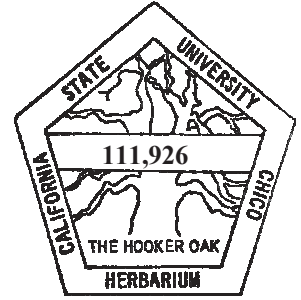




Friends of the Herbarium

The Chico State Herbarium
California State University, Chico



Volume 20 Number 2
October 2014

Newsletter

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Friends of the Chico State
Herbarium Present:

Exploring the Conifer Diversity of the Klamath Mountains and Beyond

Michael Kauffmann
Humboldt County Educator
and Author

Saturday 5:00-6:00 pm
November 8, 2014

170 Holt Hall, Chico State University
Free Admission!



Friends of the Herbarium Annual Meeting

November 8, 2014

Please join the Friends for their annual meeting:

Reception: 3:00-4:00pm—Herbarium (Holt 129)

Winners of the Native Photo Contest on Display

Annual Meeting: 4:00-5:00—Holt 170

Including: **Jokerst Student Award Talk:** "Trophic Relationships Among Deer, Manzanita and Manzanita Leaf-gall Aphids in the Big Chico Creek Ecological Reserve" - Badri Ghimire

Featured Speaker: 5:00-6:00—Holt 170

Michael Kauffmann



The Friends of the Chico State 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. Scientific and academic pursuits are the focus of the group. The Friends also offers low cost workshops and classes on various botanical topics.

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

Memberships are renewed on January 1 of each year.

BOARD OF DIRECTORS

Adrienne Edwards	Elena Gregg
Rob Schlising	Jenny Marr
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Erin Gottschalk Fisher	Linnea Hanson

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Lawrence Janeway
Herbarium Curator
Newsletter co-Editor

Colleen Hatfield
Herbarium Director
Newsletter co-Editor

Newsletter

Volume 20 Number 2

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

FOH Photo Contests

The Friends of the Herbarium hosted its 4th annual photo contest for students under 18 yrs old. And a successful contest it was with 61 photos entered by students from Chico High School photography classes. While we don't require the photographs to be of native plants two of winning photos happened to be members of our native flora. The photographs arranged on poster boards were a colorful addition to the Herbarium Open House in May.

In the fall we host the all-ages photo contest for which the closing date is October 16th. For the fall contest there is a requirement that the photographs must be of California native plants. All entries will be displayed at the Annual Meeting on November 8th. After last fall's excellent entries we are anticipating another good showing.



Photo winning first place
By Byrn Thomas, Eleventh Grade
Chico High School



Have some free time on Fridays?
Consider volunteering at the Chico State Herbarium.
Great chance to share quality time with fellow botany lovers and really help the Herbarium out.

Contact : Lawrence Janeway at LJaneway@csuchico.edu or
Colleen Hatfield at chatfield@csuchico.edu

Message from the Friends of the Herbarium President

Did you know that the Friends of the Chico State Herbarium have introduced two native plant photo contests; one for young students in the spring and one for those of all ages in the fall? Since we started these photo contest a few years ago, we have been encouraged at the response and the quality of photographs that have been submitted. Our hope is to continue to spread the word about the photo contests and get individuals of all ages out in our wildlands discovering the beautiful flora our region has to offer. We want to encourage everyone to support this year's fall contestants by coming to our annual meeting, seeing their photographs and joining us in congratulating the winners as they are announced at the meeting. Maybe seeing the photographs will entice you to submit a photograph next year!

Elena Gregg, FOH Board President 

A new population of exotic plant growing with the endangered *Orcuttia pilosa* at Vina Plains Preserve

By Board Members Erin Gottschalk Fisher and Rob Schlising

Orcuttia pilosa (hairy Orcutt grass) is a rare, summer-flowering, annual grass that occurs in vernal pools in the California Central Valley. It is listed as endangered at both the state of California and the federal levels. One of the largest series of populations occurs at The Nature Conservancy's Vina Plains Preserve (VPP) in southern Tehama County; it is found in four large pools in the original tract of VPP. Summer field surveys in one of the largest pools at VPP (Pool 17) have been conducted most years since 1995, recording the presence of hairy Orcutt grass and all other summer-growing plants that occur throughout the pool.

