

# Helena Urban Meadows

Transforming Lawns to Meadows in  
Helena, MT

Elena Johnson | Light Song Gardens





# Ready to HUM along?

- What is an urban meadow?
- Why plant a meadow?
- Meadow design process
- Planting your meadow
- Post-install meadow management
- Helena Urban Meadows (HUM) project
- Pilot meadows
- Next steps
- Questions/Comments







An urban meadow is an abstraction of a natural meadow in a garden setting.



## Why plant a meadow?

- Build relationships
- Learn
- Boost mental health
- Enhance water infiltration
- Invite wildlife
- Store carbon
- Add beauty & intrigue





## Making a Meadow- *not a linear process!*

- Goal Setting
- Site Analysis
- Site Selection
- Site Prep
- Design
- Plant Selection
- Plant or Seed
- Manage



Design Install



# Goal Setting

- What are your main motivations for growing a meadow?
- Are there any special functions you want it to serve?
- How fast do you want your meadow to take off?
- How much time are you able to invest in your meadow?



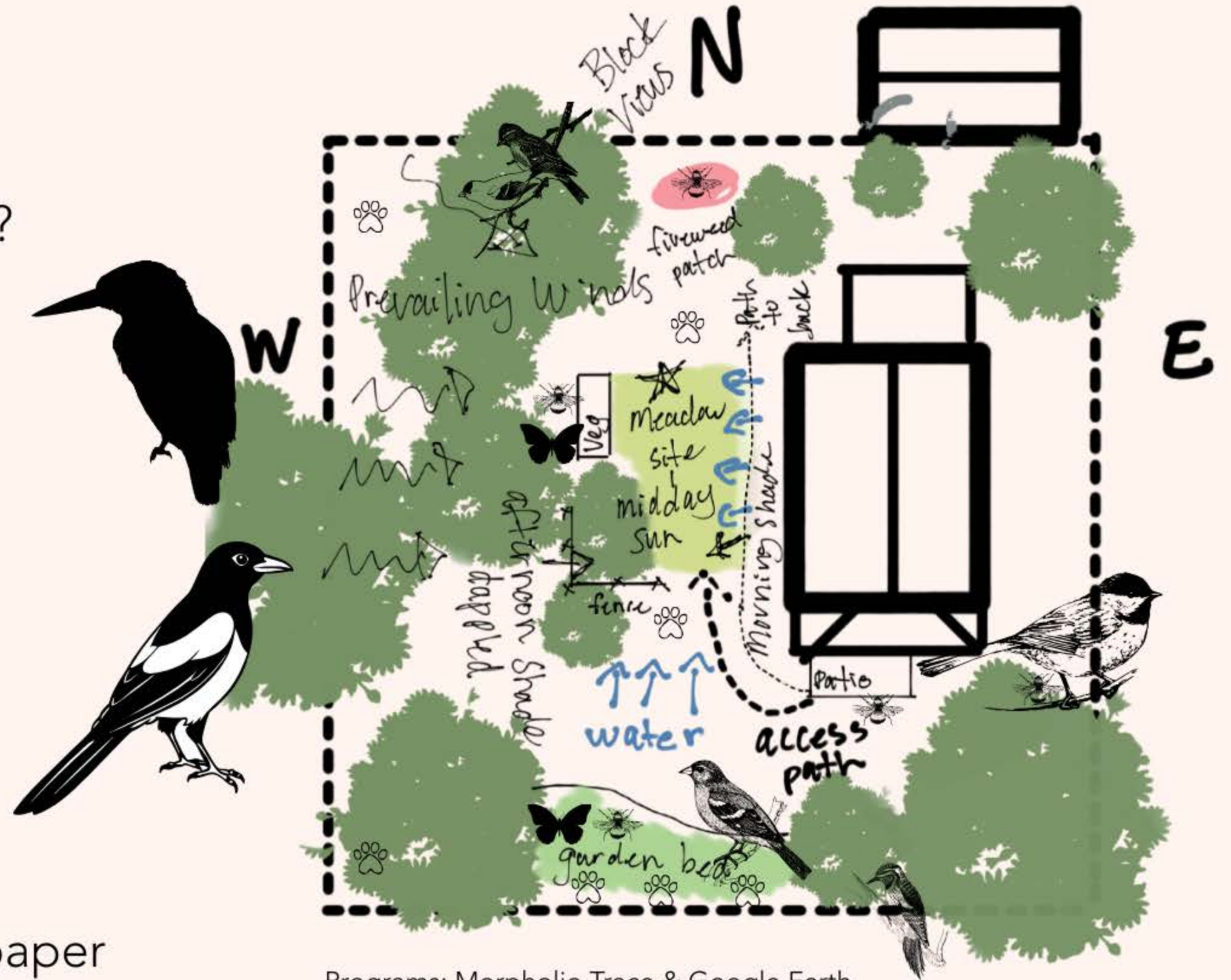


# Site Analysis

What are your site's existing conditions?

- Water
- Sunlight
- Slope
- Soil
- Wind
- Views
- Use patterns
- Vegetation
- Wildlife
- Measurements
- Structures

Keep a blank base map and use trace paper or multiple files for analysis/design layers



Programs: Morpholio Trace & Google Earth



# Site Selection

Use your goals and site analysis to determine where to plant your meadow.

- Consider ease of access for monitoring and management.
- Light- pick a sunny spot if you want a floristic meadow.
- Are there any existing features in your yard that might be supported by a meadow?





# Site Prep

- Mechanical
- Chemical
- Smothering
- Sheet mulching

Use your goals to  
decide which method  
works best for you.





