IN THIS ISSUE

Yellowstone Master Gardener

NEWSLETTER Volume 15, Issue 3—Jul/Aug/Sep 2025

METRAPARK'S PEOPLE'S GARDEN and Michaela Woempner, MontanaFair Coordinator

by Sheri Fredericksen

There is a new volunteer opportunity for master gardeners at the recently-established **People's Garden** at MetraPark. The development of this new garden has been overseen by MontanaFair Coordinator, Michaela Woempner, with help from several community partners. Michaela is from Coeur d'Alene, Idaho, and graduated from the University of Idaho with bachelor degrees in Ag Economics and Soil and Water Systems. She also is a graduate of the Institute of Fair Management, which provides professional development for employees and volunteers of member fairs.

Michaela's position was created during the restructure of MetraPark under the guidance of General Manager Stoney Field. Michaela's responsibilities include overseeing MontanaFair's agriculture activities and developing a "farm-to-table" approach for individuals wanting to cultivate their own food. To this end, the staff has created multiple raised beds located within the 220'x72' **People's Garden**.

Following the demolition of two buildings at MetraPark, Tim Goodridge, Assistant General Manager, and Craig Peterson, Production Director, made plans to create a community garden where the buildings once stood. The process of developing the garden took about three years with help from local partners like North40Ag, Agri-Organics who provided compost, and MSU Extension Agents who tested the soil and recommended appropriate crops and nutrients. With designation from the USDA (United States Department of Agriculture) as a "**People's Garden**," this area provides an opportunity for the community to grow and harvest their own fresh produce. With support from the Yellowstone Master Gardeners' "square foot gardens," there will be resources and interactive options for the public to learn about soil, water, crops, harvesting, food preservation and food processing. Management's vision is for MontanaFair to provide a year-round opportunity for education, separate from other events at MetraPark.

During the 2025 MontanaFair, August 8-16, many partners will assist in educating our community throughout the grounds. Programming includes demonstrations from MSU Extension by Yellowstone County's Family and Consumer Science agent, Erin Gregory, who plans to share food preservation techniques. During a daily scavenger hunt, members of the community will have the chance to learn interactively with activities like grinding wheat into flour. The Northern International Livestock Exposition will also participate with interactive and educational

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(People's Garden Continued from page 1)
opportunities throughout the fair and also year-round. On Saturday, August 9th, an agriculture-influenced series is planned for Ag Appreciation Day. Local businesses and individuals will share their expertise in producing, caring for, and processing livestock, as well as presentations on urban gardening, food preservation, and irrigation practices. MontanaFair and MetraPark staff are looking forward to sharing produce from the **People's Garden** with the community and offering resources to encourage the growth of Montana commodities.

Note: For more information on the **People's Garden**, please access the link within the MontanaFair's Heritage Park page. To volunteer or donate please complete the Community Interest Form at https://www.montanafair.com/p/more/heritage-park

'Cultivating Healthy Plants' Web Series

by Suri Lunde

The series offers integrated pest management (IPM) and general gardening education presented by university-based researchers and Extension personnel.

Below are two web links for master gardeners wanting to earn Continuing Education Units (CEUs). Each episode earns one CEU and master gardeners can watch online at their convenience. Report your hours at www.mtmastergardener.org (use the "Master Gardener Login" link).

https://www.youtube.com/@CultivatingHealthyPlants

https://www.youtube.com/playlist?list=PL0E60BSiNJBGx4AARIyJUsRUbOv8LzAwT

SUCCESSION PLANTING

by Ann Guthals

From mean last frost in May to mean first frost in September, we only have approximately four months to grow garden vegetables. One way we can increase our growing season is to employ season extenders like wall-of-waters, row covers, starting plants inside, covering plants when frost is predicted, etcetera.

Another way to get more production out of our relatively short growing season is to practice succession planting. Here are three examples:

1) Stagger planting—plant seeds in batches with time in between so that your crop does not mature all at the same time (I use this method to advantage with carrots).
2) Second planting—when the first planting is done and harvested, clear the growing area, add some compost, and plant a second crop (can be the same or different plant); using the seed packet to know time to maturity and knowing the mean frost date in the fall, you can back up to a mid-season planting date; if re-planting cool-weather crops, you may want to provide shade (I use screen material over my cool-weather beds all season long).
3) Intercropping—to fully utilize an area in both space and time, you can plant fast-growing vegetables between slow-growers, e.g. radishes and carrots; when the fast growers are picked, it opens up space for the slow growers to fill out.

By thinking outside the box of planting everything all at once in your garden at the beginning of the season, you can get greater and more even production. Search the internet for more useful advice on season extension and succession planting.

Tips For Efficient Watering in Yards and Gardens

by Suri Lunde

Watering plays a huge part in yard and garden maintenance. The frequency of watering, amount of watering required, and duration of each application very much depend on factors such as the type of plant, moisture requirement of plant, type of soil, water-holding capacity of soil, soil compaction, amount of organic matter, watering method, time of day, weather, and run-off potential.

Ideally, plants within a yard, garden or landscape should be grouped according to their water needs and functions. These zones then determine the best irrigation system to be used, e.g. underground sprinkler for high watering zone (0.5", 3 times a week), drip/trickle/soaker hose system for moderate watering zone (0.75", once a week) or conventional hose for low watering zone (0.5", bi-monthly).

