Natives Heal the Land!

don Jeanne Wilson, Redbud Chapter President

Put it on your calendar! Redbud’s 2018 Fall Native Plant Sale is Saturday, October 13th, at North Star House.

Native Plants for Healing the Land

This year’s theme is “Native Plants for Healing the Land.” After years of drought and last Fall’s devastating fires, we want to help heal the land with native plants that are not only resilient and beautiful but also adapted to local conditions. Native plants regenerate our ecosystems by cleaning the air and water, reducing erosion, and providing habitat for wildlife. They also help restore the beauty of our local forests, woodlands, and grasslands, so we can experience our natural heritage and renew our spirit.

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Newsletter Editor: Chrissy Freeman

Nitrogen “Fixers,” Deep Roots

Different native plants heal the land in different ways. Some — such as Redbud, Ceanothus, Lupines, Mountain Mahogany, Alder, False Indigo, and Chaparral Pea — are nitrogen “fixers,” moving nitrogen from the air and into their leaves and roots, where it becomes available to other plants. Some, including many native bunch grasses (Deergrass, Purple Needlegrass, and others), grow roots up to 10 or 20 feet deep that put organic matter and water far underground; this reduces erosion, improves moisture retention, and enriches the soil.
Reducing Weeds, Supporting Life
Other natives create a carpet of green (ground covers such as Sonoma Sage) that helps reduce the incursion of flammable invasive weeds and non-native annual grasses. Ground covers and similar native plants also protect the soil and add organic matter to support microorganisms, mycorrhizae, worms, and other beneficiais.

Providing Shade & Habitat
Fast-growing native trees and large shrubs heal the land by providing shade for humans and food and habitat for wildlife. These include Ponderosa and Sugar Pines, Bigleaf Maple, Flannelbush, Toyon, and Elderberry.

We’re Already at Work
Redbud members are already hard at work getting ready for our Fall Native Plant Sale. We’re growing hundreds of plants in a wide variety of local native species. We’re testing some new species not available commercially. We’ll have more plants in smaller, less expensive sizes. We’re also researching and creating resources to help you choose and grow the right natives for your needs that will thrive in your location.

Over the next 6 months, we need many volunteers to make this year’s plant sale a success. Without your help, the sale cannot happen. Right now, we have an immediate need for Publicity and Volunteer Recruitment. For more information, contact Jeanne at president@redbud-cnps.org.

We hope you can join us in this labor of love --- and we're looking forward to seeing you at our Fall Sale October 13!

Redbud Leadership and Involvement Opportunities
by Jeanne Wilson, Redbud Chapter President

As is clear from the diverse and fascinating articles in this newsletter, Redbud is taking initiative on several fronts; we offer opportunities for people who love California native plants to explore, learn about, grow (garden with), advocate for, and preserve the beauty of the native plant communities of Nevada and Placer Counties.

Your Energy Makes a Difference
We accomplish amazing things with our small group of dedicated leaders, who work year-round behind the scenes. We can’t do this alone, however. Several leaders have moved on to new horizons elsewhere;
many of us now wear several hats and do several jobs. We need some members to experience the benefits of greater involvement in order to avoid burnout among folks wearing multiple hats.

Whatever your interests, skills, and experience, we need your energy, enthusiasm, and talents to help keep Redbud thriving and successful, and to continue to have a Plant Sale, newsletter, active board, and all the other activities described in this newsletter. Knowledge/expertise in California native plants is NOT necessary; we are united by a zeal for California’s 8,000 native plants and a desire to learn more.

Get involved with a Redbud committee to meet great people who share your interests and make a difference!

**Open Redbud Leadership Positions**

In addition to our committees, we have the following leadership positions open:

- **Secretary** — take and distribute minutes for Board Meetings every other month
- **Assistant Treasurer** — assist treasurer with tasks (e.g., quarterly sales tax reports)
- **Hospitality Chair** — help set up for events, greet attendees, provide information about Redbud
- **Publicity Co-Chair** — help with publicity for plant sale (and other events as needed)
- **Volunteer Co-Chair** — help with volunteer recruitment and coordination

**Volunteers Have More Fun**

As a relative newcomer, I’ve found Redbud the perfect place to make friends and get involved with “grassroots” issues. Redbud leaders and members are generous and helpful; they welcome new faces and ideas.

But filling several roles — President, Treasurer, Plant Sale Co-chair — makes me very aware of our pressing need for more help.

