

46th Annual Conference of Western Field Ornithologists
Reno, Nevada • September 7-11, 2022

Science Program

September 9 and 10, 2022
Whitney Peak Ballroom, Whitney Peak Hotel –Reno

Schedule of Presentations and Identification Challenges

Friday, September 9, 2022

- 1:00–1:10 Welcoming remarks by WFO President JON DUNN.
- 1:10–1:40 Plenary presentation by ELISABETH AMMON. **Current Bird Conservation Studies in Nevada and the Role of Community Science.**
- 1:40–1:55 KELLY COLEGROVE and KAYLA HENRY. **Pinyon Jay monitoring in the southwest: a new approach to studying a unique species.**
- 1:55–2:10 JENNIFER BALLARD. **Bird community of the lower Truckee River, Nevada, and responses to riparian restoration.**
- 2:10–2:25 DAWN FLETCHER, LAUREN B. HARTER, AND ELISABETH AMMON. **Population Monitoring of Declining Desert Thrashers.**
- 2:25–2:40 **Break.**
- 2:40–2:55 JAY WITHGOTT. **Has the Eurasian Collared-Dove already peaked across the West?**
- 2:55–3:10 EDWARD R. PANDOLFINO and LILY A. DOUGLAS. **Regional Song Dialects of the Ruby-crowned Kinglet.**
- 3:10–3:25 PHILIP UNITT, TONATIUH GAONA-MELO, GERARDO MARRÓN, and LORI HARGROVE. **Breeding Status of the Gray Vireo on the Baja California Peninsula.**
- 3:25–3:45 **Break.**
- 3:45–5:15 **Bird Sound Identification: Team Challenge**, moderator NATHAN PIEPLOW.

Saturday, September 10, 2022

- 1:00–1:05 Welcoming remarks by WFO President JON DUNN.
- 1:05–1:20 FRANK FOGARTY, JIAN YEN, ERICA FLEISHMAN, RAHEL SOLLMANN, and ALISON KE. **Riparian area, not fragmentation, is associated with breeding bird species richness in the Great Basin, USA.**
- 1:20–1:35 BEN R. SONNENBERG, NED BOHMAN, and ALISON AGNERAY. **Aberrant nesting attempt of LeConte’s Thrasher (*Toxostoma lecontei*) in the northwest Great Basin.**
- 1:35–1:50 NED BOHMAN. **An Update from the Nevada Bird Records Committee.**
- 1:50–2:05 RYAN S. TERRILL, JUSTYN T. STAHL, and THOMAS A. BENSON. **California Bird Records Committee Update.**
- 2:05–2:20 **Break.**
- 2:20–2:35 KIMBALL L. GARRETT and DEVON DERAAD. ***Zosterops* white-eyes in southern California: their establishment, explosive spread, and identity.**
- 2:35–2:50 COLLEEN M. HANDEL, CAROLINE VAN HEMERT, DANIELLE E. GERIK, and LISA M. PAJOT. **An unfolding mystery: Beak deformities in wild birds.**
- 2:50–3:05 ROBERT GILL, PHIL BATTLE, WILLIAM CHAPMAN, JESSE CONKLIN, DAVID DOUGLAS, STEVEN FELDSTEIN, COLLEEN HANDEL, DAVID MELVILLE, CATRIN MILLS, THEUNIS PIERSMA, LEE TIBBITTS, JOHN WALSH, and NILS WARNOCK. **Trans-Pacific bird migration under past, present and future climate conditions.**
- 3:05–3:15 Q&A
- 3:15–3:45 **Break.**
- 3:45–5:15 **Photo Identification: Expert Panel**, moderator ED HARPER.

Banquet and Evening Program – Whitney Peak Ballroom

- 6:45–9:30 Keynote address by MORGAN TINGLEY. **Avian Responses to Climate Change in a Rapidly Warming World**

Abstracts

AMMON, ELIZABETH. **PLENARY: Current Bird Conservation Studies in Nevada and the Role of Community Science.** *Executive Director, Great Basin Bird Observatory, 1755 E. Plumb Lane #256, Reno, Nevada, 89502; ammon@gbbo.org*

In 1997, the Great Basin Bird Observatory (GBBO) began the first comprehensive breeding bird atlas of Nevada, which also was the first comprehensive assessment of non-game birds in the state. Bird conservation science has come a long way since then, with much improved technological tools, ranging from advanced spatial analysis tools that can pinpoint conservation hotspots and habitat types of greatest interest to some species, to improved understanding of year-round relevance of certain habitat types, and to the great advancement of online technology that helps all birders and naturalists to participate in conservation science. In this paper, I will present the recent insights from these advancements for bird conservation in Nevada using the example of Pinyon Jay research that GBBO has conducted for the past decade and is now intensifying by engaging community scientists and birders around the West.

