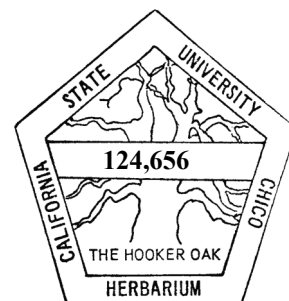


Friends of the Ahart Herbarium

The Chico State Herbarium
California State University, Chico



Volume 28 Number 2

December 2022

Newsletter

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Dye Creek Preserve Herbarium transferred to the Ahart Herbarium

By Lawrence Janeway, Herbarium Curator

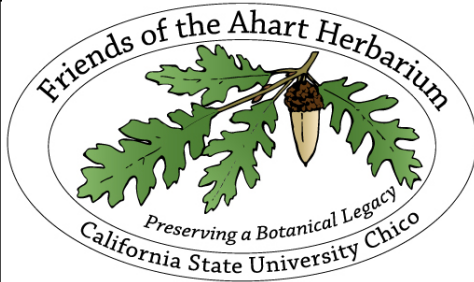
In early October 2022 the herbarium at The Nature Conservancy's Dye Creek Preserve was donated to the Ahart Herbarium at California State University, Chico (CHSC). Andrea Craig of The Nature Conservancy (TNC) made the arrangements for the transfer and delivered the Preserve's herbarium specimens to us at CHSC. In addition to the specimens, TNC also donated the full-size herbarium case that was housing the specimens at the Preserve. Thank you to Andrea for boxing up the specimens and bringing them and the herbarium case to Chico. And thank you to volunteer Tim Hanson (Friends of the Ahart Herbarium board member) and student assistant Alana Raczynski for helping get the case from Andrea's truck into the herbarium. Thanks also to David Popp (Friends of the Ahart Herbarium board member) for taking photos, and to him and herbarium volunteer Noelle Davis for helping spot for getting the case through doors and around corners.

The TNC Dye Creek Preserve is in eastern Tehama County, an area of large private property holdings at the transition from the Sacramento Valley into the Cascade Range Foothills ecoregions that has had very limited accessibility for the collecting of herbarium specimens. Thus, this transfer of about



Typical Dye Creek Preserve specimen from 1998

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The **Friends of the Ahart Herbarium**, California State University, Chico, was formed to help maintain the high quality of work known to be associated with the Herbarium. The primary purpose of the group is to provide community support for the Herbarium. This includes raising funds for items that are not covered under the University budget, in particular the curator's position. Scientific and academic pursuits as well as community outreach are the focus of the group. The Friends also offer low cost workshops and classes on various botanical topics.

The **Friends of the Ahart Herbarium** operates under the auspices of the Chico State Enterprises at the California State University, Chico, and as such enjoys non-profit status and has access to the use of University classrooms and equipment.

Memberships are renewed on January 1 of each year.

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Newsletter

Volume 28 Number 2

The Newsletter is published two times per year by the **Friends of the Ahart Herbarium**, California State University, Chico. Subscription is free with membership. Submissions on herbarium-related topics are welcome.

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520 specimens from the Dye Creek Preserve is an important addition to the collection at CHSC. Most of these specimens are of a quality that can be readily incorporated into the collection at CHSC. About 200 of these specimens are from 1997-1998 and are ready to go into the collection, 170 are good specimens from 1969, but need labels typed

for them, and another 150 specimens from 2003 will need help with completing their label information, if possible. In addition, there are 170 nice specimens from the McCloud River Preserve in Shasta County, although they all need herbarium labels typed for them -- a process that can take quite a while with our limited staff, student, and volunteer time. Almost all these 520 specimens arrived already mounted and we have already started getting those with labels databased, imaged, and incorporated into the collection. As usual for all specimens coming into the herbarium, these data and images are immediately available to the public via the Consortium of California Herbaria (CCH2) website (www.cch2.org/portal/).

Thanks again to The Nature Conservancy's Dye Creek Preserve and Andrea Craig for the donation of these valuable specimens and herbarium case to the Ahart Herbarium.