# Design Components

- Form/Layout
- Plant Selection
  - Matrix
  - Layers
  - Sociability
  - Succession
- Management





# Form/Layout

- Size
- Spaces
- Access
- Views
- Edges
- Features





# Matrix, Layers, Socialability

- Structural
- Seasonal
- Groundcover





# Research

- Hikes
- Neighborhood Walks
- Books/Internet
  - Ecoregion
  - Plant communities





# Useful Resources

- bplant.org- ecoregion info
- Homegrown National Park- keystone species
- Montana Field Guides- ecological communities
- <https://www.eddmaps.org/>- invasive species info



Idaho Fescue  
*Festuca idahoensis*



Prairie Junegrass  
*Koeleria macrantha*



Blue Grama  
*Bouteloua gracilis*



Dotted Blazing Star  
*Liatris punctata*



Sticky Purple Geranium  
*Geranium viscosissimum*



Blanket Flower  
*Gaillardia aristata*

 **MONTANA FIELD GUIDE**

Montana's Official State Website

Field Guide Home Animals Plants Lichens Ecological Communities Invasives Help

**Montana Field Guides** Search Field Guide  Go  
Advanced Search

Home - [Other Field Guides](#)  
[Ecological Communities](#)  
[Grassland](#)  
Lowland - Prairie Grassland

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### Rocky Mountain Low Elevation - Dry Grassland

Global Name: *Central Rocky Mountain Lower Montane, Foothill & Valley Grassland*

**Rocky Mountain Low Elevation - Dry Grassland**

**Habitat of Concern**  
Global Rank: [G4G5](#)  
State Rank: [S3](#)  
FWP SWAP: [HGCN](#)  
(see reason below)

[Ecological Systems Map Viewer](#) [Google for more Images](#)  
[NatureServe Ecological Systems](#) [Google for more Web Pages](#)

 © MTNHP - Steve Cooper

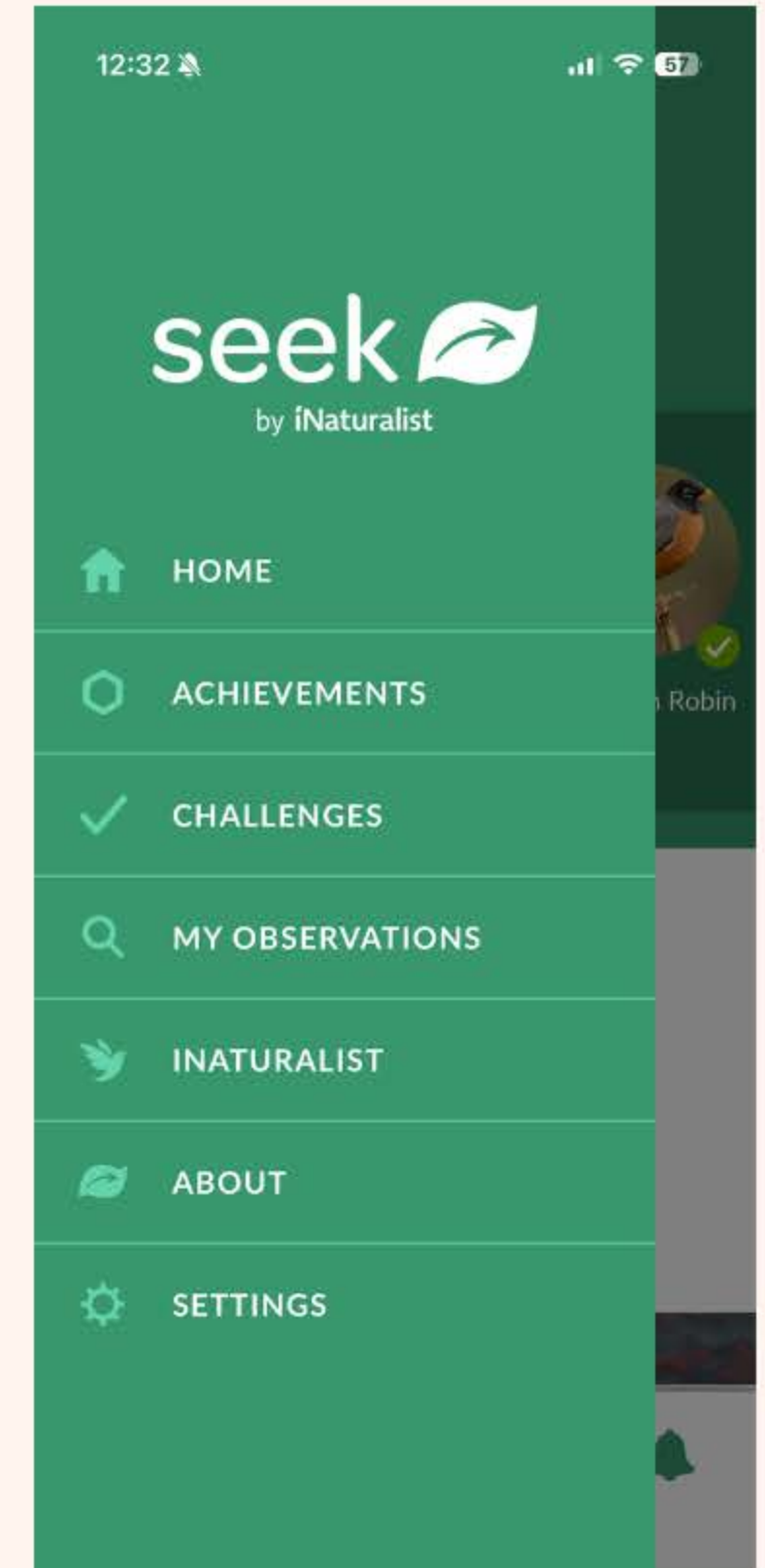
[Image Copyright and Usage Information](#)

**State Rank Reason**  
Decreases in condition and extent of these lower elevation grasslands and continued threats from development, land use practices, grazing and invasion by non-native species makes them vulnerable to extirpation.



