

EC NEWSLETTERS



Redwood Region
Audubon Society



December 2025/January 2026



Due to the unusual circumstances we have recently experienced, the Publication of *The Sandpiper* delivers this month in a mailing joined by the newsletters from our sister organizations, Environmental Protection Information Center (EPIC), North Coast California Native Plant Society, and Humboldt Waterkeeper, that are

also members of the Northcoast Environmental Center. We trust our newsletters will soon resume publishing in their usual format. Meanwhile, we are committed to distributing these newsletters to as many members as we can reach.

If you have any questions, please contact us at president@rras.org. As always,

the most up-to-date information can be found at each of the organizations' websites: rras.org, wildcalifornia.org, northcoastcnps.org, and humboldtwaterkeeper.org. To support us through this period, it would be helpful if you would make donations to these environmental organizations.

- Kathryn Wendel, President of RRAS



Potted Plants for Sale

The chapter's nursery has inventory that needs to get into people's yards ASAP. Plants are for sale at good prices during our working days and hours: Wednesday, Friday, and Sunday 10 a.m.-1 p.m. Visit us at Freshwater Farms Reserve, 5851 Myrtle Ave. Email questions to northcoastcnps@gmail.com.

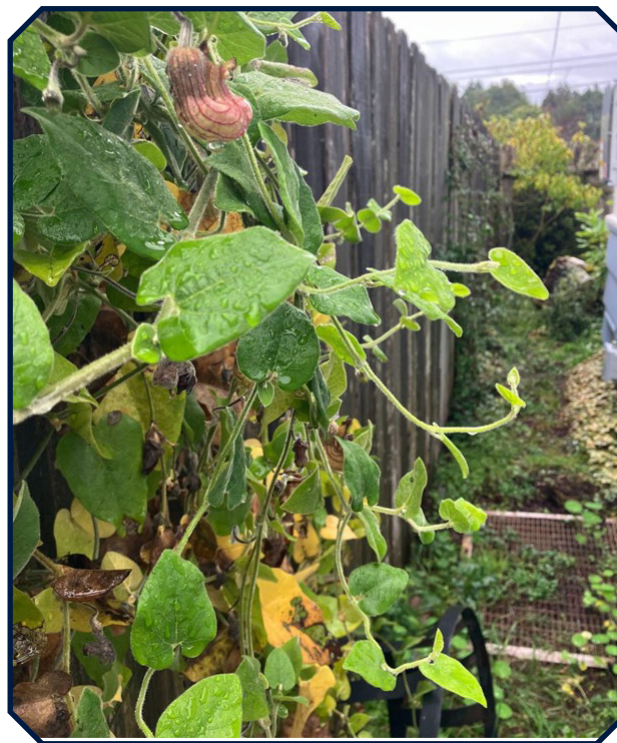
Evening Programs

Evening programs are on second Wednesdays at the **D Street Neighborhood Center** (1301 D St, Arcata). Doors open at 5:45, and the program is called to order at 6:00. After the lecture people can mingle, chat with the speaker one on one, and maybe one or two poster presentations will have authors present to discuss their work. Attend in person or register to zoom via northcoastcnps.org.

Wednesday, Dec 10, 6-7 p.m.
Assessing Conservation Priorities in California for Vascular Plants and Mosses Using a New Evolutionary Approach

Our out-of-town guest speaker, Brent Mishler, is on the statewide board of directors of CNPS and is retired from being Distinguished Professor of Integrative Biology and Director of the Herbaria at UC Berkeley. He will speak about plants that have narrow geographic ranges (endemics) and how this relates to whether they are deeply or shallowly rooted in the tree of life. Certain centers of endemism have a concentration of plants that are deeply rooted, so we might say they are *museums* of evolution, and others have a concentration of plants that are shallowly rooted,

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CNPS welcomes everyone.
No expertise required.



California Pipevine. Photo by G. Zeigler

cradles of evolution.

Wednesday, Jan 14, 6-7 p.m.
Transforming Small Garden Spaces in Suburban Eureka

Gretchen Zeigler (retired as Director of the Sequoia Park Zoo during its transformation to a modern showcase of the natural world) will chronicle

her gardening journey adding native plants in her backyard, in gardens of friends, and at the zoo. She has found joy not only in the plants but also in the ever-increasing array of pollinators and other insects that use these gardens.

