MANZANITAS: Native Plant Gardening by Pete Haggard

Regular readers of the Darlingtonia might be aware that coastal Humboldt County has only two native manzanitas, bearberry (Arctostaphylos uva-ursi) and hairy manzanita (A. columbiana). Bearberry is a low-trailing ground cover with shiny green leaves and is widely available in nurseries (although most commercial plants are not native plants). Hairy manzanita is a moderately tall shrub with gray-green foliage and hairy stems, but it is rarely offered for sale in nurseries. I became interested in manzanitas because of their stark beauty as individual plants: Tall, older plants have evergreen leaves and sinewy copper-colored branches, with the plant base often seeming to force its way into bare rock soil.

I soon found out they are garden-friendly when given full sun and minimal summer water. Manzanitas start flowering in late winter and, depending on the species or "ornamental selection," continue into spring. Late winter and early spring on the North Coast can be very cool and rainy with few plants flowering…except manzanitas. Pollinators, especially bumble bees and hummingbirds, are very dependent on the pollen and nectar from manzanita flowers; rain and cold weather, even snow, seem to have little effect on the flowers, thus providing a stable natural source for the pollinators.

In the last ten years, I have become interested in hybrid manzanitas. While the two native species couldn’t be more different, there are areas around Humboldt Bay where they hybridize and produce offspring. The plants produced are normally assigned the name Arctostaphylos x media and are offered for sale under that name and other commercial names such as "Martha Ewan" or "Xera Pacific."

Although hybrids are quite variable, they tend to favor bearberry’s hairless leaves and stems and weak upright branches. I have collected six of these hybrids for "ornamental" value and intrinsic value to wildlife. I look for plants with healthy leaves, upright habit, long-lasting red fruit, and ones that produce lots of flowers and fruit. Most of these hybrids are in the Arcata Community Center Native Plant and Wildlife Garden. If interested in a tour, contact phaggard@suddenlink.net

Find out what’s happening:
- Visit our website: NorthCoastCNPS.org
- Visit our Facebook page: facebook.com/NorthCoastCNPS
- Sign-Up for Activity Notifications by emailing: theralphs@humboldt1.com and request to be added
- Visit Instagram page: instagram.com/northcoastcnps

Arctostaphylos xmedia Manila2 is an excellent plant for bonsai. The large snaking stem is 10.5 ft long from the base of the plant to its tip. All photos by author.
**Evening Programs and Field Trips**

**Evening Programs**

Evening Programs are free, public presentations on the second Wednesday of each month, September through May. During covid restrictions and for non-local speakers programs will be via Zoom, at 7:30 p.m. The link to register will be on our website northcoastnps.org during the weeks before the program. When gathering is safe, evening programs will be at the Six Rivers Masonic Lodge, 251 Bayside Rd., Arcata, with a Zoom option, assuming we work out the technology. Register for Zoom presentations on our website, northcoastnps.org. In-person gatherings will have refreshments at 7:00 p.m. and program at 7:30.

**December 8, Wednesday, 7:30 p.m. "Research on Forest Trees, California Pitcher Plant, and Lichens."**

Three recipients of our chapter's research grants tell what they did. Sophia Lemmo measured and cored trees in 54 plots throughout our heavily timbered, diverse mountains to learn what died, what survived, and what regenerated before, during, and after the 2015 drought. Megan Teigen sampled many pitchers of California Pitcher Plant in three fens to study the bacteria living there and digesting the insects trapped by this carnivorous plant. In the dramatic, botanically and geologically rich setting of the Horse Mountain Botanical Area Sarah Norvell focused on the lichens, documenting all species of macrolichens in hopes of creating a species list for Six Rivers National Forest. Via Zoom only.

**January 12, Wednesday. 7:30 p.m. "Restoring Watersheds in Prairie Creek."** Restoration of the Prairie Creek watershed, from its headwaters to its confluence with Redwood Creek, has been a major focus for Leonel Arguello, Chief of Resource Management and Science for Redwood National and State Parks. He will tell about the dreams and the practicalities. Possibly in-person as well as Zoom.