BALLARD, JENNIFER. **Bird community of the lower Truckee River, Nevada, and responses to riparian restoration.** *Great Basin Bird Observatory; 1755 E. Plumb Lane #256, Reno, Nevada, 89502; Ballard@GBBO.org.*

We conducted breeding season point count surveys on nine transects along the lower Truckee River, in restoration and control reaches; surveys were repeated each year, between 2007 and 2019. We found a total of 123 species along the lower Truckee River between 2007 and 2019, including 20 Nevada conservation priorities and 7 Truckee River (positive) indicator species. Eight of the ten indicator species were recorded throughout the project area, including Common Yellowthroat, House Sparrow, Marsh Wren, Western Bluebird, Willow Flycatcher, Yellow Warbler, Yellow-breasted Chat, and Yellow-headed Blackbird. All of these species were recorded in surveys of the restoration sites, except for Yellow-breasted Chat.

BOHMAN, EDWIN. **An Update from the Nevada Bird Records Committee.** *Great Basin Bird Observatory, 1755 E Plumb Lane, Suite 256a, Reno NV, 89502; Bohman@GBBO.org.*

The Nevada Bird Records Committee (NBRC) has had a significant change in membership in the preceding years. The secretary of 20+ years, Martin Meyers, stepped down in October 2021 and Ned Bohman became secretary. Two other long-term members, Jeanne Tinsman and Greg Scyphers, left the committee as well. Initially, Ned replaced Jeanne as a voting member, and when Ned became secretary, Paul Hurtado rejoined the committee as the sixth voting member. Shortly thereafter, Greg left. The NBRC is currently operating with Ned Bohman as secretary and Frank Fogarty, Alex Harper, Paul Hurtado, Justin Streit, and Ben Zyla as voting members. In 2019, NBRC bylaws were adjusted such that the review list consisted only of species for which there were not 5 records within 10 years. Due to this change in criteria many species were immediately removed from the list, and many others came close to removal. The preceding two years saw the following species removed from our review list based on the new review criterion: Blue Jay (*Cyanocitta cristata*), Mississippi Kite (*Ictinia mississippiensis*), Bronzed Cowbird (*Molothrus aeneus*), Glossy Ibis (*Plegadis falcinellis*), and Cape May Warbler (*Setophaga tigrina*). Since the NBRC's last report at the end of 2020, decisions were reached on 37 records, relating to 38 individuals of 35 species; 32 records of 35 species were endorsed. These include the first accepted state records of Hutton's Vireo (*Vireo huttoni*) and Nelson's Sparrow (*Ammospiza nelsoni*). Other endorsements include Nevada's second and third Barred Owl (*Strix varia*), second Gyrfalcon (*Falco rusticolus*), third and fourth Rufous-backed Robin (*Turdus rufopalliatu*s), third Common Crane (*Grus grus*), second Magnificent Frigatebird (*Fregata magnificens*), second Red-headed Woodpecker (*Melanerpes erythrocephalus*), second Pine Warbler (*Setophaga pinus*), third Tropical Kingbird (*Tyrannus melancholicus*), and second Yellow-crowned Night-Heron (*Nyctanassa violacea*). Additionally, there are a number of interesting pending records to discuss.

COLEGROVE, KELLY and KAYLA HENRY. **Pinyon Jay monitoring in the southwest: a new approach to studying a unique species.** *Great Basin Bird Observatory, 1755 E. Plumb Ln. Ste. 256A Reno, NV 89502, colegrove@gbbo.org.*

Pinyon Jays are an iconic bird species of pinyon pine woodlands throughout the Great Basin and southwest. They maintain a mutualistic relationship with pinyon pine where they are dependent on pine nuts as their primary food source, which they disperse among the landscape through caching. Recent research suggests Pinyon Jays are in steep decline—over 80% of the population was estimated to be lost over a 50-year period—raising concern for the species. Recently, there has been a petition for listing as an endangered or threatened species. Pinyon Jays are gregarious birds that typically occur in large flocks with expansive home ranges that often expand beyond 10,000 acres. While they are very vocal birds and can often be detected from hundreds of meters away, their unique behavior and naturally occurring clumped distribution across the landscape makes them difficult to study with traditional methods such as point counts. In 2020, the Pinyon Jay Working group established a recommended protocol for monitoring Pinyon Jays which take these characteristics into account. GBBO has been implementing this protocol in Arizona for the past two years. The data being collecting in Arizona provides Pinyon Jay presence and absence data that can be used to create spatial distribution models, monitor trends, and help identify what habitat attributes may be important for various behaviors. The data standards implemented allow for combination with data from different regions, creating a large enough data set to answer important questions that can inform pinyon-juniper management decisions and aid in conservation of the species.