Field Trips

Sunday, Dec 7, 10am-12 noon. Accessible Trail Exploration at Hikshari'

The original name of the Elk River, Hikshari', has been given to the paved, wheelchair-accessible portion of the Humboldt Bay Trail. This is a flat multiuse trail between restored salt marsh and the beach of the bay. Expect to encounter salt-loving species, such as Pickleweed and Western Sea-Lavender. Plant identification through examination of the seed forms will be a focus. For an update and reminder, register via northcoastcnps.org. Meet at the Herrick Avenue Park & Ride (40.75843, -124.19075). Wear walking shoes, dress in layers, bring a hat and gloves. Bring water and if you want to keep on exploring after the walk, bring lunch. For more information, email Rita at ritazito53@yahoo.com.

Thursday, Dec 11, 9:30am-4pm. Field Trip with Mishler

The chapter is hosting Brent Mishler from UC Berkeley and the CNPS Board of Directors. He'll be giving the lecture on Wednesday, so on Thursday we are taking him on a field trip. This is an opportunity for more extended conversation. Mishler is an expert on evolutionary trees, which is a big reason why names are changing, and an expert on how the species rank is at best a crude approximation. We will visit places where there are lots of cool mosses and liverworts, possibly Big Lagoon Bog. Gather to carpool at the parking lot of Ray's Food Place (5000 Valley W Blvd, Arcata, CA 95521) at

Continued next page

CNPS, continued

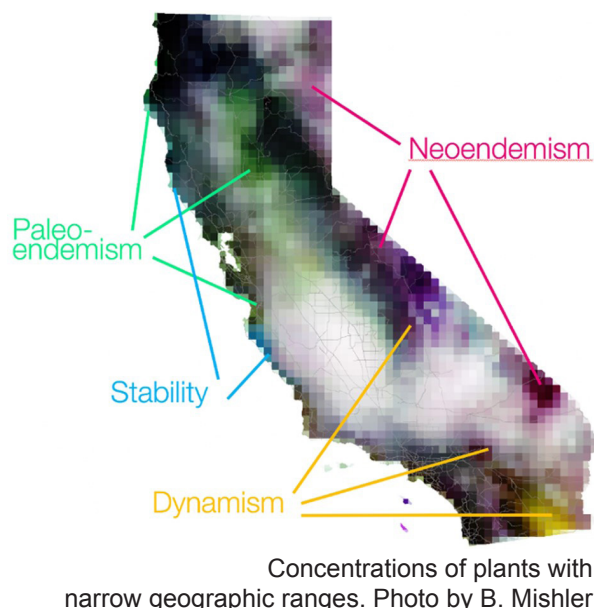
9:30 a.m. Bring water, a lunch, and waterproof boots. To receive an update and reminder, fill out a form via northcoastcnps.org.

Saturday Dec 27, 1pm. Plant Walk. Reduce the Green Blur 1: Connecting to Plants

Meet at the Sequoia Park fountain at T & Glatt for a fun, short plant ID session. Together, we'll slow down, look closer, and learn how to tell our local native plants apart—turning that “green blur” into familiar faces. Whether you're a family, a teen ditching your parents, or a nature enthusiast, this is a great way to connect with the living landscape of Sequoia Park and build a new appreciation for the plants all around you. **Bonus:** Participants under 18 will receive a **free Zoo Lights pass!** Come meet your plant neighbors, learn something new, and help reduce the green blur—one leaf at a time. Leader Joann Kerns.

Sunday, Jan 11, 10am-1:30pm. Trinidad Head (Chuerewa') and Trinidad Museum Native Plant Garden

Meet at Pacific Union School, 3001 Janes Rd., Arcata, at 9:30 a.m., or the Trinidad State Beach parking area, at the lower end of Edwards St.- Lighthouse Rd. in Trinidad, at 10:00 a.m. We'll walk the Tsurai Trail, named for a displaced Yurok village, to see what's blooming in the midst of winter—perhaps the stunning, stalwart catkins of coast siltkassel—and look for early signs of native perennials, along with the ubiquitous non-native flora. If wind and visibility abide, we'll look for migrating gray whales and feathered coastal denizens.



We'll then head back into town to the Trinidad Museum Native Plant Garden, just to pique our curiosity about harbingers of spring. The museum and garden parking area is located at 400 Janis Court, at Patrick's Point Rd., adjacent to Main St. and the Hwy. 101 egress. Bring water, snacks, and come dressed for weather. Heavy or steady rain postpones trip one week to Jan. 18. Leader Peter Warner; phytopagan@sonic.net; 707-235-2713.

Saturday Jan 31, 1pm. Plant Walk. Reduce the Green Blur 2: Protecting the Park

Meet at the Sequoia Park fountain at T & Glatt, for a fun short plant walk. We'll review the native plants you met last time and learn to spot non-native and invasive species that can crowd out our park's natural residents. Help reduce the green blur, see the park in sharper focus, and take action to protect Sequoia Park and the surrounding area. **Bonus:** Participants under 18 receive a free native plant to take home! Come meet a few plant villains, learn why removal is important, and become a guardian of the park's native plants! Leader Joann Kerns.

