chico Basin Ranch, *Pueblo*, 18 – 22 May (Brandon K. Percival, John Drummond, et al.). One at Skunk Canyon Trails, *Boulder*, 21 May (David Waltman).

MacGillivray's x Mourning Warbler (hybrid): Flagler Res. SWA, *Kit Carson*, 24 May (David Dowell).

Kentucky Warbler: One at Sands Lake SWA, *Chaffee*, 8 – 12 May (Jeff Guy, m.ob.).

Hooded Warbler: Many reports from *Adams, Arapahoe, Baca, Bent, Chaffee, Cheyenne, El Paso,*

Fremont, Jefferson, Kiowa, Larimer, Prowers, Pueblo, Saguache, and *Washington*, 9 Apr – 27 May (m.ob.).

CAPE MAY WARBLER: One at Two Buttes SWA, *Baca*, 5 May (Steven Mlodniow, Mark Peterson). One at Melody Tempel Grove, *Bent*, 6 – 9 May (Brandon K. Percival, m.ob.). One at Willow Creek Park, *Prowers*, 10 May (Brandon K. Percival). One at Cañon City Riverwalk, *Fremont*, 12 May (Brandon K. Percival). One at Neenoshe Res., *Kiowa*, 22 May (Steven Mlodinow).

Northern Parula: Many reports in 23 counties from 8 Apr – 30 May (m.ob.).

Magnolia Warbler: Many reports from *Baca, Bent, Boulder, Cheyenne, Denver, El Paso, Elbert, Jefferson, Kiowa, Larimer, Lincoln, Logan, Moffat, Pueblo, Washington,* and *Weld*, 25 Apr – 30 May (m.ob.).

Bay-breasted Warbler: One at Arkansas River Trail—east of Pueblo Blvd., *Pueblo*, 3 May (Evan Carlson). One at Morey Wildlife Reserve, *Larimer*, 5 – 9 May (Nick Komar, Robin Jasper). Two at Fort Collins—Annelise Way, *Larimer*, 16 May (Paul Ode, Meena Balgopal). Two at Oxbow NA, *Larimer*, 21 May (Irene Fortune, Bobbie Tilmant).

Blackburnian Warbler: One at First Creek at Green Valley Ranch, *Denver*, 14 – 17 May (Joe Chen, m.ob.). One at Watson Lake, *Larimer*, 14 – 15 May (Edward Raynor, m.ob.). One at Tanglewood NA, *Larimer*, 15 May (Ken Pals). One at Prospect Ponds NA, *Larimer*, 16 May (Bryan Tarbox, m.ob.).

Chestnut-sided Warbler: Many reports from *Adams, Archuleta, Baca, Bent, Boulder, Cheyenne, Crowley, Douglas, El Paso Fremont, Hinsdale, Jefferson, Kiowa, Larimer, Prowers, Pueblo, Washington,* and *Weld*, 1 – 31 May (m.ob.).

Blackpoll Warbler: Many reports in 27 counties from 29 Apr – 28 May (m.ob.).

Black-throated Blue Warbler: One at Tucker Gulch, *Jefferson*, 2 – 9 May (m.ob.). One at Upper Queens/ Neeskah Res., *Kiowa*, 2 – 16 May (David Dowell, m.ob.). One at Chico Basin Ranch, *Pueblo*, 6 – 12 May (John Bruder, m.ob.). One at Pueblo Res.—Rock Canyon area (below dam, south of river), *Pueblo*, 7 May (Chris Knight). One at Cheyenne CR-CC at CR-16 creek crossing, *Cheyenne*, 15 May (David Dowell).

Palm Warbler: Many reports from *Adams, Arapahoe, Baca, Boulder, Broomfield, Cheyenne, Custer, Denver, El Paso, Jefferson, Kiowa, Larimer, Pueblo, Saguache, Summit,* and *Yuma*, 25 Apr – 21 May (m.ob.).

Pine Warbler: One at Fairmount Cemetery, *Prowers*, 9 – 10 May (Norm Erthal, Steve Larson, m.ob.).

Yellow-throated Warbler: One at Roselawn Cemetery, *Pueblo*, 24 Apr – 28 May (Brandon K. Percival, Chris Knight). One at Poudre Ponds, *Weld*, 28 Apr (Steven Mlodinow, Shawn Mason). One at Interlocken East and Central Park, *Jefferson*, 29 Apr (Luke Pheneger, m.ob.). One at Jim Hamm NA, *Boulder*, 2 May (Elizabeth Stevenson). One at Main Res., *Jefferson*, 5 – 8 May (Robert Raker, m.ob.). One at McColskey NA, *Weld*, 28 May (Joey Angstman).

Grace's Warbler: One at FR 527E, *Montezuma*, 17 Apr (Kathy Mihm Dunning); tied record early date. Other reports from *Archuleta, Chaffee, Dolores, La Plata, Las Animas, Mesa, Montezuma, Montrose, Ouray, Pueblo,* and *San Miguel* from 22 Apr – 31 May (m.ob.).

Townsend's Warbler: Reports in 19 locations from *Boulder, El Paso, Jefferson, Larimer, Lincoln, Prowers, Pueblo,* and *Weld*, 21 Apr – 24 May (m.ob.).

HERMIT WARBLER: One at Melody Tempel Grove, *Bent*, 5 May (Luke Pheneger, Tracy Pheneger, et al.).

Black-throated Green Warbler: One at a private residence and Robert A. Easton Regional Park, *Jefferson*, 29 Apr (Dale Pate); first observed in yard, then refound at park. One at Adams OS, Fountain, *El Paso*, 2 May (Chris Gilbert).

CANADA WARBLER: One at Upper Queens/ Neeskah Res., *Kiowa*, 3 May (David Dowell, John Malenich, Jessica Miller).

Hepatic Tanager: One at Greenwood Road (Custer CR 389), *CUSTER*, 15 May (Nathan Pieplow). One at Pryor (Santa Clara Creek), *HUERFANO*, 16 – 31 May (David Tønnessen, Will Anderson, m.ob.). Four at CR 177.9 near Kim, *Las Animas*, 19 – 31 May (Eric DeFonso et al.).

Summer Tanager: Many reports in 21 counties from 16 Apr – 31 May (m.ob.).

Hermit Warbler, Bent County. 5 May 2020. Photo by John Malenich.

Pacific Wren, Jefferson County. 11 March 2020. Photo by Rob Raker.

Hooded Warbler (female), Jefferson County. 5 May 2020. Photo by Dave Prentice.

Scarlet Tanager, Jefferson County. 26 May 2020. Photo by Dave Prentice.

Bay-breasted Warbler, Larimer County. 9 May 2020. Photo by Robin Jasper.

Magnolia Warbler, Cheyenne County. 15 May 2020. Photo by David Dowell.

Scarlet Tanager: One at Upper Queens/Neeskah Res., *Kiowa*, 4 May (Jim Merritt, Brandon K. Percival). One at Home Lake SWA, *Rio Grande*, 7 – 17 May (John Rawinski). One at Cañon City Riverwalk, *Fremont*, 9 – 13 May (Mark Peterson, m.ob.). One at a private residence, *El Paso*, 16 May (Michael Rogers). One at Nucla Avenue Five, *MONTROSE*, 24 – 25 May (Coen Dexter, Brenda Wright). One at Harriman Lake Park, *Jefferson*, 24 – 26 May (Kevin DeBoer, m.ob.). One at Deer Creek at Cougar Road, *Jefferson*, 31 May (Roseanne Juergens et al.).

Rose-breasted x Black-headed Grosbeak (hybrid): One at Colorado State University Environmental Learning Center, *Larimer*, 8 May (Lori Zabel, Joshua Smith, Joe Kipper). One at Prospect Ponds NA, *Larimer*, 8 May (Jay Breidt).

Painted Bunting: One at a private residence, *Larimer*, 25 May (Marc Hemmes). Other reports from *Baca, Otero,* and *Prowers*, 7 – 21 May.

ACKNOWLEDGMENTS

The sightings reported by contributing observers to eBird and COBirds are greatly appreciated. Thanks to Coen Dexter for continuing to compile a West Slope report. Kathy Mihm Dunning for southwest region. Much of the information in this report was obtained from the eBird Basic Dataset from the Cornell Lab of Ornithology, Ithaca, New York. Weather data was provided by NOAA.gov.

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Snowy Plover, Larimer County. 12 April 2020. Photo by Zach Schiff.

Yellow-throated Vireo, Jefferson County. 5 April 2020. Photo by Bez Bezuidenhout.

Sanderling, Montezuma County. 17 April 2020. Photo by Kathy Mihm Dunning.

Summer 2020
June-July

BY DEAN SHOUP

Eastern Meadowlark, Boulder County, 20 June 2020. Photo by Rob Raker.

SEASON OVERVIEW

In the list of reports below, county names are italicized, and the following abbreviations are used: CR – County Road; et al. – and others; m.ob. – many observers; NA – Natural Area; NF – National Forest; NM – National Monument; NP – National Park; NWR – National Wildlife Refuge; Res. – Reservoir; SP – State Park; SWA – State Wildlife Area

Temperatures for June and July were slightly above normal. Thunderstorm activity was limited during June with the exception of a few big events. A wind storm on the afternoon of the 6th produced gusts up to 60 mph across the state, with the highest gust measuring 110 mph, 6 miles northwest of Winter Park. Denver International Airport measured a gust of 78 mph. Severe thunderstorms also hit northeastern Colorado hard on June 8th with numerous reports of damage. A late month storm also produced heavy rain and hail, with a few streets reporting flooding. Severe weather was limited for July with mostly normal temperatures and less precipitation than normal.

The biggest "news from the field' this season was the first state record of Varied Bunting in *Ouray*. With only two prior records of Mexican Whip-poor-will in the state, one continuing from spring throughout the summer season, provided many an opportunity to see or hear this species for the first time in the state. Other rarities included a Long-tailed Jaeger that was seen by a few at Jackson Lake in *Morgan*, a brief sighting of a Zone-tailed Hawk in *Custer*, and a Mourning Warbler in Jefferson. Other exciting news included the discovery of breeding Broad-winged Hawks in *Boulder*, when an adult and a juvenile were observed together up Sunshine Canyon. Pacific Wren was again found in Rocky Mountain National Park where it has been reported off and on over the years since 2014 in various locations. Baird's Sparrow continues to be monitored in areas close to the Wyoming border with one unusual sighting in *Boulder* reported as well.

Trumpeter Swan: One at Pinon Lake Res., *Archuleta,* 26 May (Isaac Sanchez).

Surf Scoter: One at Animas River—Huck Finn Pond & Hatchery area, *La Plata*, 26 May – 27 Aug (Ryan Votta, m.ob.); adult male, continuing from spring.

Red-necked Grebe: One at Antero Res., *Park*, 26 – 29 Jul (Steven Mlodinow, Chris Wood, Nathan Pieplow, Andrew Spencer, et al.).

MEXICAN WHIP-POOR-WILL: One at Oak Creek Grade Road, *Fremont*, 6 May – 31 Jul (Jerry DeBoer, m.ob.); continuing from spring through August.

Black-bellied Plover: Two at San Luis Lakes SWA, *Alamosa*, 8 Jun (Susan Wise, Maikel Wise). One at Prewitt Res., *Washington*, 22 – 29 Jul (Joe Kipper, Edward Raynor, Caleb Alons, Nick Komar, Hannah Schartow, m.ob.).

Whimbrel: One at Chatfield SP—Mariana Sandspit, *Douglas*, 9 Jul (Frank Farrell).

White-rumped Sandpiper: Three at Pueblo West Gravel Pit, *Pueblo*, 1 Jun (Evan Carlson). Three at Valco Ponds, *Pueblo*, 2 Jun (Rebecca Laroche). One at Playa at Morgan CR JJ & Hwy 71, *Morgan*, 5 Jun (Tony Leukering). One at Stewart's Pond, *Weld*, 7 Jun (Susan Rosine). Three at Arapahoe NWR—Auto Loop, *JACKSON*, 12 Jun (Steven Mlodinow, Q.P.). Five at North Sterling Res., *Logan*, 13 Jun (Brian George). Three at Verhoeff Res. (private), *Bent*, 20 Jun (Steven Mlodinow, Q.P.). Two at Two Buttes SWA, *Baca*, 20 Jun (Jack Bushong, Ryan Bushong). Four at Antero Res., *Park*, 3 Jul (Steven Mlodinow). Three at Barr Lake SP, *Adams*, 12 Jul (Machiel van Eldik).

Short-billed Dowitcher: One at Chatfield SP—Plum Creek Delta *Douglas*, 23 Jul (Joey Kellner). One at Prewitt Res.—Inlet Canal, *Washington*, 28 Jul (Glenn Walbek).

LONG-TAILED JAEGER: One at Jackson Res, *Morgan*, 19 – 20 Jul (Jack Bushong, Ryan Bushong, et al.).

Laughing Gull: One at Walden Res., *JACKSON*, 12 – 13 Jun (Steven Mlodinow, Q.P., et al.).

Herring Gull: One at Walden Res., *Jackson*, 12 Jun (Steven Mlodionw, Q.P.).

Lesser Black-backed Gull: One at Pueblo Res., *Pueblo*, 19 Jun (Brandon K. Percival). One at Spinney Mountain Res., *Park*, 15 Jul (Rebecca Laroche). One at Prewitt Res., *Washington*, 24 – 25 Jul (Tony Leukering, Kathy Mihm Dunning, Mitchell Bailey).

Townsend's Warbler, Morgan County. 11 June 2020. Photo by Adam Vesley.

Hooded Warbler, Larimer County. 11 June 2020. Photo by Nick Komar.

Chestnut-sided Warbler, Jefferson County. 2 June 2020. Photo by Dave Prentice.

Least Tern: Two at Clear Creek Valley Park, *ADAMS*, 9 Jun (Eric Dinkel). Other reports from *Bent* and *Kiowa* from 10 Jun – 26 Jul.

Caspian Tern: One at Walden Res., *Jackson*, 12 Jun – 19 Jul (Steven Mlodinow, Q.P., m.ob.). Two at Lagerman Agricultural Preserve—Lagerman Res., *Boulder*, 13 – 14 Jun (Diane Roberts, m.ob.). Two at Upper Tule Lake, *Arapahoe*, 14 Jun (William Richardson). Two at Marston Res., *Denver*, 14 – 15 Jun (Jake Shorty, m.ob.). One at Cowdrey Res., *Jackson*, 23 Jun (Tony Leukering, Kathy Mihm Dunning, Steven Mlodinow). One at Totten Res., *Montezuma*, 30 Jun – 3 Jul (Susan Wise, Maikel Wise, et al.). Two at McPhee Res., *Montezuma*, 3 – 4 Jul (Erik Hendrickson, Glenn Dunmire, et al.). Two at Steamboat Lake, *Routt*, 6 Jul (Norm Erthal). One at Red Lion SWA, *Logan*, 6 Jul (Brad Andres). Two at Delany Butte Lakes SWA, *Jackson*, 8 Jul (Norm Erthal). One at Stalker Lake SWA, *Yuma*, 17 Jul (Liam Waters). Two at Chatfield SP, *Jefferson*, 19 Jul (Michael Lester et al.). Two at Loloff Res., *Weld*, 20 Jul (Luke Pheneger).

Common Tern: One at Richard SWA, *Jackson*, 12 Jun (Steven Mlodinow, Q.P.). Three at Highline Lake SP, *Mesa*, 25 Jul (Ron Lambeth).

NEOTROPIC CORMORANT: One in Grand Junction, *Mesa*, 28 Jul (Ron Lambeth); first county record for *Mesa*, fourth for western Colorado.

Least Bittern: One at Fort Lyon Wildlife Easement, *BENT*, 10 Jun (Steven Mlodinow, Q.P.). One near Clear Spring Ranch, *EL PASO*, 11 Jul (Mark Peterson, Tyler Stuart).

YELLOW-CROWNED NIGHT-HERON: One at a private residence, *Pueblo*, 2 Jun (Rick Clawges). One at Pueblo City Park, *Pueblo*, 10 Jun – 31 Jul (Brandon K. Percival, m.ob.).

