



*Castilleja linariifolia*

# Castilleja

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## 2021 Award Winner Announced:

### **Jennifer Whipple receives Hartman Award**

ONE OF A KIND! The accolade applies equally well to Yellowstone National Park (YNP) and to the recipient of the 2021 Hartman Award for Excellence in Botany - Jennifer Whipple, YNP Botanist (ret.). Wyoming Native Plant Society is proud to claim Jennifer as *primarily* a wonder of Wyoming (likewise YNP)<sup>1</sup>, and to celebrate her accomplishments.

While most of us who call ourselves botanists bemoan being spread too thin, Jennifer set the bar in the Nation's oldest national park. She curated the Park's largest set of natural history collections (the herbarium!), got shuffled between the Cultural Resource Branch and the Natural Resource Branch, remained at the nerve center of all things having to do with plant species (new invasives from around the world, to geyser basin endemics and a battery of environmental impact statements), confidently stood before countless tourist audiences offering expert interpretive talks and hikes, and was agency expert for countless research projects (fire studies, long-term ecological monitoring studies, wetland studies, nonvascular flora studies, submerged aquatic flora studies, and more).

Jennifer was fascinated by Yellowstone National Park from a very young age - as an eight-year-old, she railroaded her family into visiting the Park. Her childhood was spent on a ranch in



Above: Jennifer Whipple in the field, by Charmaine Delmatier

California with endemics in her backyard where she was a compulsive natural history collector, with about 900 plant specimens in her collection by the time she started college. (Cont. p. 4)

### **In this issue**

Jennifer Whipple receives Hartman Award . . .	1, 4
Plants of Wyoming flashcards . . . . .	3
Lichens on the loose . . . . .	3
Whitebark pine listing as threatened. . . . .	5
Vision for weed control in Wyoming. . . . .	6
Mullen Fire: Frontview and Rearview . . . . .	7
Growing Native Plants:	
More Forbs for Moist Sites . . . . .	8
2021 Annual Meeting scouting report:	
Red Buttes . . . . .	9

<sup>1</sup> Yellowstone National Park (YNP) was established in 1872 so its boundaries predate state ones. Most of the Park lines up with Wyoming boundaries – 96% according to Wikipedia.

## WYNPS News

**Ready, Set...Renew!** This issue contains your renewal form to renew by mail. You can also renew electronically by PayPal. The calendar year is the membership year. The renewal form *also* has an election ballot to vote for the 2021 WYNPS Board. Check out the sterling slate – no long lines at the polls!

### **Mark your Calendars for 2021 Annual Meeting:**

We hope to convene in Laramie, June 25-27! Organizers offer “scouting trip” articles in this newsletter issue and upcoming ones.

**Scholarship Application deadline:** All applications for scholarships and small grants are due 16 Feb.

**Board Announcement:** The Board voted to enact a \$2 fee in 2021 for members receiving the newsletter by mail, an increase that was voted by the membership at the 2019 annual meeting.

### **WYNPS Board – 2020**

President: Katy Duffy, Gardiner, MT  
([owlpals@wyyellowstone.com](mailto:owlpals@wyyellowstone.com))

Vice-President: Lynn Stewart, Dubois  
([lstewart@dteworld.com](mailto:lstewart@dteworld.com))

Sec.-Treasurer: Dorothy Tuthill, Laramie  
([dtuthill@uwyo.edu](mailto:dtuthill@uwyo.edu)) Board-at-large:

Board-at-large:

Emma Freeland, Lander

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(2020-'21)

Katie Haynes, Laramie ([katiedriver@gmail.com](mailto:katiedriver@gmail.com))

(2019-'20)

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Sublette Chapter: Jill Randall, President  
([possum1b@yahoo.com](mailto:possum1b@yahoo.com))

Teton Plants: Amy Taylor, Treasurer;

([tetonplants@gmail.com](mailto:tetonplants@gmail.com)). ...Check the chapter homepage (<https://tetonplants.org/>) for events.

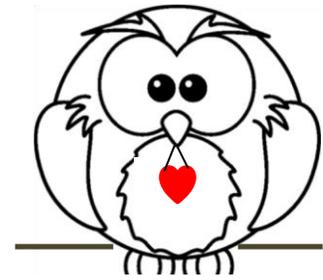
**Treasurer's Report:** Balance as of 24 Nov 2020:

Scholarship = \$140; General = \$7643.67

Total = \$7783.67.

**New Members:** Please welcome the following new member to WYNPS: Verla Flores, Laramie

## **Message from the President**



*Winter Greetings!*

It has been a privilege and an honor to serve you as president of the Wyoming Native Plant Society during 2019 – 2020! I am inspired by following in the footsteps of professional botanist Charmaine Delmatier and serving with dedicated and extremely knowledgeable professional botanists and naturalists like Dorothy Tuthill, Lynn Stewart, Katie Haynes, Emma Freeland and Bonnie Heidel. Meeting and working with so many conservation-minded members of the Society has been richly rewarding. I renew my commitment to protect the native vegetation and natural habitats of Wyoming, a state fortunate to have extensive tracts of public land that its citizens need to both enjoy and safeguard.

