DOG EVENTS * LIVE RAPTORS * BIRD WALK * RUN T-SHIRT * TALKS

EXHIBITS • FOOD • LIVE MUSIC • KIDS ZONE • CRAFTS

Gunnison Sage-Grouse Festival

WSCU University Center

Saturday, April 13 9am - 3pm

5K/10K RUN/WALK * KIDS 1500 & 3000 RUNS

CELEBRATE

THE THIRD GUNNISON SAGE-GROUSE FESTIVAL, a collaboration of land management agencies and other groups, runs **Saturday April 13**, 9:00 A.M. to 3:00 P.M. at the WSCU University Center. Bring family and friends to this fun indoor/outdoor event, discover new ways to help our valley's signature bird, and celebrate the wonders of this special place.

Features: *Free chili lunch · Live music · 5K Run/Walk, 10K Run, Kids 1500 & 3000 Races · Live raptor show & exhibit · Bird walk · Dog events · Kids zone with face painting, crafts, and games · Handouts · Murals from Gunnison area schools · Talks by experts · Sage-grouse video · Agency and conservation exhibits & more*

Exhibitors: *Bureau of Land Management · CO Parks & Wildlife · City of Gunnison · Gunnison County · Gunnison Trails · Gunnison Trails Commission · National Park Service · NRCS/Gunnison Conservation District · Sisk-a-dee · USFS · Western State CO University · K9 Training · Black Canyon Audubon & more.*

Parking: *University Center parking lot, south of Escalante Drive.*

RUN/WALK

GUNNISON TRAILS' 3RD SAGE-GROUSE 5K/10K raises awareness of Gunnison Sage-grouse with recreational and fitness-based trail users to honor seasonal closures and restrictions on lands in seasons and times of day important to the life stages of this bird. Most closures and restrictions take place in spring, when the bird is especially vulnerable. Register at the event or on runreg.com. Enjoy a free lunch. $25 entry includes an **event t-shirt**. Kids 12 & under are free & also receive a t-shirt. Medals are presented at 12:20 P.M.

Starting on the south lawn of the University Center, the **5K RUN/WALK** is a jogger-stroller friendly course that accesses Jorgenson Park, then a wide flat gravel road through a beautiful sage ecosystem by the riparian turnaround near Tomichi Creek and the base of W Mountain. The return route retraces the outbound route.

The **10K RACE** starts with the 5K but turns west on San Juan, plying the perimeter of Gunnison in a clockwise direction. If weather and conditions permit, this will be a mixed surface route, with grass, gravel, dirt and trail sections on the WSCU campus, in Jorgenson and Char Mar parks, behind Gunnison Community Schools and through Van Tuyl. If conditions are muddy, the course will be primarily paved. The underpass and bridge at the Twin Bridges/Whitewater Park are also featured.

The **KIDS 1500 RUN** starts with the 5K and 10K, but turns left to stay on the WSCU campus, not crossing major streets. The route jukes and jives around most academic buildings on the east side of campus. Surfaces will include grass, sidewalk and some parking areas. Parents are encouraged to go with their kids. The course is 1.5K (kids 5–10) and kids 11–14 do two laps or 3K.

BIRD

JOIN BLACK CANYON AUDUBON and the WSCU student chapter of **The Wildlife Society** Saturday April 13 at 9AM for a **bird walk** around the WSCU campus designed for beginning and advanced birders. We will be see birds that winter in Gunnison. While many species head south for winter, some stay through the year and have adapted to our cold and semi-urban environment. Some species we hope to see include the *house and Cassin's finches, Pine Siskins, Dark eyed Juncos, Mountain and Black-capped Chickadees, Northern Flickers, and White-breasted Nuthatches*. Other, rarer birds that we might observe on campus in April include *Cooper's and Sharp-shinned hawks, Yellow-headed Blackbirds, or Bald and Golden Eagles*. We may even see the *Great-horned Owls* nesting near the Leslie J. Savage Library! This will be **an easy stroll around campus**, with a special visit to the feeder outside the science building. Meet at the BCAS information booth at the Gunnison Sage-grouse Festival. The walk will be led by Amber Carver of Black Canyon Audubon. *For more information, contact Amber at caramb22@gmail.com.*

Walk or run to benefit Sage-grouse conservation education & efforts on local private & public lands

EAT

ENJOY free chili, fixins, dessert and drinks

SCHEDULE

All-Day Festival Fun
In Western State Colorado University's ***University Center****, on the south side of Escalante Drive, 2 blocks west of Colorado Street, in Gunnison (see map)*

ACTIVITIES

University Center Ballroom Conference rooms, & South lawn

9am BALLROOM OPENS
- Agency Interpretive Exhibits
- Vendor & Partner Booths
- Youth Art Murals Unveiled
- Kid's Zone with Face Painting, Crafts & Games
- Emcee & Cornell Video

9am INTRO TO BIRDING
Stroll the WSCU campus with an Audubon bird expert

9–10:30 SAGE-GROUSE RUN/WALK
On-site Registration
Or: register in advance at www.runreg.com/Net/3109

