

Aquilegia

Newsletter of the Colorado Native Plant Society

"... dedicated to the appreciation and conservation of the Colorado native flora."

Volume 34 Number 2 – Summer 2010



“GOATS AND MOUNT EVANS”

An Open Letter from Bill Weber

Editor’s Note

Some attendees at the annual meeting in September heard Bill Weber’s passionate speech on issues facing the unique Alpine habitat of Mount Evans, especially the growing impacts of mountain goats introduced in the early 1990’s. This is a habitat and ecosystem issue that is perhaps illustrative of the unintended consequences of well-intentioned land management decisions. The unique characteristics of the Mount Evans ecosystem, researched and documented by Dr. Weber and others, gives additional urgency to addressing the issue.

Dr. Weber visited with the CoNPS Board at its February meeting, and reiterated his views of the ongoing threat to the Mount Evans ecosystem. At that meeting, some Board members suggested that we include something in Aquilegia about the issue.

Here, then, are Dr. Weber’s concerns - in an “open letter”- with all his passion and reflecting decades of research both at Mount Evans and worldwide.

The CoNPS Board has not decided what action, if any, to take with regard to the issue. However, following Dr. Weber’s letter is a call for volunteers from Tom Grant, chair of the Conservation Committee. The Board recognizes that its possible involvement will require collaborative and constructive efforts with a number of Federal and State agencies, as well as with numerous interested parties. The Board also recognizes that the process of researching the relevant management plans and decisions, educating both our members and the public about the issues, and constructively working with others to find solutions will require a multi-year time commitment. We need volunteers to help with the effort.

To the Members of the Colorado Native Plant Society –

Some of you heard me hold forth at the annual meeting about the fact that imported, not native but exotic, mountain goats (*Oreamnos americana*) are becoming numerous on the summit area of Mount Evans. In 1961 we achieved a first step in saving the unique alpine flora there. After getting a great deal of support from North American and Eurasian botanists, Summit Lake was officially dedicated, one of the first sites to be established by the National Registry of Natural History Landmarks. I can furnish the members a .pdf file of the account on the CONPS web site, as well as a list of the species of plants we now recognize as occurring there.

The introduction of mountain goats to a dedicated botanical preserve is a situation not to be tolerated. The goats are not native, and they have already spread widely across Colorado. Mountain goats have also become a plague in the Olympic National Park in Washington. There the National Park Service is attempting to eradicate them. While most attention to potential extinctions of plants in Colorado has been directed to single species, almost none has been paid to the destruction of internationally known and threatened biological ecosystems. Colorado prides itself in having some of the most exciting botanical areas in North America, and we cannot afford morally to protect an ecosystem with one hand and allow it to be destroyed with the other. Mount Evans and its surrounding tundra areas must not be allowed to disappear, for it is at once a laboratory for research and an archive of evolution and plant dispersal over the globe.

I have devoted my career to studies of the flowering plants and ferns, lichens, and bryophytes. I was the chief mover for the

protection of Summit Lake. Now it is not only the lake that is threatened, but the entire alpine summit including a remarkable wet moss tundra at 13,500 ft. At my advanced age of 91, I no longer have the strength to take on this stewardship, but at least I have amassed the necessary knowledge of the flora, gained from work in alpine areas of the world. I am eager to lend my expertise of what is at stake, and I need statements of support. I also would like to enlist help in order to achieve the goal. I met recently with the board of CONPS and it is at their request that I send you this plea.



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The east-west oriented mountain range stretching from Mount Evans to Gray's Peak, Hoosier Pass, and the limestone mountains of the Ten Mile range is truly an International Biodiversity Hot-spot. It is an ecosystem that supports a great assemblage of plant species that are rare or endemic in Colorado, including vicariads that are disjunct from the Middle Asian Altai Mountains or from the Arctic and Antarctic. The large number of exciting discoveries stimulated us to have Summit Lake on Mount Evans set aside as a site designated by the then Secretary of the Interior, the late Stewart Udall (see Kenny, 1964, Weber 1991). The alpine Mount Evans flora is probably better known to Eurasian than local botanists because so many of the former have been lured to the mountain through my publications and correspondence. Also, in common with the other alpine and arctic parts of the world, mosses are relatively common, accounting for almost half of the plant species. Probably there are rare or vicarious fungi, diatoms, and algae awaiting discovery.

The geological age of the flora of our alpine tundra has been traditionally traced to the Pleistocene glaciation, but evidence now strongly suggests that it actually dates back to the Tertiary (Eocene) Period (Weber, 2003).

We first "discovered" the rarities of Mount Evans when we were searching for a small arctic grass that was known from a single locality in the United States. We found it at Summit Lake. Subsequently, there has hardly been a single visit to the site when we did not make new discoveries. However, it was obvious that the area was under siege. There was no protection from

trampling. Fishermen drove up to the lake and fished from their vehicles. Fish and Wildlife drove up to plant hatchery trout in this virtual bathtub. The site was dedicated, great boulders were placed in the paths of potential vehicle drivers, fish stocking was discontinued, and over the years the outlet portion of the lake has been protected by visible walkways, interpretive signs were placed, and restrooms and shelters were provided. Visitors now are welcomed, and most of them treat the area with respect. So much for success. Now comes a new threat. Nonnative Mountain Goats (*Oreamnos*) were introduced into Colorado in 1948 and are now threatening the vegetation by assembling in large herds, in moss tundra on the saddle of Mount Evans at 13,500 ft., where a delicate moss tundra as rich as Summit Lake has been discovered.

Importation of exotic animals and plants, by design or accident has a long and unhappy history. The disastrous effects of this on Australia, the Galápagos Islands, New Zealand, and Guadalupe Island (Mexico) are well documented. In North America, Florida and the southern U.S. are plagued by exotic plants such as paperbark tree (*Melaleuca*), and animals such as two species of tropical pythons. Southern California, Arizona, and New Mexico are battling exotic plant species from Africa. To have such a voracious animal as the exotic Mountain Goat of the Northern Rocky Mountains deliberately introduced into a sensitive and unique botanical preserve is a looming ecological tragedy. I believe that there is no justification for doing this in the name of recreation, especially hunting.



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Old journals describing mountain goats were mistaken in references to mountain sheep. Although no verified biological reports of goats have been found, the International Order of Mountain Goats requested Colorado to give 'native' status to mountain goats. On March 11, 1993, the Colorado Wildlife Commission approved the change. (Analysis, p. 28).

According to John Torres (undated): "The abundance and diversity of wildlife at Mount Evans is highly attractive to hunters, anglers, and wildlife viewers or photographers. However, actively managing the number of large grazing/browsing mammals, such as mule deer, elk, mountain goats, and bighorn sheep, is required to prevent habitat damage and/or reductions in biotic diversity, thus allowing preservation of both ecosystem

processes and a full spectrum of wildlife-associated recreation opportunities.” (page 1). In the analysis report, there is no mention of any possible effect on the botanical population or significance of the Mount Evans flora. To date there seems to have been no environmental impact study having to do with the Mount Evans alpine area. Yet, the Analysis states: “The unique ecology of Mount Evans attracts researchers and scientists from around the world.” (p. 4)

The Colorado Division of Wildlife, in its television advertising, uses a logo of a mountain goat, claims to “protect habitats, and to “keep Colorado wild.” There is no evidence that these claims are true. Even if goats are eliminated from this most sensitive area, there is no threat to the mountain goats all over mountainous Colorado, from the Front Range to the San Juans. Hunters may miss the paved road and the easy shots, but being true sportsmen, they will have more healthy hunting experiences.