Top left— Andrea, Tim and Lawrence unloading the donated herbarium case. Bottom left—Alana, Lawrence and Tim wrestling the herbarium case through the herbarium door. Right—The donated herbarium case in its new home.



Plants of Dye Creek Preserve
Eastern Tehama County, California

Delphinium variegatum Torrey & A. Gray ssp.
variegatum

Horse Pasture, west of Main Road, north of Road to Field Station, in rocky clay slope with *Castilleja attenuata*, *Bromus tectorum*, *Vulpia bromoides*, and *Chlorogalum angustifolium*.

T26N R1W Sec13 NW SW.

Elevation 350 ft.

Collected by S. J. Bainbridge

24 May 1998

Close up of the label on the 1998 Dye Creek Preserve specimen



Report From the Upper Watershed

By Wolfgang Rouble

This year, thanks to my job at the Butte County Resource Conservation District (RCD), I've been spending a lot of time in the upper Butte Creek watershed. I'm project manager for the 20,000-acre "Upper Butte Creek Forest Health Initiative," which involves investing State of California dollars, through our local RCD, to accelerate the Forest Service's forest restoration work. I signed up having never really spent much time there, but upper Butte got its marten-claws in my soul as soon as I saw the first magenta-red *Paeonia* bud burning through the snow like a radioactive opal, while I listened to female aspen catkins softly fall to earth around me.

A total of 4,000 acres in our project area experienced 100% tree mortality in the Dixie Fire. They are a stark world of black snags and blue sky. Under the new emptiness, I've had my breath taken away by brilliant white acres of *Perideridia*; and I smile every time I see the cephalopod arms of fire-following *Eriodictyon lobbii*, flopping around in the black sticks, reveling in their moment. This is the year I first met *Lomatium plummerae*, with its strange mixture of turpentine and honey, basking on the blackened rim of Jonesville Canyon. The understory fireworks of *Ipomopsis* and *Ericameria* won't be here forever, not like this; and neither will the morels. Yes, the Dixie Fire was a tragedy, but it did happen, and there's never been a better time to be a woodpecker or *Diplacus nanus*.

Meanwhile, over "in the green," where the fire did not burn, the Colby Meadows area is famous for its fen complex. Fens are squishy, spring-fed wetlands with unique rare flora, and the way they sequester carbon makes other ecosystems look like amateur hour. It was in one of these fens that Natalie Pyrooz, a gifted field botanist who helped survey the project under the leadership of Wendy Boes, showed me the



In Upper Butte Creek Watershed
Photo by Natalie Pyrooz

long, tomato-red setae of *Meesia uliginosa*, a rare moss. It was growing on a saturated, decaying old log, thriving alongside sundew (*Drosera rotundifolia*) like they were tidepool creatures. All summer, I had been scowling at the young lodgepole pines – beneficiaries of fire suppression – who are unfairly crowding into the meadows that surround the fens. I got worried that the fens, too, might be getting Encroached. But Forest Botanist Allison Sanger straightened me out. We don't need to worry about fens getting encroached, she schooled me: As long as they don't get trampled or incised, fens



Sundew Fen Bog
Photo by Wolfgang Rouble

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stay fens forever, no matter how many lodgepoles grow in them. In fact, they *need* lodgepoles and other conifers to come closer... yes... a little closer... so they can eventually murder them through soil saturation and eat their bones! (OK, Allison didn't actually say the murder part. But, it's Halloween.) Suffice it to say that fens feast on the bodies of lodgepoles. Fens use those regular meals of wood, after all, to accumulate the spongy, fathoms-deep carbon we know them for. And it's only on wood in a certain stage of soft decay that *Meesia* can grow. Now every time I pass a fen and feel its spring-chilled breath on the back of my neck, I hear a cold voice muttering: *MAMA FEN NEEDS BONES* ...and I find it in myself to be grateful that trees, too, must die.



Alpine meadow in
Upper Butte Creek Watershed
Photo by W. Rougle



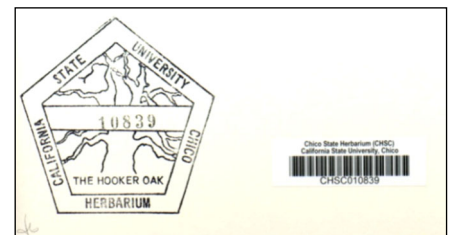
Curious About a Particular Plant Species and Would Like to Get a Close-up Look?