Recurring Outings

Saturday, Dec 6 & Jan 3, 1-2pm. Native Plant Garden Tour

Native Plant Garden Tour at the Arcata Community Center Native Plant & Wildlife Garden with Pete Haggard. The garden is on the hillside to the left of Healthsport, Arcata (300 Community Park Way), opposite the Arcata Community Center. Free. This walk repeats every first Saturday. If rain, bring an umbrella.

Saturday, Dec 20 & Jan 17, 9-11am. Rohner Park Restoration Work Party

Help preserve Fortuna's exceptionally old second-growth redwood forest by removing invasive plants. Meet at the Fireman's Pavilion. Tools and gloves provided, but it helps to bring your own. Co-sponsored by our chapter and the Fortuna Parks and Recreation Department. A third-Saturday event.



The Environmental Protection
Information Center

Copper Findings in Smith River Estuary Tributaries & Effects on Salmon

By Josefina Barrantes

Estuaries are known as the nursery of the sea. They provide critical habitat for marine animals during their early life stages in their brackish environment, offering abundant food and protection from predators. These unique coastal ecosystems are extremely biodiverse, supporting a wide array of species — contributing significantly to overall marine and freshwater biodiversity. The Smith River estuary specifically supports many threatened species such as chinook and coho salmon, tidewater goby and smelt.

The community of Smith River, where the estuary lies, is heralded as the “Easter Lily Capital of the World,” producing nearly 90% of the world's Easter lily bulbs. Easter Lily bulb farming requires virtually sterilized soil to keep nematode worms, fungus and basically anything else from eating or disfiguring the lily bulbs. To combat these pests, farmers apply 300,000 pounds of pesticides annually to a small acreage of

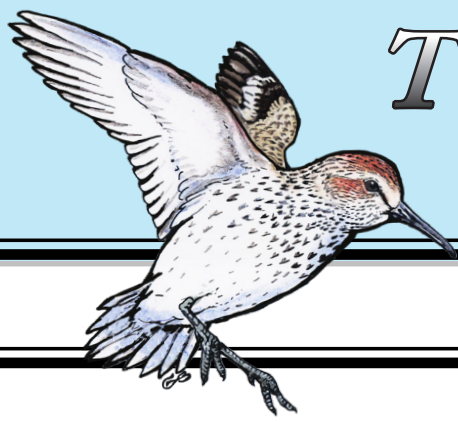
coastal floodplain lands that leach directly into the estuary. The pesticides used on these floodplains include 1,3 dichloropropene (1,3-D), metam sodium, copper hydroxide, diuron, ethoprop, napropamide, permethrin, phorate, and others.

Many of the products used in the Smith River estuary listed above are currently on the state of California's Proposition 65 list of chemicals known to cause cancer and/or identified by the National Marine Fisheries Service as harmful to salmon. A recent Smith River Plain Surface Water Quality Monitoring Report conducted by the North Coast Regional Water Quality Control Board predicted copper toxicity risk through the Biotic Ligand Model at nearly every estuary tributary that was monitored with an exception for Rowdy Creek. This means that the 300,000 pounds of pesticides that are poured into the Smith River Plain to cultivate lily bulbs are seeping into the waterways adjacent to the fields.

Copper is a significant threat to the Smith River as copper can impair or destroy neurons that are associated with a fish's ability to smell and detect movements in the water. A salmon's sense of smell is important for it to be able to migrate throughout the river basin and to the ocean during the various critical stages of a salmon's reproductive life. Additionally, these impaired functions are vital for them to be able to detect predators and pursue prey. Additionally, other pesticides applied on the lily bulb fields have similar impacts on fish's systems. Diuron, imidacloprid and Ethoprop are also known to impact a fish's growth early in its life, and overall metabolism and health. Between the copper toxicity, thus increased acidification, and the Diuron, imidacloprid and Ethoprop, this brings forth a compounding effect for fish called synergistic toxicity; when the combined effects of different chemicals pile on each other and have an overall effect that is far greater than you would expect from just one chemical.

What will effectively help the fish in the Smith River estuary is implementing zero discharge requirements from farmers, and disallowing the 300,000

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The Sandpiper

Dec 2025/Jan 2026



Redwood Region Audubon Society

www.rras.org

December Program – A Call to Join the CBC Tradition

Join us on Thursday, December 18, at 7:00 p.m. for an orientation on the upcoming Christmas Bird Count!

