

Darlingtonia

Winter 2010
Jan—Mar

Newsletter of the North Coast Chapter of the California Native Plant Society
Dedicated to the Preservation of California Native Flora

RARE, MARVELOUS, NATIVE CARNIVOROUS PLANT By George Meindl

Darlingtonia californica Torrey (Sarraceniaceae), the California pitcher plant or cobra lily, is a unique species of carnivorous plant that is endemic to northern California and western Oregon. Populations of *Darlingtonia* are distributed from the northern Oregon coast to the central Sierra Nevada mountain range of California, but the highest density of occupied sites can be found in northwestern California in the Klamath, Siskiyou, and Trinity Mountains. Due to unique habitat requirements, however, the species is restricted to a patchy distribution throughout its range. *Darlingtonia* can be found growing in perennially wet seepage areas, generally occurring on serpentine soil. Individual plants are long-lived perennials that produce rosettes of leaves annually. Reproduction is mainly asexual via the spreading of stolons.

The California pitcher plant has captured the attention of naturalists ever since its discovery, in large part due to its unique pitcher morphology. The leaves, which are modified into insect traps, deceive insects to enter, after which they are digested and used as a mineral nutrient source by the plant. The domed upper portion of the leaf, termed the hood, is covered by translucent windows, or fenestrations, that allow light to penetrate into the interior of the pitcher. A fishtail appendage, or the fangs, is found near the trap opening on the underside of the hood- it is this feature that resulted in the common name "cobra lily" for *Darlingtonia* (the flared hood and fangs bear a remarkable resemblance to a cobra rearing to strike). Nectar secreting cells line the trap opening and fangs, which attract foraging insects. Light that penetrates the hood's fenestrations tricks some insects to fly up into the pitcher, thinking they are flying up towards the sky. Once inside the pitcher, it is difficult for an insect to escape. The walls of the upper portion of the pitcher are waxy and smooth, while the lower portion is coated with stiff, downward pointing hairs. Both of these features inhibit the upward progress of an insect. Eventually the insect settles into the fluid-filled base of the pitcher where it will be digested. Unlike many carnivorous plants that produce enzymes to aid in digestion, *Darlingtonia* appears to rely on symbiotic microbes to help breakdown their prey.

The flowers of *Darlingtonia* are also rather unusual. Each rosette of leaves generally produces a tall scape with a single flower in the spring. The flowers begin as upright buds, but become pendant when mature. Five yellow-green sepals hang loosely around five crimson petals. The petals almost completely enclose the reproductive whorls, except for windows formed by notches in adjacent petals, which allow access to the flower's interior. 12 to 15 stamens are located at the base of a bell-shaped ovary. Unlike some confamilial *Sarracenia* spp., *Darlingtonia* flowers produce no nectar, and thus abundant pollen is

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Where to find what's happening:

- ◇ Visit our website:
- ◇ Sign up for our announcements
e-mail: NorthCoast_CNPS-
subscribe@yahoogroups.com
- ◇ Read the *Darlingtonia*
- ◇ Read or hear about upcoming
events in local media

FIELD TRIPS AND PLANT WALKS

Please watch for later additions on our Web site (www.northcoastcnps.org) or sign up for e-mail announcements (NorthCoast_CNPS-subscribe@yahoo.com).

Everyone is welcome. No botanical knowledge required. We are out there to share and enjoy.

February 27, Saturday. Coastal Trail Day Hike. Mosses, red-flowering current, canyon gooseberry, violets, and a giant purple wakerobin should be glorious along the Coastal Trail from Requa, on the north side of the mouth of the Klamath River, to Lagoon Creek, where Highway 101 meets the ocean north of Klamath. We will shuttle a car to one end and start at the other so we only need walk the 4 miles one way. Meet at 8:30 a.m. at Pacific Union School (3001 Janes Rd., Arcata) or arrange a place farther north. Dress for the weather! Bring lunch and water. Return late afternoon. Please tell Carol you are coming 822-2015.

March 21, Sunday. Arcata Community Forest Day Hike. The far reaches of the this great city park are beyond the casual stroll. We will explore some of the farthest trails, hiking a long loop or shuttling cars to a different trailhead. We can count trillium for fun, practice spotting false azalea, learn at least five conifers and five ferns, and watch for fetid adder's tongue (aka slinkpod) and other early signs of spring. Meet at 9:00 a.m. at the trailhead at the top of Diamond Drive. Dress for the weather, for being in shady, redwood forest, and for walking about 4 miles on dirt roads and paths. Bring lunch and water. Return mid- or late afternoon. Information: Carol 822-2015.

April 11, Sunday. Humboldt Redwoods Day Hike. Roadside stops and walks on several short trails in Humboldt Redwoods State Park should find milkmaids, western trillium, and, hopefully, fawn lilies, as well as other early bloomers under the magnificent redwoods of southern Humboldt County. Meet at 8:30 a.m. at Pacific Union School (3001 Janes Rd., Arcata), 9:00 a.m. at the McDonalds end of Bayshore Mall parking lot, or arrange another place. Dress for the weather, all sorts. Bring lunch and water. Return late afternoon. Please tell Carol you are coming 822-2015.

You can lead a field trip! Do you know a place you'd like to share with other plant aficionados? You don't have to know the names of all the plants. You just have to choose a day and tell us how to get there. We'll come explore with you. Contact Carol Ralph (822-2015) with your ideas.



Here it comes again! Spring!

And with it, the Spring Wildflower Show!

Manila Community Center

Admission is free!

Spring Wildflower Show & Plant Sale

April 30-May 1-May 2

School groups are welcome at the show on Friday, April 30, at assigned times. Educators interested in bringing their classes should contact Judie Snyder 826-7735 snyderj1@suddenlink.net.

To join the team preparing and presenting the show contact Carol at theralphs@humboldt1.com or 822-2015. Many tasks do not require botanical knowledge. You will learn on the job!

CHAPTER PROGRAMS AND MEETINGS

EVENING PROGRAMS

The North Coast Chapter of CNPS (www.northcoastcnps.org) holds free Public Programs on the second Wednesday of each month (September through May) at the Six Rivers Masonic Lodge, 251 Bayside Rd., Arcata. Refreshments at 7:00 and program at 7:30 p.m. You don't have to be a CNPS member to attend! Contact Audrey Miller, Programs Chairperson at taurdreybirdbath@suddenlink.net or 786-9701, with speaker or botanical subject suggestions.