For more information on any leadership position, or to volunteer, contact president@reбуд-cnps.org.

Together we accomplish great things while learning and having fun. Join us!

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**Know Your Watershed**

*by Josie Crawford, Education Chair*

The Wolf Creek Community Alliance presents the first annual **Know Your Watershed Week**, April 28 - May 6 to celebrate the Yuba, Bear, and American River watersheds. This week will feature **over 30 events** hosted by more than 20 organizations and schools, including the Redbud Chapter of CNPS.

Throughout the week, you will have opportunities to learn or teach about native plants, volunteer on a Bio-blitz (an event in which “experts” and amateurs identify as many plants and animals as possible in a few
hours). Or just participate and learn about the watershed you live in. Visit the Know Your Watershed website, www.knowyourwatershed.org. You’ll find an interactive map to explore the three watersheds, a Calendar of Events, and plenty of fun and informative watershed information. 

*Below: Bear River from Stevens Creek Trail, Colfax* 

Events take place in Auburn, Colfax, Coloma, Grass Valley, Nevada City, North San Juan, Placerville and the beautiful parts in between. Check the Calendar on the website for updates and additions. 

**Plant Activities**

Plant activities include a plant hike along the Bear River in Colfax on Sun, April 29, weekend wildflower hikes at Bridgeport (South Yuba River State Park), and most likely, a natural history hike along the new Wolf Creek Trail in Grass Valley, on Sat, May 5. Contact the Bear Yuba Land Trust if you would like to take part in a community or school Bio-Blitz. 

The week will feature 2 or 3 Bio-Blitzes with school groups; they are looking for plant expert or semi-expert volunteers. Two take place on Friday, May 4. One is on Independence Trail above the Yuba River outside of Nevada City (elementary schoolers), and the other is south of Grass Valley at the Adam Ryan Preserve (high schoolers). A Community Bio-blitz takes place on Sunday, May 6, Cascade Trail, Nevada City; volunteer as expert or semi-expert, or participate as a community member. Contact information is in event details on the Calendar. 

**More Kinds of Activities**

The week includes several great school programs and events, public wildflower and bird walks, lots of hikes, a Salmon Run, a benefit dinner and dance for the Bear River Legal Defense Team, open house at Sierra Streams Institute’s new nature center, chalk art of Wolf Creek by Grass Valley Charter School, outdoor painting events, restoration activities, trail building, and even Watershed Trivia Night in Nevada City, along with many other opportunities to learn about or help the watersheds.

**Participating Organizations and Schools**

American River Conservancy, American River Institute, American Rivers, Bear Yuba Land
Redbud's 2018 Field Trips
by Pamela Brillante, Field Trip Coordinator

Spring wildflower season in the foothills is in full bloom! We've had some awesome trips so far this year, including a bryophyte (mosses, liverworts, and hornworts) trip led by bryophyte expert Jim Shevock! We also enjoyed tufted poppies, blue dicks, popcorn flowers, fiddleneck, and other beautiful wildflowers while admiring fast-flowing Fairy Falls at Spenceville Wildlife Area. We learned about the wonderful Nature Area at Sierra College in Rocklin and what we can do to help preserve this amazing area in danger of being developed. Children (and adults!) also learned how plants can help families live while hiking at Placer Nature Center.

We have many more trips planned! Check our website for more details. Trips depend on when flowers are in bloom, sometimes on short notice, so check our website often and follow us on Facebook!
Some of our Upcoming Field Trips!

- **April 28th (Sat)** — Placer Nature Center, Auburn. 10 - 11 am. A “Hungry, Hungry Hike" for kids of all ages. Stay after to see Nature Center Museum/Discovery Center. Leader: PNC Docent Linda. If you missed the last hike, this is your opportunity to join the fun!
- **April 29th (Sun)** — Bear River Park, Colfax. We’ll explore a site that would be flooded by the proposed Centennial Dam.
- **May 6th (Sun)** — Stebbins Morning Glory, Grass Valley. See rare Stebbins Morning Glory and other uncommon native plants in specialized chaparral habitat. Leaders: Denise Della Santina and Karen Callahan.
- **May 12th (Sat)** — Maidu Center, Roseville, $5 Admission. Learn about native plants historically important to the Maidu Tribe. Leader: Maidu Center Docent.
- **May 19th (Sat)** — Smarts’ Crossing, Dutch Flat. Hike down to the Bear River to see woodland and riparian native plants. Leaders: Jeanne and Pam.
- **June 23 (Sat)** — Lower Carpenter Valley, Truckee. Explore Truckee Donner Land Trust’s recently acquired Preserve. Leader: Truckee Donner Land Trust docent.
- **Jun. 29 to Jul. 1** — Sierra Field Campus. Redbud members only. This is a 2-day, 2-night trip. Participants must register and pay costs for meals and lodging in tents.