Our December program will cover the basics of the Christmas Bird Count circles of our area. Come and learn the history of our local counts as well as basic protocols and fun facts about bird trends over the years. The origin of the Christmas Bird Count in Humboldt County can be traced back to the Centerville Count, which began in 1947 as an extended family event hosted by the Cranes of Ferndale, and it's now a long-standing tradition for many birders here.

The December meeting will also be a last-minute opportunity to volunteer for some of the counts, but don't wait until the 18th to sign up! RRAS conducts several counts, and whether you'd like to help out with one or all of them or simply contribute a quick thirty-minute backyard bird count on the day of your local count, it's easy to sign up electronically. Simply email president@rras.org to inquire about the circle closest to your home (or heart!), or email one of the circle leaders to sign up directly:

- **Del Norte/Crescent City:** Sunday, Dec. 14, Lucas Brug, lucas.hendrik@hotmail.com
- **Arcata:** Saturday, Dec. 20, Tony Kurz, tonyk_71220@hotmail.com
- **Willow Creek:** Saturday, Dec. 27 (subject to change), Max Brodie, brodiemaxa@gmail.com
- **Orick/Tall Trees:** Saturday, Jan. 2, Ken Burton, shrikethree@gmail.com
- **Centerville/Loleta:** Sunday, Jan. 4, David Juliano, villosus1971@gmail.com

The program will be held at our regular venue, Six Rivers Masonic Lodge. See details in the January program announcement. All are welcome!

January 2026 Program

Join us Thursday, January 15, at 7:00 p.m. for an update from Chris West on:

The California Condor Recovery Effort



Chris West is the manager of the Northern California Condor Restoration Program, a joint program between the Yurok Tribe and Redwood National and State Parks.

Chris has been working with California Condors since 1999 and has spearheaded the Northern California recovery effort under the Yurok Tribe since 2008. He will present the basics of condor conservation, application of methods to the Pacific Northwest, challenges encountered by the current effort, and future directions for condor conservation.

Programs are held at Six Rivers Masonic Lodge, 251 Bayside Road, Arcata, or you can join via the Zoom link found on our website. Drinks and goodies are served at 7:00 p.m., the program begins at 7:30.

RRAS FIELD TRIPS IN DECEMBER

Every Saturday, 8:30-11am. Join RRAS at the Arcata Marsh and Wildlife Sanctuary for a free guided field trip with an experienced birder. The meet-up spot is the parking area at the end of I St. (Klopp Lake). Bring binoculars and scopes if you have them. If not, come on out anyway!

Trip leaders for December: Dec 6, Keith Slauson ~ Dec 13, Jonny Sperling ~ Dec 20, Michael Morris ~ Dec 27, Kathryn Wendel

Sunday, Dec 7, 8-11am. Join trip leader Cedrik von Briel for birding along the North Jetty of Humboldt Bay. This trip will focus on viewing birds in the entrance channel of Humboldt Bay and the open ocean. *See the report in this issue from the November 9 trip for what we can expect to see...and more!* We will only venture out as far as it is safe to do so based on ocean conditions, but we can reasonably hope to make it to the tip of the jetty where an elevated platform provides excellent offshore views. Meet at the Cypress Patch at the

end of New Navy Base Road. Bring binoculars and spotting scopes if you have them. Contact Cedrik at (650) 315-4968 or cedro.de.bryl@gmail.com.

Sunday, Dec 14, 9-11am. Join trip leader Ralph Bucher for a walk at the Humboldt Bay National Wildlife Refuge. This easy two-mile walk is along a wide, flat, gravel-packed trail. Email Ralph to sign up at thebook@reninet.com.

Sunday, Dec 21, 9-11am. Ralph Bucher leads a walk on the Eureka Waterfront Trail, starting at the foot of Del Norte Street and continuing on a flat, paved trail that is **wheelchair accessible**. Shorebirds have arrived! Email Ralph to sign up at thebook@reninet.com.

Saturday, Dec 27, 9-11am. Wigi Wetlands Volunteer Workday. Join a fun group of volunteers to create bird-friendly habitat in a section of the bay trail behind
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President's Column

By Kathryn Wendel

Season's greetings as we finish out 2025 and celebrate the start of a new year. RRAS had many accomplishments forwarding our mission to protect birds and support local conservation efforts this year, and we sincerely thank our dedicated members and volunteers for all their time, effort and support.

We led over 100 guided birding trips around the Redwood Region, including a full season of pelagic trips. We are making progress with the Third Slough Enhancement Project (aka Lucas Street Parcel), a wetland greenspace in Eureka that we are hoping to re-zone away from development and restore to an urban sanctuary for both wildlife and public use. We also sponsored events throughout the year, including offering student scholarships, partnering with the Godwit Days Bird Festival on the Student Bird Art Contest and the Big Sit, and hosting the Christmas Bird Count (CBC) Compilation Gathering.

