

The Field Press



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From the Desk of the Coordinator

By Raquel Wertsbaugh, CNAP Coordinator

This last year has been a productive one for CNAP. Our exceptional team of staff, contractors, Colorado Natural Areas Council members, and volunteer stewards once again outdid themselves! Staff and volunteers collectively made 95 monitoring visits to State Natural Areas last year, and revisited almost 100 element occurrences (i.e. locations of important natural features such as rare plants or wildlife).

CNAP staff and contractors conducted quantitative monitoring and/or surveys on 9 rare plant species in 2018, almost all of which are federally listed, candidate, or petitioned species. Additionally, CNAP staff has been busy assisting the U.S. Fish & Wildlife Service with numerous reviews such as Species Status Assessments for rare plants.

Staff and Council members have been in the process of a comprehensive review and evaluation of our current Natural Areas System. With the help of the Council, CNAP staff have completed evaluations and rankings of all 95 designated natural areas and over 20 registered sites. We have conducted a system review and identified features that are not represented in our current system of registered and designated natural areas. We have decided to first focus on an area of the state that is underrepresented on our map: the eastern plains. I am very excited about this new undertaking. We are already off to a great start by identifying potential new sites on the eastern plains that could be excellent additions to our Natural Areas System.

I'm looking forward to the start of the 2019 field season and hope to get out in the field a little more this year, as well as see many of CNAP's wonderful volunteers and partners. As always, a huge thank you to our volunteer stewards and partners. We couldn't do what we do without you!



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2018 council field tour of White Rocks Natural Area

Get to Know the CNAP Team

CNAP has been fortunate to retain several staff members in recent years; however, we thought it might helpful to clarify our roles and let our volunteer stewards and partners get to know us a little better.

CNAP Coordinator: CNAP has one full-time permanent position, the CNAP coordinator. Raquel Wertsbaugh has filled this role since 2014. Raquel oversees the program and staff, manages contracts, grants, and program budget, facilitates the Colorado Natural Areas Council, and serves as CPW's liaison with rare plant partners.

Seasonal Field Technician(s): CNAP hires 1-2 field technicians each year that generally work for 6-9 months and can return for multiple seasons. They plan and conduct statewide natural area monitoring, and assist with rare plant work, volunteer steward program, GIS, and other projects. Our current winter technician is Lisa Merkhofer, who has returned for her 4th season with CNAP. Our new summer technician is Savanna Smith.

Contractors: CNAP has many contractors that assist the program with rare plant surveys and monitoring, research, and natural areas monitoring. Currently, CNAP has a contract with the Colorado Natural Heritage Program (CNHP) to conduct natural areas and rare plant monitoring. We're fortunate that one of CNAP's past technicians, Jessica Smith, now works for CNHP as a botanist and is able to continue working with our program.

Get to know more about our stellar team:

Raquel Wertsbaugh: Raquel grew up in Loveland, CO and spent as much time as possible camping, fishing, hunting, and exploring the state. Prior to CNAP, she was a wildlife conservation biologist for Colorado Parks & Wildlife in the Upper Arkansas Valley (Salida) for almost 10 years, working with a variety of species including boreal toads, bats, ptarmigan, and raptors. Prior to that, she spent several years as the private lands wildlife biologist in Southeast Colorado in a joint position with the Natural Resource Conservation Service & Division of Wildlife.



Raquel lives with her significant other, Nick, and 2-year old daughter, Grace, on the Lowry Ranch, a cattle ranch east of Denver. Raquel is proud to be part of a working ranch that regenerates and improves the soil, plants, and wildlife habitat, while also producing local and sustainably raised food. Days spent with her family exploring the ranch are a

favorite, but might be a toss-up with fishing a high lake off the beaten path.



