

Aquilegia

Newsletter of the Colorado Native Plant Society

“... dedicated to the appreciation and conservation of the Colorado native flora”



CONSERVATION CORNER

PARTNERSHIPS

An Introduction to the Bureau of Land Management's Botany Program

By Peter Gordon and Carol Dawson

Editor's Note: The goals of the Colorado Native Plant Society are shared by many government agencies, as well as by private organizations and individuals. Conservation of Colorado's unique and special plant life cannot be accomplished without their efforts.

This is the first in a series of articles highlighting the programs, goals, and accomplishments of our many partners.

We begin with the Bureau of Land Management, manager of nearly one in every eight acres of land and habitat in Colorado. Nationwide, the BLM (a part of the Department of the Interior) is responsible for the management and conservation of resources on 256 million surface acres, as well as 700 million acres of subsurface mineral estate. These public lands make up about 13 percent of the total land surface of the United States and more than 40 percent of all land managed by the Federal government.

The Bureau of Land Management manages nearly 8.4 million acres of public land in Colorado that supports a wide variety of topographic, climatic, geologic and hydrological conditions. This leads to a high diversity of plant life on those lands, ranging from dry saltbush and sagebrush communities, pinyon-juniper communities, spruce-fir and alpine plant communities, and riparian plant communities across a large elevational gradient. BLM's botany program in Colorado integrates many goals to reflect the plant diversity on the lands BLM manages, but for simplicity, they can be grouped into three main categories which

reflect Bureau priorities: (1) Managing healthy native plant communities, (2) Managing special status plant species, and (3) Managing non-native invasive plant species. This article will focus specifically on introducing BLM plant conservation initiatives using a small selection of our special status plant projects as examples.

Eight of the 13 plant species in Colorado protected by the Endangered Species Act are found on BLM lands. This makes the collection of robust quantitative information regarding the location, life history, and status of these species very important. In addition to its role in managing for Federally listed plant species, BLM designates sensitive species status for other rare species also found on BLM lands. According to BLM policy, proactive conservation measures are put in place to reduce or eliminate threats to Bureau sensitive species, and these species are also considered in many cases to ensure that management

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actions do not cause the need for these species to be listed in the future.

Many of BLM's conservation efforts for special status plants of Colorado include trend monitoring projects. This involves gathering robust quantitative data from rare plant populations on BLM managed lands. The Colorado State Office works closely with BLM field office staff, as well as staff from organizations like the Denver Botanic Gardens, Betty Ford Alpine Gardens, and Colorado State Park's Natural Areas Program to facilitate this work. These plant monitoring projects are particularly important as changes to BLM's special status species management policy now require quantitative population data for any designated sensitive species. The three projects outlined here include continuing monitoring work done on two BLM sensitive species (*Penstemon harringtonii* Penland and *Penstemon grahamii* Keck), and a Federal candidate species (*Penstemon debilis* O'Kane and Anderson).

Penstemon harringtonii is a G3/S3 ranked plant endemic to the greater Vail valley region of western Colorado (see figure 1). Its range spans roughly 82 by 48 miles and includes over 100 occurrences tracked by CNHP. It is designated as a sensitive species for both BLM and the U.S. Forest Service, and a number of occurrences have the additional protection of being within BLM Areas of Critical Environmental Concern. Outside of BLM's work with this species, no robust quantification of *P. harringtonii* populations exists and there is a lack of information regarding the true numbers of this plant. The aim of this project



Figure 1. *Penstemon harringtonii* flowers (Photograph: Peter Gordon)



Figure 2. *Penstemon debilis* habitat and flowers (Photographs: Peter Gordon)

is to use statistically sound techniques giving a better understanding of the status of this species. Since 2006, the Bureau of Land Management has researched *P. harringtonii* numbers through simple random sampling using a grid-cell method that incorporates sample size calculations into the experimental design. To date, ten occurrences have been visited with results suggesting that population sizes have been underestimated by techniques used in the past. Management decisions based on the threat level to this species are valid, but it is also crucial to take accurate population size assessments into consideration. Without this baseline data, true population sizes will remain unknown. Further investigation may continue to show that this species is more abundant than previously thought, but work will continue in order to fully assess whether this species is effectively conserved on BLM lands.

Penstemon debilis is a very rare Colorado endemic limited to a small number of known locations on the Roan Plateau in Garfield County. It is restricted to specific white shale talus slopes that are part of the Green River geological formation and found only in the Piceance Basin. The specific epithet *debilis* is a Latin word meaning weak or small, referring to the plant's low-growing soboliferous habit. It has pale lavender to white flowers (see figure 2) with distinctive glaucous leaves on prostrate stems. The small number of known occurrences makes the populations growing on BLM land particularly important to the survival and viability of this species. BLM aims to maintain the integrity of current populations on public land and regular monitoring work

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has been done at Anvil Points since 2004 to help ensure that management does not negatively impact this species. A permanent monitoring plot was set up and the population was sampled using random transects through the plot. A sample size calculation was used to determine the necessary number of transects to ensure the statistical integrity of the data collected. Results from this work have been positive and show no significant change in the overall number of stems at the monitoring site. In addition, the percentage of reproductive stems for *P. debilis* plants within the monitoring plot also shows no significant change between 2004 and 2009. To date these are positive results, but monitoring will continue in order to measure the status of this species in the long term.

Penstemon grahamii is a small, but beautiful endemic to the Uinta basin of Utah and Rio Blanco County, Colorado. Some of its characteristics include green oval basal leaves with a reddish margin and glandular pubescence in the inflorescence (see figure 3). When not in flower these characters outside of Colorado, roughly following the White River and its tributaries in the Uinta basin of Utah. Inside Colorado, *Penstemon grahamii* has its only population protected within the Raven Ridge ACEC in Rio Blanco County. BLM's work with this species focuses specifically on long-term population monitoring at a site originally established by BLM in 1986. The main objective was to further develop a continuing monitoring project to investigate the *P. grahamii* population trend at Raven Ridge from year to year. Results collected from 2005-2009 have shown that the current density of plants per square meter matches levels seen in the same location as far back as 1986. It has also been found that

this holds for the number of rosettes and the number of flowering stems per square meter - good news indeed for the status of this species within Colorado considering the threats and impacts it faces in other parts of its range.

We hope that this small selection of special status plant projects has helped to introduce BLM's botany program and some of the contributions made to rare plant conservation in Colorado. The work done by BLM's botany program helps ensure that the rare plants of Colorado will be a long lasting feature on public land in this state.

Resources used for this article:

6840 – Special Status Species Management. 2008. Bureau of Land Management. Department of the Interior. http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-039.html

Botany Page. 2008. Bureau of Land Management. Department of the Interior. http://www.blm.gov/co/st/en/BLM_Programs/botany.html

Center for Native Ecosystems, et al. 2002. Petition for a Rule to List Graham's Penstemon (*Penstemon grahamii*) as Threatened or Endangered under the Endangered Species Act. <http://nativeecosystems.org/wp-content/uploads/pgrahamiipetitionfinal.doc>

Panjabi, S. and D. Anderson. 2006. *Penstemon harringtonii* Penland (Harrington's beardtongue): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. <http://www.fs.fed.us/r2/projects/scp/assessments/penstemonharringtonii.pdf>

Peter Gordon is a Botanist with the Bureau of Land Management, and Carol Dawson is State Botanist with the Bureau of Land Management. Both work at BLM's State Office in Lakewood.



Figure 3. *Penstemon grahamii* in fruit
(Photograph: Peter Gordon)

2009 / 2010 WORKSHOPS

Colorado Native Plant Society workshops are designed for plant enthusiasts at all levels, from novices to experts. Workshops are designed to provide an enjoyable learning experience. We hope you will join us.

Workshops usually begin at 9:00 AM and end by 3:00 PM. Where applicable, choose between identical sessions 1 or 2.

Driving directions are sent to each participant a few weeks before each workshop.

Individual chapters may also offer workshops. See "Chapter News and Announcements" in this newsletter, or the chapter web pages at www.conps.org.

Registration Information

Registration is by mail only and requires payment at the time of registration. The fee for attending a workshop is \$25 per session for members. Non-members must join CoNPS to register for a workshop. We hope you will join us and enjoy these workshops with us.

The registration fee is non-refundable. If you register and then need to cancel, we do ask that you call or e-mail Linda Smith (970-663-4085 or conpsoffice@aol.com) so she has the opportunity to fill your spot.

Participation is often limited and registrations are processed in the order received. If you are interested in registering for a workshop, you may wish to call Linda to make sure there is room

available before mailing in your registration form and check. If the workshop has already been filled, you will be notified, your check will not be deposited, and you will be added to the waiting list if that is what you desire.

To register, please mail your check (payable to CoNPS) for \$25 per workshop, along with a Registration Form (printed in the last issue of *Aquilegia*, or you can find it online at <http://www.conps.org/pdf/Workshops/Workshop%20registration%202009-2010.pdf>).

Registrations should be mailed to CoNPS, Linda Smith, 4057 Cottonwood Drive, Loveland, CO 80538.

Additional details on registration and updates on workshop offerings are contained on the CoNPS website.

