

Friends of the Herbarium

**Biological Sciences Herbarium
California State University, Chico**

Newsletter

Vol. 8 No. 3

February 2003

!! MARK YOUR CALENDARS !!

Friends of the Biological Sciences Herbarium

Annual Meeting

November 1, 2003

Look for details in an upcoming *Newsletter*



Articles:

page 2 — Accessions into CHSC during 2002.

page 3 — *Pseudostellaria sierrae* (Caryophyllaceae), a new species — recently described from the northern and central Sierra Nevada.

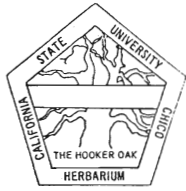
page 6 — *Chondrilla juncea* — skeleton-weed — a new weed in Butte County.

page 7 — Distinguished Service Award Recipient for 2002: Lawrence Janeway.

MESSAGE FROM THE BOARD

The various Herbarium activities continue apace. The specimen data-basing project has entered data for more than 53,800 of the 71,000 specimens of vascular plants, bryophytes, and lichens (more than 83,000 total specimens in the collection including the slime molds). Funding in the Herbarium is transitioning from National Science Foundation funding to increasing commitment from the Department of Biological Sciences and from the University. These are tight financial times throughout California, so even though the will is there from critical University officials, the money may not be. Letters of support for the Herbarium are particularly needed at this time to be sure that the Herbarium has a visible position during University budget discussions.





Friends of the Herbarium

The **Friends of the Biological Sciences Herbarium**, California State University, Chico, was formed to help maintain the high quality of work that has been 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 Biological Sciences 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 May 1 of each year.

BOARD OF DIRECTORS

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Newsletter

Volume 8 Number 3

The Newsletter is published three times per year (June, October, and February) by the **Friends of the Biological Sciences Herbarium**, California State University, Chico. Subscription is free with membership. Submissions on herbarium related topics are welcome.

Accessions into CHSC during 2002

Three years ago Vern Oswald started this annual tradition in this newsletter of summarizing all of the collections accessioned into the herbarium during the preceding year by county and collector. Here is the latest set of summaries, for 2002.

The Biological Sciences Herbarium accessioned fewer specimens compared with the past few years, 1108 collections were accessioned into the herbarium during 2002, due largely to less material being exchanged with other herbaria. This compares to 2681, 2831, 3681, 2320, and 2944 collections during 1997, 1998, 1999, 2000, and 2001 respectively.

We continue to owe a huge debt of gratitude to our mounting specialist, Lowell Ahart. Aside from a few exchange sheets that were already mounted, and the bryophytes that were accessioned into the collection (in packets rather than mounted), Lowell prepared about 1050 beautifully mounted specimens for the herbarium during 2002, all as a volunteer. Thank you once again, Lowell, for your continuing contribution of countless hours of invaluable time and some associated expenses to further the goals of the Biological Sciences Herbarium. Alas, Vern Oswald passed away early in 2002. Vern had been doing all of the accessioning into the herbarium collection of all new specimens except for the bryophytes, and the filing of all of these specimens into the herbarium collection, updating folders and nomenclature in the process. This work has been taken over by the herbarium curator (Lawrence Janeway), and especially by our excellent herbarium assistant (and data-entry technician), Morgan LoRomer.

The following table summarizes the plant specimens accessioned into the University Herbarium during 2002. LJ

SUMMARY

California accessions, 826 total (counties with 5 or more):

Butte	246	Placer	45	Sutter	9
Colusa	7	Plumas.....	146	Tehama	86
Glenn	12	San Luis Obispo.....	6	Trinity.....	70
Mono.....	17	Shasta.....	9	Yolo.....	10
Monterey.....	9	Sierra.....	8	Yuba	36
Nevada.....	48	Siskiyou	18		

Contributions of local collectors (with 2 or more):

Lowell Ahart.....	457	Colin Dillingham	2	Lawrence Janeway...254
Eva Begley.....	3	Margie Graham	3	Tara Morgan.....42
Anne-Marie Casey.....	2	Samantha Hillaire	4	

ARTICLES NEEDED

The Friends of the Herbarium welcomes, and actively seeks, articles from you, the readers, for this newsletter. Topics can include herbarium-related subjects, field collecting excursions, taxonomic issues, updates, and problems, and etc.