However in reality, plants with different watering needs are sometimes grouped together in a garden bed. Thus they should be monitored for signs of moisture stress like leaf drooping, curling or discoloration. Checking soil moisture to determine when to irrigate is better than using a pre-set schedule. The most efficient method of irrigation is the slow, deliberate, low pressure watering to individual plants via drip system which can be installed underground or laid on the soil surface. Similarly, soaker hose systems also deliver appropriate amounts of water slowly where needed with minimal evaporation loss.

More tips for efficient irrigation to conserve water and save on water bills:

- Plant native drought-resistant cultivars.
- Avoid using sprinklers that throw a fine mist high in the air.
- Avoid watering during hot, windy, or rainy weather.
- Overhead sprinkler watering should be done in the morning as the temperature is rising to avoid creating an environment for diseases to thrive.
- Use mulch to minimize evaporation and to reduce weed growth and erosion.
- Older trees should be irrigated by sprinklers placed at their dripline. Water deeply and frequently.
- Vegetables need more water in the later stages of growth when sizes and leaves are larger.
- Vegetables with sparse root systems require more watering than those with denser root systems.
- Watering need for lawns depends on sod density, height of cut, type of grass, soil texture, weather, and humidity. Generally, irrigate lawns deeply (longer duration to let water sink in) rather than frequently.
- Plants that require more water or prefer shade can be placed beneath or on the shady side of larger plants, fences, or buildings.
- South and west exposures require more frequent watering than north and east exposures.
- Sloping landscapes should be watered more slowly to allow adequate infiltration and prevent run-off.

***Never use black water (water run through the toilet) or kitchen water that contains grease, harsh chemicals, ammonia, bleach, or non-biodegradable detergents on plants. Apply gray water (water from household uses) directly to the soil only; never on leaves or on crops to be eaten raw.

Need an ID?

The Schutter Diagnostic Lab accepts samples for identification of insects, plants, diseases, turf, aquatics and even mushrooms.

Here's where to find out how to do it: https://www.montana.edu/extension/diagnostics/submissions.html

SAVE SEEDS FOR THE SEED LIBRARY!

By Anthony Sammartano

This year has been a marvelous success for the Billings Community Seed Library. The seed swap in March had over 300 individual attendees, and thousands of seed packets were distributed to the community. Occasionally I come upon a gardener who proudly shows off their seedlings that they started with seeds from the seed library, and it truly warms my heart. The Master Gardener volunteers who run the seed library have had great success in spreading the word about these gardening resources, and the next task this group will have to take on is what to do when there are no seeds left in the library!

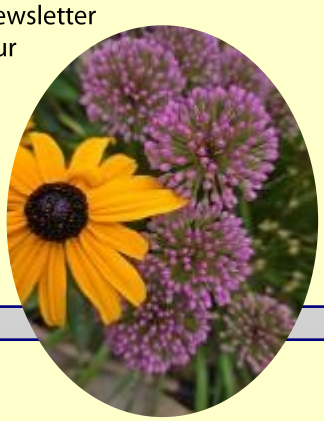
With knowledge of the seed library spreading across Yellowstone County (and even into neighboring counties), the seed donations received by the Master Gardener volunteers are quickly checked out, and now the cabinet in the Billings Public Library sits empty. The Billings Community Seed Library now kindly asks you as gardeners to start saving seeds from this year's garden and donating some of those leftover seeds to the seed library.

Seed saving is a great way for gardeners to not only save money, but to save superior cultivars of fruits and veggies that can grow in our area. Referencing the MontGuide (MT199905AG) **Harvesting and Saving Garden Seeds** by Cheryl Moore-Gough, there are a few rules and definitions to keep in mind when saving seed:

* Many cultivars that you purchase seed for are hybrids. This means that they are the first generation of seeds produced from a cross between two inbred lineages. The fruit and veggies produced by these hybrids will be true to type, but if you were to save the seeds from these hybrids and plant them next year, their produce won't match their predecessors. The seeds of these hybrid cultivars likely won't be worth saving due to this lineage issue, so be sure to read your seed packets to determine if what you are planting is a hybrid.
* Open-pollinated and cross-pollinated are two other types of cultivar to pay attention to. Open-pollinated cultivars will produce plants reasonably true to type if planted in isolation. However, cross pollinated cultivars, will need to be pollinated by other cultivars of the same kind of plant. The traits passed on to the seeds will be within the acceptable known characteristics of the cultivar.
* Always be sure to read the seed packets of what you are planting to determine if it is worth your time to save seed, and if you are interested in trying to save your own seeds this season, please read the *Seed Saving Methods* article on the next page.

Yellowstone County Master Gardener Newsletter MISSION STATEMENT

The mission of the Yellowstone County Master Gardener newsletter is to educate and inform, not to advocate or persuade. The Newsletter Editorial Board takes no position endorsing or opposing, approving or disapproving, any of the assertions or arguments in the contributed information. Information submitted to the newsletter is for your interest only.



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We want your articles, garden pictures or quotes, and suggestions.

Email :
ymastergardener@gmail.com

Deadline for the fall (Oct/Nov/Dec) issue is September 30

For an in-person demonstration, join the *Billings Community Seed Library* for a seed saving class with **Megan Poulette**, Associate Professor of Botany from Rocky Mountain College.

Wednesday, August 20th
Community Room of the Billings Public Library,
5:30pm – 6:30pm

Seed Saving Methods (Excerpted from MontGuide MT199905AG)

by Cheryl Moore-Gough

Since plants bear seeds in different types of structures, the method for saving them varies with each general type: pod-like structures, flower heads, and fleshy fruits.