**February 9, Wednesday. 7:30 p.m. "Silvery Phacelia, Rare Coastal Dune Beauty of Del Norte County."**

Silvery Phacelia (*Phacelia argentea*) exists only in the dunes of Tolowa Dunes State Park and Lake Earl Wildlife Area near Crescent City. Naturalist Sandra Jerabek, Director for the Tolowa Dunes Stewards, and Katrina Henderson, California State Parks, will share the secrets of this charismatic plant, and feature the heroic, ongoing efforts of volunteers to protect its scenic dune habitat and adjacent estuary. Possibly in-person as well as Zoom.

**March 9, Wednesday. 7:30 p.m.** In this evening program, native bee-man and native plant agriculture experimenter Brian Dykstra will touch on Wallaki ethnobotany, local botany, wildflowers, and wildfire.

**Field Trips Winter 2021-2022**

Please watch for updates on our website (www.northcoastnps.org) or sign up for announcements at https://northcoastnps.groups.io/g/activities. Outings are open to everyone, not just members. All levels of expertise, from beginners to experienced botanizers, are welcome. We mean it! Contact the leader so you can be informed of any changes and to ask questions. Covid protocols will adapt to the existing conditions. All participants should have masks with them.

**December 5, Sunday. FIELD TRIP Sue-meg State Park Day Hike.** The spruce forest, coastal bluffs, coastal meadow, and rocky outcrops of Patrick's Point State Park always have some surprise among the diverse plants there. Is the grape fern still on the steps on Ceremonial Rock? Has the Tracy's Mistmaiden been awakened by fall rains? What seedlings will be in the meadow? What flower buds can we find? We will walk 2-4 miles on park trails. Meet at 9 a.m. at Pacific Union School (3001 Janes Rd., Arcata) or 9:45 in the Bishop Pine Picnic Area. Dress for the weather; bring lunch and water. Contact Carol at 707-822-2015 or theralphs@humboldt1.com Vaccinated people only, please. Bring a mask.

**January 8, Saturday. Samoa Dunes and Wetlands Day Hike.** This newest addition to conservation lands around Humboldt Bay offers scenic dunes, wet dune hollows, tangled willow thickets, sheltering pine forest, and an elfin Douglas-fir stand. Besides absorbing the generally magnificent feel of the area, our goals will be 1) to enjoy the diversity of bryophytes (mosses and liverworts) and 2) to find the patch of Hairy Manzanita and see if it is blooming. We will walk about 3 miles, much on sand. Bring lunch and water; dress for the weather. Vaccinated people only please; bring a mask. Meet at 9 a.m. at Pacific Union School (3001 Janes Rd., Arcata) or 9:45 in the Bishop Pine Picnic Area. Dress for the weather; bring lunch and water. Contact Carol at 707-822-2015 or theralphs@humboldt1.com. Find a bryophyte guide at https://bryophyte.cnps.org/images/pdf/ArcataRedwoods.pdf

**February 27, Sunday. Field trip. Destination to be decided.**

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**Got Plant Photos?**

CNPS Chapter members’ photos add valuable information to the Calfora Database as well as preserve photos for posterity. Consider submitting yours to: https://conta.cc/3pF5sbC
2021 Update on Big Lagoon Fen Restoration
by Greg O'Connell  (All photos by author)

2021 marks the fourth year of restoration monitoring at the Big Lagoon Fen. Back in 2014, our chapter rare plant co-chair, David Imper, wrote a restoration proposal entailing vegetation management for woody shrubs and small trees that have been encroaching into this unique wetland. In coordination with Joseph Saler’s masters thesis research project at Humboldt State University, Caltrans implemented the restoration work in 2019 as part of a mitigation project. Our chapter committed to organizing the follow-up monitoring for a total of at least five years. See Fall 2020 and Winter 2021 Darlingtonia for more background info.

So how is the restoration monitoring going? The 2021 field work went well and was accomplished in two days thanks to the skilled botanists that volunteered. The fen looks amazing, and early successional herbaceous species continue to respond well, including rare sedges expanding their distribution within the fen. However, as expected, woody vegetation is re-establishing and invasive species have recruited in response to the disturbance and open canopy. Fortunately, Caltrans will be implementing another round of woody vegetation and invasive species removal as a follow-up treatment.

What’s next? First up is a big effort in data entry and preliminary analysis to provide a data-driven assessment of how the fen has responded to treatment. This will help inform how the next follow-up treatment will occur. After another couple years of annual monitoring, a more rigorous data analysis effort will occur to assess the effectiveness of the treatment and provide a basis for longer term habitat management strategies.

