Managing Invasive Weeds in State Parks
by Terra Fuller, California State Parks Senior Environmental Scientist

Managing invasive weeds is a challenge that will last not one, not two, but many careers of State Park Environmental Scientists. One missed opportunity can set a program back significantly and can be one of the most challenging efforts. Here in the Sonoma-Mendocino Coast District, we try to implement an integrated pest management approach and early rapid detection. We use a variety of tools to deal with some of the most challenging weeds, involving both mechanical/hand removal and, when needed, herbicides. We try to detect and remove weeds when populations are low, but given the abundance of weeds along the coast this can be a very challenging endeavor.

I often get inquiries from the public asking why I’m not treating a particular weed. Our natural resources program receives about $4/ per acre annually and this money is spread across our biological and vegetation seasonal aids, materials, and gear. This funding is clearly insufficient and covers two of our five staff at the Mendocino Sector. Therefore, we MUST prioritize! How do we prioritize? By working on weeds we’ve spent significant time on already, weeds that result in habitat type conversion, physically or biologically alter processes, and weeds located in rare plant communities.

Examples of invasive weeds we try to prioritize: gorse (*Ulex europaeae*), which converts grassland to shrublands—its targeted removal restores rare plant communities and wetlands (Figure 1, above); European beachgrass (*Ammophila arenaria*) alters dune morphology—its removal can restore native dune mat communities (Figure 2, page 3); and iceplant (*Carpobrotus spp.*), which can outcompete native rare plant communities and endangered plants such as Howell’s spineflower (*Chorizanthe howellii*) at MacKerricher State Park (Figure 3, page 3).

Editor’s note: Terra Fuller, California State Park Senior Environmental Scientist, is responsible for the management of park natural areas and their species in the Sonoma-Mendocino Coast District. She has over 10 years of experience in controlling non-native weeds on the Mendocino Coast and has generously contributed time and expertise to collaborative CNPS conservation efforts. Terra can be reached at  (707) 937-3689 or Terra.Fuller@parks.ca.gov

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President's Message
by Nancy Morin

2020 is going to be remembered as the year that got away, I think. Conservation co-chairs Renee Pasquinelli and Peter Baye, and Rare and Endangered chair, Teresa Sholars, continued their good work on conservation issues. Teresa, Renee, and Jim Gibson worked with CNPS Barbara Rice Intern Alexis LaFever-Jackson to assess coastal vegetation communities in the north, and she has worked with various people on the south coast to do the same there.

Jim Gibson, DKY webmaster, has put virtual wildflower walks and updated plant lists on the DKYCNPS.org website, https://www.dkycnps.org/wildflowers.html. This is a great resource if you prefer to stay close to home during the pandemic. Many of the walks feature beautiful photos taken by Mary Sue Ittner.

Jon Thompson recently conducted a preliminary rare plant survey for the Redwood Coast Land Conservancy regarding a potential trail at Saunders Reef (Hearn Gulch to Schooner Gulch). He found several plants of special status, including Sidalcea calycosa ssp. rhizomata, Point Reyes checkerbloom, and Sidalcea malviflora ssp. purpurea, purple checkerbloom, both CNPS 1B.2, and Castilleja ambiguavar. ambiguav Johnny nip, CNPS 4.2.

We were sorry to miss having our Wildflower Show. The DKY Board has reluctantly concluded that we also will skip the Fall Plant Sale. In DKY Chapter history local members grew many of the plants for the sale. Lori Hubbart, Mario Abreu, and Jon Thompson were champs for doing this year in and year out.

Our new strategy has been to order plants from reliable native plant nurseries, California Flora Nursery and Jug Handle Creek Reserve in these past several years. This has required a team of us to go pick the plants up from north of Santa Rosa, making several trips. We love seeing and talking with people at the sale and being surrounded by beautiful plants—and the sales are our main fund-raising opportunity—we miss all that.

After the sale, we have then had the challenge of what to do with unsold plants. Helene Chalfin has been very gracious about accepting returned plants and refunding part of their cost. This past year Laura Cover was extremely generous in babysitting the rest of them. Over the past couple of weekends in August Doug Forsell and Susan Wolbarst had a tiny booth at the Gualala Farmer’s Market where they sold all the remaining plants from the past sale.

