

# The Field Press

A PUBLICATION FROM THE COLORADO NATURAL AREAS PROGRAM

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April 2022

## From The Desk Of The Coordinator

By Raquel Wertsbaugh, CNAP Coordinator

It's been two years since I've last written one of these updates. Whew, how fast things can change! On the bright side, CNAP has come out of the pandemic unscathed. I'm incredibly proud of the flexibility and resiliency of the CNAP staff and volunteers during this time. Not only did they find a way to get the field work done in the midst of uncertainty and social distancing, but the CNAP staff also covered for me while I was on leave after having my second baby (pandemic baby of April 2020!).

Speaking of staff, we've recently said goodbye to seasonal field technician Lindsey Conrad, and have welcomed new staff Caroline Hildebrand and Lucy Haggard. We're fortunate to have added a new position this year: an outreach and volunteer program assistant. We're excited to have the extra staff to provide enhanced support for our amazing volunteer stewards, increase our outreach, and better tell the story of CNAP and all that our program accomplishes. Similarly, we've said goodbye and welcomed new Colorado Natural Areas Council members over the last few years. Please read more about our Council updates at the end of this newsletter.

We've been working on carrying out the many goals, objectives, and strategies outlined in our program's Strategic Plan. We're excited to be working with the City of Boulder Open Space and Mountain Parks to amend and grow both White Rocks and Colorado Tallgrass Natural Areas, as well as add the Coal Creek Tallgrass Prairie (formerly known as Jewel Mountain) property to our registry. These properties represent outstanding tallgrass prairie communities and unique geologic formations on the Front Range.

Finally, this year marks the 45th anniversary of CNAP! Seeing how far the program has come and a vision for its future brings great fulfillment. As we continue to find ways to strengthen our Natural Areas System, elevate CNAP's role in statewide conservation, and better tell our story, please reach out to us anytime if you have thoughts or ideas on how we can best achieve these goals. A big thank you to all the volunteers, partners, and others that have continued to support CNAP.

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CNAP staff, partners and volunteer steward at Arikaree River Natural Area, Yuma County.

# CNAP Staff Update: Meet The 2022 Team!

With faces both familiar and new, we would like to introduce you to the 2022 CNAP crew! Read on to learn more about our roles and backgrounds.

**CNAP coordinator:** CNAP has one permanent full-time 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 staff:** CNAP hires one to two temporary employees each year that generally work for six to nine months and can return for multiple seasons. Our stewardship specialist (formerly known as the "field tech"), plans and conducts statewide natural area monitoring, assists with rare plant work, produces GIS maps, and helps with other various projects. We're delighted to welcome a new stewardship specialist this year, Caroline Hildebrand.

This year, we have a brand new seasonal position, an outreach and volunteer program assistant. This position will assist with volunteer program management and coordination, website updates, newsletters, and new creative ways to help tell CNAP's story. We're thrilled to have Lucy Haggard on board to fill this new role.

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

## Get to know our team:

### Raquel Wertsbaugh



Photo courtesy Nora Logue

Raquel has been the full-time CNAP Coordinator since 2014 and continues to enjoy being part of such a unique and valuable statewide conservation program. Previous to her time with CNAP, Raquel was an area wildlife conservation biologist for Colorado Parks & Wildlife in Salida for almost 10 years. Prior to that she spent several years as a private lands wildlife biologist in southeastern Colorado in a joint position with the Natural Resource Conservation Service.

Raquel grew up in Loveland, CO and spent her younger years being outside as much as possible; fishing, hunting, hiking, and exploring all the corners of the state. Raquel spends her life outside of work with her significant other, Nick, and their two kids, Grace (5), and Everett (2), on a large cattle ranch they lease east of Aurora. Days spent on the ranch with her family and connecting with nature are her favorite; whether it be exploring the newly filled creek beds in the springtime, identifying prairie wildflowers, birds, and insects, or moving cattle to new pasture.



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

Jared Polis, *Governor*

Dan Gibbs, *Executive Director*  
*Department of Natural Resources*

Dan Prenzlów, *Director*  
*Colorado Parks and Wildlife*

### Colorado Natural Areas Council:

Ken Strom, *Chair*

Lynn Riedel, *Vice Chair*

Phyllis Pineda Bovin, *Member*

Denise Culver, *Member*

Jessica Pierce, *Member*

Josie Heath, *State Board of Land*  
*Commissioners*

Taishya Adams, *Parks and Wildlife*  
*Commissioner*



## Savanna Smith

Savanna Smith is a botanist for the Colorado Natural Heritage Program and is contracted full-time to CNAP. She was lucky enough to work for two years as a CNAP field technician before beginning her current role in 2021. She originally hails from Fort Worth, Texas and studied wildlife biology and ecological restoration at Colorado State University. Before CNAP, she gained a breadth of botanical, stewardship, and range management experience through various temporary positions with the Bureau of Land Management in Idaho and the Colorado State Land Board.