FLETCHER, DAWN, LAUREN B. HARTER AND ELISABETH AMMON. **Population Monitoring of Declining Desert Thrashers.** *Great Basin Bird Observatory, 1755 Plumb Lane #256, Reno, NV 89502; fletcher@gbbo.org.*

Avian communities in the Mojave and Sonoran deserts have experienced severe population declines in recent decades, and Bendire's and LeConte's thrashers are two of the fastest-declining species in these aridlands. Both thrashers are recognized by Partners in Flight as species at risk, with LeConte's Thrashers experiencing a 67% decline and Bendire's Thrashers a 90% decline since 1970. These species are traditionally under-sampled in bird monitoring programs due to low population density, early breeding phenology, and relative inaccessibility to large expanses of desert. The Desert Thrasher Working Group (DTWG) has established a standardized field protocol for inventory and monitoring and conducted ongoing surveys since 2017. The knowledge gained from this program has been or will be used to refine species distribution models, monitor trends, and contribute to best management practices. DTWG partners have conducted over 3500 surveys on 1336 plots across five states. As of 2021, we have had 155 plots occupied by LeConte's Thrasher and 85 occupied by Bendire's Thrasher. In this presentation, we will discuss sampling design, survey results, and how our initiative is effective for managing rare and elusive species.

FOGARTY, FRANK¹, JIAN YEN², ERICA FLEISHMAN³, RAHEL SOLLMANN⁴, and ALISON KE⁴. **Riparian area, not fragmentation, is associated with breeding bird species richness in the Great Basin, USA.** ¹*Department of Wildlife, California State Polytechnic University, Humboldt, 1 Harpst St, Arcata, California 95521; faf7@humboldt.edu.* ²*Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning, Victoria, Australia.* ³*Oregon Climate Change Research Institute, College of Earth, Ocean, and Atmospheric Sciences, Oregon State University, Corvallis, Oregon.* ⁴*Department of Wildlife, Fish, and Conservation Biology, University of California, Davis, California.*

The associations of habitat area and fragmentation with species richness long have been major topics within community ecology. Recent discussion has focused on properly assessing fragmentation independent of habitat area, and on whether fragmentation has significant negative or positive associations with species richness. We created a novel, multiple-region, N-mixture community model (MNCM) to examine the relations of riparian area and fragmentation with species richness of breeding birds in mountain ranges within the Great Basin, Nevada, USA. Our MNCM accounts for imperfect detection in count data at the survey-point level while allowing comparisons of species richness among regions in which those points are embedded. We used individual canyons within mountain ranges as regions in our model and measured riparian area and the normalized landscape shape index, a metric of fragmentation that is independent of total riparian area. We found that riparian area, but not its fragmentation, was a primary predictor of canyon-level species richness of both riparian obligates and all bird species. The relation between riparian area and riparian-obligate species richness was nonlinear: canyons with ≥ 25 ha woody riparian vegetation had relatively high species richness, whereas species richness was considerably lower in canyons with

<25 ha. Projections of future riparian contraction suggested that decreases in species richness are likely to be greatest in canyons that currently have moderate (~10-25 ha) amounts of riparian vegetation. Our results suggest that if a goal of management is to maximize the species richness of breeding birds in montane areas in the Great Basin, it may be more effective to focus on maximizing total riparian area rather than minimizing riparian fragmentation, and that canyons with at least moderate amounts of riparian vegetation should be prioritized.

GARRETT, KIMBALL L.¹ and DEVON DERAAD². **Zosterops white-eyes in southern California: their establishment, explosive spread, and identity.** ¹Natural History Museum of Los Angeles County, 900 Exposition Blvd., Los Angeles, California; kgarrett@nhm.org. ²University of Kansas Biodiversity Institute and Natural History Museum, Lawrence, Kansas; deraad@ku.edu.

White-eyes (family Zosteropidae) constitute a speciose and taxonomically difficult group with well-known dispersal abilities. Many species are also popular in the pet trade, although importation into the United States is currently illegal. Naturalized populations are found in many regions, including the Hawaiian Islands (*Z. japonicus*, the Japanese or Warbling White-eye) and, formerly, in San Diego, California (*Z. palpebrosus*, the Indian or Oriental White-eye). Beginning around 2006 small numbers of a *Zosterops* white-eye were noted in Orange County, California. In subsequent years these birds have become very common from urban coastal San Diego County north through coastal Orange and Los Angeles Counties to Ventura and, very recently, Santa Barbara Counties. Here we summarize the establishment and trajectory of this white-eye population, with notes on habitat use, foraging behavior, and breeding biology (all of which require further detailed study). Additionally, we report novel genetic data supporting the species identity deduced from phenotype and vocalizations as *Z. simplex*, Swinhoe's White-eye, for this introduced population.

