

2016 Colorado Rare Plant Symposium – Boulder, CO

Botanists and members of the Colorado Rare Plant Technical Committee (RPTC) were among the group of more than 80 people gathered in Boulder, CO, to attend the 13th Annual Colorado Rare Plant Symposium. The symposium is the event that precedes the Colorado Native Plant Society's (CoNPS) Annual Meeting. The Colorado Natural Heritage Program (CNHP) and the Denver Botanic Gardens (DBG) host the Rare Plant Symposium jointly.

Everyone attending the symposium, whether a professional or amateur, had common interests in Colorado rare plants and their conservation. Many of the attendees have been involved for years working to advance rare plant conservation, and have new information from field observations, genetic studies, or information related to policy surrounding conservation issues. This forum offers participants the opportunity to share these observations, see herbarium specimens, have discussions, and learn the latest information on Colorado's rare plant conservation efforts. The species discussed by the entire group or in breakout sessions are included at the end of this article.

Here are some highlights from the 2016 Symposium:

New populations of rare plants reported in 2016 included populations of the globally rare coral ipomopsis (*Ipomopsis ramosa*) and the Rocky Mountain monkeyflower (*Mimulus gemmiparus*). Several other species remain elusive, such as Heil's tansy mustard (*Descurainia kenheilii*) and have not been found despite survey efforts.

New genetic information is available or studies are underway for the following species: Grand Junction milkvetch (*Astragalus linifolius*), San Rafael milkvetch (*A. raphaelensis*), boatshaped bugseed (*Corispermum navicula*), Mancos shale packera (*Packera mancosana*), Kremmling beardtongue (*Penstemon penlandii*), North Park phacelia (*Phacelia formosula*) and *Sclerocactus* species of western Colorado and eastern Utah.

Germination studies for Pagosa skyrocket (*Ipomopsis polyantha*) indicate high rates of germination across treatments, which is good news for land managers involved in reintroduction and mitigation efforts.

Bernadette Kuhn demonstrated an interactive county map of rare plants that utilizes data from the Colorado Natural Heritage Program to develop county lists of rare plants with links to images and descriptions of the plant species along with information from previous symposia. See <http://www.cnhp.colostate.edu/download/maps.asp> where you can access free, downloadable pdf's of rare plant lists for each county.

Melissa Islam provided an informative demonstration of regional interactive herbaria including examples of checklists and collection search capabilities available at <http://swbiodiversity.org/seinet/index.php>. The site hosts specimen collections from a network of regional partners including the Rocky Mountain Regional consortium that includes most of

Colorado's herbaria. **Ryan Allen** at the University of Colorado Herbarium discussed the progress they have made in digitizing their collection, which is now 50-60% digitized. They plan to start integrating into SEINet in 2017.

Additional afternoon presentations highlighting 2016 research and conservation efforts are described briefly below:

Steve Popovich (USFS) introduced the team of people working on *Mimulus gemmiparus*, one of our rarest species, and it is being considered for listing under the ESA. The species reproduces primarily vegetatively via bulbils. **Kevin Chu** (CSU M.S. student) conducted a greenhouse study manipulating resource allocation by continuous removal of floral buds as they were initiated. He found that bulbil production is much higher when floral buds are removed, and concluded that the removal of floral buds can be used to increase bulbil production in natural populations. **Dyan Harden** (CSU M.S. student) researched ex situ propagation and cold storage protocols for *M. gemmiparus* bulbils. Successful propagation was possible with consistently moist soil and ample light. Preliminary cold storage results indicate bulbils are not viable after 9 months of cold storage. The next step is figuring out how to store bulbils without losing viability. **Mark Beardsley** (EcoMetrics), who has been studying the species for many years, has been working on assisted migration of the species to new sites. This year he discovered new populations while looking for possible transplant sites. Both populations are near known sites and are good news for the conservation of the species.

Steve Olson (USFS) discussed the 2016 BioBlitz at the recently designated Brown's Canyon National Monument in Chaffee County. The Monument which includes portions of the Arkansas River Valley lies just north of Salida. Over 70 people including biologists from the USFS, BLM, CNHP and DBG as well as volunteers from CoNPS joined in the effort. Steve reported that 224 plant species, 3 reptile/amphibian species, 96 bird species, and 22 mammal species were found. Rare plants documented included *Asclepias hallii* and *Townsendia fendleri* as well as an interesting *Thalictrum* species found growing at a dry site. The USFS will use this data in the development of a management plan for the Monument.

