

41st Annual Conference of Western Field Ornithologists

Humboldt, California • September 28-October 2, 2016

Science Program

September 30 and October 1, 2016 • Chinook Room, River Lodge Conference Center–Fortuna

Schedule of Presentations and Identification Challenges

Friday, September 30, 2016

Chinook Room

- 12:15–12:20 Welcoming remarks by WFO President DAVE QUADY.
- 12:20–12:50 Opening presentation by C. JOHN RALPH. **Why does the North Coast have more birders per capita than any other place in the West?**
- 12:50–1:05 CHRISTOPHER J. WEST, JARED D. WOLFE, ANDREW WIEGARDT, and TIANA WILLIAMS-CLAUSSEN*. **California Condor recovery feasibility in northern California: assessing spatial and temporal patterns of contaminants using surrogate species.**
- 1:05–1:20 JEFF N. DAVIS. **A century of avifaunal change in the Fresno District.**
- 1:20–1:35 DIEGO BLANCO and JAMES M. MALEY. **Geographic variation and intergradation in Elegant Quail.**
- 1:35–1:50 STEVEN ALBERT and RODNEY SIEGEL. **Using intrinsic and extrinsic markers to reveal movement patterns of small Neotropical migrant landbirds monitored at MAPS and MoSI stations.**
- 1:50–2:05 RYAN P. BOURBOUR, MEGAN M. MAYO, and JOSHUA M. HULL. **Metabarcoding and migration ecology: using trace DNA on the beaks and talons of migrating raptors to reveal complex trophic interactions.**
- 2:05–2:15 **Break.**
- 2:15–2:30 MEGAN ELROD, JULIAN WOOD, NADAV NUR, and SAM VELOZ. **San Francisco Bay tidal marsh-dependent species response to habitat restoration.**
- 2:30–2:45 MEL PRESTON and NATHANIEL SEAVY. **Grasshopper Sparrow habitat associations on central coastal California rangelands.**
- 2:45–3:00 BREANNA L. MARTINICO, RYAN P. BOURBOUR, SARA M. KROSS, EDWARD R. PANDOLFINO, and JOSHUA M. HULL. **Using road transects to census wintering raptor populations and their habitat in the Central Valley, California.**
- 3:00–3:15 DESSI SIEBURTH and JAMES M. MALEY. **Morphological variation in Golden-cheeked Woodpeckers.**
- 3:15–3:30 PETER PYLE and ERIC VANDERWERF. **Progress report from the Hawaii Bird Records Committee.**
- 3:30–4:00 **Break.**
- 4:00–5:30 **Bird Sound Identification: Team Challenge**, moderator NATHAN PIEPLOW.

Saturday, October 1, 2016

Chinook Room

- 12:15–12:20 Welcoming remarks by WFO President DAVE QUADY.
- 12:20–12:35 SEAN MCALLISTER and GARY FALXA*. **Status of the Yellow-billed Cuckoo in northwestern California.**
- 12:35–12:50 RON LEVALLEY. **Pelagic Cormorant population and reproductive rates.**
- 12:50–1:05 JOSEPH YOUTZ, REZA GOLJANI, and JENNIFER K. FREY. **A habitat suitability model for the Dusky Grouse in New Mexico.**
- 1:05–1:20 PETER PYLE and JIM TIETZ. **An assessment of Arctic Warbler (*sensu lato*) records from California.**
- 1:20–1:35 JENNIFER BALLARD. **Las Vegas Wash bird community changes, 2005-2015.**
- 1:35–1:50 AMY LEIST, DAWN FLETCHER, and LAUREN HARTER. **The Lower Colorado River Riparian Bird Project: 2011-2015.**
- 1:50–2:05 LAUREN HARTER, DAWN FLETCHER, and AMY LEIST. **Status of the Sonoran Yellow Warbler in the lower Colorado River Valley.**
- 2:05-2:15 **Break.**
- 2:15–2:30 JOSH SCULLEN, DAN WENNY*, ALEX RINKERT, and YIWEI WANG. **Twenty-year trends in capture rates of birds in a riparian woodland surrounded by urban development.**
- 2:30–2:45 NORA PAPIAN and MARK COLWELL. **Apparent survival of Western Snowy Plover during the nonbreeding season in northern California.**
- 2:45–3:00 BENJAMIN PEARL. **Factors affecting Western Snowy Plover winter foraging habitat selection in San Francisco Bay ponds.**
- 3:00–3:15 KARINE TOKATLIAN. **Evaluation of oyster shell breeding habitat enhancement on Western Snowy Plover breeding success.**
- 3:15–3:30 STEVE ROTTENBORN. **2016 update from the California Bird Records Committee.**
- 3:30–4:00 **Break.**
- 4:00–5:30 **Photo Identification: Expert Panel**, moderator ED HARPER.

Banquet and Evening Program – Chinook Room

- 6:30–9:30 Keynote Address by MARK COLWELL. **The World's Plovers: Global Diversity, Population Biology, and Conservation.**

* presenting (when not lead author)

Featured Speakers

*Science Sessions Day 1 – Opening Presentation
Friday, September 30. 12:20 p.m. Chinook Room*

RALPH, C. JOHN. Why does the North Coast have more birders per capita than any other place in the West? *U.S. Forest Service, Redwood Sciences Laboratory, and Klamath Bird Observatory, 7000 Lanphere Road, Arcata, California; c.ralph@humboldt.edu.*

The northwestern corner of California is made up of part or all of five counties and has a rich history of ornithology and birding to go with its great variety of habitats. Its beaches, forested slopes, abundant water, recreation possibilities, and very moderate climate attract birds and people looking for a relaxed environment. Despite its remoteness, the area is rich in diversity and abundance of birders, in addition to birds. Well over 500 species have been recorded in the area, and it has been the focus of endangered species research, with the Spotted Owl (*Strix occidentalis*), Snowy Plover (*Charadrius nivosus*), and Marbled Murrelet (*Brachyramphus marmoratus*) heading up the list. Strong institutions, such as Humboldt State University, plus bird-oriented research by agencies, active environmental groups, bird observatories, and a veritable army of citizen scientists, keep birders here. The result is interesting and innovative research on many different land and water bird taxa. I will touch on some of these discoveries and the diverse human characters that have made the area their home. At the same time, as vagrants are the spice in any discussion, I'll talk about the "Arcata Marsh Effect," give an analysis of the causes of warbler vagrancy, and suggest species that are overdue for discovery in this corner of the world, behind the "redwood curtain."