Savanna is grateful to work with a stellar team in beautiful places throughout the state. She loves getting to know our many wonderful volunteers and partners on field visits and the challenge of keying out an unidentified plant (one day she'll master the difference between basifixed and dolabriform hairs). She has visited almost all the natural areas over the past three years, and looks forward to returning to some of her favorite sites this season. Outside of the busy fieldwork schedule, she loves to rock climb in areas throughout the Western US, tend to her vegetable and flower garden, bike steep mountain roads, and go on long walks with her two dogs and significant other.



## Caroline Hildebrand

Caroline's connection to the land goes back to childhood, when she spent much of her time roaming the hilly oak woodlands of western Connecticut, spending long summer hours exploring moss-laden creeks and skating on frozen ponds in the wintertime. She translated her wonder and curiosity for the outdoors into a seven-year career in outdoor education, leading extended wilderness trips for teenagers across much of North America in the summers while completing her B.S. at the University of Richmond. It was during her second trip to the Alaskan Arctic in 2016 that she witnessed signs of climate change happening before her eyes and decided to shift her career in the direction of environmental conservation. She landed in Colorado, where she worked on a fire mitigation crew for a season before starting a GIS Certificate at University of Colorado at Denver. There she spent the next two years completing her M.S. in Environmental Sciences studying mutualisms between plants and fungi.

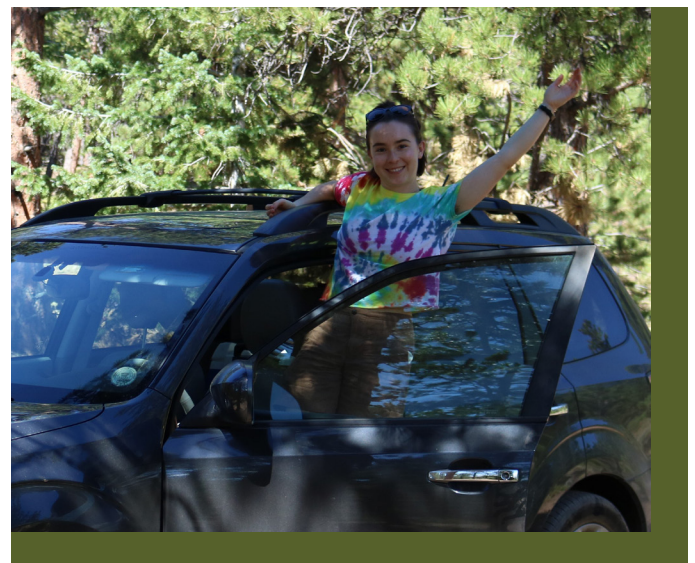
Caroline joins the Colorado Natural Areas Program as the Natural Areas Stewardship Specialist after two years working jobs with the Forest Service in Appalachia (Monongahela NF) and northern California (Klamath NF). She led botany crews on a number of projects including native seed collection, forest restoration, rare plant surveys, and non-native invasive species management. She is excited to be back in Colorado and looks forward to connecting with project partners and volunteers.



## Lucy Haggard

Lucy was born and raised south of Denver and spent many a summer day wading in creeks and picking just-ripe tomatoes from the backyard garden. Lucy graduated from the University of Colorado Boulder in May 2020 with a Human Geography major, Journalism minor and Interdisciplinary Writing certificate. For almost a year after graduating, Lucy worked as a Community Foundation Boulder County TRENDS Fellow at The Colorado Sun reporting on wildfires, drought, the coronavirus pandemic, and innovative ways people are trying to solve problems in this changing world.

The pandemic underscored for Lucy and so many others the importance of the outdoors, and Lucy is eager to make the most of the new Outreach and Volunteer Program Assistant position! When not on the clock, Lucy enjoys hiking, running, camping, birding, gardening, cooking, and tending to a plethora of houseplants. In 2020 Lucy trained as a volunteer naturalist through Boulder County Parks and Open Space, so you will also find Lucy leading guided hikes and interpretive programs in the Boulder area.