11am START
- Sage-Grouse 10K Run
- Sage-Grouse 5K Run/Walk
- Kids 1500 & 3000 Runs

11:30 FREE LUNCH
Chili & Fixin's, Drinks & Dessert

12:20 SAGE-GROUSE CHAMPIONS
Medals presentation

12:30 LIVE RAPTOR SHOW, Main Stage
Birds available during the day in the North Conference Room

11:30 & 1:30 LIVE MUSIC, Main Stage
Bands TBA

1:30 PHOTOS WITH SMOKEY BEAR
Bring your camera

1:30 DOGGY DISTRACTION & DOGGY AGILITY COURSES
South lawn

TALKS

During the festival in the south conference room

10:00 Christina Santana, NRCS
Habitat improvements on private land

10:30 Betsy Neely, Audubon
TNC Climate Change Resiliency Project

11:15 Drew Nelson, K9 Training
Positive dog training & off-leash tips

2:00 Nate Seward, CPW
Grouse lek counts & population estimates

2:30 Pat Magee, WSCU
History of the Gunnison Sage-grouse

RAPTOR

JOIN THE RAPTOR EDUCATION FOUNDATION, whose show is *cosponsored by Rocky Mountain Bird Observatory*, as they share raptors, including *eagles, falcons and owls*. REF's environmental literacy shows amaze children of all ages. See them on-stage at 12:30 and in a special room throughout the day.

PLAY

FIND FUN THINGS FOR KIDS TO DO in the agency booths and kids zone:
- Use clues to identify Gunnison Sage-grouse and habitat as you play 'The Bird Detective'
- Nature themed face painting
- Make a flock of origami Sage-grouse
- Role play a hungry bird! Discover how beaks relate to food sources
- Take home a Sage-grouse activity book or coloring page, *and much more!*

VOLUNTEER

TO VOLUNTEER on a Gunnison Basin habitat conservation project check the BLM and Gunnison Trails booths at the Festival, or email bneely@tnc.org.

DOG

BRING YOUR POOCHES to the University Center south lawn for Drew Nelson's **Doggy Distraction Course**. Join other dog owners 2pm Saturday April 13, and see how well even our best-behaved dogs react when there are little critters to chase! This is instructive for everyone who takes dogs into sagebrush. Every dog who tries the Doggy Distraction Course wins a coupon for a **Free Day of Doggy Daycare** at Waggin' Tails in Gunnison! Also, try the Doggy Agility Course! Also, catch Drew's **Positive Dog Training** presentation, a casual discussion of available training groups and classes, and other doggy socialization techniques and outdoor tips that can lead to greater success on and off-leash. Also, catch a demo of superior leash products designed for active outdoor travelers.

GROOVE

CATCH live music on the main stage at 11:30 & 1:30!

SMILE

BRING your smile for a photo with me at 1:30pm!

PUZZLE ANSWERS:

Across
2. chicks
5. Gunnison
8. sage
10. greatersagegrouse
13. hen
14. development
16. dance
17. cryptic
18. species
20. roost
21. grazing

Down
1. lek
3. habitat
4. endangered
6. nest
7. fragmented
9. yellow
11. subdivision
12. sagebrush
15. predators
19. seven

Brought to you by these agencies, presenters & partners:

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KEEPING THE DANCE ALIVE: Two Gunnison Sage-grouse court in sage in early morning light

Courtesy Mike Danzenbaker

FOR THE FESTIVAL see page 4

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Decision expected September 30, 2013

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A landmark law – the Endangered Species Act has stopped extinction for hundreds of imperiled species across the nation.

By September 30, 2013, the U.S. Fish and Wildlife Service will make a final decision on whether to list Gunnison Sage-grouse as an endangered species and designate critical habitat for the species. If listed, Gunnison Sage-grouse would gain protection under the Endangered Species Act (or ESA), which prohibits the "take" (*killing, hunting, trapping, capturing, harming, etc.*) of listed animals and the interstate or international trade of listed species, except under Federal permit. The U.S. Fish and Wildlife Service works with landowners, Tribes, and Federal and State agencies to benefit imperiled species. We provide technical assistance in the design of land use projects and implementation of conservation measures to avoid and minimize impact to these species. The U.S. Fish and Wildlife Service's mission is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people.

The community has implemented a number of measures to benefit sage-grouse including voluntary conservation agreements and conservation easements. Other conservation tools that may benefit this species include habitat conservation plans, safe harbor agreements, and conservation banks. *For more on these tools, see http://www.fws.gov/endangered/landowners/landowner-tools.html.*

Charlie Sharp is a Fish and Biologist with the Western Colorado Field Office of the U.S. Fish & Wildlife Service in Grand Junction

Life after a listing: The bald eagle

An endangered species success story

A LISTING IS NOT THE FIRST CHOICE FOR many community members, but if enacted it might increase cause for hope. Looking locally, one other species found in the Gunnison Basin – the *bald eagle* – is actually an Endangered Species listing success. When America adopted its national symbol in 1782, we may have had as many as 100,000 nesting bald eagles. However, in 1940, the species was "threatened with extinction," and Congress passed the Bald Eagle Protection Act, prohibiting killing, selling or possessing the species. However, 23 years after the act was passed, only 417 nesting pairs of bald eagles remained.