GILL, ROBERT¹, PHIL BATTLE², WILLIAM CHAPMAN³, JESSE CONKLIN⁴, DAVID DOUGLAS⁵, STEVEN FELDSTEIN⁶, COLLEEN HANDEL¹, DAVID MELVILLE⁷, CATRIN MILLS⁸, THEUNIS PIERSMA⁴, LEE TIBBITTS¹, JOHN WALSH⁹, & NILS WARNOCK¹⁰. **Trans-Pacific bird migration under past, present and future climates.** ¹USGS Alaska Science Center, Anchorage, AK 99508; regill3014@gmail.com, cmhandel@usgs.gov, ltibbitts@usgs.gov; ²Zoology and Ecology Group, Massey University, Palmerston North 4442, New Zealand; p.battle@massey.ac.nz; ³Dept. of Computer Science; Department of Atmospheric Sciences; University of Illinois at Urbana-Champaign, Urbana IL 61081; chapman@earth.illinois.edu; ⁴Groningen Institute for Evolutionary Life Sciences (GELIFES), University of Groningen, Groningen, The Netherlands; conklin.jesse@gmail.com, theunis.piersma@nioz.nl; ⁵USGS Alaska Science Center, Juneau, AK 99801; ddouglas@usgs.gov; ⁶Department of Meteorology and Atmospheric Science, Pennsylvania State University, University Park, PA, 16802; sbfl@psu.edu; ⁷1261 Dovedale, RD 2, Wakefield, Nelson 7096, New Zealand; david.melville@xtra.co.nz; ⁸Amazon, Seattle, WA; mills.catrin@gmail.com; ⁹International Arctic Research Center, Fairbanks, AK 99775; jewalsh@alaska.edu; ¹⁰Audubon Canyon Ranch, Marshall, CA 94940; nils.warnock@egret.org

Several shorebird species have extreme-endurance migrations between the Arctic and Australasia, requiring 6–10 days of nonstop flight. Bar-tailed Godwits (*Limosa lapponica baueri*, hereafter godwits) exemplify such migrations and, while their antiquity is uncertain, their current breeding distributions existed as refugia during the last glacial maximum (LGM; ~20,000 years ago), indicating their migrations were likely intact during or before the LGM. The current atmospheric structure of the Pacific Basin is complex and dynamic. Godwits must navigate multiple wind fields and storm tracks that influence decisions on when to depart, at what altitude in the air column to fly, and when and where to drift with prevailing winds. This is especially critical for flights from the Yellow Sea to Alaska and from Alaska to Australasia, where strategic decisions can reduce the overall energetic costs of flight, but poor decisions can be costly or even lethal. Here we compare wind conditions along the godwits' southward migration corridor using daily wind outputs from the Max Plank Institute's Earth System Model (MPI-ESM) for three climatically contrasting temporal periods: past (30 years during the LGM), present (1976–2005), and future (2071–2100); the latter under a high greenhouse gas emissions scenario (RCP 8.5). We compared what birds currently experience (present conditions) to those of a colder past and a warmer future to assess if distinctly different climate periods could affect wind profitability along the trans-Pacific migration corridor. Model outputs showed that the general hemispheric structure of the atmospheric circulation remained intact during all three periods. Model outputs also indicated that godwits are presently afforded slightly more opportunities to migrate with profitable wind conditions compared to both the past and future periods; however, we expect godwits to accommodate future

conditions by continuing to exploit their skill in selecting departure dates that confer wind assistance during migration.

HANDEL, COLLEEN M.^{1,2}, CAROLINE VAN HEMERT^{1,3}, DANIELLE E. GERIK^{1,4}, and LISA M. PAJOT^{1,5}. **An unfolding mystery: Beak deformities in wild birds.** ¹*U.S. Geological Survey, Alaska Science Center, 4210 University Drive, Anchorage, AK 99508*; ²cmhandel@usgs.gov; ³cvanhemert@usgs.gov; ⁴dgerik@usgs.gov; ⁵lpajot@usgs.gov.