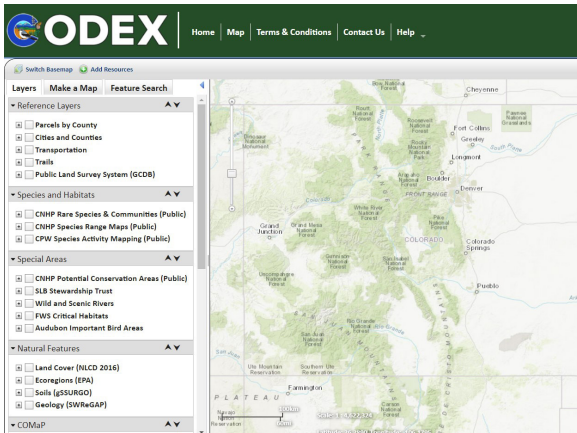
# Program Updates: The Conservation Corner

The CNAP team and broader conservation community have been hard at work since this newsletter was last published in 2020! Here's a sneak peak of a few projects that have been in the works. Click on the section headlines to learn more.

## **A Digital Spotlight On State Natural Areas**

Have you ever wondered which state Natural Areas you can visit? We've got a [new webpage](#) for that! It features a growing selection of state natural areas that either have public access or offer guided tours. The webpage includes printable fliers as well as an Arc StoryMap where you can immerse yourself in knowledge about the many incredible natural features that Colorado has to offer.

*Right: Wheeler Geologic Natural Area, Mineral County.*



## **CODEX Puts Conservation Data Together In One Place**

Have you signed up for a CODEX account yet? CODEX is a one-stop shop for a whole slew of conservation data. It includes an easy-to-use mapping tool that enables users to screen project areas for sensitive environmental features. CNAP data is directly fed into this tool and we've found this tool incredibly useful for our day-to-day activities! More information is on [the CODEX page on the CNHP website](#).

*Left: Screenshot of the CODEX browser application.*

## **Recovering America's Wildlife Act Is For Plants, Too!**

A federal bill with bipartisan support is making its way through Congress. If passed, [Recovering America's Wildlife Act](#) (H.R. 2773; S. 2372) would create a modern funding model for species of greatest conservation need across the country. [This could be a game changer for conservation!](#) Colorado could receive \$26 million annually, with another \$2 million specifically designated for high priority rare plants.

*Right: The rare cushion bladderpod, Miramonte Natural Area, San Miguel County.*



## **Focusing On The Endangered Pagosa Skyrocket**

The 2021 field season marked the fifth year that CNAP studied the [Pagosa skyrocket](#), a [federally endangered plant](#) endemic to a small area around Pagosa Springs. The monitoring techniques, developed by CNAP and CNHP, are now being duplicated across the species' range. There is still much to learn about this eye-catching plant, and study continues at Pagosa Skyrocket Natural Area.

*Left: Pagosa skyrocket in bloom, Pagosa Skyrocket Natural Area, Archuleta County.*



## More From The Conservation Corner

### **Drone Technology Helps Map Imperiled Species**

The Parachute penstemon is endemic to Colorado, with most known populations found on private lands designated as state Natural Areas. The plant is fond of steep shale slopes, so researchers from CNHP have developed innovative survey methods that use drones to avoid disturbing the plant's fragile habitat. This skillful use of technology in the field is proving useful for surveying previously inaccessible areas.

*Right: Parachute penstemon, Mount Callahan Natural Area, Garfield County.*



### **A New-For-Colorado Bryophyte Species**

Volunteer Steward Stacey Anderson, along with a team of expert bryologists, conducted surveys of bryophytes (i.e. mosses, liverworts and hornworts) in three Western Slope Natural Areas in 2021. The group discovered a new species previously unknown from Colorado at Unawep Seep Natural Area. Their surveys filled important data gaps in distribution and abundance of this understudied group of species.

*Right: A Plagiobryoides renauldii sample. Photo courtesy Stacey Anderson.*



### **CNAP Partners With The Colorado Mycoflora Project**

For the past two field seasons, CNAP has been collecting samples of Tulostoma, a genus of stalked puffball fungus. These data are sent to researchers working at Western Colorado University who are building a phylogenetic tree for the genus. WCU contributes this work to the Colorado Mycoflora Project, and will ultimately be included in the North American Mycoflora Project.