Colorado Natural Areas Program

6060 Broadway
Denver, Colorado 80216
cpw.state.co.us

Jared Polis, *Governor*

Dan Gibbs, *Executive Director*
Department of Natural Resources

Jeff VerSteeg, *Acting Director*
Colorado Parks and Wildlife

Colorado Natural
Areas Council:

Tom Nesler, *Chair*

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Julia Kintsch, *Member*

Dina Clark, *Member*

John Shaw, *State Board of Land*
Commissioners

Vacant, *Parks & Wildlife*
Commissioner

Program Staff:

Raquel Wertsbaugh
Natural Areas Program Coordinator
303-291-7267
raquel.wertsbaugh@state.co.us

<https://cpw.state.co.us/aboutus/Pages/CNAP.aspx>

Lisa Merkhofer:

Growing up in California, Lisa frequently used to get lost in her own neighborhood. Fortunately, her sense of direction improved over the years, and now she has a passion for mapping and exploring natural landscapes. Lisa has worked with Colorado Natural Areas Program seasonally since 2016, where she has enjoyed getting to know natural areas by foot and by scrutinizing maps in the office. Lisa's favorite thing about working with CNAP is being able to help conserve both living and physical aspects of the environment in a state as geographically rich as Colorado.

For the past few years, Lisa has split her time between Colorado and Alaska where she has worked with the National Park Service on projects ranging from monitoring caribou habitat to surveying for dinosaur footprints. In graduate school, she studied ancient rainforests in Patagonia and she continues to love searching for fossils. Lisa's passion for the outdoors has taken her to remote parts of the world where she likes to hike in the mountains and learn about different cultures. She also enjoys mountain biking, cooking and learning to play the fiddle.



Savanna Smith:

Savanna originally hails from Fort Worth, Texas but moved to Colorado as fast as she could! She studied wildlife biology and ecological restoration at Colorado State University in Fort Collins. She enjoyed learning about all facets of our natural world- from botany to mammalogy and everything in between. After graduation, she worked a field season with the Bureau of Land Management in Southern Idaho evaluating sage grouse habitat. She soon returned to Colorado to work with the Colorado State Land Board, a key partner in much of CNAP's work.

Savanna is looking forward to joining CNAP's team and contributing to the valuable work of monitoring and conserving our state's natural features. She's excited to visit sites across the state and further her botanical knowledge. When she's not looking at plants, Savanna enjoys rock climbing in areas throughout the Western US, traveling abroad, and attempting to cook cuisine from around the world.

Jessica Smith:

Jessica Smith has been a botanist for the Colorado Natural Heritage Program (CNHP) since 2016, and is currently working under contract with CNAP. She was previously a seasonal field technician for CNAP for 3 years. Jessica is originally from Georgia, and moved several places along the East Coast before settling in Colorado with her husband, Kandler, in 2007. Two children followed, Adelaide (11) and Klara (9). Her family loves to camp and explore nature. Wildlife is more captivating for the kids than plants, but budding botanists are encouraged with a bribe of a nickel for each plant correctly identified.

Jessica served as a board member of the Colorado Native Plant Society (CoNPS) for the past five years and has taught grass identification classes for CoNPS and the Native Plant Master Program. She holds a master's degree in environmental science, with research conducted on soil seed banks in tidal freshwater wetlands. She enjoys skiing, mountain biking, landscaping with native plants, and travelling. Her most recent family vacation was a trip to Hawaii, an awe-inspiring landscape with amazing marine life.



Project Update: Monitoring the Federally Endangered Pagosa Skyrocket

Over the past two years, CNAP staff have led an exciting study of the federally endangered plant, Pagosa skyrocket (*Ipomopsis polyantha*), on the recently designated Pagosa Skyrocket Natural Area. An eye-catching herb from the Phlox family, Pagosa Skyrocket is named for its white, firework-shaped flowers and the fact that it is only known from a 48 square kilometer area centered around Pagosa Springs. The 88-acre Pagosa Skyrocket Natural Area, owned by Colorado Parks & Wildlife (CPW), contains at least half the plant's known population world-wide.