During the late 1990s, we discovered evidence of an emerging epizootic of debilitating beak deformities among wild birds in Alaska. Avian keratin disorder, characterized by rapid overgrowth of the outer layer of the beak, was first detected among Alaskan Black-capped Chickadees (*Poecile atricapillus*) and American Crows (*Corvus brachyrhynchos*), which have exhibited the highest prevalence of such abnormalities ever reported. Over the past twenty years, with the help of many collaborators, we have conducted an array of field and laboratory studies to investigate potential causes and impacts of this disorder. Beak deformities can severely impair feeding, preening, reproduction, and survival, but we found no evidence for contaminant exposure, nutritional deficiency, or bacterial or fungal infection underlying the disorder. Recently, through genomic techniques, we discovered a novel picornavirus that is strongly associated with the occurrence of beak deformities in chickadees and has now been detected in multiple species showing similar clinical signs. Notable numbers of birds with similar beak deformities have recently been reported elsewhere from North America, South America, Europe, and India. We compiled reports from citizen-science programs, bird monitoring studies, and the scientific literature to summarize the current geographic scope and species affected by similar beak deformities. From 1979 to 2021, more than 3,300 observers reported 327 species with beak deformities, comprising >4,700 birds in Alaska, >1,900 elsewhere in North America, and >1,700 from outside of North America. Given that a candidate cause for this disorder has been identified, it may now be possible to determine whether a single factor is responsible for similar deformities across species and, potentially, across continents. Understanding the species and numbers of birds affected, as well as their geographic distribution, will help us identify research and conservation actions required to evaluate and mitigate impacts on wild birds. Careful observers can help with this important effort!

PANDOLFINO, EDWARD R.¹ and LILY A. DOUGLAS². **Regional Song Dialects of the Ruby-crowned Kinglet.** ¹*1328 49th Street, Sacramento, CA, USA*; erpfromca@gmail.com. ²*Central Valley Joint Venture, U.S. Fish and Wildlife Service, Sacramento, CA, USA*; ldouglas14@gmail.com

We used archived recordings of Ruby-crowned Kinglet (*Corthylio calendula*) songs to examine characteristics of the song, repertoire size, and regional dialects across the species' breeding range and to assess possible cultural evolution in dialects. Using recordings of 313 individuals we confirmed that individuals have a single song type and that there are distinct regional song dialects. Our examination of phrases that form the last of this species' three-part song revealed 43 different phrase types. We defined seven regions based on geographic features, ecoregions, and obvious clustering of particular phrase types. An eighth region corresponded to the published range of the subspecies *C. c. grinnellii*, coastal southern Alaska and the British Columbia coast. In each of those regions two to three phrase types dominated and were found exclusively or primarily within a single region. Our finding of regional dialects confirms that the song of the Ruby-crowned Kinglet is, at least with respect to this phrase, learned rather than innate. In species, such as this kinglet that sing during migration or in their non-breeding range, mapped dialects can help reveal migration strategy and migratory connectivity. Monitoring changes in dialects over time can confirm cultural evolution and shed light on both the timing and location of song-learning.

SONNENBERG, BEN R.¹, NED BOHMAN², and ALISON AGNERAY³. **Aberrant nesting attempt of LeConte's Thrasher (*Toxostoma lecontei*) in the northwest Great Basin.** ¹*Department of Biology, Ecology, Evolution and Conservation Biology Graduate program, University of Nevada, Reno, NV, USA*; benjamin.r.sonnenberg@gmail.com. ²*Great Basin Bird Observatory, 1755 E Plumb Lane, Suite 256a, Reno NV, 89502*. ³*Nevada State Office, Bureau of Land Management, Reno, NV, USA*.

Animal population expansions often initiate through members of the periphery pushing into previously unsuitable environments. Climate, resource availability, or a number of other selective events may mediate such expansions limiting the rate of expansion. LeConte's thrashers (*Toxostoma lecontei*) are secretive songbirds found throughout dry brushy flats in southwest North American deserts. Characterized as weak flyers with poor dispersal

ability, this species is considered to be highly resident. However, a LeConte's thrasher was observed over 200 miles north of its expected range near Fallon, Nevada in January of 2020. A second individual was also observed that year and both continued throughout the late winter and early spring. They remained in the area and were re-sighted in the winter of 2021 and on 7 March 2021 were found constructing a nest. The two individuals completed nest construction, laid a clutch of eggs and began incubating. Unfortunately, the nest was depredated before hatching and the two were not relocated mounting another reproductive attempt. This is the first observation of a reproductive attempt of this species this far north of its range. Here we document the local habitat at the site of the nest, the nest size and composition as well as all the behaviors of the individuals documented at the site. This important observation could provide clues that this secretive species may be currently undergoing a subtle range expansion and provide key locations for future target surveys.