APOLOGIES

It is early June as you have this issue of the *Newsletter* in your hands though it is dated February. However, the information within is up-to-date as you read this. My apologies for the delay in getting you your February *Newsletter*!

—The Editor



Pseudostellaria sierrae (Caryophyllaceae), a new species —
recently described from the northern and central Sierra Nevada.

by Lawrence Janeway

Pseudostellaria sierrae was recently described by Richard K. Rabeler of the University of Michigan Herbarium in Ann Arbor, and Ronald L. Hartman of the Rocky Mountain Herbarium at the University of Wyoming in Laramie (*Novon* 12: 82-86. 2002). In *The Jepson Manual*, and in *Selected Plants of Northern California and Adjacent Nevada*, this species will key to either *Pseudostellaria jamesiana* or *Moehringia macrophylla*. Here is the key, reproduced from the *Novon* article, for separating these three species. ▶ This new species has been collected from Plumas, Yuba, Nevada, Placer, and Tuolumne Counties.

The *Novon* article includes some

interesting background history on early collections of the species, and the development over the years, independently, of the recognition and identification of this species by Drs. Rabeler and Hartman. I will follow this short note with the text of communication between myself and Lowell Ahart to illustrate the involvement of Chico State herbarium (CHSC) in the process of describing

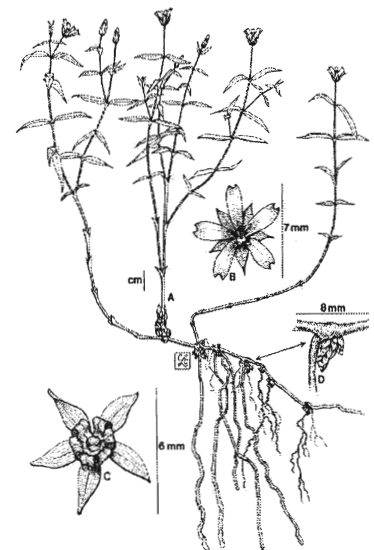
this new species, and to show some of the ups and downs of the fieldwork that is behind such work. I have added occasional comments in brackets to add clarification.

KEY TO *PSEUDOSTELLARIA SIERRAE* AND SPECIES WITH WHICH IT HAS BEEN CONFUSED

- 1a. Plants glabrous throughout; flowers solitary, mostly terminal; stamens 5 *Pseudostellaria sierrae*
1b. Plants either with dense glandular hairs (especially above) or peg-like hairs; flowers in cymes; stamens 10.
2a. Plants with dense glandular hairs (sometimes glabrous below); inflorescence bracts large, leafy; petals shallowly notched *Pseudostellaria jamesiana*
2b. Plants with short, peg-like hairs; inflorescence bracts tiny, scarious; petals entire *Moehringia macrophylla*

The illustrations of *Pseudostellaria sierrae* used in this article (at about 1/3 size) are from the *Novon* article cited at the beginning of this article, as drawn by

Carolyn Crawford. *Novon*, A Journal for Botanical Nomenclature is published by the Missouri Botanical Garden. For more information about Missouri Botanical Garden publications, visit their web site at www.mobot.org/mbgpress. "Novon publishes short articles whose primary purpose is the establishment of nomenclature in vascular plants and bryophytes."



22 June 2000

Dear Lowell,

I have another plant for you to watch for on your collecting trips into the Sierra. This time an about-to-be described new species of *Pseudostellaria*.