C. John Ralph is a Research Wildlife Biologist at the USDA Forest Service's Redwood Sciences Laboratory in Arcata, California. He is co-chair of the Monitoring Working Group of Partners in Flight, chair of the North American Banding Council, and a Faculty Associate in the Department of Biological Sciences at Humboldt State University. C.J. co-founded Point Reyes Bird Observatory (now Point Blue Conservation Science) and, more recently, helped start the Klamath Bird Observatory. C.J.'s early research centered on bird migration and orientation. He studied the behavioral ecology of endangered forest birds in Hawaii for five years before moving to Arcata in 1981 to begin work with the USDA Redwood Sciences Laboratory. His two principal research focuses for Redwood Sciences Laboratory have been landbird monitoring (involving censusing and constant effort mist-netting) and study of the Marbled Murrelet. C.J. also has been directing research at a bird monitoring station in Costa Rica since 1994, and he conducts research on an island off New Zealand involving the monitoring and reintroduction of native birds.

*Keynote Address
Saturday, October 1. 6:30 p.m. Chinook Room*

COLWELL, MARK. The world's plovers: global diversity, population biology and conservation. *Humboldt State University, 1 Harpst St., Arcata, California, 95521; mac3@humboldt.edu.*

Plovers (*Charadrius* and related taxa) are a diverse group, numbering about 40 species with a nearly worldwide distribution. Many plovers are migratory; others are sedentary. They favor open, uncluttered habitats year-round, where their reliance on visual foraging and vigilance provides them with the energy and safety to survive and reproduce. Their mating systems run the gamut from monogamy to polygamy. Features of their breeding biology are rather uniform in that precocial young hatch from large eggs but small clutches. Humans value many of the same habitats favored by plovers, which creates conservation challenges. I use the local population of the Snowy Plover (*Charadrius nivosus*) to illustrate these conservation challenges.

In 1989, **Mark Colwell** came to Humboldt State University where he has been honored as both Scholar of the Year (2007) and Outstanding Professor (2013). He has published 80+ research papers (most co-authored with graduate students) and one book, *Shorebird Ecology, Conservation and Management*, published by UC Press. His initial interests in shorebirds began with work on sex-role reversed Wilson's Phalarope (*Phalaropus tricolor*) and on Spotted Sandpiper (*Actitis macularius*). Subsequently, he has worked on avocets, curlews, Dunlin (*Calidris alpina*), and plovers. For the past 16 years he has coordinated research on the population of Snowy Plovers in coastal northern California. That project, coupled with a book he is co-authoring on the world's plovers, is the basis for his talk to WFO.

Abstracts of Scientific Presentations

ALBERT, STEVEN and RODNEY SIEGEL. **Using intrinsic and extrinsic markers to reveal movement patterns of small Neotropical migrant landbirds monitored at MAPS and MoSI stations.** *The Institute for Bird Populations, P.O. Box 1346, Point Reyes Station, California, 94956; salbert@birdpop.org, rsiegel@birdpop.org.*

The annual migration of birds has for centuries been one of the most intriguing and mystifying aspects of the natural world. While the broad outlines of these movements are coming into clearer focus, many details remain obscure, especially for Neotropical migratory landbirds. This is not surprising when one considers that these tiny, delicate creatures often travel at night, over mountains and oceans, and across international boundaries. Delineating annual movement patterns is essential for understanding threats that species or populations face in all phases of their annual cycle. Recent advances in the use of intrinsic and extrinsic markers are making the study of annual cycle dynamics easier and can be readily incorporated into existing demographic monitoring efforts such as the Monitoring Avian Productivity and Survival (MAPS) and Monitoreo de Sobrevivencia Invernal (MoSI) programs. A recent example using intrinsic markers - in this case, high-resolution genetic markers - utilized over 1,000 feather samples from MAPS, MoSI, and other bird banding stations to identify distinct populations of Wilson's Warbler (*Cardellina pusilla*) during multiple phases of the annual migration cycle. The study identified novel region-specific migratory routes and timetables along the Pacific Flyway. In an example using extrinsic markers, scientists from the Institute for Bird Populations and Yosemite National Park used an archival micro-GPS tag to track the year-round movements of a Black-headed Grosbeak (*Pheucticus melanocephalus*) that was breeding in the Park. The bird spent the autumn in northwestern Mexico, presumably to molt, before moving several hundred miles farther south, where it spent the rest of the non-breeding season. This was the first time molt migration had been documented in a passerine using GPS. We urge other researchers participating in programs such as MAPS and MoSI to harness the power of both intrinsic and extrinsic markers to continue revealing the secrets of bird migration.

BALLARD, JENNIFER. **Las Vegas Wash bird community changes, 2005-2015.** *Great Basin Bird Observatory, 1755 E Plumb Lane, Suite 256, Reno, Nevada, 89502; ballard@gbbo.org.*

Las Vegas Wash is the primary drainage of Las Vegas Valley, in Clark County, Nevada, draining into Lake Mead. In 2000, implementation began of the Las Vegas Wash Comprehensive Adaptive Management Plan, with the goal of restoring riparian and wetland habitats, improving channel conditions, and monitoring wildlife. In 2005, bird monitoring of an 8.7-km reach of the Las Vegas Wash began, with 29-31 permanently established locations being surveyed using 5-minute point counts every 2 weeks throughout the year. Once a year, in the fall, vegetation assessments have also been conducted at each survey point. Seven years of data were collected between 2005 and 2015. Over this time, 199 bird species were recorded, constituting about half of the total bird species richness recorded in Nevada. Of these, 39 are conservation priority species according to current assessments in regional bird initiatives, as well as the Clark County Multiple Species Habitat Conservation Plan and the Lower Colorado River Multi-Species Conservation Program. Average species richness significantly increased over the 10 years of the project, as did total bird abundance. Species-specific trends were mixed. Several of the declining birds are riparian shrub-associated, and

several of the species with increasing trends are associated with marshes or with upland shrub habitats. Restoration and stabilization activities and bird monitoring are ongoing.

BLANCO, DIEGO and JAMES M. MALEY. **Geographic variation and intergradation in Elegant Quail.** *Moore Laboratory of Zoology, Occidental College, 1600 Campus Road, Los Angeles, California 90041; jmaley@oxy.edu.*

Elegant Quail (*Callipepla douglasii*) are restricted to western Mexico from Sonora south through Jalisco. There are five distinct subspecies, mostly differentiated by plumage color and patterns. We examined 117 specimens representing four subspecies in the Moore Laboratory of Zoology to look at patterns of differentiation. We measured wing chord, tail length, exposed culmen, and tarsus length. We found that males were significantly larger than females within the species. We found that the only significant size difference was that the tail was longer in the nominate form than the other subspecies. We examined the plumage of specimens from southern Sonora and northern Sinaloa and determined that several appeared to be intergrades between the nominate form and *C. d. bensoni*.