During the survey this summer (2014) a new, non-native species, *Lythrum tribracteatum* (three-bracted loosestrife) made a predominant display in Pool 17 (see photo). Except for the 2012 survey when only a handful of individuals were documented in Pool 17, three-bracted loosestrife had not been previously recorded at Pool 17 or VPP (Broyles 1987; CalFlora). However, this summer about 20% of Pool 17 was covered by three-bracted loosestrife, a late spring to early summer flowering annual herb in the loosestrife family (Lythraceae). It is native to the Mediterranean region of Europe where it occupies vernal pools and, interestingly, is considered a rare species of conservation concern in France (Muller et al. 2008). According to CalFlora, in California three-bracted loosestrife has been observed from Modoc County in the north to Merced County in the south, with the majority of occurrences in the Sacramento Valley.



Dominance of three-bracted loosestrife (the dark plants close to the ground) in the north-central part of Pool 17, late July 2014

Three-bracted loosestrife has been in California since at least the early 1900s. In the March 1931 issue of *Madroño* (Vol. 2 No.2), John Thomas Howell stated that he observed three-bracted loosestrife “in the vicinity of Elmira, Solano Co., [in] the beds of summer-dried rain-pools.” It is unknown how this exotic found its way to VPP. Discussions with local botanists indicate that the species is found in cattle ponds in the region. One possible means of transport to Pool 17 could be via cattle, as VPP is grazed seasonally (cattle are brought on in late fall and removed in late spring).

Since three-bracted loosestrife was found in the same areas of the pool as hairy Orcutt grass, it is possible that three-bracted loosestrife could compete with the rare species (e.g., for late-season water still in the soil). The timing of seed set may contribute to this competition as we observed the loosestrife growing faster and ripening seeds before hairy Orcutt grass. The 2014 survey results show that three-bracted loosestrife frequency in Pool 17 was 0.20 (it occurred in 530 of the 2,698 quadrats along the survey transects). By comparison, the endangered hairy Orcutt grass occurred in 748 of the total quadrats (frequency 0.28). It appears that this exotic loosestrife utilizes the same microhabitat within this large pool that the Orcutt grass occurs in: 36% of the Orcutt grass occurrences had the loosestrife present with it in the quadrat.

Continued surveys at Pool 17 will help determine if three-bracted loosestrife is a permanent inhabitant of Pool 17 and whether there is any decrease or possible displacement of hairy Orcutt grass over time.

Broyles, P. 1987. A flora of Vina Plains Preserve, Tehama County, California. *Madroño* 34: 209-227.

Muller, S.D., H. Bruneton, I. Soulie-Marsche, T. Rey, A. Thiery, A. Waterkeyn, L. Brendonck, P. Schevin, N. Yavercovski, and P. Grillas. 2008. Long-term dynamics of a Mediterranean alkaline vernal pool (Rhône Delta, Southern France). *Wetlands* 28: 951-966.



Recent Workshop in Review

Introduction to Summer Grasses (Poaceae) of Southern Cascade and Northern Sierra Montane Habitats

The September 6, 2014 workshop, "Introduction to Grasses (Poaceae) of the Southern Cascade and Northern Sierra Nevada" was a well-attended success! Participants arrived from as far away as Corvallis, Oregon, Arcata, Oakland, Quincy and Nevada City. As he has in the past, Lowell Ahart generously donated time and energy providing us with sample material of more than 60 taxa of montane grasses, representing more than 30 genera, and all "Groups" in the Jepson Manual keys. As always, Josephine Guardino set up the beautiful labeled display.

Having diverse material at hand provides a wonderful opportunity for group instruction, as we ventured through the lengthy dichotomous keys together. Additionally, students made a permanent reference collection with provided index cards and clear tape. One student in particular stood out here! Her introduction to identifying grasses was this past spring, when she attended my last Poaceae workshop (Springtime Grasses of California Valleys and Foothills). That apparently "lit a fire" under her shoes, as in the time since she's identified, collected, and check-listed a reference "Card Herbarium" of over 200 grass species from California, Arizona, Utah and a few other states. Wow!

We started the morning going over some of the basics of grass ecology, morphology and terminology. We spent a little time talking about how to tell if it's an annual versus perennial, and "bunch-grasses" versus "turf-grasses" - the importance of careful observation and obtaining a complete specimen always emphasized!