While I will no longer be your president, I have no intention of ceasing my lifelong love affair with wildflowers. This may be my last official act, but I will continue my 30-plus-years of membership in WYNPS. And I look forward to seeing all WYNPS members and friends at our annual meeting in Laramie next summer!

Thank you to all! Wishing everyone a safe, healthy COVID-free winter!

~Katy Duffy



**Contributors to this Issue:** Charmaine Delmatier, Robert Dorn, Katy Duffy, Emma Freeland, Bonnie Heidel, Dorothy Tuthill.

**Next Issue:** Please send articles and announcements by 15 February to:

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Wyoming Native Plant Society  
P.O. Box 2449  
Laramie, WY 82073

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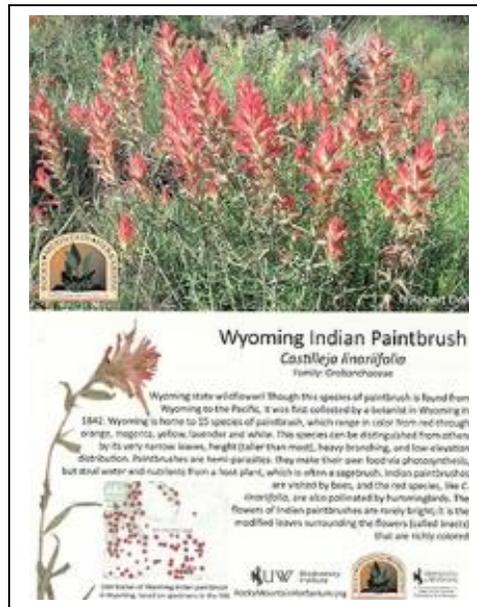
## Play with Plants this Winter!

### Plants of Wyoming Flashcards

Plants of Wyoming Flashcards are now available from the Rocky Mountain Herbarium (RM) and Biodiversity Institute.

Each card features a photo by Robert Dorn, an image of a specimen from the RM collection, and information on the taxonomy, history, use and ecological role of the species. The set includes 50, 4 x 6" cards in a case. \$7 plus S&H. Available through the online Biodiversity Institute Bookstore at: [www.wyobiodiversity.net](http://www.wyobiodiversity.net).

Great for kids of all ages, in quizzes or games, and as a reminder of RM resources.

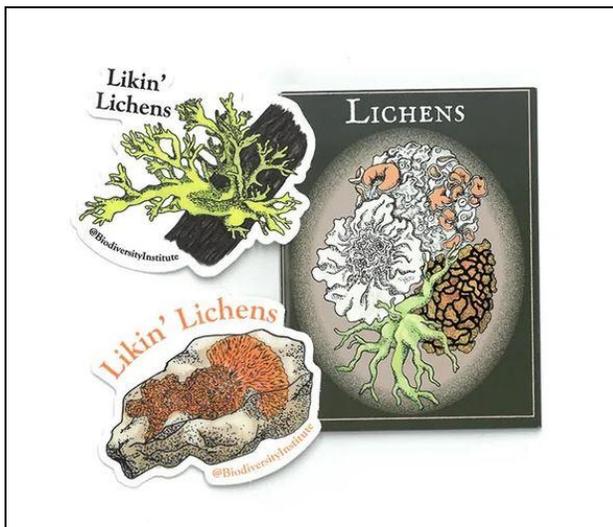


Left:  
Wyoming Indian  
paintbrush  
(*Castilleja  
linariifolia*) card,  
front and back  
(top and bottom,  
resp.)



### Lichens on the Loose!

There is now new Wyoming information and resources on lichens.



An information packed booklet is available from the Biodiversity Institute that answers such urgent questions as:

- What are lichens?
- Where are they found?
- Why are lichens important?

Here is a great place to begin your life-time enchantment with these amazing organisms. Each order includes 2 "Likin' Lichens" stickers from the Wyoming Biodiversity Sticker Collection! They are available for \$3 (or in bulk; shipping is calculated separately). Available through the online Biodiversity Institute Bookstore: <https://wyobiodiversity.net/>.

PLUS, the lichen flora of Wyoming is now posted by the Wyoming Natural Diversity Database: [https://wyndd.org/species\\_list/?lichens=All&columns=sciname%2Ccomname%2Csynonyms%2Ctaxgroup%2Ctaxgroup2%2Cblm\\_wy%2Cg\\_rank%2Cs\\_rank%2Cusfws\\_esa%2Cusfs\\_sens%2Cusfs\\_solc%2Cwgfd\\_sgc%2Cwy\\_contrib%2Cwyndd\\_soc%2Cwy\\_occur%2Cwy\\_origin&servicePrefix=prod](https://wyndd.org/species_list/?lichens=All&columns=sciname%2Ccomname%2Csynonyms%2Ctaxgroup%2Ctaxgroup2%2Cblm_wy%2Cg_rank%2Cs_rank%2Cusfws_esa%2Cusfs_sens%2Cusfs_solc%2Cwgfd_sgc%2Cwy_contrib%2Cwyndd_soc%2Cwy_occur%2Cwy_origin&servicePrefix=prod) It represents the peer-reviewed work of Dorothy Tuthill (2013) and the Consortium of North American Lichen Herbaria (<https://lichenportal.org/cnalh/>).