BOURBOUR, RYAN P., MEGAN M. MAYO, and JOSHUA M. HULL. **Metabarcoding and migration ecology: using trace DNA on the beaks and talons of migrating raptors to reveal complex trophic interactions.** *University of California, Davis, Department of Animal Science, One Shields Avenue, Davis, California 95616 and Golden Gate Raptor Observatory, Building 201, Fort Mason, San Francisco, California 94123; rpbourbour@ucdavis.edu, megan.mayo14@gmail.com, jmhull@ucdavis.edu.*

The foraging ecology of migrating raptors that feed en route is an integral component of avian migration and the predator landscape. Understanding prey selection in these wide-ranging apex predators has been challenging in the past, and as a result, most of our knowledge consists of opportunistic observations. However, with the advent of modern genetic techniques, molecular evidence may be used to study complex trophic interactions within migratory flyways. We seek to understand the diet composition of bird-eating raptors during fall migration, and to reveal the extent prey-tracking of migrant songbirds may be occurring along the Pacific Flyway. Merlins (*Falco columbarius*) and Sharp-shinned Hawks (*Accipiter striatus*) are closely associated during fall migration and both rely on avian prey to meet high energy requirements for their journey. To investigate predator-prey interactions and resource partitioning between these two raptor species, we have developed a novel technique using DNA metabarcoding to document recent prey items of individuals banded by Golden Gate Raptor Observatory in the Marin Headlands, California. We aim to identify trace prey DNA to species from samples collected by swabbing the beaks and talons of Merlins and Sharp-shinned Hawks. Preliminary results indicate that universal primers are sufficient in detecting passerine and dragonfly DNA obtained from the beaks of Merlins. Additionally, pilot data from a captive raptor population with known diets indicates that only prey species eaten by the raptor are detected using this method. This novel dietary study technique has the potential to reveal ecological interactions within migratory flyways and opens up opportunities to safely study the diet of enigmatic raptor species around the world.

DAVIS, JEFF N. **A century of avifaunal change in the Fresno District.** *Colibri Ecological Consulting, 11238 N Via Trevisio Way, Fresno, California 93730; jdavis@colibri-ecology.com.*

John G. Tyler documented the status and distribution of birds on the floor of the San Joaquin Valley in Fresno County, California (the Fresno District) in the early 20th century. His work culminated in the publication of *Some Birds of the Fresno District, California* in 1913 and its supplement in 1916. That landmark publication provides a unique opportunity to assess avifaunal changes in a sizeable portion of the San Joaquin Valley over the last 100 years. I evaluated changes among 170 species that are or were year-round, summer, or winter residents by comparing Tyler's assessment of their abundance and distribution in the early 20th century with what we observe today. I found that 59% of these species have increased in distribution and abundance, 25% have decreased, and 16% have either not obviously changed or increases in some areas have been proportionally offset by decreases in other areas. I attribute these changes to four main causative factors: (1) artificial impoundment of water in numerous locations across the region; (2) expansion and maturation of urban, suburban, and rural ornamental trees, shrubs, vines, and herbaceous

plants; (3) loss of natural land cover to urban, industrial, and agricultural uses; and (4) a change to clean farming practices (e.g., removal of weeds and non-agricultural habitats), all of which represent the major forces that have affected the birdlife of the San Joaquin Valley in general.

ELROD, MEGAN, JULIAN WOOD, NADAV NUR, and SAM VELOZ. **San Francisco Bay tidal marsh-dependent species response to habitat restoration.** *Point Blue Conservation Science* 3820 Cypress Dr. Suite #11 Petaluma, California 94954; melrod@pointblue.org.

Unprecedented investments have been made to restore tidal action to land in the San Francisco Bay Estuary, which has experienced severe habitat loss and degradation over the last 100 years. The goal of such investments is often mature tidal marsh and the recovery of special-status species, specifically, California Ridgway's Rail (*Rallus obsoletus obsoletus*). However, the restoration process often benefits a diverse suite of bird species including waterfowl and shorebirds, as a site fills in from open water to mature marsh. There is a need to create an efficient but nimble multi-species monitoring system that allows land managers to measure benchmarks and make adaptive changes throughout the restoration's trajectory as the bird community evolves alongside habitat changes. Examples of this type of multi-taxa transitional monitoring are limited. Waterbird monitoring in the Estuary occurs as a separate effort in most cases, involving disparate methods and considerations; a more comprehensive approach is needed, tied to tidal marsh habitat evolution. Our own efforts to date have focused on five marsh-dependent bird species, representing a suite of habitat requirements. Limiting focus to a single species, such as Ridgway's Rail, is problematic because it often takes 20 years to create suitable habitat to support this species, and confounding factors may affect its occupancy. Further complicating potential restoration successes, future climate change scenarios indicate some sites may not keep pace with sea-level rise, requiring land owners to manage for a different habitat and suite of species than was originally intended. Resource managers and practitioners will benefit from the characterization of a restoration trajectory and the identification of factors that influence the trajectory. The proposed monitoring framework will help them achieve success, despite challenges such as climate change, thus maximizing ecosystem function and resilience, at the site-specific and landscape scales.

HARTER, LAUREN, DAWN FLETCHER, and AMY LEIST. **Status of the Sonoran Yellow Warbler in the lower Colorado River Valley.** *Great Basin Bird Observatory*, 1755 E. Plumb Lane, Suite 256, Reno, Nevada 89502; harter@gbbo.org, fletcher@gbbo.org, amyleist@gmail.com.

The Sonoran Yellow Warbler (*Setophaga petechia sonorana*) is a subspecies of the Yellow Warbler that specializes in riparian forests of the southwestern United States and northwestern Mexico. Populations have declined in some areas due to a number of anthropogenic influences. As a result of these declines, the subspecies is considered of conservation interest in parts of its range, including being listed as a California Species of Special Concern and a covered species under the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). Populations of the Sonoran Yellow Warbler on the lower Colorado River have varied tremendously in the past century, from being abundant throughout the river valley in the early 1900s according to Grinnell, to potentially extirpated as a breeder during the 1970s. As part of the LCR MSCP long-term monitoring and research plan, beginning in 2008 the Great Basin Bird Observatory has conducted monitoring of all breeding bird species throughout the lower Colorado River Valley, including the Sonoran Yellow Warbler. We used a double sampling area search survey method to calculate population size estimates of riparian breeding birds throughout the study area. Using data collected from 2011-2015, we calculated a five-year population estimate of 1,786 (SE = 484) breeding pairs. This suggests a partial recovery of the Sonoran Yellow Warbler in the lower Colorado River Valley since the last breeding bird inventories conducted in the region. In addition to population estimates, we present data on distribution and density within the study area, breeding phenology, and qualitative observations of habitat preferences.

