



# CRAIL GARDENS

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In 2019, Grow Wild built a demonstration garden at Crail Ranch using native plants that are wildlife friendly, water wise, and preserving of the historic landscape.

This is our garden's story four years later.

2023





# NATIVE PLANTS

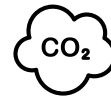
## Why Plant Native?



They are adapted to local conditions, requiring less fertilizer and pesticides.



They require less watering to thrive and can help control stormwater runoff.



They improve air quality by sequestering carbon.



They provide food and shelter for wildlife and support pollinators.

Native plants promote biodiversity and stewardship of our natural heritage.

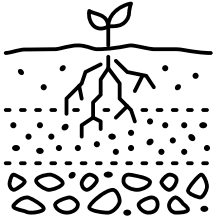


Plant life balances ecosystems, protects watersheds, mitigates erosion, moderates climate, and provides shelter for many animal species.



# IT STARTS WITH THE SOIL

Soil filters and purifies our water, reduces flooding, regulates the atmosphere, and plays a crucial role in driving the carbon and nitrogen cycles.



Healthy soil is a dynamic living ecosystem: a complex combination of minerals and organic matter containing air, water, and life.

Worms are not alone in the ground. Just a gram of dirt can contain as many as 50,000 species, all interacting with each other to keep their soil habitat healthy and productive.



2023 marked our first year seeing mushrooms in the garden!

Mushrooms are indicators of a functioning ecosystem. They improve soil structure, increase drainage, and help decompose organic matter, which in turn feeds all of the living things in the soil food web.



## Natural Fertilizer:

Our local elk herd eat our plants over winter and deposit slow acting fertilizer for plants to use throughout the growing season.





# WILDLIFE



There is an unbreakable link between native plant species and native wildlife.



Native insects cannot, or will not, eat non-native plants.

When native plants disappear, the insects disappear, impoverishing the food source for birds and other animals.

Insects provide vital services. They prey on other insects, pollinate flowers, decompose plant matter, and help spread seeds.



"If something is not eating the plants, then the garden is not part of the ecosystem."



Bert, our resident bunny, is the reason we are diligent in protecting new plantings and certain species they find irresistible.





# A SPECIAL VISITOR

## White Lined Sphinx Moth, *Hyles lineata*

It's the first time we've observed a sphinx moth in the garden. But as they often fly at dusk, during the night, and at dawn, we bet they've been a garden regular.

As a member of the sphinx or hawk moth family (Sphingidae), these moths have large and plump bodies compared to their wingspan (2½ to 3½ inches). This unique feature requires them to have fast-beating wings, enabling them to fly quickly or hover in place, similar to hummingbirds.

These moths pollinate a wide variety of native plants, helping maintain genetic diversity. They also provide food for other insects and omnivorous vertebrates including birds, bats, frogs, rodents, and even bears. Many bird species rear their young on fatty, protein-rich moth caterpillars.

Caterpillars pupate in shallow burrows in the ground and feed on a diversity of plants including willow weed (Epilobium), tomato (Lycopersicon), evening primrose (Oenothera), apple (Malus), four o'clock (Mirabilis), elm (Ulmus), grape (Vitis), purslane (Portulaca), and Fuchsia.

Adults feed on the nectar from a variety of flowers including columbines, larkspurs, petunia, honeysuckle, moonvine, bouncing bet, lilac, clovers, thistles, and Jimson weed.





# A PLACE TO REST

Most of our native bees are solitary bees.

Females make a nest, resting there between foraging trips and sheltering there overnight.

Male bees have it rough. They shelter at night wherever they can find cover, often right in the flowers that provide them with food.

Early mornings are the best time to find them in or under flowers, until the warmth of the sun coaxes them out.

To create a more 'bee friendly' landscape, incorporate a diversity of native plants into gardens.

To maximize food resources for native bees, plant native flowers of various colors, shapes, textures, and sizes with a diversity of bloom times. Early season (spring) and late season (fall) blooms are amongst the most vital since there are fewer resources available for bees and other pollinators during these times of year.