Another advantage of having such diverse material at hand is the way it lends itself to use in a relatively fast-paced "point & counter-point" teaching style, which participants really seem to enjoy. We can't possibly key all 60 plant taxa present there in a single-day workshop. However, if we "reach far" into the key with our species in question, there is opportunity to examine a representative of the "choice not taken" at each step of the way. As such, both alternatives of the structure/character in question are visualized, an index card quickly made, and we move on to the next couplet with the original specimen in question.

We spent some time in Group-6 of the Jepson Manual key exploring *Melica*, *Festuca*, *Bromus*, *Poa*, *Glyceria*, *Torreyochloa*, *Trisetum*, *Danthonia* and *Deschampsia*. From there we went to Group-5, examining *Ventenata*, *Beckmannia*, *Alopecurus*, *Phleum*, *Phalaris*, *Aristida* and *Stipa*. Group-4 was represented by a native annual (one of the few), *Festuca microstachys*, and good old non-native *Cynodon dactylon* (I always point out, even lowly weeds have something to teach!). After lunch we dealt with the old "Hordeae Tribe" (Group-3), addressing *Hordeum*, *Aegilops*, and *Elymus*. We talked about *Panicum* in Group-2, which might better be saved for another workshop (Warm-Season Grasses of Wetlands and Pastures?). We finished the class with a group effort on some of the many *Agrostis* species at hand; all, including the instructor, appreciated that challenge!

At the end of the day, participants left, heads full of information, reference collection bundled away, and ready to head to the hills to tackle some grasses. We have a few photos of the room at the beginning of the workshop. I should have thought to take a few photos at end-of-day, after our tidy-classroom was transformed to unkempt haybarn! Thanks go to Lawrence Janeway, Barb Castro, Jo Guardino, Robert Fischer and Rob Schlising for helping with set-up, take-down and clean-up.



Above: Line-up of grasses for the workshop
Below: A full workshop



Lowell Ahart delivering grasses for the workshop

John Dittes, Workshop Leader and FOH Board member



Upcoming Workshops Sponsored by Friends of the Herbarium*

Medicinal Botany—The Science and Chemistry Behind Medicinal Plants. October 18, 2014, Saturday, 8:00 am—1:00 pm

Plants have been used as medicine for millennia and that usage continues today among indigenous people and other groups. In addition, many medicinal plants can be found locally (wherever you are) as well as being available in grocery and other stores. What chemicals are in these plant medicines and do the plants really work as medicines? If they do work, how do you cultivate and prepare those plants?

Dr. Stuart Wooley will address those questions and bring a scientific perspective to understanding how medicinal plants work and teach how to cultivate a variety of medicinal plants. He will introduce the field of plant chemistry, some human physiology and introductory botany and discuss the recent advances in medicinal plant research, including essential oils. Part of the day will consist of teaching participants various ways to prepare medicinal plants and how to cultivate a number of medicinal plants. The class will finish with a medicinal plant walk around campus. Registration \$45. Class size limited to 25 participants. Registration closes October 11th.



Introduction to Keying *Carex*—November 15, 2014, Saturday, 9:00 am—5:00 pm

The genus *Carex* (Cyperaceae) is by far the largest genus of flowering plants in California, with about 140 species native to California and about 2,000 species worldwide! This workshop is an introduction to keying *Carex* using The Jepson Manual. Pressed material of several species of *Carex*, mostly from northern California, will be provided for use by all members of the class keying together, each person with their own sample; herbarium labels will be provided for those participants who would like to take home their sample material for later reference. Terminology for this notoriously difficult group will be explained and illustrated as it is encountered during the keying process.

Please bring forceps (tweezers – the sharper, the better), dissecting needle, 6" millimeter ruler, and a copy of The Jepson Manual, 2nd edition. Participants should already have a basic familiarity with using keys to identify plants. Registration for the workshop is \$120.00 business, \$100.00 personal, \$90.00 for members of Friends of the Herbarium and \$40.00 for students (limit 2 seats). Class size limited to 18 participants. Registration closes November 8th.



Wreath Making with Native Plants—December 6, 2014, Saturday, 1:00-4:00 pm

Back by popular demand, a celebration of winter through native California plants will be led by Jennifer Jewell, known for her weekly commentaries "In a North State Garden" on KCHO, and botanist Adrienne Edwards. They will introduce and discuss the native chaparral species found in our Mediterranean climate that are ideal for creating aromatic, long-lasting and low-impact wreaths.