LEIST, AMY, DAWN FLETCHER, and LAUREN HARTER. **The Lower Colorado River Riparian Bird Project: 2011-2015.** *Great Basin Bird Observatory, 1755 E. Plumb Lane, Suite 256, Reno, Nevada 89502; amyjleist@gmail.com, fletcher@gbbo.org, harter@gbbo.org.*

The Lower Colorado River Riparian Bird Project consists of system-wide and conservation area monitoring of riparian breeding birds under the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). The project emphasizes six of the species covered by the program, the Gila Woodpecker (*Melanerpes uropygialis*), Vermilion Flycatcher (*Pyrocephalus rubinus*), Arizona Bell's Vireo (*Vireo bellii arizonae*), Sonoran Yellow Warbler (*Setophaga petechia sonorana*), Gilded Flicker (*Colaptes chrysoides*), and Summer Tanager (*Piranga rubra*). We used a double sampling method recommended by Bart and Earnst (2002) to estimate abundance for these species. Double sampling uses counts from relatively low intensity (rapid) and high intensity (intensive) area search efforts on a subset of sample plots to estimate a detection ratio (DR) that is used to correct rapid counts for the entire sample. Between 2011 and 2015, we performed 400 system-wide rapid area searches and 374 conservation area rapid area searches, as well as 40 system-wide intensive area searches and 20 conservation area intensive area searches. Rapid and intensive data were used to estimate the total number of territories of the six LCR MSCP covered species and the most common territorial riparian birds within the project study area. The population size estimates derived from these data establish a baseline data set for long-term monitoring that allows detection of trends in population size and occupancy of territorial riparian bird species on the lower Colorado River.

LEVALLEY, RON. **Pelagic Cormorant population and reproductive rates.** *P.O. Box 332, Little River, California 95456; ron@levalleyphoto.com.*

In conjunction with the California Coastal National Monument, Mendocino Coast Audubon Society, the Sea Ranch Stewardship Taskforce, and other groups, we have been monitoring Pelagic Cormorant (*Phalacrocorax pelagicus*) colonies in the Mendocino County region of northern California for 8 years. Citizen scientists have volunteered to monitor known colonies. More volunteers and sites have been added to the project, and more than 15 sites with five to 25 nests each are now being monitored for reproductive success. The 2015 season had poor productivity compared to the previous 6 years, with many of the colonies lacking any nests this year. I will present a summary of the past 8 years of data. In addition, I am collaborating with others up and down the Pacific Coast to compile a broad assessment of Pelagic Cormorant population trends.

MARTINICO, BREANNA L.¹, RYAN P. BOURBOUR¹, SARA M. KROSS², EDWARD R. PANDOLFINO³, and JOSHUA M. HULL.¹ **Using road transects to census wintering raptor populations and their habitat in the Central Valley, California.** ¹*University of California, Davis, Department of Animal Science, One Shields Avenue, Davis, California 95616; bmartinico@ucdavis.edu, rpbourbour@ucdavis.edu, jmhull@ucdavis.edu;* ²*University of California, Davis, Department of Wildlife Fish and Conservation Biology, One Shields Avenue, Davis, California 95616; saramaekross@gmail.com;* ³*erpfromca@aol.com*

Habitat destruction and alteration around the globe is a primary cause of the dramatic decline of biodiversity that characterizes our era; however, many species still persist and even thrive in altered landscapes. Despite nearly complete conversion of native grassland and oak habitats into highly productive agricultural operations, California's Central Valley supports a wintering raptor population among the most abundant and diverse in the United States and Canada. Currently, agricultural fields in this region are being converted at a rapid rate from those highly associated with raptor use, such as low intensity forage, to crop types that have little to no habitat suitability for raptors, such as orchards, a trend that may have negative effects on wintering raptor populations. To assess changes in the Central Valley's winter raptor population over time, we conducted driving transects through agricultural land in the winters of 2015 and 2016 and analyzed raptor data from previous surveys along the same routes from 2008-2010. We determined crop types and quantified land use change over time along the routes using Cropland Data Layers (USDA) for all years surveyed for raptors. We found as high as a 46% decrease in crop types known to be positively associated with raptor use over an 8-year period along the routes. While species' abundances were positively correlated with

amount of preferred habitat present, variability in raptor density between years was large. This can likely be attributed to the influence of many variables outside of wintering months, such as prey productivity or nest success on breeding grounds. Therefore, single year abundances could be misleading due to unmeasured variables or unapparent lags and thresholds. Repeated annual surveys will be essential to help determine the effects of changes in cover type on population trends and inform future conservation and land planning decisions in the region.

MCALLISTER, SEAN¹ and GARY FALXA². **Status of the Yellow-billed Cuckoo in northwestern California.**

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Prior to 2000, the Yellow-billed Cuckoo (*Coccyzus americanus*) had been recorded in northwestern California (Humboldt and Del Norte counties) on six occasions, based on records assembled by Dr. Stanley Harris. In California, this species is often cryptic while nesting. In 2000, biologists initiated surveys in this area to better understand the species' status. Breeding-season surveys have been conducted in 11 years between 2000 and 2015, primarily along the lower Eel River using tape playback of a cuckoo vocalization at a series of survey stations in potential habitat. Surveys revealed the species to be more common than previously known, with detections in eight of 11 survey years, and 1-3 birds in a year. Most detections have been in riparian scrub and riparian forest habitats dominated by willow (*Salix* sp.) and red alder (*Alnus rubra*), often with scattered black cottonwood (*Populus balsamifera*). In addition to survey detections, birders and other observers have reported Yellow-billed Cuckoos on about 20 occasions during the same period; these include the first known record for Del Norte County. While no nests have been located to date, observations suggest that breeding occurs, at least occasionally. The lack of surveys prior to 2000 prevents a rigorous evaluation of the cause for the apparent increase in detections in recent years. The use of surveys, augmented by an increased awareness among birders of the species' presence, are likely contributing factors. In 2016, we broadened our survey efforts to include five other river areas in Humboldt and Del Norte counties; we will summarize survey efforts and all known occurrences. While northwestern California does not appear to be a stronghold for this Federal Endangered Species Act-listed species, our findings suggest that surveys may be warranted in other areas with substantial habitat outside of known cuckoo populations.

PAPIAN, NORA and MARK COLWELL. **Apparent survival of Western Snowy Plover (*Charadrius nivosus nivosus*) during the nonbreeding season in northern California.** Humboldt State University, 1 Harpst St., Arcata, California, 95521; ncp84@humboldt.edu.