Broad-winged Hawk: One at Bear Creek Nature Center, *El Paso*, 28 Jun (Tanja Britton). Two at Sunshine Canyon, *Boulder*, 20 – 31 Jul (Nathan Pieplow, m.ob.); one adult, one juvenile, rare breeding record.

ZONE-TAILED HAWK: One at Wet Mountains, *Custer*, 31 Jul (Brandon K. Percival).

EASTERN WOOD-PEWEE: One at Goodnight River Trail, *Pueblo*, 25 May – 13 Jul (Brandon K. Percival, Chris Knight, m.ob.); continuing from spring. Two audio recorded at Melody Tempel Grove, *Bent*, 10 Jun (Steven Mlodinow, Q.P.).

Western x Eastern Wood-Pewee (hybrid): One at Tamarack Ranch SWA, *Logan*, 25 Jul (Cole Sage).

Vermilion Flycatcher: One at Higbee Valley Road, *Otero*, 21 Jun – 15 Jul (Tyler Stewart et al.).

Scissor-tailed Flycatcher: One at Cherry Creek SP—Railroad Bed Trail, *Arapahoe*, 19 Jun (Buzz Schaumberg, Cynthia Madsen, Mary Burger).

White-eyed Vireo: One at Crane Hollow Road and ponds, *Boulder*, 5 Jun (Sue Riffe). One at Lory SP, *Larimer*, 12 Jun (Jim Nachel et al.).

PACIFIC WREN: One at Rocky Mountain NP—Old Fall River Road, *Larimer*, 6 – 15 Jul (Sue Riffe, m.ob.).

Wood Thrush: One at Animas River—Huck Finn Pond & Hatchery area, *LA PLATA*, 29 May – 8 Jun (Ryan Votta, m.ob.); continuing from spring.

White-winged Crossbill: One on private property, *Grand*, 13 Jun (Renee Schwark). One at Eco Dharma Resort (private), *Boulder*, 13 Jun (Steven Mlodinow, Susan Bawn). One at Sallie Barber Mine Survey area, *Summit*, 30 Jun (Josh Lefever). Five at Caribou Townsite to Bald Mountain, *Boulder*, 6 Jul (Dave Hallock).

BAIRD'S SPARROW: Three at Soapstone Prairie NA—Jack Springs, *Larimer,* 15 Jun (Matthew Webb). Four at Soapstone Prairie NA, *Larimer*, 18 – 26 Jun (Greg Vassilopoulos et al.). One at Gunbarrel Hill, *Boulder*, 22 Jun (Christian Nunes).

EASTERN TOWHEE: Two at Tamarack Ranch SWA, *Logan*, 22 Jun – 22 Jul (Kevin Keirn, m.ob.).

Spotted x Eastern Towhee (hybrid): One at Tamarack Ranch SWA, *Logan*, 18 – 22 Jul (Chris Wood, Russ Wood, m.ob.).

EASTERN MEADOWLARK: One at CR 54 near Jefferson, *Park*, 5 Jun (Taylor Brooks). One at East Boulder Trail—Teller Lakes, *Boulder*, 11 Jun – 23 Jul (Alexander Brown, Jeff Yegian, m.ob.).

Black-and-white Warbler: One at Browns Canyon NM—Hecla Junction area, *Chaffee*, 20 Jun (Greg Mihalik).

Prothonotary Warbler: One at Frantz Lake SWA, *Chaffee*, 30 Jul (Greg Mihalik).

Nashville Warbler: One at Brush Creek Cabin, *Mesa*, 26 Jul (Nic Korte). One at University of Colorado Boulder—South Campus, *Boulder*, 27 Jul (Laura Steadman). One at Horsethief Canyon SWA, *Mesa*, 29 Jul (David Price).

MOURNING WARBLER: One at Apex Park, *Jefferson*, 17 Jun (Jill Boice).

Hooded Warbler: One at Pleasant Valley & Lake Canal Greenbelt at West Lake St., *Larimer,* 11 – 12 Jun (Nick Komar et al.). One at Roxborough SP, *Douglas*, 23 Jun (Christina Leslie). One at Melody Tempel Grove, *Bent*, 27 Jun (Steven Mlodinow). One at Grey Rock Trail, *Larimer*, 4 Jul (Anonymous eBirder).

Northern Parula: One at Dixon Res., Larimer, 1 Jun (Nancy Eckardt, Joshua Smith). One at Quincy Res., *Arapahoe*, 2 Jun (Ben Sampson). One at Monument Valley Park, *El Paso*, 10 Jun (Tanja Britton).

Chestnut-sided Warbler: One at Wheat Ridge Greenbelt, *Jefferson*, 31 May – 7 Jun (Ben Shaum, m.ob.); continuing from spring. One at Sandstone Ranch, *Douglas*, 19 Jul (Harriet Stratton et al.).

Palm Warbler: One at Sandstone Prairie NA, *Larimer*, 22 Jun (Matthew Webb, Annie Hawkinson).

Townsend's Warbler: One at Riverside Park, *Morgan*, 11 Jun (Adam Vesely). One at Grand Mesa NF, *Mesa*, 1 Jul (Carol Ortenzio Eileen Cunningham).

Hepatic Tanager: Two near Pryor (Santa Clara Creek), *HUERFANO*, 16 May – 24 Jun (David Tønnessen, Will Anderson, m.ob.). One at Trinidad SP, *Las Animas*, 1 – 24 Jul (Tony Godfrey, Ned Wallace, Janey Rogers). Other reports from *Las Animas* from 13 Jun – 11 Jul.

Summer Tanager: One at a private residence, *Pueblo*, 2 Jun (Rick Clawges). One at Higbee Valley Road, *Otero*, 3 – 27 Jun (Bez Bezuidenhout, m.ob.). Four at Cottonwood Canyon, *Baca*, 4 Jun – 12 Jul (Marc Hemmes, m.ob.).

Scarlet Tanager: One at Bear Creek Park East, *El Paso*, 5 Jun (Rebecca Laroche). One at Flagler Res. SWA, *Kit Carson*, 19 Jun (Joey Negreann).

Painted Bunting: One at a private residence, *Jefferson*, 8 Jun (Craig Baker). One at Picture Canyon, *Baca*, 20 Jun (Ryan Bushong, Jack Bushong). One at Purgatoire River, *Otero*, 10 Jul (Joey Kellner).

VARIED BUNTING: One photographed at Chipeta Drive, Ridgway, *Ouray,* 22 Jun (Don Marsh); first state record.

ACKNOWLEDGMENTS

The sightings reported by contributing observers to eBird and COBirds are greatly appreciated. Thanks to Coen Dexter for continuing to compile a West Slope report. Much of the information in this report was obtained from the eBird Basic Dataset from the Cornell Lab of Ornithology, Ithaca, New York. Weather data was provided by NOAA.gov.

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Robert Kennicott, 1835-1866

Western Screech-Owl *(Megascops kennicottii)*

BY ROBERT RIGHTER

Although not credited with the discovery or scientific description of any new bird species, Robert Kennicott was a prominent American naturalist and a legend among zoological collectors. Kennicott added more specimens to the Smithsonian Museum collection than any other natural history collector. Even though he had no formal education, he founded Northwestern University's natural history museum as well as the Chicago Academy of Sciences.

Kennicott grew up in Northfield, Illinois, a short distance from Chicago. As a child he suffered from chronic illness that kept him out of school. Instead, he was raised by his father, a botanist, who taught him the fundamentals of collecting plants and animals.

In 1852, at the age of sixteen, his father shipped him off to serve as an understudy with his friend, Dr. Jared Potter Kirtland[1], a well-known naturalist. Impressed with the pace that Robert was absorbing scientific information and his passion for collecting, Kirtland introduced Kennicott to his friend Spencer Fullerton Baird, the director of the Smithsonian Museum[2]. With Baird's support, Kennicott began sending specimens to the museum, which he continued to do until his untimely death in 1866 at the age of 31.

During this era the government was seeking a route for a proposed railroad to the Pacific Coast. One of Baird's responsibilities was to ensure that every Pacific Railroad Survey had naturalists assigned to it to collect specimens for the Smithsonian's growing collection. Baird sent Kennicott on several trips, further honing his skills as a collector. In 1859, Baird sent Kennicott on an expedition to collect natural history specimens in the subarctic boreal forests of northwestern Canada and further north in the arctic tundra. There were no instructions for traveling to the arctic. Kennicott was left to determine a route and provisions on his own! Kennicott was fortunate to consult with his colleague Dr. Kirtland who in turn advised him to visit with the intrepid arctic explorer John Rae in Toronto. Some of Rae's best advice was to forgo the traditional wool clothes and instead to dress in skins as the native tribes did.

In May 1860, Kennicott joined up with other Canadian adventurers and explored Lake Winnipeg. He was impressed with the thousands of ducks and geese and how the adjacent boreal forests were brimming with all kinds of land birds. In June he met with Governor Simpson of the Hudson Bay Company (HBC) at Norway House, one of the many HBC forts that were sprinkled throughout central Canada. Simpson promised Kennicott every assistance possible in his travels. Kennicott's favorite form of travel was by dog sled, which he used journeying to and from the various HBC forts. At the end of the breeding season, with the help of the HBC, he sent trunks stuffed with bird skins, nests and eggs back to Baird at the Smithsonian.

That fall Kennicott traveled with the help of Native American guides down the Mackenzie River almost to the Beaufort Sea, then headed west over the Richardson Mountains to the headwaters of the Porcupine River. Kennicott was constantly collecting and many of the specimens were new to science. He spent the winter at Fort McPherson trapping and catching up on his journal. He was the only person at the fort and was homesick and lonely. His journal was full of reminiscences about his family, even thoughts of his beloved hickory trees, with their bare branches and shaggy bark at his family house in Illinois.

Kennicott planned to spend spring on the Anderson River, then considered some of the richest shorebird breeding grounds in the world and the only known nesting area of the Eskimo Curlew, now presumed to be extinct. Instead, he was forced to return to Illinois having learned that his father was gravely ill. After the death of his father, Kennicott travelled to the Smithsonian to help sort through the many trunks that contained his Canadian specimens. He negotiated with Baird to have his collection shipped to the Chicago Academy of Sciences where it would be on display for all to see, but tragically a large portion of the collection was destroyed during the Great Chicago Fire in 1871. Surviving portions of Kennicott's collection can be found at the Peggy Notebaert Nature Museum in Chicago's Lincoln Park.

In the spring of 1864, the Western Union Telegraph Company was charged with finding a route to establish a telegraph line across the Bering Sea between Alaska and Siberia. Kennicott was persuaded to serve as the scientist for the expedition. After several delays the survey team arrived in Sitka, Alaska, where Kennicott spent two weeks collecting. It was here that the type specimen for the Western Screech-Owl was obtained and subsequently named *Otus kennicottii*. The expedition continued on to the Aleutians and arrived at St. Michael on the shores of Norton Sound. That night, Kennicott experienced chest pains. To relieve the pain, he rose early in the morning and went for a walk on the beach. He was found dead that morning May 13, 1866.

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Wikipedia. 2021. *Robert Kennicott.* Last modified December 7, 2020. https://en.wikipedia.org/wiki/Robert_Kennicott

[1] On 13 May 1851, Charles Pease shot a warbler and brought the specimen to Jared Kirtland who lived along the shores of Lake Erie, near Cleveland, Ohio. Kirtland shipped the warbler to his friend Spencer Baird at the Smithsonian. Baird described the new warbler and named it Kirtland's Warbler now officially known as *Setophaga kirtlandii*

[2] Spencer Fullerton Baird was honored to have three birds named after him:

- Baird's Sandpiper (*Calidris bairdii*), described by Elliot Coues, 1861
- Baird's Sparrow (*Centronyx bairdii*), described by John James Audubon, 1844
- Kaua'i Creeper (*Oreomystis bairdi*), described by Leonhard Stejneger, 1887

Pine Siskins and Catalpa Seed

BY DAVID LEATHERMAN

In front of my childhood home in Columbus, Ohio grew a large catalpa (*Catalpa* sp.). This tree fascinated me for two reasons: its very large, heart-shaped leaves and its long "bean pods." Indirectly, the latter may be responsible for my living a longer life than my father. He smoked, something I strongly suspect contributed to his premature death in his mid-60s. I never acquired a smoking habit. Mostly this is because my brother and I tried smoking those catalpa "cigars" out in the alley behind the garage. Dad sealed the deal by offering the two of us a cigarette in the living room when we were young, knowing full well we would cough and find the habit unpleasant. That was it for me and smoking, despite opportunity and The Doors blaring in my dorm room at college.

I have given many presentations to garden and nature groups over the years. Such talks almost always include a section on plant and wildlife interactions. One slide lists what I refer to as "plastic" plants. That is, plants that have little ecological utility. Admittedly, my two biases for giving a plant this negative designation pertain to insects and birds. If a plant does not host insects, particularly types preyed upon by birds, and has no fruits or other body parts eaten by birds, it is a candidate for the list. Further, if birds rarely perch in it, nest in it or use it in any other way, combined with the first two food criteria, it wins a spot. Catalpa is on the list, at least until recently.

Two species of catalpa are native to the southeastern United States. Northern catalpa (*C. speciosa*) occurs along the Wabash and Ohio Rivers southeast to, and along, the Mississippi River as far as northeastern Arkansas. Southern catalpa (*C. bignonioides*) occurs from west-central Mississippi east across the southern half of Alabama to extreme southwestern Georgia and the panhandle of Florida (Kershner et al 2008). A catalpa planted as an ornamental elsewhere in the U.S., like the one in my childhood yard and the one later mentioned in Lamar, Colorado, is most likely a Northern catalpa.

Until recently I had never seen a bird show much interest in catalpa for anything other than a shady place to hide on a 100-degree day. Those elephant-ear leaves do shield the sun. Could a lack of insects be a reason for bird disinterest in catalpa at other times?

In Colorado, most insect visitation of catalpa is because of its orchid-like, fragrant flowers. Occasionally bumble bees may visit by day, certain moths at night. Ants, ladybird beetles and parasitoid wasps visit nectar produced on leaves and stems apart from the flowers (the so-called "extrafloral nectaries") (Illinois Wildflowers 2021). The only Colorado reference I could find to an insect feeding on catalpa not involving flowers and other nectaries was *Aphis gossypii*, also known as the "Cotton Aphid" and "Melon Aphid." Its rather long host list contains only one woody plant – catalpa (Palmer 1952). If the historical conclusion that this aphid actually feeds on catalpa is not an outright error, the distinct unrelatedness of the tree to all other listed host plants infers it is, at least, not preferred.

It is not just Colorado. Even in the eastern U.S. where catalpa is native, insects mostly leave it alone. There, the only insects listed for catalpa are the catalpa worm, caterpillar of the catalpa sphinx moth (*Ceratomia catalpae*) (more to follow); a gall midge (*Contarinia catalpae*) with larvae feeding on leaves and seed pods; a fly leafminer (*Trilobomyza pleuralis*); two mealybugs including the introduced Comstock mealybug (*Pseudococcus comstocki*); three minor scale insects and two aphids (*Myzus persicae* and *Aphis citricola*) (USDA 1985, University of New Hampshire Extension 2018). That is a pretty short list of insects for any kind of tree.

In my 32-year career as a forest entomologist in Colorado, I do not remember a single incidence of being called to look at an insect issue in catalpa. The point here being the tree is an entomological bore, and accordingly, few birds spend time in it looking for/finding insects.

