The Sandpiper

November 2021

Redwood Region Audubon Society

www.rras.org

In this Issue: • Seabirds and Climate Change • Humboldt Co. and HSU – an Ornithologists' Mecca!

Please join us on Friday, November 12, at 7 pm, for a virtual presentation on:

Clark's Nutcrackers and Whitebark Pine: Pivotal Players in our Western Mountains

With Taza Schaming

Whitebark Pine and Clark's Nutcrackers have a fascinating relationship: the trees provide rich, fatty seeds (with more calories per pound than chocolate), and the birds "plant" the trees' seeds – a single bird may hide up to 98,000 seeds in a year. The food caches help the birds get through the winter, and the leftovers grow into new trees. In fact, Whitebark Pine trees sprout almost exclusively from nutcracker seed caches. This dependency has led to considerable concern for both species because Whitebark Pine ecosystems are rapidly disappearing in the western United States. This disappearance, largely due to mountain pine beetles and the invasive blister rust, has caused concern for the entire ecosystem.

While Whitebark Pine restoration efforts are underway, these efforts will not be effective if Clark's Nutcracker populations decline or their habitat selection changes to a degree that they are not available to disperse seeds. We have limited information on nutcracker population status and behavior, but evidence suggests that declining Whitebark Pine communities are leading to reduced local Clark's Nutcracker populations.

Tromping through snow, then mud and swarms of mosquitos, I have been trapping, surveying, radio-tracking, and satellite-tracking nutcrackers since 2009, to study movement, habitat selection, and social behavior. My ultimate goal is to determine which management actions will increase the persistence of nutcrackers throughout their range. This problem is more urgent than it first seems: these high-altitude pines are essential to protect because they play a critical role in the ecosystem, including helping to retain snow (and thus drinking water) on the upper slopes of the western mountains, and providing high-energy nuts on which many animal species, including the Grizzly Bear, depend.

Nutcrackers also play an important role in forest regeneration and conifer seed dispersal for not only Whitebark Pine, but for at least ten conifer species in western North America. A decline in nutcracker populations would affect not only Whitebark Pine regeneration, but long-distance dispersal of these conifer species. My results advance our understanding of the magnitude of the impact of the decline of Whitebark Pine on Clark's Nutcrackers' behavior and populations. These data will aid in the design of biologically informed management interventions which will help maintain a healthy ecosystem by ensuring persistence of nutcrackers throughout their range.

Since 2009, Taza Schaming has been investigating the impact of the decline of Whitebark Pine on Clark's Nutcrackers, studying the stability and resilience of the Clark's Nutcracker-Whitebark Pine mutualism, to help ensure persistence of these species and the nutcracker's seed dispersal function. She carries out her research in both the Greater Yellowstone Ecosystem and Washington's Cascades, with the ultimate goal of determining which management actions will increase the persistence of nutcrackers throughout their range. Taza grew up in a log cabin in upstate New York. After finishing her Bachelor degree at Tufts University, she moved to Wyoming for the backcountry snowboarding. After a couple of years playing in the snow, she spent time travelling around the world and doing a variety of research on birds, amphibians, plants, and conservation, then completed her Master's at Cornell, before developing her PhD research on nutcrackers. She finished her PhD at Cornell University in 2016, and is continuing her research in a long-term study as a Wildlife Ecologist through Northern Rockies Conservation Cooperative, and a Research Associate at Central Washington University.

Above Top: Taza Schaming with a Clark's Nutcracker.
Above: Whitebark Pines, courtesy of *Gymnosperm Database*.
Right: Sketch of a Clark's Nutcracker, courtesy of *Birds of the World*.

RRAS Field Trips in November!

Sat. Nov. 6th – 8:30-11am. Arcata Marsh, led by Ken Burton.

Sun. Nov. 7th – 9-11am. Our monthly **Women & Girls' Birding Walks** series will be led by experienced birder and writer, Sarah Hobart, at the Eureka waterfront. Wheelchair accessible, and will include a **photography** component, so bring your camera if you have one! **For reservations and meeting location contact our Field Trip Chair, Janelle Chojnacki, at janelle.choj@gmail.com.*

Sat. Nov. 13th – 8:30-11am. Arcata Marsh led by Jim Clark.