Even though there are more lichen specimens deposited out of state than within Wyoming, the in-state expertise and national initiatives together provide a picture of our rich lichen flora (876 species).

Whipple receives Hartman Award, continued from p. 1

Jennifer's powers of persuasion and perseverance may have landed her the first National Park Service summer job she held in 1973 at Jewel Cave National Park, and her later interpretive jobs at Old Faithful in 1974 and 1975. After grad school, she volunteered her expertise for years at the YNP herbarium in what was then called the Biologist's Office (which later became the Research Office) before she was hired as YNP biological technician in 1985. She worked full-time in YNP as Botanist from 1993 until her retirement in



Above: Jennifer Whipple as guest speaker at the Buffalo Bill Historical Center, Cody, WY (NPS photo)

2013.

Publications of the Yellowstone National Park flora started with Frank Tweedy (1886), followed by later publications. Updating the YNP flora became a Sisyphean quest for Jennifer to track down and evaluate all supporting documentation of species from the Park. The YNP herbarium (YELLO) didn't officially become established until the 1920s, and earlier decades of collections were deposited at herbaria around the country and the world. So she has travelled extensively beyond YNP to understand the flora within, e.g., garnering firsthand familiarity with the bowels of the Smithsonian Institution.

It would be easy enough to be consumed by all of the YNP demands, but Jennifer has been a free-ranging botanist who sought out Wyoming Native Plant Society (WYNPS) colleagues and events, sharing her expertise as both organizer and contributor for Wyoming Rare Plant Conferences and WYNPS Annual Meetings. She always arrived for field trips armed with a camera, and her plant photography graced countless NPS

publications AND the Wyoming Rare Plant Field Guide (Fertig, Refsdal and Whipple 1994). She patiently responded to inquiries from botanists in the three adjoining states and from the Greater Yellowstone "ring" of other agencies.

Jennifer Whipple ("Jen") led a more challenging botany program than most of us could ever imagine, or replicate. Her farewell greeting of "*Tally Ho!*" always served as an exclamation point that culminated any meeting as though our botanical quarry were in sight. The word "countless" is only used three times so far in this article, and now we need to add one more, in conveying countless thanks on behalf of Wyoming Native Plant Society. bh

*(Jennifer Whipple is the 4<sup>th</sup> recipient of the Ronald L. Hartman Award for Botanical Excellence presented by Wyoming Native Plant Society, with Hartman as first recipient, followed by B. E. Nelson, and Robert Dorn.)*



***Mrs. Moore in 1894***  
(YES, we have no skunk cabbage)

A flora has many riddles, and the answer to a lingering YNP flora riddle came earlier this year. American skunk cabbage (*Lysichiton americanus*) was reported in the YNP flora (thus, the WY flora) based on a Swedish technical journal. Jennifer continues some YNP projects and asked if I could get the original article thru UW Libraries (hurray for libraries!).

The article cited a skunk cabbage specimen housed at Missouri Botanical Garden...by Mrs. Moore in 1894! That was all Jennifer needed to rule it out from YNP, having previously investigated the full whereabouts of botanical collecting by Mrs. Moore in 1894, i.e. not in YNP.

Jennifer and other WY botanists had regarded yellow skunk cabbage as implausible, a West Coast species with few inland records. Tracking down and evaluating the voucher data finally settled the question, once and for all.

## Wyoming Native Plant Society – Renewal and Ballot

Return to: Wyoming Native Plant Society – P.O. Box 2449 – Laramie, WY 82073

Name \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

Email \_\_\_\_\_

Please check all appropriate boxes:

New member

Renewing member

Check here if this an address change

Annual membership with email notification of newsletters: \$10

Annual membership with mailed newsletters: \$12

Annual membership with scholarship support and email notification of newsletters: \$20

Annual membership with scholarship support and mailed newsletters: \$22

Life membership with email notification of newsletters: \$300

Life membership with mailed newsletters: \$300

In addition to the statewide organization, we have two chapters. Membership in chapters is optional; chapter members must also be members of the statewide organization.