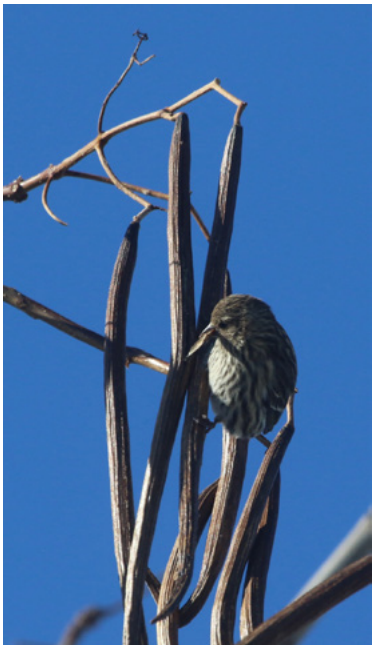
To be fair at this point, I must, however, take a slight detour to relate the details of my favorite tree "disease," which does involve catalpa. That caterpillar mentioned earlier, the catalpa worm, is locally known as the "catawba worm." They are

common, occasionally even abundant, have as many as four generations a year and can completely defoliate trees year after year. And they are prized as fish bait by fisherpersons, particularly those seeking catfish. How best to obtain caterpillars feeding on tree leaves high overhead? Remember, you are along a Southern river far from any discussion of genome sequencing or table etiquette. Wail on the trunk of said tree with a baseball bat, trademark up, of course. Fishing access to rivers is often limited. That, combined with the likelihood that trees found by insects to be tasty on one occasion will be reinfested, leads to chronic ballbat abuse of individual catalpas growing near fishing holes. Repeated bark bruising leads to wound infection by the canker fungus *Hypoxylon rubiginosum* (Hepting 1981). Thus, this would seem to be a classic only-in-America disease syndrome rich in conjured images. Narrated by the right person, the YouTube video would go viral. An episode of the TV show "Swamp People," anyone?

To complete the story, while catfish may love catalpa caterpillars, even after they have been frozen, birds find them decidedly distasteful. No doubt the reason for this avian rejection involves some of the same organic chemistry that thwarted interest in smoking by the Leatherman Brothers back in 1960 or so.

In summary, catalpa in its native haunts or where planted elsewhere has few insects and the ones it does have are not particularly prized by birds. So, what happened on 16 December 2020 in Lamar, Colorado, and what anatomical part of catalpa did it involve that warrants writing about here?

I was walking to my car from the back door of my friend Janeal Thompson's house. To my right I heard the chatter of Pine Siskins at her thistle feeders, where they had been regular for most of winter 2020-2021. Barely taking note, I passed under the low-hanging pods of her catalpa when an even louder chorus of siskin chaos rained down. I remember thinking they were probably just using the top of this tree to stage group visits to the feeders. But when I looked up, several siskins were clinging to the sides of pods and obviously pecking and prying at them (Figures 1 & 2). Whatever mission I was on in the car got delayed by an hour.



Figures 1 and 2. Pine Siskin pulling winged seeds from capsules of catalpa. Lamar, CO. 16 December 2020. Photos by David Leatherman.

The term "bean" is usually reserved for the seed-bearing structures of plants in the family Leguminaceae (aka "legumes"). Catalpa is in the family Bignoniaceae, a primarily tropical group of over 800 species containing mostly trees and vines (Eberhard 2004). What we call catalpa "beans" are really bivalved capsules many times longer than they are wide containing winged seeds. At the time of year mentioned, the capsules are somewhat dried and beginning to split. The siskins showed me for the first time what a catalpa seed looks like by exploiting minor lengthwise cracks in the capsules and pulling them out. From a distance these seeds just looked like large white flakes, somewhat resembling pieces of confetti (Figure 3.).

After pulling out the white material, the birds obviously removed most of it, kept and ate what was left. From several feet away, despite quick field analysis of zoomable photos, I could not determine what that was. Time to grab a couple "beans" and head inside to the laboratory – which Janeal, for some reason, thinks is her kitchen.

Indoor dissection of the capsules revealed each one to be packed with a few dozen pieces of "confetti," each papery propagule consisting of two wings joined at their blunt end, pointed on the other. Upon initial inspection I was baffled as to what the siskins could be consuming, as the wings appeared to be nothing but nonnutritious chaff. The actual meaty seeds were hidden within, on either side of the joint between the two wings. Janeal was the first to discover them by deftly opening the wings with her fingernails the way siskins must do with their mandibles (Figure 4.).

Mystery solved and a new, at least to me, food item for birds revealed! I love it when that happens.

Catalpa seed is not mentioned in Cornell University's "Birds of the World" account for Pine Siskin (Dawson 2020). I had neither seen Pine Siskins engage in catalpa seed acquisition before this episode, nor since. Perhaps this was either a novel occurrence under the unique circumstances of an individual Prowers County yard during the 2020 drought, or it

Figure 3. Pine Siskin with a winged seed of catalpa it has just pulled from a naturally splitting capsule. Lamar, CO. 16 December 2020. Photo by David Leatherman.

Figure 4. One catalpa capsule split into two halves along its natural seam (left), with three winged seeds pulled from the capsule (upper right), and six extracted seed kernels (lower right) as would exist (two per seed) embedded within the three winged seeds. The greenish-brown kernels are the object of siskin activity.

only occurs during a narrow window of time when the capsules are beginning to open, and has thus been consistently overlooked by birders. Time will tell. I will be looking for a repeat performance elsewhere and would appreciate reports from readers who observe something similar.

Maybe catalpa is not as "plastic" as I once thought.

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Sparrows: Same Same But Different

BY ERIC DEFONSO

Figure 1. "Same Same But Different" beachside restaurant on the island of Koh Lanta, south Thailand.

While traveling in Thailand in 2016, I encountered a charming expression frequently and earnestly given in markets and shops by Thais themselves, enough so that I brought home a bright red T-shirt emblazoned with it. The front proclaims "SAME SAME," while the back adds "BUT DIFFERENT." The phrase apparently originated in Thailand and is a cultural catchphrase there, expressing an assurance that the souvenir or brand-name knockoff you're thinking of buying is just as good as the original, but maybe not really. This expression has relevance beyond the souvenir market though and can be used in any ambiguous situation, but explained with the kind of light-hearted reassurance that Thai people are so adept at.

Over 30 species of New World Sparrow (family Passerellidae) have been documented in Colorado, and these delightful but difficult-to-ID birds also fit the bill as being "same same but different" in both appearance and sound. I remember looking at my first-ever Peterson's Guide decades ago when I had just started birding. I'd page through to the sparrows only to be horrified at how similar they all seemed to each other. How was I ever going to tell them apart? Visually, many sparrow species do resemble one another at first glance, and auditorily, some sparrow species can also sound quite like others.

The good news is, oftentimes the pairs of species that look like each other (same same) don't sound like each other (but different). In addition, the pairs that *do* sound like each other generally also don't look like each other, so with a bit of detective work and utilizing both visual and auditory identification skills, one can quickly narrow down possibilities and successfully identify a number of these "little brown jobbies" with relative ease and a minimum of consternation.

CHIPS AND TICKS

My previous article addressed common sounds like whistles and burry notes, such as those sung by Black-headed Grosbeaks and Western Tanagers. If we're going to talk about sparrow sounds and what they look like on a spectrogram, we need to examine a couple other soundtypes that show up frequently.

Recall the spectrogram and how we can read it as a kind of musical notation for birds. This analogy makes sense generally for birds that whistle, since we humans often whistle along to songs we like, but what about sounds that birds make which are far less musical? Many sparrows (and birds in general) can make rapid tick or chip notes, given either within a song or as calls. These notes are given so quickly that it registers more like a drum hit than a sung note. This will make a dark vertical line on a spectrogram, meaning it either rises or falls in pitch very quickly. In the former case we say it is *upslurred*, and in the latter it is *downslurred*. Either way, it presents our ears with sound across many frequencies so fast it sounds like they're coming all at once, making it hard for us to think of it as having any pitch at all.

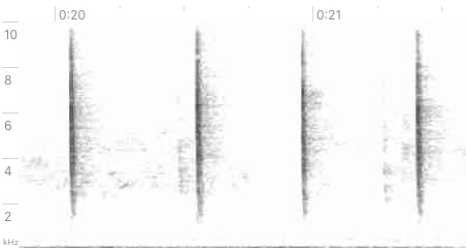


Figure 2. Spectrogram for Dark-eyed Junco downslurred call note. Nearly vertical lines on a spectrogram will be heard as a percussive tick, chip, pik or some variant of hard, rapid note in the field. (Greg Budney, Yuba Pass, California, June 15 1997.) https://macaulaylibrary.org/asset/138596

Consider this typical *smack* call from a Dark-eyed Junco in Fig. 2. Note how when examined closely, this note falls very quickly (i.e., is downslurred) and indeed has a dry, percussive quality to it. Again, these distinctions can be very difficult to hear in real time at first, but by looking at the spectrograms and paying closer attention to the sounds while doing so, one can train the ears to notice these subtle characteristics. At this point, don't worry about memorizing which birds make upslurred or downslurred tick notes — that can feel overwhelming, like me looking at the Peterson's Guide sparrow pages all those years ago. Just notice for now that these differences exist and that different species can exhibit these traits in distinctive ways. Learning and remembering the distinctions will come with time and practice.

Another relevant soundtype for sparrow songs is the "noisy" note. This can be similar to (same same) the "burry" notes of the Western Tanager, but these perhaps are even fuzzier sounding, not allowing us humans to easily fix any single pitch to the note we're hearing.

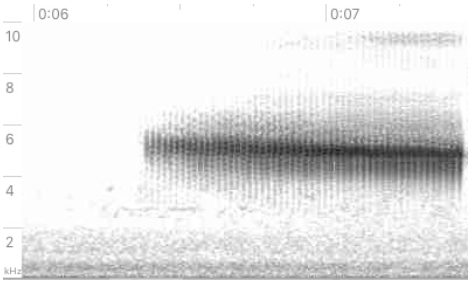


Figure 3. Spectrogram excerpt for Brewer's Sparrow. The introductory buzzy note in the song appears as a broad blur, mostly spread between 4 and 6 kHz but loudest (darkest) around 5 kHz. Also notice how it appears as a bunch of tightly packed vertical lines, like a series of chip notes delivered extremely fast, around 40 notes/sec. (Steve Sherman, Beaverhead County, Montana, June 15 2014.) https://macaulaylibrary.org/asset/195234

Fig. 3 depicts the introductory buzzy note of a Brewer's Sparrow song. See how the blur of sound in Fig. 3 extends across the frequency spectrum (from lower numbers to higher)? The phrase "white noise" may come to mind, and in fact is quite apt here. Just as white is a combination of light consisting of many colors (i.e., light frequencies) all blended together, white noise refers to a fuzzy sound that consists of many sound frequencies all blended together. A number of sparrow species emit songs or calls that are noisy or buzzy to our ears, and may only have a vague sense of pitch associated with them.

One important aspect of this, which will become relevant as we explore sounds from sparrows, is the question of the difference between a trill and a buzz. It turns out that human brains have great difficulty counting notes delivered faster than about 8/sec. Beyond that threshold, a quick series of notes or chips will be interpreted as either a trill or a buzz. If the notes are more tonal or musical in nature (flatter on a spectrogram) we call that series a trill. If the notes are more percussive (steeper on a spectrogram) we call that series a buzz. Read on to see and hear this idea applied to a number of common Colorado sparrows.

NOT SO SAME AFTER ALL

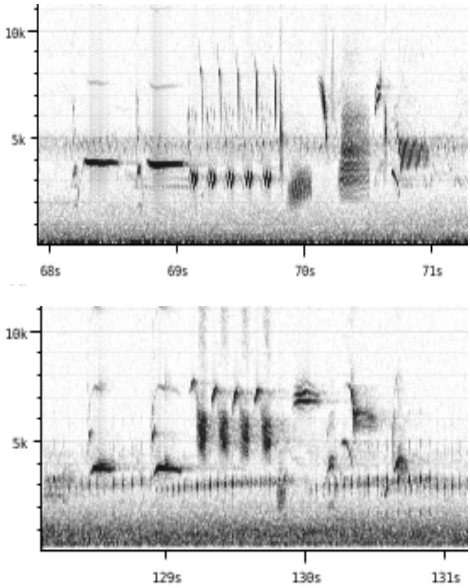
To illustrate how birding by ear can assist us with sparrows, we're going to consider four small groupings of regularly occurring sparrows in Colorado. These mini-groups represent common identification challenges due to either visual or auditory similarity, but even in the cases of similar sounding birds, there are usually enough clues present for a trained ear to notice and make positive identifications. It's also worth remembering the usual preferred range and habitats of the respective species, to help narrow down possibilities in many circumstances. Habitat and range provide contextual clues and affect the *likelihoods* of what one may find at a certain place and time, but ultimately of course the identification always comes down to the sights and sounds presented by the birds themselves.

SONG VS LINCOLN

Song Sparrow (*Melospiza melodia*) and Lincoln's Sparrow (*Melospiza lincolnii*) are both members of the same genus and thus present a similar physical aspect — longish tails, facial patterns featuring gray and brown, and striped breasts. They can even occupy similar habitats during migration, although on breeding territories the Lincoln will be in higher elevations. Song Sparrow songs and calls are perhaps the most valuable sparrow sounds to become familiar with because of their commonality, variety and distinctiveness. Song Sparrow is the "Robin" of sparrows, as it were.

Song Sparrow is appropriately named — individual males create an immense variety of ear-catching melodies, and are among the first sounds one is likely to encounter on a visit to a wetland. With a rhythm both consistent within each song and across individuals, the reliable combination of buzzes, short clear steady notes and trills comprise one of many "variations on a theme" that typify Song Sparrow song https://www.xeno-canto.org/205806. Personally I find endless delight in hearing this quite common song, due to its inherent pleasantness as well as each version's distinctiveness. The ingenuity of these birds to find new ways to express themselves using the same limited number of song elements should be an inspiration to us all!

So what are these elements? Spectrograms can show us.



Figures 4a-b. Spectrograms for Song Sparrow. 4a is from the same individual during the same song bout. (Eric DeFonso, Confluence Park, Delta, Colorado, May 29 2014.) https://www.xeno-canto.org/205806 Notice the only difference is in how the phrase concludes. 4b is from one individual as well in the same bout, but on a different occasion and location from 4a. (Eric DeFonso, Sawhill Ponds, Boulder, Colorado, April 5 2013.) https://www.xeno-canto.org/172442

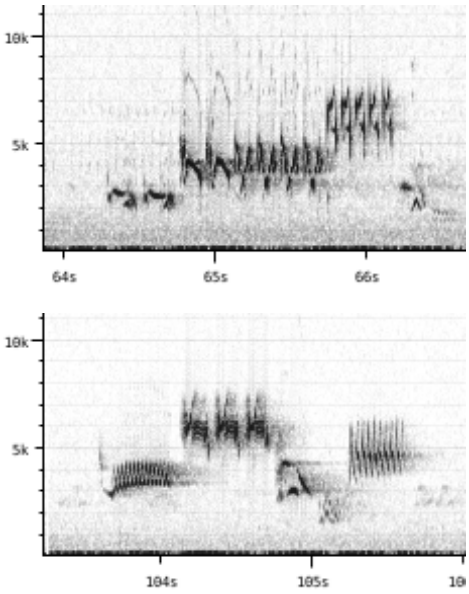


Figure 5. Spectrograms for Lincoln's Sparrow. Most songs consist of 3-4 jumbly trills, with the middle ones higher and louder, concluding with a lower, softer note or chirp. a) (Eric DeFonso, Calico Trailhead, San Juan National Forest, Dolores County, Colorado, June 30 2014.) https://www.xeno-canto.org/206126 b) (Eric DeFonso, Tuckerville Road, Weminuche Wilderness, La Plata County, Colorado, June 26, 2016.) https://www.xeno-canto.org/369862

Bearing in mind the aforementioned variety found in Song Sparrow songs across the state (and the nation!), most commonly one hears 2-3 clear flat whistled notes followed by trills, buzzes, other random whistled notes and sometimes even more flat whistles. Also keep in mind that an individual bird may switch songtypes during a song bout, like the ones in Fig. 4. See how, in Fig. 4a, the first song delivery on the upper spectrogram, there are two flat clear notes followed by a half-second buzz, then followed by a loose trill of about 6-7 notes. Then, about 10 seconds later, the same bird switches to a new songtype (shown in the lower spectrogram in 4b) that's similar to the previous one, but instead of a loud buzz after the first two notes, it does a loose trill of only four notes, and then a few random notes dancing about with no buzz at all this time. Song Sparrows are creative in this way, so be ready to hear all sorts of variations on this basic template.