I may have mentioned previously that Richard Rabeler (University of Michigan) and Ron Hartman (Rocky Mountain Herbarium) have borrowed all of our material of *Pseudostellaria jamesiana* and *Moehringia macrophylla* looking for samples of an undescribed species of *Pseudostellaria*. Last weekend I attended the Jepson Herbarium 50th Anniversary Symposium, and got to talk to Drs. Rabeler and Hartman about this new species, and they gave me a copy of the diagram they have prepared for their write-up of the species, plus a page showing photocopies of these three species side-by-side (somewhat reduced) [see page 5]. Copies of these two pages are enclosed. Despite our excellent collections of these taxa, there were no specimens of the new species in our material. However, I did see a collection of the new species that they had along with them. They had recently received it from Fred Hrusa, who collected it at Snake Lake in Plumas County (about 3800 ft elevation). They had also seen it at another Plumas County site near Crescent Mills (about 4500 ft). Their distribution dot map showed a third Plumas County location near Quincy, plus a scattering of locations southward into the central Sierra Nevada.

Pseudostellaria Continued on page 4

Continued from page 3

Pseudostellaria

Apparently the main characters for separating this new species are 1) individual flowers from axils (rather than branched inflorescences from the axils), 2) fleshy bulblets where the stems connect to the rhizome (vs. no fleshy bulblets), 3) as the capsule splits open the segments curl back and roll up, and 4) generally smaller leaves (though there is overlap in size). Those are the characters I remember anyway. Obviously, good collections need some rhizome, plus they would like to see the long roots as shown in the diagram. If you collect any of this species, they would love to get duplicate material for University of Michigan or Rocky Mountain Herbarium – with material kept at CSU Chico, of course.

The habitat is generally the same as the other two similar species – open conifer forest – but especially next to down logs (“nurse logs”).

Happy hunting.

Sincerely,
Lawrence Janeway, Curator

August 11, 2000

Dear Larry,

I have received your good letter of 22 June, 2000. It contained clear information on *Pseudostellaria*. The photocopy of *Pseudostellaria* sp. nov., from the California Academy of Sciences, collected by Gordon H. True and John Thomas Howell (no. 2257, 14 July 1965), caught my attention [see page 5]. I know where Fall Creek is found, but *Sphagnum* bog... perhaps *Eleocharis* would also be present. Two things to look for! [At this time Lowell was also searching for the *Eleocharis* that would soon be described as *Eleocharis torticulmis* – see the previous *Newsletter* for details: Vol. 8, Nos. 1 & 2.]

On 28 July, I drove to Fall Creek, arriving at 4:00 in the afternoon. I spent the next three hours looking and collecting. Found *Stellaria obtusa*, but no bog, *Pseudostellaria*, or *Eleocharis*.

I have a Flora of Nevada County, California by Gordon H. True [*The Ferns and Seed Plants of Nevada County, California*, a widely distributed, but unpublished, manuscript dated April, 1973]. He gives a numbered location for each plant collected. Thus, *Arenaria macrophylla* (= *Pseudostellaria* sp. nov.) is from location number 41. True made 62 collections with this number and many of the plants are from bogs. Where is the bog!?