By Colleen Hatfield, Herbarium Director

You can now get a close up look at almost all of the vascular plants that the Ahart Herbarium has in its collection. We currently have over 90,000 of our specimens imaged and linked to the species record on CCH2.org. We started the imaging project back in 2018 when the herbarium along with other universities, research stations, natural history collections and botanical gardens across California received funding from the National Science Foundation (NSF) to create digital images of over 1 million plant specimens housed in herbaria throughout California.

Our herbarium received three years (2018 – 2021) of NSF funding to image 30,000 specimens and initially we were concerned if we could make that goal. We had to procure all the equipment and supplies, set up an imaging station in the herbarium, coordinate with the university for cloud storage space for the images, and train staff and students. We also had to make a decision on how to integrate the specimen numbering system with our current numbering system. Each specimen has a unique identification number. For linking the specimen image to the specimen record a barcode with a unique number is placed on the specimen sheet before imaging. Most of our partners in the project chose to ignore the existing specimen number and use barcodes that didn't match, which improved efficiency. However, after much pondering, we chose to match up the specimen number and the bar code since the existing species number reflected its accession timeline into the collection. The process did take more time, but in the end several herbaria have expressed that they wished they had gone the same route.

Happily, we not only met our funded target of 30,000 imaged specimens by the end of the funding period, but we exceeded it by almost 50%. We were in fact one of the few partners that had managed to meet and surpass project expectations. How did we do that? Quite simply – an amazing effort by staff, students and volunteers who were committed to the project goals. We had eight graduate and undergradu-



Note how the specimen number on the herbarium stamp is the same as on the bar code.

(Continued on page 8)

All Things Botanically Related Presentation Series: Upcoming Presentations

It has been a fun and stimulating series of talks to date (see below) and we are excited about the upcoming talks as well. Hope you can join us the third Thursday of every month at 7:00PM to hear more fascinating presentations. For a schedule and details, check out the Friends website.

December: *Field Guide for Ferns of Placer and Nevada Counties*. Presented by Shane Hannofee, Vice President of the Redbud Chapter of the California Native Plant Society.

January: **Mojave Preserve** presented by Russel Huddleston

February: **Phenology of Growing Native Plants in Heritage Gardens** presented by Pat Reynolds

March: **Vernal Pools** presented by Carol Witham

April: **Geophytes** presented by Rob Preston

Overview of Recent Presentations:

Note: If any of these catch your eye and you would like to know more, all presentations are recorded and available for viewing on the Friends of the Ahart Herbarium/Events website.

November: *Timing is Everything: What Preserved Specimens can Tell us About Risks for Plant-Pollinator Interactions*. Presented by Laura Lampe, M.S CSU Chico.

The timing of life history stages in plants and their pollinators is strongly tied to environmental cues, which have shifted with climate change. When the timings of flowering in plants and flight periods in pollinators respond differently to changes in climatic cues, these events may become misaligned and important species interactions disrupted. Luckily, the information provided by specimens in herbaria and entomological collections can help us characterize changes over time and identify risks of these disruptions. Thank you, collecting naturalists and community science!



October: **FOAH Annual Meeting: Flora of Adak Island, Alaska: A Central Stepping Stone in the Aleutian Archipelago between Asia and North America**. Presented by Michael Williams, Ph.D. Western Washington University.

Dr. Michael Williams shared his love for the rare and isolated flora of Adak Island – the site of his master's in the late 1970s and recently visited in 2019 with a grant from the Shared Beringia Heritage Program of the National Park Service, a program aiming to recognize and celebrate the cultural heritage and natural resources shared by Russia and the United States.

Adak Island is central to the Aleutian archipelago. Located about 600 miles from mainland Alaska to the east, and Kamchatka Peninsula of Asia to the west, Adak is characterized by persistent overcast skies, moderate temperatures, high winds, significant precipitation, and cyclonic storms. The island also has active volcanoes and frequent earthquakes. Dr. Williams describes being caught in a storm so 'hellacious' that he had to stay within a couple feet of his fellow researchers to prevent getting lost. Needless to say, Adak's variable climate and unique geology makes it a very exciting place to study plants!