Teton Plants Chapter annual membership: \$5

Sublette Chapter annual membership: \$5

Additional donation of \$ \_\_\_\_\_

Total enclosed: \_\_\_\_\_

**Please write checks to:**

**Wyoming Native Plant Society**

**2021 WYNPS BALLOT** – Please mail for arrival **by January 31** or email your vote to: [www.wynps.org](http://www.wynps.org)

Please vote for one person for each Officer position, and for the At-Large positions:

President \_\_\_\_ Emma Freeland (Lander) Secretary/Treas. \_\_\_\_ Dorothy Tuthill (Laramie)

Vice President \_\_\_\_ Maggie Eshleman (Lander) At-Large (2-year term) \_\_\_\_ Paige Wolken (Cheyenne)

At-Large (2<sup>nd</sup> year of 2-year term) \_\_\_\_ Katie Haynes (Laramie)

Write-in candidate and office: \_\_\_\_\_ **Thank you** to Katy Duffy and Lynn Stewart for getting us through 2020!

### Candidate Biographies

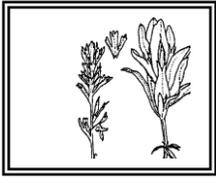
**Emma Freeland** completed one year of a two-year term as a WYNPS Member at Large, and enjoyed it so much she offered to run for President this term. She is also our new Webmaster! Emma would like to help WYNPS fill the events calendar with plant hikes around the state during the growing season.

**Maggie Eshleman** is Restoration Scientist at The Nature Conservancy, working to improve sagebrush and native forb establishment on restoration sites. She's been a member of WYNPS since relocating here and is excited to keep learning from everyone in WYNPS and bring in new ideas for member engagement.

**Paige Wolken** is Plant Ecologist with the U.S. Army Corps of Engineers. A couple years ago, she came to the rescue for WYNPS in filling the second year of a two-year term when one of the Board members became Vice President. She is excited to promote botany pursuits with WYNPS!

**Dorothy Tuthill** is Associate Director at the Biodiversity Institute. She has served as Secretary/Treasurer providing key continuity for WYNPS. She is also officer of American Penstemon Society and resident Master Weaver at Cowgirl Yarn.

**Katie Haynes** is Botanist at Medicine Bow National Forest and Thunder Basin National Grasslands. She completed a two-year term as a WYNPS Member at Large and is coming to the rescue for WYNPS in filling the second year of a two-year term when Emma offered to run as President. She is also a founding member of Naughty Pines Derby Dames flat track roller derby team.



Wyoming Native Plant Society  
**2021 MARKOW SCHOLARSHIP/SMALL GRANT**

*Applications are due February 16, 2021. Awards will be made in April, 2021.*

Electronic copies of this application are also posted on the WYNPS homepage at: [www.wynps.org](http://www.wynps.org)

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The Wyoming Native Plant Society promotes appreciation, understanding and conservation of native plants and plant communities through its annual scholarship/small grants program. For scholarships, thesis research may address any aspect of botany including floristics, taxonomy, ecology, genetics, plant geography, range science, paleontology, pollination biology, physiology, and mycology. For small grants, projects such as botany curriculum development, public native plant gardens, and other forms of outreach will be considered. **This competition is open to all grad students who conduct research in Wyoming, residents of Wyoming or members of WYNPS.**

Proposals must pertain to native plants/vegetation of Wyoming. Preference will be given to proposals expected to generate research data or promote public understanding. Up to \$1,000 may be covered for a scholarship proposal, and up to \$500 for a small grant proposal. *Awards defray direct project costs, excluding labor or conferences.* Eligible expenses include:

1. Direct costs of travel, meals, and lodging for research or education projects.
2. Supply and service expenses used for the sole purpose of the project (e.g., consumable supplies such as laboratory chemicals, soil and nursery stock, and services such as phone and computer time).

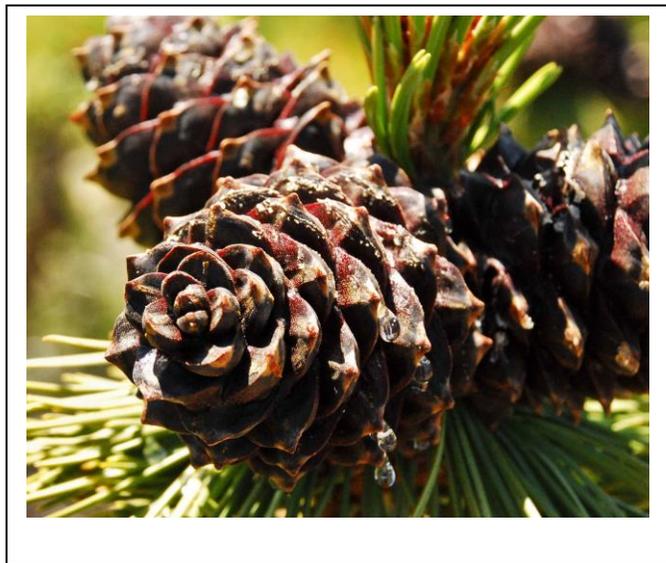
**The deadline for proposals is February 15. Awards will be announced in April.** The proposal should be no longer than three pages and include the following:

- Name, mailing address, telephone number (land &/or cell as appropriate) and email address of the applicant.
- Name, mailing address, contact person's name & phone number for any organization that will be directly involved with the applicant when executing the proposal.
- Short abstract of the study or project (2-5 sentences).
- Description of the study or project: objectives, methods, description of final product, and short description of past similar work (if applicable). Garden proposals should include plant lists, an educational component, and explicitly address long-term maintenance plans.
- Description of how the study or project will benefit native plants or plant conservation in Wyoming.
- Overall budget showing amount requested from WYNPS (\$1,000 or less), the intended purpose of the funding, and other funding sources.
- Timeline for completion of the major components of the study or project.
- Brief statement of applicant's qualifications or biography.
- Name, address, email address or phone number of two people as references.

Successful scholarship or grant recipients will be required to submit a final report (due no later than February 15, 2022) documenting the study or project accomplishments to WYNPS, written for a broad audience and suitable for publication in our *Castilleja* newsletter. **Please send completed applications to:** Wyoming Native Plant Society, P.O. Box 2449, Laramie, WY 82073; or [wynps@wynps.org](mailto:wynps@wynps.org) .

## US Fish and Wildlife Service Proposes to List Whitebark Pine as Threatened

On December 2, 2020, the U.S. Fish and Wildlife Service (USFWS) published a notice in the Federal Register of a proposed rule to list whitebark pine (*Pinus albicaulis*), as threatened under the Endangered Species Act (ESA). The status of this iconic tree of subalpine forests has been in limbo for nearly a decade: in 2011 the USFWS deemed threats to the species grave enough that listing was warranted, however, a listing decision was precluded by other USFWS priorities. The current proposed rule is based on the 2018 Species Status Assessment (SSA), a comprehensive review of the data that characterizes threats to the species. If finalized, the rule would classify whitebark pine as threatened throughout its massive 56 million-acre range in the western United States, including most subalpine forests in Wyoming's northwestern mountain ranges.



Above: Whitebark pine cone, by Susan Marsh

The proposed rule summarizes the status of the species to date, in an alarming look at the steep decline of a long-lived keystone species. The primary threat to whitebark pine is the white pine blister rust (*Cronartium ribicola*) a non-native fungal pathogen now found throughout the tree's range. The fungus grows into branches and boles, blocking nutrient flows, ultimately killing branches or the entire tree. White pine blister rust

attacks trees at any stage from seedling to sapling to mature adult. Since whitebark pine trees don't start producing cones until they are about 60 years old, in stands that are affected by the fungus, new seedlings need to resist infection for at least that long in order to begin to reproduce. The proposed rule paints a grim picture of a long term downward trend; even where white pine blister rust spreads slowly, it is still ubiquitous on the landscape and will spread more in those years where conditions are favorable. In addition to white pine blister rust, the proposed rule identified mountain pine beetle outbreaks, altered fire regimes, and climate change as threats to the species. This combination of threats has already impacted whitebark pine populations substantially: as of 2016, 51% of standing whitebark pine trees across their range were dead, a proportion that many Wyoming hikers might say seems a little low for what they've observed in the western mountains.

In accordance with section 4(d) of the ESA, the Federal Register notice proposes actions that would be prohibited under the new listing as well as exceptions to those prohibitions, referred to as the 4(d) rule. The listing would prohibit removing, cutting, digging up, damaging, or destroying whitebark pine on Federal lands, as well as exporting the trees or selling them across state lines. However, excepted from this prohibition would be all forest management activities, including silvicultural practices, restoration, wildlife habitat management, full or partial fire suppression activities, and research.

More information and links to the proposed rule and SSA are available on the USFWS webpage for whitebark pine:

<https://www.fws.gov/mountain-prairie/es/whitebarkPine.php>

The Service will accept comments on the proposal through February 1, 2021. ef

## How does weed control work in Wyoming,...and *could* it work in the future?!?

On October 1, 2020, Governor Mark Gordon's Invasive Species Initiative delivered its final report that could propel Wyoming as a national leader on combating invasive species ([https://drive.google.com/file/d/1jyn9hpJEsjR4cMeGAAE24\\_oKcih5cjFL/view](https://drive.google.com/file/d/1jyn9hpJEsjR4cMeGAAE24_oKcih5cjFL/view) ).