Changes in Field Trips and Workshops

Life sometimes changes the most well-laid plans. In spite of their best efforts, field trip and workshop leaders must sometimes change the arrangements for their programs. Efforts are made to contact participants if changes occur. Updates are also posted on our web site at www.conps.org, so participants are encouraged to check there.

SCHEDULED 2009 – 2010 WORKSHOPS

"EARLY OLD MEN- *ERIGERONS OF THE FOOTHILLS*"

Leaders: **Carla Vik and David Buckner**

Location: CSU Extension Service, Community Room of the
Natural Resources Building, 9595 Nelson Road,
Longmont, Colorado

Dates: January 23, 2010, Saturday, 9 AM to 3 PM Session 1
January 24, 2010, Sunday, 9 AM to 3 PM Session 2

The *Colorado Flora Eastern Slope*, introduces *Erigeron* as Greek for early old man: *eri*, early + *geron*, old man. The Foothills early blooming hairy Fleabanes (also called Daisies) are small and beautiful but hard to identify. Carla, with David's assistance, will guide us through many of the species.

Carla Vik has 7 years experience with ESCO Associates as a plant ecologist and geographic information system specialist. She studied *Erigeron strigosus*, Prairie Erigeron, for her master's

thesis. She also studied it in Texas and the Southeast United States. David Buckner, president of ESCO Associates for 32 years, is well experienced in the Asteraceae and has presented many workshops on this family.

"Workshops" continues on next page



"THE GOOD, THE BAD AND THE BEAUTIFUL: THE SOLANACEAE IN COLORADO"

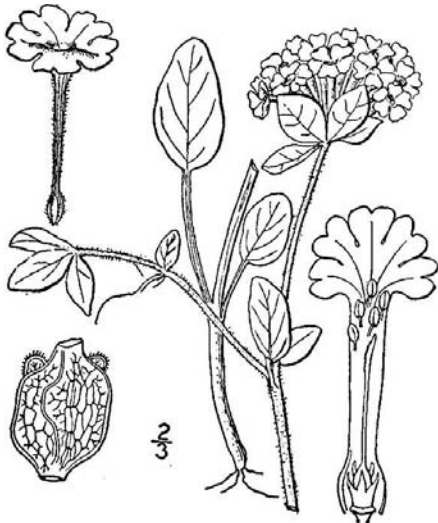
Leader: **Rich Scully**

Location: CSU Extension Service, Community Room of the Natural Resources Building, 9595 Nelson Road, Longmont, Colorado

Dates: February 6, 2010, Saturday, 9 AM to 3 PM Session 1
February 7, 2010, Sunday, 9 AM to 3 PM Session 2

Nine genera of the notorious Nightshade Family grow wild in Colorado. Cultivated petunia, potato, tomato, and pepper are also nightshades. Rich will use photos and pressed plants to show us the identifying characteristics of the genera and its members.

Richard Scully is a serious amateur botanist, who loves a road trip in Colorado to search out uncommon species, admiring the geology along the way. He says the best way to learn more about a group of plants is to give a workshop!



Abronia fragrans
USDA-NRCS PLANTS
Database / Britton, N.L.,
and A. Brown. 1913. *An
illustrated flora of the
northern United States,
Canada and the British
Possessions*. Vol. 2: 33.

"THE INVADERS: NOXIOUS WEEDS PRESENT AND NOT YET IN COLORADO"

Leader: **Tim D'Amato**

Location: CSU Extension Service, Community Room of the Natural Resources Building, 9595 Nelson Road, Longmont, Colorado

Dates: March 6, 2010, Saturday, 9 AM to 3 PM Session 1
March 7, 2010, Sunday, 9 AM to 3 PM Session 2

Noxious weeds classified by law as List A plants must be eradicated on all county, state, Federal, and private lands. Of the 18 plants on the list, nine are not known to exist in Colorado - yet. Tim will show us these plants so we can recognize any early threat to our state. He will share the likely routes of invasion. Other species of concern will be discussed. Stories of weed control successes and failures will also be told.

Tim D'Amato has been involved with weeds since 1986 conducting research or "IWM" - integrated weed management. He is currently Weed Coordinator for Larimer County. Wilderness camping and fishing are serious hobbies. He has a personal interest in protecting the state from the invading hordes!

"NYCTAGINACEAE OF COLORADO"

Leader: **Jennifer Ackerfield**

Location: Colorado State University, Yates Building (details pending), Fort Collins, Colorado

Dates: March 27, 2010, Saturday, 9 AM to 3 PM Session 1
March 28, 2010, Sunday, 9 AM to 3 PM Session 2

The small family of plants called Four-O'clock is most attractive when in flower. But the flowers wilt quickly making identification puzzling when you get home with a disintegrated plant! Recently, Jennifer has studied the five genera of Four-O'clocks found in Colorado. She will share her secret that critical characters for "Nyctags" identification are on the fruits.

Jennifer Ackerfield is the Collections Manager at the CSU Herbarium. Last year she presented a workshop on *Astragalus*.

"FOSSIL PLANTS AND INSECTS FROM CENOZOIC COLORADO"

Leader: **Dena Smith**

Location: University of Colorado, Museum Collections Building (aka Bruce Curtis Building), Room E280, Boulder, Colorado

Dates: April 10, 2010, Saturday, 9 AM to 3 PM Session 1
April 11, 2010, Sunday, 9 AM to 3 PM Session 2

Colorado has had many climates over its geologic history. Which plants and insects have been present during the Cenozoic Era? This Era is from the end of the Cretaceous and the extinction of non-avian dinosaurs to the present. The diversity of angiosperms in this Era exploded -- it could have been called the "Age of Flowering Plants." Dena will have many specimens for us to see, and she will explain how fossil plants help us understand climate change. She will talk a bit about change during the Eocene through the Oligocene periods. (Don't worry - she will keep us on geologic time.)

Dena Smith is the Curator of Invertebrate Paleontology at the University of Colorado. Her research focuses on the interaction between fossil plants and insects; she has on-going field studies in Colorado, Nevada, and Costa Rica.

VOLUNTEER OPPORTUNITIES: MAKING WORKSHOPS HAPPEN

Society workshops are a very popular and exciting part of what we do. Our survey of members in 2007 found – not surprisingly – that by far the greatest membership benefit is the opportunity to learn about native plants. Also not surprisingly, interest in workshops is so high that they can be hard to get into.

But the workshops do not just happen by themselves. They require the contributions of a Workshop Chair, hosts for individual workshops, presenters, and sometimes others to provide leads and advice.

Our wonderful administrative assistant, Linda Smith, takes on the hard job of coordinating the registrations and payments, and provides great support for the Workshop Chair and others. But we need volunteers to help with the other important tasks.

Workshop Chair

The Workshop Chair works with presenters (and potential presenters) to construct and schedule workshops, get word of them out to members via *Aquilegia* and the CoNPS website, and other necessary work to assure that the Society presents interesting, high-quality programs.

Ann Henson has served very capably as Workshop Chair, but is now ready to pass the reins. Ann is willing to assist and provide orientation, and would be happy to answer any questions you might have about this role. You can contact her at 303-772-8962 or at 2henson@kwabena.us.

So why would you want this job? First, it is crucial to the Society's ability to provide members with learning opportunities they are looking for. Second, it is a fun challenge -- thinking of ideas and contacting people to give a program. We often have suggestions from members for topics to consider. And, it's great because you get to pursue topics that interest you!

This isn't something that has to be done by one person alone. The Society has members that are willing to "consult" about qualified speakers. The job could be broken into pieces. One or more people could create workshops this winter. Other people could find a location or host the sessions.

How much work is this? In the past two seasons, the time to construct the workshops took about one week's evenings over a short period. Creating the "advertising" for the newsletter and web page took an afternoon.

This is a crucial and much-valued position. New workshops need to be constructed during the winter of 2010. So, our need is great and pressing. Please consider this. You may contact Ann or any Board Member to volunteer.

Workshop Hosts

Workshop hosts assure that when you arrive at a CoNPS workshop a friendly face will greet you. The host opens the building, brings the scopes, makes sure name tags are available, plugs in the tea pot, and brings some treats. The host also secures materials for the night and repeats the service for the second session when that is planned. Hosting includes checking in with speakers about a month ahead of their talk and then setting up for each weekend. Call Ann Henson (303-772-8962) to volunteer.

Workshop Leaders

Many of our members are very knowledgeable and could provide wonderful learning experiences for other members wishing to expand their plant horizons. Please consider leading a CoNPS workshop in the 2009-2010 season. Contact Linda Smith (970-663-4085 or **email**) if you are interested.

Workshop leaders are always in demand. If you are enthusiastic and knowledgeable on a subject that might be of interest to members, we'd like to hear from you. Enthusiasm and knowledge of the subject are needed; academic credentials are not a requirement. If you have questions on this, or an interest in volunteering, please contact the Workshop Chair.