Summary

1. Mountain goats are not native to Colorado. They are imported exotics and should be controlled or eliminated in Colorado. The claim that they were once native is not supported by any evidence. See Armstrong (undated).
2. Mountain Goats subject sensitive plants to unnatural grazing pressure, potentially with disastrous results. On Mount Evans they certainly are not limited to precipitous landscapes, but congregate on level sites rich in mosses and tundra vascular plants.
3. Plants should be considered in every deliberation concerning potential competition with exotic animals (and even with native animals like elk and moose). Higher plants are no more important to the scheme of things than the less conspicuous forms of plant life.
3. There are endangered species on site, but it is more important to conserve this remarkable ecosystem as a whole. If this is achieved, the endangered species will take care of themselves.
4. The Federal government acknowledges the importance of archeological sites and fossil beds and safeguards important sites by law. These are laboratories that contain potentially important information about the history of man, biological evolution and earth history. Mount Evans is an area that preserves elements of the Tertiary flora. There are botanical connections between this area and the middle Asiatic Altai Mountains, the Arctic, and the Antarctic continent. Some scientists question whether the species occurring in common are in fact identical to their vicariads in distant places. The proof may lie in DNA studies of species pairs but it will take international cooperation on a large scale. We can't afford to lose this important archive of ancient biotic history.

What actions are needed?

1. We need some leadership and organization. We want our efforts to succeed. We do not want to act like a ‘tea party’. My role in all this is simply be a source of scientific information.
2. We need the support of other organizations in Colorado that are concerned for preservation of ecosystems.
3. We should try to educate every tourist or hunter that visits the site and educate them as to the scientific values we are trying to protect and what they can do to help.
4. We probably will need financial support as negotiations go ahead.
5. The complicated legal aspects of the situation have to be worked out carefully. We are dealing with (a) a national botanical reserve, (b) a coexisting National Wilderness area with (c) a public highway going through it, (d), multiple ownerships of the land, and (e) grand-fathered permission to introduce, maintain, and hunt herds of a destructive exotic animal.

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Additionally, the Internet can be searched for information on, for example, Hawaiian Creatures, Galapedia, Goats in Galápagos, Guadalupe Island, ecology.

Contacts

Colorado Natural Areas Program; Colorado Natural Heritage Program; Colorado Division of Wildlife; Institute of Arctic, Alpine, and Antarctic Research, CU; Colorado State Parks; Mount Evans Recreation Area; National Park Service, Rocky Mountain National Park, Olympic National Park; The Nature Conservancy; U.S. Forest Service; U.S. Fish and Wildlife Service; National Invasive Species Information Center.

Bill Weber
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Dr. William A. Weber is professor emeritus and former curator of the University of Colorado Museum Herbarium. He is recognized as the preeminent authority on the flora of Colorado and is the author of numerous books, including Colorado Flora: Western Edition and Colorado Flora: Eastern Edition (both with Ronald C. Wittman), Rocky Mountain Flora, and A Rocky Mountain Lichen Flora (with James N. Corbridge).

VOLUNTEERS NEEDED Mount Evans Floristic Task Force

In 1965, the United States government designated the Summit Lake area of Mount Evans as a National Natural Landmark. The globally unique assemblage of flowering plants and bryophytes represent ancient links to Asiatic and arctic floras, and made the area a priority for protection in the early 1960's. The National Natural Landmark (NNL) program's goal is to identify and preserve our nation's best examples of unique biological communities and geologic features that occur on public or private lands. The Summit Lake area encompasses lands managed by Denver Mountain Parks and the U.S. Forest Service, although the National Park Service administers the NNL program. Additional information about the Summit Lake landmark can be found in several websites listed at the end of this article.

The Colorado Native Plant Society is interested in developing a task force to address the long-term management of this floristically unique area. The task force will work collaboratively with all interested parties to determine the management practices that will conserve the landmark's natural resources while providing recreation opportunities for the public. Please contact the CoNPS conservation committee chair if you are interested in participating in the Mount Evans Floristic Task Force.

Thomas A. Grant III
CoNPS Conservation Committee Chair
720-530-5290
Metag3@gmail.com

Internet References for Summit Lake National Natural Landmark:

www.nature.nps.gov/nnl/Registry/USA_Map/States/Colorado/nnl/sl/index.cfm
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www.denvergov.org/parks/MountainParks/SummitLakePark/tabid/434959/Default.aspx

WANTED!

CoNPS SECRETARY POSITION OPEN

You could help CoNPS by volunteering to fill the next three-year term of Secretary. This is a key position, ensuring the Board of Directors smoothly run the business of the Society. You will be able to vote on all matters helping direct the policies of the Society for the future. Word processing and e-mail abilities, along with strong organizational skills are needed. Reasonable time commitment per month. Apply by contacting our President, Ann Henson.

2010 MARR – STEINKAMP RESEARCH GRANTS

By Jan Loechell Turner, Chair, Research Grants Committee

The Society is grateful to those of you who choose to make donations to the John W. Marr and Myrna P. Steinkamp funds. Your donations make possible many research projects dealing with the plants of Colorado. This research contributes to a better understanding of our native plants and is integral for conservation. Numerous projects funded by CoNPS grants have resulted in publication in scholarly journals. As always, thanks for your support!

The following awards are made for 2010.

John W. Marr Fund Awards

Kristen Kaczynski (Graduate Student, Colorado State University). "Willow decline in Rocky Mountain National Park: Examining the interactions of drought, ungulate browsing, sapsuckers, and fungus." \$1,000

CONSERVATION CORNER

Colorado Forest Restoration Institute

By Jessica Clement, Ph.D.

When European settlers started establishing themselves in Colorado in the 1800's, the most spectacular ecological disturbance that they were confronted with in the states' forests was fire. In Colorado and all other States, our forebears were convinced that fires decimated all forests and everything that lived in them, leading to the loss of many important components including wildlife and commercial timber. The loss of commercial timber in an era of expansion was a significant one. Through the use of Smoky Bear and other campaigns, as well as hard and often dangerous work, Americans were able to suppress many, but not all, fires.

Starting around the 1960's, more and more voices began to suggest that fire might be an important component in forest ecological dynamics. In the short term, fire appeared to be a dramatic event which in the long term often appeared to allow a forest to regenerate and contribute many ecological benefits to forests and landscapes. It became evident to many forest managers and scientists that some trees had evolved with fire to the point that some regenerated best after fires. The Yellowstone National Park fires in 1988 for example provided many clues that this was the case in lodgepole pine forests where visitors now gaze over a sea of green saplings where fires have consumed the older stands. However, we have also

Mary Price (Professor of Biology Emerita from the University of California, Riverside.), **Nick Waser** (Professor of Biology Emeritus from the University of California, Riverside), **Dan Blumstein** (Professor and Chair of the Department of Ecology and Evolutionary Biology at UCLA), and **David Inouye** (Professor of Biology at the University of Maryland, College Park). "Coyotes and Columbiges: Do Predators Deter Deer from Eating Colorado Native Wildflowers?" (Rocky Mountain Biological Laboratory) \$350

Myrna P. Steinkamp Fund Awards

Gerald E. Bresowar (Graduate Student, Northern Colorado University). "Population-level genetics in four closely related species of *Cryptantha* subgenus *Oreocarya* (Boraginaceae) in the Colorado Plateau." \$650

Scott F. Smith. "Survey of the ferns and orchids of the Sangre de Cristo Mountains." \$1,000

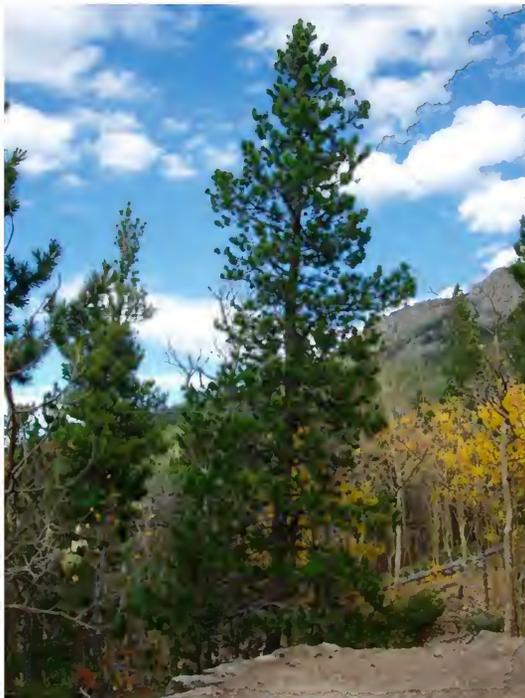
The Research Grants Committee includes Jan Turner, Catherine Kleier, Dina Clark, and Jenny Ramp Neal.

experienced fires in ponderosa pine stands in Colorado, for example the Hayman Fire of 2002, where regeneration in many areas is very slow, if evident at all, creating continuing problems for Front Range cities' watersheds. The difference is that different forests have evolved different relationships with fire, which depend on many factors such as climate, fuels, site specifics and frequency and behavior of fire.