As for sales this fall, in addition to our assumption that it is still not a good idea to have an event with many people in a room at the same time (even masked), our reluctance to ask people to make multiple trips to Santa Rosa pretty much ruled out having a sale. Some larger chapters, especially ones with their own nurseries, are having online sales with curbside pickup, but this didn’t seem practical for us.

DKY had offered to once again host the annual Conservation Symposium for the CNPS Chapter Council this fall. As with everything, this symposium has gone virtual. It took place on Saturday, September 12 via Zoom. The next big Conservation Conference is scheduled for October 2021, but State staff are gathering information on how potential participants feel about keeping the date or postponing for a year. CNPS is still in a stable financial condition thanks to strategic planning by staff and Board.

Isabella Langone, our new State Conservation Analyst, started three weeks ago. She jumped in with both feet. She has already made a great impact on conservation at the state level. Locally, we are thrilled that Rhiannon Korhummel has been hired in the Rare Plant Protection position at California Department of Fish and Wildlife for the Northern District (see box below).

Having these wonderful people in these positions will make Peter, Renee, and Teresa’s conservation efforts even more productive. We will do our best to keep interesting information flowing your way through the Calypso and on the DKY website. News and flower sightings are posted on the DKY Facebook page. Let us know what is on your mind as we navigate our way through these uncharted waters.

Rhiannon Korhummel hired as CDFW’s Coastal Conservation Planning Environmental Scientist in Fort Bragg

Rhiannon began her botanical studies at College of the Redwoods in Fort Bragg when she took a dendrology class from Prof. Teresa Sholars, a class that put Rhiannon on the botany path. She then acquired a BS in Botany from Humboldt State and worked for CNPS, California State Parks, and as a plant biologist at an environmental consulting company based in the Bay Area.

Teresa Sholars, Renee Pasquinelli (retired Senior Environmental Scientist with CA State Parks), and Jenn Garrison (CDFW senior environmental scientist in Fort Bragg), and many others have all expressed how pleased they are that Rhiannon is returning to the coast to work in a position for which she is eminently suited.

And, the DKY Chapter is lucky to have Rhiannon as Field Trip Chair!
As many of you know, there are so many weeds it can feel like an impossible task to treat them all. Two particular infestations of concern are Cape-ivy (*Delairea odorata*) from Cal Trans right-of-ways spreading into rare plant communities and riparian areas in southern Mendocino County and biddy-biddy. Biddy-biddy, (*Acaena novae-zelandiae*), is currently infesting Salt Point State Park and spreading northward due its hitch-hiking burrs and is challenging to treat because of its short rhizomatous growth. A habitat that doesn’t get much attention is our coastal grasslands, which are overtaken with non-native grasses and can outcompete native forbs and grasses. We will likely never remove our non-native grasses, but experimental mowing and grazing is having some promising results in reducing competition and promoting native growth.

Some recent progress has been made, using our internal funding (mentioned above) and grant money from both state and federal Fish and Wildlife agencies to restore endangered flora and fauna. As an example, State Parks has removed 22 acres of European beachgrass at Inglenook Fen-Ten Mile Dunes Natural Preserve and 10 acres of iceplant at MacKerricher.

Iceplant monitoring plots are showing an increase in native plant diversity, with three of the 15 plots containing four rare plants, compared to one plot prior to iceplant removal. All treatment plots contained at least one rare plant, with Howell’s spineflower (*Chorizanthe howellii*) abundance increasing post-treatment.

However, re-treatment is critical to maintain progress and in many cases State Parks is holding the line with rural residential property owners, Mendocino County, and Cal Trans land holders that share our boundaries. This incomplete treatment makes annual management more time consuming, expensive, and long-term eradication success problematic. Removal of invasive species needs to occur at a spatial scale larger than our boundary with a concerted effort at the appropriate ecological scale. There is potential to restore native plant communities and increase diversity here on the coast, creating more resiliency for plants and animals in our landscapes. We cannot do it alone!