BOOK REVIEW

By Jan Loechell Turner

***Common Southwestern Native Plants: An Identification Guide* (revised and expanded edition) by Jack L. Carter, Martha A. Carter, and Donna J. Stevens. Silver City, New Mexico: Mimbres Publishing, 2009.**

This year a revised edition of the popular identification guide, *Common Southwestern Native Plants* (reviewed in *Aquilegia* (2003), vol. 27, issue 5, p. 5) has been published with an attractive new design and twenty new species. For the purposes of this guide, the authors define the Southwest as Arizona, New Mexico, west Texas and the Pecos drainage, southern Colorado and Utah, and the southeastern California deserts.

Jack Carter, author of *Trees & Shrubs of Colorado* and *Trees & Shrubs of New Mexico* and professor emeritus at Colorado College, is an expert on willows and other woody plants, and his expertise can be seen in this guide, which includes sections on trees, small trees or shrubs, vines, cacti, and agaves. Each species entry in these sections is typically one to two pages long. Photographs and botanical illustrations in this book are of high quality, as is the writing. The common names, scientific names, synonyms, family, description, distribution, and habitat are given for each of the species.



Castilleja septentrionalis

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 215.

In response to readers' suggestions, the photos, descriptions, and illustrations for each species are grouped together and some new photographs and illustrations have been added. Record-holding trees (champion trees) are indicated, botanists who contributed to knowledge of the species are discussed, and additional information on the medicinal and edible values of the plants have been incorporated into the new edition. The scientific names have been updated, for example, *Castilleja chromosa* is now considered *Castilleja angustifolia*. The authors indicate family changes that have resulted from DNA analysis, such as the shift of *Castilleja* from the Scrophulariaceae to the Orobanchaceae family. (For more information on family changes as a result of DNA analysis and a description of the classification scheme of the Angiosperm Phylogeny Group, see Priscilla Spear's *Tour of the Flowering Plant Families*, reviewed in *Aquilegia* (2009), vol. 33, issue 2, p. 5).

Following the sections on woody plants is a smaller section on herbaceous plants, with three species per page, arranged alphabetically by the scientific family name and then by scientific species name. A photograph of each plant is included. Entries indicate whether the plant is a perennial, annual, or biennial; habitat; distribution; elevation range; and bloom time; and include something interesting or distinctive about each plant. The guide also contains a lengthy "References and Suggested Readings" list, a glossary, illustrated glossary, common name index, and scientific name index.

The authors, Jack Carter, Martha Carter, and Donna Stevens, are eloquent environmentalists and strong supporters of the use of native plants in home and commercial landscapes. Educator Martha Carter, Jack's wife, is proclaimed by Jack to be the driving force behind this book and is a talented photographer. They have been honored by the New Mexico Native Plant Society by the establishment of the Jack and Martha Carter Conservation Fund.

Jan Loechell Turner is on the Board of Directors of CoNPS, is chair of the Research Grants Committee, and an Associate Professor at the Regis University Library.

WHO'S IN THAT NAME?

Barton, McMahon, and Pursh

By Al Schneider

Following are brief biographies of Barton, McMahon, and Pursh, three eminent botanists of the early nineteenth century, who knew each other, worked together at times, and had connections to the Lewis and Clark Expedition. In the next issue of *Aquilegia*, we will look at the botanical life of Meriwether Lewis.

Benjamin Smith Barton (1766-1815) was a physician, Professor of Botany at the University of Pennsylvania, author of *Essays Towards a Materia Medica of the United States* (1798-1804), the first book on American medicinal plants, and author of *The Elements of Botany* (1803), the first American botany textbook. Barton was a teacher and benefactor of many botanists including Frederick Pursh and Thomas Nuttall. Thomas Jefferson held Barton in such high regard that he asked him to teach botanical collecting techniques and taxonomy to Meriwether Lewis prior to the Lewis and Clark Expedition. Barton actually wanted to participate in the Expedition, but he was 37 years old – considered much too old.

Bernard McMahon (1775-1816) was a nurseryman widely respected for his horticultural knowledge. McMahon is credited with publishing the first seed catalog in the United States and the first information about landscape design. Some of the Lewis and Clark Expedition planning was done in his home. He was instrumental in getting Frederick Pursh to work on the Expedition's botanical collection, and he germinated and distributed seeds collected on the Expedition. In 1806, he wrote *The American Gardener's Calendar*, which became the standard gardening authority in America, going through eleven editions until 1857. It is still available. McMahon and Jefferson corresponded regularly. McMahon forward the newest vegetable and flower varieties to Jefferson, and Jefferson considered McMahon's *Calendar* his horticultural Bible. Thomas Nuttall honored McMahon in the genus *Mahonia*, a new genus collected by Meriwether Lewis on the Lewis and Clark Expedition.

Frederick Pursh (1774-1820) was a botanist and plant collector who came to the United States from Germany in 1799 and who, by 1805, had begun collecting for Benjamin Barton. Barton, as noted above, had, at the request of President Jefferson, given botanical training to Lewis, but after the Lewis and Clark

Expedition Barton was unable, because of his health and his predisposition to procrastination, to fulfill his responsibility to work on cataloging and describing Lewis's botanical collection. Both Barton and Jefferson's friend, Bernard McMahon, then suggested having Frederick Pursh organize and describe the collection. In 1807 Lewis met Pursh, was very impressed, and paid Pursh about \$70 to begin working on the botanical collection. Pursh completed his work within a few years, but tragically, Lewis committed suicide in 1809, having himself written almost nothing about the Expedition and its botanical collection.

It is still not known what happened to all of the Lewis botanical collection after Pursh documented and described it. We know that Pursh returned most of the collection to McMahon and that Pursh took about four dozen specimens to England where he intended to combine information about them with his own collections and the work of many others in his own new publication on the flora of North America. Pursh apparently did not properly credit those whose plant collections he used in his new book, and he actually took credit for finding plants that others had discovered. This led him into numerous conflicts, especially with Thomas Nuttall, whose botanical work Pursh pilfered.

"Who's in that Name?" continues on next page



Mahonia nervosa
USDA-NRCS PLANTS Database

Pursh was an alcoholic and apparently only the help of his friends kept him at the task of publishing his new flora. In 1814 he published *Flora Americae Septentrionalis, or a Systematic Arrangement and Description of the Plants of North America*, which included descriptions of 132 specimens from the Lewis and Clark Expedition. For nearly forty years this two-volume work was the standard botany of North America. It was superseded by John Torrey and Asa Gray's *Flora of North America*.

All but a few of the Lewis and Clark Expedition's botanical specimens which Pursh had taken with him to England were eventually returned to the United States. The total number of Expedition plants known now is about 232, all but eleven (those in the Kew Gardens Herbarium in London) are in the Academy of Natural Sciences in Philadelphia – where both Lewis and Pursh began their work on the plants that were collected on the Expedition.

Pursh died in Canada - young, drunk, impoverished and forgotten. The genus *Purshia* was named by Augustin de Candolle, and in Colorado we have two beautiful *Purshia* species: Cliffrose and Bitterbrush, *Purshia stansburiana* and *Purshia tridentata*.



Purshia tridentata
Sheri Hagwood @ USDA-NRCS PLANTS
Database

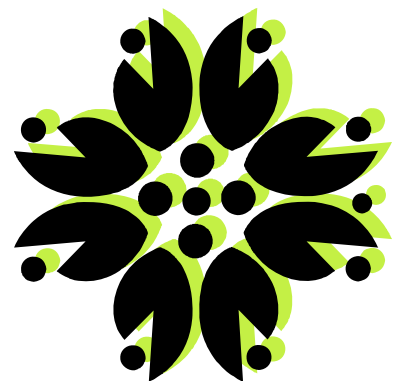
Al Schneider is Vice President of the CoNPS, webmaster of the Society's web site, and a regular contributor to Aquilegia.

REQUEST FOR PROPOSALS

THE JOHN W. MARR AND MYRNA P. STEINKAMP FUNDS

The Colorado Native Plant Society supports research projects in plant biology from the John W. Marr and Myrna P. Steinkamp funds. These separate funds honor the late Dr. John Marr, Professor at the University of Colorado and the first President of the Society, and Myrna Steinkamp, a founding member of CoNPS who worked on behalf of the Society for many years in a variety of capacities. Both funds were established to support research on the biology and natural history of Colorado native plants by means of small grants. The Steinkamp Fund targets rare species and those of conservation concern. Both field and laboratory studies are eligible for funding. Thanks to the generous contributions of many members and supporters, a total of nearly \$3,000 is available, although individual awards will not exceed \$1,000. Recipients of the awards must agree to summarize their studies for publication in *Aquilegia*.

The Board of Directors is now soliciting proposals for a February 15, 2010 deadline. Information on guidelines and requirements for proposals may be obtained by visiting our web site at http://www.conps.org/research_grants.html. If your questions are not answered by our web site, you may contact Board member Jan Loechell Turner by e-mail at jlturner@regis.edu or by phone at 303-458-4262.



TAKE A NATIVE PLANT MASTER COURSE

Colorado State University Extension

Is that wildflower useful for landscaping? Is it native or noxious? Learning which Colorado wild plants are suitable for landscaping and which are weeds are just two of the skills that participants learn in the Native Plant Master™ Program, sponsored by Colorado State University Extension. The field-based courses focus on identification, ecology, and human uses of Colorado plants. Courses are held at local open space parks and other public and private lands in various counties across Colorado. Courses include use of a botanical key with an emphasis on scientific names and families.