The order of the CBC Counts is changing this year. Traditionally, the Tall Trees Count is the last one, held in early January, with the Centerville Count held earlier. This year, the Centerville Count, to be conducted on Sunday, January 4, will be the last for our region, with a Compilation Gathering held after that at Six Rivers Masonic Lodge. All CBC volunteers from any of the circles are welcome to attend and enjoy food and beverages, share stories, and bemoan species missed from their CBC. There will also be a



Compilation Gathering after the Arcata Count. Watch your email for details.

Going into the new year, RRAS is looking forward to collaborating with the first-ever California Statewide Breeding Bird Atlas project. This major effort includes a five-year fieldwork phase (from 2026 to 2030) plus four more years for data analysis, and represents a collaboration between many government, nonprofit, and academic organizations across the state and nation.

Cornell University's eBird Lab has created an entire section of their website to help track the collected data in real time, including suggestions on where to bird to fill in data gaps. For any birder who would like to change things up from chasing rarities to chasing breeding bird presence and behaviors, this will provide an opportunity to explore under-birded habitats and contribute to a database monumental in scale and effort. Think of it as "atlasing" birds rather than "chasing" birds.

RRAS is hoping to lead guided birding trips to some of the remote or under-birded areas in Humboldt, Trinity, and Del Norte counties during this endeavor, especially in interior southern Humboldt County, where many areas have never had a single minute of birding effort, let alone breeding bird survey effort. Visit www.californiabirdatlas.org/faqs to learn more.

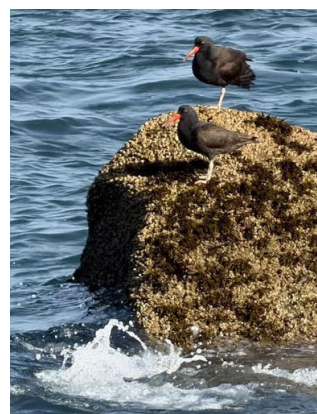
Finally, be sure to buy tickets for our annual banquet on Saturday, February 21! This catered event will feature a silent auction, a bookstore, and keynote presentation by renowned biologist, bird guide, and podcaster Ivan Phillipson. Space is limited, so sign up early to secure your spot as well as the early-bird price.

A Field Trip by the Sea – North Jetty Doesn't Disappoint

By Gina Rogers

It all felt a little magical. Conditions at the North Spit can be pretty brutal, but on this Sunday (November 9) the sun was peeking out through the clouds, there was hardly any wind, and it was a low tide rising. A good-sized group convened in the Cypress Grove, fully half bearing scopes. Leaders Jonah Lenert and Tylor Bell-Rogers casually laid out a wish list of hoped-for species, and right around the first corner, there was one on the list, a Burrowing Owl proudly demonstrating how camouflage works: very hard to see and then, there he was.

We all then traipsed down the jetty, which was very slippery in the middle section, but bone dry and easy walking for the last third to the end. Everyone kept calling out their sightings—gulls aplenty, Common Murre, some dramatic Black Oystercatchers.... A female Belted Kingfisher belted out her rattling call, alerting all to her presence. You couldn't miss the Surf Scoters (660!),



Black Turnstones (70!), and Brown Pelicans (110!). And by the time we were done, we had hit three trifectas—Red-necked, Eared, and Western Grebes; Red-throated, Pacific, and Common Loons; and Brandt's, Pelagic, and Double-crested Cormorants!

But Tylor was really really hoping for the Rock Sandpiper, and called on all to help manifest it for him. And the magic happened. Although it flirted with the rocks, going back and forth, there were many periods of clear viewing. While neither the Snowy Plovers or the Snow Bunting that had been spotted the day before materialized, the walk ended with 42 species recorded for the official list and especially long looks at many.

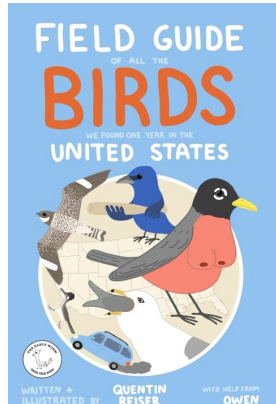
Burrowing Owl and Black Oystercatchers, by Gina Rogers; Rock Sandpiper, by Jonah Lenert



HAPPY HOLIDAYS!

“Listers” Brothers’ Humorous Twist on Field Guides

Review by Gail Kenny



If you haven't yet seen the free and commercial-free documentary “Listers” on YouTube, you're missing out. I have watched it a couple of times. It's about two brothers, Quentin and Owen Reiser, who decide to pick up birding and go all in with a low-budget lower 48 big year in 2024. Their learning curve from beginning birders and their take on who birders are is quite amusing. I wanted to keep the good time going, so I bought their self-published *Field Guide of All the Birds We Found One Year in the United States*, by Quentin Reiser with help from Owen.