State Parks is always looking for volunteer weed warriors, please contact me if interested. (707) 937-3689 or Terra.Fuller@parks.ca.gov
Multi-Property Gorse Removal project in Caspar has begun!
by Helene Chalfin

Jug Handle Creek Farm and Nature Center, working with Caspar Community Center Board members and a group called "Gorse Out" in Caspar is coordinating a large-scale gorse removal project in the town of Caspar on both the east and west sides of Highway One. The project began on September 1, 2020.

Landowners in Caspar cooperating in this project are deeply concerned with gorse as a fire hazard, as well as being a noxious weed that destroys habitats for native flora and fauna. Gorse contains volatile oils which cause the plant to burn extremely hot, with fires that are very hard to extinguish. The town of Bandon in Oregon burned down twice due to being inundated with volatile gorse growing all around the town.

Gorse's proximity to dead and dying trees, and wooden homes in Caspar makes it a deadly fire hazard. Gorse removal project coordinator, Helene Chalfin, Nursery and Education Director of Jug Handle Creek Farm, worked with another group in Caspar, "Gorse Out", to obtain a grant from the County Agriculture Department that earmarks $20,000 for gorse removal to be divided between properties located on both the east and west sides of Highway One.

The Caspar Community Board and Caspar Community members have pledged an additional $16,000 as matching funds towards the gorse removal. Each landowner that receives funding towards gorse removal has pledged in writing to do follow up on an annual basis as a condition of receiving the gorse removal grant aid.

Jug Handle Executive Director, Marie Jones, prepared the needed CEQA NOE (Notice of Exemption) documents for the County of Mendocino Agriculture Department. Chalfin and Jones worked together to produce mapping and other permit documents for the County of Mendocino Planning Department.

To carry out the gorse removal project, equipment operators Jerry Beatty and David Lindstrom have been engaged. For follow up gorse removal in the ensuing years, the plan is to continue working with them as well as with cooperating landowner in Caspar, Sam Karlin, for machine work.

The ‘Holy Goats” are participating in the gorse grazing removal. They were brought in to the Oscar Smith Ranch property to eat smaller gorse plants and do a demo for Caspar landowners. The project is working with Pastor Matt Davis of Mendocino to arrange continued follow up grazing by the "Holy Goats".

To learn more about the project, please call Helene Chalfin, (707) 937-3498.

Conservation Update - 8/26/2020:
Proposed Avalon Hotel in Fort Bragg
by Renee Pasquinelli

In the last Calypso newsletter, we reported on the proposal for a new hotel complex, the Avalon, which is to be located north of Fort Bragg, adjacent to MacKerricher State Park. The City prepared an earlier version of a Draft Initial Study/ Mitigated Negative Declaration for the project, for which we submitted comments on April 17, 2020.

Due to extensive comments by other members of the public, by the Mendocino Coast Chapter of the Audubon Society (which were supported by DKY), and by the DKY Chapter CNPS, the City pulled the earlier version of the IS/MND and circulated an amended Draft IS/MND for public review and comment between July 30, 2020 and August 31, 2020.

After review of the on-line documents for the proposed project, including the additions and amendments, we continue to have a number of concerns pertaining to the protection of rare native plants and sensitive natural communities, particularly on the adjacent MacKerricher State Park headlands.

We submitted a second comment letter on August 26, 2020, which emphasized that the amended Draft IS/MND still does not provide mitigations that would reduce environmental impacts to a less-than-significant level. An EIR should be prepared and circulated, as it is the appropriate level of environmental document for the proposed project.

The City proposed to hold a public Planning Commission hearing for the project on September 23, 2020, but this meeting was cancelled. The next Commission meeting is scheduled for October 14 at 6:00 pm. Interested DKY members and others are encouraged to review the project’s on-line documents (https://city.fortbragg.com/672/Avalon-Hotel-Application) and to participate in the hearing (likely to be a virtual meeting), if you wish to voice concerns.

As stated in our April 17, 2020 letter, the MacKerricher State Park headlands, which parallel the Pacific Ocean from Glass Beach to Ward Avenue, support numerous sensitive natural communities, including those within wetlands, coastal prairies, coastal bluffs, coastal sand dunes, riparian, and closed-cone pine forests. The nearly 1,300-acre Inglenook Fen-Ten Mile Dunes Natural Preserve of MacKerricher State Park, which extends from Ward Avenue to the Ten Mile River, contains a dune and wetland complex of statewide biodiversity significance.