Just when most of us can now recognize the beneficial as well as dangerous aspects of forest fires, there is now an apparently new phenomenon. Forest insect populations have expanded in as much diversity as there are forest types in Colorado and North America. Anyone who travels through Colorado's Rocky Mountains will have observed large amounts of lodgepole pines with red needles, or no needles at all, due to a mountain pine

beetle outbreak. But we are also confronted with growing outbreaks of other insects, e.g. spruce budworm and spruce beetle, Western tent caterpillars in aspen and ips beetles in pinon juniper forests. Here too, we first assumed these were destructive disturbances for all forests and here too, we have observed that some forests, for example again the resilient lodgepole pine, regenerate abundantly after a mountain pine beetle outbreak or an opportunity is created for the next successional stage, e.g. spruces and firs at higher elevations. Other forests are not projected to bounce back as quickly or there is great uncertainty about reestablishment all together. Additionally, during the one and a half centuries since European settlers started recording their observations, we have never seen so many types of insect outbreaks, of such scale, throughout our State. The common denominator appears to be climate and its effect on seasons, precipitation and snow melt. What does this mean for the future?



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To aid three States, their agencies and communities to grapple with these kinds of questions, the Colorado Forest Restoration Institute was established at Colorado State University in 2004 through the Southwest Forest Health and Wildfire Prevention Act, along with restoration institutes at New Mexico Highlands University and Northern Arizona University. The purposes of the institutes are to compile, translate, and apply the most current scientific information relevant to the needs of forest managers and communities in taking action to mitigate wildfire risk and restore healthy forest conditions and facilitating collaborative learning. CFRI emphasizes four areas of service:

- Synthesize and translate current scientific research and field-based knowledge and information to meet the needs of forest managers, landowners, and communities by producing and

disseminating reports and bulletins written in non-technical jargon, sponsoring workshops and short-courses, and convening field-based forest condition assessments involving managers, interested and affected stakeholders, and researchers. Many of these reports and workshop proceedings can be found at the CFRI website: <http://warnercnr.colostate.edu/cfri-home>

- Assist and support collaborative monitoring and adaptive management of forest restoration and wildfire mitigation projects by providing technical and human resources to assist collaborative forest health partnerships and land managers in developing and implementing ecological and socio-economic monitoring plans. Collaborative monitoring projects are developed and implemented in partnership with community-based non-profit organizations, the Colorado State Forest Service, and federal agencies.

- Enhance diversified economic use of wood from restoration and wildfire mitigation projects to offset treatment costs and contribute to local jobs and livelihoods by co-sponsoring networking workshops with the Colorado State Forest Service that bring together wood producers and users to learn about potential connections and new developments; contribute to analyses linking available wood supply from current and proposed treatments with existing wood utilization infrastructure, and disseminate wood biomass utilization information to collaborative forest health partnerships.

- Assist and support collaborative forest health and wildfire mitigation initiatives by consulting with collaborative partnerships regarding start-up, management, and transition issues, coordinating and communicating local needs and priorities at the state and regional level, and hosting an annual conference of collaborative forest health partnerships to facilitate learning, networking, and coordination.

CFRI is involved in place-based projects that address one or several of the above points on almost all Forests in Colorado. An example of a statewide contribution is the conference we will host "Beyond the Bugs: Future Range of Variability for Forests and Communities" in Steamboat Springs Colorado from April 19 – 21, 2010. In this case CFRI will facilitate discussions where participants from Colorado and Wyoming will take a long range look at landscapes from all perspectives. This conference will provide a forum for focused learning and discussion about economic, social and ecological desired conditions for the next forest and forest-reliant communities, and strategies to achieve those desired conditions. Although the conference will use lodgepole pine ecosystems in Colorado and Wyoming as the focus, the intention is to allow participants to explore these issues for any forest type and place. See also the CFRI website at <http://warnercnr.colostate.edu/cfri-home>. For questions, please contact Amanda Buckname, Conference Coordinator at amanda.bucknam@colostate.edu or call her at (970) 491.080.

Jessica Clement, Ph.D. is a Program Associate with the Colorado Forest Restoration Institute at Colorado State University (jessica.clement@colostate.edu).

2010 WORKSHOPS

"PHOTOGRAPHY OF BOTANICAL SUBJECTS"

Saturday, June 19, 9:30 a.m. to 3:30 p.m. and Sunday, June 20, 9:00 a.m. to 3:00 p.m.

Leader: Jacobe Rogers, ND

Location (Saturday): Foothills Nature Center, 4201 N. Broadway (at Wonderland Lake), Boulder

Please Note the Change in Saturday Location

This is a two-day workshop, therefore, the cost is \$35. A minimum of 6 participants and maximum of 12 will take this course.

Shooting pictures of plants is easy. They don't move. But, are you getting the details that illustrate characteristics of that plant? Improve your camera skills with an indoor session of "how and why" and an outdoor session of hands-on shooting.

Class will be structured primarily for digital single lens reflex cameras. However, if you bring a point and shoot or a film camera, you will learn some tricks for your camera type.

Saturday will be spent on the pros and cons of lenses, lighting methods (natural and flash) and whatever else needs covering. There will be time for demonstrations of some or all of the various lighting techniques dependent upon weather. Lots of handouts will help explain techniques.

Sunday is your chance to photograph plants using various techniques that you learned on Saturday. This is a very important day. Without the practice, Saturday becomes just verbiage. The day will end with a look at what techniques work best for varying situations.

Jacobe Rogers taught a one-day class last year to great reviews. He feels using two day format will give you more of his hints and experience. His professional training in photography will ensure your photos improve.

What to Bring:

Water. (There is no shade.)

Lunch and snacks.

Camera and your camera manual.

Macro lens or close focusing lens.

A wide angle lens.

Flash or flashes.

Tripod and/or mono pod.

Laptop computer.

Other items, if you have them: Diffusers, reflectors, etc. Note paper. Weber's Colorado Flora: Eastern Slope. Hand lens.

2010 FIELD STUDIES

By Steve Popovich, Chair, Field Studies Committee

The Colorado Native Plant Society annually collaborates with various agencies, academic institutions, and other partners in field research to promote the conservation and management of Colorado's rare plants. You are invited to participate in conducting field research, such as performing general plant inventories or monitoring rare plants.

Field studies are a rewarding and hands-on way to view Colorado's rare plants in their habitats, and your help contributes to the understanding of their ecology, distribution, and conservation needs.

To help defray travel costs, CoNPS funds may be available to those who participate and request the assistance: Typically a \$50 stipend is awarded to travelers for each day in the field. An additional \$50 may be awarded for preparation of a short field studies report.

For more information or to register for a field study, contact the coordinators below or Steve Popovich, Field Studies Committee, stevepopovich@hotmail.com, or call 970-295-6641.

Plant Survey of Corral Bluffs Open Space Ongoing in 2010

The Corral Bluffs Alliance is planning to do plant surveys of the new Corral Bluffs Open Space near Colorado Springs this year, beginning with a preliminary plant tour on May 23. We are seeking anyone interested in helping with plant surveys, especially if familiar with local flora. There is an incomplete plant list to build upon. Results may help form a management plan. Help in efforts to conserve this special place! Contact: Jackie Hilaire, hilaireja@aol.com, or call 719-683-8086.

Stonecrop *Gilia* Monitoring at Sheep Mountain July 10 – 11

Assist in research in the alpine tundra on Sheep Mountain southwest of Lake City. Join Vinnie Rossignol and Gay Austin (Forest Service) in relocating a known population of the very rare stonecrop *gilia* (*Gilia sedifolia*), using geology maps to look for additional populations, counting tiny plants, and documenting human and wildlife activities in the area. The hike will be strenuous and is limited to 8 people (avid Botanists and novice plant enthusiasts welcome). We will camp out at the trailhead Friday evening in order to get an early start Saturday.