Saving seeds borne in a pod-like structure

(beans, peas, crucifers, etc.)

- Allow the pods to turn brown, then harvest the pods, dry them for one to two weeks in a warm, dry area, then shell.
- Store the seeds in a paper bag in a cool (below 50°F), dry place.
- The seeds of crucifers can carry diseases that will infect a garden. After harvest, soak seeds of cabbage in 122°F (50°C) water for 25 minutes to disinfest. Soak the seeds of broccoli, Brussels sprouts and cauliflower at the same temperature for 18 minutes. Pay attention to the time and temperature.
- After soaking, dry and store the seeds in paper envelopes in a cool, dry place.

Saving seeds borne in a flowerhead

(lettuce, endive, dill, etc.)

- Cut off the seed stalks just before all the seeds are dried; the seeds may fall off the stalk and be lost if allowed to fully dry on the plant.
- Dry the harvested seed stalk, shake or rub the seeds off and store in a paper envelope in a cool, dry place. If seeds fall off the stalks as they dry (shattering), place the entire stalk upside down in a paper bag or cover the seed heads with a nylon stocking to catch the seeds.

Saving seeds borne in fleshy fruit

(tomato, cucumber, etc.)

- Pick fully ripe fruit of cucumber and tomato and squeeze the pulp, including the seeds, into a container.
- Add a little water and let the mixture ferment several days at room temperature, stirring occasionally. Sound, viable seeds will settle out; nonviable seeds will float.
- Pour off the pulp, nonviable seeds and water and spread the viable seeds in a single layer on a paper towel to dry.
- Store them in a paper envelope in a cool, dry place.
- Scrape out the seeds of peppers, melons, pumpkins and squash and spread them onto a paper towel to dry. Then store them in a paper envelope as you would other seeds.

Saving herb seeds

Herbs vary in the way their seeds are produced. In general, allow herb seeds to remain on the plants until nearly dry.

Some seed heads, like those of dill, shatter as soon as they are dry. Watch the early-ripening seeds; if they drop, harvest the other seed heads before they get to that point, leaving several inches of stem attached.

Tie several stems together and hang them upside-down, covered with a paper bag to catch falling seed, in a warm, dry place until completely dried. Remove seeds from the heads and store them in a paper envelope in a cool, dry place.

Herb seeds for flavoring, such as dill, anise and cumin, are used when dry. Mark storage containers clearly with permanent ink, indicating the cultivar of seed and date saved. Most seeds remain viable for years if properly stored in paper envelopes in a cool place.

"Rag-doll test" in action

Test germination in February by the traditional "rag-doll" test. Count out 100 small seeds or 25 large seeds and wrap them in moistened paper toweling. Squeeze out the extra water and place the "rag-doll" in a glass jar with the cover loosely fastened. Place the jar on a sunny windowsill. Unroll the paper after a week and calculate the germination; if germination is below 50 percent, either discard the seed or double the planting concentration to give the desired number of plants.

Acknowledgements: The author would like to acknowledge the original author of this MontGuide, Dr. Bob Gough, former Extension Horticulture Specialist.

Full text of this MontGuide in pdf format.

Wondering why your plants aren't doing well?

MSU Extension expert says: More compost might not be what garden soil needs

Yes, We Do Have Hummingbirds in Yellowstone County

by Ann McKean

Hummingbirds seem like a tropical treat – something you get to enjoy while sipping from a tall, cold drink with a little umbrella. But in truth, they're one of our greatest migratory birds. While they get to winter down in the warmer climates nearer the equator (as we all wish we could), they summer as far north as Alaska!

Western Montana tends to have a larger concentration of hummingbirds, but regular sightings in Red Lodge and yes, Yellowstone County, of a few varieties means there's a chance you could have a little guy or gal as a summer guest. But you have to help them by rolling out the red carpet (kind of literally).

Hummingbirds love a buffet, and sweet nectar is their food of choice. Providing them with shelter, water, and food is one of the easiest ways to attract them to your yard. You can put out a hummingbird feeder (take care to only use a 1:4 ratio of plain, white sugar to water (no red dyes), and change the mixture once or twice a week to avoid mold growth), but native plants with bright flowers and high sugar content are another attractant.

Native Montana plants that can attract hummingbirds include: Waxy-Leaf Beardtongue (Penstemon nitidus), Showy Milkweed (Asclepias speciosa), Dotted Gayfeather (Liatris punctata), and Harebell (Campanula rotundifolia). Of course, you can also add in annuals that bloom earlier than our season will allow, and which hummingbirds love. They are always attracted to long, tubular flowers – so penstemons, honeysuckles and hyssops are a good match. But also consider plants that will attract a variety of insects, too, since insects make up another key part of the hummingbird's diet!

