

Buzz on the Range BGO Year Two Update

Attendees:

Presenter:

- Sarah Red-Laird - BGO ED

Producers:

- Meagan Lannan
- Malou Anderson-Ramirez
- Alex Blake
- Lillian Andersen

Project:

- Chris Mehus - Fiscal Sponsor
- Michael DeChellis - Principle Investigator
- Ginelle Dekker - BGO Co-ED

Date and Time:

2023-12-11 13:00

Discussion Points:

- **Project Overview by Sarah:** Emphasis on bee data collection and analysis, with a focus on soil health, bees, and grazing.
- **Project Objectives:** Outlined six objectives, including increasing producer and consumer interest, building a coalition of adaptive grazing producers, testing grazing plans, measuring bees and soil health, community promotion, and economic data collection.
- **Data Presentation:** Discussed lack of complete bee data, shared preliminary findings, and demonstrated use of iNaturalist pages.
- **Floral and Bee Community Analysis:** Described methods for analyzing vegetation and bee populations.

Summary of Strategic Partnerships/Collaborations:

- Discussed potential engagement with commercial beekeepers.
- Collaboration with Montana ranchers interested in the project.
- Mention of a Bison project using holistic plant grazing.

Next Steps:

- Completion and dissemination of full bee data reports.
- Potential for future meetings and increased collaboration.
- Plans for more detailed analysis and strategic planning.

Plant Species Mentioned:

Here are the species of plants discussed in the meeting, along with specific facts or statements about each of them:

1. **Lupine:** This plant is noted as extraordinarily important to bumblebees. It was mentioned positively, despite being located in a dry corner that cows tend to avoid.
2. **Blanket Flower:** Highly attractive to many different kinds of bees, indicating its significance in pollinator-friendly environments.
3. **Dandelions:** Loved by a lot of bees and non-toxic to cows, making them a beneficial species in the discussed context.
4. **Yarrow:** While native and included in many pollinator mixes, bees are not always strongly attracted to yarrow. It is particularly attractive to tiny twig-nesting bees and requires specific habitats like hollow vascular wetland plants to support these bee populations.
5. **Harry False Golden Aster:** This native plant is notable for attracting a large variety of native bees. It's drought-tolerant and resilient, able to grow amongst non-native plants. However, it is not a honey plant, meaning it's less attractive for commercial beekeeping purposes.
6. **Caraway:** Despite its potential attractiveness to bees, there was no observation of bees on caraway. It's a non-native plant, and its lack of attraction to native bees at a specific ranch was noted. Bears, however, are very attracted to its roots.
7. **Chicory:** Known as a great plant for bees. It's used in mineral mixes to pull the same nutrients or minerals from the soil as thistles, indicating its use in managing soil health and bee-friendly environments.

These plants were discussed in the context of their importance to bees and their interaction with other aspects of the ranch environment, such as soil health and cattle grazing.

Queen bee death incident:

The incident involving the death of a queen bee was described as follows:

- Neighbor to Lara Birkes (where the Barney Creek BOTR pasture is) was spraying the day of Sarah's bee monitoring.
- The queen bee was having a seizure and the incident was captured on film by Sarah Red-Laird using her iPhone.
- The bee died while Sarah was holding her, which was described as a very sad moment.
- Lara was extremely affected by the queen bee's death. Sarah and Lara co-wrote a social media post about this incident, which received a lot of attention.

- Sarah attempted to find a lab to analyze the bee to determine what could have been toxic and fatal to it, but was unsuccessful in finding a lab that would analyze just one bee.
- This incident sparked a conversation among Sarah, Lara, Pete, Meagan, and a neighbor. The conversation was not about blaming anyone but rather about exploring alternatives to spraying, which was happening in the area for thistle control.

iNaturalist:

iNaturalist link:

Buzz on the Range

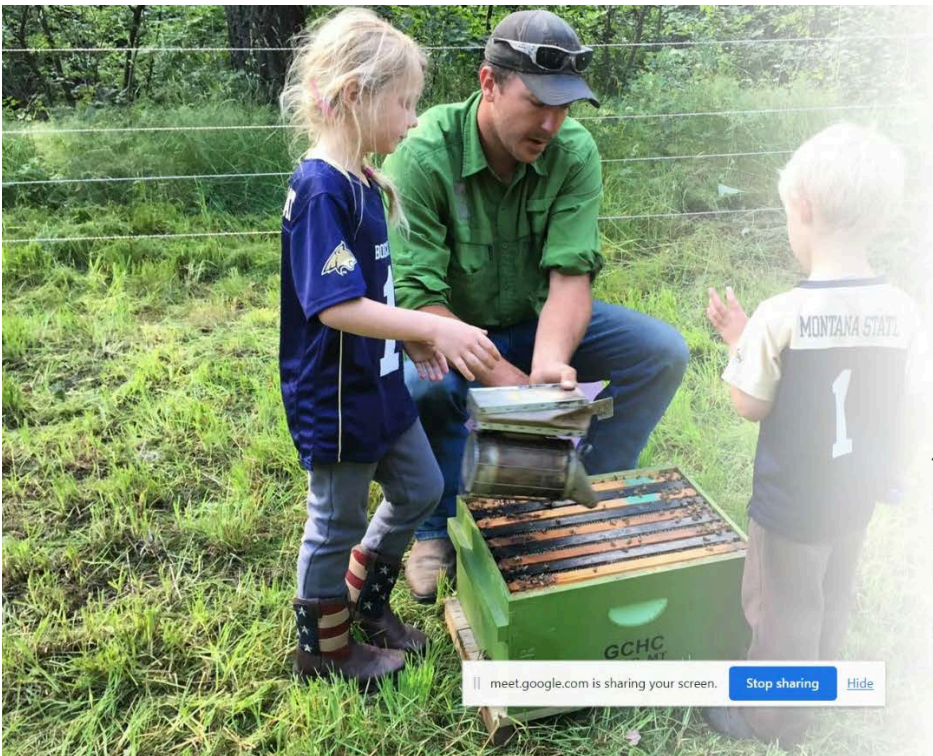
- **Project Site and Flower Sampling:** Sarah Red-Laird explained that she had mapped different properties where she collected flower samples. She created an iNaturalist flower list for each ranch, both for treatment and control plots. This allowed ranchers to see the flowers present in their respective areas as of December 2023. One specific site mentioned was Lara's ranch, where Megan and Pete have their cows.
- **Usage of iNaturalist:** Sarah Red-Laird emphasized the usefulness of iNaturalist as a tool for the project. She mentioned that, at that time, she was the only contributor on iNaturalist for this project. However, she encouraged other participants, such as Alex, Lily, or Malou, to sign up as contributors. Sarah expressed her willingness to quickly add them to the project so they could add their own observations.
- **Permissions and Publicity:** Meagan Lannan emphasized the importance of obtaining permissions from producers before making anything public. There was a need to ensure that producers were okay with putting their information out there. Sarah Red-Laird acknowledged this, suggesting there might have been some misunderstanding about what was being shared.
- **Publishing Plans:** Sarah Red-Laird clarified that the initial plan was not to publish the data, but they wanted to keep the option open for future publishing. She stressed the importance of having sound and legitimate data that could potentially be presented at various forums or used for writing articles and speaking at conventions. The focus was on collecting data rigorously while navigating budgetary constraints.
- **Website Accessibility:** According to Sarah Red-Laird, the website containing the data was not publicly accessible to anyone except the project participants at that point. Only those with a specific link could access it. Sarah mentioned considering making the page private and confirmed she had received general approval from the participants for using iNaturalist and collecting flowers for the cyanotype project.

Slides Presented:

Project Objective One

Increase producer and consumer interest in the connection between soil health, bees, and grazing in the Greater Yellowstone Ecosystem.