The book is organized by the road trips they took in a 2010 Kia Sedona. Quentin drew pictures of the birds and wrote entertaining descriptions. For example, a barn swallow in flight: “This is the best swallow. All the rest of them are cool and all, but this one is the best. They are easily told apart from the other swallows by their forked tails.” Interspersed are stories about their experiences and QR codes linked to videos of the birds or their story of seeing the bird. At a time when the news is so distressing it was wonderful to be entertained by the experiences of Quentin and Owen.

The Dalliance of the Eagles

Walt Whitman (ca. 1881)

Skirting the river road, (my languid forenoon walk, my rest,) Skyward, in air, a sudden muffled sound—the dalliance of the eagles, The rushing amorous contact high in space together, The clinching, interlocking claws—a living, fierce, gyrating wheel, Four beating wings—two beaks—A swirling mass, tight grappling, In tumbling, turning, clustering loops, straight downward falling, Till o'er the river pois'd, the twain yet one, a moment's lull,

A motionless, still balance in the air—then parting, talons loosing, Upward again, on slow-firm pinions slanting, their separate, diverse flight, She hers, he his, pursuing.

Walt Whitman's poem title, “The Dalliance of the Eagles,” puts to mind some of the colorful titles used for various groups of birds. For eagles, you'll hear “a soar of eagles,” or “a convocation” or “an aerie.” Then there's a squadron of pelicans, charm of finches, exaltation of larks, and my personal favorite, an “impossibility of shearwaters.” Check out baltimorebirdclub.org/gnlist.html for a great list plus interesting tidbits about the origins of the names. Or just google “group names for birds”! Gina Rogers

Dear Acorn (Love, Oak): New Book a Naturalist's Delight, Review by Andrea Tuttle

If you were a pebble, what would you say to the river as you tumble along its bed? And how would you thank your toes for helping you keep balance? *Dear Acorn (Love, Oak) - Letter Poems to Friends*, the charming book of poems by Joyce Sidman, written in the form of short letters, delights children and us big kids too.

The poems sparkle with perspectives you hadn't thought of before. A bubble greeting the sky as it rises in the breeze, and the sky thanking it back for the soapy kiss. Buttons talking to coats, oceans talking to turtles, little things talking to big things that bring laughs and surprise.

Joyce Sidman is an award-winning nature poet for children. Melissa Sweet illustrates with whimsical collages that prompt chats with the child in your lap. There's even a Pileated Woodpecker with a chic crest of magenta. The author concludes with a guide on how to write your own letter poem, taking on the voice of your subject. Exactly the skill for countering nature deficit and helping children observe the natural world around them.



Kid's Corner WOWZA WILDLIFE!

By Leslie Scopes Anderson



FUN FACTS

A Red Fox dives into the snow to catch a vole! Their super-power is acute hearing. They can hear mice squeaking 100 yds away.

WHERE IN THE WORLD?

Red Foxes are widespread throughout North America. They are very adaptable and are sometimes seen in suburban neighborhoods and parks.



Nature Should Have Its Place Where You Live, by Jim Clark, Co-Chair of RRAS Conservation Committee

On October 15, 2025, the *Lost Coast Outpost* published an editorial by Tom Wheeler, Environmental Protection and Information Center; Colin Fiske, Coalition for

Responsible Transportation Priorities; Melodie Meyer, Redwood Coalition for Climate and Environmental Responsibility; and Jennifer Kalt, Humboldt Waterkeeper, advocating infill instead of sprawl development. After citing positive results of infill, the authors urged readers to contact the Humboldt County Association of Governments (HCAOG) to adopt a policy of infill and curtail sprawl.

Some Historical Context

In 2007 and 2008 Humboldt County was awarded a grant by The California Endowment to study the public health effects of how each of three alternatives (infill, status quo, and out fill) would affect public health. The peer-reviewed document is titled “Humboldt County General Plan Update Health Assessment.” Although you won’t find it on the Humboldt County website, its purpose was to provide guidance for county planning. When publicly introduced to the Board of Supervisors in 2008, several audience members accused the Department of Health and Human Services of attempting to sabotage the housing and real

estate business sectors. To my knowledge there have been no challenges to the facts as presented and interpreted in this document. Interesting takeaways from the study were:

- The “rural lifestyle” is not healthier than an “urban lifestyle.”
- Greenhouse gas emissions from transportation, commute times, and miles driven per capita were not significantly different from the statewide average in 2007.
- Residents of walkable communities are generally healthier than residents in communities that require driving to get to services.

