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January Newsletter



Growing Together: Hope and Action in 2026

places we live. With new programs and changes ahead, this year is about growing what works, trying what is new, and moving forward together.

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Sustainability and the UN Climate Summit 30th Conference of the Parties (COP30)

by Doug Mandel (Guest Author)



Image Credit: Elxeneize

This is an overview of a blog I posted on the [Ghost Pine Native Plant Nursery website](#). The blog post covers the main points of this two-week world summit, along with some pent-up commentary.

The debate over fossil fuel consumption has waged for decades, especially at the United Nations Climate Change Conference or Conference of the Parties (COP), which just finished its 30th annual conference on November 22, 2025. COP30 took place in Belém, Brazil, “the gateway to the Amazon,” where 194 countries participated – the United States shunned the summit.

11/22/2025 article in The Guardian stated, "Delegates made minimal headway on a timetable for replacing oil and gas or on firm commitments to reducing carbon emissions." There were also no new commitments to halt deforestation or the expansion of industrial agriculture in the rainforest.



Amazon river flowing through the Amazon rainforest. Generated by User:Rex - NASA, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=186261>

The contentious negotiations over the future of fossil fuels almost derailed the entire COP30. If this conference had ended prematurely, then the landmark 2015 Paris Agreement could have completely collapsed. Even though science shows that fossil fuels are the root cause of the climate crisis, the COP30 final agreement reportedly did not mention "fossil fuels"; not once! The main characters in this tragedy were the petrostates (e.g. Saudi Arabia, UAE, Russia), 1600 fossil fuel lobbyists, emerging economies dependent on fossil fuels, and China versus the Indigenous peoples, European nations, other emerging economies, and small island states. Basically, the rich and powerful dominated the poorer and weaker contingents. Have you heard of this scenario before? Spheres of influence?

There were five main issues debated:

1. **Paris Climate Agreement (2015)** – In 2015, countries agreed to limit greenhouse gases to limit global heating to "well below" 2C above pre-industrial levels, while "pursuing efforts" to stay within the

agreement: Countries should aim for “full implementation of NDCs while striving to do better.” Do you think they will voluntarily cut emissions and do better? Sadly, no.

If we do not improve upon the current trajectory, scientists say at least 2.5C is in our future by the end of the century along with a logarithmic rise in catastrophic climate events. I do not think this can be overstated.

2. **Phase out fossil fuels** - Fossil fuels are the cause of more than 80% of the emissions that propel climate change. Eighty countries pushed for a roadmap to transition away from fossil fuels, but the petrostates vetoed the fossil fuel phaseout. The COP30 agreement asks countries to voluntarily “accelerate” their climate action. Again, do you think they will voluntarily do this? Sadly, no. Are we heading backwards? In the background, China has become the first electrostate by shifting away from fossil fuels and ramping up wind energy, solar energy, and electric cars. China spearheads this move forward, while the United States administration seems insistent on traveling backwards to the 20th Century.
3. **Adaptation funding** – Rich nations (e.g. the Global North) fund vulnerable countries (e.g. the Global South) from the ravages of the climate crisis. The COP30 agreement pushed the funding deadline from 2030 to 2035. Communities currently facing catastrophic climate impacts cannot wait ten years.
Many believe that the Global North needs to set a better example of a more rapid fossil fuel phaseout AND provide the finances to the Global South for its energy transition and adaptation to the climate crisis. After all, the Global North is largely responsible for the climate crisis.
4. **Just Transition Mechanism (JTM)** – This was one of the bright spots in COP history. JTM is a plan to ensure that the move to a green economy around the world takes place fairly and protects the rights of all people, including workers, women and Indigenous peoples. Care is needed to not leave communities, workers, and ordinary people behind during the transition away from a fossil fuel-based economy.
5. **Halting deforestation** – The agreement for a roadmap to end deforestation failed. However, Brazil created the Tropical Forest Forever Facility outside of the UN process, which will provide economic incentive to preserve tropical forests.

Not-so-fun fact: As of 2021, scientists have confirmed that the Amazon rainforest emits more carbon dioxide than it is able to absorb. Unfortunately, this means that the Amazon rainforests are no longer the

What is the next step? Given the low bar set by the recent and likely future COPs and the existential threat of the climate crisis, frustrated leaders from about 90 countries decided to form a “coalition of the willing” and create a parallel series of conferences for a just transition away from fossil fuels. Colombia and the Netherlands will co-host the First International Conference on Fossil Fuel Phaseout in the Colombian port city of Santa Marta in April 2026. The conference will proceed outside the UN process, outside the COP consensus-based process.