- Collaborative blog with WSE
- “Hum from the Hive” BGO Blog
- Hollow Tree Honey Foundation Speaker Series, April 2023
- Jackson County Agriculture Professional Development for K-12 Educators
- Instagram + LinkedIn + Facebook = 93,738 accounts reached from BOTR posts and stories



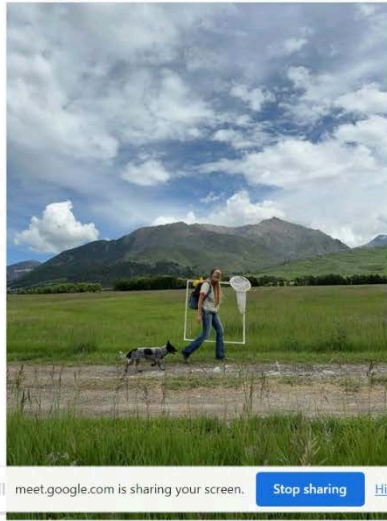
Project Objective Two

Build and support a coalition of producers who are adaptive grazing, who are interested in increasing their bee communities and who are interested in connecting with **Montana beekeepers.**

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Project Objective Four

Objective 4: Measure bees and soil health over 3 years in several locations.



A one-acre treatment plot is selected where the seeds were fed (or will be fed) in mineral. A one-acre control site is selected one, or more, miles away from the treatment to avoid sampling the same community of bees.

One 25-meter vegetation transect is measured and marked.

A 1-meter square was randomly tossed four times to the left and four times to the right of the vegetation transect, and plant communities are recorded. If there is inflorescence, the *stem* of the plant is counted as 1. Non-inflorescence plants are not counted.

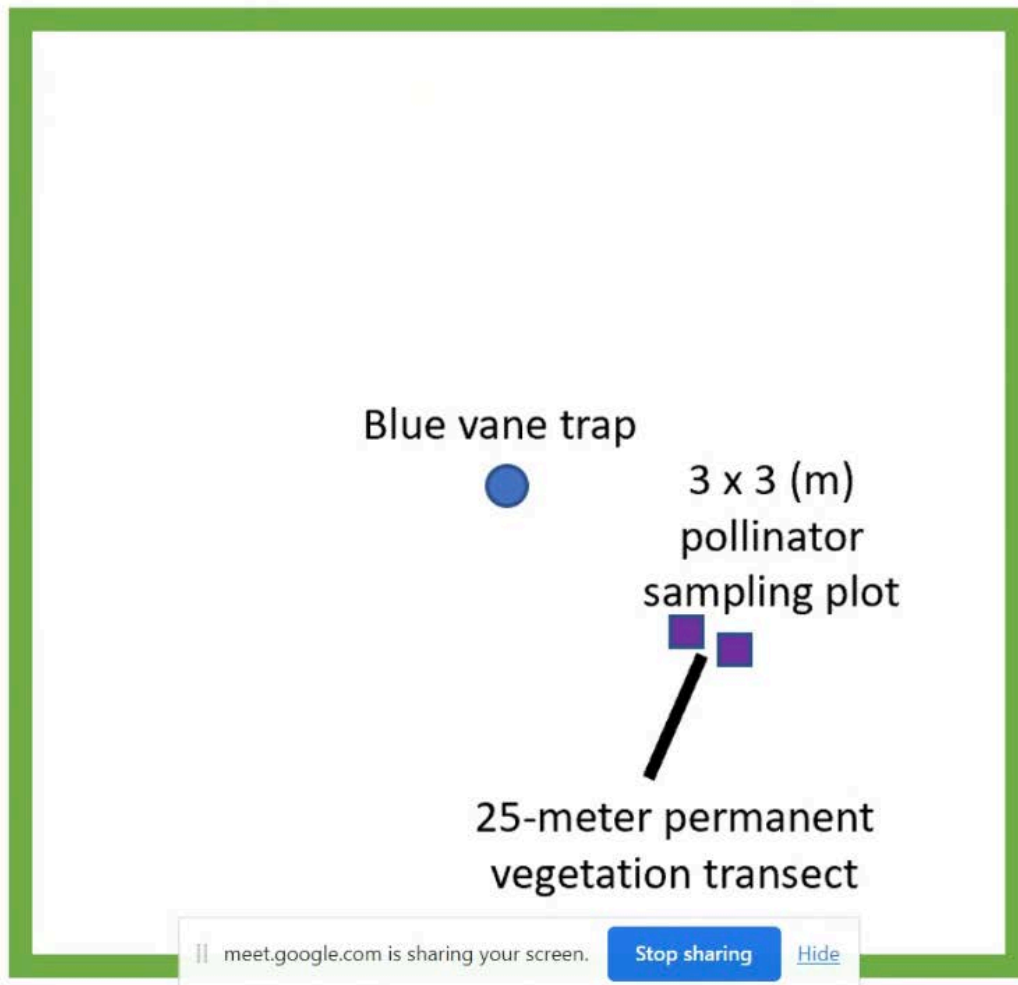
Two 3-meter square bee observation transects are placed at one end of the 25-meter vegetation transect and observed for 30 minutes each. Bee/floral associations are recorded. Any bee not ID'd to species on the wing, is netted and pinned for later ID.