Hummingbird varieties found in Montana include the Rufous Hummingbird and, in the more mountainous

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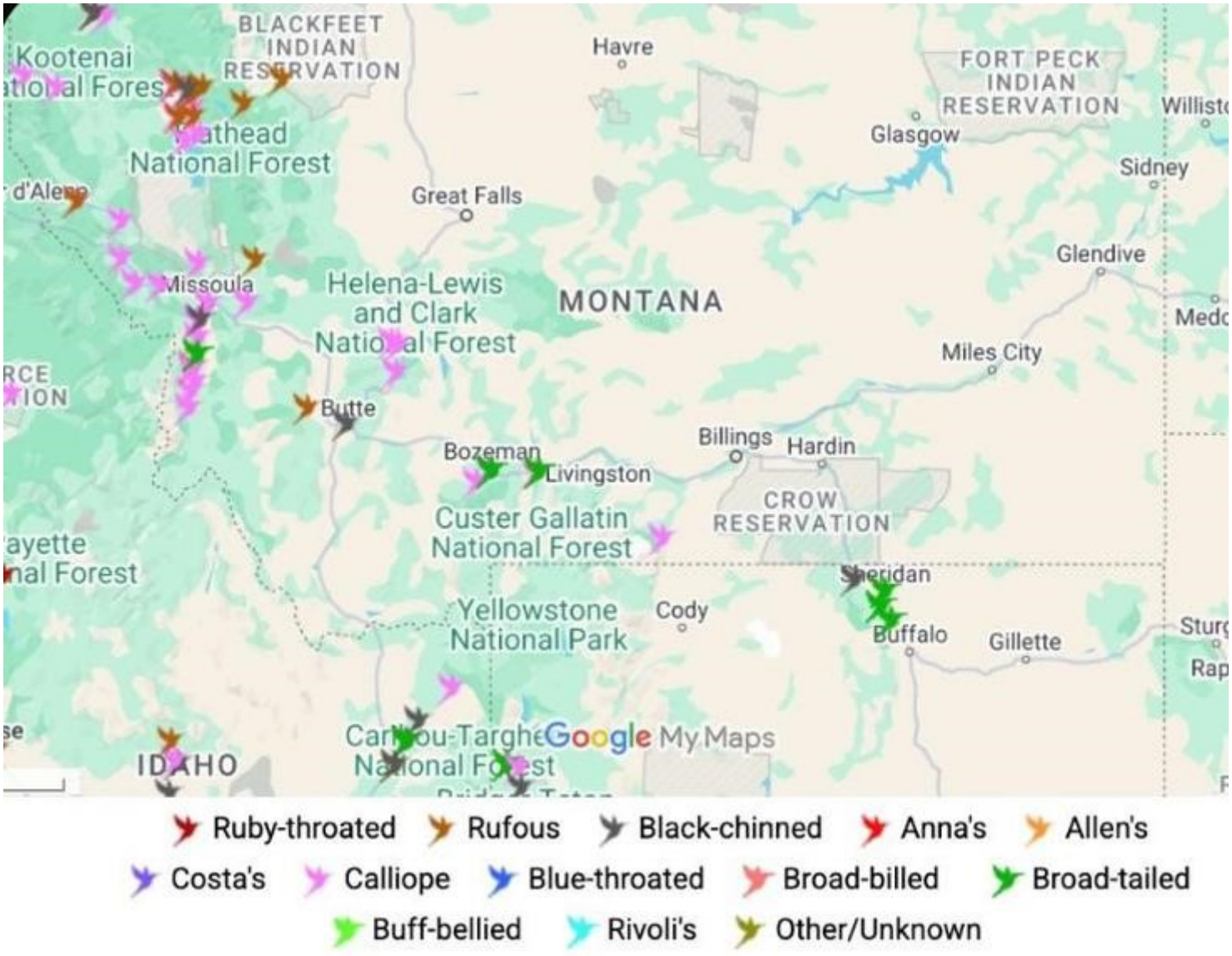

(Hummingbirds continued from page 6)

areas, the Calliope Hummingbird. (Even rarer, but not unheard of, is the Broad-Tailed Hummingbird, which can be found as high as 10,000 feet in piñon forests.)

Quick Montana hummingbird facts:

- At just 7-8 cm long, the Calliope Hummingbird is the smallest breeding bird in North America, and the smallest long-distance migrant in the world.
- The Rufous hummingbird needs just the right conditions for breeding, flying over a migratory terrain stretching from southern Alaska to southern Mexico.
- The Calliope is typically found above 4,000 feet elevation (a reminder that Billings sits at around 3,100 feet). It frequents forest glades, canyons, and open shrubby areas, especially near streams. You can often find them in second-growth areas growing several years after fires or logging. You can't miss their magenta neck feathers.
- The Rufous, on the other hand, while still a small bird (a whopping 9cm long), is known for its feistiness. You may hear one giving you a piece of its mind (by way of an almost robot-sounding trill or buzz) if you're too close to its territory/favorite feeder, or even zooming a bit around your head. Look for flashes of orange or copper (or a bit of yellow) from the male's plumage.

No matter how much effort you want to spend (with a feeder or a whole backyard plant buffet) it's easy to attract and enjoy hummingbirds in Yellowstone county!

Learn more about the Calliope Hummingbird: https://www.audubon.org/field-guide/bird/calliope-hummingbird

Learn about the Rufous Hummingbird: https://www.audubon.org/field-guide/bird/rufous-hummingbird

Details on growing a garden to attract hummingbirds: https://www.fs.usda.gov/wildflowers/pollinators/documents/AttractingHummingbirdsFS-1046April2015.pdf

Submit a hummingbird sighting and track the annual migration: https://www.hummingbirdcentral.com/hummingbird-migration-spring-2025-map.htm

Report Japanese Beetle Sightings

The Japanese beetle (Popillia japonica) is a species of scarab beetle. Due to the presence of natural predators, the Japanese beetle is not considered a pest in its native Japan, but in North America it is a noted pest to roughly 300 species of plants. Some of these plants include rose bushes, grapes, hops, canna, birch and linden trees, and many others.