We welcome suggestions for new trip locations and are always on the lookout for new trip leaders! Please email us at nativeplanthelp@gmail.com.

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**Firewise Landscaping for Zone 1 Defensible Space**  
by Nancy Gilbert, Horticulture Chair and Fire Safe Council Advisor

The devastating wildfires that occurred last year in northern California, and specifically in our local area, have been a major wake-up call for home owners and land owners to get to work making our homes and properties as safe as possible from increasingly destructive wildfires. Climate change is lengthening our fire season by increasing both temperatures and wind velocities, as well as possible shifts in rain patterns.

Add to this that our forests and woodlands are terribly overgrown due to wildfire suppression over the past century and the increasing home development in the suburban-wildland interface, and you have a recipe for wildfire disasters.

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**Are You Firewise?**  
Zones of Defensible Space

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![Firewise Landscaping Diagram](image-url)
The Importance of Defensible Space
When you look around your home and property, you can easily feel overwhelmed by the challenge of making your home and property fire safe. So it’s important to educate yourself and develop a prioritized plan before taking actions you may later regret.

A good place to begin is to contact the Fire Safe Council of Nevada County and **schedule a free “Defensible Space Advisory Visit”** from a trained Fire Safe Advisor. The advisor will conduct a walkabout of your home and property with you and assess your driveway access, home construction type, fire fuels and clearances, and any other areas that need addressing. You receive a copy of the visit form that the advisor has filled out; that can help guide you in your efforts to build what is called “defensible space.”

Defensible space for wildfire protection starts with defining the “zones” adjacent to your home and other flammable structures. This makes you and your home more fire safe, and also allows firefighters to more safely defend your home and property. They will not defend a home if doing so clearly endangers their lives.

**Focus First on Zone 1**
Zone 1 of defensible space is the area within 30 feet of your home. Zone 2 is the area within 100 feet of your home. Ideally you want both zones to become fire safe. But start with zone 1 and work your way outward. Also concentrate on managing the vegetation along your driveway access, so you can safely leave and fire fighters can access your property during an evacuation. In the diagram, “Are you Firewise?,” you can see the primary aspects for creating defensible space in these two zones. This is an idealized illustration; in our foothill forests and woodlands, we would leave more trees and shrubs than shown here, for wildlife habitat, shade, and erosion control.

*Bowtulbe iris (Iris macrosiphon).* Native bulbs are good in Zone 1, and rocks are firesafe mulch.

I am going to focus on Zone 1 area landscaping, because this is the most critical zone and one you can start working on almost immediately. Zone 1 is the “lean, low and green” zone and, therefore, also your hydro(water) zone 1, where you will concentrate your irrigated landscaping.

This does not preclude native plants, as myriad California native plants work wonderfully in this fire-safe zone. They also have the advantage of requiring less water, fertilizer and maintenance, as well as being more attractive to pollinators and birds than most non-native plants. I have a mix of native and non-invasive, non-native plants in my zone 1, and they live harmoniously because their water, soil and sun-exposure requirements match.

Zone 1 areas are ideal for locating a small kitchen and/or herb garden, water features, and perhaps a “small” lawn, which can be composed of water-thrifty native grasses, sedges or yarrow rather than the water-guzzling bluegrass lawns of yore.
Within 8 to 10 Feet of Your Home

Keep 8 to 10 feet adjacent to your home free of all flammable materials or vegetation. One older landscape design concept that has to be turned inside out is the practice of “foundation plantings,” planting shrubs directly against the house to hide the foundation. This is anathema to firewise landscaping practices. Locate your shrub or mixed border gardens away from the house, at the 30-foot boundary of zone 1 or beyond.

Maintain this 8- to 10-feet area nearest your house free of all flammable material including firewood, wood and plastic fences, large shrubs and tall perennials, dry weeds and grasses, low-hanging tree branches, leaves, pine needles, and bark or wood-chip mulches. Never use mulches such as “gorilla hair,”—a finely shredded bark that is very flammable.

The areas close to your house are perfect locations for concrete, brick, paver, or gravel walkways and patios, for rock gardens and cobble-lined drainage swales, and for low-growing groundcover-type plants that are irrigated sufficiently to keep the leaves and stems hydrated.