The blue vane trap is in the center of the plot, traps are pulled 24 hours after they are set.

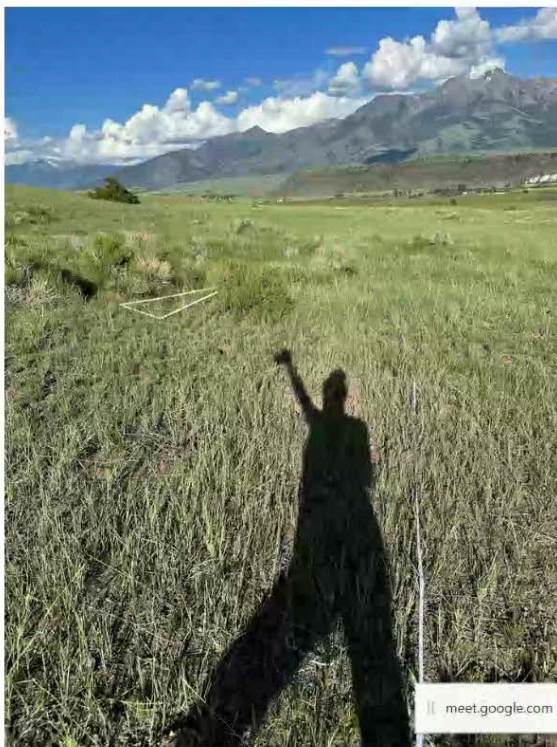
BVT bees are shipped to Sarah G, project taxonomist. Observed bees are pinned and ID'd by Sarah R-L, or hand-delivered to Sarah G for ID.

All data is entered into spreadsheets. Flower lists are uploaded into iNaturalist for ranchers to see photos with ID's of their flowers. Each list is tagged with the treatment study plot and linked in the reports.

Example of 1-acre plot layout



48



2022

Anatone Bluebunch Wheatgrass 50%

Native Purple Prairie Clover 20%

Joseph Idaho Fescue 20%

Stillwater Prairie Coneflower

2023 (?)

Cider Milkvetch (75%),

Rocky Mountain Bee Plant (3%), and

Birdsfoot Trefoil (22%)

iNaturalist

<https://www.inaturalist.org/projects/buzz-on-the-range>

The screenshot shows the iNaturalist project page for "Buzz on the Range". The header features a large landscape photo of a person in a field with mountains in the background. Below the photo is a banner with the project name and dates: "Buzz on the Range JUN 19, 2023 - JUL 6, 2023". To the right, an "About" section describes the project as a rancher-led initiative to create bee habitat on 8,900 acres in Montana's Paradise Valley. It includes a "Members" count of 1 and a "Project Journal" link. Below the header, a statistics bar shows: Overview (85 OBSERVATIONS), 46 SPECIES, 23 IDENTIFIERS, and 1 OBSERVER. A "Stats" button is also present. The "Recent Observations" section is partially visible at the bottom, showing a "View All" button and a notification from a meeting link.