DKY Chapter members have a long history of collaborative support with State Parks to further projects involving botanical education, survey and reporting, and restoration of native plant communities at MacKerricher. Chapter members lead educational walks to identify and showcase the local flora and to share information about the natural ecosystems.

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The following summarizes the points raised in our second comment letter regarding potential impacts from the proposed Avalon Hotel project:

1. The amended Draft IS/MND still fails to adequately address cumulative, direct, and indirect impacts, as required under CEQA, to rare plants and sensitive natural communities that will result from an increased number of visitors on the MacKerricher State Park headlands. Increased visitation has caused more trampling of rare plants and rare plant communities, soil erosion from widening and deepening of social trails, the emergence of new social trails from the concentration of visitors at newly developed facilities, and even large excavated areas on the headlands and bluffs from illegal digging of artifacts and poaching of native plants. Each time the soil is disturbed, rare plants and natural habitat is lost, seed from aggressively invasive plants take hold, causing the colonization and spread of non-native weeds, erosion intensifies, and natural areas of the park are further degraded. The City is still proposing that the applicant contribute to a State Park fund for maintenance and improvements, however, there is nothing to specify that this fund be used for monitoring and correcting impacts to sensitive species and habitats from increased visitation.

2. The added proposal to establish a wax myrtle (Morella californica) hedge in front of the hotel as mitigation to deter increased visitation to sensitive areas of the MacKerricher State Park headlands will not achieve the stated goal, is unrealistic, and lacks scientific validity. Limiting a proposed barrier hedge to only the section of parkland in front of the hotel property will not deter increased visitation to other sensitive areas both north and south of the hotel. It will not mitigate impacts from increased visitation to a less than significant level. The hedge will do nothing to prevent the extension of use beyond this barrier, and will only serve to concentrate the use of existing and newly established social trails away from the barrier. It does not address the fact that social trail density, trampling, and erosion is proportional with the pressure of visitor use. Fencing should be considered, as is described in the Audubon letter.

The area in which wax myrtle is proposed for planting is also ecologically inappropriate. On the MacKerricher headlands, especially in the vicinity of the proposed hotel, wax myrtle naturally occurs in wet drainage areas, and not on the drier soils of the haul road berm where the plantings are being proposed. Wynn Coastal Planning, the environmental consultant for the project, incorrectly identified the area for wax myrtle planting as one dominated by non-natives, and labeled it “velvet grass”. Photos taken of the proposed planting site and adjacent parkland by CNPS representatives on August 6, 2020 show that, although a number of non-natives (especially Plantago lanceolata) occur there, the area has a high coverage of natives, especially Grindelia stricta and Deschampsia cespitosa. There is currently little to no velvet grass (Holcus lanatus) in the proposed planting area. The June 30, 2020 Wynn Coastal Planning report refers to the proposal as “habitat enhancement plantings”, however, native habitat would not be enhanced, rather artificially converted to another vegetation type.

3. As stated in the CNPS April 17, 2020 comment letter, by not addressing cumulative, direct, and indirect impacts on the MacKerricher headlands, the Draft IS/MND (including the amended version) cannot justify a determination that the project would have a less than significant impact on the environment with mitigations. A Draft EIR must require the evaluation of alternatives to the proposed project, including potentially scaling back the size of the hotel, an alternative development site, or other measures that avoid and reduce environmental impacts.

4. The wetland delineation report may have underestimated the area of wetland habitat because it relied on survey data taken only during a severe drought year. Although Wynn Coastal Planning responded that the hydrologic study period began in February, after rains commenced, our letter continued to point out that plant survey information, which is also used to determine wetland boundaries, was based on data taken during the drought year. Weather patterns highly affect germination and presence of annual and short-lived perennial species; species that normally germinate in late winter/early spring may not have been seen during the 2013-2014 plant surveys due to the drought.

5. Botanical surveys for the proposed project were conducted in 2014, with follow-up unreported surveys in 2017. Our letter stated that such surveys are out-of-date and were not conducted to current CDFW protocols.