The adult beetles damage plants by skeletonizing the foliage (i.e., consuming only the material between leaf' veins) as well as, at times, feeding on a plant's fruit. The subterranean larvae feed on the roots of grasses. (excerpted from Wikipedia)

Montana is experiencing increasing numbers of this destructive insect. If you see the beetle, please report it to Anthony at the Yellowstone County Extension Office to help monitor location and scale of distribution.

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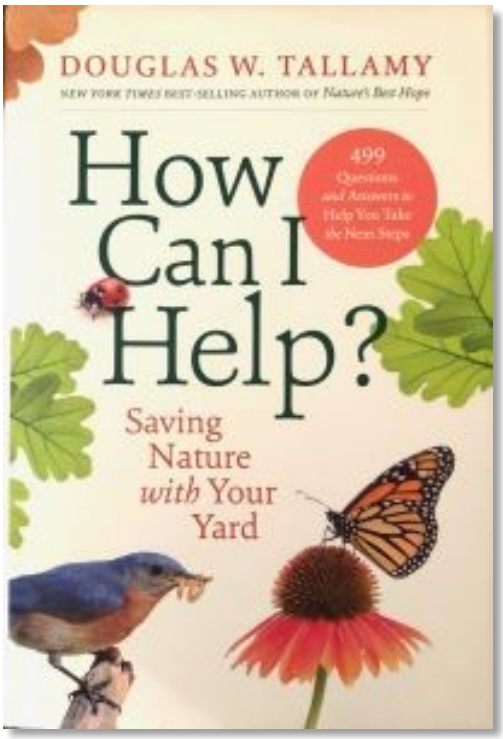
BOOK REVIEW *by Ann Guthals*

How Can I Help? Saving Nature *with* Your Yard

By Douglas W. Tallamy

Douglas Tallamy is a professor of Entomology and Wildlife Ecology at the University of Delaware. In his new book **How Can I Help?,** Dr. Tallamy answers the question: In the face of the two great crises of our time—climate change and loss of biodiversity—what can one person do? Dr. Tallamy answers 499 questions from students and readers to give us incite into what individuals can do.

With 40 million acres of lawn in the United States and the use of many non-native plants in our landscapes, we are not sustaining the web of life. Dr. Tallamy states: "It's really very simple—our landscapes must do the things that enable ecosystems to produce the life support we and every other species require: they must support a diverse community of pollinators throughout the growing season, provide energy for the local food web, manage the water shed in which they lie, and remove carbon from the atmosphere where it is wreaking havoc on Earth's climate." (p. 251)



To achieve these four ecological functions, individuals can plant keystone species and remove invasives, reduce the size of lawns, add a pollinator garden, and replace white outdoor lights with yellow bulbs (to reduce the loss of moths). If all our home landscapes worked towards these goals, it would altogether create a large movement in the direction of sustainability and help reverse the loss of biodiversity.

Chapter titles tell you the in-depth topics the author covers: loss of biodiversity, native and non-native plants, invasive plants, pest control, conservation and restoration, home landscapes (135 million acres in the U.S.), and support of wildlife at home. (There is also a long chapter on oaks, which in the eastern U.S. is possibly the best plant for providing energy for the food web, mainly through caterpillars. I learned from this chapter but feel you could skip over it because we have only one oak in Montana—the bur oak in the southeast—so it is not as applicable to our landscaping choices as the rest of the book.)

In answering questions related to these important topics, Dr. Tallamy not only speaks to the main themes, he frequently imparts much general gardening and landscaping advice as well. I am always pleased to add to my gardening knowledge with little-known facts, such as double flowers are sterile and provide no pollen or nectar, red-leaved cultivars are distasteful to insects, the hairs on a bee's body are positively charged while pollen is negatively charged so the pollen is attracted to the bee hairs, and strong-smelling deterrent plants such as garlic, dill, fennel, sage, tansy, and nasturtiums if planted with brassicas can help deter cabbage white butterflies.

The chapter on native vs. non-native plants was particularly interesting and helpful. Dr. Tallamy sees non-natives as like "statues" in the garden—pretty, taking up space, but not plants that native insects can use. He helpfully explains how to "go native" on a budget—take time, remove invasives and let the natives return (he calls this "addition by subtraction"). His advice is sensible—rather than having a yard with only native plants, he suggests leaving functional strips of lawn for recreation and pathways so that neighbors and HOAs will not see the yard as messy. He offers advice on identifying and obtaining native plants, e.g. using the National Wildlife Federation online Native Plant Finder, finding local nurseries that sell native plants (Blake Nursery in Big Timber specializes in natives), locating your local native plant society for advice, joining his Homegrown National Park initiative (see article on p. 12 on HNP), and joining the Xerces Society to find pollinator-friendly native plants.

The other chapters are equally as informative as the one on natives. He explains what invasives are and how to remove them and why; he gives reasonable advice on dealing with pests such as mosquitoes, deer and aphids; and in the conservation and restoration section he addresses some agricultural practices that help explain the precipitous drop in the monarch butterfly populations and offers alternatives. My other favorite chapters besides the one on natives were the chapters on home landscapes and supporting wildlife at home—lots of specific advice to apply in your own yard.