My thoughts: Carbon emissions need to decrease considerably, deforestation needs to stop, planting AND maintaining the right trees in the right places needs to increase, and renewable energy needs to increase (especially wind and solar). We need action through a grassroots effort to counter and overwhelm the power and money of special interests. We can do this, a little bit at a time!



Image Credit: [Markus Spiske](#)

Upcoming Events





There Is No Planet B Book Club

February 8, 2026

"Sometimes the bravest thing we can do when facing an existential crisis is to joyously imagine life on the other side: What if we get it right?" -- Ayana Elizabeth Johnson.

There is still plenty of time to join our climate solution themed book club. Our first meeting is Sunday, February 8 at 2pm, but this doesn't mean you have to have read the whole book by then. This book is long and we won't be tackling the whole thing in one meeting. We'll break it up into sections to allow us more in-depth conversation around each topic. For meeting details and additional information, please join our contact list [here](#). For any questions contact juliet@ecoshasta.org.



Lichens, Fungi, and Moss, Oh My

by Juliet Malik

Photo Credits: Juliet Malik and Ren Redlich

On January 4, a steady rain greeted SEA's first hike of 2026, but this was of little concern for the small group that joined naturalist Juliet Malik for this 1.7-mile hike that features a seasonal creek, an overlook of Clear Creek, and abundant evidence of recovery from the 2018 Carr Fire.

While the muddy trail squelched beneath the group's boots, the evergreen foliage of manzanitas (whiteleaf and common), ghost pines, yerba santa, and live oaks glistened in the falling rain. The landscape was verdant with grasses, amongst which could be seen the early foliage of some spring bloomers such as lupine, wooly sunflower, wavy-leaf soap plant, and phacelia.

The real stars of this rainy day walk, however, were the fungi, mosses, and lichens! Using their collective knowledge and apps like Seek and iNaturalist, the group identified hairy curtain crust, deceivers, turkey tails, western jack-o-lantern, haircap moss, pixie cup lichen, jellyskin lichen, and rock shield lichen. At the overlook the group took a moment to appreciate and discuss the unique characteristics and services of these organisms.



Pixie cup lichen and haircap moss.

emerge during the wet months once the trees have set their spring leaf buds and go dormant, therefore not depriving the trees of needed resources. Mosses provide important services such as water retention, temperature regulation, and erosion control by inhabiting a microenvironment known as the boundary layer –the liminal space between the atmosphere and earth –taking advantage of water and nutrients that are inaccessible to most other plants.



Deceiver mushroom and Lichens (rock tripe and rock shield)

And lichens? Lichens literally embody the concept of mutual aid. Lichens are, after all, not a single species, but a “marriage” of two or more species, namely fungi and algae, often accompanied by bacteria. The algae provide food and the fungi provide protection and minerals. This symbiotic relationship allows lichens to inhabit the harshest environments on earth from deserts to the arctic tundra. Nature is certainly full of instruction on ways of being!



From left to right: Don Manion, Michele Melhase, Doug Mandel, Juliet Malik, and Ren Redlich.

Back in the parking lot our group said their goodbyes just as the rain let up! Mother Nature in all her wisdom has a sense of humor after all.

To stay in the loop with future SEA outings be sure to follow us on Facebook, Instagram, and Meetup and subscribe to our newsletter at ecoshasta.org.

Species of the Month: Sandhill Cranes (*Antigone canadensis*)

by Stacey Alexander



Image Credit: California Department of Fish and Wildlife

Platte River in Nebraska. These gray-bodied, crimson-capped birds breed in open wetlands, fields, and prairies across North America. Two subspecies of Sandhill Crane occur in California, the lesser and greater Sandhill Cranes, named I can only assume due to one being much better than the other (just kidding, it is due to their size). Size is quite a factor in what makes these birds so extraordinary. Sandhill Cranes can range in size from 3 feet (ft) tall with a 5ft wingspan (lesser) to 5 ft tall with a 7ft wingspan (greater), which as a 5ft tall person sounds horrifying, but I hear they rarely kill humans. They also make a unique and loud rattling trumpeting call. This call is possible due to their elongated tracheas in their throats, which allow them to emit deeper frequencies. They group together in great numbers, filling the air with these distinctive rolling calls.