There have been many partners in this restoration effort, including our North Coast CNPS chapter, Humboldt County Public Works, Caltrans, and many others. This year in late July, the following local botanists volunteered for two days in the fen measuring the vegetation: Laurel Goldsmith, Greg O’Connell, Courtney Otto, Jordan Mayor, Kale McNeill, and Joseph Saler. Also of note, in a most auspicious encounter, we spontaneously found ourselves in the brief company of Virginia and Jim Walters (our North Coast CNPS president back in 1971) while they were walking in the Sitka spruce forest adjacent to the fen as we were leaving on the last day. It was great to see them!
Seawood Cape Preserve
March 21 and June 19, 2021
by Carol Ralph (photos by author unless noted)

Seawood Cape Preserve, on both sides of Patrick’s Point Drive at Scotty Point, on ancestral Yurok territory north of Trinidad, became a preserve only three years ago in 2018, when it was acquired by The Wildlands Conservancy (TWC), a California-based non-profit founded in 1995 to preserve the beauty and biodiversity of Earth and to bring this into the lives of all people, especially children. Seawood Cape is its newest, its 21st preserve. We learned about it with March and June field trips (observing covid protocols) and a September evening program (via Zoom) by preserve steward Jessie Bunkley.

Our visits to Seawood Cape Preserve were ably led by TWC staff and started in the mostly forested portion of the property east of Patrick’s Point Drive, where preserve buildings were. We saw in June the great progress staff had made since March in removing some of the monstrous amounts of Spanish Heath (Erica lusitanica) and Himalaya Blackberry (Rubus armeniacus) that were engulfing this most disturbed part of the preserve. Two loop trails derived from logging roads, north and south of the work yard, provided easy walking through the forested area, which was logged 70-80 years ago. The north loop circled through Sitka Spruce (Picea sitchensis) forest with abundant understory of Evergreen Huckleberry (Vaccinium ovatum), Thimbleberry (Rubus parviflorus), Salal (Gaultheria shal-lon), and young conifers, that deterred any cross-country exploration. Along the trail was one open grove of Grand Fir (Abies grandis) with a carpet of False Lily-of-the-Valley (Maianthemum dilatatum). At the far north end was a view across a deep, dense stream gully, and more to the west was a view to the ocean. A wet place in the forest was populated by Red Alder (Alnus rubra), Slough Sedge (Carex obnupta), and a sprig of American Brooklime (Veronica americana), though it wasn’t clear where the water was coming from or going to. This loop provided a good review of many common, coastal forest plants. We can anticipate new species showing up over the years as the canopy closes and the undergrowth clears.

The South Loop Trail first crossed a small, wet meadow with islands of alders and shrubs. The ground was squishy in both March and June, but it wasn’t until June that we noticed the plants that told us it was wet: Harlequin Lotus (Hosackia gracilis, also called Lotus formosissimus), with precious yellow-and-pink, pea-type flowers on a clover-like plant, Yellow-eyed Grass (Syringichium cali-fornicum), Tinker’s Penny (Hypericum anagali-oides), Cow Clover (Trifolium wormskioldii), a small spikerush (Eleocharis sp.), Sickle-leaved Rush (Juncus falcatus), Common Rush (Juncus effusus), and Toad Rush (Juncus bufonius). Among an assortment of perennial, non-native pasture grasses was California Oatgrass (Danthonia californica), a native bunchgrass. This meadow has exciting potential to be restored as coastal prairie. The trail entered a Redwood forest, which had a darker forest floor and less understory than the spruce forest. It passed an enchanting small pool at the foot of a rock monolith, fed by a trickle of water down its face. The water flow in June was tiny, having revived after recent rain. In a shallow, 10-ft-wide pool in an old gravel quarry at the bottom of this trail, masses of “green hair” turned out to be Needle Spikerush (Eleocharis acicularis), a new acquaintance. In June this pool was almost dry.

The afternoon portion of our field trips left the shelter of the forest and entered the bright sun and buffeting wind of the coastal bluff on the west portion of the preserve. Along the road was a good (Continued on page 7)
Canoe Fire Field Trip June 27 2021
by Steve Underwood  (all photos by Carol Ralph)

Our intrepid crew began our field day by wading across the South Fork of the Eel River at the Garden Club of America. Thankfully, the river was not deep (below our knees) and no one decided to test the water temperature. After ascending the bank we traveled a short distance south on the River Trail until we found soft ground to sit on, which facilitated our discussion about the Canoe Fire.