- Jan. 13** **"CNPSers in Patagonia -- the Southern Tip of South America."** Travel with renowned HSU botanist, author, and plant ecologist, **Dr. John O. Sawyer** to the rich, southern hemisphere rainforest where redwood-equivalent alerce grows, to the bizarre araucaria forest, to the continent's southernmost forest, and to the spectacular, rock-and-ice Torres del Paine National Park. See Patagonian wildflowers, southern beech, surprising species in familiar genera such as *Baccharis*, *Gaultheria*, and *Ribes*, all in the land of condor and penguins.
- Feb. 10** **"Poisonous Plants of Northwest California"** by **Dr. Jim Smith**. Professor Emeritus Dr. James P. Smith, curator of the HSU Herbarium, will explore what we mean by "poisonous" or "toxic," how we contact poisonous plants, and how they work. His examples will include the most violently poisonous plant in North America, the garden escape that once provided the active ingredient in a witch's recipe to cure dropsy, the plant that is second only to the common cold in causing lost days of work in California, the weed that poisons animals when they are exposed to sunlight and that appears on lists of most popular herbal remedies, the common roadside plant that is always associated with the death of Socrates (but perhaps not in the way it is traditionally presented in our textbooks), and the familiar plant that has its devastating effects not on the animal that consumes it, but on its offspring.
- Mar. 10** **"Blooming Beauties and Graceful Glaciers of the Swiss Alps"** - The Swiss Alps are rich in botanical treasures and beautiful landscapes. Botanist **Birgit Semsrott** will share her pictures of Grindenwald, Switzerland. Located in the Bernese Oberland Region, Grindenwald is in the heart of a massive mountain range and surrounded by majestic ice-clad peaks. Many of Birgit's pictures were taken at Schynge Platte Alpine Garden – one of only a few botanical gardens in the world that show alpine plants in their natural environment.
- Apr. 14** **"Our Coastal Grassland Treasures – Contemporary Conservation Challenges and Pathways to Restoration"** - Bureau of Land Management botanist and range conservationist **Jennifer Wheeler** will share the story of the historical and modern plight of grasslands on the North Coast. She will tell what defines coastal grasslands, where they are, why and how fast they disappear, and how small restoration projects could make a big impact. She will share her experiences and passion with modern methods of enhancing and restoring native perennial grass populations.
- May 12** **"Hiking the South Fork Trinity River"** - Artist, photographer, woodworker, and naturalist **Rick Tolley** has documented many faces of this popular trail. He will share wildflowers, vistas, and adventures from 20 years of family hikes, art hikes, CNPS hikes, Wild Heritage hikes, tubing hikes and backpacking hikes.

CORRECTIONS

- ◆ Summer '09 *Darlingtonia* page 14 - Cape-ivy lists the old name as *Packera bolanderi* whereas it should list *Senecio mikanioides*. Thank you to Tamara L. Gedik for letting me know of this error.
- ◆ Fall '09 *Darlingtonia* page 9—Defeat Scotch Broom was based on a news release that came out in the early spring, at a timely season for eradicating broom. Fall was not a good time, as the ground was very dry, the plants were covered in dry seed pods, and tampering with the plants would have shaken them out all over the place. My apologies to Jennifer Wheeler and to anyone who attempted to remove this weed before spring.



NORTH COAST CNPS VOLUNTEER CORNER

Phone Carol 822-2015 or write theralphs@humboldt1.com
to volunteer, ask questions, or make suggestions.

Thank You!

- ◆ **Sunny Loya** for organizing the fall plant sale.
- ◆ **Joan Watanabe, Suzanne Isaacs, Sylvia White, Ron Johnson, Kathy Dilley, Chris Beresford, Bernadette Pino, Felicity Wasser, C.J. Ralph, Carol Ralph, Cara Witte, Tami Camper, Chris Cameron,** and probably others for staffing and otherwise helping the plant sale.
- ◆ **Our numerous growers** for producing the beautiful plants to sell at the sale.
- ◆ **Frances Ferguson** for scheduling booth volunteers for the North Country Fair.
- ◆ **Jim Waters, Virginia Waters, Audrey Miller, Barbara Kelly, Frances Ferguson, Sylvia White, Frank Milelcik, Rita Zito, and Cara Witte** for staffing our booth.
- ◆ **CJ Ralph, Carol Ralph, Felicity Wasser** for putting up and taking down the booth.
- ◆ **Jeff Russell** of the **North Coast Redwoods Interpretive Association** for pursuing a native plant landscape at Stone Lagoon Visitor Center of Humboldt Lagoons State Park and paying for materials.
- ◆ **Kathy Dilley, Prairie Johnston, and Lia Webb** for designing and installing that landscape.
- ◆ **Vic Armijo, Michael Moore, Carol Ralph,** and the **California Conservation Corps** for assisting them.
- ◆ **Humboldt Fish Action Council, Telos Rare Bulbs, and CNPS growers** for donating plants to that landscape.
- ◆ **Whitney Meier** for leading a plant walk.
- ◆ **Audrey Miller** for lining up all the speakers through May 2010 already.
- ◆ **Tami Camper** for continued energy in our Plaza Garden despite further setbacks.

Welcome Aboard!

- ◆ **Sylvia White** as Econews Reporter.

Volunteers Needed

- ◆ **Wildflower Show Co-Chair.** Work with Carol to coordinate this beautiful, botanical, and social event.
- ◆ **Collectors** for the Spring Wildflower Show. With a little training you can help bring wild beauties to the show, collecting on Thursday, April 29.
- ◆ **Outdoor Sign Placers.** Our big, yellow signs (4 x 4 ft. plywood) and our yard signs (about 18 x 24 in. plastic) are valuable publicity for the Spring Wildflower Show. We have a few for each town, Trinidad, McKinleyville, Blue Lake, Arcata, Manila, Eureka, and Fortuna, and need people to put them up April 9-10 and retrieve them May 2-3.
- ◆ **Publicity Checker.** Read the papers, listen to the radio, check the web site to confirm that our publicity got there.
- ◆ **Publicity Writer.** What could be more important?! Create the text and photos attractive to and useful to the press for our few big events.
- ◆ **Outreacher.** Keep our handouts and display in good shape for use at various public events, about 6/year. We have other volunteers who man the table (booth).
- ◆ **Leaders for plant walks or field trips.** We can't have too many! Share a special place with others. You don't have to know all the plants; you just have to get us there.
- ◆ **Plant Sales Assistants.** Count plants, move plants, take money, advise customers, ...it all needs to be done, with a smile!
- ◆ **Authors for redwood flora field guide.** With a template provided, write species descriptions. Your name will be in print!