Contact: Gay Austin, austinaceae37@roadrunner.com, or call 970-641-6264.



Gilia sedifolia (Luke Tembrock)

Moonwort Survey at Molas Pass

August 3

Join fern authority and Four Corners Flora co-author Dr. Tim Reeves and Colorado moonwort (*Botrychium*) enthusiast Scott Smith in exploring a great roadside site for these fern-like ancient plants at Molas Pass north of Durango. Tim and Scott will gather rare moonworts for genetic analysis at Iowa State University. Help find and mark individuals for collection. You will see several species of these fascinating plants, and may even help collect an undescribed species new to science! All eyes are needed. Hear about the history of moonworts, and learn why medieval folklore thought people dusted with moonwort spores became invisible! Limit 10 people. Contact: Al Schneider, San Juan/Four Corners Native Plant Society, coloradowildflowers@yahoo.com, or call 970-882-4647.

High Elevation Fen Reconnaissance near Silverton

August 13 – 15

Join Gay Austin in exploring alpine fens with incredible views of the surrounding mountains at Cinnamon Pass north of Silverton. We will be documenting plant species and mosses (bryophytes) in several fens above 11,000 feet. Fens are specialized wetlands that are fascinating to visit. Altai cottongrass (*Eriophorum altaicum*), a rare plant in the sedge family, should be easily observed. We will camp Friday evening near Silverton and carpool in 4 wheel drive vehicles up to the pass Saturday morning. The trip will be easy to moderate and is limited to 8 people (avid Botanists and novice plant enthusiasts welcome). Rubber boots are required.

Contact: Gay Austin, austinaceae37@roadrunner.com, or call 970-641-6264.

Plant Survey of Fox Ranch

Date to be determined

The Nature Conservancy would like CoNPS to help perform a "botanical bio-blitz" on the Fox Ranch in Yuma County. Fox Ranch includes 14,700 acres along the Arikaree River that is in very good ecological condition. We need folks familiar with prairie grassland and riparian vegetation to identify and record plants. Help us establish a botanical baseline for this wonderful prairie ecosystem! Contact: Brian Kurzel, Colorado Natural Areas Coordinator, Brian.Kurzel@state.co.us.

2010 FIELD TRIPS

By Brian Kurzel, Field Trips Committee Chair

Our goal is to get as many people outside as possible, and there is no shortage of opportunities! Here are a few of tips as you seek to venture out this field season:

- Please sign up for trips early as there may be limits to the number of participants. If full, many trips will also have waiting lists; so even if a trip is full now, get your name on the list and don't give up hope!
- Details on where and when to meet is available on the each chapters website at www.conps.org, or by contacting trip leaders.
- When attending a trip, be sure to bring a lunch, plenty of water, sun protection, bug spray, your favorite plant identification guides, a 10X magnifying glass, and packable rain gear.
- Unless otherwise stated, all trips listed are free and open to members and non-members.
- No pets are allowed on trips.
- Please check each chapter's webpage on www.conps.org to check trip details and to see if any new trips have been added.
- Have fun!

Additional information is available online at www.conps.org.

BOULDER CHAPTER

ANNUAL SPRING HIKE AT SIX MILE FOLD, BOULDER COUNTY PARKS AND OPEN SPACE PROPERTY

Thursday, May 13, 6:00 pm to 8:30 pm

Six-Mile Fold is located about 4.5 miles north of Boulder near the junction of US 36/ Highway 7 and Neva Rd; please park along the Neva frontage road. This will be an easy hike.

Join BCPOS plant ecologist Erica Christensen and chapter member Megan Bowes for a leisurely hike along Six Mile Fold. The unique geology of this area yields a wonderfully diverse suite of wildflowers, including the Front Range endemic Bell's twinpod (*Physaria bellii*). Bring your dinner and favorite wildflower book.

Contact Megan Bowes bowesm@bouldercolorado.gov if you'd like copies of the wildflower checklist and geology diagrams.

HIKE AROUND LILY LAKE IN ROCKY MOUNTAIN NATIONAL PARK

Sunday, June 27, 9:00 am

Meet in RMNP's Lily Lake parking area; carpooling to the Park is encouraged. This will be a moderately challenging hike.

Lily Lake is located approximately 6 miles south of Estes Park on Colorado Highway 7. No RMNP entrance fee required to reach parking area, about a one hour drive from Boulder. Plenty of parking space at this high use area with picnic tables and a restroom. Wear light hiking boots to permit wandering off trail.

Lily Lake walking trail is approximately a one mile flat loop at ~8600'. The vegetation is a montane to subalpine transition zone presenting a nice variety of vegetation in a small area. The south side of lake is a mixture of wet and dry forest while north side is open field and open ponderosa pine forest. Early season blooming species will likely include: shooting stars, golden banners, parsely, blue-eyed grass, choke cherry, lupine, iris, anemone, miner's candle, blanketflower, pink-plumes, pyrolia, and lousewort . Water fowl, ring-neck and mallard ducks are usually present on the lake at this time of year.

Please contact Ron ronmachi@gmail.com to sign up for this hike, and contact Elizabeth Drozda-Freeman elizabeth.wildflower@gmail.com if you are interested in carpooling from Boulder.

ROCKY MOUNTAIN NATIONAL PARK WETLAND TOUR

Saturday, August 28, 9:00 am to 3:00 pm

Meet in RMNP's Fall River Visitors' Center parking; carpooling into the Park is encouraged. This will be a moderate to strenuous hike.

The wetlands of Rocky Mountain National Park are relatively small and frequently overlooked, but they play a vital role in the health of the park ecosystem and support over a third of the parks flora, including many interesting species. NPS ecologists Katie Driver and Billy Schweiger will lead a field trip to riparian wetlands on the eastern

and western slopes of the park, where the success of the willow communities affects the health, appearance and functioning. They will then turn to the parks fens or groundwater-fed peatlands similar to bogs that are known to support unique plant communities including rare and disjunct populations of Holarctic species. We will look at different species and talk about the pressures on plant communities, the long-term effects of population decline and what park wetlands may look like in the future.

Contact Billy at Billy_Schweiger@nps.gov (970-213-2677) if

you'd like to attend this moderate to strenuous field trip. Space is limited.



Physarria bellii © Charlie and Jan Turner

METRO-DENVER CHAPTER

MOUNT FALCON PARK

Tuesday, May 25, 5:30 pm

Easy walking through mountain meadows and pine forests with lots of wildflowers.

Leader: Vickey Trammel, past president of the Metro Denver Chapter of the Colorado Native Plant Society

Equipment: water, sack lunch and jacket. Optional: camera, hand lens, binoculars, and key books.

Contact: Vickey Trammel, 303-795-5643, jrtramb@q.com .

OPEN SPACE HIKE TO SEE CALYPSO ORCHIDS AND DODOCATHEON PULCHELLUM (SHOOTING STARS)

Saturday, May 29, 9:00 am

There are many great wildflowers here, beginning on a level trail which ascends gradually over several small stream crossings (where the shooting stars hide out) and on approx two miles to a field of about a dozen Calypso orchids close to the trail, which a half mile farther on opens to a wonderful long-distance vista. Total mileage in a loop up and back: four miles.

Leader: Lenore Mitchell, Native Plant Master (NPM) Instructor at Lair O'Bear

Location: Reynolds Open Space Park - approx twenty miles from junction of US 285 and 470.

Equipment: water, snack, jacket. Optional: camera, hand lens and key books.

Contact: Lenore Mitchell 303-934-2691, or lenoremitchell@msn.com



Dodocatheon pulchellum © Charlie and Jan Turner

OPEN SPACE WILDFLOWER HIKE

Saturday, June 19, 9:00 am

Variable terrain from riverside to Ponderosa forest yields a wide variety of wildflowers including the common but fascinating Equisetums which are fern allies and pre-date the angiosperm / flowering plants. In a two hour hike over gentle trails, we'll identify a minimum of thirty blooming herbaceous and shrubby specimens in an enjoyable outing for both novice and avid botanists. The park, which ranges from 6,600 to 7,200 ft elevation, hosts hummingbirds and many other birds, and deer are spotted frequently.