Listing bald eagles as endangered accelerated the pace of recovery through captive breeding programs, reintroduction, law enforcement, and nest site protection during breeding season.

In 1967, taking protection to the next level, the Secretary of Interior listed bald eagles south of the 40th parallel under the Endangered Species Protection Act of 1966, and in it the eagle's remarkable recovery began. There are now at least 9,789 nesting pairs of bald eagles in the contiguous U.S.. At these numbers **they no longer need protection** under the Endangered Species Act. On June 28, 2007, the Service announced the *recovery* of our nation's symbol and its *removal* from America's list of threatened and endangered species.

Looking ahead, with or without a listing, we hope the Gunnison Sage-grouse will become *another* success story – conserved, protected and enhanced by the collaboration of many stakeholders for our continuing mutual benefit.

For more on the recovery of bald eagles, visit www.fws.gov/migratorybirds/BaldEagle.htm. For more on the U. S. Fish and Wildlife Service Endangered Species Program, visit www.fws.gov/endangered

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Timeline of increasing habitat fragmentation, monitoring and study, partnerships and interventions, and hopeful rebound for the Gunnison Sage-grouse

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Gunnison Sage-grouse research

A study in uniqueness

RESEARCHERS CONSIDER SAGE-GROUSE in the Gunnison basin different from the more widespread Greater Sage-grouse. The Sage-grouse in Gunnison was proposed as a different species in 2000 by a team of researchers led by Dr. Jessica Young, formerly at Western State Colorado University. The American Ornithological Union accepted the designation based on a variety of distinguishing traits, including genetics, body size, plumage and different mating vocalizations.

So, while the two species are similar, it is important to research both species. "Research gives us a window into a species' actions, existence, and use of their habitat. Research allows us to move forward with meaningful conservation actions to preserve species and their habitats," says Young.

"I work with Gunnison Sage-grouse and believe they are the 'canary in the coal mine' of the sagebrush ecosystem," says Tyler Hicks, a Western State graduate. Hicks has been involved with several Sage-grouse research projects, including a study documenting Gunnison and Greater Sage-grouse sperm characteristics, and a project studying the impacts of human noises at the Waunita Watchable Wildlife Site, which will hopefully guide future management of noise levels for recreational wildlife viewing.

Gunnison Sage-grouse indicate sagebrush health and their decline may signal a general decline in the quality and quantity of sagebrush habitat.

Another current noise study is measuring ambient noise and the introduction of anthropogenic (*man-made*) noise and its impact on grouse and lekking behavior. Headed by Dan Piquette at WSCU and Colorado Parks and Wildlife (CPW), this study is similar to those performed on Greater Sage-grouse. Piquette says, "I am learning that every species is different in how it responds to human and natural environmental factors. Gunnison has a unique climate and species, worthy of its own research."

Western State Colorado University professor Dr. Pat Magee has coordinated the Waunita Watchable Wildlife Site for over a decade. He is also researching sagebrush habitat treatment effectss by the Bureau of Land Management on songbirds, especially those that require healthy sage ecosystems. Magee's research will help determine if attempts to restore the sage ecosystem for grouse are effective, and whether these negatively influence other birds.

Colorado Parks and Wildlife has several active researchers, including Dr. Mike Phillips. In addition to assessing population dynamics and movement patterns, Phillips is working on Sage-grouse captive rearing techniques. He is also attempting to improve population size estimates through genetic samples.

Gunnison Sage-grouse are a beautiful, unique species that should be studied closely to better understand the bird and its interactions with the ecosystem. "Their plumage and dances make them one of the most charismatic species in the western U.S.," says Hicks. Magee adds, "I value this species because it is an amazing, rare and unique work of biological art."

Gunnison Sage-grouse brings together people from varied backgrounds, such as *biologists, recreationists and ranchers* in a conservation effort unprecedented in the Gunnison Basin. Magee adds, "the bird provides an opportunity to grow professionally and personally, to work more effectively with others, to examine my thoughts and perceptions, to stretch my patience and understanding, to dig deep and work hard." Hicks adds, "What I enjoy most about Sage-grouse research is interacting with the people the birds bring together."

Marcella Fremgen works for Colorado Parks and Wildlife in Gunnison County

Do our dogs obey in sage?

GUNNISON SAGE-GROUSE ARE UNDER SIEGE BY DOGS. Leashes are our best option, but we often opt for 'voice command.' As a dog trainer of 15 years this usually means hollering and hoping they respond. This is unlikely when there are fun things to chase and smell. What 'voice command' *should* mean is our dog is under control. We want our dogs to run outdoors, but how can they ignore instinct and obey us when every step presents another exciting doggy distraction course?

Training is the first answer. Our dogs need a solid base of sit, stay, down and come, taught in a social situation with distractions. One solution is finding a fun training group or class. In class and at home, trainings should be filled with treats and praise. A happy dog works out of love and enjoyment, not fear. The context for 'come' should always be positive – don't use it for bath time or nail trimmings – it sends mixed signals.