The Lincoln's Sparrow, in contrast, sings a somewhat more jumbled song, usually consisting of 3-4 trilly or burry portions on different pitches, ending on a lower one. As with Song Sparrows, one will encounter a fair amount of individual variation, but generally a lot less nuance and more adherence to this specific structure.

Let's consider the examples in Fig. 5.

DARK-EYED JUNCO VS CHIPPING SPARROW

Now we can put our new understanding of chips and ticks to good use by comparing the Dark-eyed Junco (*Junco hyemalis*) and the Chipping Sparrow (*Spizella passerina*). At first glance it might seem these two sparrows would be impossible to confuse given the distinctive solid-color appearance of the Junco versus the stripe-faced aspect to the Chipper. But their songs can be frustratingly similar, and particularly vexing because they can occupy the same breeding habitats, mostly in montane coniferous forests, and can therefore sometimes be heard simultaneously emanating from the same

woods. Occasionally their songs actually overlap in tonal quality, at which point a visual confirmation is necessary to clinch an ID. Nevertheless, there are average differences between their songs as well as their deliveries, and paying attention to the details will often be sufficient in distinguishing them.

The simplest criterion for distinguishing these similar songs is to consider the musicality of the trills. The trills themselves can often be at identical speeds (14-20 notes/sec or more), so that's no help. But the Dark-eyed Junco almost always sings sweet musical notes while the Chipping's notes are drier, more insect-like, and flatter (meaning they lack lilt). They are often delivered in more erratic, variable stretches, sometimes consisting of multiple separate bursts of trills of 2-3 seconds, or sometimes 6-7 second stretches of a single burst. The junco however seems less apt to stray from the template.

To start, listen to the birds at these links: Dark-eyed Junco https://www.xeno-canto.org/253589 and Chipping Sparrow https://www.xeno-canto.org/104951. They sure sound alike, don't they? Both were uttering their songs at around 14 notes/sec, yet the Junco sounds a tad sweeter to our ears while the Chipper has a more insect-like chatter.

Let's analyze the songs of these two doppelgangers a bit more closely with the help of spectrograms. One of the advantages of a spectrogram is the ability to "zoom in" to a portion of a song or call, to see what is happening in very short spans of time. (A visual analogy to this might be the act of zooming in on or cropping a photo of a bird, to get a closer look at flight feathers or facial markings.) This is essentially what we are doing in Fig. 6.

First, the Junco's notes (top) on the spectrogram look like inverted Vs, and consist of very clean lines with somewhat steep slopes but are not vertical. That means the notes sound more like a fast whistle, and whistles to our ears will sound more "musical" or pleasing. The Chipping Sparrow (bottom) also sings notes that look like inverted Vs, but notice how each note begins with a buzzy section before the very steep upslurred part followed by a short, steep downslur. Because those notes are a combination of a buzzy part followed by notes that sound more

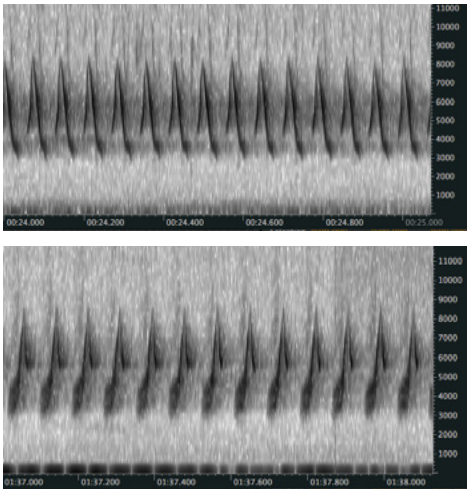


Figure 6. Spectrograms for Dark-eyed Junco (top) and Chipping Sparrow (bottom). Both are excerpts of 1 second, showing very similar 14 notes/sec series. Consider the finer, more sloped lines of the DEJU versus the fuzzier start and steeper lines for the CHSP, and how that translates to the comparatively sweeter trill versus a drier buzz. (top) (Eric DeFonso, Flagstaff Mountain Park, Boulder, Colorado, June 9 2015.) https://www.xeno-canto.org/253589. (bottom) (Eric DeFonso, Great Basin Natl Park, Nevada, June 15, 2012.) https://www.xeno-canto.org/104951

percussive or sharp to our ears, the overall perception of the song is more harsh, buzzy and indeed, more insect-like.

The spectrogram thus shows some subtle details that, when brought to our attention, allow us to hear it in a recording, and thus, the next time we're in the field.

SAVANNAH VS GRASSHOPPER VS VESPER

In the grassland habitats of the eastern plains, Savannah Sparrow (*Passerculus sandwichensis*), Vesper Sparrow (*Pooecetes gramineus*) and Grasshopper Sparrow (*Ammodramus savannarum*) comprise a curious triangle of likely species that either visually or auditorily resemble each other, but not both simultaneously. For example, Vesper and Savannah can look very similar, but their songs are quite different. On the other hand, Savannah and Grasshopper *sound* somewhat similar, but with an unobstructed view one can see how streaky-breasted the Savannah is, while the Grasshopper

notably is not. And so all these species can be readily separated, but learning their songs becomes key to unlocking this puzzling threesome of prairie sparrows, especially as they blend in with the tall grass and don't always offer easy views.

Of these three species, Vesper Sparrow is perhaps the most common in Colorado, and has the most distinctive song. The commonly heard song often begins with two bright whistles (sometimes just one, occasionally three or four, as seen in Fig. 7), then turning into an accelerating cascade of trills or buzzes culminating in a trailing off set of buzzes and chirps. Songs are typically repeated every few seconds or so.

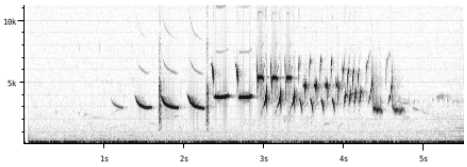


Figure 7. Spectrogram for Vesper Sparrow song. Vesper songs feel bright and cheery, and the spectrogram shows many whistled notes right from the start, followed by tapering trills, all of which contribute to that impression. (Eric DeFonso, Marble Hot Springs Rd, Plumas County, California, June 13 2010.) https://www.xeno-canto.org/65375

In contrast, while surveying a field of tall grass in the springtime, one might initially confuse Grasshopper Sparrow songs with actual grasshoppers. This song consists of a flat, insect-like buzz, usually preceded by 1-4 very quick but barely audible chips or tsips (Fig. 8). It will seemingly emanate from the grass itself, with no bird in sight, but equally often the male will take up a precarious perch to sing from a taller blade of grass or atop a short shrub. Grasshopper Sparrows are fairly picky about their grasslands, and will not be found in areas with too much shrub or too short grass.

Savannah Sparrow combines some elements of both preceding species in both looks and sound. Savannah has a streaked breast like Vesper, and sings a bit like Grasshopper with a buzzy section, yet is different enough in both senses to be separable. (See Fig. 9 and listen to https://www.xeno-canto.org/172938). Its song starts with a few high *tsits* like the Grasshopper, but all on the same pitch, and accelerates before

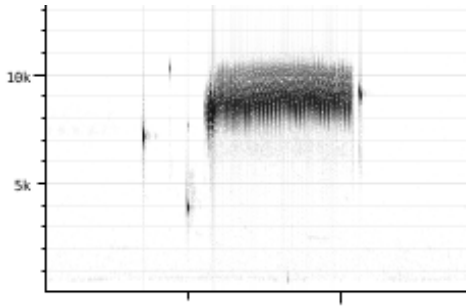


Figure 8. Spectrogram for Grasshopper Sparrow song. The main aspect of the song is the prolonged buzz, here seen to be centered around 9 kHz, which is fairly high pitched and not easily detected by all birders. Note also the 3-4 preceding tsit notes before the buzz which are audible once one's attention is brought to them. (Andrew Spencer, San Rafael Grasslands, Santa Cruz County, Arizona, June 2 2009.) https://www.xeno-canto.org/35377

transitioning into a sequence of multiple buzzes on different pitches and with different durations, often concluding with two quick buzzes, the first higher-pitched and the last one lower and ending quite abruptly. The main buzz of the Savannah can be pretty similar in character to the Grasshopper's buzz, but is usually lower in pitch, and the presence of multiple buzzes in sequence is unlike anything the more monotonous Grasshopper offers.

TOWHEES

The towhees of Colorado are large, distinctive sparrows that frequent shrubby habitats. Visually, the Spotted Towhee (*Pipilo maculatus*) and the Green-tailed Towhee (*Pipilo chlorurus*) are unlikely to be confused, as the former sports a striking black or brown hood that contrasts with a white breast and belly with rufous flanks, while the latter is largely green with a red cap and white facial markings. But different as they look from one another, their sounds do overlap more than one might realize. In addition, they can sometimes be found in the same locales, and because they often skulk, recognizing their songs and calls becomes a real asset for figuring out who's present.

Spotted Towhee was formerly conspecific with Eastern Towhee (*Pipilo erythrophthalmus*) and was then called Rufous-sided Towhee. "Drink your tee-eee-eee" is a common mnemonic used to characterize Spotted Towhee songs, although the

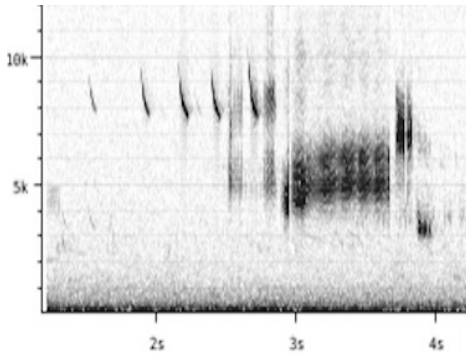


Figure 9. Spectrogram for Savannah Sparrow. Note also the 10-second duration of this featured phrase. (Eric DeFonso, Red Canyon Rd, Garfield County, Colorado, June 10 2013.) https://www.xeno-canto.org/172938

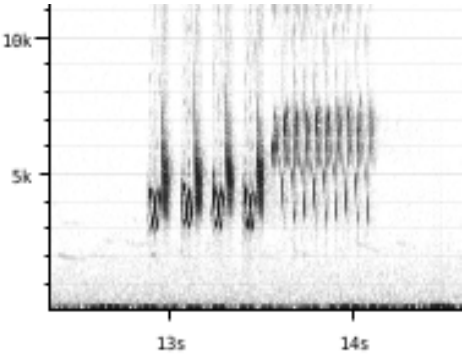


Figure 10. Spectrogram for Spotted Towhee. Note also the 10-second duration of this featured phrase. (Eric DeFonso, Rabbit Mountain Open Space, Boulder County, Colorado, April 7 2013.) https://www.xeno-canto.org/172446

expression perhaps describes the Eastern's song better. The Spotted's song is raspier and buzzier than its eastern counterpart, with its initial notes less sweet and whistly and instead sharper and more atonal. Individual birds do have a handful of songtypes, but will usually sing one song type repeatedly for minutes on end before switching. The songtypes themselves almost always fit a pattern depicted in Fig. 10.

Green-tailed Towhee songs possess the basic elements that its Spotted cousin has, which is one reason it can be confused with a Spotted at times. However, the Green-tailed sings a more varied and lively song, often incorporating clear whistles and varying trills in quick succession in a way that Spotted never does. In fact, a Green-tailed Towhee will vary its songtypes one after the other, sharing over a dozen different variations within a minute or two. Listen to https://www.xeno-canto.org/369863 and take in the multiple songtypes shown in Fig. 11.

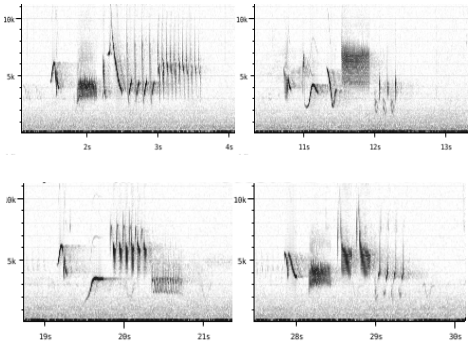


Figure 11. Spectrogram for Green-tailed Towhee. These are four of the dozen or so songtypes given by this particular bird in the same song bout. The phrases certainly have some common and shared characteristics, yet each is distinctly different. (Eric DeFonso, Tuckerville Rd, Weminuche Wilderness, La Plata County, Colorado, June 26, 2016.) https://www.xeno-canto.org/369863

I've not addressed the issues of sparrow call notes in this article, only for the sake of brevity. But with the towhees, it's too relevant to ignore since both species call frequently and therefore deserves brief mention. The most common call notes of the Spotted and Green-tailed Towhee are shown in Fig. 12.

Both call notes have an upslurred, rising whiny quality to them, but note how the Spotted's spectrogram shows notes that are broad (and buzzy), while the Green-tailed's shows thin, clear lines, and its sound has no fuzzy quality to it. Thus, the call notes have a similar rising, inquiring character but a very different tone. Note also that in both these spectrograms, the lines are stacked in a peculiar but orderly way — there's a reason for that which we will discuss in greater detail in a future article. Teaser: it relates to the kinds of sounds you hear from Red-breasted Nuthatches and Black-billed Magpies.

Remember: Rome wasn't built in a day. And neither is one's comfort and familiarity with sparrow songs in Colorado. As the flurry of previous examples shows, sparrow identification is an intricate dance between the similarities and differences in size, color, habitat preference, behavior and vocalization.

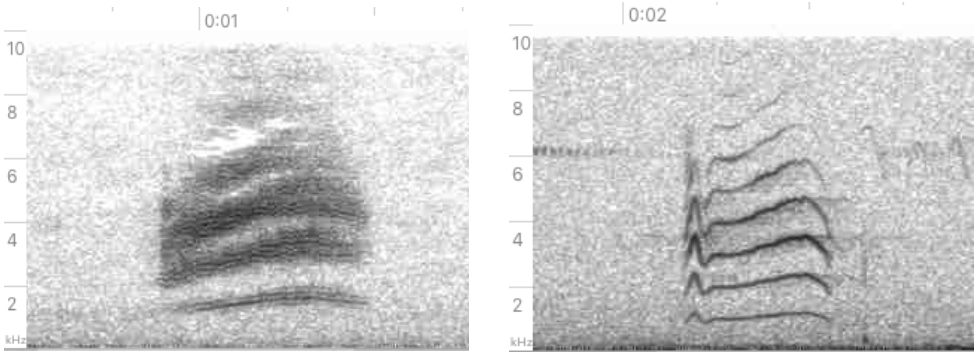


Figure 12. Spectrograms for Spotted Towhee call (left) and Green-tailed Towhee call (right). a) (Tyler Stuart, Garden of the Gods, El Paso County, Colorado, March 12 2020.) https://macaulaylibrary.org/asset/215013241 b) (Charles Hundertmark, Gross Reservoir, Boulder County, Colorado, July 6 2020.) https://macaulaylibrary.org/asset/248095481

That latter character, however, can be very effective in discerning who's out there lurking out of view, and at the very least will help you narrow down the possibilities if not tell you outright who is doing the singing. Knowing how to read spectrograms will definitely help you hear more of what the birds are saying by drawing attention to features that may not have been obvious the first few times you heard them.

Figure 13. The author in south Thailand, Feb 19 2016.

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Big Green Big Year:
Birding the Front Range by Bike

By Thomas Heinrich

On the morning of May 8, 2020, I was high above Boulder's iconic Chautauqua Park. I'd been hiking up Gregory Canyon for more than an hour in search of Dusky Grouse when I heard my phone ping. I made the mistake of checking it...sure enough, it was a text reporting that a Black-and-white Warbler had been found along Boulder Creek at CU East Campus. "Great, what do I do now?" my inner pessimist mused. "Do I give up on the grouse, turn around and make a dash for a bird that will likely disappear before I arrive? Or do I continue hiking, dip on the grouse in all likelihood and then rush down to CU and miss the warbler by hours, not just minutes?" Both species would not only be new green year birds, but new for my green life list.

ONE OF THE DILEMMAS OF BIRDING: YOU CAN'T BE IN TWO PLACES AT ONCE. IN GREEN BIRDING IT'S EVEN HARDER.