Leader: Lenore Mitchell, Native Plant Master (NPM) Instructor at Lair O'Bear

Location: Lair O'Bear Jefferson County Open Space Park

Equipment: Water bottle, snack, camera and hand lens advised. *Optional:* books for keying plants.

Contact: Lenore Mitchell, 303-934-2691, lenoremithell@msn.com

LOVELAND LAKES: AN ALPINE FLOWER EXPERIENCE

Monday, August 2, 7:30 am

Swamp (alpine), Laurel, Kalmia, Microphylla. A plant list will be provided to participants for the hike. Will return after lunch. Very easy walking.

Leader: Vickey Trammel, past president of the Metro Denver Chapter of the Colorado Native Plant Society

Location: Loveland Lakes, just west of Loveland Pass.

Equipment: water, sack lunch and jacket. *Optional:* folding chairs, camera, hand lens, binoculars, and key books.

Contact: Vickey Trammel, 303-795-5643, jrtramb@q.com.

NORTHERN CHAPTER

THE SPLENDOR OF SHAMBHALA MOUNTAIN CENTER

June 12, 9:00 am. - 3:00 pm

Leader: Jim Tolstrup

Location: Meet at Albertson's parking lot on College in North Fort Collins to carpool at 9:00 am to Shambhala Mountain Center, Red Feather Lakes.

For over 30 years Shambhala Mountain Center has presented yoga and meditation programs in a peaceful valley near Red Feather Lakes. Jim Tolstrup, former Land Stewardship Director of Shambhala Mountain Center, will lead this moderately strenuous hike to see spectacular wildflowers and a campus landscaped with sustainability and native plant conservation in mind. Visitors will also get a tour of the Great Stupa of Dharmakaya, the largest example of Tibetan Sacred Art and Architecture in the Western Hemisphere.

Cost: \$7:00 per person (for a buffet lunch with a vegetarian option) at Shambhala Mountain Center.

Call Jim Tolstrup to register: (970) 622-9676.

EARTHSHIPS AND ERIGERONS

Saturday, June 26, 9:30 am to noon

Program Hosts: Amelia Tuttle and Scott Woods

Tour Leaders: Dr. Lynnell Rubright, Rick Shory and Pam Smith

Location: Meet at the "Overland Foods" market on the corner of 287 and Overland Trail to carpool to the site.

Join our hosts Amelia Tuttle and Scott Woods as we explore the foothills east of 287, overlooking the area between LaPorte and Owl Canyon. We will enjoy fabulous panoramic views, look at the foothills ecosystem (plants and geology), and take a tour of an Earthship - a mostly self-sustaining home, made of earth, recycled tires and aluminum cans! Our goal will be to provide the Tuttle/Wood's with a plant list in return for letting us explore their property. We want to encourage people that know plants, insects, geology and animals of the foothills to attend but this hike is open to anybody. Walking distance will be roughly two miles and it may be off trail for some of the time. Travel to the site is on dirt roads that wind up into the foothills. Contact Pam Smith for information and reservations at 970-223-3453 or e-mail pamelas4824@earthlink.net.

RARE PLANT SURVEY AT SOAPSTONE PRAIRIE

Tuesday, August 10, 8 am – 4 pm

Leader: Crystal Strouse, City of Fort Collins Resource Management Botanist

Location: Meet at Nix Natural Area, 1745 Hoffman Mill Rd., Fort Collins

This is an exceptional opportunity to explore the plants of Soapstone Prairie and to conduct surveys for rare plants, specifically: Rocky Mountain Blazing Star (*Liatris ligulistylis*),

Fuzzy-tongue penstemon (*Penstemon eriantherus*), blazing stars (*Mentzelia speciosa*, *M. sinuata*) and Rocky Mountain phacelia (*Phacelia denticulata*). We will travel to places currently off-limits to the public to conduct surveys of these rare plants. This opportunity is limited to 10 people. We need people who are willing and able to work all day and able to walk long distances. You don't need to be an experienced botanist. Crystal will teach you what you need to get the search images for the plants. Contact Pam Smith for information and reservations at 970-223-3453 or e-mail pamelas4824@earthlink.net.



Gutierrezia elegans © Al Schneider

PLATEAU CHAPTER

LONE MESA FIELD TRIP

Friday – Saturday, June 4-5, 9:00 am – 3:30 pm

Leader: Peggy Lyon, Botanist with the Colorado Natural Heritage Program

Location: Lone Mesa State Park, between Norwood and Dolores

Lone Mesa State Park is a hotspot of biodiversity and narrowly endemic plants. It is home to two recently discovered species, Cushion Bladderpod (*Physaria pulvinata*) and Lone Mesa Snakeweed (*Gutierrezia elegans*), with a couple of others that are awaiting publication.

We will be on a moderately strenuous hike (3 – 4 miles) to view the different plant species of the park. Avid botanists and novice plant enthusiasts are welcomed.

We plan to camp Friday night nearby, then explore the park and surrounding areas on Saturday. This park field trip is limited to 11 people.

E-mail Gay Austin or call her at 970-641-6264 for trip details.

MONTROSE-OURAY WEED PULL

June 12, 9:30 am – 12:00 pm

Leader: Amanda Clements, BLM Ecologist

Location: Montrose and Ouray areas.

This will be a Yellow Starthistle (*Centaurea solstitialis*) and Absinthe Wormwood (*Artemisia absinthium*) weed pull and dig! Come learn what these highly invasive Colorado noxious weeds look like and how to help control them. Afterwards we will have lunch and visit the Ouray Hot Springs. Snacks and refreshments will be provided.

E-mail Gay Austin or call her at 970-641-6264 for trip details.

TAMARISK SEMINAR & FIELD TRIP

Saturday, June 19, 9:00 am - 12:00 pm

Leader: Mike Drake, Executive Director of Painted Sky Resource Conservation and Development Council

Location: Delta, Colorado

This will be a seminar and field trip on the Tamarisk beetle introductions for control of Tamarisk in the Delta area. Come learn about the history of the beetle and the results of the release.

This will be an easy walk along the Confluence Park trail looking at control sites. Wear sturdy walking shoes and bring a lunch. Limited to 15 people.

E-mail Gay Austin or call her at 970-641-6264 for trip details.

SHEEP MOUNTAIN RESEARCH TRIP

Saturday-Sunday, July 10 – 11th, 8:00 am – 4:30 pm

Leaders: Vinnie Rossignol and Gay Austin

Location: southwest of Lake City on Sheep Mountain

This is a research field studies trip into the alpine tundra on Sheep Mountain. We will be relocating a known population of Stonecrop Gilia (*Gilia sedifolia*) (using geology maps to look for additional populations of the *Gilia*), counting tiny plants, and documenting human and wildlife activities in the area.

The hike will be strenuous and is limited to 8 people (avid Botanists and novice plant enthusiasts welcome). We will camp out at the trailhead Friday evening in order to get an early start Saturday and minimize lightning exposure.

E-mail Gay Austin or call her at 970-641-6264 for trip details.

HIGH ELEVATION FENS RESEARCH

Friday-Sunday, August 13 – 15th, 8:00 am – 4:00 pm

Trip Leader: Gay Austin, CoNPS and USDA Forest Service

Location: Cinnamon Pass north of Silverton

This is a research field studies trip into fascinating alpine fens with incredible views of the surrounding mountains. We will be exploring and documenting plant species and mosses (bryophytes) in several fens above 11,000 feet in elevation. Altai Cottongrass (*Eriophorum altaicum*), a rare sedge, should be easily seen.

We will camp Friday evening near Silverton and carpool in 4 wheel drive vehicles up to the pass Saturday morning. The trip will be easy to moderate and is limited to 8 people (avid Botanists and novice plant enthusiasts welcome). Rubber boots are required.

E-mail Gay Austin or call her at 970-641-6264 for trip details.