Registration is limited. Applications are due for all county programs by March 15. Each course consists of three, four-hour sessions. There is a fee for each course and the cost is reduced for participants who agree to teach at least 20 people per year per course about Colorado plants. Participants who pass three courses and satisfy the teaching requirement become certified Native Plant Masters.

For more information, visit www.conativeplantmaster.org or contact the local Colorado State University Extension office in the following counties directly:

Boulder: (303) 678-6238
Custer: (719) 783-2514
Eagle/Garfield: (970) 328-8630
El Paso: (719) 636-8920
Douglas: (720) 733-6930
Jefferson/Gilpin: (303) 271-6620
Larimer: (970) 498-6000
Logan: (970) 522-3200
Mesa: (970) 244-1841
Montezuma: (970) 565-3123
Pueblo: (719) 583-6579
San Miguel: (970) 327-4393

For the latest information on more than 1,000 Colorado plants, browse the Colorado Plant Database website at <http://coloradoplants.jeffco.us>.

Colorado State University Extension empowers county citizens and enhances their quality of life through education, innovation and excellence in service. As part of a nationwide system, Extension brings the research and resources of the University to your community. For more information, see <http://www.ext.colostate.edu>.

AWARD NOMINATIONS REQUESTED

The Board of Directors of the Colorado Native Plant Society desires to honor contributions to Colorado botany and to the Society. Service to the Society takes many forms ranging from an occasional event to significant contributions over a span of five years or more. Do you know someone who deserves recognition for their time and effort given to CoNPS? Perhaps you know an individual who has contributed over a lifetime to enhancing Colorado botany?

Nominations should be sent to the President, Boyce Drummond (bdrummond3@msn.com). They are accepted at any time during the year. Directors of the Society then review and vote upon nominations at their next meeting.

The awards policy adopted by the Board of Directors in February 2009 provides for the following types of awards:

Certificate of Appreciation – This certificate is awarded to members or non-members who provide occasional services to the Society and/or as an outreach tool. In lieu of a certificate or in addition to a certificate, it may also be in the form of an annual membership and/or merchandise.

Special Merit Award – This plaque is given to members or non-members for recognition of significant contributions to Colorado botany and/or significant contributions to the Society's goals. This is generally given when the contribution is made over a short period of time (less than five years).

Honorary Lifetime Membership – This award is a framed original artwork, conferring lifetime membership status to an individual CoNPS member for long-term, high quality service to the Society. This is generally awarded to members with over ten years of service to the Society and may be combined with the Lifetime Achievement Award.

Lifetime Achievement Award – This award is a framed original artwork for recognition of members and non-members long-term (thirty-plus years) contributions to Colorado botany. This award may be combined with the Honorary Lifetime Membership.

Awards are generally presented at the Annual Meeting of the Society. If this is not convenient for awardees, other arrangements are made.

REPORT TO MEMBERS

2009 ANNUAL MEETING

The 2009 Annual Meeting was held at The Ranch in Loveland and was a great success with over 170 attendees and an well thought-out agenda. Those who could not be there missed 4 (four!) talks by Dr. William A. Weber – a captivating speaker on any subject. The agenda also included a challenging, contrarian view of invasive species by David Theodoropoulos. It is probably fair to say that he won few converts to his view, but most of the listeners found his unconventional views to be thought provoking. The entire list of speakers held the members’ attention (despite *very* hard chairs) in one absorbing presentation after another.

The entire agenda is posted on the Society’s web site at the “Annual Meeting” tab (or see the Annual Meeting issue of *Aquilegia*). On the web site, you

will also find Pam Smith’s enthusiastic retrospective on the meeting she was so instrumental in planning and conducting.

There are also pictures of the meeting and Sunday field trips to the newly opened Soapstone Prairie Natural Area near the Colorado-Wyoming border.

The entire Northern Chapter deserves our thanks for the great effort to plan and hold the meeting; conduct a silent auction (netting over \$800 for the Society) and a poster contest; and arrange for speakers, lunches, and all the collateral activities that go with a meeting of this size.

It was a job well done!

Election of Board Members

Votes cast at the Annual Meeting resulted in the election of one new board member, **Carol English**. Carol has been a member of the Metro-Denver Chapter

since 2005. Carol sees a key CoNPS issue to be continuing to work hard toward educating the general public about the importance of native plant species.

Jan Loechell Turner was reelected to another three-year term on the Board of Directors. She has been a member of the board since 2004 and serves as chair of the CoNPS Research Grants Committee, regularly contributes book reviews to *Aquilegia*, and served as co-president of CoNPS with Charlie Turner from September 2008 to September 2009.



Patrick Murphy, Honorary Life Member. Photo by Maria Fernandez.

THANK YOU! Patrick Murphy

One of the highlights of the Annual Meeting was the presentation of an Honorary Lifetime Membership to Patrick Murphy for his many years of enthusiastic management of the Society’s bookstore.

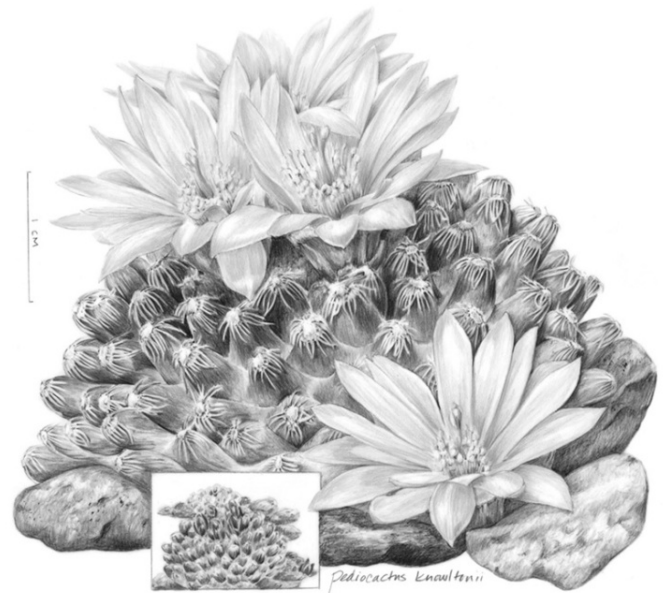
An Honorary Lifetime Membership award is a framed original artwork, conferring lifetime membership status to an individual CoNPS member for long-term, high quality service to the Society. It is generally awarded to members with over ten years of service to the Society.

RARE, BUT REALLY WELL DONE!

by Carol Till

Two years ago I didn't even know there were rare plants in Colorado. As the new exhibit manager for the Rocky Mountain Society of Botanical Artists (RMSBA), I was looking for an exhibit theme. I was inspired by an exhibit our parent organization (the American Society of Botanical Artists) was planning on endangered plants of the world. I discovered that few of our 100 members were entering that exhibit, feeling that Colorado plants weren't the showy subjects that jurors select. I discovered the online "Rare Plant Field Guide, Colorado Master Plant List" link on the Colorado Natural Heritage Program website and thought that would be an ideal resource for an exhibit. An exhibition of Colorado rare plants would also fulfill our mission statement which reads in part: "The RMSBA seeks to educate the public on plant diversity, regional plant ecology, and the rationale for preservation of plant species through botanical art that is relevant to the region."

The exhibit idea soon blossomed into a program with potential to do far more than create a botanical art display. A meeting with Betsy Neely of The Nature Conservancy in February of 2008 introduced me to the Colorado Rare Plant Conservation Initiative (CRPCI). The opportunity to work with



Pediocactus knowltonii, colored pencil, Susan Rubin

CRPCI members to promote and conserve rare plants meshed perfectly with our exhibit program plan. **Locations**

We hoped to place our exhibit titled "RARE: Imperiled Plants of Colorado" in four public galleries distributed around the state for maximum public exposure. The exhibit premiered on March 15, 2009 at the Denver Botanic Gardens, a Center for Plant Conservation site and home of the Botanical Illustration program which trained many of our members. The exhibit's second stop from May 23 to September 30 was the Steamboat Art Museum in Steamboat Springs. The Museum is located on the main street through town and is a highly visible location for summer tourists. The exhibit opened at the Center of Southwest Studies at Fort Lewis College in Durango on October 10, where it will remain through May of 2010. The final exhibit stop will be at the Business of Art Center in Manitou Springs from July 1 to September 30, 2010. **The Exhibit**

We established criteria for an exhibit requiring that all paintings be of plants from the online Colorado Master Plant List. We required that all paintings be in color and fit in a standard frame to make the exhibit uniform and attractive to galleries. Researching the plants and finding plants, photos and specimens was a difficult task for the artists and couldn't have been done without the help of local botanists, herbaria staff and members of the Colorado Rare Plant Conservation Initiative. Our members were instructed to take utmost care in their research and not to harm or disturb any living rare plants that they encountered. The entries were juried for botanical accuracy and



Sclerocactus mesae-verdae, watercolor by Ann Fleming

Sclerocactus mesae-verdae

artistic quality in December 2008. Forty pieces were selected for the touring exhibit and framed by our members.