The one drawback I saw in this book was that the author almost exclusively uses examples of situations and plants native to the eastern U.S. He only occasionally mentions conditions in the west. Thus it is incumbent on readers

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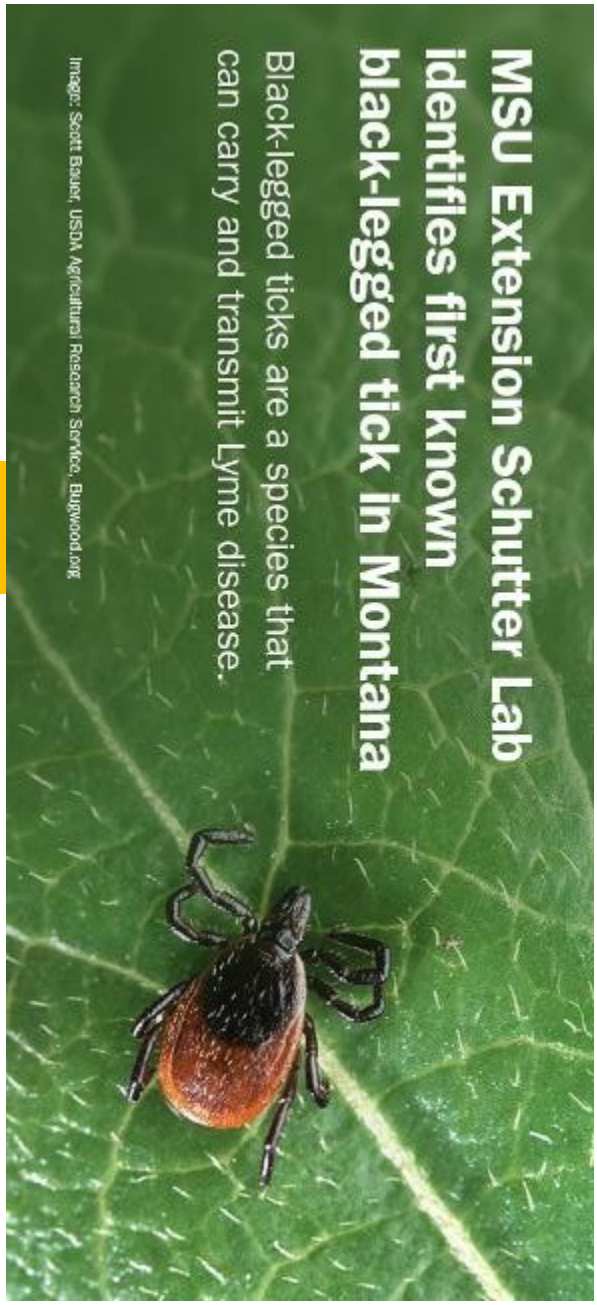
(Book Review continued from page 8)
from our part of the country to translate and apply his principles to our local conditions and plants.

This is not a quick read—there is much information to take in. Nor are the steps we need to take in our yards easy or simple or immediate. And you have to adjust to the question/answer format of the book. But the problems addressed are so important and critical, it is worth your time to read and absorb the information in this significant book. You will be glad you did—you will learn so much and hopefully you will take Dr. Tallamy's advice to heart and do what you can in your own yard to move us all towards sustainability.

TICKS IN MONTANA

by Ann McKean



It's that time of year when ticks seem to be EVERYWHERE! Yuck! April-July is the time of year when ticks are most active, but they're always there, hiding in the plants and debris, ready to latch on any time it's above freezing. That means you need to be vigilant all year long.

Historically, Montana has been host to four tick species: the Rocky Mountain Wood Tick, the American Dog Tick, the Brown Dog Tick, and the Soft Tick. But in 2023, a tick discovered in Dawson County was identified as the Black Legged Tick or Deer Tick. This tick is known to carry Lyme disease, a debilitating bacterial infection which is prevalent in the eastern part of the U.S. Lyme disease hasn't been reported in our state yet, but ticks do carry other serious illnesses. They include Rocky Mountain spotted fever, tularemia, Colorado tick fever, and the tick-borne relapsing fever/borreliosis. While all these illnesses are rare, it is important to protect yourself when you go out, whether hiking, working in the garden, or just walking the dog.

Wearing an EPA-approved tick repellent, spraying your clothing with a product containing permethrin and tucking pants into your socks and long-sleeved shirts into your waistband are all good strategies. Staying in the middle of a trail and avoiding walking through vegetation are also helpful. Anytime you've been outside, it's always a good idea to do a quick tick check as soon as possible. Deer ticks, especially, are very small (sometimes the size of a pinhead) and can drop off quickly before they are noticed. The most common symptoms of a tick bite are rash, fever, chills, and body aches.

While ticks cannot jump, they do hang from plants, legs out, ready to cling to any passing host. Some ticks are so light, they can even use the static electricity of an animal to seemingly 'fly'. If you find a tick latched on, use tweezers to grasp the head as close to the skin as possible to gently pull it straight off, then wash your hands and the bite area with soap and water or alcohol. Do not crush a tick, but flush it or put it in alcohol. If you develop a rash, seek medical advice.

Although ticks don't harm our plants, they are considered a garden pest because of the diseases they can spread to us. This season, take a few precautions to protect yourself and enjoy your time outside!