Sun. Nov. 14th – 9-11am. Ralph Bucher will lead a walk at the Humboldt Bay Nat. Wildlife Refuge.

Sat. Nov. 20th – 8:30-11am. Arcata Marsh, led by Larry Karsteadt.

Sat. Nov. 20th – Beginning Birdwatching & Project FeederWatch. Drop in 10-12 at the Jacoby Creek School Garden. Contact Denise Seeger, at daseeger@gmail.com for more information.

Sun. Nov. 21st – 9-11am. Ralph Bucher will lead a walk in Eureka.

Sat. Nov. 27th – 9-11am. Wigi Wetlands Volunteer Workday: Contact Jeremy Cashen at jeremy.cashen@yahoo.com or (214) 605-7368.

Sat. Nov. 27th – 8:30-11am. Arcata Marsh, led by Bob Battagin.

**Contact Ralph at thebook@reninet.com for any walks he leads and Arcata Marsh walks. Standard COVID protocols apply.*

Eleven U.S. Bird Species to be Declared Extinct, Including the Ivory-billed Woodpecker

As reported by the Audubon Society, the U.S. Fish and Wildlife Service has proposed officially removing the Ivory-billed Woodpecker (IBWO) from the endangered species list and declaring the iconic woodpecker extinct. This regal species that once reigned over the hardwood bottomland of America's south has been pushed out by logging, development, and hunting, in the early 20th century. Some, however, adamantly believe a handful of the large, red-crested birds could still be out there, living in remote patches of the south.

John Fitzpatrick, former director of Cornell's Lab of Ornithology, thinks the Ivory-billed Woodpecker could still exist and disagrees with the plans to declare the bird extinct. "My opinion is it's premature, especially when included with so many other species for which the evidence of truly being extinct is overwhelming,"

These birds require huge tracts of land with large swaths of old-growth forest to survive. Losing that land and beetle housing trees the birds depend on, is seen as the biggest contributing factor to their demise. But by keeping the bird's status in place, Fitzpatrick says, we are at least conserving the land that it needs while continuing the search for them. And in the meantime, other species that also depend on this habitat will benefit.

Eleven bird species of the U.S. are about to be declared extinct, and Hawaii alone is set to see eight avian species delisted. A major threat to Hawaiian birds is avian malaria, transmitted by non-native mosquitoes and exacerbated by warming temperatures associated with climate change, allowing mosquitoes and the lethal diseases they carry to move into higher elevations – the last refuges of the remaining Hawaiian forest birds. The other U.S. bird species presumed extinct are the Bachman's Warbler, and the Bridled White-eye of Guam.

The Sandpiper is published eleven times a year by
Redwood Region Audubon Society
P.O. Box 1054, Eureka, CA 95502.

President's Column

By Gail Kenny

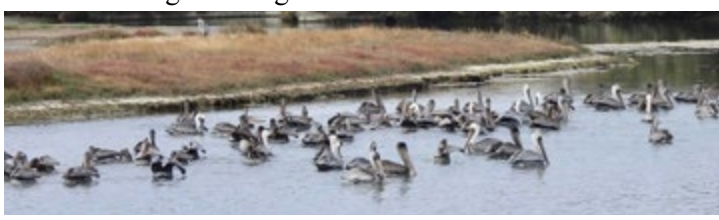
Redwood Region Audubon Society held its first "catio" (cat patio) tour on Saturday, September 18. The morning rainfall stopped just in time for the 80 people who came out. The self-guided tour showcased seven catios in Arcata and McKinleyville. Our plan was to inspire cat owners to think about building their own backyard cat patio for their felines to enjoy safe outdoor time. The tour featured both simple and fancy enclosures to keep cats safe from outdoor hazards such as cars, disease, and injury from other cats. It showed how cat owners have made their yards more wildlife friendly by providing their animals access to a fun outdoor space where they could bird-watch and enjoy being outside.