RMSBA put this exhibit together with no outside funding. Products were produced to help us pay for the costs of insuring, transporting, and supporting the exhibit. We printed card sets, tee shirts and prints of the exhibit's illustrations to sell. Denver Botanic Gardens and Steamboat Art Museum cooperated in designing and printing a catalog for the exhibit. RMSBA artists contributed the artwork, Denver Botanic Gardens staff researched and wrote the copy. The catalog is being sold at the exhibits, and we have just ordered a second printing of 200 catalogs.

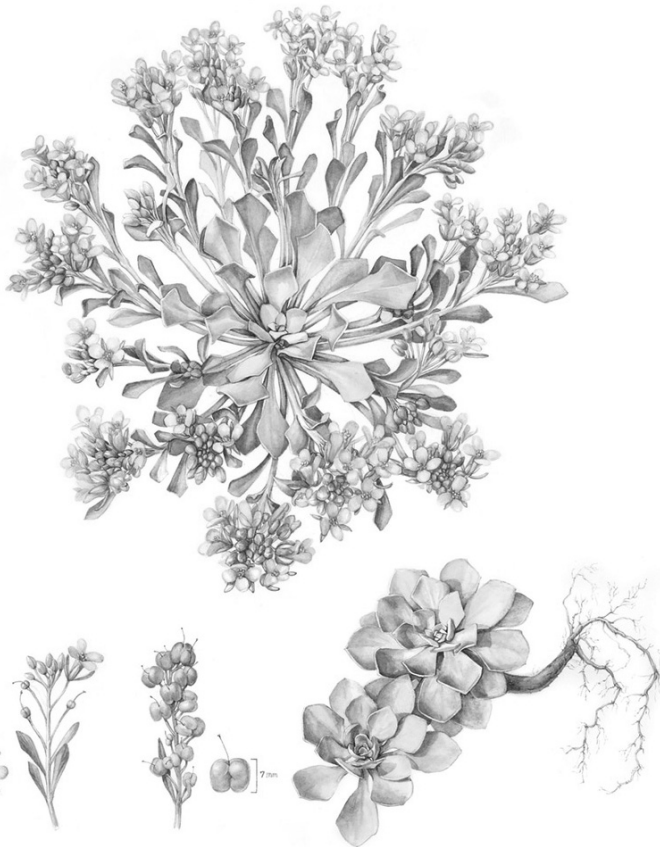
Outreach

The exhibits provide an opportunity to talk about conservation and protection. Members of the Colorado Rare Plant Conservation Initiative helped produce lectures, tours and public receptions to enhance the educational experience of the exhibit. We had over 300 attendees at both the Denver Botanic Gardens and Steamboat Art Museum opening day receptions. More events are in the works, and we are grateful for help from

CoNPS members. Having knowledgeable botanists at the receptions is a wonderful way for exhibit visitors to learn more about rare plants.

A friend said to me recently that; "No one really needs art." This exhibit has demonstrated to me that our art can play a role in helping conservation efforts. Painting a rare plant elevates it to the level of a portrait. Portraits are painted of the important and cherished. And our rare plants are both of these things. We hope that through this exhibit the public will recognize that and help us to conserve and protect them.

Carol Till is Volunteer Exhibit Coordinator for the Rocky Mountain Society of Botanical Artists, a chapter of the American Society of Botanical Artists. The RMSBA web site is at www.botanicalartists.org. Carol can be contacted at caroltill@mindspring.com.



Physaria bellii

Physaria bellii, watercolor, Constance Sayas

RARE: Imperiled Plants of Colorado Exhibit Calendar
Center of Southwest Studies, Fort Lewis
College 1000 Rim Drive, Durango, CO
81301 October 10, 2009 through May 31,
2010 Business of Art Center 513 & 515 Manitou
Avenue, Manitou Springs, CO 80829 July 1, 2010
- September 30, 2010 Reception, Friday p.m.,
July 2, 2010

CHAPTER NEWS AND ANNOUNCEMENTS

BOULDER CHAPTER

Boulder Chapter programs are held on the second Thursday of each month (September through April) from 7:00 p.m. to 9:00 p.m. All meetings, except as noted, are held at the Community Room at the **Boulder REI Store** at 1789 28th Street (between Canyon and Pearl). For more information, please email Chapter President **Elizabeth Drozda-Freeman** at ellizabeth.wildflower@gmail.com or call her at 303-586-1810. *Please support zero waste: bring your own cup and plate.*

January 14, 2010, 7 PM

“PHOTOGRAPHY POWER POINT: COLORADO WILDFLOWERS”

Presenters: **Tim and Ann Henson**

Location: Boulder REI Community Room

In the depth of winter, we need to remember how beautiful plants flower every year. This photography show covers most of the ecosystems across Colorado. We might say, it's just a bunch of pretty pictures for your enjoyment! But, a biology teacher is presenting, so there will be a few facts along the way.

Tim and Ann Henson have been observing and caring for native plants of Colorado for more than 40 years. Ann worked in agriculture conducting weed control research. Tim taught biology and geology in the Longmont area. Now retired, Tim has taken his photography to new levels and watches birds. Ann spends time teaching in the Native Plant Master program and learning about lichens. They volunteer for CoNPS, Colorado Natural Areas Program, Wildlands Restoration Volunteers, and Rare Plant Monitoring.

February 11, 2010 7 PM

“BUTTERFLIES OF UPPER GREGORY AND LONGS CANYON”

Presenters: **Steve Jones**

Location: Boulder REI Community Room

The unique and diverse plant communities of upper Gregory and Long Canyons support more than 75 butterfly species, including 6 swallowtails and a dozen skippers. In early summer hundreds of fritillaries gather to sip nectar from mints and coneflowers before laying their eggs in patches of violets. Steve Jones will present close-up photos of many of these butterflies, discuss their relationships with host plants, and explore the

potential impacts of human-induced environmental change on the flora and fauna of these very special canyons.

Steve Jones is author of *The Last Prairie, a Sandhills Journal* and *Owls of Boulder County*, and he is co-author of *The Shortgrass Prairie*, the *Peterson Field Guide to the North American Prairie*, and *Wild Boulder County*. Steve organized the first comprehensive small owl and wintering raptor surveys in the central Rockies and helped plan and carry out the Colorado Breeding Bird Atlas. His consulting work includes breeding bird and resource inventories for city, county, and state open space programs. He has led field trips and taught nature classes for 28 years, and he taught in the Boulder Valley Public Schools for 33 years.

March 11, 2010, 7 PM

“THE VEGETATION MONITORING PROGRAM OF THE BOULDER OPEN SPACE AND MOUNTAIN PARKS ‘GRASSLAND ECOSYSTEM MANAGEMENT PLAN’”

Presenters: **Marianne Giolitto and Lynn Riedel**

Location: Boulder REI Community Room

Marianne Giolitto and Lynn Riedel will describe the vegetation monitoring program that has been developed for the city of Boulder Open Space and Mountain Parks Department Grassland Ecosystem Management Plan implementation. The Grassland Plan provides viability standards for conservation targets, including Mixed grass Prairie Mosaic, Xeric Tallgrass Prairie, and Mesic Bluestem Prairie, and Wetlands. The GMAP vegetation monitoring program measures the success in achieving the viability standards for vegetation composition. An overview of the sampling design and preliminary data will be presented.

Marianne Giolitto has a master's degree in applied ecology from Indiana University and has worked over the last decade in ecological consulting and wetland delineations in regulated wetlands. She is currently the ecological monitoring coordinator for the city of Boulder Open Space and Mountain Parks Department.

Lynn Riedel has spent her career in natural areas management in Colorado, initially working with the National Park Service. Her academic background is in biology and science education. Over the last 14 years, she has worked as a plant ecologist with the city of Boulder Open Space and Mountain Parks Department.

April 8, 2010

“PROJECT BUDBURST”

Presenter: **Sandra Henderson**

Location: Boulder REI Community Room

Volunteers across the country are welcoming spring by taking part in a nationwide initiative, Project BudBurst, which tracks climate change by recording the timing of flowers and foliage. Operated by the University Corporation for Atmospheric Research (UCAR), Chicago Botanic Garden, and University of Montana, the project is amassing thousands of observations from students, gardeners, and other citizen scientists to give researchers a detailed picture of our warming climate. Please join us to find out more about Project Budburst.

Sandra Henderson, of UCAR’s Office of Education and Outreach, is the project’s director.

METRO-DENVER CHAPTER

Monthly meetings of the Metro-Denver Chapter are typically held on the fourth Tuesday of the month (September through May, except November). Beginning January 2009, Chapter meetings are being hosted by the Department of Biological Sciences at the University of Denver (DU), where we will meet in Olin Hall, located at 2190 E. Iliff Avenue. For more information, visit www.conps.org or contact **Jannette Wesley (303) 969-2131 (daytime) or (303) 985-5299 (evenings)**.