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Due to its close ties with both continents, Adak has unique endemic occurrences. *Takakia ceratophylla*, a moss, once thought to be liverwort and its closest relatives in the Mongolian Plateau, was found on Adak in the 1960s. The Aleutian shield fern, *Polystichum aleuticum*, a federally endangered species only grows on the island. It is also home to some of the world's smallest trees, *Cornus suecica* and *Salix arctica* – growing only 20 cm (8 inches) tall at maturity. About 9 species of orchids grow on Adak, previously known to not occur on the Aleutians, *Cypripedium guttatum* was found growing with *Adiantum aleuticum* by Dr. Williams in the late 1970s.

Unfortunately, this beautiful island has seen a number of disturbances in past 300 years. The exploitation and removal of the native Unangan peoples for the Russian fur trade, World War II, nuclear testing, over-fishing and the introduction of land mammals such as caribou, rats and foxes heavily damaged the island. Dr. Williams recalls lying down on big cushions of reindeer lichen interspersed with anemones and orchids in the 70s, but his recent visit in 2019 showed a completely different landscape, hypothesizing that grazing of the introduced animal population decimated many vulnerable plant populations. He also found that many of the plants are not producing viable seeds at the end of the growing season.

Attempts are being made to restore these ecosystems and Unangan peoples, but the project has been delayed to due political conflicts between Russia and the United States. Dr. Williams expressed his deepest respect and gratitude to the Unangan peoples for access and the ability to work on this project; he hopes the project will continue soon. We are looking forward to what comes next!

September: *EcoFlora for Everyone: Engaging Your Community in Observing Nature.*

Presented by Jennifer Neale, Ph.D. - Director of Research & Conservation at Denver Botanic Gardens.

Jennifer Neale gave a very comprehensive and informative talk all about the Ecoflora concept and how it is helping to document biodiversity. The Ecoflora concept was started at New York Botanical Garden, which has now spread to five botanic gardens: Chicago, Desert, Denver, Marie Selby, and New York.

The Ecoflora program was created in response to major concern with our current global biodiversity crisis. Ecoflora strives to merge data contained in herbarium records and iNaturalist observations in order to document biodiversity and track invasive species. This data can then be used for various scientific studies and projects. The project is focused on urban ecosystems and the iNaturalist app is used; any observations within a geographic boundary will automatically be added to the project.

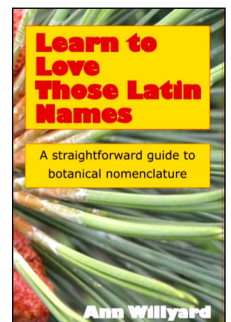
The program includes Meet-ups, and Monthly Ecoquests: challenges or treasure hunts specific to a genus or family. Jennifer invited anyone interested to join the Denver Ecoflora project, OR start your own for your local herbarium or institution!!

For more info visit: <https://www.nybg.org/plant-research-and-conservation/center-for-conservation-strategy/new-york-city-ecoflora/> or email Jennifer at Jennifer.Neale@botanicgardens.org.



August: *Learn to Love Those Latin Names.* Presented by Ann Willyard, PhD., Hendrix College.

Why use Latin names? If you have ever wondered this, you will be fascinated by botanist and author, Ann Willyard's presentation on her new book "Learn to Love Those Latin Names." It is clear that Ann is an accomplished teacher as you listen to her easy to understand explanation of why using Latin names is so beneficial and her clear explanation of



(Continued from page 6)

the rules behind the development and use of Latin names in botanical nomenclature. Ann discusses how using Latin names for plants provides a common language around the world that can facilitate collaboration between plant enthusiasts, naturalists and researchers and how by understanding the Latin naming conventions and the hierarchy used in botanical nomenclature, it can help us recognize related plant species. Ann's explanation of the nomenclature rules, how to correctly use scientific names in literature and the correct way to use abbreviations cleared up so many questions that I have harbored over the years and got me excited to use these new found understandings in my next foray into writing about plants! If you want to learn more, you can find Ann's book on Amazon.