# Useful Apps

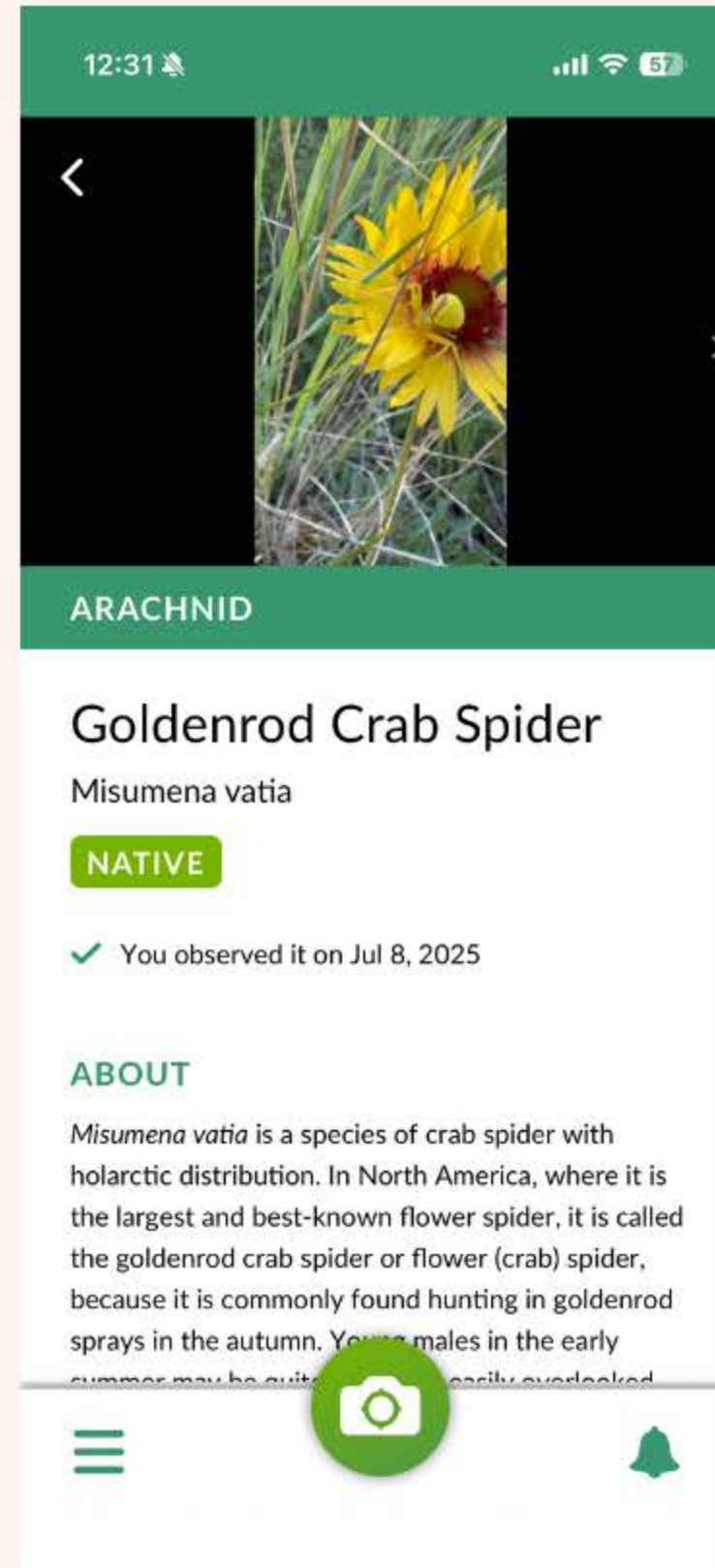
- iNaturalist
  - Identify plants and animals
  - Share observations for scientific research and public viewing
  - Not private
- Seek by iNaturalist
  - Identify plants and animals
  - Record observations privately
  - Simple





# Find clues in nature

- Spotted on *Gaillardia aristata*
- Habitat: forest biomes
- Common host plants: goldenrod and milkweed
- Females do not travel far from their feeding location
- Prefers to nest in common milkweed (*Asclepias syriaca*) and chokecherries (*Prunus virginiana*)
- Garden benefits: provide pest control



## Goldenrod Crab Spider (*Misumena vatia*)

Native to United States (Source List: [United States Check List](#))