Here are some great online resources where you can learn more and even report tick sightings in Montana. It's important to track the spread of ticks so we can be better aware of what we may encounter in our great outdoors:

https://dphhs.mt.gov/publichealth/cdepi/diseases/ticks/

https://ticksafety.com/tick-identification/

https://www.cdc.gov/ticks/data-research/facts-stats/geographic-distribution-of-tickborne-disease-cases.html

https://extension.psu.edu/do-chickens-guinea-fowl-or-opossums-control-ticks

GAZPACHO

by Ann McKean

If the weather cooperates, our hard work in our gardens this summer will hopefully produce bountiful results. I know many of us have gazpacho recipes we have used and loved for years, but if you have not tried one in this Andalusian style, I encourage you to give this simple recipe a go. You can use a food processor for a chunkier style or whiz it in a blender for a silky texture (my favorite). After you've made this the first time, feel free to tweak with more of this or less of that.

Spanish Style Gazpacho

(makes about 6 cups)

Ingredients:

28 oz canned tomatoes (or fresh if they are very flavorful and not watery)
1 large cucumber, peeled and seeded
1 slice white bread, crusts removed (gluten free works too)
1 clove garlic
½ sweet onion
4 T olive oil, plus more for serving
4 T white vinegar
2 t salt
Optional: croutons

Directions:

Chop the garlic and bread finely first if using a food processor for the chunky style. Pulse in remaining ingredients to desired texture. For smooth style, toss everything into the blender and whiz until smooth. Refrigerate until chilled and serve with a generous swirl of your best olive oil, and a few croutons or flowers. (Or just drink it in a mug for breakfast!) Enjoy!

URBAN FORESTRY GRANT UPDATE

by Ann Guthals

As reported in our October 2023 newsletter, the Inflation Reduction Act (IRA) included $1.5 million for developing urban forests in Montana. Of this, the City of Billings was awarded $1 million to develop an urban forestry program and plant many new trees in areas lacking adequate tree cover to create cooler temperatures, cleaner air, and greener more inviting neighborhoods.

Unfortunately, in April 2025 the Billings grant was canceled, as were other such grants across the US. The recently-hired urban forester had to be let go. The reason given for canceling the grant was that focusing on underserved neighborhoods was "unlawful discrimination."

The many people who were interested in and working on this project are hoping to appeal the grant cancellation. The cancellation was a major disappointment and setback, but hopefully the work to establish a professional urban forestry department in Billings, inventory existing City trees, and begin filling in the gaps in the City's tree cover will continue with local support.

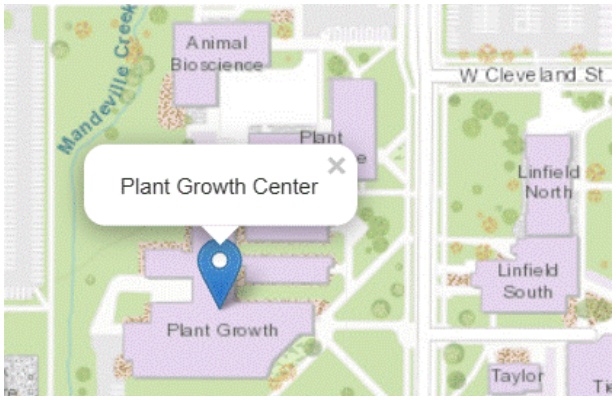
Turf to Trees 2025

by Ann McKean

If you have never attended a Turf to Trees workshop, I urge you to sign up and go this summer. This year's focus will be on Montana soils, water, native herbaceous perennials, and trees along with native pollinators.

Although leaving Billings at 6 AM to travel to the MSU campus seems like a lot of effort, you will be *soooo* glad you did. If you are passionate about gardening in Montana, you will be riveted the entire day. In addition to quality lectures and fun, interactive activities, you will enjoy the comradery of fellow master gardeners from other counties.

The Master Gardener workshop is **August 14** and the cost is $85, but the first 20 master gardeners who email Sarah will only pay half. This is a not-to-be-missed learning opportunity, and I encourage you to sign up immediately before the class fills up!



Preparing for Garden Flooding

by Ann Guthals

Climate change is exposing us to new weather patterns and extreme weather events. Our main climate challenges in Montana are related to dry conditions—excessive heat, drought conditions, wildfires—or to extremes of weather like punishing hailstorms. But some areas may now also experience unexpected flooding problems, for example in properties near overflowing streams, irrigation ditches, or rivers; areas experiencing unpredictable heavy rains; or gardens below slopes with sudden runoff from severe storms.

Newly planted terraces, designed to prevent runoff

Gardens can be designed and planted in ways that help them to experience excess water with minimal damage. One important underlying principle is that slower water flow does less damage than rapid flow. Here are some garden design ideas to slow the flow, allow the water to sink in, and to minimize flood damage:

Mature terraced planting

1. Ensure good soil drainage by mulching beds, incorporating organic matter in soils, and using no-till practices.
2. Provide places for excess water to accumulate such as bioswales*, rain barrels or ponds.
3. Raise plants and their roots above flood waters by growing in raised beds or on mounds.
4. If you know the direction from which excess water will come, you can build in a bioswale to slow the flow of rushing water and catch excess water before it reaches your garden.
5. Terrace sloped yards so water does not run straight downhill; add bioswales at each level if possible.
6. Plant densely and include trees and bushes with deep roots to help absorb extra water and prevent excessive runoff.
7. Rather than regular cement, use porous surfaces for walkways like flagstones, gravel, shredded bark, or porous cement to allow water to sink in rather than run off.

Hopefully incorporating several or all of the above suggestions will help your garden suffer less damage and recover more quickly after a severe storm or a flood.