SOUTHEAST CHAPTER

GENERAL INFORMATION: All field trips will start in the morning and will go into the afternoon, except for the photography workshop on May 20. The time or duration of each trip will depend on the distance traveled and the number of plant species observed. Except as noted, participants should bring a lunch, plenty of water, their favorite flora keys, 10X hand lens, and rain gear. The SE Chapter welcomes everyone from professional botanists to beginners. Beginners may experience "plant terminology shock." However, with increased participation, the terminology will become a familiar and even enjoyable part of the learning experience.

REGISTRATION: Advanced registration is required since leaders typically limit participation to somewhere between 10 and 15 persons.

HOW TO REGISTER FOR A TRIP: Simply e-mail your name, trip date, and phone number (in the event of a last minute cancellation), to SEtrips@gmail.com. You will be contacted by reply e-mail to confirm your registration or, if a trip is full, given the option of being wait-listed.

IMPORTANT: AN ANNOUNCEMENT WITH DETAILS ON EACH TRIP IS E-MAILED 2 TO 3 WEEKS IN ADVANCE OF EACH TRIP DATE. Details may include exact meeting locations, directions to the trailhead, and/or car pooling information. These detailed announcements will be e-mailed to you after you register.

For information about the SE Chapter of the Colorado Native Plant Society, please visit www.conps.org and click on "Southeast Chapter."

DIGITAL PHOTOGRAPHY WORKSHOP

Thursday, May 20, 6:30 pm

Instructor: Pat McCracken

Location: Southeast Colorado Water Conservation District meeting room (near Pueblo Airport)

Wherever you are in your progression toward photographic perfection, this workshop will help you take better pictures. The emphasis will be on botanical subjects, of course, but the techniques will help you with just about any close-up.

Equipment: Bring your digital camera, memory card, and extra batteries.

DESCENT TO THE PURGATORIE (RIVER, THAT IS)

Saturday, May 22

Leader: Steve Olson, Botanist, United States Forest Service

Location: Comanche National Grasslands, approximately twenty miles south of La Junta

Brought back by popular demand, this is a repeat of last year's field trip to Picketwire Canyon, but this time we intend to visit the "Red Rocks" section of Picketwire Canyon. We will identify various and interesting plant species including shrubs (*Artiplex canescens* / Fourwing Saltbush), perennial wildflowers (*Asclepius asperula* / Antelope Horns), and grasses (*Chondrosium gracile* / Blue Grama). In addition, we will also discuss the relationships of these plant species to the very interesting geology of the area. The plan is to have a United States Forest Service geologist along to explain and describe the geology. One of our members writes this about **Picketwire Canyon: "A beautiful canyon filled with amazing archaeology, paleontology, and botany. My favorite natural place in Colorado."** Go to <http://www.exploresoutheastcolorado.com/picketwire.htm> for **additional information. This is a moderate to strenuous trip.**

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. Optional equipment: camera, hand lens, and key books

COLORADO NATIVE PLANT SOCIETY CORAL BLUFFS FIELD SURVEY

Sunday, May 23

Leader: Jackie Hilaire, Coral Bluffs Alliance

Location: Coral Bluffs Open Space, approximately four miles east of Colorado Springs

This trip is for those with some plant identification experience. Familiarity with a flora key, like Weber's, would be helpful. Participants will help complete an essential field survey in the Coral Bluffs Open Space near Colorado Springs. To get a relatively complete picture of species in the area, the survey will include subsequent visits over the course of the 2010 growing season. This is a moderate to strenuous trip. See www.savecorralbluffs.com for a map and details on what to wear and bring.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

We will meet at the Loaf 'N Jug on Peterson Road off Platte Road. Additional details will be forthcoming. The Corral Bluffs Open Space is not yet open to the public; advance reservations are required for this trip. Please e-mail corralbluffs@aol.com to reserve your place.

“HOW TO USE A BOTANICAL KEY” WORKSHOP

Saturday, June 5

Instructor: Dr. Tass Kelso, Professor of Botany at Colorado College

Location: Colorado College, Colorado Springs

The day will start with a classroom session detailing what you need to know to take your favorite flora key into the field and make it work for you. After the “academics,” we’ll go where the plants are and practice, practice, practice.

Equipment: Bring your favorite plant key and a hand lens.

AIKEN CANYON

Sunday, June 6

Leader: George Cameron, Biologist, Botanist and Instructor at Pike’s Peak Community College

Location: Aiken Canyon (Nature Conservancy Preserve), approximately 12 miles south of Colorado Springs

We will traverse this 1,621 acre preserve to find and identify plant species in a diverse spectrum of life zones including: lower montane shrub lands, mixed woodlands, foothills riparian habitats, and tall grass prairie. This is an exceptional foothills ecosystem with new things to discover at every bend of the trail. The Nature Conservancy web site says this about Aiken Canyon: “Striking images can be found here - the zone between the plains and mountains where dramatic red spires and outcrops collide with rich green flora. This is a high-quality foothills ecosystem along the southern Front Range. A treasure trove of plant and animal communities call this home.” This is a moderately strenuous trip.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. Optional equipment: camera, hand lens, and key books

BIRDS AND BOTANY

Saturday, June 12

Leader: Jeff Jones, Avian Specialist and Naturalist

Location: Trout Creek Riparian Corridor, near Woodland Park in Teller County

On this trip, the emphasis will be on the interrelationship between avian species and the native plant species they depend on for food and shelter. Birders consider the Trout Creek Riparian Corridor the crown jewel of Teller County. We will see why it is essential to protect the native plant communities which provide the foundation for so many other living species. Since we will be on the lookout for both flora and fauna, a pair of binoculars will come in as handy as your 10X lens. This is a moderately strenuous trip.

Go to http://www.coloradocountybirding.com/county/bird_a_county.php?name=Teller for additional information.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

SPRING IN THE ALPINE

Saturday, June 19

Leader: Doris Drisgill, Area Naturalist

Location: Pike’s Peak Tollgate, approximately 10 miles west of Colorado Springs

We will search for early tundra alpine wildflowers including the endemic *Oreoxis humilis* (Alpine Parsley), *Mertensia alpine* (Alpine Bluebells), and the rare *Aquilegia saximontana* (Dwarf Columbine). The hike will be fairly easy, about 1 mile in length, but remember, you will be hiking at high altitude. It is all too easy for those of us who live near Pikes Peak to take this majestic peak for granted, and to forget that its immense swath of tundra is home to many alpine wildflowers we too often associate with more distant and “exotic” locales.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

We will meet at the Pike’s Peak tollgate; expect to pay an entrance fee of \$7 per person. We will then carpool up to Elk Park Knoll at 12,000 feet.

MOSCA PASS TO THE GREAT SAND DUNES

Sunday, June 20

Leader: Steve Olson, Botanist, United State Forest Service

Location: Mosca Pass, approximately fifty miles southwest of Westcliffe

A fabulous trail for all things botanical; we will hike down from the top of Mosca pass, west toward the Great Sand Dunes National Park and Preserve. The trailhead is easily accessed by car from the eastern side of the Sangre de Cristo mountains. This trails traverses through moist meadows, rocky exposures and riparian habitats. After botanizing, some of the more intrepid souls may want to make a day of it and hike all the way to the dunes. This is a moderately strenuous trip unless you do the round-trip from the top of Mosca Pass to the Sand Dunes. Go to http://www.trails.com/tcatalog_trail.aspx?trailid=HGR114-362 for additional information.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

THE RIPARIAN FOOTHILL OF EMERALD VALLEY

Saturday, June 26

Leader: Doris Drisgill, area naturalist

Location: Cheyenne Canyon near Colorado Springs

We plan to explore Emerald Valley which is off of the Old Stage Road west of Colorado Springs.

We will hike a moderate 4 to 5 miles in search of the very rare *Cypripedium calceolus* (Lady's Slipper Orchid) as well as associated streamside plants. Go to http://www.etrailmaps.com/Trail_Guides/Emerald_Valley_Trail_Guide.pdf for additional information.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

We plan to carpool up the Old Stage Road to Emerald Valley; high clearance vehicles are recommended for this portion of the trip. This trip will start in the morning.