Conservation of rare species often is based upon the improvement of species' vital rates. Survival, particularly adult survival, is the vital rate that most affects population growth and viability. The western snowy plover (*Charadrius nivosus nivosus*) is a threatened shorebird of the Pacific coast of the United States. Observers surveyed three sites in Humboldt County with wintering snowy plover flocks from September through March to study over-winter survival at two-week intervals. There were 73 uniquely marked plovers detected on surveys during the 2014-2015 non-breeding season (~30% of plovers observed, others were unmarked or had brood combinations); biweekly apparent survival was 0.971 (SE 0.008) and apparent survival for the season was 0.662 (SE 0.0014). During the 2015-2016 non-breeding season, there were 91 uniquely marked plovers (~30% of the population), and biweekly apparent survival was 0.936 (SE 0.01) and apparent survival for the season was 0.396 (SE 0.0907). The return rate was 0.712 with 52 marked plovers observed at least once during the 2015-2016 season, and there was no difference in return rates in age and sex groups (0.74-0.75 return rates). All of the returning plovers maintained the same strategy in the second season; plovers returned to the same location or moved between the same sites as they had in the 2014-2015 season, which indicates that there may be some site fidelity to non-breeding locations by plovers. These data may provide insight to the effects of cold weather on plover survival, and may be used to determine effective management of wintering plovers, such as reducing human disturbance of non-breeding flocks by creating exclosures around roost locations.

PEARL, BENJAMIN. **Factors affecting Western Snowy Plover winter foraging habitat selection in San Francisco Bay ponds.** *San Jose State University, 1 Washington Square, San Jose, California 95192 and San Francisco Bay Bird Observatory, 524 Valley Way, Milpitas, California 95035; bpearl@sfbbo.org.*

Within the San Francisco Bay Area, Western Snowy Plovers (*Alexandrinus nivosus nivosus*) nest and winter in former salt ponds. They face a number of threats including human-altered habitats and high levels of predation by mesopredators and raptors. The South Bay Salt Pond Restoration Project is a large wetland restoration project that will alter, and may reduce the amount of, Snowy Plover habitat in the region. As the Project returns salt ponds to tidal wetland, there will be less of the dry, flat, and sparsely vegetated habitat that plovers need for breeding and wintering habitat. A greater understanding of the specific microhabitat requirements for high-quality plover foraging sites is needed. In particular, it is important for managers to understand what constitutes high-quality wintering habitat for Snowy Plover numbers. This study assessed the characteristics at sites where Snowy Plovers winter in former salt ponds, especially habitat traits related to promoting plover foraging. Initially, behavior and size of foraging plover flocks were observed. This was followed up within 24-48 hours with microhabitat sampling at foraging locations. Analysis of plover foraging habitat showed that plovers were associated with increasing plant height, water cover, and distance from perches and levees. This information is designed to inform restoration and management decisions in efforts to meet Snowy Plover recovery goals in the South San Francisco Bay, and may be applicable to other parts of the species' range.

PRESTON, MEL and NATHANIEL SEAVY. **Grasshopper Sparrow habitat associations on central coastal California rangelands.** *Point Blue Conservation Science, 3820 Cypress Dr. #11, Petaluma, California 94954; mpreston@pointblue.org; nseavy@pointblue.org.*

The Grasshopper Sparrow (*Ammodramus savannarum*) is a California Bird Species of Special Concern that utilizes rangeland habitats along the central coast of California. We investigated Grasshopper Sparrow habitat associations in central coastal California rangelands by conducting 160 point counts and vegetation surveys on five properties in San Mateo County, California from early May to late June 2014. At each point, we measured cover of annual grasses, perennial grasses, bare ground, shrubs, and trees within a 50-meter radius circle of the point count center. We used logistic regression to evaluate four competing hypotheses about Grasshopper Sparrow habitat associations: an all-grass model, a perennial grass model, a no-grass (bare ground and shrubs) model, and a null model. We found that the perennial grass model, which included the height of all grass and the cover of all perennial grasses, was the best supported. The proportion of occupied sites increased with the cover of perennial grass but decreased with average height of all grasses. We hypothesize that this result could represent the importance of California oatgrass (*Danthonia californica*), and other short-statured perennial bunchgrasses occurring in the coastal prairie, to Grasshopper Sparrow habitat quality. Our results suggest that across the range of variability we considered, managing for grassland composition and structure, including managing for high perennial bunchgrass cover, may be more important than managing against shrubs or bare ground when considering Grasshopper Sparrow habitat quality.

PYLE, PETER¹ and JIM TIETZ². **An assessment of Arctic Warbler (*sensu lato*) records from California.** ¹*The Institute for Bird Populations, P.O. Box 1346, Point Reyes Station, California 94956; ppyle@birdpop.org;* ²*Point Blue Conservation Science, 3820 Cypress Drive #11, Petaluma, California 94954; jtietz@pointblue.org.*

In 2014 the American Ornithologists' Union (AOU) split the Arctic Warbler (*Phylloscopus borealis*) into three species: the Arctic Warbler (*P. borealis*), which breeds across northern Europe from Sweden to far eastern Russia and into Alaska; the Kamchatka Leaf Warbler (*P. examinandus*), which breeds primarily in the southern Kamchatka Peninsula and the Kurile, Sakhalin, and Hokkaido Islands; and the Japanese Leaf Warbler (*P. xanthodryas*), which breeds in the mountains of Japan other than on Hokkaido Island and the Shiretoko Peninsula. These three taxa were previously considered subspecies of Arctic Warbler. Kamchatka Leaf Warbler was accepted to the AOU Check-list on the basis of specimens of migrants or vagrants from Alaska, whereas Japanese Leaf Warbler has not been reported from North America. At the time of the split there were eight records of Arctic Warbler (*sensu lato*) accepted by the

California Bird Records Committee (CBRC), from the period 1995-2012. Although the AOU attributed at least most of these California records to Arctic Warbler (*sensu stricto*), the basis for their identification as separate from the two leaf warbler species is unclear, and the CBRC now regards them as "Arctic/Kamchatka Leaf Warblers," considering Japanese Leaf Warbler too unlikely to occur in California to be acknowledged. The species split by the AOU was based primarily on differences in song and mitochondrial DNA; literature on the former subspecies documents average plumage and morphological differences, including variation in the relative lengths of primaries. Here we carefully analyze the plumage and wing morphology of the eight records from California plus an additional record from Baja California in 1991, and we make recommendations regarding the taxonomic level of acceptability for each of these nine records. In the process, we summarize field criteria to potentially separate Arctic Warbler from Kamchatka Leaf Warbler in California.

