THE MONTANA CONSERVATIONIST

News from Montana's Conservation Districts

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In This Issue

More than 70 fourth grade students from Choteau, Fairfield, Greenfield and Power attended the annual Creeks and Critters Field Trip presented by the Teton County Conservation District.

4th graders learn about creeks, critters, and more

Choteau Acantha: How long does a honey bee live, which type of soil can easily form a ball, what animal did this fur come from or how do you measure antlers?

Fourth graders from around Teton County had these and hundreds of other questions about the outdoors answered when they attended the annual 18th annual Creeks and Critters field day held May 2 in Choteau. Students from Choteau, Fairfield, Power and Greenfield schools spent the spring day learning about how riparian health affects water, soil, wildlife, weeds, aquatic life, bees and plant life. Presenters used hands-on activities to teach the children rudimentary ecological concepts.

Sponsored by the Teton Conservation District, Creeks and Critters field day brought 70 students to a variety of educational stations along Spring Creek and in the Choteau City Park. Teton Conservation District Administrator Nancy Moorhouse coordinated this year's event, which was made possible by a grant from the Department of Natural Resources and Conservation.

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Building connectivity through Sagebrush Ecosystem Education Trunk

By Hayden Nelson, SGI Range Conservationist, Roundup

Last year the Montana Sage Grouse Initiative (SGI) partner positions put together an education trunk to travel around the state and teach students about the importance of the sagebrush ecosystem and the numerous species that depend on the prairie landscape that covers more than 50% of Montana.

The goal of the trunk is to provide students with hands-on experience learning about the different plants and animals that live and depend on sagebrush ecosystems, and how they all interact with one another. Connectivity is key! The trunk includes hides, skulls, and/or sheds from more than fifteen predator and prey species, as well as native plant specimens that are important to the prairie habitat.

This last month the trunk traveled to Hardin High School and the Lower Musselshell Conservation District's outdoor classroom. The Hardin High School students have been studying sagebrush ecosystems as part of their final class project, and the trunk allowed them a hands-on example of the species that depend of this ecosystem and why preserving these landscapes is important to many – including landowners, land managers, and policy makers. At the end of the school year they will use what they learned to propose a mock easement proposal.

Later in the week the trunk traveled to Roundup to partake in the conservation district's outdoor classroom. The 5th and 6th grade students of the surrounding schools came and learned about the food chain and sage grouse. Our focus was to show the young students how important this ecosystem is for many different species. The students had a great time and so did we! These educational events wouldn't have been possible without the help of NRCS employees out of the Hardin and Roundup Field Offices and the conservation district administrators – thank you.

If you are interested in having the trunk in your area, contact the SGI partner closest to you:

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406-775-6355
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photos of trunk materials by Hayden Nelson

New strategy aims to save sagebrush in the West

AP News: A new plan to save sagebrush habitats in Western states that support cattle ranching, recreation and 350 wildlife species — including imperiled sage grouse — is a paradigm shift in strategy, federal officials said.

The 248-page document released this month emphasizes new technologies and analytics as lands managers try to turn around a decades-long losing streak to a devastating combination of invasive plants and wildfires.

The plan categorizes sagebrush areas on their resistance and resiliency to those two threats, and describes a triage system as officials with limited money try to restore and protect sagebrush country where they can.

"A strategic approach to wildland fire and vegetation management is now required that focuses available resources in the places that will maximize conservation return on investment," the document says.

A federal report last year concluded efforts to save sagebrush habitat were failing, with invasive plants such as cheatgrass and medusahead on nearly 160,000 square miles (414,400 sq. kilometers) of public and private lands.

"The problems that are facing the sagebrush steppe are hideous," said Matt Germino, a research ecologist with the U.S. Geological Survey whose work is cited numerous times in the report. "Things haven't been working to everyone's satisfaction."

Failures from past decades include reseeding burned areas at low elevations with sagebrush seeds from high elevations that were from a different subspecies of sagebrush unsuited for warmer, low elevation landscapes.

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Outdoor coallition seeks new ideas for funding, maintenance of public lands

MTPR: A coalition of wildlife, conservation and outdoor recreation business groups has launched an effort to find ways to fund conservation and maintenance projects on public lands.