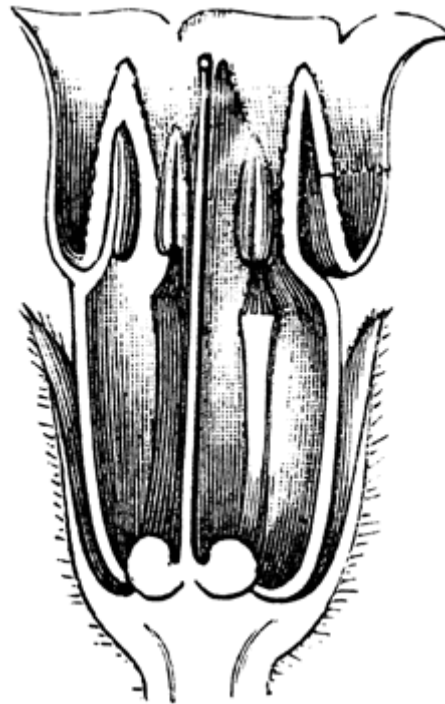
December 8, 2009 Tuesday at 7:00 PM

BRISTLECONE PINE ON MT. GOLIAT

Presenter: **Dr. Anna Schoettle**

Location: Olin Hall, University of Denver, 2190 E. Iliff Ave.,
Room 103

Dr. Anna Schoettle is a Research Scientist at USFS Rocky Mountain Research Station in Fort Collins, Colorado. She is studying the ecology and sustainability of bristlecone pine and limber pine populations in the Rockies and the factors that threaten them. Anna earned her BS and MS at Cornell University and PhD at the University of Wyoming. She joined the Rocky Mountain Research Station in 1985; her research has focused on high elevation trees and their ecosystems. Recently Anna has been working to develop proactive strategies to sustain and conserve high elevation 5-needle pine species in the presence of white pine blister rust, a lethal disease caused by a non-native pathogen, and mountain pine beetle in a changing climate.



Symphytum officinale
Clipart courtesy FCIT

January 26, 2010 Tuesday at 7:00 PM

NATIVE LANDSCAPE RESTORATION AT THE NATIONAL PARK SERVICE

Presenter: **Robin Gregory**

Location: Olin Hall, University of Denver, 2190 E. Iliff Ave.,
Room 103

Robin Gregory is a Landscape Architect with the National Park Service, Denver Service Center. She is involved in planning for the restoration of park lands along roadways throughout the country.

February 23, 2010 Tuesday at 7:00 PM

GARDENING WITH NATIVE PLANTS

Presenter: **Gwen Kelaidis Moore**

Location: Olin Hall, University of Denver, 2190 E. Iliff Ave.,
Room 103

Gwen Kelaidis Moore will be the speaker -- more details to follow.

March 23, 2010 Tuesday at 7:00 PM

THE HISTORIC ROLE OF FIRE IN FOREST AND GRASSLAND ECOSYSTEMS

Presenter: **Tom L. Thompson**

Location: Olin Hall, University of Denver, 2190 E. Iliff Ave.,
Room 103

“Chapters” continues on next page

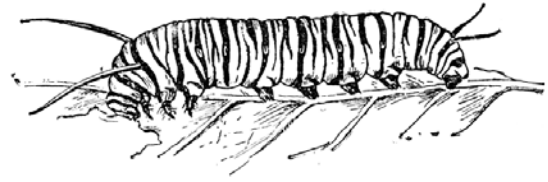
Tom L. Thompson is a forester and the past president of the Society of American Foresters. He will speak about the historic role of fire in ecosystems and particularly focus on the historic understanding and use of fire in managing forests and grasslands. He will discuss the challenges of using fire today, especially those caused by excessive fuel buildup, insect and disease mortality, shifts in climate, and interface with human development. Tom Thompson recently retired as Deputy Chief of the U.S. Forest Service in Washington, D.C.. He also served as Deputy Regional Forester in the Rocky Mountain Region from 1989-2001. Mr. Thompson, a native of Colorado, was with the Forest Service for 37 years and is a graduate of Colorado State University.

April 2010 (exact date to be announced) Tuesday at 7:00 PM
THE GREAT MIGRATION: MONARCHS OF NORTH AMERICA

Presenter: **Sarada Krishnan**, Director of Horticulture, Denver Botanic Gardens

Location: Olin Hall, University of Denver, 2190 E. Iliff Ave., Room 103

Of all nature's wonders, one of the most fascinating phenomena is the annual migration ritual performed by Monarch butterflies (*Danaus plexippus*) in North America. What is amazing is how these tiny creatures, four or five generations removed, return year after year to the same overwintering grounds in Mexico. Each fall, millions of Monarch butterflies make the trip from the eastern United States and Canada each year to Mexico's southwestern flank of the Transverse Neovolcanic Mountains congregating in the oyamel fir (*Abies religiosa*) forest, ten thousand feet in elevation. No other butterfly performs such an arduous migration feat as the Monarch with some individuals traveling up to 2,000 miles. Sarada's talk will feature the Monarch migration and her recent visit to the Monarch butterfly sanctuaries in central Mexico. Sarada has a Master of Science degree in Horticulture from Colorado State University, with a research focus on the propagation of native Colorado flora specializing in plant tissue culture. She is currently a doctoral candidate at the University of Colorado, Boulder. Sarada is the author of the book "Butterfly Gardening: A Guide for Colorado Gardeners."



Monarch butterfly caterpillar
Clipart courtesy FCIT

May 25, 2010 Tuesday

SPRING HIKE

Time and place to be chosen by members.

NORTHERN COLORADO CHAPTER

Except as noted, Chapter meetings are held on the first Wednesday of the month (October through April) at 7:00 PM, at the Gardens on Spring Creek, 2145 Centre Ave., Fort Collins. Prior to meetings, members are invited to meet at 5:30 PM for dinner with the speaker at Café Vino, 1200 S. College Avenue. If you would like to join us for dinner, please contact Chapter President Pam Smith at 970-223-3453 or pamelas4824@earthlink.net. For more information, visit www.conps.org.

December 2, 2009, 7 PM

“DRAGONFLIES, DAMSELFLIES, ‘BUFORD’, AND THE FUTURE OF WALNUTS!”

Presented by **David Leatherman**, Naturalist and retired State Forest Service Entomologist from Fort Collins.

David will present a program on dragonflies and damselflies of Colorado. In addition, he will provide updates on both the current pine beetle epidemic and a new nationwide threat to black walnuts with ties to Colorado.

January 6, 2010, 7 PM

“HORTICULTURAL THERAPY”

Presented by **Kim Ewy**, master gardener, health care professional and CSU student

Join Kim Ewy to learn about a fascinating new field that combines the fields of medicine and gardening into a health care career option!

“Chapters” continues on next page

February 11, 2010 7 PM

JOINT MEETING WITH THE AUDUBON SOCIETY

Topic to be announced.

Note: This is a Thursday evening presentation at the Lincoln Center.

March 3, 2010, 7 PM

“IMPERILED PLANTS OF NORTHERN COLORADO”

Presented by Susan Spackman Panjabi, Botanist with the Colorado Natural Heritage Program at Colorado State University

Susan will be discussing some of Colorado’s rarest plant species. Come learn about these threats to these interesting species, and initiatives underway to help assure their long-term survival.

April 7, 2010, 7 PM

“PLANT BIOGEOGRAPHY OF COLORADO”

Presented by **Lynnel Rubright**, Ph.D., geographer, master gardener and City of Fort Collins Master Naturalist

Come enjoy an evening of exploration of the biogeography of plants in Colorado with Dr. Lynnel Rubright.

PLATEAU CHAPTER

Chapter activities are scheduled throughout the year. For more information, visit www.conps.org or contact Chapter President Gay Austin at austinaceae@frontier.net or 970-641-6244.

SOUTHEAST CHAPTER

Activities of the Southeast Chapter are scheduled throughout the year and are often held in Colorado Springs at the Beidleman Environmental Center on Caramillo Street, north of Uintah, off

Microscope Fund

Members continue to pay off the purchase of the dissecting microscopes with \$8 of the \$20 workshop registration fee going directly to this Fund. We have collected approximately 50% of the purchase price in two seasons. You can also contribute directly to the Fund by mailing contributions, payable to CoNPS, to P.O. Box 200, Fort Collins, CO 80522.

Chestnut. For more information, visit www.conps.org or contact Ed Roland at 719-676-2179 or edwardrroland@gmail.com.

SAN LUIS VALLEY CHAPTER

Chapter activities are scheduled throughout the year. For more information, visit www.conps.org or contact Chapter President Hobey Dixon at 719-589-3813 or pixies@amigo.net.

SOUTHWEST CHAPTER

The Southwest Chapter explores, preserves, and enjoys the flora of the Four Corners area through activities that are scheduled throughout the year. We welcome new ideas for field trips, activities, and programs, and we especially welcome new members from Colorado, New Mexico, Arizona, and Utah. For more information, visit www.conps.org or contact Chapter President Al Schneider at 970-882-4647.

All meetings and field trips are free and open to everyone. Bring a friend. We always have homemade refreshments.

January 21, 6:30 PM

“RARE: IMPERILED PLANTS OF COLORADO”

Location: Fort Lewis College Center of Southwest Studies.

A discussion of the exhibit of botanical illustrations with artists Amy Wendland and Barbara Klema.

March 30, 6:30 PM

HERBARIUM TOUR

Presenter: Botany Professor **Ross McCauley**

Location: Fort Lewis College with Botany Professor, Ross McCauley.