Map

About

Taxonomy



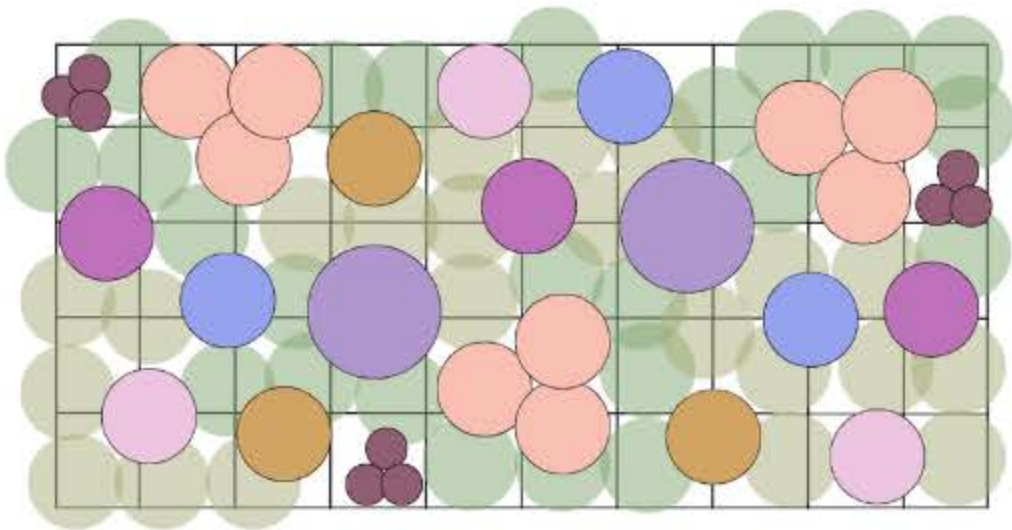
# PLANT SELECTION

**Notes:** You don't need to have something flowering in every layer at all times, just make sure that at least one layer has blooms throughout the seasons. Some species might cover multiple layers or seasons. Be sure to use a combination of both short and long lived species. Your structural layer should be relatively long lived, and present throughout most of the year. It can also be a shrub, tree, or other feature.

| Matrix      |                 |
|-------------|-----------------|
| Warm Season | Side Oats Grama |
| Cool Season | Idaho Fescue    |

|                               | Spring                                                    | Summer | Fall | Winter |
|-------------------------------|-----------------------------------------------------------|--------|------|--------|
| Structural                    | <u>Narrow-leaved Coneflower</u>                           |        |      |        |
| Masses/Drifts<br>*short lived | <u>Wild Bergamot</u><br><u>Blue Flax (will self-seed)</u> |        |      |        |
| Masses/Drifts<br>*long lived  | <u>Sticky Geranium</u><br><u>Blanket Flower</u>           |        |      |        |
| Groundcover                   | <u>Nodding Onion</u>                                      |        |      |        |

## SAMPLE DESIGN



### KEY

- 

Blue Flax (3)  
*Linum lewisii*  
scatter singles
- 

Wild Bergamot (3)  
*Monarda fistulosa*  
scatter singles
- 

Narrow-leaved Coneflower (9)  
*Echinacea angustifolia*  
scatter groupings of 3
- 

Blanket Flower (3)  
*Gaillardia aristata*  
scatter singles
- 

Sticky Purple Geranium (3)  
*Geranium viscosissimum*  
scatter singles
- 

Nodding Onion (9)  
*Allium cernuum*  
scatter groupings of 3, outer edges
- 

Smooth Blue Aster (2)  
*Symphyotrichum laeve*  
scatter singles, center
- 

Side Oats Grama (24)  
*Bouteloua curtipendula*  
plant swaths of 3-6, approx 1' between centers
- 

Idaho Fescue (24)  
*Festuca idahoensis*  
plant swaths of 3-6, approx 1' between centers

**Note:** this is just a guide, plan does not need to be followed exactly



# Other Considerations

- Aim for about 60% grasses and 40% forbs (wildflowers)
- 1-2 plugs/square foot
- Plant forbs in groupings of 3 or more visual impact
- Reduce numbers of plants likely to spread vigorously
  - Select plants with similar sociability
- Include “clues to care”
- Design for winter
- Your meadow will change over time!





# Planting Strategies

- Seed
- Plug
- Seed + Plug





# Management

- **Water**

- Regularly during establishment (first 1-2 seasons).
- Only during severe heat/drought after establishment.

- **Weed**

- Monitor regularly during establishment and weed as needed.
- Learn the lifecycles of weeds on your site.