Beyond 8 to 10 Feet but in Zone 1

Beyond this critical 8- to 10-feet most closely surrounding your house, in the rest of zone 1 you have more latitude and can include slightly taller landscape plants, but keep vegetation pruned low, as flames will generally be at least twice as high as the height of the vegetation.

You can mulch your planters and borders in these outer portions of zone 1 with organic as well as inorganic mulches. Remember to leave some patches of bare ground for ground-nesting bees and butterfly puddling!

Plants for Zone 1

Within zone 1, avoid both native and non-native plants that are highly aromatic, have waxy coating on the leaves, or have fine feathery foliage or flat, narrow needles, as such plants are highly flammable. Common examples of non-native plants with these qualities are Rosemary and Junipers, which are all too common in Sierra foothill home landscapes. Our strongly scented native Salvias (Sages) are wonderful garden plants, but do not plant the shrubbier and taller ones near structures or propane tanks.

Following is a list of some fire-safe and attractive California native plants well-suited for planting in Zone 1. To learn more about these plants and for an expanded palette of native plant species for your garden, visit CNPS’s huge native-plant database website: http://calscape.cnps.org.

Some Firewise California Native Plants for Zone 1 Defensible Space in Sierra Foothills

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adiantum species</td>
<td>Maidenhair Fern, Five-fingered Fern</td>
</tr>
<tr>
<td>Aquilegia Formosa</td>
<td>Western Columbine</td>
</tr>
<tr>
<td>Arctostaphylos uva ursi</td>
<td>Bearberry, Kinnikinik</td>
</tr>
<tr>
<td>Asarum caudatum</td>
<td>Wild Ginger</td>
</tr>
<tr>
<td>Berberis repens</td>
<td>Creeping Barberry</td>
</tr>
<tr>
<td>Carex pansa</td>
<td>Sand Dune Sedge</td>
</tr>
<tr>
<td>Carex tumulicola</td>
<td>Foothill Sedge</td>
</tr>
<tr>
<td>Ceanothus gloriosus ‘Anchor Bay’</td>
<td>Carmel Creeper</td>
</tr>
<tr>
<td>Ceanothus prostratus</td>
<td>Mahala Mat</td>
</tr>
<tr>
<td>Cliriopodium douglasi</td>
<td>Yerba Buena</td>
</tr>
</tbody>
</table>
Dicentra Formosa                  Western Bleeding Heart
Epilobium canuum                  California Fuchsia
Erigeron glaucus                  Beach Aster
Eriogonum umbellatum              Sulphur Buckwheat
Eriogonum grande v. rubescens     Red Buckwheat
Fragaria vesca                   Woodland Strawberry
Heuchera species                 Alum Root
Iris hartwegii and macrosiphon   Hartwegg’s Iris, Long-Tubed iris
Iris Pacific Coast Hybrids        Pacific Coast Hybrid irises
Lewisia cotyledon                 Cliff Maids
Polypodium species               Polypody Ferns
Salvia sonomensis                Creeping Sage
Salvia spathacea                 Hummingbird Sage
Sedum spathifolium               Pacific Stonecrop

*Note: CA native bulb species and low-growing wildflowers can be inter-planted among plants on this list.

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**Development Challenges in Placer County:**

**West Placer’s Wetlands and Farmland Face Massive Industrial and Residential Development**

by Leslie Warren, Advocacy Chair

We’re so grateful to our State CNPS office and Greg Suba, CNPS Conservation Program Director, for providing extensive comments on the proposed Community Plan for the proposed Sunset Industrial Area/Placer Ranch (SIA/PR) projects. ([Read his comments](#).) Let’s look at the big picture of why CNPS comments on it matter, and what you can do.

**The Proposed Sunset Industrial Area/Placer Ranch Projects**

The County of Placer is proposing to develop 9,000 acres (13.9 square miles) of habitat and farmland for industrial uses and residential urban sprawl. This West Placer land is in the Auburn Ravine Watershed. It is critical vernal pool and migratory fowl and raptor habitat; it also includes farmland, wetland and grasslands, which sequester carbon dioxide and methane.