Carol Dawson (BLM) presented information on the BLM rare plant-monitoring program in Colorado. Species monitored are either on the BLM sensitive species list or are federally listed with the ESA. On-going monitoring projects take a landscape level approach so that the effects of grazing, recreation or climate change can be measured across a species range thus providing quantitative methods to approach management decisions and species conservation.

Al Pfister (CoNPs) discussed the need of a management plan for Pagosa skyrocket (*Ipomopsis polyantha*) populations on the City of Pagosa Springs land. The species, listed in 2011, has a very limited range and is located almost entirely on private lands or highway right-of ways. The Colorado Department of Transportation (CDOT) recently conducted a successful transplant project. The Colorado Natural Areas Program/Colorado Parks and Wildlife (CNAP/CPW) with assistance from the USFWS, are purchasing a 77 acre parcel of occupied habitat. This purchase will allow CNAP to conserve and manage this core area of habitat. Additional efforts to

conserve the species include cooperation with private land owners and the recognition of the species by the town of Pagosa Spring's historic preservation board as part of the town's cultural history.

For more information:

All of the information from this meeting as well as from previous symposia are available online at the Colorado State University, Colorado Natural Heritage Program (CNHP) website: www.cnhp.coloradostate.edu

The Rare Plant Symposium is open to anyone with an interest in the rare plants of Colorado. Contact Jill Handwerk for more information at jill.handwerk@colostate.edu or Jennifer Neale at nealejr@botanicgardens.org and check the CoNPS website for details as they become available about next year's symposium at www.conps.org

2008/2016 - G2G3 Species SW Colo					
5th ANNUAL SYMPOSIUM					
13th ANNUAL SYMPOSIUM					
State Scientific Name	Global Scientific Name	G Rank	S Rank	USESA	USFS/BLM
<i>Astragalus anisus</i>	<i>Astragalus anisus</i>	G2G3	S2S3		BLM
<i>Astragalus cronquistii</i>	<i>Astragalus cronquistii</i>	G2	S2		
<i>Astragalus equisolensis</i>	<i>A. desperatus</i> var. <i>neeseae</i>	G5T1	S1		BLM
<i>Astragalus iodopetalus</i>	<i>Astragalus iodopetalus</i>	G2	S1		FS
<i>Astragalus naturitensis</i>	<i>Astragalus naturitensis</i>	G2G3	S2S3		BLM
<i>Astragalus piscator</i>	<i>Astragalus piscator</i>	G2G3	S1		BLM
<i>Astragalus rafaensis</i>	<i>Astragalus rafaensis</i>	G2G3	S1		BLM
<i>Boechera crandallii</i>	<i>Arabis crandallii</i>	G2	S2		BLM
<i>Camissonia eastwoodiae</i>	<i>Camissonia eastwoodiae</i>	G2	S1		BLM
<i>Cirsium perplexans</i>	<i>Cirsium perplexans</i>	G2G3	S2S3		
<i>Draba graminea</i>	<i>Draba graminea</i>	G2	S2		
<i>Erigeron kachinensis</i>	<i>Erigeron kachinensis</i>	G2	S1		BLM
<i>Eriogonum clavellatum</i>	<i>Eriogonum clavellatum</i>	G2	S1		BLM
<i>Eriogonum coloradense</i>	<i>Eriogonum coloradense</i>	G2	S2		BLM
<i>Lepidium crenatum</i>	<i>Lepidium crenatum</i>	G2	S2		
<i>Lomatium concinnum</i>	<i>Lomatium concinnum</i>	G2G3	S2S3		BLM
<i>Lupinus crassus</i>	<i>Lupinus crassus</i>	G2	S2		BLM
<i>Machaeranthera coloradoensis</i>	<i>Machaeranthera coloradoensis</i>	G3	S3		FS
<i>Oreocarya osterhoutii</i>	<i>Cryptantha osterhoutii</i>	G2G3	S2		BLM
<i>Physaria alpina</i>	<i>Physaria alpina</i>	G2	S2		
<i>Physaria pruinosa</i>	<i>Lesquerella pruinosa</i>	G2	S2		FS/BLM
<i>Physaria rollinsii</i>	<i>Physaria rollinsii</i>	G1G2	S1S2		
<i>Physaria vicina</i>	<i>Lesquerella vicina</i>	G2	S2		BLM
<i>Puccinellia parishii</i>	<i>Puccinellia parishii</i>	G2G3	S1		
<i>Salix arizonica</i>	<i>Salix arizonica</i>	G2G3	S1		FS
<i>Thelypodopsis juniperorum</i>	<i>Thelypodopsis juniperorum</i>	G2	S2		
<i>Townsendia glabella</i>	<i>Townsendia glabella</i>	G2	S2		
<i>Townsendia rothrockii</i>	<i>Townsendia rothrockii</i>	G2G3	S2S3		