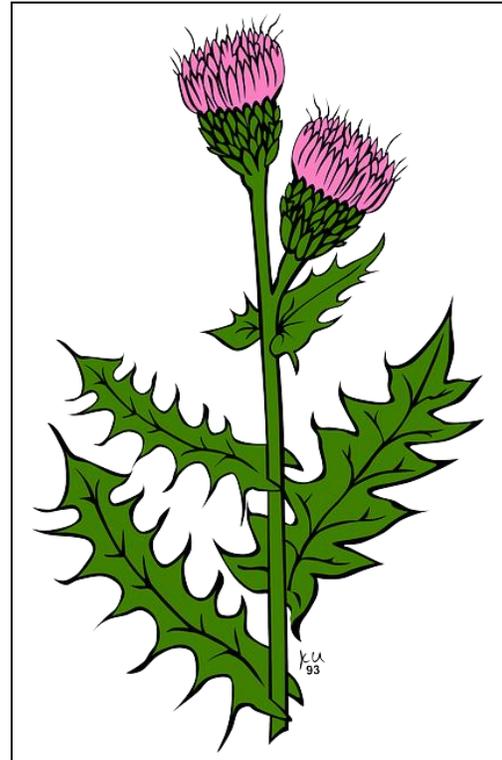
The forty-page report addresses an array of topics surrounding terrestrial invasive plant species. It sheds light on how weed control currently works in Wyoming and includes recommendations on how it could work in coming years. Formal recommendations include developing assessments, a landscape approach to collaboration, and a landscape approach to weed control funding.

"Completion of this report has been challenging on multiple fronts" Governor Gordon said, in an understatement. "Nevertheless, the group delivered a product that can serve as a launchpad for future discussions and I am extremely appreciative of their efforts during these challenging times" he added. The timing of the report reflects the importance of acting now. Weeds are not confined to land management and ownership boundaries, or weed district boundaries. This report elevates the importance of coordination (and coordinated funding), that represent shifts from current boundary-based weed control operations.

The task force report introduces us to more acronyms in the weed control lexicon: EDRR species refer to Early Detection Rapid Response species, those newly-introduced species in our state that are recognized as highly invasive in adjoining states that Wyomingites might hope to eradicate or confine. IAG species are Introduced Annual Grasses – everything from cheatgrass (*Bromus tectorum*) to newcomers. The latter are also in the EDRR category.

If a priority is placed on EDRR, then perhaps it is a more targeted approach of species priorities and landscape priorities, one that includes followup monitoring. It is a move away from the mindset that every invasive needs treatment every time.

The report emerged from a series of collaborative meetings between experts in terrestrial invasive plants. The group was divided into policy and



technical teams that included local, state and federal government representatives, private citizens representing industry and agricultural groups, as well as scientists and practitioners. "If you value the natural resources of an area ...and an agricultural economy, then the potential degradation... by invasive plants is **huge**" stated Brian Meador, associate professor of plant sciences (University of Wyoming). As many Wyoming Native Plant Society members already know, invasives are some of the most pervasive threats to our native plants. bh