July: *Adventures in the Native Plant Program of the UC Santa Cruz Arboretum and Botanic Garden.* Presented by Brett Hall, California Native Plant Program Director, UC Santa Cruz Arboretum.

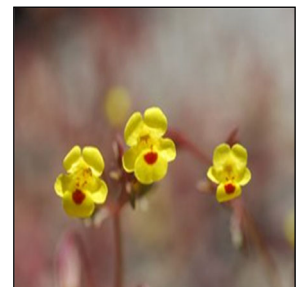
In this presentation, Brett Hall gave an overview of the UC Santa Cruz (UCSC) Arboretum and Botanic Garden and the work they are doing there under the UCSC Arboretum Native Plant Program. Under this program, 77 acres of grassland, mixed evergreen and hardwood forest corridors are managed and the gardens that have been developed since its inception include California central coast and maritime chaparral zones as well as a world conifer collection and a Laurasian forest. The UCSC Arboretum Native Plant Program also focuses on conservation, education and research. One of the projects Brett discussed was some of the maritime chaparral vegetation mapping efforts and the work the UCSC Arboretum Native Plant Program is doing to collect and maintain a seed bank of rare maritime chaparral species and to manage a collection of rare manzanitas at the UCSC Arboretum and Botanic Garden. Brett gave a wonderful tour of the different types of maritime chaparral within California that were included in the vegetation mapping project and showed beautiful pictures of some of the rare species observed. The UCSC Arboretum Native Plant Program is doing wonderful work and I encourage you to watch the recording of Brett's presentation if you haven't already to learn more about this northern California gem.



June: *Hey, Hey We're the Monkeys! We're too Busy Evolving to Put Anybody Down.* Presented by Steve Schoenig—retired Branch Chief for the Biogeographic Data Branch at the CA Dept of Fish and Wildlife (CNDDDB, Veg Mapping).

In this intriguing talk, Steve goes into great detail to help clarify the “messy diversity of *Erythranthe* section *Simiola*”, and updated taxonomy in the Jepson eFlora. He briefly talked about genetic work being done to further clarify the relationships between these different species.

What is section “*Simiola*”? A couple of the defining features are the calyx lobes are not all equal and often upcurved, corolla throat is constricted. This section has gone from three named species in the original Jepson Manual to 21 current species in the Jepson eFlora. Steve also looked at several localized species in this section that are very localized and unique, before delving into the more common widespread species that were once lumped together as ‘*Mimulus/Erythranthe guttata/us*. Steve gave many tips on differentiating between these species. One tip is that *Erythranthe guttata* will always be in areas that are wet year-round.



Steve gave some helpful tips for field botanists to I.D. monkey flowers in the field: First become familiar with the localized species. Focus on whether perennial or annual by looking for rhizomes or stolons. After localized species are ruled out, it will most likely be one of the common or widespread species. He also gave

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a tip to take pictures of all parts of the plant relevant for I.D. (corolla, calyx, leaves, bracts, stems, vestiture, roots), especially if posting to an online site or seeking help for an I.D.

For more info or a PDF version of Steve's talk, email seschoenig@gmail.com

May: *The Genus Clarkia – Botanical Adventures and Conservation Potential.*

Presented by Dr. Steve Laymon - Wildlife Biologist, Bureau of Land Management.

Steve gave an in-depth talk about the lovely genus *Clarkia* from the family Onagraceae. What defines a *Clarkia*, you ask? One can identify the genus by its 4 petals, 4 sepals, 4 or 8 anthers, 4-lobed stigma, anthers maturing before the stigma, 4-chambered elongated seed capsule, and no hair tufts on the seeds. California is a hotspot for *Clarkia*! 61 of the 64 taxa on North America occur in California! Several are rare species that need protection.

Many researchers have studied this genus, including hybridization and DNA studies. One result is the confirmation that the *Clarkia* species are "real". Although the species can sometimes hybridize, the hybrids have much lower fertility, and sometimes are completely sterile.