2004/2011/2015 - T&E Species Statewide					
1ST ANNUAL SYMPOSIUM					
8TH ANNUAL SYMPOSIUM					
12TH ANNUAL SYMPOSIUM					
State Scientific Name	Global Scientific Name	G Rank	S Rank	USESA	USFS/BLM
<i>Astragalus humillimus</i>	<i>Astragalus humillimus</i>	G1	S1	LE	
<i>Astragalus microcymbus</i>	<i>Astragalus microcymbus</i>	G1	S1	C	BLM
<i>Astragalus osterhoutii</i>	<i>Astragalus osterhoutii</i>	G1	S1	LE	
<i>Astragalus schmolliae</i>	<i>Astragalus schmolliae</i>	G1	S1	C	
<i>Astragalus tortipes</i>	<i>Astragalus tortipes</i>	G1	S1	C	BLM
<i>Corispermum navicula</i>	<i>Corispermum navicula</i>	G1?	S1		BLM
<i>Draba weberi</i>	<i>Draba weberi</i>	G1	S1		FS
<i>Eriogonum brandegeei</i>	<i>Eriogonum brandegeei</i>	G1G2	S1S2		FS/BLM
<i>Eriogonum pelinophilum</i>	<i>Eriogonum pelinophilum</i>	G2	S2	LE	
<i>Eutrema penlandii (edwardsii)</i>	<i>Eutrema penlandii</i>	G1G2	S1S2	LT	
<i>Ipomopsis polyantha</i>	<i>Ipomopsis polyantha</i>	G1	S1	LE	
<i>Mimulus gemmiparus</i>	<i>Mimulus gemmiparus</i>	G1	S1		FS
<i>Oenothera coloradensis ssp. coloradensis</i>	<i>Gaura neomexicana ssp. coloradensis</i>	G3T2	S1	LT	
<i>Pediocactus knowltonii</i>	<i>Pediocactus knowltonii</i>	G1	SNA	LE	
<i>Penstemon debilis</i>	<i>Penstemon debilis</i>	G1	S1	LT	
<i>Penstemon grahamii</i>	<i>Penstemon grahamii</i>	G2	S1		BLM
<i>Penstemon penlandii</i>	<i>Penstemon penlandii</i>	G1	S1	LE	
<i>Penstemon scariosus var. albifluvis</i>	<i>Penstemon scariosus var. albifluvis</i>	G4T1	S1		BLM
<i>Phacelia formosula</i>	<i>Phacelia formosula</i>	G1	S1	LE	
<i>Phacelia submutica</i>	<i>Phacelia submutica</i>	G2	S2	LT	
<i>Physaria congesta</i>	<i>Lesquerella congesta</i>	G1	S1	LT	
<i>Physaria obcordata</i>	<i>Physaria obcordata</i>	G1G2	S1S2	LT	
<i>Sclerocactus glaucus</i>	<i>Sclerocactus glaucus</i>	G2G3	S2S3	LT	
<i>Sclerocactus mesae-verdae</i>	<i>Sclerocactus mesae-verdae</i>	G2	S2	LT	
<i>Spiranthes diluvialis</i>	<i>Spiranthes diluvialis</i>	G2G3	S2	LT	