A workshop participant displays their wreath from last year's wreath workshop

Bryophyte Sampling and Inventory Techniques: How to Find the Rare and Unusual Species—January 9-10, 2015, Friday & Saturday, 9:00am to 4:30 pm

Led by Jim Shevock. Check the Friends of the Herbarium website for upcoming details.

*General Workshop Information:

All workshops unless otherwise noted are held in Holt Hall 129 on the CSU Campus. Check out the FOH Workshop website for more details on each of these workshops, registration information as well as updates on these and future workshops at www.csuchico.edu/biol/Herb/Events.html.



Lapsana communis L. Common Nipplewort A New Plant for Butte County

By Lowell Ahart, Summer 2014

On Friday, July 4, 2014, I loaded my pickup with two boxes of freshly mounted plants for the Chico State Herbarium (80 or so) and drove to Chico. Lawrence Janeway, the herbarium curator, had e-mailed me that the herbarium would be open. I made two trips from Bidwell Mansion Parking lot carrying the boxes to the herbarium. It took only a little time to unpack the herbarium specimens, and since it was still early morning I returned to the pickup and drove to Butte Meadows. John Dittes wanted grasses for his class on mountain grasses in September.

Since it was the 4th of July there were many people at Butte Meadows. I decided to take Bull Hill Road to the Skyway. To my amazement the rough dirt road was now all nicely improved and paved. In about two miles I spotted some nice grasses and stopped and collected. I spent some time looking and collecting. In a deep wash I stepped on a small downed tree, it broke and I fell down. I took a little time getting up and was much more careful after that. There were many cars on the road and when a group stopped and started shooting I returned to my pickup and continued on to the Skyway. Again to my amazement the rough dirt road was now much improved and paved. I returned to my home in Honcut.

I still did not have many grasses for John Dittes. Once when out with Sue Taylor we made a collection of *Melica stricta* on Snow Mountain [Ahart & M.S. Taylor 3049, August 15, 1981 – LJ]. I wondered if the road through Coon Hollow to Snow Mountain was still open. In Coon Hollow Vern Oswald had taken me to a nice bog. In one of the nearby

snow lakes there was *Muhlenbergia minutissima* [Ahart 6799, July 21, 1992 – LJ]. On Monday, July 7, I decided to see if I could re-collect these grasses and others along the way. I went to Paradise and on to Stirling City. About a mile north of Stirling City I stopped to see if I could find some grasses to collect. Although there is forest here along the Skyway, a little to the east I saw a large clear-cut forest. I was attracted to a large sunflower-like plant three feet tall and with a large inflorescence. It is *Senecio sylvaticus*, a non-native species, and the plants here are huge and may become a serious forest weed. I collected some to record their presence. I fairly well filled one press with 12 different plants. In a disturbed area near the road was a delicate yellow-flowered sunflower. I did not recognize it so I collected a number of duplicates. Then I continued on my way to Humbug Summit Road, took it to Philbrook Road, and before you get to Philbrook Reservoir there is a road to the north. I took it and soon kept to another road to the north. This road takes you around and over the ridge and into Coon Hollow. The road is very good to Coon Hollow Creek, but farther on the road was very poor so I turned around (thus did not get to Snow Mountain), re-crossed Coon Hollow Creek and went back. In about a mile, following the road up and out of the canyon, is the bog on the north side below the road. I went down to the snow lakes near the bog and did some collecting – and got some *Muhlenbergia minutissima*. In the bog I collected *Glyceria borealis* and two species of *Agrostis*. By the time I had wandered around and collected a bunch I got tired and returned to the pickup. I returned to Philbrook Road and headed back home. In about a mile there was a good place to park along the road. The area to the south of this had been harvested leaving a few seed trees. Many of the seed trees had blown over. There were many nice disturbed areas where many plants had found a place to grow. I got busy and made some more

(Continued on page 7)



Lowell Ahart delivering specimens to the Herbarium



New plant for Butte County:
Lapsana communis courtesy of
Cal Photo. © 2007 Luigi
Riganese



Faces in the Herbarium

A new face in the herbarium is that of **Herman Gray**, who began his volunteer time six months ago. While new to the herbarium he is not a newcomer to the world of plants. As a medical missionary Dr. Gray spent nearly 25 years in West Africa, primarily in Nigeria, initially going there to work with leprosy patients after WWII. He and his wife of 62 years, Bea, traveled to other countries including a two year stay in Mongolia where they taught English. He has a framed specimen of a *Leontopodium* (edelweiss) species collected in Mongolia.