6. Similar to impacts on sites of botanical significance, the Draft IS/MND also fails to address cumulative, direct, and indirect impacts to wildlife species, including listed birds, and to Cultural Resources and Tribal Cultural Resources, including the extensive midden sites and cultural landscapes on the MacKerricher headlands.

7. Our letter did support the City’s proposal to at least remove non-native vegetation on the project site and install interpretive panels that highlight the natural area of the park.
Name Changes in California *Campanulas* by Nancy Morin, including all photos

Taxonomists get excited when they learn about new relationships among species, or even families, of organisms, but no one, professional or enthusiastic amateur, likes it when familiar names get changed. It is irritating! And yet, the new names are windows onto that new understanding.

I work on the bellflower family, Campanulaceae. I wrote about the discovery of new species in *Nemacalidus* in the May/June 2020 issue of *Calypso*. Adjusting to a new species—that is a different matter, since there is nothing to unlearn. But sometimes there are good reasons to change the classification of familiar species. [Editors note: Nancy is the author of the Campanulaceae treatment in *The Jepson Manual* and the *Jepson eFlora*.]

The largest genus in the bellflower-like group in this family is *Campanula*, with upward of 500 species. Bellflowers are commonly used in landscaping, including Canterbury Bells, peach-leaved campanula, and others that are used in rock gardens.

Campanuloides in California are *Triodanis*, *Heterodon*, and *Githopsis* (all annual), four annual campanulas, and the perennial *Asyneuma prenanthoides*, *Campanula californica*, *Campanula wilkinsiana*, and several other high elevation species.

In the last ten years Campanulaceae has been the focus of many phylogenetic studies—research using molecular analysis to hypothesize genetic relationships. They all have concluded that the huge genus *Campanula* and its segregate genera form two large groups.

At the base of one (and therefore presumably older) are genera and *Campanula* species that are native to North America, and these in turn fall into two subgroups, including all the Californian species except the high elevation perennials and *Triodanis*.

The purpose of taxonomy is to encapsulate our understanding of a group and communicate that understanding to others. We like to think that we are identifying natural groups, preferably ones that are genetically related. It is an inexact science and involves a fair amount of subjectivity.

A simple non-biological example would be classifying the buttons in a big bottle. You could do it by shape, or color, or material. Size, number of holes, texture, structure, might all be modifications. Or you start with flat ones, ones with shanks, ones with cloth inserts. You can imagine how many different systems could be created.

For plants we tend to look at structures that seem fairly stable, sometimes that are important biologically. Chemicals, anatomy of the seed, chromosome number, and DNA sequences are examples of characters that are not visible but can be important. Generally speaking, a genus of 500 species, or even 300, is not a very practical group to work with, and it is inevitable that *Campanula* will be split up as we learn more about it.

I had already been thinking that some of our Californian species needed to come out of *Campanula*, and the genetic studies convinced me that most of them should be assigned elsewhere. The upshot is that I’ve described new genera for most of the North American taxa. Here is what these changes mean for the DKY area:

The bellflower that is precious to us is *Campanula californica* (swamp harebell). It is now *Eastwoodiella californica*, named in honor of Alice Eastwood. This species only occurs on our part of the coast—north of Fort Bragg south to Point Reyes with a disjunct population in Scotts Valley north of Santa Cruz. Its growth in wet (at least early in the season) habitats, often in standing water, and its weak stems that clamber over adjacent vegetation using tiny hooked hairs on the stem, as well as the shape of its capsule set it apart from other campanulas.

![Eastwoodiella californica from near Manchester State Beach.](image)

*Asyneuma prenanthoides* (California harebell), with its very long style and deeply divided corolla lobes is startling when you encounter it in our forests. It often grows a bit inland, and it is actually widespread in California and Oregon. In our area it is found north and east of Mendocino, about ten miles east of Hwy 1 on both Hwy 20 and Hwy 128, and on Skaggs Springs Road by Haupt Creek Bridge.

Rogers McVaugh, a giant in the field of plant taxonomy, moved it from *Campanula* to *Asyneuma*, which is otherwise a Eurasian genus, based on those two characters—deeply divided corolla and very long style. The genetics suggest it isn’t *Asyneuma*, and the characters suggest it is not *Campanula*. I have placed it in *Smithiastrum*, named in honor of James P. Smith, professor emeritus at Humboldt State University. So, California harebell is now *Smithiastrum prenanthoides*. *Smithiastrum* has two species, the other being *S. wilkinsiana*, a narrow endemic from Mount Shasta.