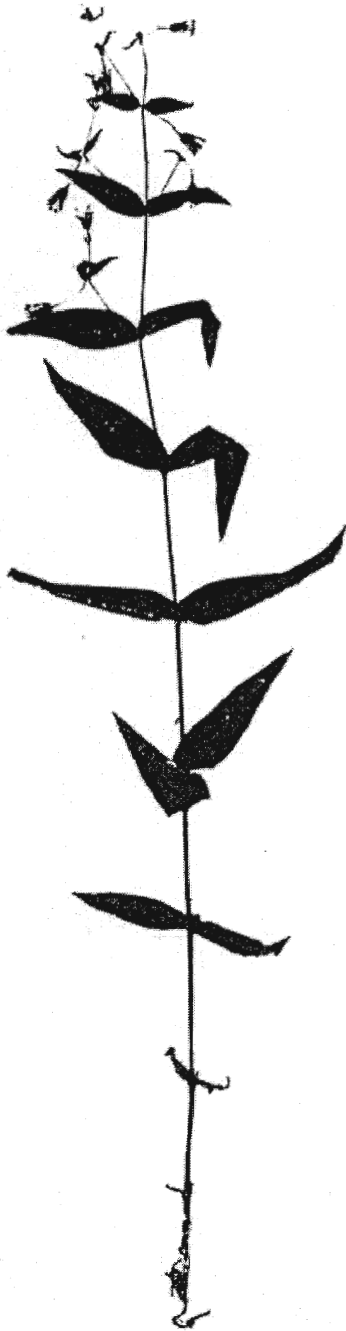
On 10 August, Peter (my brother) and I went to Fall Creek. I had him drive past (north) of Fall Creek for about ½ mile to see if I could see a bog. I asked an old man along the road if he knew of a bog in the area. He said “there is a meadow just a little ways up Fall Creek.” We went back to Fall Creek. Peter went fishing, I botanized along the creek. I went up the creek about a mile and saw no meadow. There is a cement dam across Fall Creek; as I returned from the upper reaches of the creek and came south of the dam, on a road I saw some partly dry yellow plants. I inspected them and discovered the new *Pseudostellaria*. On the mountain side (south of the road and some distance up) there is an abundance of the plant. I collected some that was still green [*Ahart 8650* – paratype]. Peter and I were both tired. I had him drive north towards Bowman Lake. About ¾ mile north of Fall Creek I had him stop. On both sides of the road under Red Firs are massive stands of the *Pseudostellaria*. These stands can be found for the next 1½ miles. When leaving Fall Creek to the north, a good road (dirt) ¼ mile, leads to the west (left), after crossing a small stream *Pseudostellaria* is abundant on both sides of the road. Then you cross the water ditch.

Hope this is helpful, have good *Pseudostellaria* material for you.

Lowell

P.S. – Never did find the bog!

Pseudostellaria Continued on page 5



CALIFORNIA ACADEMY OF SCIENCES
Plants of the Sierra Nevada

Stellaria jamesiana Torr.

Glacier Pt. Road, Yosemite National Park,
Mariposa County, California
Woods.

Paul F. Covel 1335

9 August 1938

CALIFORNIA ACADEMY OF SCIENCES
Plants of the Sierra Nevada

Arenaria macrophylla Hook.

Fall Creek about 5 miles north of Yuba Gap and just
east of Lake Bowman Rd.
Nevada County, California
Dry soil, shaded slopes below sphagnum bog.
5600 ft.

Gordon H. True 2257
John Thomas Howell

14 July 1965



46551

CALIFORNIA ACADEMY OF SCIENCES
Plants of the Sierra Nevada, California

Arenaria macrophylla Hook.

Mixed coniferous forest in Rubicon River
Canyon, N-NE. of Leonardi Spring, El. 3800'.
El Dorado County.

JOHN THOMAS HOWELL
GORDON H. TRUE

May 27, 1970.

Reference sheet distributed by Rabeler & Hartman. The center specimen and label is a paratype of *Pseudostellaria sierrae*. As is typical with undescribed species, the specimen is labeled with the species name that best "seemed to fit" at the time. See pages 3-4 for details. NOTE: *Stellaria jamesiana* is now known as *Pseudostellaria jamesiana* (specimen on left), and *Arenaria macrophylla* is now known as *Moehringia macrophylla* (specimen on right).

Chondrilla juncea L. – skeleton-weed, new weed in Butte County

by Lowell Ahart

On 13 August 1997, I took a short trip over into Nevada County to collect plants. A little south of Highway 20, at the intersection of Penn Valley Road and Indian Springs Road I stopped and collected plants. One plant I collected looked like chicory (*Cichorium intybus*), but it had showy yellow flowers (Ahart 7840). The flowers open early in the morning or when it is cool. Most of the time the flowers are closed and it looks very much like yellow star-thistle (*Centaurea solstitialis*). Later when I tried to identify the plant I was unsuccessful. On 18 August 1997, Vernon H. Oswald identified the plant as *Chondrilla juncea*. When one knows the plant it can be easily recognized, either by its showy yellow flowers or by its fuzzy seeds. The fuzzy-seeded clusters separate it from yellow star-thistle as one drives down the road. Through June 2002 I got to know the plant from Placer, Nevada, and Yuba Counties.