Eric Melson says the Montana Outdoor Heritage Project is trying to hear from 10,000 Montanans on what they value about the state's public lands and outdoor recreation, and how those values should be funded.

"The idea is to collect a lot of information from community conversations like this and then tell everybody what we're hearing," Melson said.

Melson is a volunteer with the Outdoor Heritage Project, which held its sixth of 50 planned community conversations over beers and snacks at Rocky Mountain Outfitters in Kalispell Friday night.

He points to a $22 million backlog for Montana State Parks maintenance projects and waning funding for trails maintenance and wildlife as troublesome statistics for a state that sees $7.1 billion in consumer spending on outdoor recreation.

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For certain invasive species, catching infestation early pays off

Pest Control Technology: AMHERST, Mass. – An international research team led by invasion ecologist Bethany Bradley at the University of Massachusetts Amherst has conducted the first global meta-analysis of the characteristics and size of invasive alien species' impacts on native species as invaders become more abundant.

For example, as alien garlic mustard (Alliaria petiolata) invades forest understory in New England, the number of native sugar maple seedlings declines, and invasive purple loosestrife (Lythrum salicaria) in New England wetlands is linked to a decline in the abundance of native red-winged blackbirds and song sparrows, Bradley says. Elsewhere, predatory invasive lionfish (Pterois volitans) introduced in Caribbean waters leads to a rapid decline in the abundance of native coral reef fish, and invading Burmese python (Python bivittatus) in the Everglades has caused dramatic losses of natives such as opossum, fox and bobcats.

Bradley says, "What surprised me most was the magnitude of some of these effects. Invasive animal pests, like Emerald Ash Borer or lionfish, cause nearly a 50 percent decline in native populations. That's the average case – on average, invasive pests will cut the populations of native species in half if we don't prevent or control those invasions."

The associate professor of environmental conservation adds, "Our principal finding is that if the invasive species is at a higher trophic level, that is, they are likely eating the native species, then just a few invasive individuals can cause a sharp decline in native populations. Once those invaders reach higher abundance, the damage has long ago been done. This has big implications for management," she says. "Early detection becomes critical."

They report that impacts depend strongly on the invasives' position in the food chain, known as trophic level. Invasive species at higher trophic levels have a strongly non-linear effect on native species with the greatest impacts occurring early in the invasion, while invasive species at the same trophic level have a negative, linear effect on native species.

Reporting in "Latest Articles" in the current online issue of Proceedings of the National Academy of Sciences, Bradley and colleagues analyzed findings from 1,258 case studies from 201 research papers. One goal was to understand generally how impacts accumulate during an invasion in order to support evidence-based management, Bradley says.

"We know that invasive species have negative impacts, but past meta-analyses have only looked at studies where invaders were absent vs. present," Bradley says. Without information on the slope and magnitude of the impacts, she adds, "we don't know the slope of the relationship, whether it's linear or non-linear, or if there's a sharp decline of native species early or late in the infestation. These are the questions we looked at."

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Conservation project in central and northwest Montana takes on saline seeps

Agricultural producers in Cascade, Chouteau, Daniels, Fergus, Judith Basin, Petroleum, Roosevelt, and Sheridan counties can sign up for the Environmental Quality Incentive Program to reclaim saline seeps at their local USDA Natural Resources Conservation Service (NRCS) office between May 15 and June 14, 2019.

The Montana Saline Seep Reclamation Project, proposed by the Montana Salinity Control Association, received funding through NRCS's Regional Conservation Partnership Project.

MSCA will conduct an initial site review with the producer to determine whether saline seeps are caused by current farming practices and/or rule out those that form naturally with little to no influence from surface land use. If a seep is caused by farming practices, they will conduct a groundwater investigation, which includes the installation of shallow groundwater monitoring wells and an elevation survey of wells and other relevant surface points.

After the field investigation, the Montana Salinity Control Association will assess the information and create a saline seep reclamation plan, including a map delineating the recharge and discharge areas targeted for land-use change.

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Grazing history can answer future questions

By Alan Newport, Beef Producer Online: I regularly hear questions asked by newcomers to managed grazing that I believe a bit of history could answer.