PYLE, PETER¹ and ERIC VANDERWERF². **Progress report from the Hawaii Bird Records Committee.** ¹*The Institute for Bird Populations, P.O. Box 1346, Point Reyes Station, California 94956; ppyle@birdpop.org;* ²*Pacific Rim Conservation, 3038 O'ahu Avenue, Honolulu, Hawaii 96822; ewerf@hawaii.rr.com.*

The Hawaii Bird Records Committee (HBRC) was established in 2014. By-laws were modeled after those of the California Bird Records Committee, with numerous small changes to better suit the unique situation in Hawaii. The HBRC consists of seven members whose initial terms are open-ended, with rotating term limits a future possibility. Geographical scope includes all Hawaiian Islands, including Midway Atoll (not officially part of the state of Hawaii), and pelagic waters out to 200 nautical miles from any point of land. The first identified task of the HBRC was to establish an official Hawaiian Islands bird checklist, consisting only of species that the HBRC considers to have occurred naturally or to have introduced populations that have become established in the Hawaiian Islands. The list developed in 2009 for the Robert L. Pyle on-line monograph at the Bishop Museum website, as updated through 2016 following American Ornithologists' Union supplements, was used as a template. Members considered reports of 16 new species reported from Hawaii since 2009 and deliberated the acceptance, at the request of any member, of records of other species that 1) were considered unsubstantiated by the Pyle Monograph due to questions regarding identification or natural origin but that might be acceptable; and 2) were accepted as substantiated by the Pyle Monograph but that might be questionable. The latter group included eight species of migrants or vagrants that were accepted by the Pyle Monograph without specimen or photograph (i.e., as based on descriptions from sight-records only). The official HBRC Hawaiian Islands bird checklist will be presented, with discussion of controversial and other interesting records.

ROTTENBORN, STEVE. **2016 update from the California Bird Records Committee.** *H. T. Harvey & Associates, 983 University Avenue, Bldg. D, Los Gatos, California 95032; srottenborn@harveyecology.com.*

Since June 2015, the California Bird Records Committee (CBRC) accepted first state records of Common Scoter (*Melanitta nigra*), Chatham Albatross (*Thalassarche eremita*), and Kelp Gull (*Larus dominicanus*). Two additional species have been added as a result of taxonomic splits - the split of Western Scrub-Jay (*Aphelocoma californica*) into the California Scrub-Jay (*A. californica*) and Woodhouse's Scrub-Jay (*A. woodhouseii*), both of which occur in the state, and the split of Leach's Storm-Petrel (*Oceanodroma leucorhoa*) into three species, two of which (Leach's Storm-Petrel and Townsend's Storm-Petrel [*O. socorroensis*]) have been recorded in the state. These additions bring the California list to 664 species. In addition, the Committee is currently reviewing documentation of Purple Sandpiper (*Calidris maritima*), Buff-breasted Flycatcher (*Empidonax fulvifrons*), and Jouanin's Petrel (*Bulweria fallax*), all three potential first state records. CBRC decisions on several well documented records that were not accepted, of Gray Thrasher (*Toxostoma cinereum*), White-tipped Dove (*Leptotila verreauxi*), and a possible Red-backed x Turkestan Shrike (*Lanius collurio* x *L. phoenicuroides*), are also of interest. Ruddy Ground-Dove (*Columbina talpacoti*) was added to the review list due to the extirpation of the small breeding population in Imperial County and low numbers of reports in recent years. After serving as a voting member and sometimes Chair of the CBRC for 28 years between 1981 and 2015, Joe Morlan

resigned when termed out in 2016, but his hard work for the CBRC continues – he has just finished working closely with City College of San Francisco faculty and students to completely redesign the committee’s website.

SCULLEN, JOSH, DAN WENNY, ALEX RINKERT, and YIWEI WANG. **Twenty-year trends in capture rates of birds in a riparian woodland surrounded by urban development.** *San Francisco Bay Bird Observatory, 524 Valley Way, Milpitas, CA95035; jscullen@sfbbo.org.*

The San Francisco Bay Bird Observatory runs a banding station at Coyote Creek Field Station in riparian woodland on the southeast edge of the San Francisco Bay. Four habitats are sampled: remnant riparian woodland, two woodland restoration areas planted in 1987 and 1993, and an overflow channel mowed annually to eliminate woody vegetation. Nets are run three days a week, year-round. Here we report on the last 20 years of banding data (1996-2015). Capture rates (birds/100 net-hours) for all birds and new birds (not previously banded) peaked annually during fall migration. Capture rates of previously banded birds (recaptures) peaked in early winter, typically in December. Total capture rates declined over the 20-year period, a pattern driven by a strong decline in capture rates of new birds. Capture rates for recaptures slightly increased over the 20-year period. The overall trends mask differences among the four habitats. Capture rates in the remnant riparian woodland and overflow channel increased due to an increase in recapture rates while capture rates for new birds remained relatively constant over the 20 years in those habitats. Total capture rates in the 1987 and 1993 revegetation areas declined largely due to a decline in new captures. Overall, capture rates were higher in the 1993 revegetation and overflow channel areas (about 50 birds/100 net-hours) than in the remnant riparian and 1987 revegetation areas (about 25 birds/100 net-hours). These trends suggest a decrease in previously abundant species, perhaps as a result of habitat changes on site, as well as a decline in fall migrants. The differences in capture rates between the two revegetated areas reveal important lessons for future riparian restoration efforts.

SIEBURTH, DESSI and JAMES M. MALEY. **Morphological variation in Golden-cheeked Woodpeckers.** *Moore Laboratory of Zoology, Occidental College, 1600 Campus Road, Los Angeles, California 90041; jmaley@oxy.edu.*

Golden-cheeked Woodpeckers (*Melanerpes chrysogenys*) are distributed exclusively in western Mexico from southern Sinaloa south through Oaxaca. They are present mostly in the Pacific lowlands but also occur in the mountains southwest of Mexico City. There are two distinct subspecies that differ primarily in the color of the nape. Birds in the northwest have a red nape (*M. c. chrysogenys*), whereas birds in the south have a yellow nape (*M. c. flavinuchus*). We measured 172 adult specimens deposited in the Moore Laboratory of Zoology (MLZ) from throughout the species’ range. We compared wing chord, exposed culmen, length of red crown, and color of nape. We found that males had significantly longer wings and bills than females. We also found that the birds in the south had significantly longer wings than the northern subspecies. We fit a cline to length of the red crown and found a steep transition with a width of only ~48 km between San Blas and Puerto Vallarta. The rapid transition in the length of the red crown suggests that these may represent more than one species.