*Right: Tulostoma sample collected at North Park Natural Area, Jackson County.*



### **CNAP Continues Work With Endangered Species Act**

CNAP is the only state government program with a focus on rare plant conservation, and we've been busier than ever working with partners, especially the U.S. Fish & Wildlife, on a myriad of ESA-related actions. This includes numerous technical teams to help inform species status assessments, recovery plans, and recovery implementation for species such as Brandegee's wild buckwheat and clay-loving wild buckwheat.

*Left: North Park phacelia, North Park Natural Area, Jackson County.*





# Colorado Natural Area Highlight: Tamarack Ranch

By Lucy Haggard

Nestled in the northeast corner of Colorado, Tamarack Ranch Natural Area contains lush plains cottonwood riparian forests and vast expanses of sandhill prairie. This natural area is located within the Tamarack Ranch State Wildlife Area (SWA), owned and managed by CPW, and is composed of two disjunct parcels located north and south of I-76. The two parcels were designated as one natural area in 1986.

The western parcel is centered around the floodplain of the South Platte River. At the turn of the century, the South Platte was a wide, shallow, sandy river with few trees or riparian vegetation. The South Platte has since seen significant changes as a result of altered water regimes, such as the installation of transbasin water transfers in the 20th century like the Colorado-Big Thompson project. For Tamarack Ranch Natural Area, these changes have resulted in a diverse mosaic of plains cottonwood-based communities, with multiple stages of ecological succession present and a variety of microhabitats. Migrating waterfowl frequently use the western parcel as a rest stop on their travels, and species such as the SWAP Tier 2 Species of Greatest Concern common garter snake find a welcome home in the riparian forest. The eastern sandhill prairie parcel is ideal habitat for the greater prairie chicken, another SWAP Tier 2 SGCN.

The SWA currently has a grazing plan that runs cattle at varying times of year in order to achieve habitat management goals. Within the western parcel, managers use grazing to create a diverse, patchy landscape, which benefits bobwhite quail populations. In the eastern parcel, grazing is used to increase the abundance of native



*A juvenile Great Horned Owl at Tamarack Ranch Natural Area.*

warm-season grasses, thereby improving habitat for greater prairie chickens. Targeted grazing can also be a viable tactic for weed management.

Since the Natural Area is part of the greater Tamarack Ranch SWA, all public access must follow the rules set in place by the SWA. Public access is allowed, but users must have a hunting or fishing license or an SWA pass. While no facilities exist within the Natural Area parcels, the SWA does offer restrooms and limited camping. Please visit the [Tamarack Ranch SWA webpage](#) for more details on rules and regulations. Although the Natural Area is spectacular at all times of the year, visits during early fall should yield exceptional displays of the native warm-season grasses.



*The South Platte River winds through Tamarack Ranch Natural Area, Logan County.*



# Volunteer Corner: New Faces And Places



Volunteers and CNAP staff hike through Hurricane Canyon Natural Area, El Paso County.

CNAP's volunteer program consists of about 60 dedicated volunteers who steward one or more Natural Areas. Volunteers monitor their site at least once a year, and sometimes more often. They report on site conditions, status of rare plants or other significant features, and more, providing valuable insights on their site for CNAP staff and the landowner. Volunteers get to know their assigned site(s) over many years; about half of our volunteers have been visiting their sites for more than 10 years! Occasionally, we have volunteers who conduct special projects, such as completing site-specific inventories of vascular plants or bryophytes.

CNAP thanks the following dedicated volunteers who retired in 2020 and 2021.

- ▶ Larry Morandi, Hoosier Ridge Natural Area, 3 years
- ▶ Jim and Sue Schleuder, Roxborough Natural Area, 13 years
- ▶ Lorraine and Dick Yeatts, Gateway Natural Area, 13 years
- ▶ Judy Hopper, Copeland Willow Carr Natural Area, 18 years

We appreciate our volunteers who stepped up to steward additional Natural Areas. Thank you for going above and beyond!