When people began to manage their grazing in the early 1980s after hearing Allan Savory and Stan Parsons, they did so sheepishly. I believe there were at least three reasons: First was because they were afraid of "hurting" the forage; they had been programmed by the flawed idea from F.J. Crider's potted-grass experiments that led to the take-half-and-leave-half forage management concept. Savory was teaching about plant recovery (not rest) and the fact forage plants need to recover from grazing before being bitten again.

This was the radical new idea. But the old ideas held on hard. The truth is that "severe" grazing is not a problem so long as the forage gets adequate recovery time. Put another way, taking most and leaving less than half is not a problem if the management fits the grazing.

Second, I believe producers didn't begin to understand the monetary value of frequent moves for cattle and so did not want to move them very often. This was fallacy also, and I recall from Savory's Holistic Management Workbook the diagrams which showed declines in forage quality are too large with infrequent moves, but are improved with more frequent moves. No matter, the belief system wasn't well-established in the minds of the early adopters and therefore they had to learn the hard way that more frequent moves, managed properly, benefit the cattle and the land.

Third, I think the natural human tendency toward laziness helped hold people back. I've heard various country-isms about this, but the one that sticks in my mind went something like this: "If I wanted to run a dairy, I'd be milking cows and not keeping beef cattle."

Another factor in those early years which I remember well was the overemphasis on stage of plant recovery, denoted as phases I, II and III regrowth. People were told they needed to always graze in phase II because that was the best combination of forage quality and volume. The idea was and is fundamentally correct, but trying to manage for that concept alone can drive one to insanity and it still doesn't build soil very much. It also drove many people to expensive practices such as haying and ensiling to "capture the quality" of those forages before they could become "over-mature."

It also can lead one backward toward the improper grazing of very young forages. One-time grazing guru Burt Smith once wrote about the problem: "The New Zealanders are so afraid of phase III growth they rarely let their forage get out of phase I.

I should also mention that many people struggled with the idea they could set up a certain number of paddocks and "rotate" the livestock on a regular schedule. This caused many wrecks in the country and on university farms.
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Good bread, healthy land

Great Falls Tribune: CHOTEAU — Farming is a 23,000-year-old experiment, so it's only suitable that Judy Cornell's Conservation Grains is experimental in spirit and practice, too.

Cornell, formerly an accountant, started farming 11 years ago between Choteau and Dutton. Lately, Cornell has added a craft milling business to Conservation Grains. "It's a lot more interesting flavor-wise with a blend," she said. "Everything is all whole wheat," she said. "You get the bran and germ — where the nutrition is."

The mill produces up to 28 pounds of finely ground flour an hour. It's softer somehow than conventional flour. It's flavorful.

A Bozeman baker is using rye flour she's milled, but most of what she sells in stores and through conservationgrains.com is flour blends.

Her micro-mill uses local grains, some from her farm, and creates flours from a blend of grains, hard white, hard red winter wheat, hard red spring wheat, rye, kamut and spelt.

She split a tote of rye from Fairfield with Farm Power Malt, a craft malt operation in Power. Finding rye growers has been challenging. The crop can be weedy, but it's a beautiful sight in the fields.

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Grants

Future Fisheries Improvement Program

For almost two decades, FWP's Future Fisheries Improvement Program has worked to restore rivers, streams, and lakes to improve and restore Montana's wild fish habitats. Between $350,000 and $650,000 are available each year for projects that revitalize wild fish populations. Any entity proposing a project that would benefit wild fish will be considered for funding. Due **May 31**. More Info

Western States WUI Grants

The Department of Natural Resources and Conservation's (DNRC) Forest Stewardship Program is requesting project information relating to application development for the fiscal year 2020 Western States Wildland Urban Interface (WUI) Grant program. Qualifying projects should fall into one or more categories: reduce hazardous fuels in the WUI; WUI-based prevention and education; CWPP development. Project proposals are due by Friday, **May 31.** Application development of selected projects will occur collaboratively over the summer and will be submitted in September to the competitive WUI Grant program.