This species is also well known for its killer dancing skills. When courting, cranes have elaborate dancing behaviors that include hopping, flapping, bowing, and even throwing sticks. I mean who could resist a good stick throw in a life partner?! Speaking of life partners, Sandhill Cranes mate for life, which can be up to 37 years in the wild! Peak breeding May until July, and nesting completed by late August.

Breeding population from north of California passes southward through the state in September and October and northward in March and April, California breeding population winters chiefly in the Central Valley. When foraging, this species prefers open shortgrass plains, grain fields, and open wetlands, roosts at night in flocks standing in moist fields or in shallow water and nests in remote portions of extensive wetlands.

Enough fun facts about this crane, where can we see these studs? From October to February (at dawn and dusk) large populations of these species can be viewed.

Woodbridge Ecological Reserve (<https://wildlife.ca.gov/Regions/3/Crane-Tour>) is one of the best spots to see cranes and many other migrating bird species. Located in the Stockton Delta wetlands, it provides California's largest area of freshwater marsh wintering habitat as well as Sandhill Crane viewing tours. Looking for somewhere closer? The Sacramento National Wildlife Refuge (<https://www.fws.gov/refuge/sacramento>) is also a great location for spotting these beauties. Here is also a helpful link (<https://sandhillfinder.savingcranes.org/near>) to where recent crane viewings have occurred.

Conservation

The Greater Sandhill Crane listed as threatened under the California



California Species of Special Concern, this primarily due to the loss of suitable breeding habitat and the continued loss of winter foraging areas. Wetlands are a key habitat feature for not only cranes but many other species but as drought frequency increases and freshwater supplies continue to shrink, wetland habitat is at risk.



Luckily there has been a push since the 90's for 'no net loss' of wetlands in California which coordinates with state agencies to prevent overall loss and achieve long-term gains in wetland acreage and value in California. There are also many non-profit organizations assisting in this effort. For example, the Migratory Bird Partnership (made up of the Nature Conservancy, Audubon California, and Point Blue Conservation) used the BirdReturns Program to work with farmers, wetland managers, and communities to increase flooded habitats for migratory birds where and when they need it most in ways that deliver multiple benefits for the parties involved. Hopefully with these creative solutions and partnerships we will see wetland acreage and Sandhill Crane populations increase.

Resources:

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Species of the Month: Toyon (*Heteromeles arbutifolia*)



Image Credit: David Ledger

Toyon, Christmas berry or Holly berry is a common chaparral shrub in Shasta County foothills and throughout California and coastal Mexico. It is most notable in winter because of its brilliant green leaves covered with bright red berries. The plant is very important to animals as it blooms during the summer providing nectar and pollen for pollinators from hummingbirds to butterflies to bees and its fruit ripens in late fall and winter providing food to birds and other animals in a time of food scarcity.

This plant is in the rose family and is related to the apple. In our area, American Robins will descend on the plants in flocks of hundred and in some cases thousands which helps the birds to survive the winter. Other birds, bears, coyotes and small mammals also use it to supplement their diet.

Toyon was so popular for making wreaths for Christmas in the Los Angeles area during the early twentieth century that the hills above Hollywood and other areas were becoming denuded by collectors. In 1921 Los Angeles County convinced the state to pass a law prohibiting the collecting of toyon or holly berries as it was also referred to. The law is still in effect, unless written permission is obtained, the people still make wreaths from them.

Some Native American tribes used the bark and leaves as a medicinal treatment. Other tribes cooked, mashed and ate the fruits. The seeds, like

The root of the plants can live up to 200 years and have buds that can be activated by fire. This allows the shrub to actively resprout and begin producing flowers and fruits within five years. Fire may also activate a dormant seed base producing new plants. Like manzanita and other chaparral shrubs, toyon can be spread by birds, bears and other animals eating them with the seeds surviving in the scat which provide fertilizer for the new growing plant.

Be a Voice for the Environment

Do you care deeply about protecting our local environment and the wildlife, forests, rivers, and public lands that make it special? Join our board and help guide advocacy efforts that shape land use, conserve natural habitats, and preserve spaces for recreation and enjoyment. Bring your ideas, energy, and passion to make a real difference for the environment and your community.

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