FIELD TRIP REPORTS

Groves Prairie 12 September 2009 by Carol Ralph

Mid-September at 4,100 ft elevation, as is Groves Prairie, is on the cusp of winter. Our group of 11 found the general aspect of this level area in a mixed conifer forest dry and "finished" for the season. Most of the non-coniferous vegetable world was tired, yellowing, burned, tattered, and falling. Yellow and rusty fronds were among the green bracken *Pteridium aquilinum* that covers a big portion of the meadow. Tall, straight, straw-colored stalks above green tufts of a perennial bunchgrass caught the light against a gray-brown background of dead annuals. The corn lilies *Veratrum* sp., lush, summer sentinels of mountain meadows, were dry and flat on the ground.

True, we missed lots of blooms and greenery, but look! The grassy sward along the creekside alder thickets was green below the dry culms. There was the dense, vibrant green, erect clump of grape fern *Botrychium multifidum* bearing abundant yellow sporangia. Late-blooming individuals of many species were easy to find--yampahs *Perideridia* spp., sneezeweed *Helenium* sp., pussypaws *Calyptridium umbellatum*, cinquefoil *Potentilla* sp., checkerbloom *Sidalcea* sp., yarrow *Achillea millefolium*, paintbrush *Castilleja* sp., scarlet gilia *Ipomopsis aggregata*, monkshood *Aconitum columbianum*, Siskiyou penstemon *Penstemon anguineus*. And there were the fall-bloomers in full glory-- massed, yellow goldenrod *Solidago canadensis* (?), scattered violet faces of aster *Aster* sp. in the green sward, and the great balls or flat-topped umbels (different stages) of tiny, white flowers or green seeds on 5-6-ft tall stems of kneeling angelica *Angelica genuflexa* right along the creek. The blooming angelica bore very few leaves, so I had to search to find good leaves to witness the bent petiole and leaflet characteristic of this species. The stem leaves were small with a wide sheath around the stem. The other large, lush umbellifer along the creek was water hemlock *Cicuta* sp., the most toxic native plant. With its feet in the water, its clumps of large, pinnate leaves with pointy leaflets were still green, as were the tall stems and starbursts of seeds, but not one was blooming. The third mega-umbellifer, cow parsnip *Heraclium lanatum*, was among the truly finished species, plenty of seeds and decadent herbage.

We walked around and through the meadow for about 1.5 hours and then ate lunch at the campsite back in the forest. The desirable, meadowside site was occupied by a travel trailer and a road-mowing machine, whose work we witnessed all along the

drive up. Perhaps this workman's presence accounted for the lack of vehicle and cow tracks in the meadow. The fence intended to keep these out could easily be breached. Whatever the reason, the result was pleasing. The meadow was in good shape. Now the biggest concern might be the invasive Klamathweed *Hypericum perforatum*, which has established a significant presence.

After lunch we walked upstream on the trail parallel to the creek in lovely, old Douglas fir forest. Here the world was not as parched as in the meadow. We found the "other" clintonia, queen cup *Clintonia uniflora*, and discovered its fruit is also a smooth, blue berry. The fall-bloomers here on the forest floor were parrots beak *Pedicularis racemosa* and sugar scoop *Tiarella unifoliata*. We followed the trail, which needs some trunks cleared off it, to the upper meadow, across that to a logging road, right on that to its end and the trail that circles back to Groves Prairie Creek and the bridge with the Pacific yew *Taxus brevifolia*. Here we found western burning bush (western wahoo) *Euonymus occidentalis*, with its funny, three-lump fruit hanging individually below the arching branches, and the large-leaved clump of "the other native oxalis," *Oxalis trilliifolia* (An old flower stalk had several pedicels on it, proving it was not redwood sorrel *O. oregana*, which has a single flower.).

A day at Groves Prairie is always too short. By the time we scouted around and were ready to focus on some identifications, it was time to leave. The variety of habitats--creekside alder thickets, marshy meadow, moist meadow, dry meadow, old growth Douglas fir, second growth Douglas fir and white fir, mixed evergreen forest--provides a diverse flora to study. The two-hour commute to home on the coast is part of the problem. How long do you want to camp there?

Read about previous visits to Groves Prairie in the fall 2003 *Darlingtonia*.

To get there: In Willow Creek turn north off Highway 299 on Country Club Rd. (by the gas station), then up Patterson Rd. onto FS 4 along Waterman Ridge, left at the well-marked 7N04, and 9 miles to a right turn on 7N04P. Follow the left fork. If you find a dead end, try a different road until you see the meadow. Alternatively drive east out 299 to Hawkins Bar, cross the river and go up past Trinity Village and on to FS 4. Watch for the sharp right turn onto 7N04.

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THE CALIFORNIA NATIVE PLANT SOCIETY
AND
THE HUMBOLDT STATE UNIVERSITY VASCULAR PLANT HERBARIUM

PRESENT

Introduction to the Sedges of Northwestern California: A Hands-on Workshop

Saturday, February 27, 2010

9:00 am to 5:00 pm at Humboldt State University
Building Science D, Room 161

Carex is the largest genus of flowering plants and most are important wetland indicators. There are more rare species in the genus *Carex* than in any other genus on the Northcoast.

This workshop will follow a virtual transect from North Coast dunes, through coastal wetlands, redwood and mixed evergreen forests, coastal prairies and montane meadows to the alpine habitats of the Klamath Mountains at Mt. Eddy. The most common sedges by habitat type along the way will be keyed and reviewed. Participants will hone their skills in sedge sight recognition and keying in the *Jepson Manual*.

Basic sedge terminology, morphology, ecology, evolution, and keying techniques will be covered. Much of the day will be spent dissecting and keying specimens in the laboratory using a microscope and the *Jepson Manual*. Many specimens will be available for review, dissection, and comparison. This workshop is geared for beginner and intermediate caricologists, but familiarity with identifying plants using the *Jepson Manual* is required.

Know your sedges to conduct:

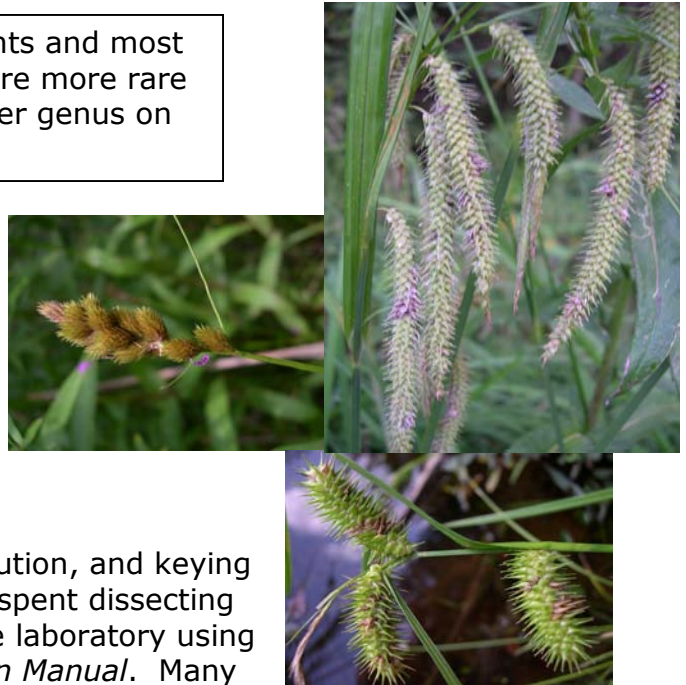
- ◆ Wetland delineations
- ◆ Floristic and vegetation studies
- ◆ Rare plants surveys
- ◆ Habitat assessments

Participants should bring: dissection equipment, including extra-fine forceps; *Jepson Manual*; and lunch.