Steve gave tips on keying *Clarkias*, and mentioned to keep in mind where you are, your location, and elevation; you can rule many species out this way. He also talked about his many adventures in searching for, identifying, and photographing *Clarkias*. His many gorgeous photos and species descriptions, which he presented by grouping into geographic ranges, were very impressive!



(Curious About a Particular Plant Species continued from page 4)

ate students who worked on the project. Lawrence Janeway helped with training and troubleshooting. A big shout out to Nancy Groshong who as staff held down the fort for the duration of the project and to this day keeps us on track. Let's not forget volunteers who provided invaluable time and dedication to continue to help the Ahart Herbarium stand out for its excellence.

So what are our next steps? Well obviously we will continue to image incoming vascular plant specimens including those we just got from the Dye Creek Preserve donation. But the herbarium also has collections of bryophytes, lichens and macroalgae. With the advances in technology, we now also have a Consortium of North American Bryophyte Herbaria that we will post our bryophyte collection information. We will add our lichen specimen collection information to The Consortium of North American Lichen Herbaria and our macroalgae collection to the Macroalgal Herbarium Consortium. So no, we aren't done yet but the progress is so energizing, so stay tuned.

Up Next: Macroalgae

Microcladia coulteri Harvey
Collected by Kingsley Stern,
1962 in Monterey County, CA



Postelsia palmaeformis Rupr
Collected by Kingsley Stern,
1962 in Monterey County, CA

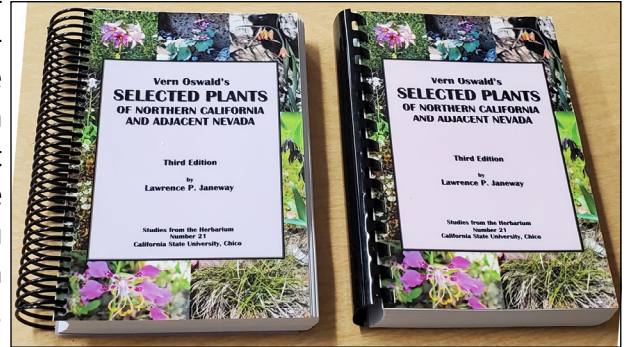


Vern Oswald's Selected Plants of Northern California and Adjacent Nevada Third Edition by Lawrence P. Janeway

Studies from the Herbarium Number 21

By David Popp

A new publication is now available from the Ahart Herbarium. Like any good work of science, the book is constantly being amended and the keys improved. An example is when you are keying a plant in a section you have been to in the past and the key seems different than the last time you were there, you may start to question if you are in the same book when you keyed there before or did you use a different key? That is because the keys have been improved or another species has been added or moved. This new edition is updated to newest botanical nomenclature following the Jepson eFlora. Older keys are modified as new taxonomic changes are made following the Jepson standards. Plants added as their botanical range is expanded and as new species are discovered or split off from their previous taxonomic stasis. Unlike the Jepson printed manual, this book is updated and printed on a regular basis as needed.



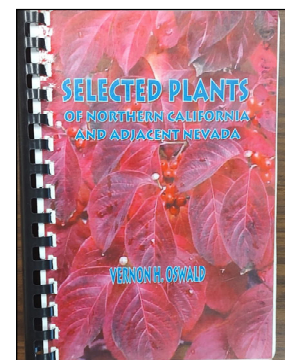
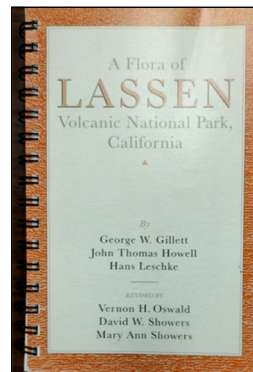
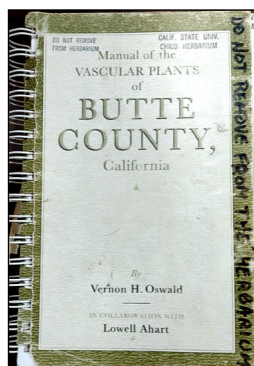
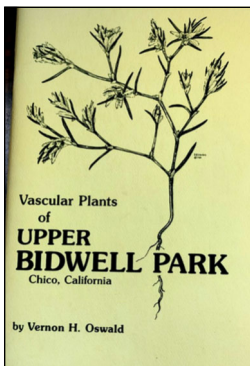
New edition of Selected Plants with choice of binding.