- **Whack**

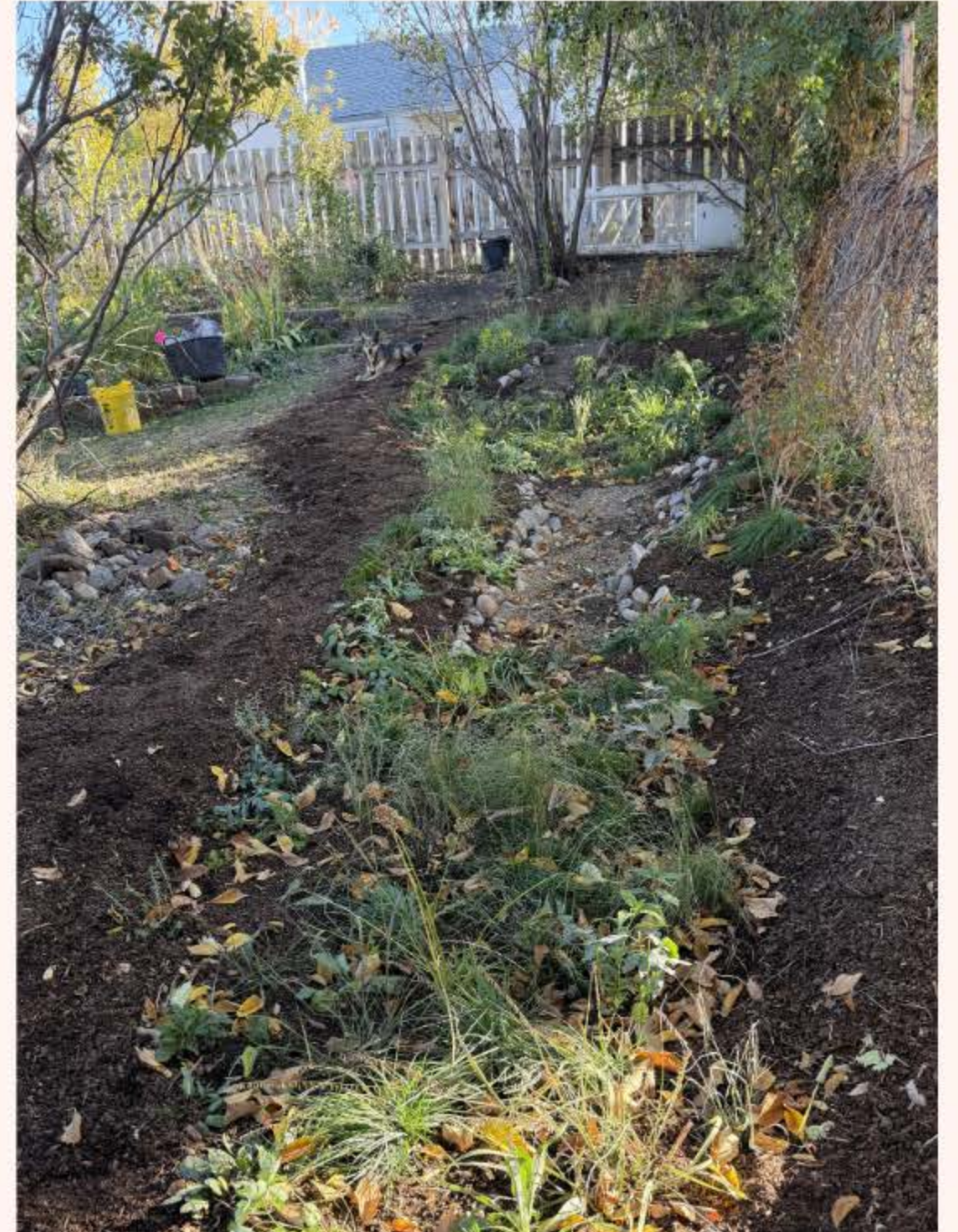
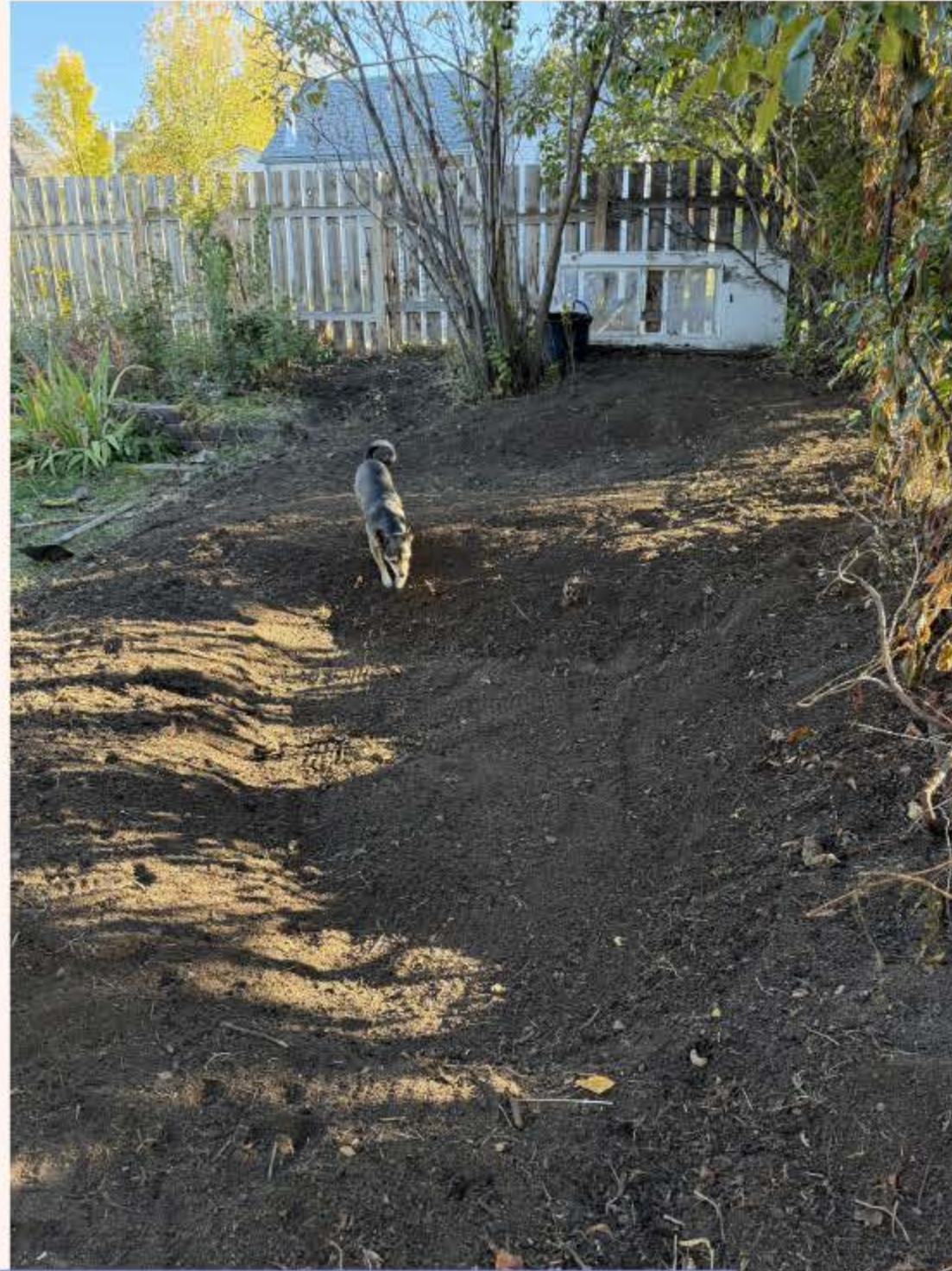
- Year 3 on, mow at 4-6", or weed whack to about 12".

- **Watch**

- Monitor meadow for balance from year to year- remove and add plants as needed.