Registration is \$60 for CNPS Members, \$95 for non-members.

To register, send a check made out to "NC CNPS" with your contact information, including email address, to: CNPS PO Box 1067, Arcata, CA 95518-1067

For more information contact Gordon Leppig at: gleppig@dfg.ca.gov



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Wildflower Show	Position Open		Contact Carol Ralph for Details
NEC NC CNPS Representative	Jennifer Kalt	839-1980	jkalt@asis.com

COMMUNICATIONS

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

1. The **Darlingtonia Newsletter** (quarterly),
2. Our chapter's website (www.northcoastcnps.org - updated regularly), and
3. E-mail lists/forums (Announcements, Business, and Gardening – subscribe from the **E-mail lists and Forums** page on www.northcoastcnps.org).

The *Darlingtonia* is the quarterly newsletter of the North Coast Chapter of CNPS. Items for submittal to *Darlingtonia* should be sent to marisa_nativecalifornian@yahoo.com by each quarterly deadline: December 1, March 1, June 1, and September 1. Botanical articles, poetry, stories, photographs, illustrations, sightings, news items, action alerts, events, factoids, tidbits, etc. are welcome and appreciated.

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. This means we have a seat on the board of directors. It also means that as our member you are automatically entitled to receive the NEC's monthly publication, **EcoNews**.

Due to the vagaries of membership lists, you might not be receiving this informative newsletter. If you are a member of our chapter, do not receive *EcoNews*, and want to receive it, phone 707-822-6918 or e-mail nec@yournec.org and leave the pertinent information.

NATIVE PLANT CONSULTATION SERVICE

Are you wondering which plants in your yard are native? Are you unsure if that vine in the corner is an invasive exotic? Would you like to know some native species that would grow well in your yard?



The North Coast Chapter of the California Native Plant Society offers the Native Plant Consultation Service to answer these questions and to give advice on gardening with natives. If you are a member of CNPS, this service is free, if not, you can join or make a donation to our chapter.

A phone call to our coordinator, Bev Zeman at 677-9391 or donjzeman@yahoo.com, will put you in touch with a team of volunteer consultants who will arrange a visit to your property to look at what you have and help choose suitable plants for your garden.

Bear Basin Butte and Buck Lake 26-28 July 2009 by Carol Ralph



The pool of downingia along Jawbone Rd. Rings mark old ATV tracks.

Bear Basin Butte, the encompassing botanical area, and the roads and trails nearby in Six Rivers National Forest southeast of Gasquet, have been a favorite chapter destination. This trip benefited from a gift to one of us of two nights in the Bear Basin Butte cabin and lookout perched in a cramped clearing scraped on top of brushy slopes. (Cabin available through www.Recreation.gov) Seven of us spent two nights there, on top of the world, joined by pairs of day-trippers on Sunday and Monday. The weekend was truly hot, even at the elevations we were, 5-6,000 ft. The roads and the cabin site were dusty. The setting and the flora were sufficient to distract us fully from those discomforts.

Along the drive up Jawbone Rd. (17N05, FS16. Turn up Little Jones Creek Rd. 10 miles east of Gasquet) we encountered a spectacle on the right: a shallow, dry pond aglow with a solid, violet-blue mass of dainty *Downingia bacigalupii*. At the time we simply gazed, breathed, and admired. That night with a microscope in a room at Patrick's Creek Lodge one of us (Wilma Follette) saw the details to identify the species.

The Forest Service road was good all the way to the gate to the cabin, for which we had a key. The spur road from there became steep and a bit crumbly as it mounted a ridge that seemed too wild for a building. Suddenly we were there, and the vast vistas drew us—huge, quiet, empty sky; mountains on all sides, rows and jumbles, near and far, to the horizon. A few logging roads were the only signs of man. At night the only lights were a few up Oregon way. We looked down at the mountains, across into treetops. and at

night up at the stars, We exercised our geography, naming mountains, stars, a planet, compass directions, skyglow. We watched the sun sink into the distant bank of ocean fog at 8:45 p.m. and rise between Preston and Twin Peaks at 25 degrees north of east at 6:20 a.m.. A few people could report that deep in the night the sky was more star than black. On our second morning a group of seven Mountain Bluebirds joined us at the lookout, busy with their bluebird tasks while we welcomed their touch of activity in the quiet, thin air.

Our first afternoon we walked or drove down to Bear Meadow, below the main road shortly east of the turnoff to the cabin. We were in a fir forest. Later studies of the treetops from the comfort of the picnic table by the cabin, saw some firs with smaller cones and more flat sprays, clearly white fir *Abies concolor*, and some firs with larger cones, bracts covering the entire surface, and with "skeleton tops" (needles curved up and close to the twigs, creating an antenna, or skeleton, look), clearly noble fir *Abies procera*, but some whose bracts we couldn't see might have been red fir *Abies magnifica*. We could have spent the entire weekend practicing these distinctions, but other attractions called. A population of handsome *Angelica tomentosa* (glaucous herbage) along the roadside ditch caught my attention, as did a late, lovely pink bloom of Washington lily *Lilium washingtonianum*. A trickling stream entered the upper end of the sloped meadow, supporting shrubby alders (You can spend a lot of time studying shrubby alders too, wondering is it *incana* or *viridis*.) and filling a waterhole excavated for water trucks to draw from. Around the lush waterhole were white bog orchid *Platanthera leucostachys*, red columbine *Aquilegia formosa*, and the delicate, white pompoms of false bugbane *Trautvetteria caroliniensis*. Among the green grasses and sedges of the central meadow floated white umbels of yampah *Perideridia* sp., Gray's lovage *Ligusticum grayi* (only 12 rays; few, small leaves on the stem), and yarrow *Achillea millefolium*; glowing, orange turbans of Wiggins' leopard lilies *Lilium pardalinum* ssp. *wigginsii*; sturdy, yellow-capped towers of arrowhead butterweed *Senecio triangularis*; and pink tufts of swamp onion *Allium validum*. A dry slope off the lower end of the meadow offered a sparse covering of entirely different plants, all low and small. The growing shadows prompted our retreat to the cabin for dinner with a view and a peaceful night.