Browser tabs: Bee, Not, i, Whc, Buz, Obs, Obs, Obs, Obs, iClo, G hair, +

Address bar: inaturalist.org/observations?q=Barney%20Creek%20Treatment&search_on=tags

Navigation: Farming, Phylcia's Tasks, QBO, Workspace Login, Adobe Photoshop, Templates | Bram..., Brammo Campaig..., Brammo, All Bookmarks


Site Navigation: The World, OBSERVATIONS, SPECIES, IDENTIFIERS, OBSERVER

View Options: Map, Grid, List




Silver Wormwood
(Artemisia ludoviciana)

Research Grade 2 5mo



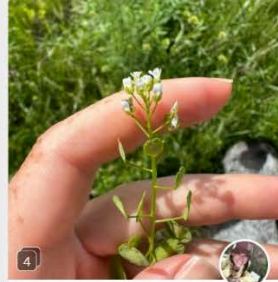
Hairy False Goldenaster
(Heterotheca villosa)

Research Grade 2 5mo



Common Yarrow
(Achillea millefolium)

Research Grade 3 5mo



Field Penny-Cress
(Thlaspi arvense)

Research Grade 3 5mo

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Windows Taskbar: Search, File Explorer, Edge, Teams, Word, PowerPoint, PDF, 12:24 PM 12/11/2023



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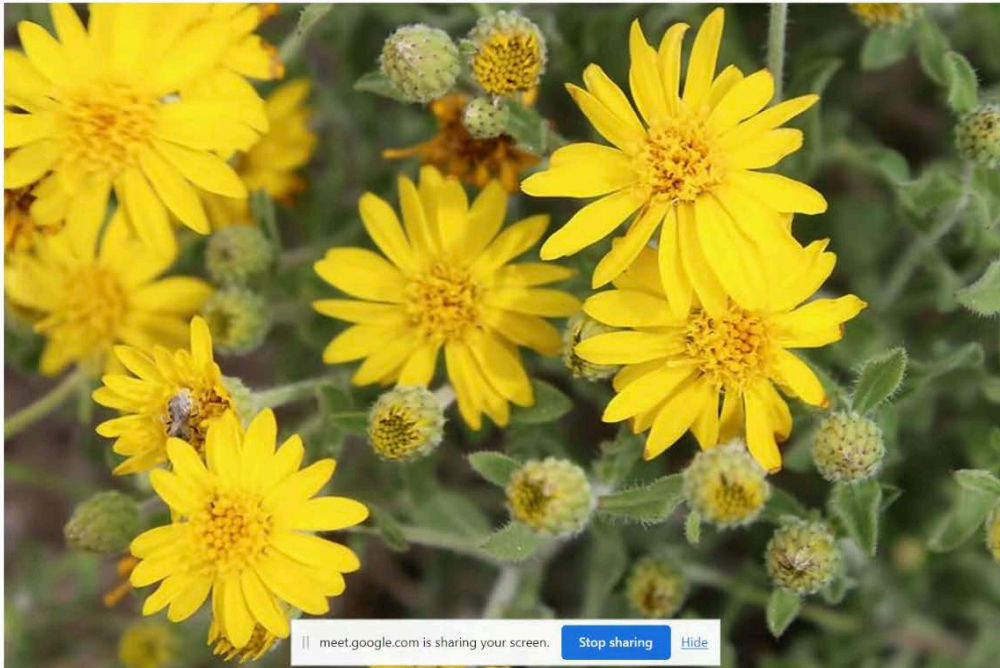


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Row Labels	Count of Bee	Common Name
Alfalfa	3	
Alsike clover	12	
Alyssum	1	
Caraway	2	
Corn gromwell	2	
Dandelion	6	
False flax	2	
False London-rocket	9	
Hairy false golden aster	13	
Hoary alyssum	2	
Hound's-tongue	1	
No inflorescence	3	
Prickly pear	4	
Red clover	1	
Sage or wormwood	2	
Sainfoin	21	
Scarlet globemallow	3	
Thistle	1	
White clover	1	
Wild morning glory	3	
Yarrow	2	
Yellow sweetclover		
Grand Total	95	



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