2005/2010 - G1 Species Statewide					
2ND ANNUAL SYMPOSIUM					
7TH ANNUAL SYMPOSIUM					
State Scientific Name	Global Scientific Name	G Rank	S Rank	USESA	USFS/BLM
<i>Aletes latilobus</i>	<i>Lomatium latilobum</i>	G1G2	S1		BLM
<i>Aliciella sedifolia</i>	<i>Gilia sedifolia</i>	G1	S1		FS
<i>Astragalus deterior</i>	<i>Astragalus deterior</i>	G1G2	S1S2		
<i>Astragalus lonchocarpus</i> var. <i>hamiltonii</i>	<i>Astragalus hamiltonii</i>	G1	SNA		
<i>Boechera glareosa</i>	<i>Boechera glareosa</i>	G1	S1		
<i>Botrychium lineare</i>	<i>Botrychium lineare</i>	G2G3	S2S3		FS
<i>Botrychium</i> tax. nov. "furcatum"	<i>Botrychium</i> tax. nov. "furcatum"	GNR	SNR		
<i>Cirsium scapanolepis</i>	<i>Cirsium scapanolepis</i>	G1G2Q	SNR		
<i>Oreocarya revealii</i>	<i>Cryptantha gypsophila</i>	G2	S2		BLM
<i>Descurainia kenheillii</i>	<i>Descurainia kenheillii</i>	G1	S1		
<i>Draba malpighiacea</i>	<i>Draba malpighiacea</i>	G1?	S1?		
<i>Erigeron wilkenii</i>	<i>Erigeron wilkenii</i>	G1	S1		
<i>Gutierrezia elegans</i>	<i>Gutierrezia elegans</i>	G1	S1		FS/BLM
<i>Hackelia gracilentata</i>	<i>Hackelia gracilentata</i>	G1G2	S1S2		
<i>Ipomopsis ramosa</i>	<i>Ipomopsis ramosa</i>	G1	S1		
<i>Lygodesmia doloresensis</i>	<i>Lygodesmia doloresensis</i>	G1G2	S1S2		BLM
<i>Oreoxis humilis</i>	<i>Oreoxis humilis</i>	G1	S1		FS
<i>Penstemon gibbensii</i>	<i>Penstemon gibbensii</i>	G1G2	S1		BLM
<i>Phacelia ginaglennae</i>	<i>Phacelia ginaglennae</i>	G1	S1		
<i>Physaria pulvinata</i>	<i>Physaria pulvinata</i>	G1	S1		FS/BLM
<i>Physaria scrotiformis</i>	<i>Physaria scrotiformis</i>	G1	S1		FS

2006/2012 - G2 Species SE Colo					
3RD ANNUAL SYMPOSIUM					
9TH ANNUAL SYMPOSIUM					
State Scientific Name	Global Scientific Name	G Rank	S Rank	USESA	USFS/BLM
<i>Asclepias uncialis</i> ssp. <i>uncialis</i>	<i>Asclepias uncialis</i> ssp. <i>uncialis</i>	G3G4T2T3	S2		FS/BLM
<i>Cleome (Peritoma) multicaulis</i>	<i>Cleome multicaulis</i>	G2G3	S2S3		BLM
<i>Delphinium ramosum</i> var. <i>alpestre</i>	<i>Delphinium alpestre</i>	G2	S2		
<i>Delphinium robustum</i>	<i>Delphinium robustum</i>	G2G3	S2?		
<i>Draba exungiculata</i>	<i>Draba exungiculata</i>	G2	S2		FS
<i>Draba grayana</i>	<i>Draba grayana</i>	G2	S2		FS
<i>Draba smithii</i>	<i>Draba smithii</i>	G2	S2		FS
<i>Frasera coloradensis</i>	<i>Frasera coloradensis</i>	G2G3	S2S3		
<i>Herrickia horrida</i>	<i>Herrickia horrida</i>	G2?	S1		
<i>Nuttallia chrysantha</i>	<i>Mentzelia chrysantha</i>	G2	S2		BLM
<i>Nuttallia densa</i>	<i>Mentzelia densa</i>	G2	S2		BLM
<i>Oenothera harringtonii</i>	<i>Oenothera harringtonii</i>	G3	S3		
<i>Oonopsis foliosa</i> var. <i>monocephala</i>	<i>Oonopsis foliosa</i> var. <i>monocephala</i>	G3G4T2	S2		
<i>Oonopsis puebloensis</i>	<i>Oonopsis puebloensis</i>	G2	S2		
<i>Oxybaphus rotundifolius</i>	<i>Mirabilis rotundifolia</i>	G2	S2		
<i>Penstemon degeneri</i>	<i>Penstemon degeneri</i>	G2	S2		FS/BLM
<i>Physaria calcicola</i>	<i>Lesquerella calcicola</i>	G3	S3		
<i>Ptilagrostis porteri</i>	<i>Ptilagrostis porteri</i>	G2	S2		FS
<i>Telesonix jamesii</i>	<i>Telesonix jamesii</i>	G2G3	S2		