The second answer is leashes, used properly, strengthen bonds. In a pack hierarchy all dogs have a job and rules to obey. Dogs understand leashes and are happier with guidelines.

We have more fun with our companions when they know what we want and expect, and when they know that rewards are given consistently for obeying. However, when we take our pooches into Sage-grouse country, we can give no better gift to local Sage-grouse than a leashed pet, even with our best and most well-behaved dogs. They'll get over it!

Drew Nelson owns K-9 TRAINING OF THE WESTERN SLOPE and co-owns WAGGIN' TAILS DOGGY DAYCARE & PET BOARDING in Gunnison. Drew is an AKC CANINE GOOD CITIZEN APPROVED EVALUATOR with 15 years experience in multiple facets of dog training. He can be reached at drew@waggintailsgunnison.com.

Students protect habitat

Prepare for natural resource careers

A YOUTH CONSERVATION CORPS (YCC) CREW through the Western Colorado Conservation Corps (WCCC) is completing route restoration in the Signal Peak area near Gunnison, Colorado. The crew is on a four-week assignment restoring routes by (1) creating visual and natural barricades, (2) dead planting, (3) transplanting shrubs and grass, (4) scarifying soil, and (5) planting grass seed in priority Gunnison Sage-grouse habitat. These methods work. The crew members are students at Western State Colorado University in Gunnison. Most major in Environmental Science. The crew leader is a veteran.

This high priority project allows the BLM to implement the Gunnison Basin Federal Lands Travel Management Plan which significantly supports Gunnison Sage-grouse conservation efforts. The Gunnison Sage-grouse is a candidate species under the Endangered Species Act and may be listed as threatened or endangered.

The Signal Peak area is just north of Western State Colorado University and is a playground for mountain biking, running and hiking for these students when attending WSCU. Through the YCC program, these young adults are developing a work ethic based on hands-on experience in natural resource projects and careers. The corps members now have first-hand knowledge as to why travel management implementation is a key to successful Gunnison Sage-grouse conservation. Defragmenting grouse habitat significantly enlarges wildlife safety corridors and the species' chances for survival. When the crew returns to school, they will be able to share with (and point out to) fellow students the importance of hiking, riding and running on open designated routes and steering clear of restored, non-designated routes.

Recent science shows unmanaged travel systems fragment habitat, adversely impacting the Gunnison Sage-grouse.

Kristi Murphy is an Outdoor Recreation Planner with BLM Colorado, Gunnison Field Office

TOP RIGHT: ***An undesignated route*** *through priority Gunnison Sage-grouse habitat.*
ABOVE: ***Less route, more habitat****. WSCU students block and remove the above undesignated route.*

Road management improves habitat

LIKE HUMANS, WILDLIFE MOVES OVER THE LAND TO ACCESS FOOD, water, and cover, and to breed and raise their young. Humans use roads to transport people and goods, and access places and resources. However, the relationship between roads and the natural environment is complex. Roads facilitate predation, and are barriers to breeding, migration and habitat quality. The U.S. Fish and Wildlife Service identified **habitat fragmentation**, specifically from development (*roads and other infrastructure*), as one of the greatest threats to Gunnison Sage-grouse.

Roads also add noise, visual disturbance and pollutants. Roads provide corridors for predators which thrive in human-modified landscapes such as coyotes, red foxes, raccoons, and corvids (*ravens and crows*), all of which prey on Sage-grouse. This diminishes productivity (*nest success and chick survival*), especially if roads access high concentrations of nesting birds. Roads also facilitate the spread of non-native invasive plant species along roadsides from ground disturbance, introduced road fill, vehicle transport, and road maintenance. Once established, non-native plants encroach into surrounding areas and degrade habitats. Sage-grouse depend on a variety of native forbs and associated insects for chick survival, and they use sagebrush exclusively in winter for food and cover. Invasive plants reduce or eliminate these native plants.

For these reasons and more, some **route decommissionings** and **annual spring road, trail and area closures and restrictions** exist. From March 15 to May 15, many roads and trails in sagebrush terrain are closed to motorized vehicles to protect soft roadbeds caused by motorists in mud season and minimize disturbance to Sage-grouse in breeding season. Because Sage-grouse mate on spring mornings, it is also important in the spring to **travel after 9:00 A.M.** In some priority habitats, such as the Flat Top Mountain area north of Gunnison, the closure extends to June 15 to protect Sage-grouse nesting and early brood-rearing periods. Respecting all seasonal road and trail closures minimizes disturbances in times of high vulnerability, such as the reproductive season.

Public cooperation is invaluable. Public land management agencies (*Gunnison County, Colorado Parks and Wildlife, and the BLM and USDA Forest Service*) appreciate the public's support in respecting closures implemented under the Gunnison Basin Federal Lands Travel Management Plan. Community involvement is critical to Gunnison Sage-grouse conservation and overall habitat quality. Together, we can foster solutions that consider our community's needs and the needs of local wildlife.