I volunteered by taking a 2-hour shift at the home of an old friend in Arcata who lives on a busy street. She keeps her cats happy and safe with a simple enclosed space at the back of the house which includes a separate space where the litter boxes are located making maintenance easy and keeping the litter boxes out of the house. I had the chance to tour the other catios after my shift. One of the catios was fenced in with overhanging netting that prevents cats from getting out. One of fancier catios occupied a large greenhouse connected to the house with several outside enclosures attached. Another one was a large room-sized space enclosed on all sides and on top with chicken wire, with lots of ramps and nooks to climb on.

The feedback we received from tour participants was very positive. People enjoyed seeing the different catios and got lots of great ideas. They enjoyed meeting like-minded cat and bird lovers. They appreciated how the tour was set up to make it easy to find the locations. The catio summaries describing each site were also much appreciated. We are already discussing ideas for a future catio tour. If you missed the tour, photos of the catios are available at rras.org.

We would like to thank catio tour organizers, Harriet Hill and Jude Power, for all the time and effort they put into making this catio tour a success! We also thank the owners of the seven catio sites who agreed to show their cat enclosures along with volunteers at each site who greeted participants. Finally, we especially want to thank Denise Seeger and Susan Penn for their generous guidance and material support and for providing us with an excellent model in the 2019 RRAS Bird-Friendly Yard Tour.

On a different note, you may have noticed large numbers of Brown Pelicans around Humboldt County. They breed on islands off Southern California and Mexico and then migrate north up the Pacific Coast in summer. We've had many reports of hundreds of pelicans feeding and congregating locally. Ocean conditions may have been beneficial to the pelican population this year, which is why we were seeing such large numbers of them.



Above Top: A catio on recent RRAS Tour. Above: Brown Pelicans galore at HBNWR, by Ralph Bucher.

In Honor of... Janelle Chojnacki,

Redwood Region Audubon Society Field Trip Chair

By Jude Power

Janelle Chojnacki has recently been honored as a recipient of the prestigious CSU Trustees' Award for Outstanding Achievement for 2021. In addition to academic performance, the award recognizes community service. We congratulate Janelle for this accomplishment and greatly appreciate her contributions to our chapter, such as her leadership in rethinking the function and composition of birding field trips. When asked why she took on this role when new to the area, she explained that it was a way to meet other birders and facilitate a birding community. Toward these ends, she is hoping to increase the involvement of HSU faculty and graduate students in guiding local field trips, and broaden the collection of people who participate.

As a field trip leader herself, Janelle is dedicated to bringing birders of all levels into the fold, and by "birders" she means anyone who simply enjoys birds at any level. Enjoyment is the primary goal of field trips, and she's observed over time that the infectious pleasure of appreciating common birds with others often leads to curiosity and a desire to know more.

One outcome of conversations she's had with local leaders and field trip participants is a 6-month trial of first-Sunday field trips focusing on women and girls. This series was initiated in June and each trip has had a different leader who is free choose a location they think would be fun to bird. The tone is relaxed in pace and supportive of both basic questions and advanced inquiries about bird identification and behavior. Curiosity is encouraged as questions arise while the group absorbs the appearance, behavior and sounds of the different species they encounter.

Janelle's academic research is as singular as her vision of a more expansive birding community. Her study design aims to deepen the understanding of Common Raven predation on the nests of Snowy Plovers, a protected species on California beaches. The question she's attempting to answer is: Are human food subsidies influencing the movement and home ranges of ravens that use Snowy Plover nesting beaches? By capturing ravens and outfitting them with GPS devices, she hopes to learn about the ravens' seasonal variation and use of these beaches. Ultimately, she might be able to correlate the movements of individual ravens with the locations and timing of predated nests.