On 02 July 2002, I got an early start to go to Tamarack Flat in Plumas County. As I approached the Enterprise Bridge across the South Fork Feather River arm of Lake Oroville, I noticed a yellow flowered plant along the side of the road. I did not recognize the plant, but noted to remember the spot on my return. I met John Dittes and Josephine Guardino near Tamarack Flat and we went on west to Hartman Bar Ridge. I spent most of the day collecting plants. At the end of the day we checked out some wet meadows and I collected more *Botrychium* [see the previous *Newsletter* for details: Vol. 8, Nos. 1 & 2]. On the way back to Oroville I completely forgot about checking out the yellow flowered

plant at the Enterprise Bridge.

On 18 July 2002, I again went to the Tamarack Flat area. I again spotted the yellow flowered plant at the Enterprise Bridge and late in the day, as I returned to Oroville, I stopped and collected the plant and found it to be *Chondrilla juncea* (Ahart 9875). This is a new, typically aggressive, weed for Butte County. It is abundant along the edge of the road for perhaps one-fourth of a mile.



Image from: USDA-NRCS PLANTS Database (<http://plants.usda.gov/>); original from Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 3: 314.

Editor's note: Although *The Jepson Manual* lists *Chondrilla juncea* in our area for the northern Sierra Nevada and the Great Central Valley, it has not been reported from Butte County prior to this article. The species does appear in *Selected Plants of Northern California and Adjacent Nevada* with two collections cited, both from Nevada County – Lowell's Nevada County collection noted

above, and an Oswald & Ahart collection (8842) from a different location, collected the day after they determined that the other collection was *Chondrilla juncea*!

The Washington State Noxious Weed Control Board calls *Chondrilla juncea* a "Class B - B designate Weed." This is what they have to say about the detrimental effects of the species (see www.wa.gov/agr/weedboard/weed_info/skeleton.html):

"Rush skeletonweed is a threat to irrigated lands of the Columbia Basin, to the sandy soils of dry land wheat areas, and it is a threat to rangelands. Rangeland infestations impact the cattle industry when rush skeletonweed displaces native or beneficial forage species grazed by livestock and wildlife. Forage production is lowered when rush skeletonweed successfully out-competes beneficial species for limited resources, particularly nitrogen. Often, the cost of herbicide control is not economical due to low productivity of the land."

"Rush skeletonweed spreads from rangeland to croplands by seed. Once established on roadsides adjacent to croplands, mechanical injury to the plant can produce shoots from any part of the main root, from the lateral roots, and from root fragments at least 4 feet deep. Once established in wheat-fallow systems, cultivation is the major factor of spread. Crop yields are also reduced as a result of rush skeleton-weed out-competing grain for soil moisture and nitrogen. Grain harvest is difficult because of the wiry stems, and the latex sap of rush skeletonweed gums up harvesting machinery. In Australia, crop yields were reduced by 50-70 percent, with some fields later converted to rangeland."



Friends of the Biological Sciences Herbarium Distinguished Service Award Recipient for 2002: Lawrence Janeway

by John Dittes

On 2 November 2002, the **Friends of the Biological Sciences Herbarium** were honored to present the 2002 Distinguished Service Award to Lawrence Janeway.

Although Lawrence is the latest of six recipients of this award, he was among the first mentioned as a candidate by Board Members in 1996, the first year the award was presented. Others were chosen that year and subsequent years, not necessarily because they were better candidates, but because Lawrence seemed then, as now, too obvious a choice. Because of his dedication to the herbarium, botany in general, his attention to detail, diligent work, extensive experience, and many collections of plant specimens, his name has almost become synonymous with the Biological Sciences Herbarium and northern California botany. Lawrence's nomination for this Award is long overdue.

Lawrence's association with the Herbarium began in the Fall Semester of 1985, when he arrived in Chico to attend graduate school. While previously working on his B.S. in Botany at Humboldt State University (HSU), Lawrence completed a senior project, under the supervision of Dr. Dan Norris, which involved collection and identification of sedges (*Carex*). Lawrence continued with this challenging group at CSU Chico and, with Dr. Rob Schlising as his graduate advisor, completed his Master's thesis: *The Genus Carex (Cyperaceae) in Butte County, California* (later issued as Number 9 of "Studies from the Herbarium" as *Cyperaceae of Butte County, California, Part I: Carex*). Lawrence added 471 specimens of *Carex* to the Herbarium collections as part of his thesis work. This important treatment

and his invaluable (and expanding) research collections remain much appreciated and well-used references.