Since I was already somewhat committed in effort, and was hoping to catch the grouse when vocal, I headed on up, now with a heightened sense of determination and purpose, and more than a pinch of urgency. The backside of Green Mountain that morning was especially beautiful. The cool, humid air fragrant with scents of pine, soil and damp leaves with patches of snow still surviving amongst the pines, was its own reward, grouse or no grouse. Twenty minutes later, still no grouse, but another ping. This time the text read, "Baltimore Oriole in Lyons, come on over with your mask." Holy $#%!, Another potential green life bird. Sense of urgency now turned up to 11!

Well, not five minutes later, a rush of motion downslope just yards off the trail—a male Dusky Grouse. I whipped off my pack, frantically grabbed the camera and clicked off about a dozen shots before it mercifully strutted out of sight, leaving me free to chase. I packed up and, joining the trail runners, made a dash back to the trailhead, albeit with a 30 lb. pack on my back. A ten-minute bike ride later, I ran into Stephen Chang who had just been on the Black-and-white Warbler. As we headed over to it, an Ash-throated Flycatcher flitted up into a tree across the creek—a third new green life bird for the day!

The next morning at 5:30, I left my home in north Boulder and set out on my bike for Lyons, hopeful that the Baltimore Oriole would still be there. My favorite route to Lyons traverses Heil Valley Ranch, rising nearly 1,000 feet on the seriously bumpy Wapiti trail, then dropping into town on the relatively smooth flowy Picture Rock trail, a distance of 7.5 miles. Birding along the way delayed my arrival in Lyons until 8:30, but within an hour I saw the Baltimore Oriole, along with other vividly colorful passerines including Black-headed and Rose-breasted Grosbeaks, Lazuli Bunting and Western Tanager. My route that morning continued on to Pella Crossing in Hygiene where I found Bobolinks in the fields to the southeast. Next, I dropped by Lagerman Reservoir where I had my first Cliff Swallows and Red-necked Phalaropes of the year. A quick stop at Sombrero Marsh brought nice views of a Common Yellowthroat. And then to Boulder Creek to find a Yellow-throated Vireo reported that afternoon. In two days, after 64 miles of biking and four miles hiking, I'd added 18 new green species for the year, four of them new green life birds.

A BIRDER'S RESPONSE TO THE PANDEMIC

What turned out to be a Big Green Big Year (BGBY, pronounced big bee) didn't start out that way. In fact, for me 2020 began as a sort of break from birding, or at least effortful green birding. I had just finished a year of relatively intense effort with the goal of surpassing a personal best of 182 green birds in a year, ending with 209 species. So, for the first three months of 2020, birding consisted of watching my feeders and hiking from my house up Mt. Sanitas.

And then everything changed. With the onset of COVID-19 and the ensuing quarantine, the trails on Mt. Sanitas became clogged with hikers and no longer felt safe or tranquil. Green birding by bike seemed like a good alternative. On April 4, having seen 47 species for the year, and not having biked for over three months, I set out to ride up to Ward, one of my absolute favorite rides. The scenery is stunning and the grade is relatively low except for the steep last mile into Ward. And of course, the return trip downhill is a blast! I arrived in Ward around 10:15 am, and spent some time catching up with Pete, the town marshal, watching Pine Grosbeaks at his

feeders. Then I continued up through town to the still snow-encrusted Brainard Lake Road with its raucous Clark's Nutcrackers calling overhead. In the parking lot at Brainard Gate, the resident Canada Jays were poking around for crumbs. I decided to return through Gold Hill, hoping for Evening Grosbeaks, but happy to find many Red Crossbills along the way.

Feeling exhilarated by my first ride and lured by an eBird report of a Williamson's Sapsucker and possible Evening Grosbeaks, I returned to high elevations on April 11, riding to Caribou via Ward and the Peak to Peak Highway. It was a spectacular day, the kind that makes one want to extend one's arms, soak in the radiance of the sun and embrace the sublime surroundings. The male Williamson's Sapsucker was busy pecking at the ponderosas in the open forest between Mud Lake and Caribou Ranch, but the grosbeaks were nowhere to be seen. My return trip took me through Nederland, east on Magnolia Road, along the 4wd road to Gross Reservoir, up and over Flagstaff Mountain and home through Boulder. The full trip was 62 miles including 7,000 feet of elevation gain. I woke up the next morning totally incapacitated. I was panicked, convinced that my ride had given me a hernia, and that I was done for the season! Fortunately, that wasn't the case.

GOING GREEN

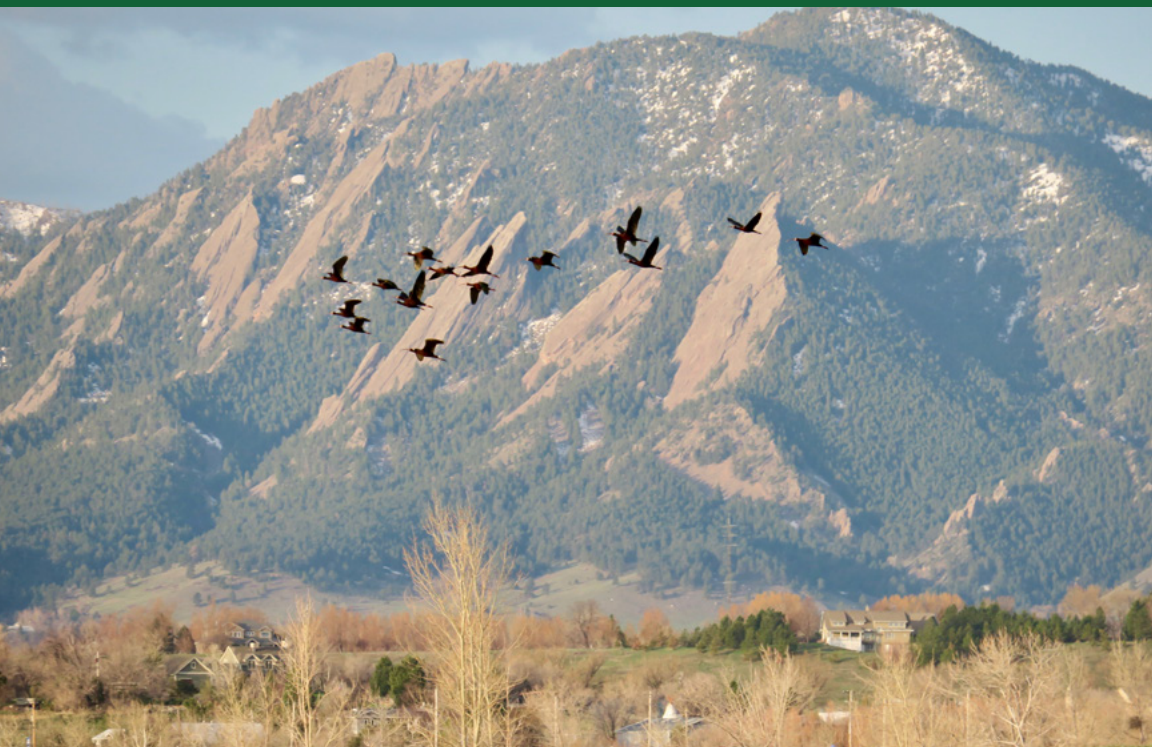
I first learned about green birding by reading posts on BirdChat in 2007. At the time, I had no idea just how much it would influence my future birding experience. The British Canadian wildlife biologist and photographer Richard Gregson was coordinating a BGBY challenge taken up by birders across North America. In his words:

"This is a low-key, friendly bit of birding rivalry that is not especially original, but which seems appropriate in these days of carbon emissions and climate change. If you have ever felt even a tiny bit guilty about driving or flying to see a good bird (or several) why not join us in a year of carbon-neutral birding?

It is simply a Big Year in which you only count those species within walking or cycling distance of your home or principal place of work. As simple as that, no dashing off to the far corners of the planet burning fossil fuels as you go."

Burrowing Owl on Gunbarrel Hill, Boulder Cty., with Long's Peak in the distance. Photo by Thomas Heinrich.

What we do for Ptarmigan! The road to Brainard Lake, Boulder Cty. Photo by Thomas Heinrich.



White-faced Ibis take flight from Boulder Reservoir, Boulder Cty. Photo by Thomas Heinrich.

It seemed like a great way to combine my interests of hiking, mountain biking and birding with my concern for the environment. Well, having just become a father, my first green year in 2008 didn't exactly qualify as "big." My grand total: 96 species. (That same year Christian Nunes found 236 species biking over 2,000 miles.) Even so, I was hooked. Each year since, I've kept a green year list (averaging 153 species). I've modified my gear, replacing a heavy trailer with a backpack, moving to a full suspension bike from a hardtail, and further shaving off weight with a compact scope, camera and tripod. And as I've become more invested in green birding, I've become less interested in birding by car. So much so that in 2020 I went birding just twice by car.

BEWARE THE NEMESIS

Nemesis birds and green birding are not a good combination. The disappointment and frustration of not seeing a bird is amplified by the physical toll of getting to the location. I have deemed several species "nemesis birds" over the years, but none so far has rivaled the White-tailed Ptarmigan (WTPT). I've been fortunate to have seen ptarmigan while hiking Mt. Audubon and on Guanella Pass, and on probably at least a half dozen 14ers. But always birding by car.

My first green attempt for White-tailed Ptarmigan was in September 2013. I biked up to Pawnee Campground at Brainard Lake towing a two-seater Chariot trailer loaded with camping gear, food and optics arriving at the entrance gate just in time to take shelter from a wild thunderstorm, an ominous foreshadowing of the flooding that would hit Boulder County just days later. The hike up Mt. Audubon produced no ptarmigan. Two subsequent attempts I did in the winter, biking and then snowshoeing in and searching around Lefthand Park Reservoir just south of Brainard Lake. The next time I biked to the Mitchell Lake trailhead and hiked up towards Mt. Audubon, spending several hours scanning the alpine tundra without success. In September 2019, I biked up again hauling camping gearing, this time in a full-sized backpack, only to bail out after one night. Each round trip is close to 50 miles on the bike with 6,000 feet of elevation gain, plus up to eight miles of hiking with an additional 2,600-foot gain.

So, when I headed up Lefthand Canyon on July 6, 2020, it was with a bit of a "WTPT or bust" feel.

Sunrise over Mt. Sanitas, Boulder Cty. Photo by Thomas Heinrich.

I stashed my bike in the pines just below tree line on the eastern shoulder of Mt. Niwot and began to hike west along the ridge. American Pipits were abundant that day, but bird numbers otherwise were low, with just a few nutcrackers, crows and ravens along with a few other common mountain species. I had anticipated hiking the ridge all the way to the eastern flank of Navajo Peak, but after ascending the fourth or fifth "false summit" along Niwot Ridge, doubt began to creep in. My legs were spongy and weak from the ride and from miles of traversing and bushwhacking. Storm clouds were forming and moving in with ferocious gusts of wind from the west, and my inner dialogue was turning negative. I took a break, had a bite to eat, and contemplated my options. Not ready to accept defeat just yet, I decided to risk the weather and continue on. About halfway up the last incline, in an expansive lush alpine tundra meadow, the rock that I was about ten feet from stepping on suddenly moved out of the way. I couldn't believe it. Out of joy and sheer exhaustion, I dropped down and lay on my stomach for the next half hour watching this single White-tailed Ptarmigan feed, have a dust bath, and then slowly preen, all within about 20 feet before moving on its way.

Evening Grosbeak was another pesky nemesis bird. In 2020 alone, I made at least five trips specifically to chase the species, taking me to the northern, western and eastern edges of Boulder County. There was even a sighting from within a few blocks of my home that I missed as well. A report from Walden Ponds lured me out during a narrow window of time on December 10. Unfortunately, a little too narrow to actually find them. A few days later, in miserable weather on one of the coldest days of the year, I returned for another try. After looking for Winter Wren along Boulder Creek, I passed another birder entering Walden Ponds from the north. Just then, a few birds flew into the top of a cottonwood, their grosbeak-like silhouettes immediately catching my attention. I don't think the other birder quite understood the intensity of my excitement when I pointed out the Evening Grosbeaks to her. The birds were feeding on nearby Russian olives, and as I watched, appreciating how the vibrant colors of these beautiful birds contrasted with the fresh snowfall and gray skies, the flock steadily grew to 63. It was almost as if all the birds I'd missed over the years had gathered in celebration of my finally finding them!

Evening Grosbeak feeding on Russian Olives at Walden Ponds, Boulder Cty. Photo by Thomas Heinrich.

A TURNING POINT

In retrospect, July was kind of a turning point. In three months of fairly intense birding, I'd seen over 200 species, and with the White-tailed Ptarmigan, I'd matched my personal best for a green year list. Although the first hint of potential for a true big year attempt emerged in July, it wasn't until much later that I even thought of it that way. In fact, it was when a birder I kept running into while chasing rare birds blurted out "So, are you doing a big year?" that I realized, well maybe I am. Rather than setting an ambitious final goal, I found motivation and joy in achieving smaller incremental goals. The result was a gradual transition to a more traditional big year strategy that included more planning, targeting species that I'd missed (or would soon be departing), and keeping closer track of eBird reports.

In August I added 15 species and 250 miles of biking that included a return to Brainard Lake, this time to hike Mt. Audubon in search of Brown-capped Rosy Finch and American Three-toed Woodpecker. Some of the month's highlights were a Northern Pygmy-Owl being harassed by two Broad-tailed Hummingbirds on the Green Mt. West Ridge trail, a Stilt Sandpiper at Lagerman Reservoir and a Black-throated Sparrow found by Peter Burke at Boulder Reservoir. A Bank Swallow at Lagerman on August 23 was species #220. September brought some nice shorebirds and other migrants to Boulder County, including Pectoral Sandpiper, Sabine's Gull, a rare Field Sparrow (a new green life bird) and Sanderling (#230).

By the end of September, the temptation of an astoundingly cooperative Nelson's Sparrow at Cherry Creek State Park became irresistible. I had to give it a try despite the daunting route that would take me 116 miles round trip with over 3,500 feet of elevation gain. With no guarantee that I'd see the bird it was a high stakes gamble, but at the very least, it would be an epic adventure, my first green birding that far south. So, at 4:30 a.m. on October 2, I set out in the darkness. My route linked the Highway 36, Sand Creek, South Platte and Cherry Creek bike paths. At 8:45 I arrived at the beach at Pelican Point—the moment of truth. In bare feet, I waded across the mucky inlet and waited. A bit of quivering in the grasses and weeds, and out popped the Nelson's Sparrow (#239)! Huge relief! It was still

feeding along the willows when my brother arrived by bike 30 minutes later. This would turn out to be the last day this bird was reported on eBird. We birded together for a few hours then rode 20 miles to his house in Littleton, where I spent the night.

October turned out to be one of the most exciting months of the year. With fall migration in high gear, I added 23 new green species, four of them green life birds, and pedaled 521 miles on 17 days of birding. Sparrows continued to be the theme with Sagebrush (#240), White-throated, Harris's (#250) and American Tree. Highlights were personal finds of Red Phalarope and a totally unexpected Short-eared Owl, plus a Northern Shrike, which technically found me by visiting my yard and perching atop one of my feeders! Other new sightings included Black-throated Green Warbler, Nashville Warbler and a beautiful Philadelphia Vireo found by Ernest Crvich. I added Snow, Greater White-fronted and Cackling Geese, as well as Dunlin, Purple Finch, Black Scoter, Pacific Loon and Tundra Swan, bringing my year list up to 261.

In contrast, November was tough. I biked 460 miles to find just nine species, equating to 51 miles per species. The law of diminishing returns (or migrants?) comes to mind. But those were nine nice birds! On November 2, on my way to dipping on the reported Greater Scaup way out in Frederick, I dropped by Elena Klaver's house in Niwot to see her resident Yellow-bellied Sapsucker. Next, I found a Red-necked Grebe at Foothills Reservoir and a Ross's Goose at goose mega-magnet Dodd Reservoir. On November 12, I biked out to Union Reservoir in Longmont to find a very distant male Barrow's Goldeneye bobbing up and down among hundreds of Common Goldeneyes in bitterly cold winds. A big surprise was a previously unreported Black-legged Kittiwake—a nice reward for enduring the brutal wind-chill. Closer to home were Eastern Bluebirds at CU South Campus and a quick look at a Swamp Sparrow at Walden Ponds.