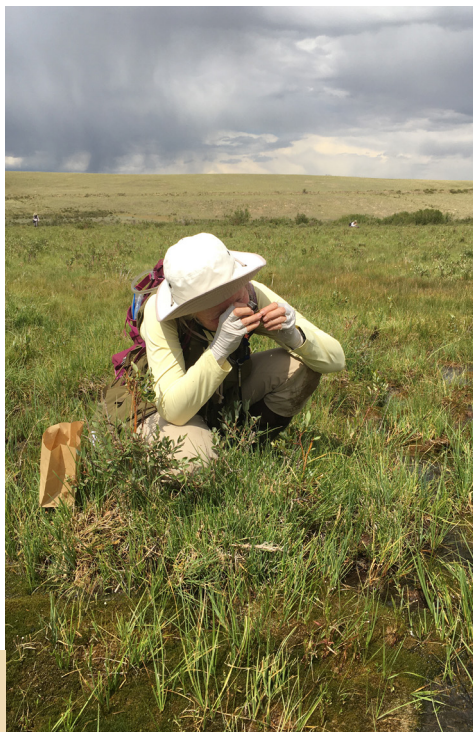
- ▶ John Dougherty, Dudley Bluffs, Black's Gulch, and Lower Greasewood Natural Areas
- ▶ Stephen & Jeanne Wenger, Gateway Natural Area

And last but not least, we are grateful for our new volunteers from 2020 and 2021! Thank you for being a part of our program and coming on with such enthusiasm.

- ▶ Camille Richard, Slumgullion Earthflow Natural Area
- ▶ Mona and Ken Charles, Rajadero Natural Area
- ▶ Mike Thomas, Ann Sarg and Tom Zeiner, Roxborough Natural Area
- ▶ Erik Facticeau, East Lost Park Natural Area
- ▶ Alex Laurence-Traynor, Hoosier Ridge Natural Area

## CPW Connect: A hub for all things volunteering!

The CPW Volunteer Program rolled out a brand new volunteer management system in 2021, called CPW Connect, and CNAP staff are excited about the website's capabilities. It has a user-friendly interface that makes entering hours, sending photos, and completing required courses and waivers a breeze. CNAP volunteers: if you haven't had the chance to check out the new system, we'd love to help you set up your account.



Volunteer Steward Stacey Anderson at Fourmile Creek Natural Area, Park County.

## Want to be a CNAP Volunteer Steward?

We're currently at capacity for site assignments. However, life happens, and vacancies for a Natural Area may open up throughout the season. If you or someone you know is interested, send an email to [dnr\\_cnep@state.co.us](mailto:dnr_cnep@state.co.us) for more information. Thanks for your interest!



# Volunteer Corner: Out In The Field



CNAP volunteers contributed over 1,884 hours in 2021, representing 73 different site visits to 44 Natural Areas. We are grateful to have an excellent cadre of volunteers with diverse skill sets and backgrounds. Here are just a few highlights from the many volunteer visits in 2021.

- › Lee Cassin and Dave Tolen reported on the recovery of a unique curl-leaf mountain mahogany community at Limestone Ridge Natural Area, which was burned by the Peekaboo fire in 2017.
- › Peter and Marian Rohman scouted out and submitted updated records of several state-rare plant species at McElmo Natural Area in southwest Colorado.
- › Gay Austin re-took photo monitoring points and reported on the progress of a wetland restoration project at Mount Emmons Iron Fen Natural Area.
- › Travis and LaDonna Ward provided updates on the encroachment of noxious weeds at Haviland Lake Natural Area. The local CPW office used this data to inform weed management actions.
- › Stacey Anderson and other Colorado bryophyte experts conducted bryophyte inventories on several Western Slope state natural areas, leading to the discovery of a new-to-the-state species. For more information, see the Conservation Corner story highlight.
- › Erik Facticeau identified several fungi species at East Lost Park Natural Area, adding to our knowledge of the species diversity at the site.

*Top left: Volunteer Viki Lawrence at Gothic Natural Area, County. Top center: Ken and Mona Charles at Rajadero Natural Area, Conejos County. Top right: Volunteer John Dougherty and CNAP staff monitor Dudley Bluffs bladderpod at Dudley Bluffs Natural Area, Rio Blanco County. Middle left: Volunteer Eric Facticeau at East Lost Park Natural Area, Park County. Below: Volunteer Lee Cassin traverses the rock in Rough Canyon Natural Area, Mesa County.*





# State Wildlife Action Plan (SWAP) Species Highlight: Great Sand Dunes Tiger Beetle

By Caroline Hildebrand

Nestled beneath the towering Sangre De Cristo Mountains lie the tallest sand dunes in North America, now protected within the Great Sand Dunes National Park and Preserve. These wind-swept dunes are home to the Great Sand Dunes tiger beetle (*Cicindela theatina*), a small insect endemic to the harsh, arid dunal ecosystem found within the San Luis Valley. The beetle stands out amidst the beige dunes with its brilliant green thorax, large antennae, pincher-like mandibles, and the distinguishable violin-shaped pattern atop its wings. Its magnificent coloring caught the eye of Father Bernhard Rotger, who first described it as new to science in 1944, a decade after the dunes were designated as a national monument by President Herbert Hoover. The dunes were later designated as a National Park and Preserve in 2004.