Water for this vast development would be drawn from the North Fork of the American River. The projects will be a major growth stimulus and create upward price pressure on homes throughout the region. Placer County supervisors are the project “applicants;” they will also be the deliberative body. As such, they will decide whether the environmental impacts of the projects are significant or not.
Draft Environmental Impact Report (EIR) is Up for Review

Because the County is the project “applicant,” taxpayers have paid for studies advancing this project, at a cost exceeding $5,000,000. These studies include the Draft Environmental Impact Report (EIR), of specific concern at this time. Under California Environmental Quality Act (CEQA), the public must be allowed a minimum of 45 days to review and comment on an EIR. At its discretion, the Board of Supervisors can extend the comment period. CNPS, the public, and other entities need 120 days to complete a review of this massive development proposal, the SIA/PR.

What You Can Do

1. Write to the Community Development Director, Steve Pedretti, 3091 County Center Drive, Auburn, CA 95603 to request that the County allow the public 120 days to comment on the large and complex Sunset Industrial Area/Placer Ranch (SIA/PR) Project Draft Environmental Impact Report which is due to be released this summer.

2. If you live in Placer County, call your Supervisor at 530-889-4010 to ask for a 120-day CEQA review period on the SIA/PR projects — because we, citizens, paid for the Draft EIR and need this extended review period.

3. Ask Crystal Jacobsen, Project Manager, 530-745-3085, cjocobse@placer.ca.gov, to put you on the mailing list for all hearings and publications associated with Sunset Industrial Area/Placer Ranch activities.

Forest Resiliency

by Chris Paulus, Retired CalFire Battalion Chief

People think that “forest resiliency means “forest health.” But forest health is a more narrow and simple perspective. Resiliency is the ability to resist, respond or withstand negative impacts, then recover and return to a former healthy state.

Though parts of a forest ecosystem may be healthy, they may lack diversity, natural forest growth stages, and fauna. A monotypic timber stand (trees of the same species) may be
healthy, but it is vulnerable to forest pests and pathogens that can kill all the trees. In a resilient forest ecosystem, the forest’s complexity and diversity allows it to withstand the loss of single species and still remain viable and productive.

For the west slope of the Sierra Nevada, and specifically Nevada and Placer Counties, we should compare forest resiliency with the historical forest that occupied these lands before Eurasian contact. These lands and the biodiversity they supported were generated, shaped, manipulated and managed by determining factors of four basic types: These forests were: human-interactive, disturbance-dependent, fire-adaptive, and drought-tolerant ecosystems.

How Humans Affected the Historical Forest
The first people to occupy these lands, commonly referred to as the California Indians, carried out the human-interactive component. Their principle tool was using fire to augment the natural successional state these ecosystems move through. The repetitive use of fire helped maintain large areas of these forests in a sub-climax or early successional state. (This means the forest did not progress to the final stage, such as Douglas fir, which is more likely to support fire conflagration than sub-climax hardwoods such as oaks.) Examples of these would be montane (mountain) meadows or open oak stands with no conifer encroachment or brushy understory.

Disturbance and Fire Adaptation
The fire itself provided the necessary disturbance to achieve the “desired state” that the first people found created the optimal living conditions to meet their food, shelter, tool, medicinal and cultural needs. The repetitive use of fire, in turn, led to a fire-adaptive ecosystem tolerant of frequent fire passages. Fire professionals now refer to repetitive fire passages as a fire-return interval (FRI).

Native people sometimes did annual FRIs to maintain food gathering sites, such as seed-collecting sites associated with grasslands or large tracts of herbaceous-plant communities that dried out and would support fire spread in late summer months. These processes led to open forest with herbaceous understories. These places developed tremendous plant diversity that, in turn, supported a very diverse and abundant wildlife community with fish, insects, reptiles, amphibians, mammals, and birds.

Drought Tolerance in the Historical Forest
These open forests with their associated herbaceous understories were also drought-tolerant. The drought-tolerant aspect derived, in part, from having far fewer trees in the historical forest than we find today. The historical forests would have had trees populations of 25 to 70 trees per acre, with an approximate average of 40 trees per acre. Today’s forests can range between 500 to 1,000 trees per acre.

The spacing in the historical forests would have allowed rainfall and snowfall to reach the forest floor and penetrate the soil. That soil moisture then supported a widely-spaced forest...
that had less competition for water and nutrients during the drought periods. By comparison, today’s forests intercept, and then consume, an enormous amount of water.

The historical herbaceous understory would have improved soil health and provided organic material that would have readily decomposed after dying back. Increased organic matter in the soils improves the soil’s tilth and rate of water infiltration, thus enhancing water-holding capacity. For every one-percent increase in soil organic matter per acre, the water-holding capacity of that acre increases by 20,000 gallons.