Matt Vasquez is USDA Forest Service District Wildlife Biologist in Gunnison

Free maps aid local navigation

JOINTLY-PRODUCED FREE MOTOR VEHICLE TRAVEL MAPS are available to explain new travel management policies on local USDA Forest Service and BLM Gunnison Basin lands. *Key points:*

- Keep wheeled vehicles on **designated motorized roads and trails**.
- Not all roads and trails are designated motorized routes, ground signage may or may not exist, and some roads and trails are seasonal.
- To see *which* routes are designated motorized, for *what* kind of vehicle, and in *what* seasons, get a *free* current Motor Vehicle Travel Map.

PUZZLE ANSWERS:

Across	Down
2. chicks	1. lek
5. Gunnison	3. habitat
8. sage	4. endangered
10. greatersagegrouse	6. nest
13. ben	7. fragmented
14. development	9. yellow
16. dance	11. subdivisions
17. cryptic	12. sagebrush
18. species	15. predators
20. roost	19. seven
21. grazing	

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View grouse at local lek » 3

WSCU students protect habitat » 4

The Sage-grouse News

ZEN & THE ART OF SPRING RECREATION » 2 | LANDMARK GROUSE BOOK » 2 | WORD PUZZLE » 2 | VOLUNTEER OPPORTUNITIES » 3 | ROAD MANAGEMENT IMPROVES HABITAT » 4 | DOGS IN SAGE » 4

KEEPING THE DANCE ALIVE: Two Gunnison Sage-grouse court in sage in early morning light

Courtesy Mike Danzenbaker

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Let the good times roll

To put more Zen in your sport and keep the monkeys off your back, follow these guidelines:

MO-JO (*good*)
Dogs on leash.
Wait until 9:00 am.
to do your thing.

JU-JU (*bad*)
Disturb wildlife in winter.
Disrespect road closures.
Pioneer new routes.

Zen & the art of spring recreation

NATURE HAS A WAY. Not nature like in flowers and rainbows – the *passive* nature – but nature in the *active* sense; the nature we mean when we say, grimly, "let nature take its course". That kind of nature has a way of ensuring an equality; a gritty, ironic means of getting even. You know – Yin and yang. Good and evil. Mojo and juju.

Life is that way. Call it karma. Take recreating on our public lands for example: here in the Gunnison Basin we're blessed with thousands of square miles out our back door where we can hike, hunt, run, camp, fish, climb, ski and bike. That's a big Yin. The Yang of it is, we have to make a few small sacrifices in the way we do our thing. Ain't no big deal – we just need to go with the flow.

In fact, dodging bad karma is as simple as keeping your dog under control or respecting road closures. Dude, that's easier than tying your shoes. And waiting 'til after 9 a.m. to do your thing earns you another measure of good fortune, cause hey, the critters that live here, like sage grouse, need time to do their thing too.

Easy enough? You can even help out on a trail work day or other public lands project to fatten your Mojo against flat tires and twisted ankles, "cause, brothers and sisters, what goes around comes around."

Chris Parmeter works for Colorado Parks and Wildlife in Gunnison County

Landmark grouse book

SAVE THE LAST DANCE – A STORY OF NORTH AMERICAN GRASSLAND GROUSE – is a collaboration between award-winning photographer Noppadol Paothong and outdoor writer Joel M. Vance. The 204-page book captures the beauty of seven North American grouse species, including **Gunnison Sage-grouse**, and another species that lost its battle for survival.

With beautiful illustrations of habitat and range, over 200 photographs, a stirring text, and conservation steps you can support to protect Gunnison Sage-grouse, SAVE THE LAST DANCE is an essential look at the changing dynamics and evolving viewing opportunities in the prairies, plains and sagebrush steppes of the American West.

Order weekdays at the Gunnison Ranger District Office in Gunnison at (970) 641-0471, or check out the book web page at www.savethelastdance.com

Courtesy Nop Paothong

View Sage-grouse at a local lek

SISK-A-DEE, A LOCAL NON-PROFIT ESTABLISHED IN 2000, is the only organization in the world entirely dedicated to *the conservation of the Gunnison Sage-grouse.* Sisk-a-dee's goal is to promote implementation of the Gunnison Sage-grouse Conservation Plan in Colorado's Gunnison Basin, developed in 1995 by land managers, environmentalists, and landowners. The plan includes recreational opportunities to experience and observe the grouse during spring lekking season.

Your opportunity to see Gunnison Sage-grouse

Since 2001, a unique collaboration between Sisk-a-dee, Western State College, and Colorado Parks and Wildlife gives the worldwide birding community a place to view the Gunnison Sage-grouse. To find out how to schedule a grouse viewing in Sisk-a-dee's wildlife trailer (*pictured*), visit www.siskadee.org.

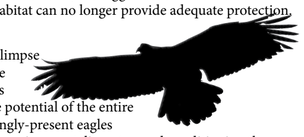
Out-of-area visitors to this site help stimulate the local economy by staying in hotels and eating at restaurants. Over the past twelve years, the Gunnison Sage-grouse **Watchable Wildlife Program** has observed and help drive increasing interest in and awareness of local conservation measures being employed for the benefit of Gunnison Sage-grouse by visitors, volunteers and community members.