To further his interest in plants he took some courses at Chico State in the late 90's – botany from Kingsley Stern and plant ecology classes from Doug Alexander and Rob Schlising. He also worked in the Forest Service herbarium in Oroville under the guidance of Linnea Hanson. His

few hours of volunteer time are primarily spent working at the computer entering data. This work keeps him current with plant names and he shows great admiration for the specimens Lowell Ahart brings in to add to the herbarium collection.

If you are in the herbarium you can talk exotic plants with him or hear about carpet vipers or puff adder poisonings. Herman Gray clearly leads an interesting life.



Lapsana communis (Common Nipplewort) (Continued from page 6)

collections. It was then getting late so I returned home before it got too dark.

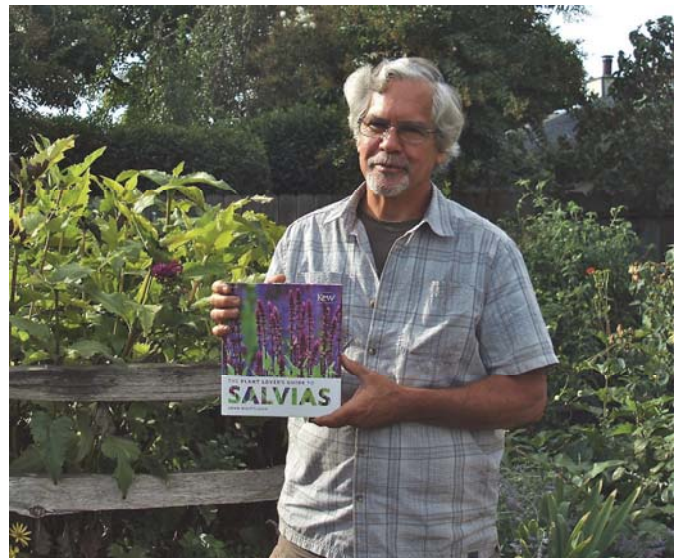
I got a lot of nice grasses for John's September grass class (40 species!), but what about the "odd" sunflower. Since it was not in Vern Oswald's Selected Plants book I had to turn to The Jepson Manual 2 to make the identification. The plant was not hard to key and I went right to *Lapsana communis* L. This is a new weed for Butte County, but it has been collected in nearby Plumas County [John Thomas Howell 50887, Sept. 19, 1974, from "Quincy," a specimen at the California Academy of Sciences herbarium according to the Consortium of California Herbaria website – LJ]. It's only a weed, but it's always exciting to find a new plant for the Butte County flora. **All Right!!!**

[According to the Consortium of California Herbaria (CCH) website the next nearest collections are three from Nevada County, and there are no collections from the northern Sacramento Valley, the Cascade Range, the Modoc Plateau, eastern Klamath Ranges, or the nearby North Coast Ranges. Jepson Manual 2 says "widely adventive in North America; native to Europe." –LJ]



CHECK IT OUT!

Friends of the Herbarium Board member John Whittlesey, has written a book, "**A Plant Lovers Guide to Salvias.**" It was published early in 2014 in association with Kew (the Royal Botanic Gardens, England) by Timber Press, Portland, Oregon. John is the owner of Canyon Creek Nursery and Design, north of Oroville, and is known for the beautiful gardens he landscapes, including those featuring native California plants and the increasingly popular "pollinator gardens." John is an excellent photographer, and his book is filled with stunning photographs of over 150 salvias. Along with descriptions of the salvias and how to grow them, the author has included chapters on "Understanding Salvias" and on "Designing with Flowers, Fragrance, and Foliage."



Yes! I would like to join/renew!

____ Student \$20.00
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This is a renewal for 2014.....

Please make your check payable to: Friends of the



Friends of the Herbarium

The Chico State Herbarium
California State University, Chico

JOIN US FOR OUR ANNUAL MEETING—SATURDAY, NOVEMBER 8
RECEPTION 3:00; MEETING 4:00; HOLT 129
GUEST SPEAKER 5:00; HOLT 170

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