TERRILL, RYAN S.¹, JUSTYN T. STAHL², and THOMAS A. BENSON.³ **California Bird Records Committee Update.** ¹*California State University, Stanislaus, One University Circle, Turlock, California 95382; ornithoterrill@gmail.com.* ²*4177 Utah St., San Diego, California 92104; justyn.stahl@gmail.com.* ³*California State University San Bernardino, 5500 University Parkway, San Bernardino, California 92407; secretary@californiabirds.org.*

The purposes of the California Bird Records Committee (CBRC) include, but are not limited to: the review of records of select species of birds occurring in California; the publication of review decisions; the archiving of documentation and commentary; and, ultimately, the maintaining of the official California State Bird List. Nine voting members and one non-voting Secretary form the CBRC. Since the last update at the 2021 virtual WFO conference one report has been published in *Western Birds* and a number of additional records have been reviewed. This presentation will provide an update on the last year of the CBRC's decisions, including any species new to California, as well as additional records of note and other committee activities. As of July 2022, 681 bird species have occurred in California, including 17 established introductions. One native species has been added to the State List since the last update at WFO: Mexican Duck (*Anas diazi*), along with four exotic species: Lilac-crowned Parrot (*Amazona finschi*), Mitred Parakeet (*Psittacara mitratus*), Nanday Parakeet (*Aratinga nenday*), and Red-masked Parakeet (*Psittacara erythrogenys*) This report also marks a shift in the scope of record review by the CBRC. At the most recent meeting the committee agreed that the review list should not include 18 species for which the status and distribution in California is well-known, and continued review is not significantly increasing our knowledge about their occurrence in California.

PHILIP UNITT¹, TONATIUH GAONA-MELO², GERARDO MARRÓN^{3,4}, and LORI HARGROVE¹. **Breeding Status of the Gray Vireo on the Baja California Peninsula.** ¹*San Diego Natural History Museum, P. O. Box 121390, San Diego, California 92112; birds@sdnhm.org.* ²*Universidad Autónoma de Baja California, Carretera Transpeninsular Ensenada-Tijuana no. 3917, Colonia Playitas, Baja California, México 22860; tgaona@uabc.edu.mx.* ³*Laboratorio de Aves, Departamento Académico de Ciencias Marinas y Costeras, Universidad Autónoma de Baja California Sur, La Paz, Baja California Sur, Mexico 23080; atakamara@gmail.com.* ⁴*Pronatura Noroeste, Programa de Conservación de Ecosistemas Terrestres, Mulegé #760, Bellavista Bellavista, La Paz, Baja California Sur, México 23050.*

Most of the breeding range of the Gray Vireo (*Vireo vicinior*) lies within the United States, where the population is sparse, patchy, and declining. It also breeds in Baja California, however, where its status has not been assessed. To rectify this, we surveyed four mountain ranges where the species is known or might be expected. In the northernmost, the Sierra Juárez, from 1 to 5 June 2021 we located 41–46 territories at elevations from 1120 to 1685 m—an abundance strikingly greater than just across the border in southern Upper California. Some were in woodland of piñon or mixed piñon/chaparral, but density was greatest in treeless chaparral dominated by chamise (*Adenostoma fasciculatum*) and redshank (*A. sparsifolium*). In the Sierra San Pedro Mártir, we surveyed elevations from 420 to 2320 m from 30 May to 3 June 2021 and located 69–72 territories at elevations from 765 to 1450 m—all in chaparral dominated by *Adenostoma* spp. If the densities observed in these two ranges can be extrapolated over the extent of similar habitat within them, the population of the Gray Vireo in Baja California should be in the thousands. Confirmed by audio recording, one sighting from the Sierra de Ulloa overlooking Ensenada suggests a still wider distribution in Baja California. Isolated stands of chamise and other chaparral plants grow south of the Gray Vireo's previously reported breeding range, on the Sierra Asamblea. But our reconnaissance of this range, 19–25 April 2021, revealed no Gray Vireos. Survey of the Sierra San Francisco in the center of the peninsula, 3–9 April

2022 revealed only 3 Gray Vireos, all in winter habitat containing *Bursera microphylla*. Despite Baja California representing only a small part of the Gray Vireo's spatial breeding range, it contributes disproportionately to the species' population and therefore conservation.

WITHGOTT, JAY. **Has the Eurasian Collared-Dove already peaked across the West?** 7515 SW 34th Ave., Portland, OR, 97219; withgott@comcast.net.

The Eurasian Collared-Dove (*Streptopelia decaocto*) spread across the North American continent with astonishing speed, becoming an abundant species across much of the West within the past 15 years. However, this avian blitzkrieg has apparently run its course. Analysis of data from eBird indicates that numbers of this species now appear to be flat or declining in every western state and province. These data will be examined from multiple perspectives and with reference to data from other sources such as the Breeding Bird Survey and Christmas Bird Count. The Eurasian Collared-Dove has provided a dramatic example of logistic growth on a continental scale, but we are now witnessing a new chapter in the story of the dove's invasion. In Florida, its entry point to mainland North America, the dove apparently overshot its carrying capacity and has been declining. Yet for the species to peak in the West so soon after its arrival here seems remarkable. We will touch on some of the fascinating questions surrounding this species' invasion. One is whether Mourning Dove populations have been affected by competition from collared-doves. Another is what factors may be limiting further population growth. The Eurasian Collared-Dove's potentially imminent decline mirrors those of other invasive bird species in North America, such as the European Starling, House Sparrow, Cattle Egret, and Spotted Dove, perhaps suggesting that biological invasions may not be as insurmountable as once presumed.