Although infill has many benefits including economic, housing availability, and reduced infrastructure costs, open space and natural areas must be included in infill planning. Access to nature, including wildlife, is an important component in healthy living. The goal of infill development should not be to “force” people into dense housing but to offer an attractive alternative to sprawl development for families and individuals of all income levels. Close access to natural areas is known to be considered an asset by upper- and middle-income people looking for a home to buy. Having this asset close to home and work is better than commuting through sprawl.

Natural areas interspersed within an urban environment benefit birds, and birds provide contact with nature throughout the community.

You can find the full document at:

https://hia.communitycommons.org/cc_resource/humboldt-county-general-plan-update-health-impact-assessment/

DID YOU KNOW?

Compassion and Protection

Between October 7 and November 10 of this year, there were 39 Nextdoor notifications of missing cats in the greater Bayside area. These stories represent much suffering and distress, not only for the unfortunate cats but for the wildlife they attempt to capture to feed themselves. Being at large and uncared for is a miserable circumstance for cats, and nearly always results in injury, illness, or early death. Please, if you discover an unhoused cat begging for food, don’t feed it. Instead, take it to the county shelter in McKinleyville where it can be adopted out to a loving home. This compassionate action can protect cats as well as wildlife. If you own a cuddly cat yourself, keep it indoors, on a leash, in a catio, or otherwise contained. *For the birds!*



This Holiday Season, Think Twice About Stringing Up Lights

By Jolian Kangas, RRAS Secretary

Of the myriad impacts human encroachment has begat on wild habitats, one of the less commonly considered is that of outdoor light pollution. From dense residential lighting in city skyscrapers to floodlights at rural airstrips, humans have created the equivalent of daytime illumination during times it should be pitch black.

This phenomenon has led to severe impacts on other species; for birds in particular, it is a literal waking nightmare. A study recently published in the journal *Science* revealed that birds inhabiting a light-polluted area were extending their active daytime (as measured by call frequency) by up to 51 minutes on average. Some species fared worse, with variables including eye size, nesting behavior, and migration paths found to be factors in the overall impact of excessive artificial light exposure. The result can lead to chronic exhaustion for a number of birds.

The negative impacts of all this light affect captive birds as well. One of the most profound moments I’ve ever experienced in interacting with a non-human animal involved a cockatoo who was upset about being left in a cage with a bright overhead lamp. The bird’s caregiver had neglected to darken the room before going to bed. It was about 1:30 a.m., and I was the last person awake in the house. When the bird began screeching, I went to check on him and noticed the light. I shut it off, and the cockatoo exclaimed in clear English, “Thank you!”

Now that the year is drawing to a close and holiday festivities are ramping up, perhaps this is the time to reconsider your choice of decorations. Many of us enjoy the visual spectacle of a well-adorned house or front yard, sparkling with hundreds of tiny lights. But for a bird, this type of display is just adding to an unnaturally lit sky during the season of maximum darkness. Disorientation and injury can and will occur.

“It’s just a light switch away,” Brent Pease, co-author of the study in *Science* told the *Washington Post*, “We’re optimistic about darkening the night again.”

RRAS FIELD TRIPS, continued
Bayshore Mall. Bring water and gloves. We provide tools and snacks. Contact Susan Penn at susanpenn60@gmail.com for more information.

Saturday, Dec 27, 8:30-11am. Join RRAS in Southern Humboldt for a free guided bird walk. Meet leader Tess McGuire at Tooby Park, one mile west of Garberville on Sprowl Creek Road. Contact Tess (tmcguire9130@gmail.com) with questions and to sign up.

NOTE: See rras.org for January field trips.

Copper Findings, continued

pounds of pesticides from being applied annually to the coastal plain. As the Regional Water Board continues to develop their Waste Discharge Requirements for lily bulb cultivation in the Smith River plain, EPIC is continuing to advocate for zero discharge requirements for pesticides and chemical runoff, and thus for lily bulb pesticides to stop being applied to the coastal plain of the Smith River for the fish, birds, and people of the community of Smith River.

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The Mouth of the Smith River (Smith River Estuary) or “Nii-li” in the Tolowa language, the first peoples of Smith River by Allen J. Schaben



How You Can Protect the Night Sky & Prevent Light Pollution

By Sylvia van Royen, Humboldt Waterkeeper

Humboldt County’s new Outdoor Lighting Ordinance has many people asking, “How can I protect the night sky?” The ordinance applies to new development, but protecting the night sky can be as easy as getting new lightbulbs or clip-on shields for your existing fixtures.