And then there was Jean Folsom's report of a Red-bellied Woodpecker at her feeders. After reading the eBird reports on 11/26, Thanksgiving Day!, it took every ounce of self-restraint not to bail out with the turkey literally in the oven and jump on the bike to sneak in a "quick" two-hour ride to Superior. I was there, however, at sunrise the next morning, very appreciative of Jean's gracious hospitality and enjoying

2020 BGBY BY THE NUMBERS

Distance biked: 3,316 mi.

Distance hiked: 235 mi.

Total elevation gain: over 115,000 ft.

Days birding: 171 days

Species total: 281 (270 in Boulder County)

Miles/Species: 11.9

First Bird: Dark-eyed Junco, 01/02/2020

Last Bird: White-winged Crossbill, 12/31/2020

the buzz with friends, acquaintances and fellow birders. On November 28, I headed out at first light to McIntosh Lake, hoping to find the Mew Gull seen the day before. After spending nearly an hour repeatedly scanning through a mixed flock of resting gulls on the north shore, the Mew Gull finally popped its head up and revealed itself—#270.

JUST ONE MORE

This was when the intensity really ramped up. The more birds I saw, the more compelled I felt to increase my efforts. All of the elements of a big year attempt came into sharper focus: the determination, effort, strategy to maximize success, urgency and even a hint of desperation. I realized I would need to expand my reach and travel farther to find new species. And I could feel the window of opportunity closing.

December started off with a Greater Scaup just five miles from home. Over the next ten days I scoured the local haunts for Winter Wren, finding a very cool "Sooty" Fox Sparrow along the way. On December 12 I finally caught up with the wren along Boulder Creek. It took two trips to Union Reservoir totaling 90 miles to at last glimpse the pair of wintering Trumpeter Swans. The very next day, with a twinge of painful irony, I read a report of two Trumpeter and 11 Tundra Swans at Valmont Reservoir, just seven miles from home. They were still there when I stopped by December 18 to take advantage of the great opportunity for side-by-side comparison of the two species. A nice surprise was an adult Lesser Black-blacked Gull (#275) accompanying the Ring-billeds that arrived at dusk to roost on the ice. I enjoyed participating in the Boulder CBC on December 20 and was rewarded with a Yellow-bellied Sapsucker, another on the list of birds you work so hard to find, only to have subsequently show up in your neighborhood.

I had been planning to try for Rosy-Finches in either Ward or Allenspark, but I knew my chances would be much better in Golden. After a failed attempt December 23 due to two flat tires, I biked down to North Table Mountain on Christmas Eve day. Just as I arrived, a few rosies landed in an aspen tree. I couldn't believe my luck! I glanced away to grab my camera, and they were gone. Now I could believe my luck, kicking myself for not having had the camera ready. But patience paid off as the full flock of 100+ birds, including all three species of Rosy-Finch, came into the feeders about an hour later, bringing my list to 277.

That night my wife discovered a water leak in our hot water line, which essentially put birding on hold for several days while I kept an eye on it and tried to find an available plumber. Feeling alternately stir-crazy and resigned, I eventually decided that I'd feel better about finishing the year with one last push. Thinking aloud, I asked myself, "What can I do to get to 280?" Or as my wife put it, "What can I do to get out of the house?"

> Option #1: Take two or three rides out to eastern Boulder County hoping for a Rough-legged Hawk, Brant or Snowy Owl to turn up. Success seemed unlikely.
>
> Option #2: Ride down to Golden again and try for Iceland Gull and the long-staying Varied Thrush, then to South Platte Reservoir and Chatfield State Park for Long-tailed Duck and Rusty Blackbird. Stay overnight at my brother's and return the next day, retracing my route should I miss any species on the way south.

The December 28 report of a White-winged Crossbill in Lakewood just 8 miles from Golden made the decision easy. I left Boulder an hour before sunrise December 30 arriving at Tucker Lake two hours later. Although completely frozen, the lake hosted a flock of roosting gulls on the ice. Just as I picked out a possible Iceland Gull, a Bald Eagle flew over dispersing the flock. Frustrated, I pedaled over to Blunn Reservoir and was fortunate to catch up with the flock where I found the Iceland Gull and three Lesser Black-backed Gulls as well. On to Clear Creek in downtown Golden, where I spent two hours meticulously but unsuccessfully searching the banks for the Varied Thrush. Feeling the pressure of time, I headed over to Holbrook Park. Bird activity in the neighborhood was minimal and the crossbill was nowhere to be seen for the 90 minutes I was there. I underestimated the distance to South Platte Reservoir and ended up racing against the setting sun. I arrived near dusk but was very lucky to encounter a kind birder who helped me find the Long-tailed Duck in the fading light.

On the morning of New Year's Eve my brother and I quickly relocated the Long-tailed Duck then walked over to the beaver dam below Chatfield where we had great views of the Rusty Blackbirds and a Swamp Sparrow. I then biked north along the South Platte River, stopping at Overland Park to see the stunning male Barrow's Goldeneye before continuing on to Holbrook Park for a last try at the White-Winged Crossbill.

There was absolutely no one there when I arrived. Not a good sign. I was actually prepared to wait until dark, but about an hour later a couple of tantalizingly quick glimpses in the treetops created a buzz in the small crowd that had gathered in the neighborhood. Ten minutes went by, no crossbill. Twenty. And then at last it flitted down into the tree that held the feeders. It spent maybe five minutes in the tree taking turns at the feeder accompanied by oohs and aahs, shutters clicking and celebratory words offering congratulations on a life bird. For me, the White-winged Crossbill was #281, my last green bird of 2020. I knew that was it, there would be no last-minute stop in Golden for the Varied Thrush. I headed out, propelled the 32 miles home by a radiant feeling of joy from finishing out my 2020 Big Green Big Year with a bang!

NOW WHAT?

For the next week or so I felt a little like Wily E Coyote, having chased the Roadrunner right off a cliff, mid-air, legs spinning, thinking, "What? That's it?!?"

So, would I do it again? Knowing just how much time and effort it took makes another attempt seem pretty daunting. But it was an awesome experience. I loved the adventure, seeing all the birds, being out in nature, but most of all connecting with friends, acquaintances and meeting new people, birders and non-birders alike. I will definitely continue to keep a green list each year. At the moment, I'm interested in branching out with green birding, doing more extended trips around the state, perhaps further, focused more on searching for green life birds than on big year pursuits.

END NOTE

What makes green birding so appealing? (It's not just the endorphins...but they add to it!)

For me, green birding enhances every part of the birding experience. Not having the shell of a car around me, I feel much more connected with nature (cold, wet and windy weather included!). I'm able to see, hear and stop for birds I would otherwise be unaware of. There's an added sense of adventure and being able to get further out on trails contributes to this. The physical effort and commitment required intensifies—to adapt ABC Sports' slogan—the thrill of victory and the agony of dipping. And then there are, of course, the environmental benefits. I feel fortunate and very grateful to be able to bird this way, both in terms of location and physical health. Finally, and this might sound hokey, but at times biking feels just a little like flying, especially down the steep canyons along the front range!

RULES OF THE ROAD

Green birding rules are widely known, but for clarity I'll list my personal green birding rules:

- All transportation self-propelled: foot, bike, boat, etc.
- Start and end at one set location, either home, or an alternate site arrived at by green means.
- Self-supported: I carry all necessary gear, optics, etc. with me, though I do occasionally stop at a store to buy more food or drinks.
- Overnight stays at homes and hotels on extended trips allowed.

One of the big challenges of green birding in the winter is managing body temperature. It's easy to work up a sweat getting to a location, then get chilled from evaporation shortly after arrival, especially in stakeout situations. The solution is to wear the lightest layers possible for the ride to avoid overheating, then add layers soon after arrival, peeling off sweaty layers if necessary. I bring a thick down jacket in a compression sack for really cold days, and also a thermos of hot tea. If all else fails, get back on the bike and ride until warm again!

A Breeding Record of Gray-headed x Pink-sided Dark-eyed Junco in Moffat County, Colorado

BY CHRISTIAN NUNES

In Alden H. Miller's (1941) seminal monograph Speciation in the *Avian Genus Junco*, he describes how, "among birds, the genus *Junco* is especially rich in instances of natural interbreeding of well-marked forms, and it shows great variety in degree and kind of differentiation." Miller recognizes that the study of relationships between forms in intergrade zones can provide scientists with important insights on taxonomy and the evolution of species. There are currently five recognized species of junco: Dark-eyed (*Junco hyemalis*), Yellow-eyed (*J. phaeonotus*), Baird's (*J. bairdi*), Volcano (*J. vulcani*), and Guadalupe (*J. insularis*). Of these, the Dark-eyed Junco shows the most pronounced phenotypic variation, with 14 currently recognized subspecies (Nolan et al. 2020). The diversity of phenotypes among the Dark-eyed Junco is compounded by the presence of intergrades (hybrids between subspecies). I document the occurrence of an intergrade Gray-headed (*J. h. caniceps*) x Pink-sided (*J. h. mearnsi*) Junco breeding within Colorado.

The "Gray-headed" Dark-eyed Junco is the common breeding subspecies throughout Colorado. It is characterized by a brick-red back, gray wing covert and tertial edges, and uniformly gray sides and head that lacks a "hooded" effect (Fig. 1). The "Pink-sided" Dark-eyed Junco breeds throughout the central Rocky Mountains of Wyoming, Montana, and Idaho. This subspecies is characterized by a brown back, brown wing covert and tertial edges, pinkish sides, and a light gray hood that contrasts with the back, sides, and white belly (Fig. 2). Intergrades can possess any combination of these features, but the most noticeable mixed characters are usually a red back on an otherwise Pink-sided like individual (Nunes 2014; Olsen 2015), or pink sides on an otherwise Gray-headed like individual (Mlodinow 2017, Sheeter 2014). Care must be made when prescribing definitive parentage to hatch-year juncos, especially away from the breeding grounds. This age group commonly has more extensive

Figure 1. An adult Gray-headed Junco demonstrating the characteristic gray head with darker lores, a brick-red back, gray wing coverts and tertials, and gray flanks with little contrast between the gray head. Photographed in Lyons, Colorado (8 November 2018).

brown in their plumage, especially on the flanks, crown, nape, back, wing coverts and tertials (Miller 1941, Pyle 1997). Thus, a hatch-year Gray-headed Junco may have more brown in the plumage, leading to a dubious identification as an intergrade.

Figure 2: A Pink-sided Junco demonstrating the characteristic gray head with darker lores, a brown back, wing coverts and tertials washed with brown, and pinkish sides that contrast with the gray hood. Photographed at the Eldorado Mountain Open Space, Boulder County, CO (23 November 2008).

Intergrade zones exist wherever neighboring forms of Dark-eyed Junco come into contact during the breeding season (Miller 1941). In western North America, these areas are often limited to isolated mountain ranges situated partway between the core ranges of distinct forms. The Gray-headed Junco interbreeds with the Red-backed Junco (*J. h. dorsalis*) in NE Arizona and NW New Mexico

(Miller 1941, Nunes 2008), with the Oregon Junco (*J. h. thurberi*) in outlying ranges on the west side of the Great Basin (Miller 1941), potentially with the White-winged Junco (*J. h. aikeni*) in the Laramie Range of central Wyoming (Nunes 2014), and with the Pink-sided Junco (*J. h. mearnsi*) throughout the Wasatch and Uinta Mountains of NE Utah and in outlying ranges in southern Wyoming (Miller 1941, Nunes 2014). The author visited Middle Mountain and Diamond Peak in Moffatt County, Colorado, on 14-15 July 2018 to determine if Gray-headed x Pink-sided Junco intergrades were present during the breeding season.

Figure 3. Diamond Peak (9,640') as seen from Middle Mountain (9,559'). Juncos breed in the pine and aspen forests that persist on these "sky islands" amidst sagebrush and other treeless habitats.

The north slopes of Middle Mountain (2,914 m) and Diamond Peak (2,938 m) support junco breeding habitat (i.e., lodgepole pine, mixed-conifer, and aspen forests), while the surrounding landscape is dominated by sagebrush flats where they do not occur in the breeding season (Fig. 3). These small peaks are an extension of the Uintah Mountains, which are only 24 km to the SW across the Green River. The next closest area of suitable junco breeding habitat is found 129 km to the ESE in the Elkhead Mountains and separated from Middle Mountain and Diamond Peak by the Little Snake River basin. Most of the area around the peaks is owned and managed by the U.S. Bureau of Land Management.

Figure 4. A Gray-headed Junco from Diamond Peak, Moffat County, Colorado (15 July 2018). Note the uniformly gray plumage except for the brick-red back.

The author explored Middle Mountain from 1700-2000 hrs. on 14 July 2018. One family group of 6 Dark-eyed Juncos was observed with a mixed-species flock at 40°58'51.6"N 108°55'41.7"W. Both adults possessed Gray-headed traits, except for the presence of pale gray flanks that contrasted with darker gray hoods. All four juveniles sported a brown suffusion on the sides of the breast near the bend in the wing. However, this can't be taken as evidence of Pink-sided influenced because of the pitfalls of juvenile plumage pigmentation.

Figure 5. A presumptive backcross with Gray-headed x Pink-sided ancestry. The pale gray flanks with a hint of brown contrast with the darker hood, which may be a sign of past intergradation. Diamond Peak, Moffat County, Colorado (15 July 2018).

From 0600-1400 hrs. on 15 July 2018 I observed 12 Dark-eyed Juncos. Most (n=6) were typical Gray-headed Juncos (Fig. 4). Two adults had paler flanks with a hint of brown that contrasted with their darker hoods (Fig. 5). These are likely backcrosses between a first generation (F1) Gray-headed x Pink-sided with a Gray-headed. A likely F1 Gray-headed x Pink-sided Junco (Fig. 6 & 7) was found feeding a recent fledgling (Fig. 8) at 40°57'12.2"N 108°53'40.2"W.

Figure 6. An intergrade Gray-headed x Pink-sided Junco from Diamond Peak, Moffat County, Colorado (15 July 2018) demonstrating the brick-red back of a Gray-headed and the pink flanks of a Pink-sided. Here the bird is in flat light, making it appear darker gray than in Figure 7.

This singing male had the brick red back and gray-edged wing coverts like a Gray-headed, but the flanks were a mixture of rich pinkish hue like a Pink-sided. The head color appears darker than in life in Figure 6 due to the light conditions.

Figure 7. The same individual as Figure 6. An intergrade Gray-headed x Pink-sided Junco from Diamond Peak, Moffat County, Colorado (15 July 2018) demonstrating the brick-red back of a Gray-headed and the pink flanks of a Pink-sided.

Dark-eyed Juncos with mixed traits between two recognized subspecies are breeding in Colorado. These observations extend the known geographic area covered by this intergrade zone. This zone now incorporates much of the Unita and Wasatch Ranges of UT, the Laramie Range of east central WY, the northern reaches of the Medicine Bow Mountains in WY (Miller 1941), and even extends to the South Hills of Cassia County, Idaho (Curd 2017). This extensive intergradation supports the interpretation that

Figure 8. The intergrade Gray-headed x Pink-sided Junco in Figures 6 & 7 was observed feeding this recently fledged chick, demonstrating that birds of mixed parentage are capable of producing viable young and are doing so on Diamond Peak, Moffat County, Colorado (15 July 2018).

these two formerly separate phenotypic species (Pink-sided was ascribed as a sub-species of the species-level "Oregon Junco" and Gray-headed as its own species by Miller (1941) and other earlier taxonomists) are now considered to be a single biological species. Phylogenetic studies suggest that the various races of Dark-eyed Junco have radiated and evolved into their current forms very recently, starting in the Pleistocene (Milá et al. 2007). It is interesting to ponder the forces that are maintaining the two distinct phenotypes throughout the core of their ranges, while allowing for such extensive intergradation across 800 km of the intermountain west. Are natural or sexual selective forces selecting for certain characteristics like a brick-red back in the southern Rockies, but not the central? Are individuals from either subspecies dispersing into the intergrade zone at an even annual rate? Or perhaps there is the occasional influx of dispersing individuals entering the intergrade zone as a result of extensive habitat alterations (e.g., wildfire, beetle-killed forest, etc.) within the core range? Future exploration of other junco breeding habitat in NW Colorado will further quantify the frequency of such intergrades, which in turn may help uncover the evolutionary mechanisms at play.