The book is designed to be used in the field and fits into a field jacket with the dimensions of about 8.5 in. by 6 in. (21.6 cm x 15.25 cm) depending upon which of the two binder versions you get. This is a must-have book if you botanize in this part of the state. As an added benefit, a PDF version is available for your electronic devices.

This book covers many sections of Northern California but because of its early creation in Butte County, it becomes less accurate as one adventures further out from the geographic/ecological areas explored and documented from the areas of the authors' botanical adventures.

A Brief History

The book started off from the botanical adventures of Vern Oswald when he would make florulae from various areas he botanized such as Vascular Plants of Upper Bidwell Park, Chico, California (1986). He produced various florulae (annotated checklists of the plants of wildlife areas, preserves, interesting private



Representative time line of botanical publications by Oswald

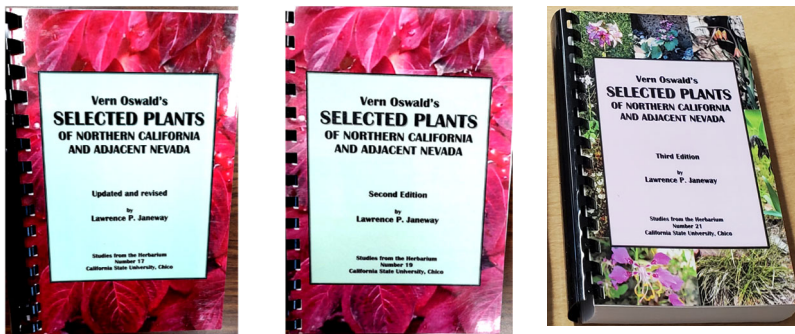
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properties, etc. around northern California).

They were later combined into the Vascular Plants of Butte County California in collaboration with Lowell Ahart. Later to become Manual of the Vascular Plants of Butte County, California (1994). As more areas were explored, the book expanded its range by including A Flora of Lassen Volcanic National Park, California which was revived by Oswald, Showers and Shower. This was later to lead to the first of Selected Plants of Northern California and Adjacent Nevada 2002 (which was published as a 2 cd edition, too). With the passing of Vern Oswald, Lawrence Janeway has taken on the task of continuing this valuable book for three editions. And the book is currently working toward the 4th Janeway edition.

The Book is only available from the Ahart Herbarium (sorry, this gem is not available from Amazon) for \$30 plus tax and shipping. (But one can swing by the herbarium on Fridays from 9-5, Room 129 Holt Hall, or order by mail to obtain a copy. An order form can be found on the herbarium website under "Studies from the Herbarium". For more information call 530-898-5381. (60 books on hand but they are going fast.)

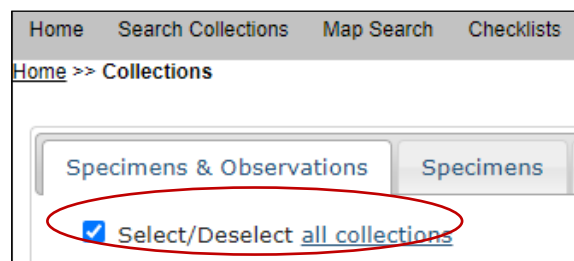


Chronological sequence (left to right) of updates to Oswald's Selected Plants, with the latest (#21) hot off the press.



How to Search CCH2—Consortium of Herbaria for Your Favorite Plant at Ahart Herbarium

- Go to CHH2 at www.cch2.org/portal/index
- In the upper left hand menu bar, click on "Search Collections"
- Click on the "Deselect" (image to right) and scroll down to "Vascular Plants" and look for "CHSC—CSU Chico, Chico State Herbarium" and click on the box to the left
- Scroll to the top or bottom of the page and click on "Search"
- From the window that pops up (below), there are a number of search criteria you can choose to find if the herbarium has a record of your favorite plant in the collection. You can search by scientific name, collector or even catalog number if you know it. Happy browsing.