To protect the night sky, choose lighting that is fully shielded, directed downward, and turns off when not needed. Choose bulbs with a brightness of 1,000 lumens or less, and warm color temperatures of 2,700 Kelvins or less. Choose light fixtures that restrict the amount of upward-directed light, avoid glare, avoid over-lighting, utilize dimming and other appropriate lighting controls, and minimize short-wavelength (blueish) light in the nighttime environment. Parshield-brand light shields can be added to existing floodlights (visit www.parshield.com).

Dark Sky International is a nonprofit organization leading the campaign to reduce light pollution and globally make our skies darker. The county ordinance is based on Dark Sky International’s “5 Principles of Responsible Lighting”:

- **Use light only if it is needed.** All light should have a clear purpose. Consider how the use of light will impact the area, including wildlife, their habitats, and your neighbors.
- **Direct light so it falls only where it is needed.** Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.

- **Light should be no brighter than necessary.** Use the lowest light level required. Be mindful of surface conditions, as some surfaces may reflect more light into the night sky than intended.
- **Use light only when it is needed.** Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.
- **Use warmer color lights** where possible. Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.

Why is it important to protect the night sky from light pollution?

Light pollution can disrupt the circadian rhythms of people, wildlife, and migrating birds. It is especially harmful to migratory birds and wildlife. Migratory birds travel at night so they can use the stars for navigation, avoid predators, fly in calmer air, avoid overheating, and refuel during the day. These birds are especially vulnerable to light pollution, as it can cause birds to collide with lit structures, start migration early or late, and change the timing of life cycles. Some examples of local night-migrating birds include the Western Snowy Plover, Marbled Godwit, Rufous Hummingbird, Varied Thrush, and Wilson’s Warbler.

When, where, and how does the new ordinance apply?

The new ordinance applies to new development in unincorporated areas. Outdoor lighting that predates the adoption of the ordinance and aligns with zoning regulations when it was installed may remain unless the county receives a nuisance complaint or there are substantial changes to the property (including expansion).

The ordinance requires the following: all outdoor lighting fixtures must be fully shielded and directed downward – away from neighboring properties, the public right-of-way, wildlife habitat or the sky. Outdoor lights must only be on when the area to be lit is actively being used or for safety purposes. Additionally, residential outdoor lighting must be no brighter than 1,100 lumens, and commercial/industrial/agricultural outdoor lighting must be no brighter than 3,200 lumens.

These types of lighting are prohibited: aerial lasers, search-light style lights, mercury vapor lights, flashing lights, low-pressure sodium fixtures, and any lighting that creates glare or distraction to the traveling public. A Conditional Use Permit may be sought to use these types of lights for a special event, provided the lights are necessary for the event and light will not spill onto neighboring properties.

The following are exempt as long as they don’t cause light trespass onto adjacent properties, the night sky, or wildlife habitat: temporary holiday decorations, flag-illuminating lights, string lights with a correlated color temperature (cct) of 2700 Kelvins (K) or less (and they must be turned off by 10 p.m.), emergency lighting, and motion-detector lighting fixtures that are limited to five minutes and cannot be triggered from beyond the property line.

Conditional Use Permits will be required to light newly constructed outdoor athletic fields. Street lights will be covered in a Street Light Ordinance, along with new language about lighting in parking lots. We hope these ordinances will be brought to the Planning Commission by the end of 2025.

For more information and to stay informed of opportunities for comment, you can send an email to alerts@humboldtwaterkeeper.org and we’ll add you to our email list.



Redwood Region Audubon Society
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In early November Kathryn Wendel and Chet Ogan met with Bridget Mulkerin, from CA Audubon, representatives from Brightline Defense (a sustainable energy group), and EPIC for some birding and networking at the Arcata Marsh. Highlights from birding were over 2,000 Marbled Godwits and a pair of Peregrine Falcons.

We took a group pic in front of the RRAS sign. From the left: Alexis Sutterman, Astrid DuBois (both Brightline Defense), Matt Simmons (EPIC), Bridget Mulkerin, Chet Ogan, and Kathryn Wendel.

Your membership in Redwood Region Audubon supports our field trips, programs, education, and conservation efforts. You may also join us online at rras.org and click the JOIN US button. We have two different types of memberships:

Local membership For just \$15 a year you will receive *EcoNews*, with *The Sandpiper* inserted. To join locally mail a check for \$15 made out to RRAS with your name, address, and email address to:
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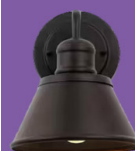
brightness $\leq$ 1,000 lumens



**warm color temperature:
2,700 K or less**



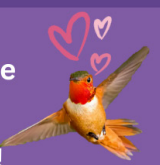
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