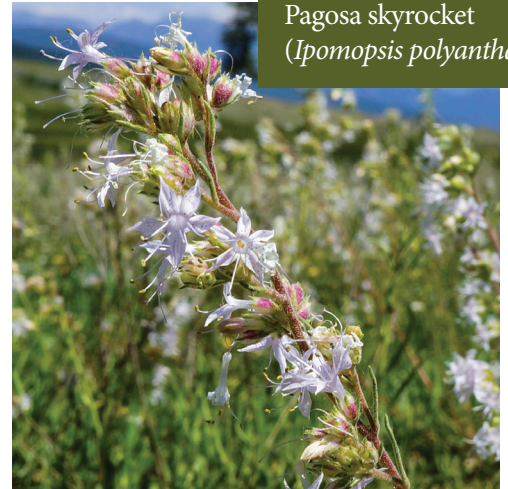
CNAP staff have partnered with experts from multiple agencies, including the U.S. Fish & Wildlife Service, to develop a monitoring protocol for the plant in the natural area and across the species range. By monitoring the Pagosa skyrocket, we aim to better understand the population trend and gain

natural history information on the species.

The summer of 2018 marked the second year of preliminary monitoring results. Between 2017 and 2018, we saw significant changes in Pagosa skyrocket density across the property that support anecdotal evidence that the plant has large population fluctuations. A similar quantitative method could be employed to monitor Pagosa skyrocket in other locations in order to develop estimates on the species total population size over time. In the future, we want to collect more environmental data to help figure out what factors are associated with fluctuations, such as plant community composition, disturbance, and soil temperature and moisture. These efforts have contributed to the growing body of knowledge about Pagosa skyrocket and CNAP will continue to work toward ensuring its conservation for future generations.



CNAP and partners monitoring the federally endangered Pagosa skyrocket



Pagosa skyrocket
(*Ipomopsis polyantha*)

CNAP Visits Aiken Canyon with Colorado College Field Botany Class

This past September found CNAP staff, fourteen college students, and their Professor, Dr. Rachel Jabaily, at Aiken Canyon Natural Area. The natural area is part of The Nature Conservancy (TNC) Aiken Canyon Preserve. The parcel is owned by the State Land Board and leased to TNC through a long-term conservation lease. During our visit, robust, native grasses and late-blooming asters presented themselves for identification while staff made observations for the triennial site assessment. The group hiked through grasslands of mid and tallgrass species, interspersed between forests of Ponderosa pine, Douglas fir and pockets of Gambel oak. The group enjoyed viewing a high diversity of native plants, set among a dramatic background of red sandstone outcrops of the Fountain formation.



CNAP staff help Colorado College field botany class identify plants at Aiken Canyon Natural Area

Colorado Natural Area Highlight: Zapata Falls Natural Area

The Zapata Falls Natural Area is located in Alamosa County, uniquely situated 1,000 feet above the Eastern edge of the San Luis Valley on the slopes of Blanca Peak. To the north, one can look down on the expanse of the Great Sand Dunes and view the spine of the Sangre de Cristo Range stretching out in the distance. The roughly 600 acre parcel, owned by the State Land Board, is nestled within surrounding BLM and USFS lands.

Viewing Zapata Falls can be an adventure; the thirty foot falls are hidden within a chasm of crystalline rock. A short hiking trail, 0.4 miles, leads to Zapata Creek. To reach the falls, one must wade upstream into the gorge. The trail is family-friendly, with wooden benches and many new interpretive signs.