It's easy to think: Just get rid of the ravens. But there's an important dynamic at work in the natural world: if one offending species (in this case ravens) is removed without eliminating the reason they're there in the first place (human food scraps), then another predator is likely to move in when the original problem species is gone. A "holistic" approach to management could be to eliminate the food subsidies that brought ravens to the beaches in the first place. Something for all of us to think about. Janelle's research may help guide us toward meaningful solutions to nest predation of Snowy Plover and other protected species.

When asked for ending thoughts, Janelle shared that she is continuing to think about approaches to welcoming a variety of people to birding. This could include field trips for beginning birders, or specifically for young birders. Finally, she expressed her appreciation for encouragement and guidance received from the people she's met through Redwood Region Audubon Society.

Left: RRAS Field Trip Chair, Janelle Chojnacki.

Seabirds, Climate Change and the California Current Ecosystem

By Andrew Orahoske

In Carl Safina's Song for the Blue Ocean and Eye of the Albatross, I learned quite a lot about seabirds and the threats that face all pelagic birds and marine wildlife. Twenty years after reading Safina's stories, the world has grown more hostile for these majestic seabirds, and there are more looming threats to their ocean home. Indeed, we are now witnessing the potential for threats to amplify exponentially to marine wildlife, on the west coast of North America and worldwide. This is due to traditional dangers from illegal and unregulated industrial fishing fleets, oil spills, plastic pollution, climate change and now, in a new twist, potential offshore wind developments in critical foraging areas.

Black-footed Albatross chick, courtesy of USFWS, Pacific Region.

The California Current Large Marine Ecosystem extends from Baja California to British Columbia. It is one of a handful of significant cold water upwelling zones around the earth. These upwelling zones are incredibly productive due to the influx of vital nutrients brought to the surface in cold water currents. The result is a proliferation of phytoplankton - the foundation of the marine food chain sustaining everything from microscopic organisms to the largest animals on earth, the great whales. Of course, these upwelling zones are also vital for seabirds from all around the Pacific Ocean, that travel to our coastal waters to feast. There are many species, and here we take a closer look at two species that are commonly seen offshore.

The Black-footed Albatross breeds on islands and atolls from Hawaii to south of Japan. During the breeding season, adults forage over waters typically about 250 miles, and up to 1,250 miles, from their nest. Satellite tracking has revealed that they target seamounts, continental slopes, and areas where different seawater masses or currents interact, areas of cold-water upwelling. Some of the individuals observed in spring off the west coast of North America are making regular trips back to feed chicks in the Hawaiian Islands. During the nonbreeding season, Black-footed Albatrosses wander widely across a vast area, from Alaska to Mexico.

Sooty Shearwaters nest on islands in the southern hemisphere, around New Zealand, Australia, Chile and the Falkland Islands. Remarkably, this species has the longest annual migration of any animal recorded to date, covering the entire Pacific Ocean in a giant figure-8 pattern over 39,000 miles. During their travels, many shearwaters make prolonged stopovers in three discrete regions, Japan, Alaska and the *California Current Ecosystem*. While the global population of Sooty Shearwaters remains in the millions, off the California coast the species has declined by 90% in the last few decades.

Seabirds as Indicators of Ecosystem Health

There are many ways to monitor the oceanic biodiversity for relative changes in productivity from year to year or decade to decade. Fortunately, seabirds are indicator species, and they can tell us about oceanic ecosystem health more effectively and efficiently. In essence, if seabirds are healthy, then everyone is healthy.

"Blue Carbon" and highly productive marine ecosystems

Why does any of this matter in the context of climate change? As researchers have already shown numerous times, the oceans are immense carbon sinks, capturing the majority of CO^2 from the atmosphere and cycling it through an incredible diversity of life. In addition to absorbing CO^2, the oceans have the ability to permanently sequester carbon: when it sinks to the bottom of the ocean, that carbon is effectively cut off from the atmosphere.

In the various strategies put forth to combat the climate crisis, researchers are increasingly recognizing the importance of natural systems in sequestering carbon, promoting ecological complexity and supporting a diversity of cultures. One such strategy involves the concept of "blue carbon" or the ability of marine and coastal ecosystems, including plankton, kelp, seagrasses and salt marshes, among others, to effectively capture and sequester carbon for very long periods of time.