The Great Sand Dunes tiger beetle lives for two to three years, most of which are spent underground in its larval stage. Larvae only emerge from their burrows when hunting, which they do via ambushing prey that ventures too close in a style called “burst hunting.” Adult beetles emerge from their larval burrows in late May, ready to bask in the sunlight after waiting out the harsh, windy winters of the San Luis Valley. The beetles are active during the day and spend their time breeding, preening, hunting, and scavenging.

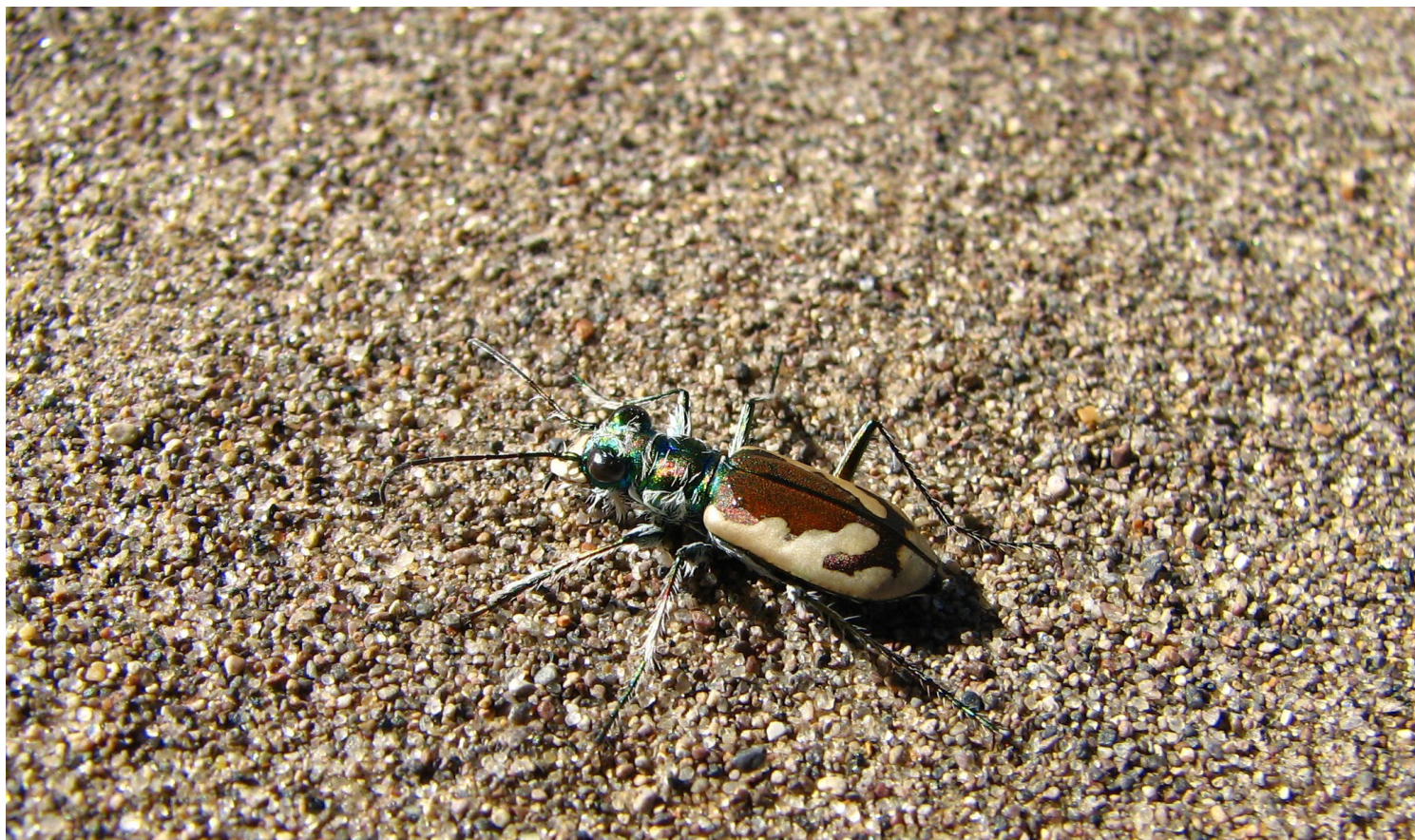
The species was petitioned for listing under the Endangered Species Act in 2007 and was later determined not warranted for listing by the U.S. Fish & Wildlife Service in 2017. Research on the species in the early 2000’s was conducted by Phyllis Pineda Bovin, a former