To learn more, visit www.siskadee.org

Predator impacts rising

Degrading habitats are a factor

WHILE PREDATORS ARE A NATURAL, INTEGRAL and vital part of our Sage-steppe ecosystem, habitat integrity alters predator impact. In a healthy ecosystem, raptors are a normal part of the life cycle of Sage-grouse. Each spring, many species of raptors migrate through the Gunnison Basin, including *bald eagles, golden eagles, red-tailed hawks, northern harriers, rough-leg hawks, ferruginous hawks, rough-legged hawks, Swainson hawks, goshawks, Cooper's hawks, and sharp-shinned hawks*. Several of these inhabit Gunnison year round except in the harshest winter months. While any raptor can disturb strutting Gunnison Sage-grouse, **golden eagles** lead the group, killing on average three Sage-grouse each lekking season (*especially strutting males*). Predators influence populations (*through mortalities*) and behavior (*females abandoning nests and birds leaving the lek*) – both of which reduce population growth. However, the bigger issue for us is that vulnerability to predators increases when Sage-grouse habitat can no longer provide adequate protection.



Coping mechanisms may affect counts

Often, strutting male Sage-grouse will flush at the first glimpse of a large silhouette overhead. But, sometimes grouse are too enamored and they become prey. Losing a few males each season usually have little effect on the reproductive potential of the entire population. However, consistent harassment by increasingly-present eagles and other raptors increase the stress on Sage-grouse, increasing mortality rates, and conditioning them to strut at night. **Avoiding daylight** and **flushing** (*flying*) at the first hints of raptors complicates lek counts, as do the normal challenges associated with viewing in low early-morning light and in bad weather. All of these factors can lead to more conservative (*or variable*) population estimates.

Habitat quality and survival

Habitat is a natural buffer against predation. In a high-quality habitat, Sage-grouse typically avoid predators through **cryptic plumage** and behavioral adaptations such as **crouching** in vegetation and flying from threats. However, when vegetative cover is inadequate, Sage-grouse are more visible to raptor and mammalian predators, and the additional contacts increase stress and mortality. Worse, land fragmented by roads and trails creates new travel corridors for land-based predators. Fences, telephone poles and other structures create new raptor perching spots. Lower and/or thinner vegetation increases the visibility of Sage-grouse to all predators. As development increases, so does fragmentation and predation. Conservation measures provide an answer. Habitat management to increase shrub and grass cover and decrease fragmentation and perching sites can make life easier for Gunnison Sage-grouse. With their numbers threatened, it could mean the difference between survival and extinction.

Marcella Fremgen and Nate Seward work for Colorado Parks and Wildlife in Gunnison County

Springtime play areas

Hiking, biking trails open

SPRING IS MATING SEASON for our Gunnison Sage-grouse**.** After a long winter, it's also when *we* want to get out and use the lower trails. This is a perfect storm – the rush to enjoy sage-country in the most critical life-stage for Gunnison Sage-grouse. With the high country snowed in, and spring road closures in the lower elevations in effect between March 15 and May 15 for mud and Sage-grouse, we are limited in our options. So where *can* we recreate in spring?

- **VAN TUYL RANCH** – This area northwest of Gunnison is accessed from Char Mar Park and the Gunnison Community Schools. Because this is **not Sage-grouse habitat**, the trails on Van Tuyl Ranch are an excellent place to walk, run or mountain bike at any time of day from March 15 to May 15.
- **HARTMAN ROCKS** – Once the snow melts and mud dries – a date that changes each year – the half of Hartman Rocks that's closest to Gunnison (**north of Power Line Road**) opens to wheeled travel. To find out when North Hartmans opens, call the Gunnison BLM office at (970) 642-4940. The south half of Hartman Rocks (*south of Power Line Road*) remains closed to mountain bikes and motorized travel a bit longer – until May 15.
- **SIGNAL PEAK** – In this area behind Western State Colorado University, people hike, run, mountain bike, and walk their dogs. Because the **Contour Trail** and **Ridgeline Trail** traverse Gunnison Sage-grouse habitat, if you travel here, do so only *after* 9:00 A.M. if it's between March 15 and May 15, and keep all dogs on leash.
- **CURECANTI NATIONAL RECREATION AREA** – Curecanti offers: **Pine Creek Trail** (*2 miles roundtrip*). Descend 232 steps to the historic narrow gauge railroad bed. Fish along the shore of Morrow Point reservoir or explore the canyon. Dogs are allowed on leash. **Dillon Pinnacles Trail** (*6 miles roundtrip*). This south-facing slope dries early in spring. Ascend to a viewpoint at the base of the Dillon Pinnacles overlooking Blue Mesa Reservoir. **Riverway, Neversink** and **Coopers Ranch** access the Gunnison River for fishing, birding and exploring. Riverway and Coopers Ranch have take-outs for rafts. All areas have restrooms and picnic areas. Great Blue Herons arrive in spring. **Stevens Creek** and **Dry Creek** are Gunnison Sage-grouse habitat; Stevens Creek Campground opens May 15. Use open and signed roads and parking areas to access the reservoir and keep pets on-leash while using the Blue Mesa shoreline. *Visit Elk Creek Visitor Center or go to www.nps.gov/cure.*

Compiled from submissions by Kristi Murphy (Bureau of Land Management) Dave Wiens (Gunnison Trails), and Theresa Childers (Curecanti)

Grouse numbers stable

50 counters at 82 sites, 4 times in 40 days

HISTORIC LITERATURE AND PIONEER DIARIES ATTEST to the former abundance of Sage-grouse, citing flocks of thousands. Place names such as Sage Hen Gulch and Sage Hen Spring run throughout its historic range. Generations of ranchers tell stories of Sage-grouse killed by the wagonload to feed railroad workers. The *Lake City Silver World* reported hundreds harvested by a lone hunter in one day.