2007/2013 - G2G3 Species NE Colo					
4TH ANNUAL SYMPOSIUM					
10TH ANNUAL SYMPOSIUM					
State Scientific Name	Global Scientific Name	G Rank	S Rank	USESA	USFS/BLM
<i>Aletes humilis</i>	<i>Aletes humilis</i>	G2G3	S2S3		
<i>Aletes nuttallii</i>	<i>Lomatium nutallii</i>	G3	S1		
<i>Aquilegia saximontana</i>	<i>Aquilegia saximontana</i>	G3	S3		
<i>Astragalus sparsiflorus</i>	<i>Astragalus sparsiflorus</i>	G2	S2		
<i>Bolophyta alpina</i>	<i>Parthenium alpinum</i>	G3	S3		
<i>Carex oreocharis</i>	<i>Carex oreocharis</i>	G3	S2		
<i>Draba crassa</i>	<i>Draba crassa</i>	G3G4	S3		
<i>Draba globosa</i>	<i>Draba globosa</i>	G3	S1		
<i>Draba streptobrachia</i>	<i>Draba streptobrachia</i>	G3	S3		
<i>Eriogonum exilifolium</i>	<i>Eriogonum exilifolium</i>	G3	S2		FS
<i>Nuttallia sinuata</i>	<i>Mentzelia sinuata</i>	G3	S3		
<i>Nuttallia speciosa</i>	<i>Mentzelia speciosa</i>	G3	S3		
<i>Oonopsis wardii</i>	<i>Oonopsis wardii</i>	G3	S1		
<i>Phacelia denticulata</i>	<i>Phacelia denticulata</i>	G3	SU		
<i>Physaria bellii</i>	<i>Physaria bellii</i>	G2G3	S2S3		
<i>Potentilla ambigens</i>	<i>Potentilla ambigens</i>	G3	S2		
<i>Potentilla rupincola</i>	<i>Potentilla rupincola</i>	G2	S2		FS
<i>Sisyrinchium pallidum</i>	<i>Sisyrinchium pallidum</i>	G3	S2		BLM

**2009/2014 - G2G3 Species North & Central
Colo**

6TH ANNUAL SYMPOSIUM					
11TH ANNUAL SYMPOSIUM					
State Scientific Name	Global Scientific Name	G Rank	S Rank	USESA	USFS/BLM
<i>Anticlea vaginatus</i>	<i>Zigadenus vaginatus</i>	G2	S2		
<i>Astragalus debequaeus</i>	<i>Astragalus debequaeus</i>	G2	S2		BLM
<i>Carex stenoptila</i>	<i>Carex stenoptila</i>	G3	S2		
<i>Castilleja puberula</i>	<i>Castilleja puberula</i>	G2G3	S2S3		
<i>Ipomopsis aggregata</i> ssp. <i>weberi</i>	<i>Ipomopsis aggregata</i> ssp. <i>weberi</i>	G5T2	S2		FS
<i>Ipomopsis globularis</i>	<i>Ipomopsis globularis</i>	G2	S2		
<i>Limnorchis zothecina</i>	<i>Platanthera zothecina</i>	G2G3	S1		
<i>Mertensia humilis</i>	<i>Mertensia humilis</i>	G2	S1		
<i>Nuttallia rhizomata</i>	<i>Mentzelia rhizomata</i>	G2	S2		BLM
<i>Oenothera acutissima</i>	<i>Oenothera acutissima</i>	G2	S2		BLM
<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	G5T2	S2		
<i>Penstemon fremontii</i> var. <i>glabrescens</i>	<i>Penstemon fremontii</i> var. <i>glabrescens</i>	G3G4T2	S2		
<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	G4T2	S2		
<i>Physaria parviflora</i>	<i>Lesquerella parviflora</i>	G2	S2		BLM
<i>Saussurea weberi</i>	<i>Saussurea weberi</i>	G2G3	S2		
<i>Thalictrum heliophilum</i>	<i>Thalictrum heliophilum</i>	G2	S2		FS/BLM
<i>Thelypodium paniculatum</i>	<i>Thelypodium paniculatum</i>	G2	SH		