The Canoe Fire started in a remote portion of the Canoe Creek drainage on September 3, 2003 following a lightning storm. Due to its remote location, fuel conditions, and weather, the fire was hard to fight and eventually grew to include over 5,000 acres of old-growth redwood and redwood/Douglas-fir forest. The Canoe fire gave the State Parks the opportunity to collect data in four old-growth plots, two of which were pure redwood (alluvial) and two of which were redwood/Douglas-fir (upland). Flame lengths were typically only 6 to 12 inches. Although the sample size was small, the data suggested that fine fuels (those most important in carrying a ground fire in a forest) were reduced to nearly zero right after the fire and were still reduced by about 12-13% ten years after the fire. The opportunity for a subsequent intense fire appeared to be reduced for approximately 10 years.

To the south we found the only tree that fell on the alluvial flats in the plots. Ten years after the fire, 91% of the basal area loss was due to bark burning on the outside of redwood trees, not tree loss.

We next traveled north towards Canoe Creek through redwood/Douglas-fir forest. Along the way we observed that the fire had killed many of the lower branches of the large (greater than 24”) Douglas-fir and redwoods while the larger trees almost always survived. Measurements of the distance from the ground to the bottom of the live crown on alluvial flats increased from 46’ to 56’ while upland areas increased from 44’ to 51’ 10 years after the fire. The greater the distance from the ground to the bottom of the live crown the more resistant forest stands are to crown fire. These measurements suggest the importance of routine fire in old-growth stands as a method of preventing crown fire.

Carol Ralph identified the many plant species we encountered along the trail and we departed after fording the river once again.

Steve showed us a polished slice of a forest tree showing tree rings and fire scars. The years marked (labels with one arrow) are 1800, 1850, 1929, 2003. The years between fires (labels with two arrows) are: 12, 15, 11, 21, 19, 60, 74. The jump to 60 and 74 yrs between fires from 12-21 yrs occurred between 1850 and 1929.

Steve points out the fresh, uncharred bark that has formed between strips of charred bark as this tree grew in circumference after the fire. Note the clean understory in this alluvial forest.
Hope Creek-Ten Taypo Loop: July 11, 2021

By Carol Ralph (all photos by author)

The Hope Creek-Ten Taypo Loop Trail in Prairie Creek Redwoods State Park goes through truly magnificent forest of stately old growth Redwood with lush undergrowth. We enjoyed every minute, breathing in the freshness, gazing to the vaulted heights, and delighting in every flower we encountered. We saw blooming: Columbia Lily (*Lilium columbianum*), Twisted Stalk (*Streptopus amplexicaulis*), Pacific Starflower (*Lysimachia latifolia*), Long-tailed Ginger (*Asarum caudatum*), Douglas Iris (*Iris douglasiana*), Mock Azalea (*Menziesia ferruginea*), Rhododendron (*Rhododendron macrophyllum*), Northwestern Twayblade (*Neottia banksiana*), Baneberry (*Actea rubra*), Anemone (*Anemone deltoidea*), Clintonia (*Clintonia andrewsiana*), Bog Wintergreen (*Pyrola asarifolia*), Rose-flowered Lotus (*Hosackia rosea*), and Toothed Monkeyflower (*Erythranthe dentata*). We also enjoyed striking beds of mosses, 6 species of ferns, including Grape Fern (*Sceptridium multifidum*), beds of Baneberry, and the challenge of distinguishing Smith’s and Hooker’s Fairybells and those from Solomon’s Plume and Twisted Stalk. We were interested to find 3 saplings of Port Orford-cedar (*Chamaecyparis lawsoniana*) along the old road portion of the trail.

We were especially looking for mycoheterotrophs, those vascular plants without chlorophyll that live off of an underground fungus that has a mycorrhizal relationship with a tree. Although someone visiting this trail shortly before us had found more species of mycoheterotroph, with 9 of us looking hard we found only three: Western Coralroot (*Corallorhiza mertensiana*), Fringed Pinesap (*Pleuricospora fimbriolata*), and Leafless Pyrola (a form of White-veined Wintergreen *Pyrola picta*). I was interested to find that where a great cluster of Fringed Pinesap were last year, this year was none! Where last year’s Gnome Plant (*Hemitomes congesta*) was—none! Last year’s Pinesap (*Monotropa hypopitys*)—just the dry stems from last year. There was plenty of Fringed Pinesap in other places for us to marvel at these surprising plants and take many photos. In fact, we agreed that you can't have too many photos of coralroots or pinesap, or for that matter of Columbia Lily or Rhododendron or Douglas Iris or ...