This increased water-holding capacity allowed plant communities to withstand both droughts and California’s typical long hot, dry summers. This available ground moisture would have also increased plant moisture content, making them more resistant to both fires and drought.

Open forest: Mt. Howell restoration area 16 months after a prescribed burn
Fire-hazard forest: Needs thinning and removal of understory
Manzanita returning after mastication, which can scatter seed. Hand thinning is more effective.

End of Indigenous People and Practices

When we look at our forest of today, we can see that their historical resiliency has been severely compromised. This compromise has occurred and accelerated over the last 225 years. The genocide and forced removal of the indigenous people first altered, then eliminated, their cultural practices of frequent fire return intervals.

Cost of “Modern” Practices

This in combination with the “war on fire” established in the early part of the 20th century, along with other western constructs, has taken what was once an FRI of 1 to 3 years to an FRI of approximately every 200 years. Add to this commercial exploitation such as mining, logging, grazing, residential development, commercial development, infrastructure development, legislation and policies over this 225-year period, and the result is a dramatic loss of forest resiliency.

We see this compromise in overstocked forests, tree mortality from forest pests and pathogens, understories choked with impenetrable brush, invasive species, loss of herbaceous understories, and dwindling biodiversity at all levels. Combine this with a tremendous lack of public knowledge about the Sierran ecosystem, loss of education and information in our educational systems, and a political infrastructure that makes policies and legislation without regard to the welfare of this ecosystem, and resiliency declines further.
How to Improve Resiliency
So how do we improve forest resiliency? Before we can achieve forest sustainability or permaculture, restoration must occur first. Restoration can occur only when we begin to accept and practice indigenous management practices, employ traditional ecological knowledge, or some combination. At the heart of these concepts is responsible human interaction within the forest ecosystem. As we interact with the plants, we begin to understand the needs of the plants and how to optimize plant communities.

Like gardeners who pride themselves on raising award-winning roses, those who live in the Sierra must maintain their oak trees free of dead material, with no brush or accumulated dead material under the trees, to promote healthy acorn production. Tending to individual plants that make a garden is no different than tending plants that make a forest. The common denominator is the knowledge of what is best for the plants to grow, whether in a garden or a forest.

When we restore the historic ecological function of the forest and its historical plant communities, we increase forest resiliency. When we restore forest resiliency, the forest’s ability to withstand drought, pathogens, pests, and wild fires is itself restored. With this restoration, we can achieve sustainability and permaculture. Responsible forest management and interaction can achieve forest resiliency. At the center of all that is the preservation and restoration of the native plants.

2018 Passionate about (Native) Plants Lecture Series
This year’s speaker series has begun! We hope you were able to attend our first lecture. On April 11, scientific beekeeper Randy Oliver discussed pollen and how flowers and bloom times resulted from coevolution of each plant species with its pollinators. He amazed us with the detailed ways honey bees communicate to support the survival of the hive, and shared data about how our local ecosystem is changing — becoming drier, with different forest types.

We have a fascinating line-up of speakers for the rest of the year. Come join us!

- Wed., June 27, Auburn.* Ted Beatty: Birds and Their Habitats of the Western Sierra
- Wed., August 29, Nevada City.* Bonnie Bradt, Kate Brennan: Monarchs & Milkweed
- Fri., September 21, Nevada City.* Nancy Gilbert: California Native Perennials, Vines and Shrubs for Sierra Foothill Gardens

Save these dates on your calendar, and enjoy truly memorable evenings! Programs are 7 pm to 9 pm. In the weeks prior to each event, you’ll find more information about that event on our Facebook page and our website. All lectures are free and open to the public. See you there!

Locations
*Auburn Library, 350 Nevada Street, Auburn
**Madelyn Helling Library, 980 Helling Way, Nevada City, CA
**CNPS Workshop on Plant ID — by Josie Crawford**

Workshop on Intro to Plant Identification, Northern CA  
**July 10-12, Truckee**  
Taught by Josie Crawford  
(Redbud’s very own Education Chair!)

$375 CNPS Members, $395 Non-Members  
Learn the terminology and characteristics of 8 of the more common California plant families, reducing the amount of time required to key most plants to genus and species.