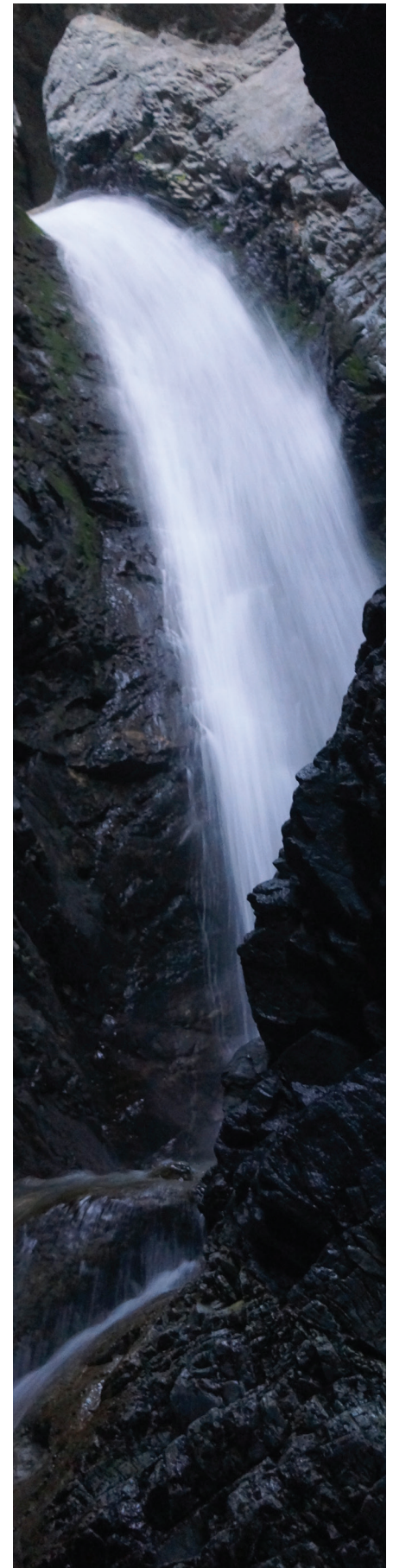
The waterfall is not the only significant feature of the natural area. One of the few occurrences of nesting black swifts in Colorado is found here in the summer months. Black swifts require

inaccessible cliff habitat for nesting, most often choosing rocks behind waterfalls. This is the largest species of swift normally found in North America, and recent research indicates the birds travel over 4,000 miles to winter in Brazil. Stunning montane grasslands are also found on the mountain slopes above the falls, interspersed between forests of bristlecone and pinyon pine.

This natural area is included in the State Land Board's Stewardship Trust, and is part of the State Trust Land Public Access Program, a program through which Colorado Parks & Wildlife leases land from the State Land Board to provide public access for wildlife-related recreation (<https://cpw.state.co.us/placestogo/Pages/StateTrustLands.aspx>). Access to this property is open year-round for wildlife viewing. There is a BLM campground below the trail to the falls, and the 8.8 mile South Zapata Trail continues on from the falls into the Sangre de Cristo Wilderness.



View of Great Sand Dunes & Sangre de Cristos from Zapata Falls Natural Area



Waterfall at Zapata Falls Natural Area

Volunteer Corner

The Power of Volunteers

Volunteers contributed over 1,400 hours to the Program in 2018, visiting almost 40 natural areas, and providing CNAP with field observations, updated photo monitoring, spatial data, species lists, and more. Some highlights of the 2018 volunteer season follow:

- **Element Occurrence Records:**

- Larry Allison updated information on Ferron milkvetch, Nevada onion, and tall cryptantha at Badger Wash Natural Area
- Denise Wilson with Steve Olson, U.S. Forest Service botanist, found a new occurrence of Hall's milkweed at Hurricane Canyon Natural Area

- **Floristic Inventories:**

- Bob Clarke continued a collection project at Badger Wash Natural Area and took on an additional floristic project at Unawep Seep Natural Area
- Tony Romano began a floristic inventory at Mount Emmons Iron Fen Natural Area
- Loraine and Dick Yeatts continued a decade of floristic work at Gateway Palisade Natural Area

- **Detailed Investigations**

- Patty Corbetta researched the geology of the Mexican Cut, Gothic and Mount Emmons Natural Areas and submitted findings in a report
- Peter Rohman conducted field reconnaissance and authored a report on fencing needs and possible solutions at McElmo Natural Area
- John Vickery researched species documentation and compiled a detailed plant species list for Mount Goliath Natural Area

- **Rare Plant Monitoring Data Collection**

- Lee Cassin and Larry Allison joined CNAP staff at three sites in Rio Blanco County to collect data on the federally threatened Dudley Bluffs bladderpod (*Physaria congesta*)