# GARDEN #5

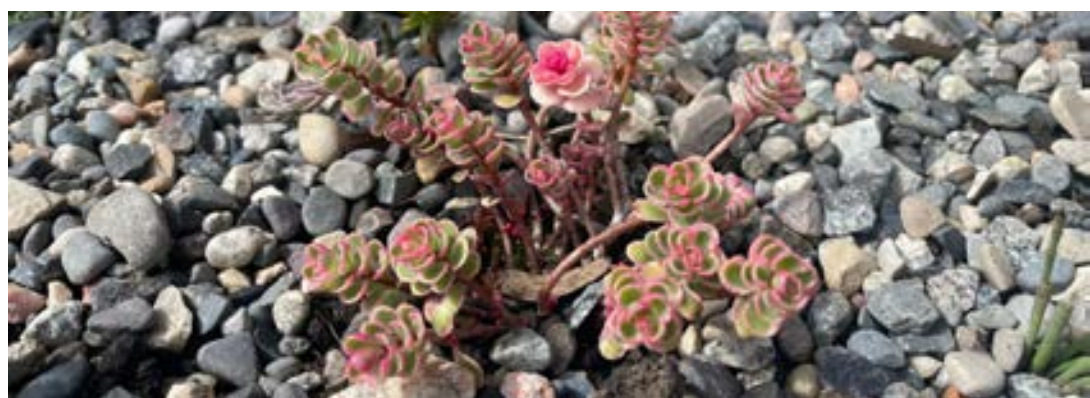
THANK YOU  
VOLUNTEERS!

We built a new garden of sedums, pussytoes, and thyme on the south side of the big cabin.

- Sedums are among the most versatile, drought-tolerant, and easy-to-grow perennials.
- They actually decrease work for a gardener as they increase in square footage.
- Renowned for their ability to spread quickly, these low growers thus keep weeds from taking hold.

10 Species (2 native species in blue):

- Antennaria dioica* 'Rubra' (var. rosea), Stoniferous Pussytoes
- Antennaria rosea*, Rosy Pussytoes
- Sedum karnschaticum*, Russian Stonecrop
- Sedum lanceolatum*, Native Alpine Stonecrop
- Sedum rupestre*, 'Angelina' Stonecrop
- Sedum reflexurn*, 'Blue Spruce' Stonecrop
- Sedum spurium*, 'Dragon's Blood' Stonecrop
- Sedum spurium*, 'Tricolor' Variegated Stonecrop
- Sedum album*, White Stonecrop
- Thymus pseudolanuginosus*, Woolly Thyme





# ESTABLISHING NATIVE GRASS



## 2020

Fall:

- Killed weeds and non-native grass (smooth brome) twice.
- Raked up plant materials.
- Added 1/4" topsoil.
- Seeded with Idaho Fescue



## 2021

Spring:

- Driest spring on record resulted in little to no germination.

Summer:

- Installed a temporary irrigation system.
- Prepped area again and added 1/4" layer of topsoil.
- Seeded Idaho fescue in late summer. Germinated well under irrigation.

Fall:

- Because the area around the cabin could not be irrigated at all, seeding was put off to late fall. Erosion control mats were used for protection.



## 2022

- A wet spring resulted in germination around the cabin.
- Noxious and nuisance weeds, as expected, were weed whacked and pulled by hand. This will continue until grass is established.



## 2023

- Success! Native grass has established, but the effort continues.
- Weeds were fewer, but still needed to be managed by hand pulling or cutting back before they flower and produce seeds.
- A few bare spots were reseeded.



Revegetaion takes time,  
patience, and diligence.

Especially in mountain  
environments.







# WILDFLOWER LESSONS

Sleep. Creep. Leap.



The saying goes: First year they sleep. Second year they creep. Third year they leap.  
For Maximilian Sunflower, it took 4 years.  
Native plants put their energy first into roots, then into leaves, and then into flowers.  
It takes time to get established and then flourish!

## Experiment.

Every piece of land has different soil,  
sun, aspect, elevation, and moisture.  
Study up and try something.  
Observe.  
Continue with what works, and try  
something new if it doesn't.