UP THE GREENHORN

Saturday, July 10

Leader: Dr. Neal Osborn, Botanist and Professor Emeritus, Colorado State University-Pueblo

Location: Cuerno Verde Trailhead, Greenhorn Mountain near Rye Colorado

We will identify native shrubs such *Jamesia Americana* (Waxflower), *Holodiscus dumosus* (Rockspirea), *Ribes aureum* (Golden Currant), and *Rhus trilobata* (Skunkbush or Three-Leaf Sumac), and many other herbaceous species in montane habitats, ranging from pastoral creekside to massive exposures of granite and gneiss. Based on past experience, this will be a leisurely trip up an easy trail to one of the upper canyons of Greenhorn Creek. Go to the following web address for an informative article about Greenhorn Peak and the Wet Mountains: <http://www.gazette.com/articles/wilderness-61612-mountain-greenhorn.html>.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

GRASS IDENTIFICATION WORKSHOP AND FIELD TRIP

Saturday, July 17

Leaders: Rich Rhoades, District Conservationist, Natural Resources Conservation Service

Kimberly Diller, Rangeland Management Specialist, Natural Resources Conservation Service

Location: Chico Basin Ranch, east of I-25 between Pueblo and Colorado Springs

Join us for an introductory session on the morphology of the *Poaceae* (the grasses), then practice your in-the-field grass identification skills under the tutelage of the experts from the Natural Resources Conservation Service. Chico Basin is a unique blend of working cattle ranch and educational venue. It was selected for this workshop because of its pristine meadows and wide diversity of grass species: long grasses, short grass prairie and even riparian types of grasses. The Greater Chico Basin has been identified by the Nature Conservancy as one of Colorado's "last great places." Go to <http://www.chicobasinranch.com/> for additional information.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books.



Lilium philadelphicum

USDA-NRCS PLANTS / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1:502. Courtesy of the Kentucky Native Plant Society.

LILIES IN CHEYENNE CANYON

Sunday, July 18

Leader: Doris Drisgill, area naturalist

Location: Cheyenne Canyon, west of Colorado Springs

We'll hike a moderately strenuous 5 to 6 miles to see the rare *Lilium philadelphicum* and associated streamside species below St. Mary's Falls on Buffalo Creek. Go to:

http://etrailmaps.com/Trail_Guides/St._Mary_s_Falls_Trail_Guide.pdf for additional information.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books.

HIGH SEASON BOTANIZING AND PHOTOGRAPHY IN THE SANGRES

Saturday, July 24

Leaders: George Cameron, Biologist, Botanist and Instructor at Pikes Peak Community College

Wojtek Rychlik, professional photographer

Location: Sangre de Cristos Mountain Range, Specific trail to be announced

This trip is timed to take advantage of the spectacular mid-summer wildflower displays in the high meadows of the Sangre de Cristo Mountains. The specific location is “to be announced,” but wherever we go, you are likely to be dazzled. Botanist George Cameron will help us identify the many species of wildflowers. We will also get pointers on how to photograph wildflowers from renowned photographer, Wojtek Rychlik. This will be a moderately strenuous trip.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

HORSETHIEF PARK WETLANDS

Saturday, July 24

Leader: Doris Drisgill, Area Naturalist

Location: Highway 24, Horsethief Park Trailhead

We will hike a moderately strenuous 4 to 6 miles to see the montane beaver ponds, wetlands and meadows at 10,000 ft. We may find *Calochortus*, *Aconitum*, and several varieties of gentian, among many others. This is a moderately strenuous trip. Go to the following web address for additional information about this trail: http://www.localhikes.com/hikes/HorsethiefFalls_0000.asp

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

WEST SPANISH PEAK

Sunday, August 15

Leader: Dr. Neal Osborn, Botanist and Professor Emeritus, Colorado State University-Pueblo

Location: West Spanish Peak via Cordova Pass, approximately 11 miles southwest of La Veta

If we are lucky this is the perfect time of year to catch the departure of summer wildflowers and the arrival of fall wildflowers, and what better place to witness the mix of seasons than West Spanish Peak—a special area to view both the famed geological dikes, and of course, some beautiful alpine species! We will start hiking at approx. 11,000 ft. elevation; we will see one of the most picturesque stands of Bristlecone Pines in Colorado, plus *gentians* and many other alpine species. Note that the trip date could be changed depending on seasonal moisture and the opportunity to see species in bloom. This is a moderately strenuous hike unless you decide to climb West Spanish Peak. Go to <http://www.summitpost.org/mountain/rock/150802/west-spanish-peak.html> for additional information.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

THE FENS OF GREENHORN

Sunday, August 22 (see note about possible alternate date below)

Leader: Steve Olson, Botanist, United States Forest Service

Location: Greenhorn Peak, approximately forty miles west of Pueblo

If you doubt there are fens in Colorado then you must go on this trip. Yes, fens are the stuff of Gothic literature and pale young women chasing vampires across some cloudy English moor, but there are also honest-to-god fens on Greenhorn Peak in southern Colorado. On this trip to the fens we should see find many species in the huge *Carex* family, including a number that are considered to be quite rare. We will also see numerous riparian grasses and other interesting wetland species in this extensive, high altitude fen. This is an easy trip, but you must be prepared to wade through 6 to 12 inches of cold alkaline or neutral water (remember, bogs are acidic). Go to the following web address to view pictures of the area we will be visiting: <http://www.sangres.com/mountains/greenhorntour.htm>. An added bonus to this trip could be the budding of *Boletus* mushrooms along Greenhorn Road. Note that this trip could be changed to Sunday, August 29 to improve our chances of viewing certain species.

Equipment: water, sturdy walking shoes, sack lunch and appropriate outerwear—rain jacket and an extra layer. **Optional equipment:** camera, hand lens, and key books

Brian Kurzel is Chair of the Field Trips Committee, and a member of the CoNPS Board of Directors. He is a Natural Areas Coordinator for the Colorado Natural Areas Program.



CHAPTER 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 elizabeth.wildflower@gmail.com or call her at 303-586-1810. Please support zero waste: bring your own cup and plate.

Native Plant Garden Party and Backyard Cook-out. On Sunday, May 30 at 5:00 pm, Billy Schweiger and Megan Bowes will host a chapter social at their home in Boulder (2111 4th St, near the intersection of 4th and Spruce). Come early for a "tour" of the native plants growing in their yard-or stop by when you can for some tasty vittles or a game of croquet! RSVP with Megan Bowes at bowesm@bouldercolorado.gov (303-561-4883) if you think you'll join us and bring a dish to share.

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).

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.

Solanaceae slide show and key. The slide show and key prepared by Rich Scully for the recent 'Solanaceae of Colorado' workshop are now posted on the CoNPS website (look on the bottom of the 'Workshop' page). The slides depict most of the Solanaceae species native or naturalized in Colorado. The closeup photos may be of particular interest, as they illustrate such things as terminal anther pores and terminal slits in the *Solanum*, sclerotic granules in *Solanum* berries, the difference between the seeds of *Physalis* and *Quincula*, vesicular hairs on *Quincula*, and the internal structure of berries and capsules.

Wyoming Native Plant Society Annual Meeting and field trip to the Belvoir Ranch. In conjunction with its June 18-20 annual meeting, the Wyoming Native Plant Society has invited CoNPS members to tour the Belvoir Ranch. Newly acquired by the City of Cheyenne, the ranch is a 17,000 acre area, contiguous in places along the state line with the City of Fort Collins Soapstone Prairie Natural Area. The tour will be on June 19, and will include a hike. The City of Cheyenne only allows access by escort, so pre-registration is strongly encouraged. If you are interested in joining the tour, please pre-register by contacting amb749@yahoo.com or by mail to WNPS, P.O. Box 2500, Laramie, WY 82073 before June 7.

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 include field trips and meetings. Meetings are scheduled from Fall through early Spring and are often held at the Colorado State University Extension offices in Pueblo, located at 701 Court Street, Suite C. Those wishing more information can e-mail us as SEtrips@gmail.com and we will add you to our distribution list.

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.