Hooker's Fairy Bells

Smith's Fairy Bells

Solomon's Plume

Twisted stalk

Northwestern Twayblade, a tiny orchid
thicket of Nootka (*Rosa nutkana*). Over it we could look down over the dense, sculpted shrubbery to the sparkling, tossing sea. The public has long used an informal trail here to access Scotty Point. The trail dove into a tunnel through Coast Silk Tassel (*Garrya elliptica*), Cream Bush (*Holodiscus discolor*), Coyote Brush (*Baccharis pilularis*), Blue Blossom (*Ceanothus thyrsiflorus*), etc., and then shot straight down an especially steep stretch with a rope to hold onto, and emerged onto a narrow, grassy knoll looking straight out onto Scotty Point. Down each side of the knoll were vague, steep ways to go down through short shrubs to the rocky shore. The vista to the north featured the quilt-like mosaic of sculpted shrubs. In June the view to the south of the bluffs facing the sparkling sea was a carpet of purple Riverbank Lupine (*Lupinus rivularis*), dotted with yellow Seaside Wooly Sunflower (*Eriophyllum staechadifolium*) and white Ox-eye Daisy (*Leucanthemum vulgare*). Among the blooming lupines near us on the knoll was a patch of deep purple Ithuriel’s Spear (*Triteleia laxa*, a native bulb) and plenty of handsome Henderson’s Angelica (*Angelica hendersonii*). (The angelica’s leaves were only lightly tomentose, but the seeds harvested later in the summer had wider wings than the seeds of *Angelica lucida.*) On the point itself, viewed with binoculars from the knoll or up close from the shore, Sea Fig (*Carpobrotus edulis*), in June sporting intense, pink flowers, Powdery Dudleya/Bluff-lettuce (*Dudleya farinosa*), some with yellow flowers, Broad-leaved Stonecrop (*Sedum spathulifolium*), Maritime Plantain (*Plantago maritima*), and bluegrass (*Poa sp.*) clung in patches to the crumbly rocks.

Our visits to Seawood Cape Preserve provided both the sheltered, quiet, studious forest environment and the exciting, windy, roaring ocean bluff environment. In March we encountered a serene, green forest with some plants dormant, some of those invisible, and just a few boldly starting to bloom—Slinkpod (*Scoliopus bigelovii*), Salmonberry (*Rubus spectabilis*), and on the face of Scotty Point, found with careful search with binoculars, Footsteps-of-spring (*Sanicula arctopoides*). In June, flowers were thrown open everywhere, all the plants were full green, all were busy growing and creating seeds or spores.

The Scotty Point side of the preserve is open to the public, because it always has been, and it would be hard to close. The east side will be open to the public in a few years, after improvements to trails and infrastructure are made. For now, visits to the east side can be arranged for groups. See the website. The video of Jessie’s presentation to us in September is available online through the "Archived Evening Programs" under the "Education" tab of our website. It features many of the common plants of the preserve. The iNaturalist project for Seawood Cape Preserve is another place to see photos of the plants of the preserve.

On the knoll looking at Scotty Point

*Maritime Plantain*
Fall Plant Sale Volunteer Thank You

By Chris Beresford

I wish to thank all the many volunteers, as well as our community, who helped to make the September 25th & 26th fall plant sale the best fall we have had to date. Even in this difficult year, we continue to reach more and more people about the importance of native plants in their landscapes. We are grateful for the support of our customers. It is wonderful to see our community continuing to recognize the importance of planting native plants for the wellbeing of ourselves, our local birds and insects, and for our planet.