Western Native Trout Initiative Small Grants

Projects considered for funding under the Small Grants Program include those with a strong element of or primary focus on community outreach, education and/or volunteer engagement; or design/planning/monitoring work. Approximately $21,000 in funding is available for projects in the 12 western states that are WNTI's focus. Individual projects can be funded at a maximum of $5,000. Due **June 18.** More Info

Northern Grassland Restoration Incentives Program

The Northern Great Plains Joint Venture is making up to $145,000 available for habitat projects in priority counties of the NGPJV geography, with a maximum grant of $30,000 per project. Successful applicants will deliver habitat projects that contribute measurably to the protection, restoration or enhancement of grassland and/or shrub-steppe habitats. Proposals due **June 28.** More Info

Events, etc

Soil Health Workshops with Nicole Masters

World renowned agroecologist Nicole Masters of New Zealand-based Integrity Soils will lead three similar day-long workshops across Montana on soil biology and carbon levels, nutrient cycling, grazing management, and the economic benefits of soil health. **May 24th** in Shepherd; **June 3rd** in Paradise Valley; and **July 1st** in Hot Springs. Sponsored by Western Sustainability Exchange.

Judith Basin Range School

Johann Zietsman, world renowned speaker, will be presenting at a 2-day seminar on Livestock Management and Grazing. Zietsman will be sharing proven concepts for selecting the best adapted genetics with ultra-high-density grazing. **May 29 & 30**, Hobson, MT. For info call 566-2311 x107.

Montana Youth Range Camp

The Montana Youth Range Camp (MYRC) is a 4-day program for youth ages 11–17. This year's camp will be held June 25-28 at Hyalite Reservoir south of Bozeman. Registration deadline is **June 11**. More Info

Montana Range Days

The annual Montana Range Days will be hosted by Beaverhead Conservation District, **June 17-19**. More Info

Composting Workshop

The Fallon County field office will be hosting Gerry Gillespie to teach us how to make a compost that is easy, low-odor and appropriate on a large or small scale. Plan on joining us for a hands-on workshop where you can take away the skills and inoculant needed for the process. **June 21**, Baker. Email ann.fischer@usda.gov for more info.

Increasing Profit on Your Farm with Healthy Soil

A workshop with Nicole Masters of Integrity Soils, Inc. New Zealand. Sponsored by Valley County Conservation District **June 26**. For more information, call (406) 228-4321 ext.101 or email vccdmt20@gmail.com

Coming Up

May

16 CMR Community Working Group Meeting, Flatwillow Hall

23 Montana Invasive Species Council Meeting, Helena

27 MACD Executive Committee Conferece Call

24 Nicole Masters Soil Health Workshop, Shepard

29-30 Judith Basin Range School

June

3-6 Statewide Administrator's Training, Arrowpeak Lodge

10 Don MacIntyre retirement party, Helena (at the Montana Club)

10-13 MACD Spring Board Meeting

17-19 Montana Range Days

21 Composting Workshop, Baker

25-28 Montana youth Range Camp

Have a story, funding opportunity, or event to share? Please email tmc@macdnet.org with details.

Save the Date: River Rendezvous

Please Plan to Spend **July 26th** on the Missouri River. You are invited to the 2019 River Rendezvous hosted by Valley County Conservation District, MT Fish Wildlife and Parks, the US Army Corps of Engineers, and the Missouri River Conservation Districts Council. All activities will take place on July 26th, and the tour will leave from the Fort Peck Interpretive Center. This year's Rendezvous will highlight key features of the Missouri / Milk River confluence including: Pallid sturgeon habitat, irrigation, proposed crossing sites for the Keystone XL pipeline, management efforts for aquatic and terrestrial invasive species, and more!

Save the Date: Montana Range Tour

The 2019 Montana Range Tour, will be held **September 4th & 5th** in Harlowton, MT.

Jobs

Clark Fork/Kootenai Regional Water Planner, DNRC

The Regional Water Resource Planner (Water Planner) connects the Bureau, Division and other state and federal agencies with individuals, organizations and communities to meet the objectives of DNRC water management through collaborative water use planning and project facilitation and implementation. Closes **May 29**. More Info

Join us for the Annual

MACD Spring Board Meeting

June 10, 11, & 12 at the DoubleTree Inn, Helena