- **Multi-day Wilderness Backpack Trip**

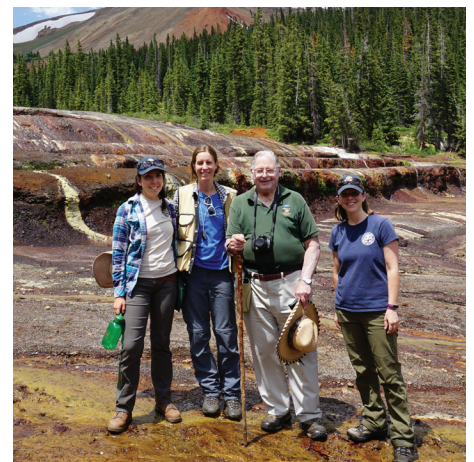
- Lindsey Brandt, Chelsea Beebe, Elizabeth Crawley, and Melissa Dozier backpacked through Paradise Park Natural Area in Rocky Mountain National Park, reporting field observations



New volunteers stewards Viki Lawrence and Patty Corbetta at Gothic Natural Area



Volunteer steward Lynn Riedel at Antero Salt Creek Natural Area



Volunteer steward Dave Bathke and CNAP staff at Geneva Basin Iron Fen Natural Area

A warm welcome to our new stewards...

- Rebecca Heisler, Treasurevault Mountain Natural Area
- Larry Morandi, Hoosier Ridge Natural Area
- Patty Corbetta and Viki Lawrence, Mexican Cut and Gothic Natural Areas

Thank you to our current stewards taking on new sites...

- Lynn Riedel, Antero-Salt Creek Natural Area
- Stephen and Jeanne Wenger, South Beaver Creek Natural Area
- Lee Cassin and Dave Tolen, Rough Canyon Natural Area

And our gratitude for many years of service to those stepping down...

- Matt Lohrentz, Elephant Rocks Natural Area
- JeanMarie Harahush, Escalante Canyon Natural Area
- Dana and Ellen Daldoss, Wheeler Geologic Natural Area
- Steve Jones and George and Petrea Mah, Comanche Lesser Prairie Chicken Natural Area



Butterflies at Treasurevault Mountain Natural Area, photo taken by volunteer steward Rebecca Heisler

Volunteer Steward and Natural Area Vacancy Update

CNAP staff have been making efforts to match volunteer strengths with the monitoring needs of specific natural areas. Instead of posting a list of natural areas in need of a steward, we are asking current and potential volunteers to contact us and we'll work with you to find a good match. So far, this has been a positive and more effective method for both CNAP and our volunteer stewards. If you are a current steward and are looking to take on an additional site, or perhaps want a change of scenery, please contact us anytime at dnr_cnap@state.co.us.

Join us for the 2019 Volunteer Steward Natural Area Tour

CNAP volunteer stewards are invited to join CNAP staff on **Thursday April 18th, 2019** for a tour of the **Trinidad K-T Boundary Natural Area** at Trinidad Lake State Park. This is one of the best places in Colorado to see the Cretaceous-Paleogene boundary that records the extinction of dinosaurs 65 million years ago. Pack a lunch and enjoy a short informative hike with CNAP & CPW staff. The Trinidad area also has great opportunities for enjoying the outdoors and includes several historical points of interest along the Santa Fe Trail. We plan to meet at the Longs Canyon Trailhead at 10am. Please RSVP and direct questions to dnr_cnap@state.co.us.



Trinidad K-T Boundary Natural Area at Trinidad Lake State Park. Photo by Chris Stark

State Wildlife Action Plan (SWAP)

Species Highlight: Cushion Bladderpod (*Physaria pulvinata*)

The cushion bladderpod, with its mass of yellow blossoms atop its low, rounded form, is a bright and colorful stand-out on the grey Mancos Shale where it is found. Newly described in 2006 by Steve O’Kane and James Reveal, the Colorado endemic is known only from Dolores and San Miguel Counties.