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Very Large Brown Shorebirds

BY TONY LEUKERING

All Photographs by Author

The previous installment in this essay series also treated brown birds. Whereas that essay, on brown-plumaged ducks, dealt with identification of the subject species in most situations, this essay treats a single situation of identification difficulty. Most of us have had the experience: Waiting for that lone, sleeping, very large, brown shorebird (Figs. 1-2) to pick its head up in order to make the correct choice between Long-billed Curlew and Marbled Godwit. While I discuss identification features that do not depend on bill shape to distinguish between these two species with very similar plumages, I also provide a caveat. Even armed with the points I make in this essay, you will probably still have to wait for that shorebird to lift its head if it is on the other side of the lake. Or in bad shimmer. Or badly backlit. Or all three. In other words, the bird needs to be reasonably close and in reasonably good light.

LEG COLOR

I have published often on the usefulness of soft-parts (eyes, bill, legs) coloration in bird identification, as it is just so, well, useful (Leukering 2015a, 2015b, 2015c, 2017). The dichotomy of Long-billed Curlew and Marbled Godwit provide yet another example of the usefulness of soft-parts coloration. To wit, curlews – all species (even that short-billed curlew, Upland Sandpiper) – have bluish-gray legs (Figs. 1, 3), while godwits – all species – have black legs (Fig. 4).

PRIMARY PROJECTION

As for soft-parts coloration, primary projection is an identification feature that is underutilized and overlooked by many birders. For some, perhaps many, birders, primary projection may be something that seems just too technical, too... esoteric to use, perhaps even to think about. Birding is a hobby than can accommodate with ease a wide range of interests in birds. However, if a birder truly wants to elevate one's bird-identification capability, then ignoring primary projection (and other seeming esoteric methods) is a good way to shoot oneself in the foot. The more one knows about individual species, the more likely one will be able to correctly identify such on brief and partially obscured views. A sleeping very large brown shorebird provides just such a situation.

Quickly, primary projection is the amount of the longest primary (primaries are the long flight feathers on the "hand" of a bird) that extends beyond the tip of the longest tertial (the set of 3-4 large feathers that cover the flight feathers on the folded wing; see pages xx and xxi in Sibley [2014]). Since most bird species have black or blackish or very dark primaries and since most bird species have tertials that are not the same color as their primaries, given reasonable views, picking out the dark primary tips from the clutter of feathers at the bird's back end is often straightforward. Straightforward, that is, unless the bird has particularly short primaries and/or particularly long tertials, in which situations the tertials completely (or virtually so) hide the primaries. This is the case in our two-shorebird dichotomy. While Marbled Godwits have quite short primary projection (Figs. 2, 4), they have more primary tip peeking out from below the tertials than the typical lack of primary projection in Long-billed Curlews (Figs. 1, 3).

There is a caveat when dealing with primary projection, as this is biology and there is always a caveat somewhere. To use primary projection accurately, both the longest tertial and the longest primary must be present and full grown. One's identification can be thrown off kilter if either is not true. However, this will usually not be a problem in Colorado, as most molting in both species takes place on winter grounds (Pyle 2008), and neither species winters in the state.

OTHER USEFUL OR POSSIBLY USEFUL FEATURES

Although variable, particularly in Long-billed Curlew, the gross pattern of black on the scapulars (the large, showy feathers that usually cover much of the wing when folded) differs in the two species. On Long-billed Curlew, most scapulars on most individuals show a strong vertical aspect to the black on individual feathers, particularly the upper scapulars

Figure 1. This sleeping shorebird's obvious nearly complete white eye ring on a very plain face make a strong case for the bird being a Long-billed Curlew, as opposed to a Marbled Godwit. The grayish legs put the icing on the identification cake. This bird's legs are duller, less blue, than those of most. Additionally, this bird shows no primary projection – that is, the tips of the longest primaries do not extend beyond the longest tertial, resulting in the most-distal portion of the wing being the pale tip to the longest tertial rather than the dark tips to the bird's primaries of one wing that are just visible beneath the longest tertial. The upper scapulars have obvious black shaft streaks that run down the feather; they, rather than the black bars, dominate the black aspects of those feathers. Puerto Peñasco, Sonora, Mexico; 21 February 2006.

Figure 2. This sleeping shorebird's legs are mostly hidden within the water column, with only the feathered parts being visible, thus leg color is not discernible. Despite the unavailability of leg color to assist in this bird's identification, many other features allow certainty that the depicted bird is a Marbled Godwit. Although strong for a Marbled Godwit, the bird's eye arcs are rather weak compared to those of Long-billed Curlew; the strong dark loral line provides another clue. However, the strongest clue is the domination of the black portions of the scapulars by the bars, which are so wide and obvious that they relegate the black shaft streaks to virtual obscurity. Importantly, note that this individual shows no primary projection. This photo was taken in mid-winter, at which time the bird may well not have completed its prebasic molt, its outermost primaries not, yet, having achieved full growth, thus providing illustration of the importance of the caveat in this essay's text. As in virtually all bird-identification endeavors, using many lines of evidence to put a name on a bird is much more reliable than a single, flashy character. Fort DeSoto Park, Pinellas County, Florida; 9 January 2016.

Figure 3. The very long and obviously decurved bill on this bird is all that is needed to rule out Marbled Godwit. However, the bird's gray legs also do the job, while the upper (at least) scapulars having the black shaft streaks outcompete those feathers' black bars for attention provide more certainty to the identification. The obvious pale eye rings and the very weak darker loral line also help make the case. Despite that the tips of some of the primaries on one wing are visible here (due to how the wing is being held), note that the longest primary extends only very barely beyond the tip of the longest tertial. Puerto Peñasco, Sonora, Mexico; 21 February 2006.

Figure 4. The long, slightly upturned pink-and-black bill eliminates Long-billed Curlew from identification contention. Also helpful are the wide, black bars on the scapulars (and tertials on this individual) that completely dominate the black shaft streaks and would allow virtually certain identification even if the bill were hidden. Unlike the bird in Fig. 2, this Marbled Godwit shows obvious primary projection, with the length visible of those blackish feathers at the back end of the body being roughly equivalent to 1/5 to 1/4 the length of the visible portion of the longest tertial, and quite unlike the appearance presented by either Long-billed Curlew in Figs. 1 and 3. Fred Howard Park, Pinellas County, Florida; 7 October 2011.

(see, particularly, Fig. 1). This appearance is created by a more-or-less obvious black shaft streak running down each feather. On Marbled Godwit, the overall impression of the black is of wide bars crossing the feathers and usually dominating the colorscape on the upperparts (Figs. 2, 4). This difference results in overall difference in upperparts coloration, with Long-billed Curlew tending strongly to brown and Marbled Godwit tending strongly to black. As noted above, this feature seems particularly variable in Long-billed Curlew, with some or much of this variability possibly being due to differences in the appearance of juvenile and older scapulars. Certainly, juvenile plumage in many individual Long-billed Curlews tends strongly to black (such as https://tinyurl.com/LBCUjuv01).

If the area around an eye is visible on a sleeping, very large, brown shorebird, take note of the presence or absence of white or pale eye arcs or eye ring and dark loral line or bar. Long-billed Curlew typically exhibits pale, usually white, eye arcs or, even, nearly complete eye rings (Fig. 1), while Marbled Godwits typically lack them or, if they express them, they are very weak (Fig. 2). Conversely, Marbled Godwits typically exhibit a more-or-less obvious dark loral line or bar (Fig. 2) that Long-billed Curlews often lack on their plain faces (Fig. 1). Juvenile plumage in both species is somewhat contrary, with juvenile Long-billed Curlews typically sporting something of a dark loral line, while that of many juvenile Marbled Godwits is weak or nearly lacking (https://tinyurl.com/MAGOjuv01). To summarize, obvious white eye arcs is suggestive of Long-billed Curlew, while those eye arcs combined with the lack of an obvious dark loral line on a very large, brown shorebird virtually make the case for an identification of Long-billed Curlew. The lack of white eye arcs and the presence of a strong dark loral line or bar indicate an identification of Marbled Godwit, although that identification may be less certain than the immediately previous case.

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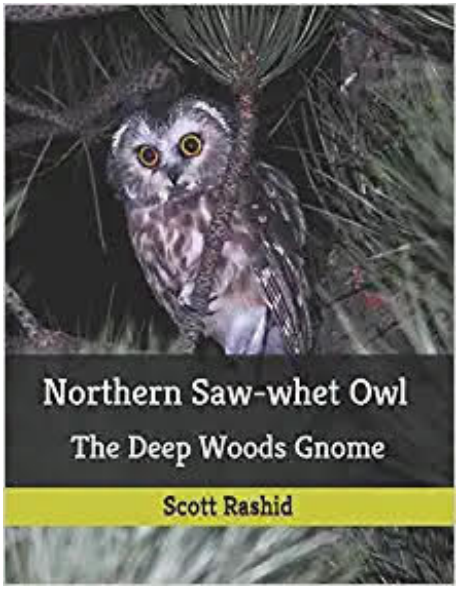

Northern Saw-whet Owl The Deep Woods Gnome

by Scott Rashid, Published by Amazon: $34.99

Scott Rashid is the director of the Colorado Avian Research and Rehabilitation Institute, which is based in Estes Park. He is well known to CFO members as the person who studies and bands owls in Rocky Mountain National Park (RMNP) and the surrounding area. He also bands Rosy-Finches and many other species at his house in winter. This is his sixth book and the fourth dealing with owls.

Chapter one details how the author first found a Saw-whet Owl nest in RMNP, why the bird was named and the breeding range across North America. Chapter two describes the anatomy of the owl and its many vocalizations. Chapter three has details of the courtship and nesting habits of the owls, including clutch size, and the use of man-made nesting boxes. Chapter four describes how the young go from eggs, through fledging and feather molts until they reach adult plumage. Chapter five describes the hunting techniques and diet of Saw-whet Owls, with many details on their pellets. Chapter six is mostly about catching and banding Saw-whet Owls in Estes Park and surrounding areas. Very interesting is that a bird banded in the fall of 2011 was recaptured in eastern Pennsylvania in November of 2016! A much larger number of owls are banded at several sites in the east of Canada and the USA, with the total being about 100,000 since 1914. Interestingly less than 2% of these banded birds have been recaptured. Scott suggests that not all Saw-whet Owls are migratory, with some males staying on their territory all year. Chapter seven contains several stories of how Scott has rehabilitated owls and a description of the flight cages used to house owls before they are released. It also informs the reader that a wild Saw-whet Owl was known to be at least 10 years old, and a bird kept in captivity was at least 16 years old.

I thought the book got better towards the end, with chapters six and seven containing the most interesting material. I also thought that a bit more editing of the text could have eliminated some of the repetition of phrases and facts. However, to me the highlight of the book is the nearly 100 photographs and sketches of Saw-whet Owls, which are very pleasing to the eye. Most of the excellent photographs and all of the lovely sketches are by the author. These photographs show why the author calls Saw-whet Owls, "the most adorable owl in North America," "cute" and "little gems" at various points in this book, and I have to agree with him.

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The 78th Report of the Colorado Bird Records Committee

BY RACHEL HOPPER

CHAIR, COLORADO BIRD RECORDS COMMITTEE

INTRODUCTION

This 78th report of the Colorado Bird Records Committee (hereafter CBRC or Committee) presents the results of deliberations of the CBRC involving one report submitted by three observers documenting one new addition to the Colorado state list. Per CBRC bylaws, all accepted records received a final 7-0 or 6-1 vote to accept. Therefore, with this publication, the Colorado list now stands at 514 species compared to 513 from the 77th Report (Peterson and Leukering 2020).

Committee members voting on this report were David Dowell (Longmont), Kathy Mihm Dunning (Denver), Mark Peterson (Colorado Springs), Bill Maynard (Colorado Springs), Steven Mlodinow (Longmont), Ric Olson (Castle Rock), and Jason St. Pierre (Durango).

COMMITTEE NEWS

The CBRC continues to recruit excellent members from the local birding community. We welcome new member Cathy Sheeter (Aurora) to the committee and Tony Leukering (Dodge City, KS) has agreed to serve another term. Ending their terms on the committee are Peter Gent (Boulder) and Dan Maynard (Denver). CFO and the CBRC sincerely thank them for their years of dedicated service.

COMMITTEE FUNCTIONS

The Committee solicits documentation of reports in Colorado for all species published in its Main Review List (https://coloradobirdrecords.org/ReviewList.aspx), species with no prior accepted record in Colorado and sightings of regularly occurring species that are considered out-of-range or out-of-season. Documentary materials should be submitted online at the CBRC website https://coloradobirdrecords.org/. Alternatively, one can request an electronic document from the Chair or Secretary (see this journal pg. 52 for contact information).

REPORT FORMAT

The records in this report are arranged taxonomically following the American Ornithological Society's (AOS) Checklist of North American Birds (AOS 1998) through the 61st Supplement (Chesser et al. 2020). We present the initials of the contributing observer(s), the official accession number and the vote tally in the first round and, if relevant, the second and third rounds (with the number of "accept" votes on the left side of the dash). The initial observer of the bird is underlined if known and is presented first. Additional contributors follow in alphabetical order by last name. Observers submitting a photograph or video capture are indicated with a dagger (†). In this report, county names are italicized.

ACCEPTED RECORD NEW TO THE STATE LIST

Ruddy Ground Dove - *Columbina talpacoti* (GS, CD†, PG†, RH†; 2020-022; 7-0). Found by George Steele at one of his backyard feeders in Norwood, San

Miguel, on 17 October 2020, this first state-record bird delighted many observers until 18 November 2020 (https://ebird.org/checklist/S76454278). Interestingly, on a single occasion, George Steele also found the bird about 1 mile east of his home on 15 November 2020 (https://ebird.org/checklist/S76315158). The Colorado bird was part of a large incursion by Ruddy Ground Doves into the ABA area which included 50+ birds in Arizona, multiple birds in Texas from five different locales, two birds in California, and a single bird in Nevada (Swarth 2020).

REPORTERS AND CITED OBSERVERS

The CBRC thanks the following individuals for submitting records of, or discovering and reporting, the new state species in Colorado discussed in this report: CD: Coen Dexter, RH: Rachel Hopper, PG: Peter Gent and GS; George Steele.

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Field Trip Committee Report

COMMITTEE MEMBERS: Sue Riffe (Chair), Nick Komar, Diana Beatty, Mark Peterson, Eric Hynes, Megan Miller, Jordan Spaulding, Allison Hilf

The CFO Field Trip Committee met twice during the first quarter of 2021. In January we discussed ideas for alternative programming due to COVID-19 restrictions and precautions. We developed a series of virtual Birding Skills Workshops that would be offered to CFO members monthly at no charge via Zoom. The proposal, which included a budget of $150 per workshop to be offered to instructors as an honorarium, was approved by the CFO board of directors. As always, CFO officers and board members are exempt from receiving CFO honoraria. During the first two quarters of 2021, CFO presented five workshops including: "Colorado Raptor Identification" with Eric Hynes, "Colorado Gull Identification" with Nick Komar, "eBird for Everyone" with Ted Floyd, "Audio-enhanced Birding" with Nathan Pieplow and "Colorado Flycatcher Identification" with David Tonnessen. Recordings of these workshops are available on CFO's YouTube channel: youtube.com/c/ColoradoFieldOrnithologists.

The second committee meeting was held in March. Our goal was to develop in-person field trips for fall 2021. With COVID-19 vaccinations on the rise, the committee believed that restrictions will be lifted by that time and CFO members will be eager to participate in live events. Based on input from committee members and a state initiative to develop birding ecotourism in Sterling, Colorado, we developed a unique program called the CFO Shorebird Workshop that was proposed to the board on March 27. Our proposal included an online Birding Skills Workshop on shorebirds hosted by Eric Hynes and a series of guided weekend field trips to Jackson, Prewitt and Jumbo Reservoirs with additional locations to be determined.