Taxonomic Criteria		
<input checked="" type="checkbox"/> Include Synonyms		
Scientific Name: <input type="text"/>		
Locality Criteria		
Country: <input type="text"/>		
State/Province: <input type="text"/>		
County: <input type="text"/>		
Locality: <input type="text"/>		
Elevation (in meters): <input type="text"/> to <input type="text"/>		
Latitude and Longitude		
Bounding box	Polygon (WKT footprint)	Point-Radius
Northern Latitude: <input type="text"/> N	<input type="text"/>	Latitude: <input type="text"/> N
Southern Latitude: <input type="text"/> N		Longitude: <input type="text"/> W
Western Longitude: <input type="text"/> W		Radius: <input type="text"/> Kilometers
Eastern Longitude: <input type="text"/> W		
Collector Criteria		
Collector's Name: <input type="text"/>		
Collector's Number: <input type="text"/>		
Collection Date: <input type="text"/> - <input type="text"/>		



Friends of the Ahart Herbarium Board Transitions

We have some exciting shifts in the composition and leadership of the Friends of the Herbarium Board. We are so glad to welcome Laurie Archambault as a new board member to the Friends of the Herbarium. Laurie started her botany path, including a masters degree in Botany at Chico State. The majority of her career was as a botanist for the California State Parks. In addition, after generously serving as President for the Friends Board for over 10 years, Elena Gregg (Senior Botanist/ISA Certified Arborist for Gallaway Enterprises) turned over the presidential reigns of the Friends Board to Emily Doe, District Botanist for the Feather River District of the Plumas National Forest. The Herbarium is indebted to the Board for their efforts!



Its That Time of Year Again— Join the Friends of the Ahart Herbarium



Yes, I Would Like to Join/Renew/Contribute!

- Student.....\$20
 Individual.....\$35
 Sustaining.....\$100
 Lifetime\$1,000
 Jim Jokerst Award\$ _____
 Annual Fund\$ _____
 Endowment\$ _____

Total \$ _____

- This is a membership renewal for 2023

Name _____

Organization _____

Address _____

City _____

State _____ Zip Code _____

Phone _____

E-mail _____

Please make your check payable to: Chico State Enterprises (include membership or donation on the memo line).

The Chico State Enterprises is a 501(c)(3) non-profit organization.

Mail to: Chico State Herbarium, c/o Biological Sciences Dept., California State University—Chico, Chico, CA 95929-0515

Friends Workshops

Native Plant Wreath and Other Holiday Accents Workshop Saturday, December 10, 1:00 —4:00PM

What comes to mind when you think of the winter holiday season? Do you think of evergreens and baking spices? Did you know that many of our native chaparral shrubs and forest trees are evergreen, and that native sages can remain fragrant for years after drying? Learn more about native plants while you create a holiday wreath, kissing ball, or garland!

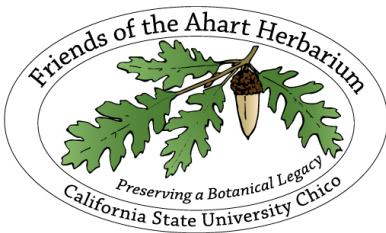


Workshop leaders, Jennifer Jewell of “Cultivating Place” and Adrienne Edwards, botanist, ecologist and arborist will guide you through the process of creating your own holiday native decoration. All materials and tools will be provided. The workshop will be in Room 129 in Holt Hall on the CSU Chico campus. For more information and registration, check out the Friends of the Ahart Herbarium website

Introduction to the Willows of California (Salicaceae).

June 24, 2023 9:00AM—5:00PM

California is home to over one quarter of the estimated 120 willow species growing in North America. The workshop will focus on willow family taxonomy and key identification traits. The workshop will be led by **John Bair**, who is a recognized expert in willow and cottonwood taxonomy and physiology.



Friends of the Ahart Herbarium
California State University, Chico
Chico, CA 95929-0515
(530) 898-5356