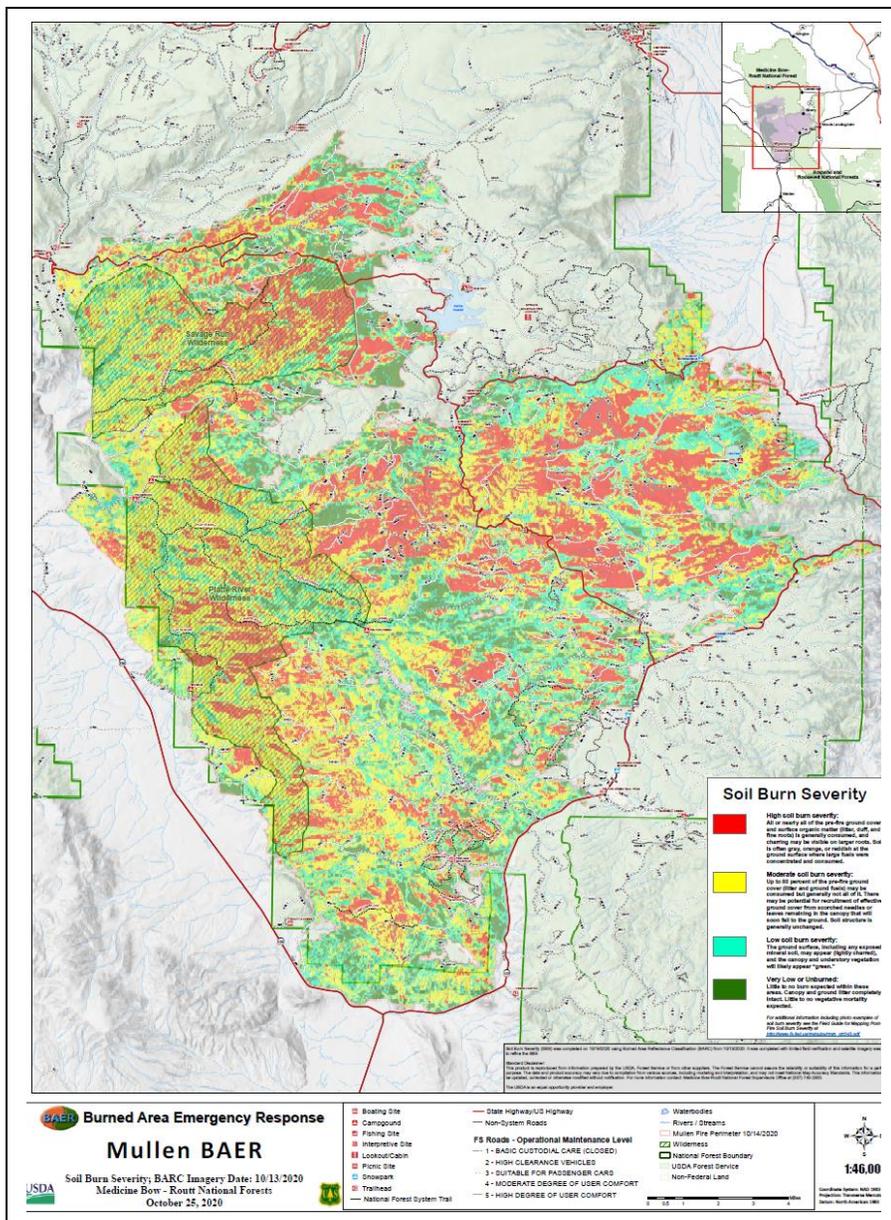
### Know your weeds

Wyoming Noxious Weed list is posted by Wyoming Weed and Pest Council, Dept. of Agriculture: <https://wyoweed.org/noxious-species/listed-species/state-designated-noxious-weeds/>

County noxious weed lists are posted at the same site.

The book, "Weeds of the West" (Whitson et al. 2012) is now posted online: [bit.ly/weedswest](http://bit.ly/weedswest)

## Mullen Fire: Frontview and Rearview



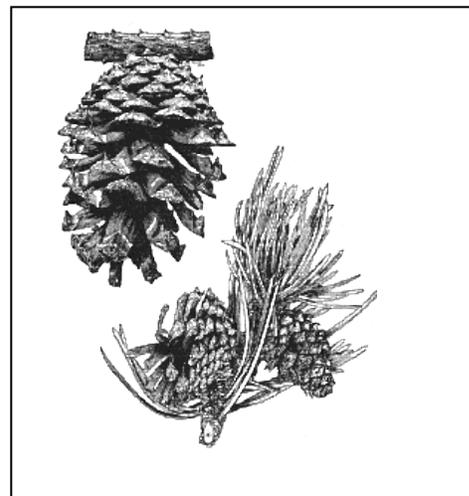
Mullen Fire embers have died and now the BAER has emerged: the Burned Area Emergency Response evaluation (Figure 1).

The Mullen Fire started in the Savage Run Wilderness Area on the west side of the Range, on September 17. Strong winds out of the west whipped it across to the entire east side, and doubled its size overnight. The predominantly lodgepole pine timber cover of this area had widespread mortality from whitepine blister rust and mountain pine beetle prior to the fire. Dead trees were tinder-dry by autumn, fueling the flames and filling the skies with smoke.

High and dry ridges across the southern third of the Medicine Bow Range took the brunt of the fire's fury, scorching over 176,178 ac (275 mi). About 90% of the burn area is in Wyoming and the rest in Colorado. This makes it one of the largest single events in recent Wyoming history. The Yellowstone fires of 1988 included 51 converging fires that burned over 8X greater an area (over 1,500,000 acres). There might have been one larger single fire event on record in our state, the Big Horn fire burned an est. 500,000 ac. However, it burned in 1875, ...long before statehood. bh

Figure 1: Map of the Mullen Fire and its Burned Area Evaluation Response, posted at: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fseprd836599.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd836599.pdf)

*Feasibility of 2021 fieldtrips to see the effects of the Mullen Fire, possibly as part of the 2021 annual meeting in June, will be evaluated once it is practical to plan and get boots on the ground.*



Right: Lodgepole pine (*Pinus contorta*) has two different kinds of cones – those that open and shed their seeds (the cone above) like our other pines, and those that remain closed until fire burns them (the lower right cone). Illust. From University of California – Agricultural and Natural Resources: <https://ucanr.edu/>. The cones of past pine generations, with or without fire events, shape future pine generations.

## Growing Native Plants

### **Part 38. More Forbs for Moist Sites**

By Robert Dorn

*Balsamorhiza sagittata*, Arrowleaf Balsamroot, is a perennial to 2.5 feet tall and wide. The leaves are mostly basal, triangular-heart shaped, gray-green, and to 12 inches long and 6 inches wide with wavy margins. The flower heads are to 3 inches across and mostly solitary at the tips of the many stems. The ray and disk flowers are both yellow. The flowers appear from April to June. The plants occur naturally on open slopes in the foothills and mountains. They prefer full sun or part shade and moist, loamy, well drained soils. The plants dry up after flowering. It can be grown from seed covered lightly to allow some light exposure. Cold stratification for 60 days is usually helpful. The plants may take several years to reach flowering size. Seed is commercially available.