Experiment, embrace change, and enjoy the process



# Helena Urban Meadows (HUM)

- Lawn to meadow education
- Ongoing demonstration and research
- Community building!
- Workshops
- Online community platform





# Year One HUM: Soft Landing

Planted June 6<sup>th</sup>, 2025



Plug Kit



After Planting



Two Months Later...



# Year One HUM: Sunny Lawn Patch

Planted June 10<sup>th</sup>, 2025



Prepared Site



After Planting



Three Months Later...



# Year One Meadow Examples | Sunny Patch

Planted June 11<sup>th</sup>, 2025



After Planting



Two Months Later



Three Months Later...



# Year One HUM | Shady Oasis

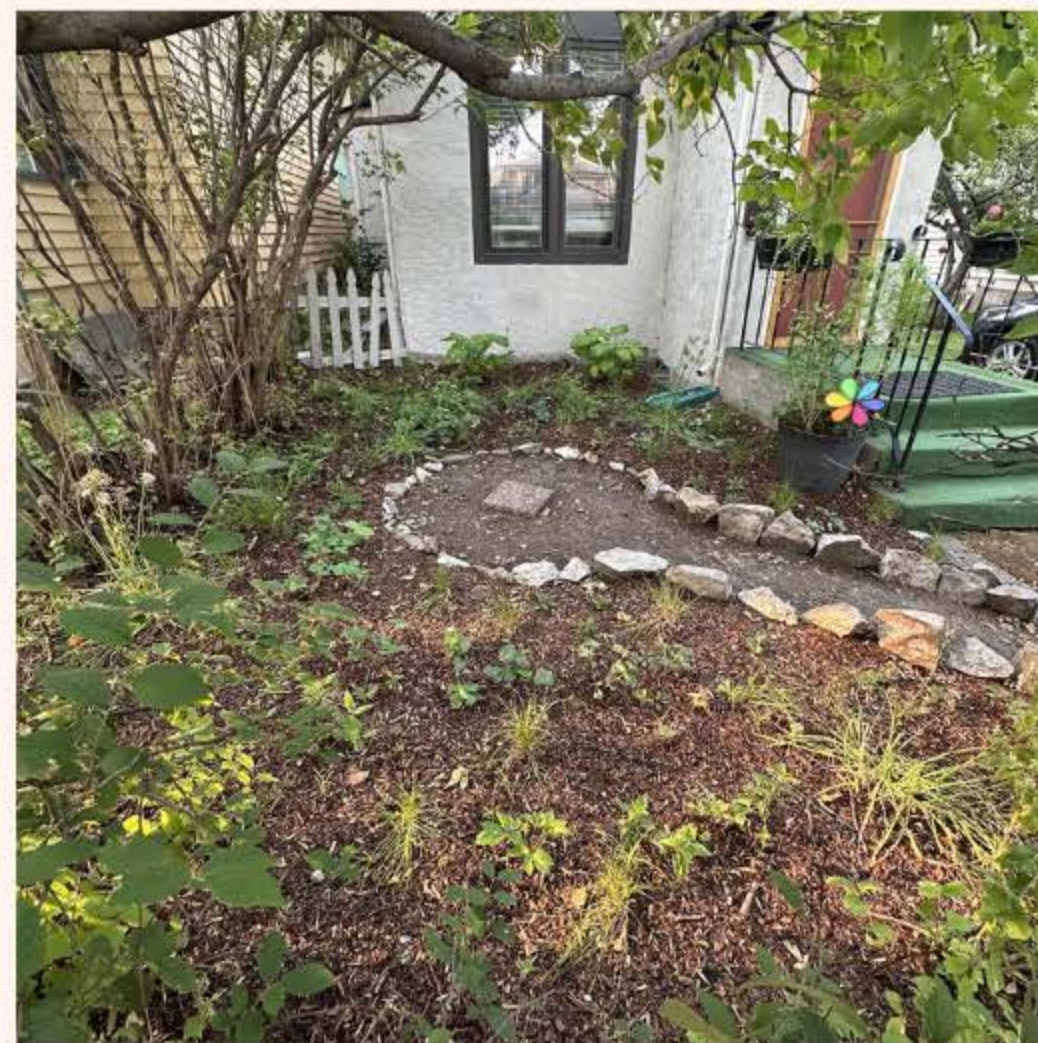
Planted June 12<sup>th</sup>, 2025



Planting Day



Kitty Love, 1.5 months later



Three Months Later...