Today, the story is different. Sage-grouse are in shorter supply and harder to count. To count local grouse today, the Gunnison Basin lek survey utilizes fifty counters (*from private landowners to employees from the U.S. Forest Service, Bureau of Land Management, Natural Resources Conservation Service, National Park Service, Western State Colorado University, and Colorado Parks and Wildlife*) in a coordinated effort monitoring 82 leks four times each in a 40-day period ending May 10.

Leks are open areas near sagebrush where strutting males display and call to hens. Like the sound of a pebble dropping in a puddle – "Kaplunk!" – males puff their chests and pop their airsacs. Only a few males on each lek win the right to breed. Yearlings and most two-year olds are excluded. If a dominant male lives up to a hen's expectations, the two slip into the brush for better acquaintance. Some couples mate in plain sight – an activity that helps biologists determine peak breeding season.

How and what we observe

Counters rise at 4:00 AM to arrive at leks early enough before sunrise to minimize disturbance. Some leks require extensive hikes or post-holing through snows. Observers maintain safe distances, using binoculars and spotting scopes. Counters count grouse every five minutes and record unusual events, such as disturbance from predators such as coyotes, foxes and golden eagles. Where leks are closer to roads and residences, counters record how grouse respond to passing vehicles, runners and pets at large. Responses vary, depending on the nature and severity of the disturbance and hen receptivity. Grouse often flush upon seeing a golden eagle or other raptor (*ending mating activity for the day*), whereas a passing vehicle may only temporarily suspend the action. Herds of deer and elk, pronghorn, coyotes, and even man's best friend can cause grouse to flush, ending count efforts for that morning. As early morning light intensifies, strutting grouse move back into the sage cover. Once there they may continue to call and display, but typically they disappear with only occasional glimpses between plants. As strutting subsides, counters tally their numbers into male, female and unknown. Counters remain on site until the strutting ends.

Sage-grouse depend on sagebrush, which makes survey efforts difficult. No game bird is more intimately associated with a single plant group.

Determining populations and trends

To move from actual counts to *population estimates*, research tells us 53% of all males are viewed in leks and 1.6 females are present for every male counted. To identify *population trends*, CPW uses a three-year moving average to mask annual variations in weather, disturbance, and counter experience. The Gunnison Basin population of Gunnison Sage-grouse is the largest of seven populations in its range in Colorado and southeast Utah. In 2012, the Gunnison Basin 'high male count' was 832 (*up 69 over previous year*). The 'high female count' was 138 (*down 95*). Corrected, the 2012 Gunnison Basin population is estimated at 4,082 birds (*up 338*). The three-year moving average high male count for 2010–2012 is 780, up 2.4% from the 2009–2011 average of 762. With a three-year moving average high male count of 780, the Gunnison Basin population – the largest of the species' seven populations – is determined to be stable, with a conservative estimate of 3,800 birds.

Nathan Seward is a Wildlife Conservation Biologist with Colorado Parks and Wildlife

Kids zone

Sage-grouse word puzzle

Across

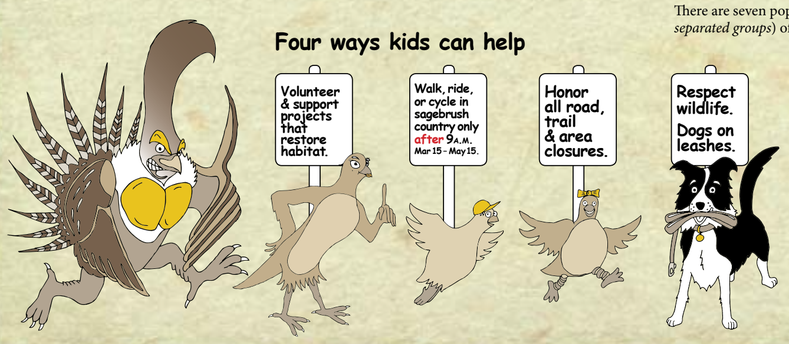
2. Baby sage-grouse (plural)
5. World's largest population
8. Main food during the year
10. The 'other' species of sage-grouse
13. A female sage-grouse
14. Biggest known threat to grouse
16. What males do at the lek
17. Plumage pattern that prevents easy detection
18. Newly designated in 2000
20. Where birds sleep at night
21. A managed livestock activity on sage-grouse habitat

Down

1. Strutting grounds
3. Where an animal lives
4. Proposed status under ESA (Jan. 2013)
6. Where eggs stay before hatching
7. Current state of sage habitat, split
9. Color of males' air sacs and eye combs
11. Land divided into parcels to build upon
12. Primary habitat component
15. Animals that eat grouse
19. Number of remaining populations

When finished, check your answers on page 4

Four ways kids can help



Our grouse are different!