Amazing Amazon!

Whenever you buy anything through Amazon.com, be sure to enter Amazon from our CoNPS bookstore at <http://www.conps.org/bookstore.html>. CoNPS will then receive 5-7% of your purchase price. You do not pay anything extra, nor do you fill out forms – you simply enter Amazon by clicking on any book on our Bookstore page. If every member did this, the Society would receive several thousand dollars from Amazon each year.

CHAPTER AND COMMITTEE REPORTS

Two chapters and one committee provided reports at the November 13 meeting of the Board of Directors. Thanks to all who help to plan and conduct all these activities, and to the members who attend!

Southeast Chapter

The first year of the "reestablished" Southeast Chapter included four monthly meetings and nine field trips, including excursions to the Comanche Grasslands, the Sangres, Spanish Peaks and Emerald Valley near Cheyenne Canyon.

In 2010, five meetings are scheduled with topics like "the life cycles of the Pinacea" and a digital photography seminar.

The Chapter plans to repeat, if not increase, the number of field trips, including the grass morphology field trip that was very popular in 2009. Other trips are yet to be determined.

Some objectives for 2010 are (1) scientific documentation of trips with digital photography, species lists and herbaria vouchers, (2) creation of a "Virtual Field Trip" Internet site with digital photography uploads (for those who couldn't make the real trip), and (3) an Internet nexus for people who want to get together for impromptu field trips with no specific leader.

Southwest Chapter

The Southwest Chapter had twelve field trips this summer, and three well-attended programs in the 2008-2009 season.

The Chapter has been active in a number of projects, including: (1) working with the Natural Areas Program of the State of Colorado to protect an area that is home to two rare Colorado plants; (2) working with BLM to place informational signs in Colorado Plateau hanging garden alcoves to help educate the public about protecting the plants; (3) working with the Fort Lewis College Center of Southwest Studies in their exhibit hall and helping to sponsor the new exhibit, "RARE: Imperiled Plants of Colorado" (featured elsewhere in this issue of *Aquilegia*); (4) working with the Colorado Mountain Club in its efforts to build trails on sections of Engineer Mountain; (5) working to protect several recently discovered rare species in Lone Mesa State Park that are threatened by a proposed dam on Plateau Creek; and (8) running free wildflower programs in Durango and Cortez.

Education and Outreach Committee

The E&O committee, led by John Vickery, presented a

program entitled "Natural Areas Vegetation Management in Local Government Park Systems in the Colorado Front Range: an ecological approach" to about 50 people at the Colorado Open Space Alliance annual meeting in September. This involved a formal presentation as well as facilitated breakout sessions. The main themes of this presentation included the challenges of plant community management in urban/ex-urban settings, issues in restoration and weed management (ecological services of weeds, plant materials selection as cultural control, and livestock grazing as biological control) and specific case studies (prioritizing weed management in natural areas/open space systems, vegetation management in prairie dog towns, and novel habitats/plant communities).

John Vickery and Megan Bowes are currently working on a separate presentation for the Native Plants Committee of the Colorado Weed Management Association's annual meeting in December. "Weeds on the Wild Side" will detail how to recognize and evaluate native plant communities, including the identification of early feral species. John and Megan are also gearing up for a slightly modified version of the Vegetation Management presentation at the ProGreen Expo in February. John is continuing to develop a list of "Prairie Dog Survivors", tenacious natives and non-noxious, non-native plants that tolerate or flourish in prairie dog colonies. Expect to see the link to this document and the related wiki on the E&O webpage soon. Finally, a native plant materials selection document is also on the horizon.

Society Workshops

As detailed in the last issue of *Aquilegia*, a full season of seven workshops has been scheduled. See elsewhere in this issue for the ones yet to take place in the coming months. Thanks to Ann Henson, Linda Smith, and all who have stepped up to lead and support the workshops!

Chapter Programs

In addition to those that have already come and gone, sixteen chapter programs have been scheduled (see "Chapter News and Announcements" and back cover) for December through April. Thanks to all the chapter presidents, members, and presenters for a great variety of programs and all the work to make them happen!

WELCOME NEW MEMBERS

Birgit Arvin	Germaine French	Mitchell McGlaughlin	Carol Till
Robin Bay	Daniel Hail	Clyde McKinney	Shirley Van Riper
Penny Bieber	Mariska Hamstra	Cary Meister	Cheryl Vestal
Brock Bowles	William & Cindy Henk	Barbara Mullen	Peter O'Brien & Elaine
Sandra Bray	Shalene Hiller	Lynne Price	Vickers
Gerald Bresowar	Bob Jondle	Mary Richardson	Sharon Williams.
Wendy Covert	Kevin Kovacs	Lynn Rubright	
John Du Waldt	Ben Legler	Allison Shaw	
Jim Erdman	Brooke Lyons	Loretta Simms	
Terry & Don Erickson	Bruce MacBryde	Aaron Keller & Emily	
Betty R Forrest	Ellen Mayo	Thorn	

THE CoNPS WEBSITE

www.conps.org

A wide variety of information, both interesting and useful, awaits you on the Society's website at www.conps.org.

You are invited to browse for information about native plants, including plant lists and keys, news from the botanical front, and more. Click on the "Links" button to find resources ranging from taxonomy and nomenclature to Colorado gardening with native plants. There are a host of sites maintained by other organizations – the native plant societies of other states, Colorado and national conservation organizations, wildflower societies, Federal and state agencies – the list is too long to do full justice here.

A variety of botanical slide shows can be found, as well as sites to aid in the identification of trees, wildflowers, and other plants.

Society news is an important part of the website. Information and updates on workshops, field trips, and activities are posted and updated when "things change". Issues of *Aquilegia* back to 2003 have been posted on the web.

So, on the next winter day when you wish you could be out slogging, trekking, tramping, meandering, moseying, or otherwise out on the ground sleuthing out native plants (but you can't because everything is under a foot of snow), just sit down at your computer and check out the website.

And while you're there – if you find links that aren't working, errors that need to be fixed, or have other suggestions to improve the website, please contact the webmaster, Al Schneider, at webmaster@conps.org. The task of keeping the website current is a big one, and your help in identifying any problems will be appreciated.

Future issues of *Aquilegia* will highlight additions to the web site that may be of interest to members. In the meantime, you might want to check out the "Botanical Slide Shows" tab and see great photographs of all the Botrychiums, Orchids, and Physarias of Colorado – and more!

VOLUNTEER OPPORTUNITY!

Website Assistance

Do you have an hour or two you can spare to assist with proofreading the CoNPS website? Would you enjoy browsing through Amazon's books on botany to add titles to the botanical books listed on the CoNPS web site? If you would like to assist with either of these two valuable services (in your home whenever you have the time), please volunteer by e-mailing or calling the webmaster at webmaster@conps.org or 970-882-4647.



With this issue, we are launching several efforts to emphasize opportunities for more members to be actively involved in the Society, and to increase the amount of information that all members receive.

Volunteer opportunities: Beginning with this issue, *Volunteer Opportunities* will be more conspicuously highlighted. Elsewhere in this issue, you will see calls for volunteers as:

- Workshop Chair
- Workshop or field trip leader
- Workshop host
- Presenter at Education and Outreach programs and events
- Website reviewer

These are just a small smattering of the opportunities the Society has. In future issues, we will highlight more.

A healthy Society will have the involvement of many of its members. The phrase “volunteer opportunity” is not an oxymoron. We invite you to become involved if you haven’t been, and more involved if you have.

Partnerships: Partnerships and cooperative efforts are crucial to achieving conservation goals. Beginning with this issue, we will provide the opportunity for our partners to share what they are doing. This issue kicks this series off with an article from Peter Gordon and Carol Dawson, both with the Colorado State Office of the Bureau of Land Management.

Society accomplishments: Now and again, it is good for any organization to take note of what it has accomplished. Elsewhere in this issue, you will find a sampling of some of the things done by the Southeast and Southwest chapters, and by the Education and Outreach Committee. In future issues, we plan to continue this with accomplishments of other chapters and committees.

More “conversation” with members. For many reasons, we will not have highly visible involvement from all of our members. From the less visible membership, we welcome your thoughts, such as:

- Ideas for articles
- Ideas for workshops and field trips
- Comments and feedback (including corrections and critique) of articles or material in *Aquilegia*
- Suggestions for improvement to *Aquilegia*

One area in which we can specific benefit from your ideas and feedback is assuring that we keep a statewide perspective. We have a membership that is demographically concentrated along the

Front Range from Denver to Fort Collins. But plant-wise and habitat-wise, that is not the way Colorado is. We especially encourage members in all the other areas to contribute to the newsletter and help us to keep our focus statewide and even over the four straight lines on the Colorado map.

Society members represent a wide spectrum of backgrounds with regard to plants – ranging from doctorates to casual hobbyists or those who simply have an interest in plants. We think we can meet the challenge of providing knowledgeable and informative newsletter that addresses the many interests of our readers. If we are not meeting yours, we’d like to hear from you, along with your suggestions.