Use of dichotomous keys will be covered. This workshop will include classroom presentations and exercises, and we will spend at least half the time in the field identifying plants in the Sierra.  
Full details & registration:  

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**Nevada County Checklist --- An Update for Gordon True's List**  
by Wendy Boes

The Redbud Chapter is beginning an endeavor to create a checklist of all the vascular plants that occur in Nevada County. A vascular plant checklist is generally tiered to include what is known from herbarium records. A checklist can range from just being a list of species to including associated information that is the strong beginnings of a local flora. The checklist could include additional information such as nativity, the defining characteristics of the species, local range and habitat preference, local abundance, rarity rankings, and other information that describes how the individual species manifest locally.

In beginning to conceptualize what I wanted to write here, I tried to come up with the rational reasons for creating a checklist and how this has utility in our world. I considered the obvious arguments such as, “We will know what is here, so we will know what to conserve” or “it will contribute to the larger body of knowledge about floristics in California.”

**Gordon True’s List**

I wasn’t sure these arguments would actually pass muster with, say, members of my family who do not value native plants and plant communities the way I do. The thought struck me, though, that this desire to explore and find what is here is something we humans have historically been compelled towards. Think Lewis and Clark, or, more locally applicable, Gordon True.

*Lewisia collected in Nevada County. Expert at Santa Barbara Botanical Gardens is trying to determine its species.*

Gordon True (1908 to 1984) was a wildlife biologist and a self-taught botanist who bought a dairy farm in Nevada County after an automobile accident forced him into retirement. He
recounts a story in the self-biographical article “Evolution of a Botanist,” of the cows from his dairy farm coming back from pasture with interesting burs on their coats. He couldn’t rest until he had found the plant that was responsible, *Agrimonia gryposepela*. Thus, the first rendition of a checklist of plants from Nevada County was motivated and eventually born. True completed and published his preliminary flora in 1973, based on extensive time in the field tromping around and collecting plants.

**Why Update True's List**
The current effort to update Gordon True’s list, or the Nevada County checklist, is motivated by several reasons. First, present-day botanists have the desire to explore this very diverse county. Second, we would like to take True’s work to the next level, by filling in gaps in knowledge for certain geographic areas, and documenting new plants to the county both due to invasion and those just previously overlooked.

Third, we would like to be able to look at these data to get a sense of the distribution of plants, the local rarity of species perhaps widespread in other areas, and, with some persistence and commitment, potentially produce a publication that will allow others to know what grows here.

We will begin the project this field season, starting with a Plant Collection Workshop led by Steve Schoenig, who has done extensive work with the monkeyflowers and is an accomplished botanist. The group will learn to properly collect plant specimens and the appropriate metadata to both have it useful in an herbarium and in the checklist.

We hope to explore and collect from more than ten sites this year, sites on both public and private lands. If you are interested in participating, contact nativeplanthelp@redbud-cnps.org.

_Fritillaria_. Botanists are trying to determine whether it is _F. micrantha_ (common) or _F. eastwoodiae_ (rare species).

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**Ready, Set, Restore!**
by MerryLynn Byles-Daly

Ready, set, restore! On December 1st, 2017, a group of Grass Valley Charter School’s (GVCS) fifth-grade Restoration Rangers did some fine stewardship work at Bridgeport. The next week they continued their work at Bennett Street Meadow.

**Rangers in 2017**
The efforts of our Restoration Rangers paid off with beautifully-rooted bushes and clumping grasses started from seed. We had dozens of plants to take to our local state parks to plant this fall. These included snowberry (*Symphoricarpos albus*), skunkbush (*Rhus trilobata*), brown twig dogwood (*Cornus glabra*), and purple needlegrass (*Stipa pulchra*).
Students really enjoyed being stewards, noting that “Native plants help the pollinators and all the other animals that live here,” and “People will like seeing the flowers on our plants,” and “It’s really fun putting the plants in the ground.”

Restoration Blossoms
This spring, our fifth-grade Restoration Rangers are hard at work helping with the planting, maintenance, and signage for a native-plant demonstration and restoration area in the GVCS Science Garden. As sixth graders next year, they will be able to act as docents, giving tours of the native garden, explaining the benefits of each plant, and pointing out beneficial insects, pollinators, and birds that visit the area.

Working with native plants has had a lasting impact on these young Restoration Rangers. We are grateful to the California Native Plant Society and to our state biologist, Dan Lubin, for offering us this opportunity for stewardship!

Keeping up to the mark set over the last 20 years will require ongoing commitment and generosity, both financial and time-wise. In the meantime, let us give ourselves a hearty round of applause!