Putting on the plant sale requires many people in a wide variety of roles and jobs. Prior to the sale itself and behind the scenes volunteers are busy with, in addition to growing and maintaining all of the many plants we offer: taking inventories of plants that will have for the sale; making sure every plant has a plant label; doing publicity for the sale; making a list of plants that we offer with informational links to each plant; printing the labels and putting them on our plant labels; making new informational plant signs including updating some of our older tired signs; setting up Sign-up Genius enabling community members to sign up for a specific day and time; distributing flyers; finding volunteers to work the actual sale; collecting boxes for customer use; working with the participating nurseries as to what plants they will be bringing and how many; gathering office supplies and safety gear; making all of the needed signage for the sale, such as pricing lists; ensuring we have the needed copies of all of our many informational handouts; organizing and getting all of our merchandise ready for sale; helping to clean up the nursery; picking up plants from a participating nursery; checking the participating nurseries in and out on site; labeling all of the participating nursery plants as we check them in; marking the parking area to insure everyone knows where to safely park and finally, setting up for the sale. Whew, that’s a lot of work!

On the days of the actual sale, volunteers are: directing and assisting cars to safely park; checking that attendees are there at the time they have signed up for and are following Covid-19 protocols; answering plant questions; adding up plant sales; working the cashiering table; helping to take plants out to customers’ cars; selling t-shirts, posters and totes; helping to take down, put away and clean up after the sale; and anything else that I may have missed.

A special Thank You to all of the following volunteers who worked for our fall plant sale: Richard Beresford, Karen Isa, Carol Ralph, Chris Brant, Ann Burroughs, Anita Gilbride-Read, Jessi von Floto, David Callow, Christine Kelly, Celeste Thaine, Barbara Reisman, Brian Dorman, Laura Guldin, Susan Halpin, Rebecca Zettler, Sharon King, Joan Tippettts, Andrea Taylor, Sam O’Connell, Alice Ford Sala, Tristan Cole, Bill Rodstrom, Kunal Mehta, Gisela Rohde, Ashley Dickinson, Callie Almand, Kate Rowe, Randi Swedenberg, Ron Melin and Katrina Henderson. We literally could not have the sale without all these folks helping, many in multiple ways and on multiple days! Each of you played an important role in this fall’s plant sale success.

Another thanks to the 6 local native plant growers who participated by providing plants: Samara Restoration, Beresford’s Bulbs, Mattole Restoration Council, Lost Foods, Bob Vogt, and Brant’s Plants. These native plant growers provide the great shrubs, trees, bulbs, and perennials that we do not grow at our CNPS nursery so we can have them more readily available to our community.

Special thanks to: Chris Brant for weed trimming and mowing prior to the sale; Sharon King, who did all the publicity; Barbara Reisman for ordering labels for our different plant species; Karen Isa for organizing the CNPS booth with all of those great items for sale and for getting boxes; Anita Gilbride-Read for soliciting and coordinating our numerous volunteers and for being in charge of cashiering; Ann Burroughs for printing all of the plant labels for the CNPS nursery plants as well as for all of our participating nursery plants, literally 1,000’s of labels; Sam O’Connell for updating and making new informational plant signs; David Callow for marking our parking area; Christine Kelly for organizing the plants from the participating nurseries; Brian Dorman and Christine Kelly for picking up and delivering plants to us. Each of you plays a vital role in helping to make the plant sale happen. Thank you so very much! If I have missed naming anyone, please accept my sincere apologies for my oversight. See you at the Spring Sale at the nursery site at Freshwater Farms Reserves, April 30th & May 1st, 2022.

Nursery Thank you’s

I would like to thank the following individuals for helping at our nursery. In addition to growing all our plants, they also help with special projects at the nursery, keep the nursery and hoop house clean and work in our demonstration garden. Thanks to: Carol Ralph, Karen Isa, Sharon King, Brian Dorman, Joan Tippettts, Laura Guldin, Anita Gilbride-Read, Nancy Brockington, Christine Kelly, Rebecca Zettler, Jessi Von Floto, David Callow, Richard Beresford, Alice Ford Sala, Ron Melin, Jason Roberts, Christy Wagner, Joan Kerns, Paul Reisman, Kate Rowe, Callie Almand, Kellie Johnson, Hannah Crabb, Marina Gargarina, Kevin, Dave Imper, Steve Underwood, Mary, Erika Granadillo, Katrina Wright, Clarice Robenalt, Hannah Crabb and Gina, James, and Sharon from Gain Ground.

A special thank you to our faithful watering team organized by Barbara Reisman. They always show up on their scheduled days to water and monitor the nursery plants for us: Sharon King, Celeste Thaine and Christy Wagner.

(Continued on page 9)
And an especially special thanks to Barbara Reisman who takes the lead while I am away as well as spending many other hours working at the nursery!