Our second day, a full day, we hiked to Buck Lake from the trailhead at the end of road 16N02. We were glad to have a map from the Gasquet headquarters of the Six Rivers National Recreation Area showing the new trail arrangement. The first section of the trail is decommissioned road that some of us have driven in

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(Continued from page 8)

the past. Eventually the trail veers off the old road and contours along the hill a long ways. Most of this trail is in old, shady, mixed conifer forest with a rich ground layer--great mats of shiny-leaved *Linnaea borealis*, stands of umbrella-like vanilla leaf *Achlys triphylla* and of pointy-leaved star Solomon's seal *Smilacina stellata*, bright green clumps of one-sided wintergreen *Orthilia secunda*, fuzzier green clumps of sugar scoop *Tiarella unifoliata*, scattered trail plant *Adenocaulon bicolor*, a few tussocks of bear grass *Xerophyllum tenax*, etc. Mountain maple *Acer glabrum* was a common shrub (three major lobes on leaves, doubly serrate). A large burrow betrayed the presence of mountain beaver *Aplodontia rufa*. When the trail turned sharply right, uphill, the forest became thinner and smaller, with many lodgepole pines *Pinus contorta* ssp. *murrayana*, and the soil rockier. Soon we dipped down to the conifer- and azalea *Rhododendron occidentale*-lined lake crowded against rocky peaks on three sides. Swimming and lunch were high priorities. The water proved delightful, and one swimmer discovered grass-like quillworts *Isoetes* sp., a fern ally, growing on the lake bottom. Some of us made the pilgrimage around the right side of the lake to the Alaska yellow-cedar *Chamaecyparis nootkatensis*, here one of its only locations in California, and noted its droopy foliage, less lacy than Port Orford-cedar, with no white x's or butterflies on the undersides, and its green, soccer-ball style cones. On the boulder face at the far end of the lake is a large, dense thicket of dark green yew *Taxus brevifolius*, shrubby alder *Alnus* sp., and red-stem dogwood *Cornus sericea*. From our lunch perches in the shade we could spot other conifers: sugar pine *Pinus lambertiana* (long branches, big cones), western white pine *Pinus monticola* (alligator bark), mountain hemlock (delicate foliage, droopy top), Brewer's spruce (weepy), incense cedar (short, flat, jumbled sprays), Douglas-fir *Pseudotsuga menziesii* (mouse tails in the cones), and red fir (or was it noble?). Our return trip we descended straight to Doe Creek, on the old trail, through a vast understory of Sadler oak *Quercus sadleriana*, one of our uncommon oaks, under big white firs, Douglas-fir, and Brewer's spruce. The creek area, known as Doe Flat, was an extensive thicket of shrubby alder, vine maple *Acer circinatum* (leaves almost fanlike,



CNPS hikers show where the new trail to Buck Lake forks off the old.

singly serrate), red-stem dogwood, and mountain dogwood *Cornus nuttallii*. Port Orford-cedar *Chamaecyparis lawsoniana*, with white x's on the foliage underside, grew here. In the small patch of meadow several Wiggin's lilies hid their finely speckled, orange flowers in the edge of the alders. It was a mighty fine hike, about 4 miles that day.

We were grateful for the shade offered by the forest all along our route.

Before we left the cabin on the third day, we focused on the diversity of shrubs in the short distance between the cabin and the lookout: manzanita *Arctostaphylos* sp., Fremont's silk tassel *Garrya fremontii*, serviceberry *Amelanchier* sp., creeping snowberry *Symphoricarpos mollis*, tobacco brush *Ceanothus velutinus*, huckleberry oak *Quercus vaccinifolia*, canyon

live oak *Quercus chrysophylla* (and a hybrid?), bitter cherry *Prunus emarginatus*, creambush *Holodiscus discolor*, and hazelnut *Corylus cornuta*. On the bluff-top rocks beyond the lookout was an assemblage of rock-lovers that needed more study: a saxifrage, buckwheats *Eriogonum*, jewel flower *Streptanthus*, sedum, lace fern *Cheilanthes gracillima*, penstemons, etc. Along the entrance road a festive, blooming patch of spreading dogbane *Apocynum androsaemifolium* hosted a crowd of butterflies on its pinky-white flowers.

After departing the cabin we stopped shortly at the shady rock face along the road just below the junction of 17N05 with 16N02. Among the good display of rock plants were two species of bluebell, *Campanula prenanthoides* with sessile leaves (no stalk) and very narrow petals and *C. scouleri* with petioles and wider petals. The rest of our drive down via 17N04 and French Hill Rd. (county 411), which can be thrilling in June, was hot and unwelcoming. Nevermind. The shady forests of the more distant mountains had worked their magic on us. We had seen 5 different penstemons, three firs, two maples, maybe two alders, two yampahs, two bluebells, and countless other, less confusing or totally unknown species, and we had been on top of the world.

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SPECIES PROFILE: COASTAL WILLOW AND SHINING WILLOW

(*SALIX HOOKERIANA* and *SALIX LUCIDA*)

By Carol Ralph

March is a good time to decide to learn willows, when they are waking up from winter dormancy. Don't plan on learning all of them, just the ones you see frequently in your usual travels. That will be three or fewer species.



Coastal Willow twigs with catkins, female on left, male on right.

Where I live at the dune edge of Arcata Bottom, the first willow action is the thick, silky catkins ("pussies") on the sprawling tree willows. These willows are larger than shrubs and have large trunks, but the trunks are crooked or leaning. If the tree is a male, the yellow-tipped stamens popping out all around the catkins will soon envelop the tree in a halo of yellow haze. These catkins readily fall off if you bump them. If the tree is a female, the swelling, bowling-pin

shaped, green pistils will soon give the tree a greenish cast. The tree hangs onto these precious catkins tightly until their seeds and fluff have matured. Each pair of stamens or each pistil represents a separate flower in the catkin. In thickets I know are entirely one kind of willow, because they all have similar leaves later in the season, some trees bloom well before others. Given the fickleness of March weather, this asynchrony of bloom means that at least some flowers will encounter decent weather for pollination. The leaves of this willow emerge after the flowers. They are wide, elliptic, short-tipped, and silvery underneath, especially at night in the headlights of the car. This is the coastal willow, *Salix hookeriana*.