# Year One HUM | Sunny Border

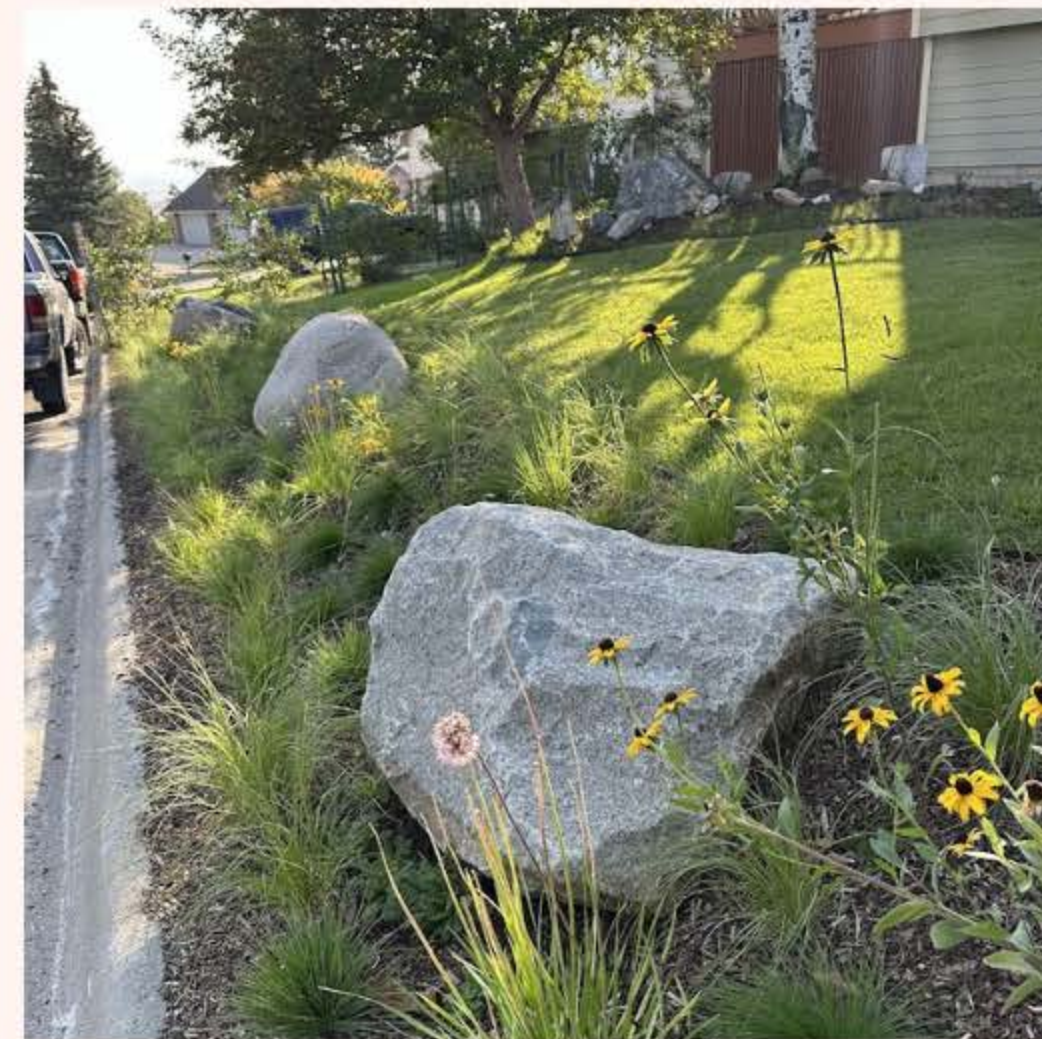
Planted June 11<sup>th</sup>, 2025



Prepared Site



Planting Day



Three Months Later...



# Year One HUM | Mia's Meadows

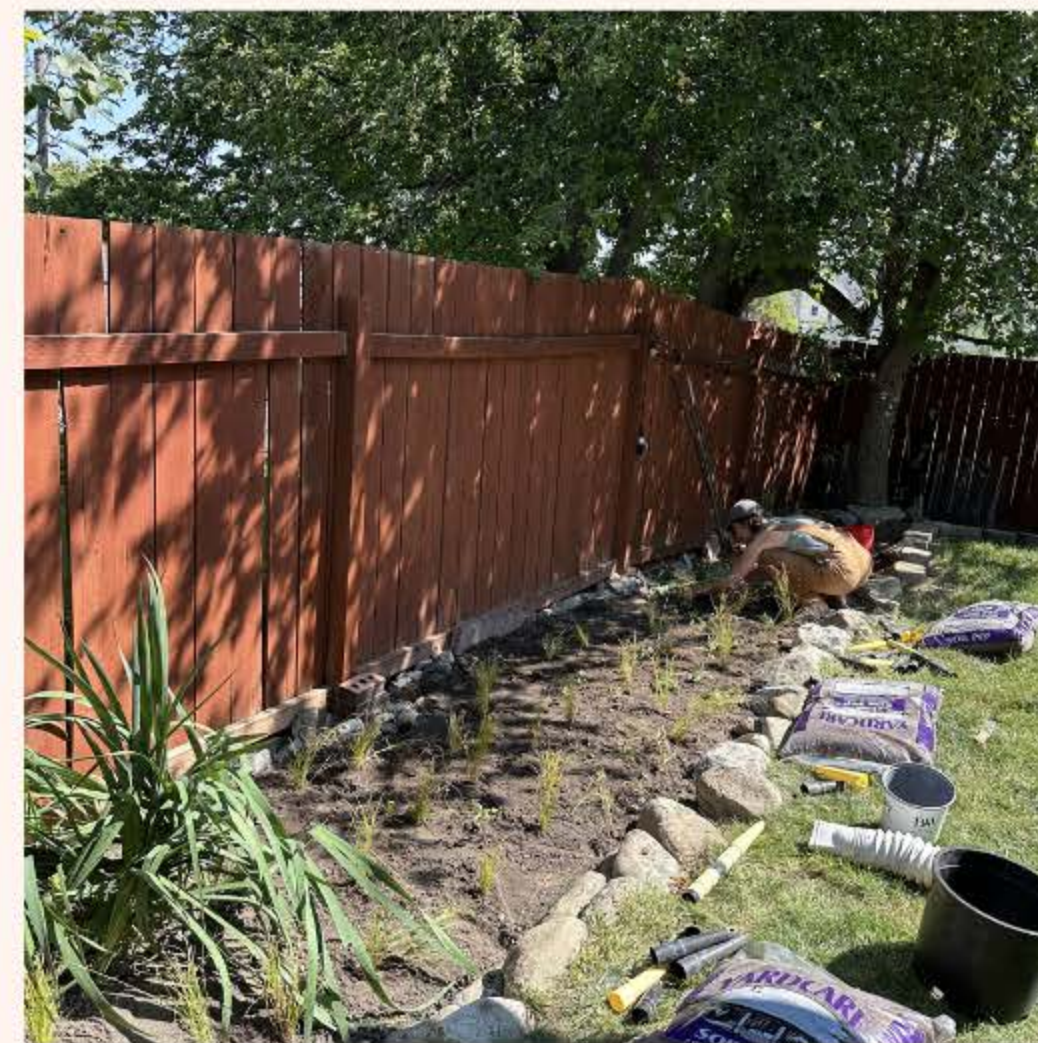
Planted September 1st, 2025



Plugs



Planted!