The California Current Ecosystem Needs Protection and Enhancement

More work needs to be done to restore smaller forage fish that form the backbone of the marine food web. The restoration of salmon runs in California and the Pacific Northwest will increase biomass and productivity to a degree that has not been seen for over a century.

However, just one oil spill could significantly and negatively impact our offshore and coastal environment. As is currently unfolding in southern California, and reported by Sarah Rose, Executive Director, Audubon California; "the oil slick infiltrated the Talbert Marsh, a 25-acre ecological reserve that is home to dozens of species of birds. Along with the nearby Bolsa Chica Reserve, these are among the last remaining wetlands along the southern California coast, making them vital stopovers for migratory birds along the Pacific Flyway… Thousands of birds could be impacted, including Brown Pelicans, Pacific Loons, Western Grebes, Double-Crested Cormorants, Ospreys, American Avocets, and Willets. We received reports of oiled Western Snowy Plovers… (and) about 8% of the Pacific coast population, winter in Orange County."

Offshore oil development and international shipping created a large oil spill that will impact that area for years to come. However, many oil spills are not related to oil drilling or pipelines, but instead originate from large ships that run aground or wreck due to negligence or inexperience. Keeping large ships out of our regional waters and limiting coastal and marine development is the only way to prevent oil spills in the future.

The oceanic ecosystems off our local coasts are some of the most spectacular and productive on the entire planet earth – and they need our help.

Above: Sooty Shearwater, by Cindy Marple.

Left: Tracks of 19 Sooty Shearwater migrations originating from breeding colonies in New Zealand. Flight patterns of birds are shown during breeding (light blue); the start of migration, and paths of northward transit (yellow); and wintering grounds and southward transit back to New Zealand (orange).
Image credit: Tagging of Pacific Pelagics (TOPP)

A Question of Scale

By Jim Clark, RRAS Conservation Committee Co-chair

By the time you read this our Redwood Region Audubon Society Chapter will have submitted scoping comments on what is now called the Humboldt Wind Energy Area. This is the first project that we have seriously evaluated that is meant to benefit the habitability of the planet by reducing green-house gas emissions (GGE), while at the same time has the potential to negatively impact birds and wildlife on a local and regional scale. It is, however, not going to be the last project of this type that we will need to consider.

In his 2007 paper, S. L. Stephens, et al, U.C. Berkeley College of Natural Resources, estimated that prehistoric (before 1800) fires burned an average of 4,447,896 acres (1,800,00 ha) per year. Banning of Native American fire management during early colonization and a century of management for industrial forestry by fire suppression, means that the California "fire deficit" is enormous. When housing developments were established within these dense forests and climate change enhanced drought occurred, the recipe for disaster was complete. The oven is now lit.

A related item is urban sprawl. The mid-twentieth century aspiration of owning a home, perhaps even a ranchette, and commuting by car to work has led to nearly half of California's GGEs being caused by transportation. Significantly reducing California's GGEs will only be possible if enough clean energy is generated to supply our current electricity needs AND run about 10,000,000 electric cars that will need to replace petroleum powered cars. This by itself is a staggering number, but when you consider the number of people that will need to make significant changes to their lifestyle it is even more daunting. It is a sad irony that what created urban sprawl into fire prone areas, is partially responsible for fires in those areas.

Academic studies indicate that at least ten times more funding than what is currently allocated to wildland management for fire, is needed to begin to be effective. This will require a year-round work force equivalent to, in the writer's opinion, the workforce being used to fight the current California wildfires. This will not be a five, or ten-year job; it will take the better part of a century and need to continue in perpetuity – long enough to occupy generations of wildland management specialists and professionals, including Native American Tribes.

The California climate change crisis looks to be a longer-term disaster, putting Humboldt Offshore Wind Energy Project in perspective. Even if offshore wind energy supplies all of Humboldt County's electricity, reducing our carbon GGEs, it would still continue to be a global problem. It's not easy to grasp the full scale of what we must do, as individuals, Audubon members, and citizens, yet we must act in a big way. It has been shown that giving the aging brain a good mental workout by solving problems keeps it young - if you become active in the Conservation Committee, I can only promise the former.