Colorado Parks & Wildlife has figured prominently in the discovery of this species and its conservation. The herbarium specimen used to describe and name the species (i.e., the type specimen) was collected at the Miramonte Reservoir (Dan Noble) State Wildlife Area, which CNAP designated as a state natural area in 2012. In fact, four of the six known, and largest, populations of the species are found wholly or in part on CPW-owned lands. CNAP staff and volunteers regularly monitor the population at Miramonte. CNAP has also funded the Colorado Natural Heritage Program (CNHP) to quantitatively monitor the species, with three years of data so far. Interpretive signs have been installed on-site, helping highlight the value of the species.

This species was listed as a Plant of Greatest Conservation Need (PGCN) in the most recent version of the Colorado

State Wildlife Action Plan (SWAP, 2015), in which plants were included for the first time. State Wildlife Action Plans are designed to be a comprehensive roadmap for all stakeholders to conserve species on a declining trend. Plans are approved by the U.S. Fish & Wildlife Service, and required for states to be eligible to receive federal grants for species conservation. There are 117 plants listed in the SWAP, and 37% are listed as Tier 1 (highest priority), including the cushion bladderpod.

As noted in the SWAP, conservation actions for this species and other rare plants, include increasing awareness. The online Colorado Rare Field Guide, maintained by CNHP with support from CNAP, provides information on the description, phenology, habitat, distribution and threats to this and other of Colorado’s most rare plants (<https://cnhp.colostate.edu/rareplants/index.asp>). The Rare Plant Addendum to the SWAP provides a roadmap to conservation, including specific conservation needs for each of the PGCN (<https://cpw.state.co.us/Documents/CNAP/Rare-Plant-SWAP-2015.pdf>).

Cushion bladderpod at Miramonte Natural Area

Cushion bladderpod (*Physaria pulvinata*)



Natural Areas Council News

By Tom Nesler, Council Chair

Serving on the Colorado Natural Areas Council has been one of the most satisfying experiences of my conservation career, which includes 25 of my 33 years with the former Colorado Division of Wildlife as a native wildlife conservation researcher, program coordinator and statewide manager. As I close in on the finish of my eighth year on the Council, I

reflect on the talent and dedication of former and current members and staff I have had the opportunity to serve alongside.

CNAC tour of White Rocks Natural Area in September 2018



My goal as chairperson has been to put this program in a position to succeed despite a challenging fiscal environment. The Natural Areas Program saw a lot of turnover in my first term, both in council members and agency staff. Forward momentum was difficult to sustain. Now, we have in Raquel Wertsbaugh an excellent program coordinator. We have also been fortunate to have the dedicated and loyal service of part-time staff like Jessica Smith and Lisa Merkhofer. They have been critical in providing the Council with the tools and analyses to manage and improve our unique conservation portfolio.

In my mind, a turning point was our development of a new strategic plan in 2015. Under that guidance, we have since developed evaluation criteria to re-evaluate our registered and designated natural areas and choose new candidate areas for inclusion. We performed a gap analysis on our portfolio and determined greater emphasis was needed acquiring natural areas in Colorado's eastern plains. We have used our collective expertise on the Council and outside input to identify a host of potential new natural areas across the eastern plains, including small watersheds with high-priority native fish species. We are exploring partnerships with Fort Collins and Larimer County Natural Areas Programs. Underpinning the success of our program is the participation of volunteer stewards and participating landowners. Through them, unique Colorado landscapes are included in the Natural Areas Program because they too recognize and take pride in the extraordinary geology, plants, wildlife or landscapes they have chosen to conserve.

Monitoring our 95 designated natural areas is done annually by a steadfast volunteer work force of Colorado residents, many of whom have served as volunteer stewards longer than those of us responsible for the program's oversight. As I step away from the duties of Council, I will continue to serve as a volunteer steward, watching over my special piece of Colorado's natural areas.

CNAC tour of White Rocks Natural Area in September 2018