TOKATLIAN, KARINE. **Evaluation of oyster shell breeding habitat enhancement on Western Snowy Plover breeding success.** *San Francisco Bay Bird Observatory, 524 Valley Way, Milpitas, California 95035; ktokatlian@sfbbo.org.*

The federally threatened Pacific coast population of the Western Snowy Plover (*Charadrius nivosus nivosus*, WSPL) is facing breeding habitat loss in the South San Francisco Bay (South Bay) due to the South Bay Salt Pond Restoration Project (Project). Achieving recovery goals defined in the WSPL recovery plan is necessary for delisting the species; this would be a challenge in the South Bay even without the Project’s actions. We tested whether adding oyster shells, which provide cover and camouflage, would increase nesting success or facilitate brood development. If so, managers may be able to increase WSPL nesting success and reach species recovery goals while the Project continues to alter breeding habitat. In 2015, we monitored WSPL nests, broods, and predators in an oyster shell enhanced breeding site in the South Bay, and we compared success criteria between enhanced and control study plots to determine their effects. Results show that enhancement increased breeding WSPL numbers and nesting densities

compared to previous seasons, as birds selected enhanced plots over control plots for nest locations. However, our models did not show significant effect of enhancement on nest survival or chick behavior, indicating that enhancement might attract breeding WSPLs but is ultimately ineffective at increasing nest success without additional predator control. We are continuing this study in 2016 to investigate the multiyear effects of oyster shell enhancement on breeding WSPLs. Findings from this study will inform species and Project managers, and may reveal a method for achieving species recovery goals in the South Bay as the Project reduces the species' habitat.

WEST, CHRISTOPHER J.¹, JARED D. WOLFE^{2,3}, ANDREW WIEGARDT³, and TIANA WILLIAMS-CLAUSSEN¹. **California Condor recovery feasibility in northern California: assessing spatial and temporal patterns of contaminants using surrogate species.** ¹*Yurok Tribe Wildlife Program, P.O. Box 1027, Klamath, CA 95548; cwest@yuroktribe.nsn.us; tiana@yuroktribe.nsn.us;* ²*USDA Forest Service, Pacific Southwest Research Station, 1700 Bayview Drive, Arcata, CA 95521-6013; jdw@klamathbird.org;* ³*Klamath Bird Observatory, PO Box 758, Ashland, OR 97520; akw@klamathbird.org.*

Areas of northern California have been identified as quality habitat for an expanded California Condor (*Gymnogyps californianus*) recovery program. Nonetheless, lead poisoning continues to complicate California Condor recovery efforts within the species' current range and threatens viability of future reintroduction efforts. Therefore, background levels of lead and other contaminants should be assessed as part of a feasibility analysis to determine the efficacy of expanding the recovery program into northern California. A California-wide ban on the use of lead ammunition for hunting, scheduled to go into effect in 2019, coupled with hunter outreach programs aimed at reducing lead ammunition, may present new opportunities for California Condor recovery in this region. As such, we captured and studied two surrogate species, Common Raven (*Corvus corax*) and Turkey Vulture (*Cathartes aura*), in coastal and near-coastal habitats of northern California to examine relationships between contaminant (lead, mercury, zinc, and copper) exposure through time, as a function of distance from coast (vultures and ravens), body size (vultures and ravens), and hunting season (ravens only). Although blood-lead concentrations were found to be relatively low throughout our study area, we documented that median blood-lead concentrations of ravens captured during the non-hunting season (0.9 µg per dL, n = 17) increased seven-fold during the hunting season (6.4 µg per dL, n = 10). Additionally, we found that larger, and presumably more dominant, Turkey Vultures exhibited higher blood concentrations of lead, mercury, zinc, and copper. We also found that with increasing distance from the coast, blood concentrations of mercury decreased while blood concentrations of lead increased in both species. Given the significant increase in lead among ravens during the hunting season and significantly higher levels of lead among larger vultures, we believe that pervasive exposure to lead demonstrates risks facing California Condors throughout the species' historical range.

YOUTZ, JOSEPH, REZA GOLJANI, and JENNIFER K. FREY. **A habitat suitability model for the Dusky Grouse in New Mexico.** *Department of Fish, Wildlife, and Conservation Ecology, 2980 South Espina, Knox Hall 132, New Mexico State University, Las Cruces, New Mexico 88003; joeyoutz@nmsu.edu, rgoljani@nmsu.edu, jfrey@nmsu.edu.*

The Dusky Grouse (*Dendragapus obscurus*) is a large game bird that occurs in boreal forests from southern Canada and Alaska south to isolated mountaintops in Arizona and New Mexico. This species has been poorly studied in the American Southwest where it is a protected game species. Our study aims to develop a habitat suitability map of Dusky Grouse in New Mexico using Maximum Entropy Modeling (MaxEnt). We collected occurrence records of Dusky Grouse from museum collections and the New Mexico Ornithological Society database. We assigned observations error based on the observer's knowledge. We constructed two models, one based on six biophysical variables, including elevation, GAP landcover, slope, aspect, distance to streams, and distance to springs, and one based on 19 standard bioclimatic variables. Elevation (87.4%) and landcover (10.7%) were the highest contributors to the biophysical model. The most important landcover types were subalpine grassland and bristlecone pine forest. The highest contributors to the bioclimatic model were annual precipitation (31.2%) and precipitation in the warmest month (23%). The largest and most suitable areas of grouse habitat were the northern mountains, while areas in the southern part of the state were small and fragmented. This could be an area of conservation concern considering the large-scale fires that recently occurred in these areas. This

species could be affected by recent land cover changes and the increasing effects of global climate change. Future research will need to be undertaken in order to better understand this species and its current status in the American Southwest.

Presenter Biographies

Steven Albert has been involved with the conservation of migratory birds and other wildlife in the U.S. and Latin America for many years, working for federal and state agencies, Indian tribes, and in the private sector. He is currently the Institute for Bird Populations' Assistant Director for Demographic Monitoring Programs, and its representative to the U.S. North American Bird Conservation Initiative Committee.

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 birds and small mammals in narrowleaf cottonwood/box-elder riparian forests along the Yampa River in Colorado. She has been working with the Great Basin Bird Observatory since 2006.

Diego Blanco is 16 years old and lives in Altadena, California. He has been interested in dinosaurs, especially birds, and ornithology from a young age and has volunteered and worked at the Moore Lab of Zoology at Occidental College and the Natural History Museum of Los Angeles. He also received the WFO Youth Scholarship for the 2016 Central Sierra trip.

Ryan Bourbour is from San Jose, California and is currently a graduate student at UC Davis. His research interests include avian ecology, migration, and conservation.

Jeff Davis is Principal Scientist at Colibri Ecological Consulting in Fresno, California. He is also Marine Specialist (seabirds) at UC Santa Cruz, bird records compiler and science advisor for the Fresno Audubon Society, executive board member of the Western Section of The Wildlife Society (representing the San Joaquin Valley Chapter), and a Northern California regional editor for *North American Birds*.

Megan Elrod, a biologist in the San Francisco Bay Program at Point Blue Conservation Science, helps lead the monitoring program for tidal-marsh dependent species, including secretive marsh birds, and works with resource managers and scientists to promote the restoration of resilient tidal marshes throughout the Bay.