Banquet Keynote

TINGLEY, MORGAN. **Avian Responses to Climate Change in a Rapidly Warming World.** *Ecology and Evolutionary Biology, University of California – Los Angeles, 621 Charles E Young Dr S #951606, Los Angeles, CA 90095, mtingley@ucla.edu*

The Carolina Parakeet, the Heath Hen, the Passenger Pigeon – when we contemplate how bird diversity has changed, we often focus on the handful of species we have lost entirely. But while we have yet to lose a single bird species to our rapidly changing climate, birds are currently adapting and responding in myriad ways. Integrating field research and citizen science over decades to centuries, the research presented in this lecture illustrates the complex and interacting ways that species are responding to a changing climate through shifting in space, traveling in time, and evolving to face new challenges.

Presenter Bios

Elisabeth Ammon began her career in wildlife-habitat modeling and wildlife monitoring with a PhD in Wildlife Ecology from the University of Colorado at Boulder. After consulting on several bird habitat restoration projects around the west, she was hired by the Great Basin Bird Observatory in 2002. She helped complete the Nevada Breeding Bird Atlas, began the Nevada Bird Count for statewide landbird monitoring, and has played a leadership role in Pinyon Jay, desert thrasher, and riparian bird research in the Great Basin. Since starting at GBBO, her focus has been establishing and maintaining collaborative partnerships with agencies, private entities, non-profits, and researchers throughout the western region to accomplish shared missions in the conservation of birds, other wildlife, and their habitats. Most recently, she has facilitated her organization's goals, which have been mostly research and monitoring oriented, to expand into recruiting community scientists across the west into data collection, developing a comprehensive public education program, and using current digital technology to meet both of these program

goals.

Jennifer Ballard graduated from Washington State University with degrees in Wildlife and Range Management. She earned an MS in Wildlife at Colorado State University, studying the impacts of understory on small mammals and birds in narrowleaf cottonwood/box-elder riparian forests along the Yampa River in Colorado. She is the monitoring coordinator for Great Basin Bird Observatory and takes great joy in playing along the lower Truckee River, looking at birds and other wildlife, and getting wet feet.

Edwin (Ned) Bohman has been with Great Basin Bird Observatory since 2017, primarily as a project biologist and more recently as an outreach coordinator. He graduated from the University of Vermont in 2012 with a BS in Wildlife Biology. With GBBO, Ned has been involved in extensive point count surveys throughout the state, as well as Pinyon Jay monitoring, and desert thrasher surveys. He currently serves as secretary of the Nevada Bird Records Committee.

Kelly Colegrove is a wildlife biologist and program manager for the Great Basin Bird Observatory. She received a B.A. in Wildlife Conservation and a B.S. in Biology from the University of Delaware, and acquired a Masters from Oregon State University. She has been working with birds since 2009, and currently focuses on riparian birds of the southwest, renewable energy, and Pinyon Jays.

Dawn Fletcher is a passionate wildlife biologist interested in the conservation of biodiversity through field research and public outreach. She received her BS at The Ohio State University and an MS in biology from the University of Nevada Las Vegas. In her current position with Great Basin Bird Observatory, she manages several projects working with desert thrashers in the uplands, and riparian birds along the Lower Colorado River.

Frank Fogarty (he/him) is an Assistant Professor of Applied Avian Ecology in the Wildlife Department at Cal Poly Humboldt. His research interests include understanding how disturbances, such as wildfire, climate change, and livestock grazing, affect bird communities, and developing analytical tools that help us better address these questions using detection data.

Kimball Garrett retired in March 2022 after 40 years as the ornithology collections manager at the Natural History Museum of Los Angeles County. He has been a member of WFO since it was founded in 1970 as California Field Ornithologists, serving several terms on the Board and as President 1995-1999; he is a Fellow of the American Ornithological Society. Residing nearly all his life in highly urbanized Los Angeles, he developed a research interest in naturalized non-native bird species in the region. He lives in Juniper Hills in the Mojave Desert foothills of northern Los Angeles County.