Center: Flock of peeps, by Leslie Scopes Anderson.

HSU and Humboldt are a Mecca for Aspiring Ornithologists!

By Mark A. Colwell, Wildlife Department, Humboldt State University

Years ago, as a newly minted Ph.D. contemplating my future, I pondered the best locations to teach and conduct ornithological research. I grew up in Portland and had high school friends who attended Humboldt State University (HSU); therefore, I was aware of its strong reputation in the natural and applied sciences. Later, after studying shorebirds in the Saskatchewan prairies and northern lakes of Minnesota, I relished the idea of continuing that endeavor so I sought out a hotspot for shorebirds. I quickly settled on HSU and Humboldt County as the ideal place. About a year later, HSU advertised a temporary position, for which I successfully competed; a year on I competed for a tenure-track position. All this is to say that I ended up spending my entire professional career at the university that I believe offers unrivaled field experiences and hands-on learning opportunities, especially for students seeking an ornithological future. Here's why:

Academic training: Aspiring ornithologists can sample from diverse courses that cover all things birdy. In addition to the basic Ornithology course, there are separate advanced courses covering the ecology, behavior and conservation of waterfowl, shorebirds, passerines, and raptors. A regular graduate-level offering in Advanced Ornithology has covered topics of molts and plumages, migration, incubation, and vocalizations. In other words, the curriculum offers ten different bird classes. Search the curriculum of other North American institutions and you would be hard pressed to find many that offer even a single course in ornithology.

Practical learning: The university's location offers readily accessible field opportunities, in part owing to partnerships with agencies (e.g., California State Parks, Bureau of Land Management, U.S. Fish and Wildlife Service) and other nongovernmental groups (e.g., Friends of the Dunes). As a residential campus, students can walk out the door into habitats (e.g., Arcata's Redwood Park, Arcata Marsh and Wildlife Sanctuary) that afford diverse birding experiences. For example, it was not uncommon for students in my Ornithology lab to tally 80+ species on a 3-hr lab on a November morning. Moreover, faculty routinely create field experiences that offer initial exposure to bird banding, for instance, as well as other labs that emphasize identification by sight and sound, behavioral sampling, and point count methodology. And, to ice the cake, no university that I know of offers, at no cost (…ok, other than that embedded in university fees), the opportunity to go on a pelagic birding trip! As an outcome of this training, students acquire first-hand knowledge which makes them competitive for their first jobs, often with HSU faculty.

Bird diversity: I've done analyses of shorebird diversity along the Pacific Americas Flyway (PAF) to make the argument that Humboldt Bay is special in supporting a rich species assemblage: 52 of the world's 215 species of shorebird have been observed locally! The list includes abundant Nearctic migrants (e.g., Western Sandpiper) and rarities from the Palearctic (e.g., Wood Sandpiper). Overall, the bay's high shorebird diversity stems from its mid-latitude location along the PAF and diverse habitats, including ocean-fronting beaches, intertidal flats, seasonal wetlands, riverine habitats, and agricultural lands. Expanding this argument to include all avian taxa, eBird data show that birders have detected 480 species in the county. My guess is that there are few other universities that offer comparable bird diversity, but this requires formal analysis.

Welcoming community of birders: For the novice, birding can be an overwhelming and sometimes intimidating experience, depending on the folks with whom you bird. Some thrive on competitive birding; others enjoy a more collaborative experience. In Humboldt we have everyone covered! For instance, Redwood Region Audubon Society offers several walks each month, some geared more to novice birders, some to those more experienced and many encourage both. They also offer monthly birding trips for women and girls, and seabirding trips by kayak.

So, next time you travel and accompany a young birder keen on enhancing their ornithological knowledge with practical learning in an academic setting, be sure to brag (as I have!) about HSU and Humboldt County!

Left: Mark Colwell studies shorebirds with students, in Humboldt County.