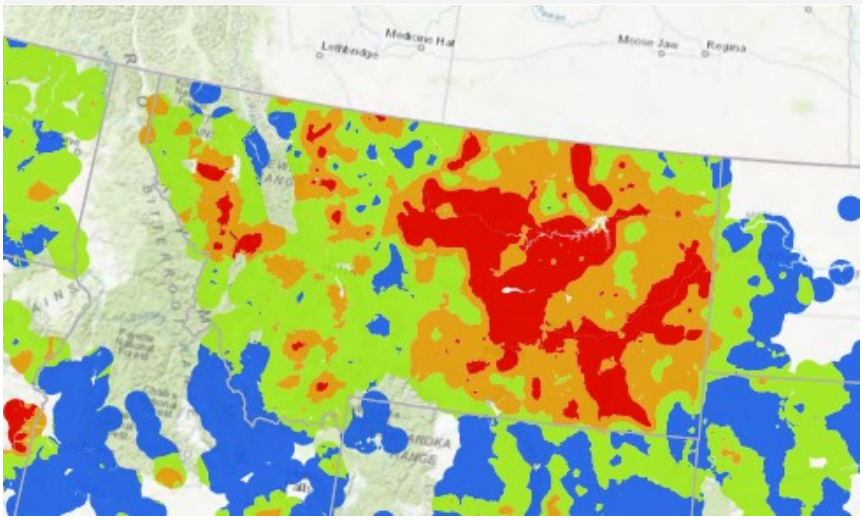
*A bioswale is a long, channeled depression or trench that receives rainwater runoff (as from a parking lot) and has vegetation (such as grasses, flowering herbs, and shrubs) and organic matter (such as mulch) to slow water infiltration and filter out pollutants (from online Merriam Webster Dictionary)

Sources:

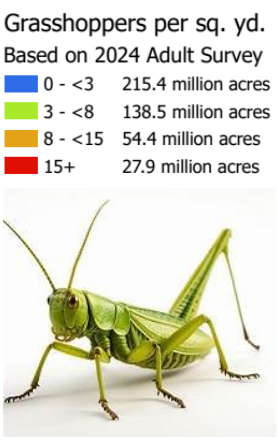
By Googling "Mitigating flood risk in the garden," you will find numerous helpful articles; in particular, I found gardeningknowhow.com to be useful.

"Flood Resilience in the Garden" by Naomi Slade and "Create a Climate-resilient Allotment" by Sally Morgan in Permaculture Magazine Spring 2025. Permaculture Magazine is available locally at Natural Grocers.

2025 Rangeland Grasshopper Hazard



Seeing grasshoppers?



The USDA Animal and Plant Health Inspection Service (APHIS) Colorado lab predicted dense populations in Montana in 2025. The APHIS Rangeland Grasshopper Hazard map was released late in 2024. Based on what I'm seeing in my garden, it appears to be accurate.

Dr. Bob Short

October 26, 1940 – April 25, 2025

Dr. Robert Edgar "Bob" Short, 84, passed away on April 26, 2025. A devoted scientist, community leader, and family man, Bob's life was marked by a deep commitment to service, learning, and the natural world. Bob dedicated his professional life to advancing agricultural science at the Fort Keogh USDA Research Center in Miles City and as faculty at Montana State University.

He had a lifelong passion for the outdoors, and gardening became one of his many pursuits. He became a Master Gardener and helped establish a garden space for students at Friendship House in Billings where he spent many days training volunteers, watering, planting and teaching. He also served on their board. Bob Short leaves behind a legacy rooted in scientific excellence, civic responsibility, faith-driven service, and deep familial love. May his memory bring comfort to all who knew him.

Our Homegrown National Park

by Ann McKean

Have you taken a walk or worked in your garden lately and wondered where all the insects and birds have gone? North America has lost nearly 30% (3 billion) birds since 1970! And although it is difficult to accurately measure, scientists believe we have lost somewhere between 25-75% of our global insect biomass. These shocking statistics are both directly related to an increase in development and the ensuing loss of habitat.

Cofounded by Doug Tallamy, ***Homegrown National Park*** is a grassroots call-to-action to restore some of this habitat and regenerate biodiversity by removing invasive plants and planting natives. This can range from a single native plant in a container to a meadow, forest, or prairie.

According to government figures, the total land in the U.S. is 2.26 billion acres, 85 million acres of which is in the National Park System. There are approximately 74 million acres of urban land, and even though that is just 3% of land in the U.S., its development has had a huge impact on our natural world. If we collectively restored just half of our nation's residential land to native plants that would be almost 45% of our National Park System: our own ***Homegrown National Park***!

If you have planted even one native plant, you can put it on the biodiversity map at Homegrown National Park. The biodiversity map shows where people have registered their work toward biodiversity regeneration, and that has energized me to continue working toward greater biodiversity. Montana has 93,147,839 (largely uninhabited) acres and 134 people who have registered 166 planting areas with a total of 5,979 acres! Add your efforts to the map and help energize others. Interactive map: https://map.homegrownnationalpark.org

Learn More: https://homegrownnationalpark.org/about-us/

Remember, you don't have to redo your whole yard. Tuck in one or two native plants, or reclaim a corner of lawn. Then register your accomplishment on Homegrown National Park!

https://www.ers.usda.gov/amber-waves/2024/december/ers-data-series-tracks-major-uses-of-u-s-land-with-a-focus-on-agriculture

https://ers.usda.gov/sites/default/files/_laserfiche/publications/109971/EIB-275.pdf?v=49369