In the year 2000, scientists named **Gunnison Sage-grouse** (*Centrocercus minimus*) a different species than **Greater Sage-grouse**. This means there are less of 'our' grouse, because the larger populations of Greater Sage-grouse can no longer be counted along with Gunnison Sage-grouse to give us a big total. Although in pioneer times they were too numerous to count, there now may be *well under 5,000* Gunnison Sage-grouse left in the world. How is our Gunnison Sage-grouse different than the Greater Sage-grouse? There are four main ways:

1. At 18 to 22 inches long, and 3 to 5 pounds, the Gunnison Sage-grouse is **smaller** (*just ⅔ the size and weight of the Greater*). Other than the big difference in size, the females of both species look very similar.
2. The males of both species have three main differences. First, the Gunnison males have **longer pointed tail feathers** and these feathers have more white barring.
3. Next, the males have **longer, thicker filoplumes** (*special neck feathers neck*) which lay flat except when they raise them high above their heads when strutting at the lek (*see the Elvis-looking male, below left*).
4. Finally, Gunnison Sage-grouse males have a **more elaborate mating display** and make different sounds to attract females.

There are seven populations (*or geographically separated groups*) of Gunnison Sage-grouse. The largest lives in the Gunnison Basin. The six other groups live from southwestern Colorado to southeastern Utah. The naming of Gunnison Sage-grouse as its own species is something we can be proud of. Please help support efforts to keep this part of our area's unique natural heritage alive.

Nick Gallowich is a District Wildlife Manager for Colorado Parks and Wildlife

Warming continuing

Drives wetland resiliency projects

THE CLIMATE OF THE SOUTHWESTERN U.S. has warmed a few degrees and is projected to continue warming in coming decades. In Colorado, we are experiencing larger and more severe wildfires, increased drought, and earlier snowmelt. Scientists tell us to expect longer, hotter summer heat waves, smaller late-season snowpacks, declines in river flow and soil moisture, and hotter and more frequent droughts. This puts people, plants, animals and habitats at risk. In this mix, the Gunnison Sage-grouse, one of the rarest species in North America, is facing federal listing as endangered.

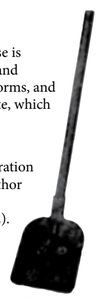
But so are Gunnison Basin livelihoods such as ranching and recreation, as they require healthy ecosystems too. If our habitats fail, ranchers may lose key grazing lands for livestock and big game. To preserve our way of life, we must address these impacts, reducing adverse effects of climate change for grouse and other wildlife, improving overall health of our lands, waters, recreation and ranching.

And so it begins

The Gunnison Climate Working Group, made up of *land and water managers, planners, researchers, ranchers and landowners*, is collaborating to reduce the adverse effects of climate change on nature and people in the Gunnison Basin. This project is coordinated by the *Nature Conservancy* and is part of the *Southwest Climate Change Initiative*, a partnership to help natural resource managers understand and respond to change across the Four Corner states.

Improving habitat

Brood-rearing wetland habitat for Gunnison Sage-grouse is adversely affected by erosion and lowered water tables, and intensifies with increasing drought, erosion from rainstorms, and habitat shifting to higher elevations in a warming climate, which diminishes food and chick survival.



You can volunteer!

The Working Group is taking action, using simple restoration methods designed by restoration expert Bill Zeedyk, author of the *Let the Water Do the Work: Induced Meandering, an Evolving Method for Restoring Incised Channels* (2012). We place these rock structures in small drainages and wet meadows to help retain moisture in stream banks, increase wet-loving plants and insects, and create late brood-rearing habitat for Gunnison Sage-grouse. This also improves elk and deer winter range and nesting habitat for neo-tropical migratory birds, and increases forage for livestock.

The Gunnison Sage-grouse is losing critical wet meadow and stream habitat to raise its young.

Set aside a day to join the work group during the week of July 8, or pick another local project!

Last Fall, Working Group partners – with the help of *landowners, ranchers, community members, college and high school students, and volunteers like you* – built over 100 rock structures in critical habitat areas. We will monitor response and share methods so they can be applied across similar sagebrush ecosystems in the Gunnison Basin and the West.

This summer, the Working Group plans to complete restoration work on private lands and expand onto nearby public lands with help from field crews, youth corps and volunteers. **Roll up your sleeves and join these volunteer days** starting the week of July 8. For information on the Gunnison Climate Working Group, Southwest Climate Change Initiative, and to volunteer for one or more work days, contact Betsy Neely at bneely@tnc.org.

Betsy Neely is with the Nature Conservancy in Boulder, Colorado. This pilot project is funded by Colorado Parks and Wildlife, Upper Gunnison River Water Conservancy District, Wildlife Conservation Society, Rocky Mountain Bird Observatory and The Nature Conservancy. We especially thank the private landowners and ranchers for making this project possible.