Conspicuously different are the willows bursting out in bright, fresh, green leaves. These are proper, upright trees. Soon after the green the catkins appear, nestled in the emerging leaves. The male catkins are strongly yellow when bearing pollen. The leaves of this willow are smooth, shiny green, long, and tapered. Often tiny glands (They look like warts.) are on the edge of the leaf blade where it joins the petiole. This willow is shining willow, *Salix lucida*.



Catkins of coastal willow, male on left, female on right.

Coastal and shining willows are my "reference willows." As I encounter new species in other places, I mentally compare them to these. Are they shrubbier? blooming earlier? finer-leaved? I recognize a tree or shrub as a willow, assuming no catkins are around as clues, by its alternate, simple, deciduous leaves, smooth twigs, moist location, ... and willowy look! Variability within species is real. I am still getting a feel for that, and you have to remember that hybridization happens! In *Trees and Shrubs of California* the authors alert, "Arroyo willow widely hybridizes with Hooker willow along the north coast." Arroyo willow, *Salix lasiolepis*, is likely to be your third willow. Watch for a shrubby tree willow with leaves narrower than coastal willow's and wider above the middle.

These and other willows when blooming attract clouds of busy insects on a warm day. The flowers reward pollinators with nectar. The catkin arrangement suggests that wind pollination is also successful. Willow thickets are attractive to bird-watchers in all seasons, a good sign that birds frequent them. The deciduous leaves of willows are good tucker for insects both on the tree and as an ingredient of rich leaf litter. The soft wood makes easy work for woodpeckers excavating nest holes. You can't find a better addition to your wildlife habitat yard than these fast-growing, easily rooted, readily resprouting species.



Thoughts on Completing Fall Planting

Okay, Rain!
You're invited! Anytime now!
Come soon!
Bring lots of friends!
Stay a long time!
My yard is ready!
You're in charge now!
I'm going inside to Sit,
And Watch, and Listen.

By Sylvia White

PROMOTING GARDENING WITH NATIVES

By Sylvia White

The California Native Garden Foundation (CNGF) is a non-profit educational, research, and resource organization that promotes gardening with California native plants. The goal of CNGF is to increase the popularity and use of California's native plants in the landscape. Its mission is to demonstrate the beauty, garden worthiness, and ecological appropriateness of California native gardens and to advance knowledge of native plants and increase their availability.

CNGF was incorporated in March, 2004 by president and director Alrie Middlebrook. Ms. Middlebrook is a landscaper, artist; and owner of Middlebrook Gardens, a native plant landscaping company, in San Jose, California. Co-author of *Designing California Native Gardens*, she was a popular speaker at a well attended meeting of our North Coast CNPS Chapter in March, 2008.

CNGF offers classes and workshops on how to design, build, and maintain a California native garden yourself. They have a monthly email newsletter of their activities.

In 2009, CNGF launched the Distinguished Native Garden Certification program.

Certification requires evidence that one's garden meets at least most of the criteria, which include eliminating or greatly reducing the lawn; eliminating invasive plants; retaining rainwater; mulching landscaped areas; creating habitat for wildlife (with features such as a wildflower meadow, berries, detritus, native trees and shrubs, and a source of water), and providing a water-wise method of watering plants.

To read more about CNGF and the Certification program, visit their web page at www.cngf.org. There is no fee to apply for Certification, and the application form is right on the CNGF web site. (Click the link for "Activities" and then "Native Garden Certification.") Besides completing the application form and description of your garden, send pictures to info@cngf.org. When Certification has been awarded, you can purchase a certificate of merit suitable for framing and/or an original sign or banner designed by Ms. Middlebrook to display in your garden. The garden sign or banner, and the CNGF program will help you spread the word to your friends and neighbors about the beauty and importance of creating landscapes using native plants.

I just received the Distinguished Native Garden Certification, and have found it to be a source of great pride, a reward for my work, and a great way to demonstrate to others my native plant yard. I look forward to knowing others in our chapter, or not in it, who receive this certification.

Autumn Sounds

Quiet steps behind me as I walk across my yard -
Brown leaves falling from my Maple tree.

By Sylvia White

IT COULDN'T HAPPEN HERECOULD IT? by Carol Ralph

A brief visit to Philadelphia this summer gave me perspective on our western forests. At an ornithologists' conference I studied a poster presentation by a student from Delaware (working with Douglas Tallamy) who had counted birds and measured vegetation in a variety of local forests to see if forests with more native vegetation had more birds. She didn't have the definitive answer yet. The number that impressed me was that the average percent of the vegetation that was non-native in her forests was 50%. Wow! In some forests it was 100%! When I walk into a forest in Humboldt County, I usually feel, "This is how it's supposed to be; these are all native." Not so in the East! On a walk in the wonderful park along the Wissahickon River in Philadelphia I witnessed the lush, green eastern deciduous forest. Not knowing the species, I could only wonder how many were native. Fortunately some people do know and do care. The Friends of the Wissahickon has published a brochure that lists 45 species of invasive trees, shrubs, vines, and ground covers known to occur in the park. Some of these are so ubiquitous and dominant, like Norway maple, that local people probably think they are native. The pamphlet also lists 112 woody, indigenous species suitable for planting in the area. The threat to forests is so real that the Commonwealth of Pennsylvania Department of Conservation & Natural Resources has produced a pamphlet "Landscaping with Native Plants," outlining the threat and listing 103 native species suitable for gardens.

Before we start feeling smug about our "pristine" forests here, let us remember what we have done to our grasslands. Chances are none of us has ever seen a native grassland, though they existed. Our agricultural and pastoral grasses and forbs dominate them now. Then remember all those eucalyptus that are covering the Oakland and Berkeley hills that used to be oak woodland, grassland, or chaparral. Then notice how much tree-of-heaven, black locust, and Himalayan blackberry are in the riparian forest along the Trinity River, or cotoneaster in the understory in Trinidad. It's just a matter of time, as more species jump out of our gardens. Let us learn from our friends in the East and control the invasion now.

STONE LAGOON GOES NATIVE

By Kathy Dilley

Humboldt Lagoons State Park is located on Hwy 101, 40 miles north of Eureka. This beautiful park is comprised of Stone Lagoon, Big Lagoon and Dry Lagoon. Prior to 1979, a motel and restaurant called the "Little Red Hen" was located next to Stone Lagoon. The restaurant building was remodeled into a museum and park office, and currently serves as the Humboldt Lagoons Visitor Center and bookstore. The North Coast Redwoods Interpretive Association (NCRIA), a cooperating associate with California State Parks, operates the center and bookstore.



Stone Lagoon Visitor Center of Humboldt Lagoons State Park gets a native plant make-over. Prairie Johnston, Michael Moore and Vic Armijo clear blackberries, invasive grasses and other weeds before the second phase of native plant installation.