2005/2010 - G1 Species Statewide				
2nd ANNUAL SYMPOSIUM				
7th ANNUAL SYMPOSIUM				
State Scientific Name	Global Scientific Name	G Rank	S Rank	USFS/BLM
<i>Aletes latilobus</i>	<i>Lomatium latilobum</i>	G1G2	S1	BLM
<i>Aliciella sedifolia</i>	<i>Gilia sedifolia</i>	G1	S1	FS
<i>Astragalus deterior</i>	<i>Astragalus deterior</i>	G1G2	S1S2	
<i>Astragalus lonchocarpus</i> var. <i>hamiltonii</i>	<i>Astragalus hamiltonii</i>	G1	SNA	
<i>Astragalus missouriensis</i> var. <i>humistratus</i>	<i>Astragalus missouriensis</i> var. <i>humistratus</i>	G5T1	S1	FS
<i>Boechera glareosa</i>	<i>Boechera glareosa</i>	G1	S1	
<i>Botrychium lineare</i>	<i>Botrychium lineare</i>	G2G3	S2S3	FS
<i>Botrychium</i> tax. nov. " <i>furcatum</i> "	<i>Botrychium</i> tax. nov. " <i>furcatum</i> "	GNR	SNR	
<i>Descurainia kenheillii</i>	<i>Descurainia kenheillii</i>	G1	S1	
<i>Draba malpighiacea</i>	<i>Draba malpighiacea</i>	G1?	S1?	
<i>Erigeron wilkenii</i>	<i>Erigeron wilkenii</i>	G1	S1	
<i>Gutierrezia elegans</i>	<i>Gutierrezia elegans</i>	G1	S1	FS/BLM
<i>Hackelia gracilentia</i>	<i>Hackelia gracilentia</i>	G1G2	S1S2	
<i>Ipomopsis ramosa</i>	<i>Ipomopsis ramosa</i>	G1	S1	
<i>Lepidium huberi</i>	<i>Lepidium huberi</i>	G1G2	S1S2	
<i>Lygodesmia doloresensis</i>	<i>Lygodesmia doloresensis</i>	G1G2	S1S2	BLM
<i>Oreocarya revealii</i>	<i>Cryptantha gypsophila</i>	G2	S2	BLM
<i>Oreoxis humilis</i>	<i>Oreoxis humilis</i>	G1	S1	FS
<i>Packera mancosana</i>	<i>Packera mancosana</i>	G1	S1	
<i>Penstemon gibbensii</i>	<i>Penstemon gibbensii</i>	G1G2	S1	BLM
<i>Phacelia ginaglennae</i>	<i>Phacelia ginaglennae</i>	G1	S1	
<i>Physaria pulvinata</i>	<i>Physaria pulvinata</i>	G1	S1	FS/BLM
<i>Physaria scrotiformis</i>	<i>Physaria scrotiformis</i>	G1	S1	FS