Dale Pendell and the Kuksu Herbarium
by Wendy Boes

Dale Pendell (1947 - 2018) grew up in the mesas and canyons of San Diego at a time when children could walk the canyon trails to and from school. He told me how on, his walk to school, he would encounter three different Salvias (white sage, black sage and chia). At the time, he noticed only their morphological differences.

When his parents acquired a wildflower book, he was amazed and thrilled to find that the different plants had specific names he could attach to them...and that those names indicated relationships. Thus began his long and diverse love affair with plants.

Dale’s Plant Collecting
Dale, revered as a poet and philosopher, inspired many by his ethnobotanical explorations. These are most popularly summarized in his Pharmako books, a three-volume study of psychoactive plant-based and related synthetic substances. Many people who have read Dale’s books don’t know that an early part of Dale’s fascination with plants included collecting plant specimens.

Although Dale is not known in the botanical community as a collector, he introduced botanical collecting to many in his community. Several people who grew up on the San Juan Ridge with
Dale as a mentor have told me how he often had his plant press in tow and would show them how it was used and how cool they thought it was — collecting specimens and pressing them.

Dale began collecting seriously in the early 1970s in the hills above Santa Barbara. He continued collecting through the late 1980s, with the bulk of his collections occurring in Santa Barbara, Humboldt, Santa Cruz and Nevada Counties. Almost half the specimens were collected between 1979 - 1981 in Nevada County, with the great bulk of them from the North Columbia Diggins and other localities on the San Juan Ridge.

The most important part of his collection is from the cranberry bogs at the North Columbia Diggins. He has preserved an almost comprehensive collection of the various species that grow there. This includes rare (Club-Moss, Beaked Rush), unusual (Cranberry, Golden-Eyed Grass) and high-elevation disjunct species (Lodgepole Pine, Tinker’s Penny, Sierra Laurel). (A disjunct species has two or more groups that are related but widely separated from each other geographically.)

Special Nature of the Kuksu Herbarium

The legacy of Dale’s days spent on the trail are now archived in the Kuksu Herbarium, which houses over 1,000 archived plant specimens. The specimens are preserved and documented as they would be in an institutional herbarium, having been mounted onto herbarium sheets. They are complete with labels indicating the habitat, scientific name, location data and descriptions about the plants that are not easily observable in the plant specimen or are lost over time, such as height of plant, flower color, and abundance.

Herbaria generally have the design and feel of institutional environments in which time seems to have stopped. The Kuksu Herbarium is an interesting place to hang out, because it is also Dale’s art studio. In contrast to herbaria, it is technicolor, chaotic and politically flamboyant.

Kuksu Herbarium page for Juncus effusus variant that Dale Pendell found at N. Columbia Diggins.

All the botanical specimens fit into a small wooden cabinet that Dale built for them years ago. But the walls of the herbarium space are filled with Dale’s paintings, which include bright colors and political statements. This adds a fascinating juxtaposition to the old-timey establishment feel of working with herbarium specimens.

Preparing the Herbarium for Jepson

In the summer of 2017, Dale received a terminal diagnosis that his cancer had metastasized; he reached out to find a new home for his Kuksu Herbarium. Through various channels, it was
resolved that I would sort through the herbarium to assess each specimen for bug damage, location information; I would then submit the herbarium to the Jepson Herbarium. Over the final days of Dale’s life, I scrutinized the collecting locations for accuracy. I first went through his notebooks, which alongside his collection notes, often contained poems, to-do lists, or an I Ching reading. Where locality information was not specific enough, I would ask Dale. In response, at times, he would share great adventures and stories; at other times the pain from the cancer required medication that would fog his usually-precise memory. Sometimes through the silence would come a single word that would clarify where he had been thirty or forty years earlier when he was out in the field collecting.

Whenever possible, each specimen was annotated with locality information that aligns with the Jepson Manual bioregions and township, range, sections and quarter sections, to make geo-referencing these collections as precise as possible. Having this collection housed in the Jepson Herbarium is an important step for this work; now his contribution can be integrated into the larger body of knowledge of the Nevada County Flora and available to botanists at large to examine for taxonomic or floristic reasons.

Kuksu Herbarium page for Mimulus guttatus Fisch (Seep Monkeyflower) collected by Dale Pendell. Updated location information is on the small typed note to the left of the original info.

Your membership in the California Native Plant Society helps ensure that our vital work in conservation, education, horticulture, advocacy, and plant science continues to grow and flourish!

*We know you care about nature and native plants!*

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