In early 2009, the NCRIA's director, Jeff Russell, requested a native plant renovation for the area surrounding the Stone Lagoon Visitor Center. The goal was to develop site-appropriate native plant beds, while honoring the center's historical use as a motel and restaurant. The project is being managed by CNPS volunteer Kathy Dilley.

Hoping to refresh the garden beds prior to the center's grand re-opening on April 17th, Carol Ralph, Kathy Dilley, Lia Webb, Michael Moore, Prairie Johnston, Vic Armijo and Wanda Naylor quickly went to work eliminating weeds. Several layers of weed barrier, buried six inches deep, were also removed by our undaunted volunteers.

Carol, Kathy, Lia, and Prairie generated the design and plant list after considering site characteristics, educational potential, indigenous plant uses, and surrounding native plant communities. The existing native Western azaleas (*Rhododendron occidentale*) and

ornamental azalea and Rhododendrons were planted by the proprietors of the former motel-restaurant and so were retained for historical value as requested by the NCRIA.

The new plants were then installed in two phases. In addition to the existing Western azaleas (*Rhododendron occidentale*), Coast strawberry (*Fragaria chiloensis*), Fringe cups (*Tellima grandiflora*), and an existing Alder, visitors can now look for Bigleaf lupine (*Lupinus polyphyllus*), Coast silk tassel (*Garrya elliptica*), Douglas iris (*Iris douglasiana*), Giant chain fern (*Woodwardia fimbriata*), Oregon grape (*Berberis aquifolium*), Red-flowering currant (*Ribes sanguineum*), Seaside daisy (*Erigeron glaucus*), Sticky monkeyflower (*Mimulus aurantiacus*) and Western columbine (*Aquilegia formosa*). Coming attractions: Columbia lily (*Lilium columbianum*), Evergreen huckleberry (*Vaccinium ovatum*), Salal (*Gaultheria shallon*), Sword fern (*Polystichum munitum*) and more bulbs.

Plants were donated by CNPS growers, the Humboldt Fish Action Council, Freshwater Farms and Telos Rare Bulbs. NCRIA ordered and placed the mulch, plans to label the plants, and is preparing signage. A plant map will be available in the visitor center in spring of 2010.

For more information on Humboldt Lagoons State Park see www.parks.ca.gov or call 707-488-2169. Contact the North Coast Redwood Interpretive Association through www.ncria.org, or 707-464-6101.

If you'd like to help maintain the garden, please contact Kathy Dilley at 825-7665 or kathy@greeneearthlandscapes.net.

(Continued from page 1)

the only likely reward for pollinators. Following pollination and subsequent fertilization, the flowers mature into upright capsules capable of producing over 2,000 seeds.

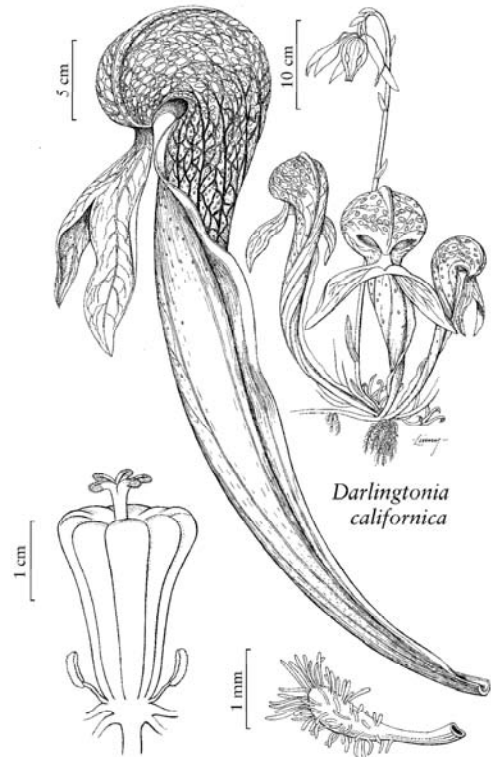
Despite much interest, the pollinators of *Darlingtonia* flowers have rarely been observed. Study of the pollination system began in the late 19th century by a self-taught botanist named Rebecca Austin who lived in the Feather River valley of California. Austin consistently observed spiders patrolling and building webs on flowers, which led her to the conclusion that spiders were acting as pollinators for *Darlingtonia*. In addition to spiders, recent studies suggest that a solitary bee, *Andrena nigrihirta*, also contributes to *Darlingtonia* pollination. The shape of *Darlingtonia*'s ovary was once thought to prevent self-pollination by guiding an insect pollinator away from the stigmatic surfaces as it exits the flower. However, following detailed accounts of floral visitation by bee pollinators, it was recently determined that the bell-shaped ovary, in combination with the uniquely shaped petals, promotes stigma contact both when pollinators enter and exit a flower.

First discovered in 1841 by J. D. Brackenridge, *Darlingtonia* was formally named and described by New York botanist John Torrey. Since then, the California pitcher plant has maintained a high profile and has become extremely popular among horticulturalists and carnivorous plant enthusiasts. Despite being threatened by over-collecting from wild populations (which is illegal) in the past, populations now appear stable. Because of its small range and specific habitat requirements, the CNPS has placed *Darlingtonia* on its watch list of species with limited distributions and the IUCN red list classifies *Darlingtonia* as a species at low risk. However, with the support and interest of native plant enthusiasts, *Darlingtonia* will continue to be enjoyed as a rare and marvelous plant.

George Meindl received from Humboldt State University both a BS in Environmental Biology and a MA in Biology. His master's thesis was "Pollination biology of *Darlingtonia californica*, the California pitcher plant." Mr. Meindl is currently working on a PhD in Biology (Ecology and Evolution) at the University of Pittsburgh, studying plant-pollinator interactions. You may contact him at gam35@pitt.edu.

MORE *DARLINGTONIA CALIFORNICA*

The North Coast Chapter of CNPS sponsored the following *Darlingtonia californica* illustration in the newly published ***Flora of North America Volume 8—Magnoliophyta: Paeoniaceae to Ericaceae***

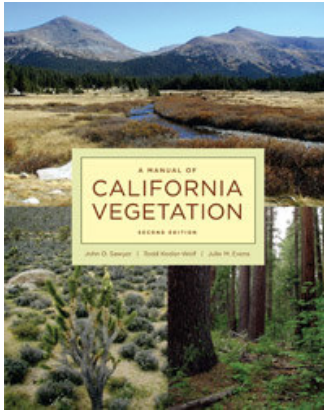


Linný Heagy, illustrator.