*Balsamorhiza sagittata*, Moffat Co., CO

*Epilobium canum* var. *garrettii* (*Zauschneria garrettii*), Hummingbirdflower, is a perennial to 2 feet tall but often sprawling. The leaves are ovate to elliptic, toothed, and thick and firm. The flowers are red, tubular, to 1.75 inches long, and in small clusters on the ends of the stems. They appear from July to September. The plants occur naturally on moist open slopes in the mountains. They prefer full sun and moist, rich soil. Afternoon shade is usually helpful and periodic watering may keep them blooming longer. They can be grown

from seed sown outdoors in the fall. It is in the nursery trade.



*Epilobium canum* var. *garrettii*, Park County

*Mertensia lanceolata*, Lanceleaf Bluebell, is a perennial to 12 inches tall and 6 inches wide with one to few stems per plant. The leaves are to 5 inches long and 1.5 inches wide. The flowers are blue to blue-pink, to 0.5 inch long, and in drooping clusters at tips of stems. They appear from May to July. The plants occur naturally in moist, open places in the plains and foothills. They prefer full sun to light shade and moist, loamy, well drained soils. It may die back during summer heat. It can be grown from seed surface sown for light exposure. Keep moist after seeding. Fall seeding is best. It is also in the nursery trade.



*Mertensia lanceolata*, Albany County

*Polemonium pulcherrimum*, Short Jacobsladder, is a perennial to 10 inches tall and 18 inches wide and bushy with many stems. The leaves are pinnately compound with mostly 11 to 25 leaflets. The flowers are blue-purple, to 0.6 inch across, and in open or congested clusters at the stem tips. They appear from June to August depending on elevation. The plants occur naturally in open meadows and on slopes in the mountains. They prefer full sun and moist, well drained soils. It can be grown from rootstock divisions or from seed surface sown outdoors in the fall. Seed is commercially available.



*Polemonium pulcherrimum*, Park County

*Symphotrichum novae-angliae*, New England Aster, is a perennial to 4 feet tall and 1.5 feet wide with one to several stems per plant. The leaves are to 4 inches long and 1 inch wide. The flower heads are to 1 inch across and loosely clustered at the stem tip. The ray flowers are purple and the disk flowers are yellow. They appear from August to

October. The plants occur naturally in moist, open places and on stream banks in the foothills. They prefer full sun and moist, well drained or loamy soils. They can be grown from seed sown immediately after it matures. Use locally obtained seed which is best adapted for our area. Sow 0.25 inch deep. Cold stratification for 30 to 60 days may increase germination if not sown immediately after maturing. It needs constant moisture after planting and is sometimes slow to germinate. There are many cultivars available in the nursery trade. It is best to divide clumps every third year in the fall.



*Symphotrichum novae-angliae*, Pennington Co. SD

To see the above plants in color, go to the newsletter on the Society website: [www.wynps.org](http://www.wynps.org).

**2021 Annual Meeting Scouting Report: Red Buttes**

“I never saw so many gentians in my life” declared B. E. “Ernie” Nelson, Rocky Mountain Herbarium Curator and a person who is not prone to hyperbole. Dorothy Tuthill and Bonnie Heidel invited Ernie to join them on a Red Buttes outing last June, late in the month, at the same time of summer as we hope to hold the 2021 annual meeting with a Red Buttes fieldtrip. (Continued, next page)



Right: Water gentian (*Gentiana aquatica*)

Continued from p. 9

A galaxy of water gentians, primroses, shooting stars, blue-eyed grass, and lousewort lay before us at Red Buttes, where water gushes from springs year-round and flows down Harney Creek. Buckwheats, sandworts and penstemons emblazoned the highest ridge at the same time. Late June is a peak flowering time of the growing season, and a time that six of the seven rare plant species present locally can be observed.

Ever since May 8, 2020, when Dorothy and Bonnie first visited the grounds of the Red Buttes Environmental Biology Laboratory (University of Wyoming) – and found water gentians already in bloom - they saw signs of a diverse flora that kept them coming back for socially-distanced botanizing. The information they compiled is in a report that has a checklist of 227 species. The report, with photos, is posted at: <https://www.uwyo.edu/wyndd/files/docs/reports> and search the title column for “Red Buttes”

...Look for more scouting reports that cover 2021 annual meeting destinations in coming newsletters. bh

WYOMING NATIVE PLANT SOCIETY MEMBERSHIP FORM

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Please check all appropriate boxes:

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- Renewing member
- Check here if this an address change
- Annual membership with email notification of newsletters: \$10
- Annual membership with mailed newsletters: \$12
- Annual membership with scholarship support and email notification of newsletters: \$20
- Annual membership with scholarship support and mailed newsletters: \$22
- Life membership with email notification of newsletters: \$300
- Life membership with mailed newsletters: \$300

In addition to the statewide organization, we have two chapters. Membership in chapters is optional; chapter members must also be members of the statewide organization.

- Teton Plants Chapter annual membership: \$5
- Sublette Chapter annual membership: \$5
- Additional donation of \$ \_\_\_\_\_

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