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The four annual California campanulas are now in a new genus, *Ravenella*, named for Peter H. Raven. These diminutive plants are mostly inland from us, but you’ll remember that a few years ago I stumbled on a population of *Campanula angustiflora* in pygmy forest like habitat on the ridge east of Anchor Bay. I hope everyone will keep a lookout for more populations of this plant, which is now *Ravenella angustiflora*.

*Campanula scouleri*, also a favorite species in northern California, and the other high elevation *Campanulas* in California—*C. shetleri*, *C. scabrella*, and *C. rotundifolia*, are in other parts of the phylogenetic tree and will need to come out at some point, but for the moment they remain in *Campanula*.

You can read the full paper here: [http://www.phytoneuron.net/2020Phytoneuron/49PhytoNCampanuloideae.pdf](http://www.phytoneuron.net/2020Phytoneuron/49PhytoNCampanuloideae.pdf)

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**Mill Bend Conservation Project: Yesterday, Today, and Tomorrow**

[https://www.youtube.com/watch?v=7LRC49yPQb0](https://www.youtube.com/watch?v=7LRC49yPQb0)

The Mill Bend Forum video (9/26) is nicely done and highly informative about this wonderful conservation project of The Redwood Coast Land Conservancy (RCLC). Board members Kathleen Chasey, Mill Bend Project Manager, and John Walton, RCLC Vice President, describe the project... past, present and future. Kathleen gives an update on current efforts to acquire the land (less than $3,000 of the original $2.7 million goal remained as of 9/26/20!) as well as sharing the various plans to develop, restore, and steward Mill Bend. The theme of the campaign to acquire this significant site is “Preserving the Land, Restoring the River and Sustaining Our Community”. Thank you RCLC, Kathleen Chasey, and all the volunteers and contributors who are making this possible.

Screen shots from the forum video:

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*Smithiastrum prenanthoides* from Skaggs Springs Road at Haupt Creek.

*Ravenella angustiflora* from the ridge above Anchor Bay.

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©
**Eastwoodiella californica** discovered in Russian Gulch State Park by Katy Pye

My husband and I are creatures of habit. Every day means a walk and our most consistent choices are several Russian Gulch trails. Unlike many DKY members, we are not widely-versed in plant identification. But a positive in taking our well-worn paths year-after-year is we’ve become familiar with many of the plants along our routes. I tote my camera along to catch favorite species in bloom also hoping to catch pollinators actively using them.

So, it was a great surprise when, on the last day in June, a stretch of tiny, pale blue to purple, bell-shaped flowers caught our attention low along the edge of the North Boundary Trail. The almost 30 foot long patch should indicate 2020 isn’t its first season. Despite years walking this trail several times a week, these delicate beauties managed to escape our notice.

I posted two photos on the California Native Plant Society’s Facebook page and they were quickly identified as *Campanula californica* (name recently changed to *Eastwoodiella californica*, see page 6)—a rhizomatous, perennial herb commonly known as swamp harebell.

While research documents bees pollinating more common *Campanula* species — *C. rotundifolia*, for example, are used by bumble bees — it is unclear from the literature whether (or which) pollinators are attracted to, or depend on, *Eastwoodiella californica*. Nancy Morin suggests that although undocumented, solitary Halictid bees may forage on *E. californica* and she noted that, “In general this family of plants, *Campanuloideae*, has an unusual method for presenting pollen: the pollen is deposited from the anthers onto the sides of the style, which is densely covered with papillae. So pollinators collect the pollen from the style. Eventually the stigmatic lobes open up, and a passing bee will deposit its load of pollen on the stigmatic surface.”

No bees or other insects were spotted using *Eastwoodiella californica* during the dozen or more times we stopped to watch. Now that I know where to look, and possibly which bee to look for, I’ll be more attentive next summer.