2006/2012 - G2 Species SE Colo				
3rd ANNUAL SYMPOSIUM				
9th ANNUAL SYMPOSIUM				
State Scientific Name	Global Scientific Name	G Rank	S Rank	USFS/BLM
<i>Asclepias uncialis</i> ssp. <i>uncialis</i>	<i>Asclepias uncialis</i> ssp. <i>uncialis</i>	G3G4T2T3	S2	FS/BLM
<i>Cleome (Peritoma) multicaulis</i>	<i>Cleome multicaulis</i>	G2G3	S2S3	BLM
<i>Delphinium ramosum</i> var. <i>alpestre</i>	<i>Delphinium alpestre</i>	G2	S2	
<i>Delphinium robustum</i>	<i>Delphinium robustum</i>	G2G3	S2?	
<i>Draba exungiculata</i>	<i>Draba exungiculata</i>	G2	S2	FS
<i>Draba grayana</i>	<i>Draba grayana</i>	G2	S2	FS
<i>Draba smithii</i>	<i>Draba smithii</i>	G2	S2	FS
<i>Frasera coloradensis</i>	<i>Frasera coloradensis</i>	G2G3	S2S3	
<i>Herrickia horrida</i>	<i>Herrickia horrida</i>	G2?	S1	
<i>Nuttallia chrysantha</i>	<i>Mentzelia chrysantha</i>	G2	S2	BLM
<i>Nuttallia densa</i>	<i>Mentzelia densa</i>	G2	S2	BLM
<i>Oenothera harringtonii</i>	<i>Oenothera harringtonii</i>	G3	S3	
<i>Oonopsis foliosa</i> var. <i>monocephala</i>	<i>Oonopsis foliosa</i> var. <i>monocephala</i>	G3G4T2	S2	
<i>Oonopsis puebloensis</i>	<i>Oonopsis puebloensis</i>	G2	S2	
<i>Oxybaphus rotundifolius</i>	<i>Mirabilis rotundifolia</i>	G2	S2	
<i>Penstemon degeneri</i>	<i>Penstemon degeneri</i>	G2	S2	FS/BLM
<i>Physaria calcicola</i>	<i>Lesquerella calcicola</i>	G3	S3	
<i>Ptilagrostis porteri</i>	<i>Ptilagrostis porteri</i>	G2	S2	FS
<i>Telesonix jamesii</i>	<i>Telesonix jamesii</i>	G2G3	S2	

2009/2014 - G2G3 Species North & Central Colo				
6th ANNUAL SYMPOSIUM				
11th ANNUAL SYMPOSIUM				
State Scientific Name	Global Scientific Name	G Rank	S Rank	USFS/BLM
<i>Anticlea vaginatus</i>	<i>Zigadenus vaginatus</i>	G2	S2	
<i>Astragalus debequaeus</i>	<i>Astragalus debequaeus</i>	G2	S2	BLM
<i>Carex stenoptila</i>	<i>Carex stenoptila</i>	G3	S2	
<i>Castilleja puberula</i>	<i>Castilleja puberula</i>	G2G3	S2S3	
<i>Ipomopsis aggregata</i> ssp. <i>weberi</i>	<i>Ipomopsis aggregata</i> ssp. <i>weberi</i>	G5T2	S2	FS
<i>Ipomopsis globularis</i>	<i>Ipomopsis globularis</i>	G2	S2	
<i>Limnorchis zothecina</i>	<i>Platanthera zothecina</i>	G2G3	S1	
<i>Mertensia humilis</i>	<i>Mertensia humilis</i>	G2	S1	
<i>Nuttallia rhizomata</i>	<i>Mentzelia rhizomata</i>	G2	S2	BLM
<i>Oenothera acutissima</i>	<i>Oenothera acutissima</i>	G2	S2	BLM
<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	G5T2	S2	
<i>Penstemon fremontii</i> var. <i>glabrescens</i>	<i>Penstemon fremontii</i> var. <i>glabrescens</i>	G3G4T2	S2	
<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	G4T2	S2	
<i>Physaria parviflora</i>	<i>Lesquerella parviflora</i>	G2	S2	BLM
<i>Saussurea weberi</i>	<i>Saussurea weberi</i>	G2G3	S2	
<i>Thalictrum heliophilum</i>	<i>Thalictrum heliophilum</i>	G2	S2	FS/BLM
<i>Thelypodium paniculatum</i>	<i>Thelypodium paniculatum</i>	G2	SH	