Jessi von Floto continues to take care of stocking our plant stand at Kneeland Glenn Farm Stand. He fills in plants, cleaning up those on the stand and adds new species with their signage as plants look their best or we decide to put them on sale. He also keeps us up to date about what is on the plant stand so that we can update the plant list on the website and post on our Facebook page what we have available. Thank you so much Jessi for taking this on!

A special thanks to all the volunteers who showed up on a very wet October Sunday to help with the 3 projects that needed to be accomplished at the nursery. With their help we were able to get everything moved into and set-up in our new larger and more secure barn space; install an 80’ long strip of fabric cloth down the center of the hoop house over the existing fabric cloth using concrete nails, washers and gorilla glue; and build and install a gate between the hoop house and the white building to keep Bambi out of our garden. Thanks to Nancy Brockington, Jason Roberts, Callie Almand, Kate Rowe, Laura Guildin, Dave Imper, Richard Beresford, David Callow, Steve Underwood, Alice Ford Sala and Barbara Reisman those much-needed projects were completed.

If you would like to help at the nursery, contact us at northcoastcnps@gmail.com and we will add you to our nursery-only contact list. Currently we work on Tuesdays, Fridays, and Sundays from 10 – 1 and other days, occasionally, as needed. At this time of year we have already direct seeded and stratified our seeds (placed them in bags of sterile mix in our refrigerator for specific number of days) for the spring sale, and we are starting our stratified seeds as they are ready to come out of the fridge, transplanting seedlings up as they need to be moved up, working on replanting any plants that we will be over-wintering and working in our demonstration garden as the weather allows. Thanks everyone so much. Without all of you, the CNPS nursery would not be able to happen!

Kneeland Glen Farmstand News

With the Kneeland Glen Farmstand losing their lease at Freshwater Farms Reserve, we will not have any plants available there after December 14th. If you want to purchase plants, please contact us at our nursery email address: northcoastcnps@gmail.com and we will get back to you. For updates as to when we will be able to set up the plant stand again, please check our website.

Know Your Invasive Non-Native Species:
Tree of Heaven (Ailanthus altissima)

WHO?: Tree of heaven is a fast-growing tree that reaches 80 feet tall and 6 feet in diameter. The leaves are alternate-ly arranged. Each leaf is 1-4 feet long and has 13-41 leaflets. In early summer, large clumps of yellow flowers emerge. Single-winged fruit on female trees are tan to red and disperse by wind and water. The leaves also produce chemicals that impact the growth of neighboring plants.

WHERE?: Native to China, tree of heaven was brought to the U. S. as an ornamental. It is widely distributed across the U.S. except for the Mid North region. It was widely planted in cities due to its tolerance of poor soil conditions.

WHY?: Tree of heaven forms dense thickets and is capable of growing in small cracks, easily invades disturbed forests and forest edges. It can reproduce by seed and creeping roots with many suckers. Hundreds of thousands of seeds are produced. Tree of heaven serves as the host plant for the invasive insect, the spotted lanternfly, which has a highly detrimental effect on agricultural and ornamental species and native trees.

WHAT CAN YOU DO TO HELP?: Best removal is done by manual techniques. If creeping roots have already begun growing, this method is far less effective. There is new information about using a fungus, Verticillium nonalfalfae, to kill the tree (for more information see the article “A promising agent to control tree-of-heaven” in the Summer 2021 Dispatch, newsletter of California Invasive Plant Council.)

CAUTION: The sap is a skin, heart, and eye irritant (ex: rashes, dermatitis, heart palpitations and conjunctivitis). The smell can cause nausea and headaches. Please report locations of tree of heaven within the North Coast Redwoods District of the California State Parks to Michelle Forys at michelle.forys@parks.ca.gov or 707-677-3109.

References:
profile/
THANK YOU NEW MEMBERS

Alexander Blessing
Betsy Elkinton
Brian Burke
Carl Lionberger
Charlotte Ballenger
Christel Shaughnessy
Ellen Coats
Emily Jackson
Jane Cole
Jeanne Acuna
Jessica May
Joann Kerns
Julia Schrandt
Katya McCulloch
Melanie Williams
Melissa Home
Melissa Whitney
Nathaniel Paffett-Lugassy
Paula Home
Rosie Thompson
Roxanne Tobler
Ruth Holbrook
Scott Riley
Simone Aloisio
Stacey Evans