## Be Patient.

Some species are irresistible, so  
efforts to keep herbivores away is  
essential.  
It took 4 years, but Echinacea is  
finally thriving!

## Celebrate.

Every single plant in the landscape matters.  
Small additions matter.  
Big ones matter more.  
Celebrate being a part of building biodiversity.





# MVG

2023's MVG: Most Valuable Gardener

## SUGAR

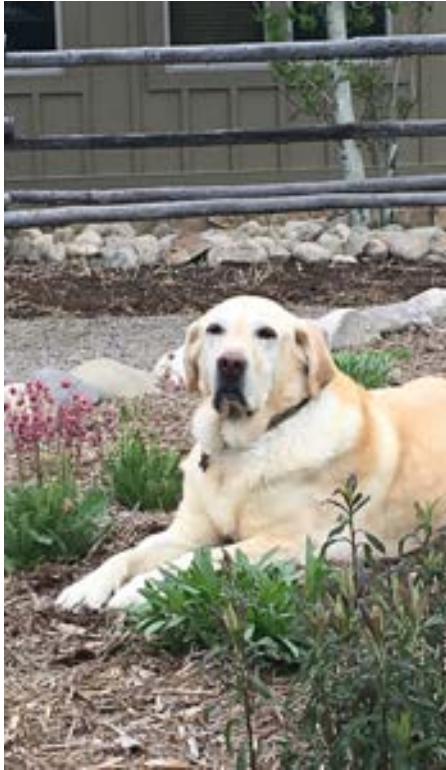
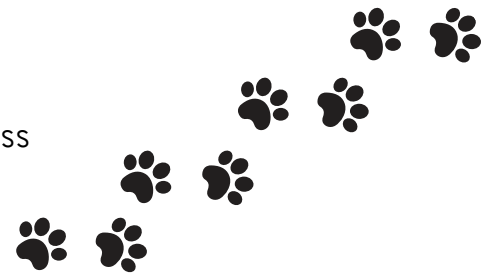
Sugar helped us build this garden in 2019, and she's been back every year to ensure we're doing things right.

She's even taken on the job to train the next generation. Cooper has large paws to fill.

Gardens and dogs go hand in hand. They both are proven to:

- lighten mood
- reduce anxiety
- relieve stress
- improve mindfulness

A few of Sugar's Team





# GARDEN MOMENTS





# A PLACE TO GATHER

"The garden suggests there might be a place where we can meet nature halfway."  
- Michael Pollan



33 Volunteers



93 hours



105 Wildflowers



6 new species

Native Plant Sale  
Open Houses  
Bag the Peak Cornhole  
Tournament  
Summer Wine Down



20 Events



493 People



## Big Sky Wildflower Festival

Flower Arranging Workshop · Guided Weed & Wildflower Hike · Crail Garden Open House · Flower Arranging Workshop · Noxious Weed Bouquet Contest · Camp Big Sky Scavenger Hunt · Native Bees of Montana · Creating Pollinator Habitat · Trout & Native Plants · Wildflower Photography Workshop · Big Sky Bears · Healthy Forests · Montana Native Plant Society Tour & Guided Hike



Thank you volunteers, partners, donors & dogs!

### Volunteer

sign up to volunteer  
info@growwildmt.org

### Donate

online at growwildmt.org

### Shop

the spring native plant sale or  
Grail Garden merch online to  
support the gardens!

growwildmt.org



- Arts Council of Big Sky
- Beth MacFawn Landscape Design
- Big Sky Community Organization
- Big Sky Landscaping
- Big Sky Owners Association
- Big Sky Resort Tax
- Big Sky Water & Sewer
- Big Timberworks
- Cross Charitable Foundation
- Gallatin Canyon Women's Club
- Gallatin Conservation District
- Gallatin River Task Force
- Great Bear Native Plants
- Historic Crail Ranch
- Hungry Moose Market & Deli
- Meadowview II LLC
- Moonlight Community Foundation
- Private Donors
- Rotary Club of Big Sky
- Spanish Peaks Community Foundation
- Westscape Nursery
- Yellowstone Club Community Foundation