Group sizes would be limited to 12 or fewer, depending on field trip leader preference as well as current COVID-19 restrictions, and of course state masking and distancing requirements will be followed. The program would be open to non-CFO members, and participants would be encouraged to join CFO. Overall event costs would be limited to some advertising expenses (to reach non-birding public) and travel expenses for trip leaders who are not CFO board members. We believe that the number of new CFO memberships generated by this activity would likely cover these costs.

Genetic Divergence of White-breasted Nuthatches (*Sitta carolinensis*)

KENNETH ASKELSON

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How populations of organisms diverge to the point of reproductive isolation is a fundamental question in understanding speciation. Sometimes, after speciation occurs, species do not have obvious morphological differences. This can create challenges to identifying species. However, with genome sequencing we can isolate and analyze genetic sequences to tease apart otherwise cryptic species that have yet to be identified.

White-breasted Nuthatches (*Sitta carolinensis*) occur widely across North America and are frequent visitors to backyard feeders. Astute birders may know that White-breasted Nuthatches have four described song types that occur in specific geographic regions: the Pacific Coast, Northern Rocky Mountains, Southern Rocky Mountains and Eastern North America. To assess if these different song groups correspond to different species, I collected genetic samples from across the range from both museum and field-caught birds. With funds from the Colorado Field Ornithologists Grant, I then sequenced DNA from these samples.

I found that birds from the four different song groups do indeed correspond to highly diverged genetic groups. Interestingly, some of these groups come into very close contact with each other, yet do not show signs of interbreeding. This provides strong support that these populations may be different species.

I have also found that there are subtle differences in bill morphology between the groups and I am investigating whether the genetic differences may be related to differences in bill morphology. This could provide a better understanding of the genetic basis of bill morphology and how it relates to the divergence of these groups.

I hope that within the next year my collaborators and I will come to a conclusion regarding the number of species of White-breasted Nuthatches in Colorado and North America. We also plan to resolve how speciation occurred within this system and whether key regions in the genome played a critical role in divergence.

Are Yellow Warblers handling the heat? – Evaluating climate change effects on Yellow Warblers using telomeres as health indicators

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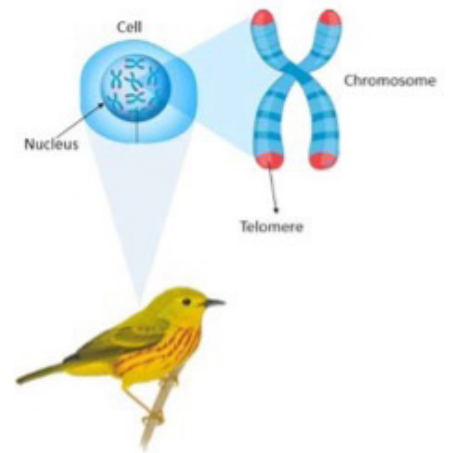
Climate change is causing rapid temperature changes, fluctuations in precipitation and extreme climatic events across the globe. The ability of bird populations to persist in the face of these changes depends on their capacity to shift their ranges as well as their ability to tolerate climate change through adaptation.

Previous work by the Bird Genoscape Project used genome-wide sequencing along with environmental



data to estimate the ability of populations to adapt to climate change by the year 2050. In Yellow Warblers, this metric, termed "genomic vulnerability," indicated that the most vulnerable populations largely reside in the Rocky Mountains, a region particularly affected by droughts over the past decade, which models predict will become more severe in the future. Research further showed that populations with high genomic vulnerability coincided with recent population declines, suggesting that these populations may have already experienced some negative impacts of climate change over the past 50 years.

However, a direct link between genomic vulnerability and population decline is lacking. One indicator that captures health and long-term stress of an individual is telomere length. Telomeres are sequences of DNA that cap and protect the chromosome from damage. Telomeres shorten with age, and this shortening can be accelerated by environmental stressors. The association between telomere length and survival in numerous species suggests that telomere length may be a good proxy for an individual's long-term health. I will use telomere length as a measure of environmental stress on an individual and examine whether it is associated with climate-related changes in Yellow Warblers breeding across Colorado.

I captured Yellow Warblers during the summer of 2020 at numerous sites across Colorado with varying degrees of genomic vulnerability. In addition to standard banding and measurement procedures, I collected a small blood sample from each individual. I have begun lab work to measure telomere length for each of the 40 samples. Although the analysis is still underway, preliminary results indicate that individuals in areas with high genomic vulnerability have shorter telomeres. If this pattern is confirmed, it would support the genomic vulnerability hypothesis. These results will provide insight into the potential detrimental effects of climate change on Yellow Warbler populations, and may allow us to identify populations that are most likely to be threatened by environmental change.

Habitat Selection of Flammulated Owls: Do moths matter?

SCOTT YANCO

PHD CANDIDATE, UNIVERSITY OF COLORADO DENVER

The Flammulated Owl (*Psiloscops flammeolus*) is a U.S. Forest Service (USFS) Sensitive Species and Partners in Flight "Yellow Watchlist" species. Narrow habitat preferences drive the species' conservation status. Individual owls preferentially select trees that are older and with larger live crown volumes when choosing foraging and roosting locations, and they defend territories with proportionally more of these preferred trees. Furthermore, the proportion of preferred habitat found within a breeding territory may influence reproductive success and dispersal strategies. Despite the apparent importance of

Figure 1. A moth from the family Noctuidae sampled as part of this project. Noctuidae is thought to be a major component of Flammulated Owl diets. We collected moths as part of this project to allow for identification, estimation of relative abundance and caloric value. These data will be linked to the owl movement data collected by the GPS units.

this forest type to the species, the mechanisms underpinning this apparent preference remain poorly understood.

To consider whether prey abundance covaries with tree size and might explain this pattern of habitat preference, I have collected owl movement, vegetation structure, and moth (prey) availability data over the last four years on the Hot Creek Research Natural Area on the east slope of the San Juan Mountains. To monitor owl movements, I use miniature GPS tags which record owl locations with high spatial resolution. Along with the movement data, I have assembled data about vegetation characteristics that may influence owl movements. Finally, I sampled moths (the owls' primary prey) across the study area and am collaborating with the U.S. Geological Survey (USGS) to determine the caloric value of each species available to the owls. I will compare prey and habitat distributions to determine if prey abundance is associated with habitat type, and if owl movement patterns are better explained by habitat or prey distributions.

This year, funds from Colorado Field Ornithologists provided partial support for a lab assistant to help with final processing of moth samples (identifying taxa, counting individuals and preparing samples for calorimetry analysis).

This research applies to a widespread forest type and I hope to generate valuable information to share

Figure 2. A moth trap used to sample moths across the study area. LED lights attract moths to the trap where they are captured for subsequent identification, counting and calorimetry.

with land managers across western North America. I am collaborating with USFS on this project and have conducted field tours and seminars with land managers and resource specialists from that agency as well as the Bureau of Land Management (BLM) focusing on important management considerations for this sensitive species and its ecosystem. While COVID-19 restrictions have slowed our progress in the lab, I am optimistic that we will complete data collection efforts this spring and will shift to data analysis by the end of 2021.

CFO Board Meeting 3-27-21 4:03 p.m. to 7:09 p.m.

Present: Nick Komar, President; Megan Jones Patterson, VP/Membership; Diana Beatty, Secretary; Irene Fortune, Treasurer; Peter Burke, Journal/Communications; Rachel Hopper, Colorado Birds Records Committee; Allison Hilf, Conventions/Conservation; Stephanie Gobert Pitt, Scholarship/Grants; Sue Riffe, Field Trips/Conventions; Don Marsh, WFO liaison; Bryan Guarente, new board member; Forrest Luke, new board member; Greg Osland, new board member

The meeting was called to order at 4:03 p.m., with new board members joining at 4:30.

The existing board voted unanimously to approve the new members filling vacancies: Rachel Hopper, Bryan Guarente, Forrest Luke and Greg Osland.

January board meeting minutes were approved by all after a few corrections.

CBRC REPORT:

Rachel Hopper, Colorado Birds Records Committee (CBRC) new chair, reported on CBRC website work and records committee progress on 2020 and older reports needing votes. There will be a large committee report in the summer journal and more in the fall one also. Rachel also reported on the status of historical records and a need for checking on an archive at Denver Museum of Nature and Science as well as digitizing existing historical records. The board discussed in general a need to develop a plan on the future of all of the board's paper archives.

New members are joining committees as follows: Bryan Guarente will join the communications committee, Forrest Luke will join the conventions committee (eventually to be chair), Greg Osland will join the communications committee and has already been serving on Colorado Birding Challenge (COBC) committee.

The board voted to add a new board position last year and that remains open at this time. It is not urgent that it be filled, but the board expressed some interest in increasing diversity on the board.

PRESIDENT'S REMARKS:

Nick Komar updated the board on offering complimentary memberships to Bird Conservancy of the Rockies COBC team leaders, expanding Zoom capacity to 500 attendees, and on an information agreement with Denver Field Ornithologists (DFO) to cross-promote upcoming events. He also updated the board on the handling of a variety of requests/external communications and outlined the plan for filling the VP role following Gloria's retirement. Megan Jones Patterson currently is serving, and Stephanie Gobert Pitt has agreed to serve next year. The following year, he would like to have the VP be in line to take over as president when his term ends in 2023.

GRANTS AND SCHOLARSHIPS COMMITTEE REPORT:

The committee met and discussed funding streams for grants/scholarships moving forward. The board recommended that the committee's budget be put on the agenda prior to the due date of requests for each cycle, and that funds received after the budget is set annually be applied to the following year's budget rather than added to current year's. The committee wants to pursue an auction/sale from art donation sometime next winter. The committee also intends to look into adding a fall/winter 2022 ornithology retreat to increase CFO's interaction with ornithologists.

WFO LIAISON REPORT:

Don Marsh reported on WFO's plan for virtual events in late August. WFO leadership is excited to increase the communication and relationship with CFO. The CFO President may be able to introduce CFO at their event and CFO could potentially have a speaker as well. CFO members might be able to get the WFO rate for early registration, pending WFO board approval. WFO expressed a desire to work on website information on both sides about WFO-CFO partnership and to increase youth outreach.

CONVENTIONS COMMITTEE REPORT:

Next convention is still set for Pueblo, May 19-22 2022. Carriage House banquet registration has been updated. The Headquarters site is still intended to

be Holiday Inn Express North, and other facilities still intended to be kept as planned - Rotary Pavilion at City Park for picnic, Radeaux's gallery for social, etc. These facilities will need to be reserved and rates renegotiated, etc.

TREASURER'S REPORT:

The Treasurer updated the board on the status of the current budget, which does show a deficit due to the lack of conventions two years in a row.

CONSERVATION COMMITTEE REPORT:

The committee is working with the Competitions committee on the COBC, which will raise money for the chosen conservation project.

COMMUNICATIONS COMMITTEE REPORT:

Facebook membership is over 5000, our new YouTube channel has surpassed 100 members and has a new customized URL https://www.youtube.com/c/ColoradoFieldOrnithologists. The COBirds listserv has roughly 2000 members. The spring issue of Colorado Birds is nearly complete and will go to press in early April. Joe Kipper agreed to serve as the CFO email manager, building and sending email communication using MailChimp to increase communications to members and help promote CFO events and activities.

MEMBERSHIP COMMITTEE REPORT:

Megan Jones Patterson has taken over as the new membership chair. She is tracking membership renewals in relation to our online events and observed that these events tend to correlate with new memberships and renewals. She raised some questions about how to manage complimentary memberships and complimentary print/digital journal subscriptions as well as how to handle paper archives. Megan and Rachel will work on the archive issue.

VOLUNTEER COMMITTEE REPORT:

Megan is working on updating website text and produced the online application form used by the new board members.

FIELD TRIP COMMITTEE REPORT:

Sue Riffe reported that the committee is planning a fall shorebird field trip series including a virtual workshop that will be hosted by Eric Hynes August 7th. The proposal calls for multiple field trips, particularly in the Sterling area but potentially around the state, in late August and early September. Upcoming Birding Skills Workshop speakers include Ted Floyd March 28, Nathan Pieplow April 25 and David Tonnesen on May 30.

SPEAKER SERIES:

Richard Crossley agreed to speak at the Annual meeting and Holly Merker is slated for fall.

AWARDS:

Board agreed to accept last fall's nomination of Joe Roller for the Lifetime Achievement award to be awarded at the Annual Meeting in July. A subcommittee of board members will prepare that award and also determine any landowner awards to be given this year.

COMPETITIONS COMMITTEE REPORT:

Beginning in April the Competitions committee will push to increase pledges, and in mid-April will roll out a print media campaign. The committee asks that board members consider creating a team and/or talking to others about joining the event or pledging. Greg and Stephanie are working on a promotional video.

Meeting adjourned at 7:09 p.m.

AGREEMENTS AND TO DOS

Secretary will update the website with new positions. Done - please review for corrections at https://cobirds.org/CFO/Membership/Staff.aspx

Secretary will update email lists to include new board members. Done - please confirm that you are receiving board emails.

Secretary will update board tenure tracker - Done, but needs your review for corrections especially committee chairs https://docs.google.com/document/d/1sy7jiX2skLe0csfzL-5EBI4l-NNK3Y3oX6oPE_uGvsI/edit?usp=sharing

All committee chairs will update the committee membership rosters after confirming with existing and new board members about membership. https://docs.google.com/document/d/1zLTBssm

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All committees will meet at least once prior to the next board meeting (and more as needed).

Peter Burke will make sure all new board members have GSuite access and Megan Jones Patterson will train any new members in GSuite use as needed, or new members can watch the recording of previous training at https://drive.google.com/drive/folders/1-VLyVfhn1mM2JiWJ9P1Rf9yjYWSSKu_V?usp=sharing

Stephanie agreed to serve as VP after the annual meeting for 1 year. Next VP would hopefully be from new members and would succeed Nick as president.

Board members will review committee reports presented at this board meeting in the board meeting folder as needed: https://drive.google.com/drive/

Don Marsh agreed to inform WFO leadership about how to communicate/contact CFO board and facilitate communication around all events but especially CFO role in upcoming WFO event in August.

Convention Committee will negotiate reservation/rate for Holiday Inn Express North in Pueblo, start communication with Mark Yeager re: using gallery for social as originally planned, and with city of Pueblo for Rotary Pavilion in City Park as picnic site as well as continue to work with Carriage House re: banquet and picnic.

New board members (and existing as needed) will familiarize themselves with our website https://cobirds.org/

Board members will consider creating a COBC team and/or reaching out to others to create/join COBC teams or pledge for the event so we can raise funds for conservation.

Committee chairs will contact Joe Kipper if they wish to schedule email communications to members.

Committee chairs will submit at least one committee report annually for publication in the journal.

Membership chair will continue to pursue the issue of digital complimentary memberships/journals and tracking complimentary memberships, etc.

Communications committee will take up the issue of developing an advertising policy and report back to the board.

Diana will mail Megan the missing 2006 journal hardcopy and Megan will digitize it and work with Peter Burke to get it added in digital format to Colorado Birds online archive.

Megan and Rachel agreed to discuss archiving hard copies of Colorado Birds.

Field trip committee will prepare ads for Birding Skills Workshop events at least two weeks prior to each event for publication by the communications committee.

Speaker series committee/Stephanie will prepare ads promoting registration for the Annual Meeting and other speaker series presentations at least two weeks prior to each event for publication by the communications committee.

Board members interested in volunteering for fall shorebird field trips will contact Sue Riffe.

Nick, Allison and Irene agreed to investigate any landowner awards for this year's Annual Meeting and prepare for Joe Roller's lifetime achievement award to be given at that meeting.

Next Meetings: board June 26th 1-4 p.m.; Annual Meeting July 11 7-9 p.m.; board August 21, board November 20, board January 2022 tbd, board April 2022 tbd, Pueblo convention May 19-21 2022

Hope is the thing with feathers
That perches in the soul,
And sings the tune without the words,
And never stops – at all, …

–Emily Dickinson

Palm Warbler, photo by Rob Raker.