Any of your ideas can be relayed to the editor, your chapter president, or any Board Member (see list on the next-to-last page of the newsletter).

I appreciate the opportunity to be your editor and look forward to receiving your ideas and your help in increasing “the appreciation and conservation of the Colorado native flora.”

Bob Henry
Editor, *Aquilegia*

Coming Soon! In 2010, we will add some new features to *Aquilegia*, including:

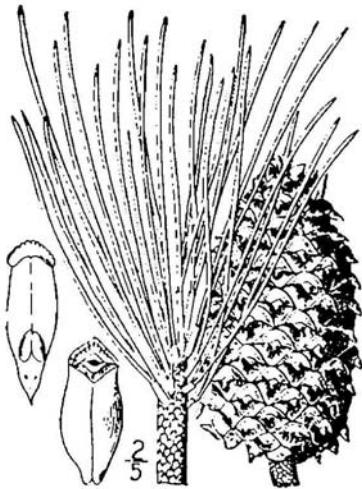
A series of articles on **plants with known historical occurrences in Colorado**, but which have not been observed in recent years. Several members have been involved in e-mail conversations on how to pursue this idea, which was suggested by Susan Spackman Panjabi.

A series on very **common, dominant, or “keystone” plants** (such as plains cottonwoods, pinyon and juniper, ponderosa pine and others) that are so “ordinary” that we tend to overlook their importance in healthy ecosystems. It is the premise of this series that we have much to learn by looking at things as obvious “as the back of your hand.” Writing these relatively brief articles is another volunteer opportunity.

Al Schneider will conduct **interviews with botanical notables** in Colorado and surrounding region. These would be in the vein of interviews with Dr. Weber that we have printed in the past.

AQUILEGIA AVAILABLE BY E-MAIL

Did you know that *Aquilegia* is available electronically? You could receive your issue of *Aquilegia* as a pdf file by e-mail. This saves the Society postage as well as paper. The Membership Chair (not the newsletter editor) makes this possible for you. Please submit your request to change from paper to electronic delivery to Eric Lane at ericmlane@yahoo.com or call 303-239-4182. *Be sure to include your e-mail address!*



Pinus ponderosa
USDA-NRCS PLANTS Database / Britton,
N.L., and A. Brown. 1913. *An illustrated flora*
of the northern United States, Canada and
the British Possessions. Vol. 1: 57.

AQUILEGIA DEADLINE APPROACHES

Submit Contributions by December 15

Chapter presidents, committee chairs, and others responsible for submitting information on Society activities and events are reminded that the deadline for the next issue (Spring issue) is December 15.

As you submit updates and new information of events to the Webmaster, please copy the *Aquilegia* editor so that we can keep the newsletter and website as consistent as possible. The editor and webmaster will try to keep this straight, but your help is very much needed and appreciated.

Suggestions from chapter presidents, committee chairs, and members on ways to make our communication most effective, and to keep our communication chores as simple as possible are always welcome.

THANK YOU! Leo Bruederle

Over the past years, it has been the good fortune of the Society to have had the abilities and commitment of Leo Bruederle as a member and officer. At various times – and sometimes at the same time – Leo served as President of the Society, led field trips and workshops, actively participated in the Field Studies committee, and – very notably to the readers of this newsletter – served as the capable editor of *Aquilegia*.

After patiently awaiting the completion of the transition to a new editor, Leo is now focusing his full-time attention on the considerable duties of Chair of the Department of Integrative Biology at UC-Denver's College of Liberal Arts and Sciences, as well as to his ongoing research.

Those who are interested in Leo's research interests in plant systemics and evolution and his achievements can find them at <http://thunder1.cudenver.edu/clas/biology/faculty/lbruederle.html>. (You also will be treated to an imaginative portrait.)

We appreciate Leo's contributions to the Society, wish him well, and hope to see him at future events!

Thank you, Leo!

Aquilegia

Newsletter of the Colorado Native Plant Society

Aquilegia is the newsletter of the Colorado Native Plant Society, and is available to members of the Society and to others with an interest in native plants. Past issues from 2003 to the present are available on the Society's website at <http://www.conps.org/newsletter.html>.

Deadlines

Submissions to *Aquilegia* are accepted throughout the year, although deadlines for publication are January 15 for the winter edition, April 15 for the Spring edition, July 15 for the Summer edition, and October 15 for the Fall edition.

Submission guidelines

Announcements, news, articles, book reviews, poems, botanical illustrations, and other contributions are requested for publication. Articles in a range from 500 to 2000 words in length are welcome, but content is more important than word count. Proposals for periodic columns or content are also welcome.

Those submitting material should write for an audience that is universally interested in native plants of Colorado and surrounding areas. Society members are well-educated and intellectually curious, but have wide variations in their formal botanical backgrounds. These range from a significant number of members with doctorates or other advanced degrees in botany, biology, and related fields to a large number of others without botanical backgrounds who are plant enthusiasts, gardeners and landscapers, nature-enjoyers, hikers, gardeners, and others who simply appreciate native plants and want to learn more. This presents a challenge to the writer – but an enjoyable one.

Please refer to a previous edition of *Aquilegia* for guidelines (these can be readily obtained online – see above). However, you need not be overly precise about format as text will be formatted during editing and layout for consistency of style. Dr. William A. Weber's nomenclature for the scientific names of plants should be followed, italicized and capitalized properly. Please proofread all material carefully and use "spell check".

Other guidance:

- Previously published articles submitted for reprinting require permission.
- Digital photographs or line drawings are also solicited. Be sure to include credit for images.
- Please include author's name, address, and affiliation in all contributions.
- Please submit all contributions as Word® attachments to prairieink@aol.com.

All contributions are subject to editing for brevity and consistency, with final approval of material changes by the author.

Articles from *Aquilegia* may be used by other native plant societies or non-profit groups, if fully cited to author and attributed to *Aquilegia*.

Please direct questions or comments regarding newsletter contributions and content to the editor, Bob Henry, at prairieink@aol.com.

Please direct all questions or comments regarding layout to Kim Regier, at Kimberly.regier@ucdenver.edu.



Aquilegia canadensis

Clarence A. Rechenthin @ USDA-NRCS PLANTS Database

Colorado Native Plant Society



The Colorado Native Plant Society is a non-profit organization dedicated to the appreciation and conservation of the Colorado native flora. Membership is open to all with an interest in our native plants, and is composed of plant enthusiasts both professional and non-professional.

Please join us in helping to encourage interest in enjoying and protecting Colorado's native plants. The Society sponsors field trips, workshops, and other activities through local chapters and statewide. Contact the Society, a chapter representative, or committee chair for more information.

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MEMBERSHIP APPLICATION AND RENEWAL FORM

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone _____ E-mail _____

Chapter: Boulder Metro-Denver Northern Plateau

San Luis Valley Southeast Southwest

DONATION

\$ _____ General Fund

Endowments in support of small grants-in-aid of research:

\$ _____ John Marr Fund: research on the biology and natural history of Colorado native plants

\$ _____ Myrna P. Steinkamp Memorial Fund: research and other activities that will benefit the rare plants of Colorado.

Mail to: Eric Lane, PO Box 200, Ft. Collins, CO 80522

DUES AND CONTRIBUTIONS ARE TAX-DEDUCTIBLE

MEMBERSHIP CLASS

Dues cover a 12-month period

Individual, \$20.00

Family/dual, \$30.00

Senior, \$12.00

Student, \$12.00

Organization, \$30.00

Supporting, \$50.00

Lifetime, \$300.00



Colorado Native Plant Society

P.O. Box 200
Fort Collins, Colorado 80522
<http://www.conps.org>



TIME SENSITIVE MATERIAL

CALENDAR 2009

Details of chapter programs and Society workshops can be found inside or at www.conps.org.

CHAPTER PROGRAMS

Boulder Chapter

Jan 14 Colorado Wildflowers
Feb 11 Butterflies of Gregory and Longs Canyon
Mar 11 Vegetative Monitoring Program
Apr 8 "Project Budburst"

Metro-Denver Chapter

Dec 8 Bristlecone Pine on Mt. Goliath
Jan 26 Native Landscape Restoration
Feb 23 Gardening with Native Plants
Mar 23 The Historic Role of Fire
Apr TBD Great Migration: Monarchs of N. Amer.

Northern Chapter

Dec 2 "Dragonflies, Damselflies, 'Buford' ..."

Jan 6 Horticultural Therapy
Feb 11 Joint Meeting with the Audubon Society
Mar 3 Imperiled Plants of Northern Colorado
Apr 7 Plant Biogeography of Colorado

Southwest Chapter

Jan 21 "RARE: Imperiled Plants of Colorado"
Mar 30 Herbarium Tour, Fort Lewis College

SOCIETY WORKSHOPS

Jan 23, 24 "Early Old Men: *Erigerons* of the Foothills"
Feb 6,7 The Solanaceae in Colorado
Mar 6,7 The Invaders
Mar 27, 28 "Nyctaginaceae of Colorado"
Apr 10, 11 "Fossil Plants and Insects from Cenozoic"

BOARD MEETINGS

Feb 20, 9:00 AM Regis University, Denver
Apr 17, 9:00 AM Northern Colorado, site TBD