2007/2013 - G2G3 Species NE Colo				
4th ANNUAL SYMPOSIUM				
10th ANNUAL SYMPOSIUM				
State Scientific Name	Global Scientific Name	G Rank	S Rank	USFS/BLM
<i>Aletes humilis</i>	<i>Aletes humilis</i>	G2G3	S2S3	
<i>Aletes nuttallii</i>	<i>Lomatium nuttallii</i>	G3	S1	
<i>Aquilegia saximontana</i>	<i>Aquilegia saximontana</i>	G3	S3	
<i>Astragalus sparsiflorus</i>	<i>Astragalus sparsiflorus</i>	G2	S2	
<i>Bolophyta alpina</i>	<i>Parthenium alpinum</i>	G3	S3	
<i>Carex oreocharis</i>	<i>Carex oreocharis</i>	G3	S2	
<i>Draba crassa</i>	<i>Draba crassa</i>	G3G4	S3	
<i>Draba globosa</i>	<i>Draba globosa</i>	G3	S1	
<i>Draba streptobrachia</i>	<i>Draba streptobrachia</i>	G3	S3	
<i>Eriogonum exilifolium</i>	<i>Eriogonum exilifolium</i>	G3	S2	FS
<i>Nuttallia sinuata</i>	<i>Mentzelia sinuata</i>	G3	S3	
<i>Nuttallia speciosa</i>	<i>Mentzelia speciosa</i>	G3	S3	
<i>Oonopsis wardii</i>	<i>Oonopsis wardii</i>	G3	S1	
<i>Phacelia denticulata</i>	<i>Phacelia denticulata</i>	G3	SU	
<i>Physaria bellii</i>	<i>Physaria bellii</i>	G2G3	S2S3	
<i>Potentilla ambigens</i>	<i>Potentilla ambigens</i>	G3	S2	
<i>Potentilla rupincola</i>	<i>Potentilla rupincola</i>	G2	S2	FS
<i>Sisyrinchium pallidum</i>	<i>Sisyrinchium pallidum</i>	G3	S2	BLM

2004/2011/2015 - T&E Species Statewide					
1st ANNUAL SYMPOSIUM					
8th ANNUAL SYMPOSIUM					
12th ANNUAL SYMPOSIUM					
State Scientific Name	Global Scientific Name	G Rank	S Rank	USESA	USFS/BLM
<i>Astragalus humillimus</i>	<i>Astragalus humillimus</i>	G1	S1	LE	
<i>Astragalus microcymbus</i>	<i>Astragalus microcymbus</i>	G1	S1	C	BLM
<i>Astragalus osterhoutii</i>	<i>Astragalus osterhoutii</i>	G1	S1	LE	
<i>Astragalus schmolliae</i>	<i>Astragalus schmolliae</i>	G1	S1	C	
<i>Astragalus tortipes</i>	<i>Astragalus tortipes</i>	G1	S1		BLM
<i>Corispermum navicula</i>	<i>Corispermum navicula</i>	G1?	S1		BLM
<i>Draba weberi</i>	<i>Draba weberi</i>	G1	S1		FS
<i>Eriogonum brandegeei</i>	<i>Eriogonum brandegeei</i>	G1G2	S1S2		FS/BLM
<i>Eriogonum pelinophilum</i>	<i>Eriogonum pelinophilum</i>	G2	S2	LE	
<i>Eutrema penlandii (edwardsii)</i>	<i>Eutrema penlandii</i>	G1G2	S1S2	LT	
<i>Ipomopsis polyantha</i>	<i>Ipomopsis polyantha</i>	G1	S1	LE	
<i>Mimulus gemmiparus</i>	<i>Mimulus gemmiparus</i>	G1	S1		FS
<i>Oenothera coloradensis ssp. coloradensis</i>	<i>Gaura neomexicana ssp. coloradensis</i>	G3T2	S1	LT	
<i>Pediocactus knowltonii</i>	<i>Pediocactus knowltonii</i>	G1	SNA	LE	
<i>Penstemon debilis</i>	<i>Penstemon debilis</i>	G1	S1	LT	
<i>Penstemon grahamii</i>	<i>Penstemon grahamii</i>	G2	S1		BLM
<i>Penstemon penlandii</i>	<i>Penstemon penlandii</i>	G1	S1	LE	
<i>Penstemon scariosus var. albifluvis</i>	<i>Penstemon scariosus var. albifluvis</i>	G4T1	S1		BLM
<i>Phacelia formosula</i>	<i>Phacelia formosula</i>	G1	S1	LE	
<i>Phacelia submutica</i>	<i>Phacelia submutica</i>	G2	S2	LT	
<i>Physaria congesta</i>	<i>Lesquerella congesta</i>	G1	S1	LT	
<i>Physaria obcordata</i>	<i>Physaria obcordata</i>	G1G2	S1S2	LT	
<i>Sclerocactus glaucus</i>	<i>Sclerocactus glaucus</i>	G2G3	S2S3	LT	
<i>Sclerocactus mesae-verdae</i>	<i>Sclerocactus mesae-verdae</i>	G2	S2	LT	
<i>Spiranthes diluvialis</i>	<i>Spiranthes diluvialis</i>	G2G3	S2	LT	