Lawrence has been a continuous presence in the Biological Sciences Herbarium since he began his graduate school years at Chico State. He came to CSU Chico from Humboldt State University (HSU) with experience in and enthusiasm for the herbarium environment. At HSU he was one of a select group that called themselves "herbariophiles." As a graduate student at Chico State, Lawrence immediately established workspace for himself in the herbarium and sometimes worked as a Student Assistant or Graduate Assistant in the Herbarium. Even when not actually employed in the Herbarium, Lawrence was always helping and advising those who were. Following his graduation in 1991, Lawrence continued to volunteer time in the herbarium, enough so that during the last several years of

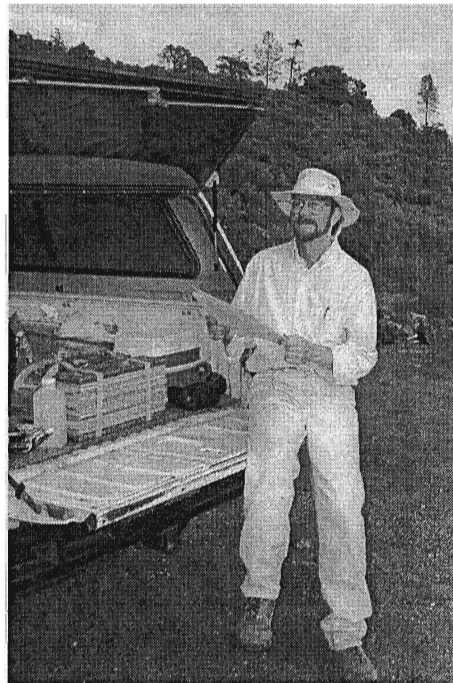
Dr. Kingsley Stern's Directorship of the Herbarium, Lawrence's volunteer time was as Assistant Curator. After Dr. Stern's retirement in 1994, he became Herbarium Curator, although still as a volunteer. With Dr. Kristina Schierenbeck as Herbarium Director starting in 1998, Lawrence has been variously funded for his work as the Herbarium Curator, for the past three

years working half time.

In addition to the many ongoing curatorial duties in the Herbarium, some of Lawrence's other important contributions and services to the Biological Sciences Herbarium include initiating and maintaining an active exchange program with nine other North American herbaria, curating the herbarium's moss and lichen collection, coordinating and supervising the Herbarium Databasing Project, corresponding with and assisting other researchers, creation and maintenance of the Herbarium web site, and supervising the many fortunate

herbarium volunteers and Work-Study students. Under Lawrence's careful eye, the Herbarium collection has grown from approximately 40,129 specimens in the fall of 1985 to 83,973 specimens today. Of these, Lawrence has personally contributed nearly 7,000, mostly from northern and central California. In addition

to these activities Lawrence also serves as Editor-in-Chief of the "Studies from the Herbarium" and is a long-time Board Member of **Friends of the Biological Sciences Herbarium** (one of the founding board members) where he organizes the workshop program, is editor of this newsletter, and shares his sedge



Janeway Continued on back page

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Continued from page 7

Janeway

expertise through his popular workshop “Introduction to Keying *Carex*.”

The botanical community, the Department of Biological Sciences, and the **Friends of the Biological**

Sciences Herbarium owe much and are deeply grateful to the energy and many contributions of Lawrence Janeway. As a token of appreciation from the **Friends of the Biological Sciences Herbarium** Lawrence was given a large cobalt Amazon vase, etched with sedges by local glass de-

sign artist Kerry Rippon. You can see a photograph of this vase by going to www.csuchico.edu/biol/Herb/curator/lawrence_janeway.html and clicking on the Distinguished Service Award plaque.

Congratulations Lawrence.



Friends of the Biological Sciences Herbarium

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