Bob Gill is an emeritus research biologist with the U.S. Geological Survey's Alaska Science Center, where he directed research on shorebirds for over four decades. His tenure in this position entailed long-term collaborative projects throughout the Pacific Basin, Russia, North and South America, and Europe. His work in Alaska has focused on several aspects of shorebird ecology. Initial studies looked at the breeding biology of several poorly known species (e.g., Bristle-thighed Curlew, Bar-tailed Godwit, Surf-bird, Wandering Tattler, Rock Sandpiper, and Black Turnstone), while later research addressed movement ecology, particularly of extreme endurance migrants that cross the Pacific Ocean. The Bar-tailed Godwit is the exemplar of this, for which Bob and colleagues continue a multi-disciplinary quest to understand the evolution of and adaptation for such migrations, particularly how birds incorporate the Pacific's seasonally dynamic windscape into their annual flights. Bob received an MSc degree from the Avian Biology Laboratory at San Jose State University, is a graduate fellow at Groningen University, The Netherlands, and a Fellow of the American Ornithological Society.

Colleen Handel is a Research Wildlife Biologist with the USGS Alaska Science Center, where she leads the Landbird Research Program. She received her Ph.D. from the University of California Davis and has studied Alaskan shorebirds and landbirds for over 40 years. Her research has focused on breeding ecology, migration, and impacts of climate change, with an unexpected excursion into disease ecology.

Ed Pandolfino received his Ph.D. from Washington State University and has served as president of Western Field Ornithologists, vice-president of the San Francisco Bay Bird Observatory, and on the boards of the Institute for Bird Populations and Western Field Ornithologists. He co-authored *Birds of the Sierra Nevada: Their Natural History, Status, and Distribution* (U.C. Press, 2013) and is lead author of *Sacramento Breeding Birds: A Tale of Two Atlases and Three Decades of Change* (Central Valley Bird Club, 2021). Much of his research covers status, distribution, and conservation of western birds, with particular emphasis on the Central Valley of California. Many of his recent publications involve bird vocalizations and their application to studies of taxonomy, migration, and breeding phenology.

Ben Sonnenberg is a 5th year PhD candidate at the University of Nevada, Reno in the Ecology, Evolution and Conservation biology program. His main work focuses on how early development shapes future complex cognitive phenotypes in mountain chickadees (*Poecile gambeli*). Ben is an avid birder and thoroughly enjoys spending time documenting not only the behavior of his focal species but also that of all other avian taxa.

Ryan S. Terrill is vice chair of the California Bird Records Committee, serving his first term as a member. He works as an assistant professor of vertebrate zoology at California State University Stanislaus. He was recently an NSF postdoctoral fellow working at the Moore Lab of Zoology on the ecology and evolution of feather molt in birds using genomic and museum data. He received his Ph.D. from the Remsen lab at Louisiana State University, and his B.S. from UC Santa Cruz. His research interests broadly encompass the distributions and evolution of life history in birds of the Americas.

Morgan W. Tingley joined the faculty of the University of California, Los Angeles as Associate Professor of Ecology and Evolutionary Biology in 2020, after previously serving as an Assistant Professor at the University of Connecticut and as a David H. Smith Conservation Research Fellow at Princeton University. He holds a Ph.D. in Environmental Science, Policy, and Management from the University of California, Berkeley. Prior to this, he received a B.A. from Harvard University and an M.Sc. from Oxford University. He is a Fellow of the American Ornithological Society, with whom he currently serves as an Elected Councilor, and a research associate with the Institute for Bird Populations. He is a recipient of the “Wings across the Americas” conservation award from the U.S. Forest Service and the Young Professional Award from the Cooper Ornithological Society. His more than 60 research papers, primarily about birds in California, have been covered widely by the popular press, including features by *The New York Times*, *LA Times*, and *Washington Post*.

Philip Unitt is a native of San Diego and graduate of San Diego State University. Curator of birds and mammals at the San Diego Natural History Museum, he has published nearly 50 articles and book chapters on the distribution, ecology, identification, and conservation of birds. During his tenure the museum's bird collection has grown by over 8000 specimens. Since 1986 he has served as editor of *Western Birds*. He is a co-author of *Birds of the Salton Sea* (2003), author of the *San Diego County Bird Atlas* (2004), and editor and co-author of the *San Diego County Mammal Atlas* (2017). He served on the technical advisory committee for the revision of the California Department of Fish and Game's list of bird species of special concern, writing six of the species accounts published in that revision in 2008. Phil co-authored four articles in the symposium on avifaunal change in western North America that WFO published in 2018. As a professional editor with the museum, ornithological societies, and commercial publishers, Phil has edited and produced publications on a wide variety of scientific subjects for diverse readers, from the general public to scientists.

Jay Withgott is an author of college textbooks in environmental science. A former board member of WFO and of Portland Audubon, he serves as an eBird reviewer, a member of the Oregon Bird Records Committee, and a board member of the Xerces Society for Invertebrate Conservation. He lives in Portland, Oregon.