Planting



# HUM Documentation & Community

- HUM iNaturalist project
- Circle online community- in progress
- Meadow meetups- stay tuned!

×

Explore

Your Observations

Community

Identify

More



HUM

Helena Urban Meadows

About

This project tracks birds, insects, and plants visiting urban meadows in Helena, Montana.

The purpose of the project is to encourage participants to spend more time in urban gardens, while growing an understanding of the local environment who we are sharing them with the world.

Read More >

Edit Project

Overview

13  
OBSERVATIONS

11  
SPECIES

6  
IDENTIFIERS

2  
OBSERVERS

Recent Observations →

RG



Red-belted Bumble Bee

*Bombus rufocinctus*

2 5mo



Western Bumble Bee

*Bombus occidentalis*

1 5mo



Genus Archytas

1 5mo



Red-belted Bumble

*Bombus rufocinctus*



1st

Most Observations

lightsong

10



1st

Most Species

lightsong

5

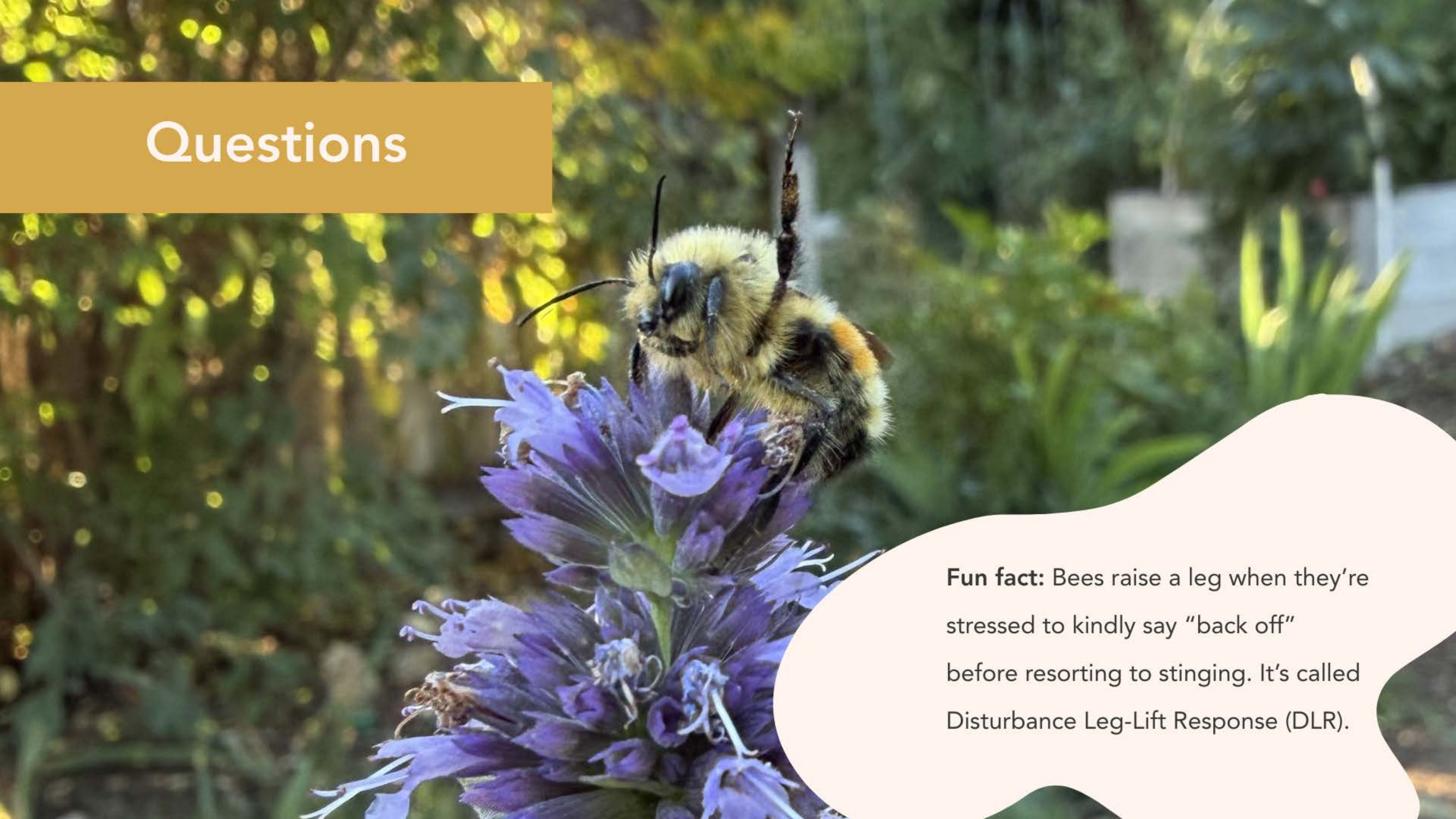


Most Observed

Red-belted Bumble



# Questions

A close-up photograph of a bumblebee perched on a purple flower. The bee's right leg is raised high into the air, a behavior known as the Disturbance Leg-Lift Response (DLR). The background is a soft-focus garden scene with green foliage and yellow flowers.

**Fun fact:** Bees raise a leg when they're stressed to kindly say "back off" before resorting to stinging. It's called Disturbance Leg-Lift Response (DLR).