Gary Falxa became interested in Yellow-billed Cuckoos while working as a wildlife biologist in the Sacramento Valley. This interest continued after moving to northwestern California, where he worked with the U.S. Fish and Wildlife Service on the conservation and management of rare and endangered species, including birds, butterflies and plants.

Lauren Harter has worked with the Great Basin Bird Observatory on the Lower Colorado River Riparian Birds Project since 2011. Prior to moving to the Colorado River, she worked on field jobs in Arizona, Maine, Oregon, Ohio, and Costa Rica. She is currently the Book Review Editor for *Western Birds* and serves on the Arizona and California bird records committees.

Amy Leist has been the Great Basin Bird Observatory's Lower Colorado River Project Manager since 2008. Her other interests include environmental education, bird banding, and outdoors activities. After graduating with an MA in Biology from Colorado College, she worked on field jobs in Washington, Hawaii, Alaska, California, and Chile. She

received an MS from Humboldt State University in Wildlife, then moved to Reno in 2007 then Bishop, California, in 2012.

Ron LeValley was a founder of Biological Journeys and a pioneer in the ecotourism industry. His travel expertise extends from South America and the Galapagos Islands through Central America and Baja California to Alaska, northern Canada, Australia and Africa. He has been leading natural history and bird-watching excursions for almost 25 years. Much of his early knowledge and inspiration stems from a long involvement with Point Reyes Bird Observatory, including a two-year stint as a biologist at the Farallon Island research station. As a professional photographer, Ron has compiled an impressive collection of over 50,000 wildlife photographs that he uses for presentations and publications.

Breanna Martinico is from San Jose, California. She received her bachelor's degree from the department of Wildlife Fish and Conservation Biology at UC Davis and is currently a graduate student at UC Davis studying raptor ecology and genetics under Dr. Josh Hull.

Nora Papiian is a graduate student in the Shorebird Ecology Lab at Humboldt State University. She was introduced to birding as a child through Audubon summer camps and quickly formed an interest in conservation biology and endangered species management. Since attending a WFO Conference in 2008, she is excited to return to the conference to present preliminary results from her Masters thesis.

Benjamin Pearl is Plover Lead Biologist with San Francisco Bay Bird Observatory. He grew up in San Luis Obispo, California and first fell in love with nature exploring the local tidepools and oak forests. He completed his BS in Ecology and Evolutionary Biology at UC Santa Cruz in 200, and his MS in Environmental Studies at San Jose State University in 2015.

Mel Preston is a Rangeland Field Ecologist with Point Blue Conservation Science. Her base is TomKat Ranch in Pescadero, California, but she travels the central coast to collect data for Point Blue's Rangeland Monitoring Network. Mel's first love is birds; she started with Point Blue in the Northern Sierras in 2009, conducting point counts and searching for woodpecker nests in burned forests.

Peter Pyle is an ornithologist and marine biologist who has studied the ecology of birds, pinnipeds, and sharks in California, Hawaii, and throughout the Pacific. He specializes in bird molt and its use in ageing birds. He currently works for the Institute for Bird Populations in Point Reyes Station, California.

Steve Rottenborn is an ecologist with H. T. Harvey & Associates in Los Gatos, California. He is a member of the WFO Board of Directors, Chair of the California Bird Records Committee, and a Northern California regional editor for *North American Birds*.

Dessi Sieburth is a 9th grader at Saint Francis High School in La Canada, California. He was the ABA 2015 Young Birder of the Year and won the 2015 International Young Eco-Hero award. He is a member of the Pasadena Audubon Society Young Birder's Club and volunteers at the specimen collection at the Moore Lab of Zoology at Occidental College.

Karine Tokatlian manages the San Francisco Bay Bird Observatory's Plover Program, and oversees plover-related research, outreach, and monitoring activities. Karine holds a BS in Field and Wildlife Biology from California Polytechnic State University, San Luis Obispo, and is currently working toward an MS in Environmental Studies at San Jose State University. She has 8 years of professional experience monitoring protected breeding bird populations

along the California coast, including the Western Snowy Plover and California Least Tern. As a native of California, Karine has a profound respect for the conservation of coastal ecosystems and is grateful for the opportunity to nurture her interests through the efforts of the San Francisco Bay Bird Observatory.

Dan Wenny is Landbird Senior Biologist at the San Francisco Bay Bird Observatory working mainly on surveying birds in urban areas of the south bay. Before that he was Grassland Avian Ecologist for the Illinois Natural History Survey.

Tiana Williams-Claussen is a Yurok tribal member and native to the North Coast and the Yurok Reservation. She received her Bachelor's degree in Biochemical Sciences from Harvard University, and has been employed by the Yurok Tribe for 9 years. She was instrumental in the creation of the Yurok Tribe Wildlife Program and the subsequent birth of the Yurok Tribe California Condor reintroduction effort. Her native upbringing and formal education allow her to bridge the gap between traditional understandings of the world and those rooted in Western science, and to work toward a cohesive, well-informed perspective on holistic ecosystem management.

Joe Youtz is an undergraduate student in the Department of Fish, Wildlife, and Conservation Ecology at New Mexico State University. He has a deep interest in birds and avian ecology and plans on continuing his education towards a Master's degree in this subject. Joe has worked extensively to prepare educational outreach programs about wildlife species.

Identification Challenges

Sounds: Team Challenge. *Friday, September 30. 4:00–5:30 p.m. Chinook Room.* **Nathan Pieplow** returns with this pub-quiz style competition to challenge participants with the varied sounds that birds make. Start forming your teams** now! The audience will have plenty of opportunity to participate, too, so come ready to use what you know about bird sounds and to learn even more. WFO logo prizes will be awarded to the winning team!

Nathan Pieplow is the author of the *Peterson Field Guide to Bird Sounds*. He is a former editor of the quarterly journal *Colorado Birds* and an author of the *Colorado Birding Trail*. He teaches writing at the University of Colorado in Boulder.

** Teams can include up to 6 people, but please, no more than two “experts” per team, defined as current or past members of a bird records committee, field guide authors, and/or professional bird tour leaders. Teams are encouraged to come up with their own creative team name!

Photos: Expert Panel. *Saturday, October 1. 4:00–5:30 p.m. Chinook Room.* In this ever-popular staple of WFO conferences, a distinguished panel of identification experts will examine and comment on photographs of “mystery” birds. Panelists will analyze photographs of birds and discuss the relevant aspects of each bird’s particular characteristics that lead to an identification. The intent is to provide a real learning experience for audience and panel alike. Panel moderator is **Ed Harper**.

Ed Harper is one of the finest birders and bird photographers in the country. His lively talks and programs are always highly informative and full of humor. An educator at heart, he taught mathematics and field ornithology classes at American River College for 34 years before recently retiring to spend more time in the field. An active birder, he travels widely and he and his wife, Susan Scott, lead birding and natural history tours all over the world.