THANK YOU RENEWING MEMBERS

Sydney Larson
Annie Reid
Daniel Jenkins
Daniel Platter
Frank Hubinsky
Jessi Von Floto
Joy Fox-Beaudet
Steve French
Zachary Neider
Aimee Wyrick
Aline Faben
Amy Levine
Ann Lindsay
Anne Lotz
Arlene Broyles
Barbara Reisman
Caitlin French
Caitlyn Allchin
Carol Sherpa
Catherine Allen
Catherine Marsten
Cheryl Lisin
Colin Fiske
Cynthia Hammond
Dan Paquette
Dana York
David Wagner
Elaine Weinreb
Erika Erzberger
Frank Callahan
Friends of the Lost Coast
Gail Hovorka
Gail Judge
Gail Kenny
Gary Falxa
Genia Garibaldi

George Miller
James Aven
James Baskin
Jean Schlesinger
Jennifer Riddell
Jim Waters
Joan Tippets
Joel Ziegler
John Bair
John DeMartini
John Nicklas
John Patton
Judith Hinman
Julie Navarre
Julie Weeder
Kathy O'Leary
Ken Berg
Laurie Puzo
Loretta McBride
Margorie Pearson
Mark Pringle
Marla Knight
Mary Lowry
Melinda Groom
Michael Kolden
Nancy Dean
Natasha Granoff
Nina Jimerson-Kidd
Pamela Bullen
Patty Gomez-Gillard
Paula Cunningham
Paulette Lueke
Peter Boffey
Peter Ryan
Randy Davis
Richard Boothe
Rita Zito
Ron Melin
Ronald Hildebrant
Scott Godfrey
Sharon King
Tracy O'Connell
Veronica Yates
William Rodstrom

Membership Benefits

Support these local businesses and receive discounts on your purchases with proof of North Coast membership.

*Greenlot Nursery, 10% discount on plants, 443-9484
*Lost Foods Native Plant Nursery: 10% discount on plants, 268-8447, LostFoods.org
*Mad River Gardens: 10% discount on plant purchases, 822-7049
*Miller Farms: 5% discount on plant materials, 839-1571
*Pierson’s Garden Shop, 10% discount on all garden shop items (except sale or non-discountable items—please ask staff before going to register), 441-2713
*Samara Restoration LLC, 10% discount on plants, 834-4379 samararestoration.com.
North Coast CNPS members have four ways to share information with each other:

- Contact Chelsea at nec@yournec.org
- Chapter pays NEC to mail members' mailing lists.
- The NEC is the only organization with which we share our mailing list. We think it is important that our EcoNews and You

We, the North Coast Chapter of CNPS, are a member organization of the Northcoast Environmental Center (NEC), a valuable voice for conservation in our area. We have a seat on their board of directors. The NEC is the only organization with which we share our mailing list. We think it is important that our members receive EcoNews, an informative publication about conservation issues in our area. Our chapter pays NEC to mail EcoNews to our members who are not also NEC members. You can reduce this cost to our chapter by joining NEC at www.yournec.org or requesting your EcoNews be electronic, contact Chelsea at nec@yournec.org

Communications

North Coast CNPS members have four ways to share information with each other:

- The Darlingtonia Newsletter (quarterly),
- Our chapter’s website: www.northcoastcnps.org
- E-mail lists: To subscribe, go to <northcoastcnps.groups.io/g/activities>
- Like us on Facebook www.facebook.com/NorthCoastCNPS

EcoNews and You

E-mail newsletter articles, factoids, tidbits, etc. to the Newsletter Editor by the submission date.

Articles should generally be no more than 1,000 words and images can be any size and in these formats: JPG, JPEG, BMP, GIF, or PNG (note preferred location in the article and send image as a separate attachment).

The Darlingtonia Newsletter (quarterly)

North Coast CNPS offers the Native Plant Consultation Service to answer these questions and to share our experiences gardening with natives. This service is free. We hope it will inspire you to join CNPS or make a donation.

Contact our coordinator Melanie Johnson at 707-502-8856 or mjokega@reninet.com to put you in touch with volunteer consultants who will arrange a visit to look at what you have and help choose suitable plants for your garden.
CALENDAR OF EVENTS

December
- 5  Day Hike
- 8  Evening Program

January
- 8  Day Hike
- 12 Evening Program

February
- 9  Evening Program
- 27 Field Trip

March
- 9  Evening Program