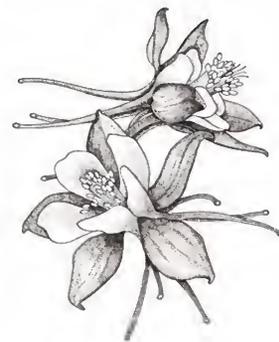
COMMITTEE NEWS AND ANNOUNCEMENTS

HORTICULTURE AND RESTORATION COMMITTEE

Pulling For Colorado (P4C) is a statewide effort to educate citizens about the impacts noxious weeds have on our natural, agricultural and recreational lands. This is Colorado's third year hosting Pulling for Colorado, and nearly 20 volunteer opportunities are scheduled throughout the state to help protect native plants through the eradication of these foreign invaders. CoNPS members can help their local community this July by joining in the fun.

CoNPS' Horticulture and Restoration Committee and the Boulder chapter are pleased to work with Boulder County Parks and Open Space at their July 10th event at Walker Ranch. We'll be targeting diffuse knapweed, a State of Colorado List B noxious weed. To register for this event, call Matt Bruce at 303-678-6216 or email him at WildWorkVolunteers@BoulderCountyorg or WildWorkVolunteers@BoulderCountyorg.

For more information about other Pulling for Colorado events across the state, visit <http://www.cwma.org/p4c.htm>.



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. Four regular issues are published each year, plus a special issue focused on the annual Society meeting held in September of each year.

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 (Spring issue, published February 15)
- April 15 (Summer issue, published May 15)
- June 15 (Special Annual Meeting issue, published July 15)
- July 15 (Fall issue, published July 15, published August 15)
- October 15 (Winter issue, published November 15)

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.

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 bh.prairieink@gmail.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 the newsletter to the Editor, Bob Henry, at bh.prairieink@gmail.com.

Aquilegia

Newsletter of the Colorado Native Plant Society

Editor	<i>Bob Henry</i>
Contributors	
Book Reviews	<i>Jan Turner</i>
Conservation	<i>Tom Grant</i>

ANNUAL MEETING

September 10-12, 2010 – Denver

The Metro-Denver Chapter is hosting this year's annual meeting and is well along in planning the program. The working title is "Colorado Collage: Inspecting and Protecting our Special Places".

Details about the program, meeting locations, and other arrangements will be included in a special Annual Meeting issue of the newsletter (which should be e-mailed and mailed around July 15).

Tentative topics include plants of locations or habitats such as Great Sand Dunes National Park, fens / wetlands, Front Range mesic tallgrass prairie, alpine, and Gateway Palisade State Natural Area (Mesa County).

The Chapter is planning field trips for Sunday the 12th, including: Roxborough State Park Species of Concern and Unique Plant Communities, Rocky Flats Grasses & Plant Communities on Ancient Substrates, and Alpine Plant Communities on Mt. Goliath.

The Rare Plants Technical Committee will meet on Friday, September 10th.

Posters will be accepted from students, academics, vendors, professionals, and government agencies.

A silent auction will again be held to raise funds for the Society.

2010 CoNPS ELECTION of BOARD OF DIRECTORS

Would you like to be on the Board of Directors of the Colorado Native Plant Society? Would you like to nominate someone who will work diligently to further the mission of CoNPS to encourage the appreciation and conservation of Colorado native plants and their habitats? If so, please contact Ann Henson, CoNPS President, at 303-772-8962 or 2henson!@kwabena.us.

Board Members attend meetings in person or via telephone conferencing.

Board members are expected to actively support the mission of CoNPS with their expertise and enthusiasm, and to enable the Board to act by attending (in person or via telephone) and actively participating in Board meetings.

The CoNPS Board of Directors is made up of the Society's officers, chapter presidents, and eight At-Large members. This year three At-Large Board positions are open.

MEMBERSHIP APPLICATION AND RENEWAL FORM

Name(s)
Address
City State..... Zip
Phone ____ - ____ - ____ E-mail

MEMBERSHIP CLASS

Dues cover a 12-month period.

CHAPTER

You are free to affiliate with any chapter you choose and to attend the meetings of any chapter. Chapters do not have drawn map boundaries; the locations below indicate the usual meeting place of chapter meetings.

- Individual (\$20.00)
- Family / dual (\$30.00)
- Senior (65+) (\$12.00)
- Student (\$12.00)
- Organization (\$30.00)
- Supporting (\$50.00)
- Lifetime (\$300.00)

- Boulder Metro-Denver Northern
- Plateau San Luis Valley Southeast

OPTIONAL E-MAIL DELIVERY OF *Aquilegia*

Many members prefer to receive the newsletter electronically via e-mail, and this saves the Society considerable printing and postage expense. If you would like to receive the newsletter by e-mail, please check this box and provide your e-mail address above.

- Please deliver *Aquilegia* electronically to the above e-mail address.

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 to benefit the rare plants of Colorado

Mail to: Eric Lane, P.O. Box 200, Fort Collins, CO 80522

Please make checks payable to "Colorado Native Plant Society"

Dues and contributions are tax-deductible.

WELCOME, NEW MEMBERS!

Marti Aitken, Marie Amicucci, Mary Amstutz, Crystal Andrews, Julie Artz, Susan Bardwell, Susan Beatty, Bill Behrns, Erica Christensen, David Cooper, Holly F Cruser, Ray & Louise Dalen, Lisa Dierauf, Dorothy C Fears, Penelope Fisher, Gayla Gallegos, Evelyn Glesne, Mary Goshorn, Connie Gray, Jim & Cheryl Graydon, Diane Green, Sally J Green, Lawton Grinter, Mary Hamilton, Mary Hegedus, Mary Heuwinkel, Julia Hicks, J Hilaire, Heather Houston, Jill M Jacobsen, Suzanne Jarvinen, Gail Jennings, Kristen Kaczynski, Jennifer Kesler, Geri Kidawski, Christine Kleinhansel, Eric Knopinski, Mary Knorr, Aria Marie Marco, Joy Master, Danell Mccaslin, Cheryl Mccutchan, Guinevere Nelson, Boulder County Parks & Open Space, Judith E Pasek, Kari Pokorny, Glen Poole, Patricia Propp, Martin F Quigley, R Gary Raham, Kaye Reed, Tom Riedel, James Riser, Jackie Sanderson, Ann Sarg, Brandy M Schill, Linda Shaw, Priscilla Sherman, Kimberly A Shoppell, Shar Short, Barbara J Smith, Melissa Strand, Ann Streett-Joslin, Kelly Uhing, Ellen Vandervoort, Sara Ward, Chris Woods, Carol Zager





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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Colorado Native Plant Society

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<http://www.conps.org>

CALENDAR 2010

FIELD TRIPS

Boulder Chapter

June 27 Lily Lake, Rocky Mountain National Park
August 28 Rocky Mountain Nat'l Park wetlands

Metro-Denver Chapter

June 19 Open Space Wildflower Hike
August 2 Loveland Lakes: An Alpine Flower Experience

Northern Chapter

June 12 Shambhala Mountain Center
June 26 Earthships and Erigerons
August 10 Rare Plant Survey, Soapstone Prairie

Plateau Chapter

June 4-5 Lone Mesa Field Trip
June 12 Montrose-Ouray Weed Pull
August 13 High Elevation Fens Research

Southeast Chapter

June 5 How to Use a Botanical Key
June 6 Aiken Canyon
June 12 Birds and Botany
June 19 Spring in the Alpine
June 20 Mosca Pass to the Great Sand Dunes
June 26 The Riparian Foothill of Emerald Valley
July 10 Up the Greenhorn
July 17 Grass Identification Workshop and Field Trip

WORKSHOPS

June 19, 20 "Photography of Botanical Subjects"

FIELD STUDIES

Ongoing Plant survey of Corral Bluffs Open Space
July 10-11 Stonecrop Gilia Monitoring at Sheep Mountain
August 3 Moonwort Survey at Molas Pass
August 13-15 High Elevation Fen Reconnaissance
near Silverton
TBD Plant Survey of Fox Ranch

HORTICULTURE AND RESTORATION

July 10 Pulling for Colorado (P4C) – Pulling diffuse knapweed
at Walker Ranch

BOARD MEETINGS

Sept TBD Board Meeting, Regis University, Denver
Nov 13 Board Meeting, Regis University, Denver

CoNPS ANNUAL MEETING

Sept 10-12 Denver