The CNPS Inventory of Rare and Endangered Plants ranks *Eastwoodiella californica* as 1B.2 - Rare or endangered in California and elsewhere, with a moderate threat rank. No previous CNDDB (California Natural Diversity Database) reports of swamp harebell exist for this location or for another we discovered on a nearby PG&E right-of-way. We were doubly thrilled. I submitted “California Native Species Field Survey” forms to the State so both sites can be recognized, protected, and enjoyed.

Sources:
- CNPS, Inventory of Rare and Endangered Plants: [http://www.rareplants.cnps.org/detail/264.html](http://www.rareplants.cnps.org/detail/264.html)
- Calflora.org: [https://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=1460](https://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=1460)
Coastal Prairie and Coastal Scrub Mapping
by Alexis LaFever-Jackson, CNPS Intern

Being on the coast of northern California is like a dream that you never want to wake up from. When I visited MacKerricher State Park and Jughandle State Park during March, I was welcomed by bright-blue skies and the perfect breeze. I was there to practice the CNPS vegetation survey protocol alongside some DKY chapter members. As we walked along the coastal trails near Glass Beach we noticed that a few species were beginning to flower which sparked excitement for the upcoming field days.

However, the internship had to take a different route as shelter in place orders rolled out across California. Given the new circumstances, I redirected my time to compiling data pertaining to the Mendocino and northern Sonoma county coastline. From historic vegetation classification data to rare plant occurrences, I have been actively searching for any existing information to create a comprehensive GIS (Geographic Information System) dataset for this area.

The project focuses on the coastal prairie and coastal shrub habitats that range from MacKerricher State Park to Salt Point State Park. I have been able to participate in a variety of online courses that have bolstered my abilities to process and analyze data. My experience with GIS is limited to a few college courses so the opportunity to expand this knowledge was greatly appreciated. I took advantage of a free training video from the California Department of Fish and Wildlife that covered MS Access software basics so that I can better understand how our databases function.

I spent the first week of this internship at a CNPS-CDFW Vegetation Mapping workshop in Redlands. The training focused on identifying vegetation patterns from both aerial imagery and on the ground. This experience proved to be much more helpful than I anticipated. I have had to utilize the knowledge gained from the workshop to better interpret aerial imagery to identify underrepresented vegetation types.

The field work encompasses much of the public land between MacKerricher State Park and Salt Point State Park. Although a large gap in collection points exists between the Navarro Point Preserve and Manchester State Park. I have been collecting data since May and have personally surveyed 80 plots. Additionally, 300 species have been identified and roughly one-fourth of the plots had a rare species present. This data will be entered into the California Natural Diversity Database. Most surveys were conducted on State Park land however, a handful were collected on land either owned by the Redwood Coast Land Conservancy or Mendocino Land Trust.

As the season for herbaceous species comes to a close, the internship is shifting gears once again, now the field work will focus on surveying evergreen species like Pinus contorta ssp. contorta.
DOROTHY KING YOUNG CHAPTER
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MEMBERSHIP APPLICATION
DOROTHY KING YOUNG CHAPTER

Membership in the California Native Plant Society is open to all. The task and mission of the Society is to increase awareness, understanding, and appreciation of California native plants. The challenge is to preserve their natural habitat through scientific, educational, and conservation activities. Membership includes subscriptions to Fremontia, Flora and the chapter newsletter, The Calypso.

Name_____________________________________
Address___________________________________
City___________________________ Zip________
Tel. __________ E-mail _____________________

Please choose the chapter you wish to join; CNPS will make the assignment if none is specified by applicant.
I wish to affiliate with the DKY Chapter ______
or, other chapter _______________________

MEMBERSHIP CATEGORY
  Student/Fixed Income $25
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Make check to: California Native Plant Society
Mail check and application to:
  Bob Rutemoeller, Membership Committee
  DKY Chapter, CNPS PO Box 577
  Gualala, CA 95445

Next Board Meeting: For information, please contact Nancy Morin at nancy.morin@nau.edu. All members are welcome to attend Board meetings. Calypso newsletter: If you wish to contribute items contact jlarke@mcn.org. If you choose to receive the emailed pdf version of the newsletter, contact Bob Rutemoeller at 884-4426 or brutem@mcn.org. You can view issues of the newsletter at www.dkycnps.org.