Flora of North America publishes reference information on the names, taxonomic relationships, continent-wide distributions, and morphological characteristics of all plants native and naturalized found in North America north of Mexico. The Flora will appear in a total of 30 volumes (15 published through 2009) available in print and on the Web.

Visit the Flora of North America's website at www.FNA.org and see their *Darlingtonia californica* information written by Dr. T. Lawrence Mellichamp from the University of North Carolina (Charlotte) at www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=10798

**THE SECOND EDITION OF
A MANUAL OF CALIFORNIA VEGETATION**
By John O. Sawyer, Todd Keeler-Wolf, and Julie M. Evens



California is famous for its beautiful plant displays across the landscape. These patterns of plants are known collectively as plant communities or vegetation, such as redwood forests, oak woodlands, and Joshua tree woodlands. *A Manual of California Vegetation*, published in 1995, has since become widely accepted as the standard for classifying the state's vegetation. CNPS is pleased to announce the release of the Second Edition of *A Manual of*

California Vegetation. Greatly expanded from the previous edition, this revision comprises a collection of biological and ecological information on all of the known vegetation types in the state focusing on both the individual species and surrounding habitats. This completely updated edition features more than twice the number of vegetation descriptions as the original *MCV* and includes the following and more:

- ◆ Over 485 written descriptions of vegetation types with updated references
- ◆ Keys to differentiate groups of related vegetation types
- ◆ Information on restoration and other management considerations
- ◆ Display of the new national and international classification of vegetation
- ◆ Standardized nomenclature complying with the National Vegetation Classification

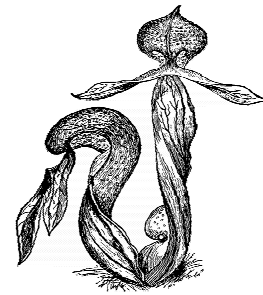
The *MCV* provides a systematic approach to classifying and describing vegetation in California, providing definitions, descriptions, and maps that enable more definitive assessments of extent, location, rarity, and threats to these natural communities.

John O. Sawyer is an emeritus Professor of Botany at Humboldt State University where he taught ecology and plant taxonomy for 40 years. His interests are especially in the vegetation of the Klamath Mountains and North Coast and the state's shrubs.

Todd Keeler-Wolf is an ecologist who has worked in California for over 30 years. Currently he is the Senior Vegetation Ecologist at the California Department of Fish and Game and leads their Vegetation Classification and Mapping Program.

Julie M. Evens is a vegetation ecologist with over 15 years of fieldwork and research in California. She is the Vegetation Program Director for CNPS where she manages projects to survey, describe and map vegetation statewide.

**JOIN THE CNPS
NORTH COAST CHAPTER!**



By joining CNPS you:

- Add your voice to that of other native plant enthusiasts wishing to increase awareness, understanding, appreciation, and conservation of California's native flora.
- Receive the quarterly journal *Fremontia* (the statewide newsletter), our chapter's quarterly newsletter, *Darlingtonia*, and the Northcoast Environmental Center's (NEC) newsletter, *EcoNews*.
- Receive discounts at local businesses

Membership fees: Individual \$45; Family \$75; Student or Limited Income \$25 (Membership fee minus \$12 is tax deductible).

To join or renew, you can either:

- Send your name and address, check (payable to CNPS) or credit card information to CNPS, 2707K Street, Suite 1, Sacramento, CA 95816-5113.
- Pay on-line <http://www.cnps.org/cnps/join/>

Please notify the state office and/or our Membership Chairperson if your address changes. **MEMBERS**—see your membership expiration date on the first line of your newsletter's address label.



**Chapter Picnic at Patrick's Point State Park
October 4, 2009
by Carol Ralph**

For the second year in a row a dash of rain did not dampen the fun of our picnic at the Bishop Pine Picnic Area . This year 22 CNPSers, spouses, and friends shared delicious food, lively conversation, and a walk to Ceremonial Rock, Rim Trail, and Wedding Rock. We duly noted the Bishop pine, wispiest and paler than Monterey pine, and needles in bundles of two. A dead shrew-mole *Neurotrichus gibbsi* on the trail provided good material for a mammalogy lesson. Ceremonial Rock sported a good fern and spikemoss flora this time of year and a truly alarming mass of English ivy. The grape fern that grows on the trail was not visible because the trails had all been closely and thoroughly trimmed recently. From the rocktop we identified a good number of tree species, and one of us, who isn't unduly old, recalled the days when you could see over the tops of the spruces to the ocean south of the rock. Thankfully the park has managed to mow the meadow enough to keep it a meadow, where lilies, violets, and iris bloom in summer. Along the Rim Trail we found *Angelica lucida* (glabrous; large bractlets), and at Wedding Rock we found *Angelica hendersonii* (finely fuzzy leaf underside; bractlets very small). At Wedding Rock some people watched for whales, while others spotted the four species of plantain found there.



Plantains *Plantago* on Wedding Rock: *Plantago maritima*, *P. major*, *P. coronopus*, *P. lanceolata*. Only *maritima* is native. *P. major* and *lanceolata* are common yard and pasture weeds. *P. maritima* and *coronopus* are strictly coastal.

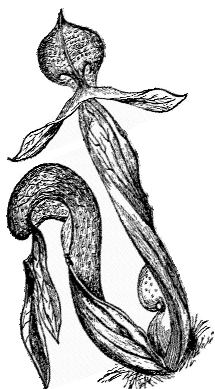
Two stalwart members who had completed the paperwork (a heroic task in itself) to be long-term park volunteers arrived before the picnic and pulled English ivy from a number of trees near the picnic area. Admiring their effort, a good number of us expressed enthusiasm for ivy-bashing work parties in the near future. Anyone interested in becoming a long-term volunteer should contact Michelle Forsys 677-3109. Anyone wanting to be notified of an ivy bash when one gets organized should contact Stephanie Klein 822-5785.

**CNPS, North Coast Chapter
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Darlingtonia



Visit us at NorthCoastCNPS.org

CALENDAR of EVENTS

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February

- ◆ Wednesday, 10 — Program (Page 3)
- ◆ Saturday, 27 — Sedge Workshop (Page 6)
- ◆ Saturday, 27 — Hike (Page 2)

March

- ◆ Wednesday, 10 — Program (Page 3)
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April

- ◆ Saturday, 11 — Hike (Page 2)
- ◆ Wednesday, 14 — Program (Page 3)
- ◆ Friday, 30 — Wildflower Show (Page 2)

May

- ◆ Saturday, 1 — Wildflower Show and Plant Sale (Page 2)
- ◆ Sunday, 2 — Wildflower Show and Plant Sale (Page 2)
- ◆ Wednesday, 12 — Program (Page 3)