*A mounted Great Sand Dunes Tiger Beetle. Photo courtesy Denver Museum of Nature and Science.*

biologist at Great Sand Dunes National Park and current Governor appointee on the Colorado Natural Areas Council.

Despite their diurnal habits, these elusive iridescent beetles are hard to spot, and are only active during the late spring and summer months. Within Great Sand Dunes National Park & Preserve, they are concentrated around Indian Spring Natural Area, which is located in an area of the park closed to the public. Make sure to bring plenty of sunscreen and [check out the park's website](#) if you are planning a visit to the publicly accessible areas of the park!



*A Great Sand Dunes Tiger Beetle skitters across the ground. Photo courtesy Phyllis Pineda Bovin/National Park Service.*



# Natural Areas Council News

By Ken Strom, Council Chair

After a couple of challenging years, many of us find ourselves taking stock of what's truly important in our lives. As we consider the people and places that are special to us, it seems appropriate at this time to recognize and celebrate the good work that special people have continued to do to ensure the future of places that are valuable to us. Such is the work of the Colorado Natural Areas Program itself, which exists to help ensure the future of the many natural gems that sparkle across Colorado's magnificent landscapes. But the program succeeds only because of the people who give so much of themselves to sustain these natural treasures. This newsletter itself is a celebration of the ongoing efforts over the past two years of the people who have held this crucial program together, especially the CNAP staff themselves and the many dedicated volunteers across the state who continued their study and stewardship of these treasured lands. All of this reminds us that nature itself carries on through every kind of change and is always available for each of us to turn to when we're looking for something to sustain us in tough times.

I'd like to focus here on celebrating another group of volunteers who give their time and energy to support the CNAP staff and stewards and ensure that they succeed in maintaining the highest quality of care for our Natural Areas network. These are the 7 members of the Colorado Natural Areas Council (CNAC), who advise, assist, plan and provide initial approval of major decisions affecting the state's Natural Areas. Appointed by the governor or as representatives of two partner commissions, the CNAC members bring an impressive array of skills, talents and experience to the functioning of the Natural Areas Program. Consider the caliber of the latest CNAC roster. In 2020 we had to bid farewell to applied ecologist Julia Kintsch, and the following year we said good-bye to botanist and Council Vice-chair Dina Clark. But we maintained strong continuity with the ongoing terms of ecologist/botanist Denise Culver, long with the Colorado Natural

Heritage Program; and plant ecologist Lynn Riedel, who was also elected as our new Vice-chair and has worked many years for the City of Boulder Open Space & Mountain Parks Department. Since 2020 the governor has provided two new strong appointees to CNAC: Phyllis Pineda Bovin, a natural resource specialist and entomology expert with the National Park Service; and Dr. Jessica Pierce, a bioethicist with the University of Colorado who teaches and writes about environmental bioethics and sustainability. We also welcomed to our ranks Parks & Wildlife Commission representative Taishya Adams, a powerful advocate for justice and environmental access and participation who is also Colorado Co-lead for Outdoor Afro; and Board of Land Commissioners representative Josie Heath, a public servant, philanthropist and educator, who helped establish Mile High Youth Corps and Americorps.

During the past 8 years of my service on CNAC I have watched with pride as the Council and staff have grown into a true team, making impressive strides in building an effective Program. Out of our diversity and intellectual daring, we are forging a vision for a vibrant environmental future. More than ever we are focused on raising the quality of our Natural Area inventory, monitoring the health of the sites' special plants and other features, and ensuring that CNAP provides added value for the people of Colorado. As my final term ends in June, I will think most about the honor it has been to serve with this amazing team.



*CNAC and CNAP staff tour Coal Creek Tallgrass Prairie, September 2021.*



*The Colorado Natural Areas Council and CNAP staff take a field tour of Colorado Tallgrass Prairie Natural Area, Boulder County, September 2021.*