

Yellowstone Master Gardeners  
 P.O. Box 35021  
 Billings, MT 59107

**Newsletter**

**Volume 8 Issue 2**

April, May, June 2019

We want hear from you  
 -Send your submissions  
 for newsletter to [ymastergardener@gmail.com](mailto:ymastergardener@gmail.com)  
 by June 15 for the next  
 issue.

**~ Featured Master Gardener ~ Joy Stevens ~**

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- ◆ Elaine Allard
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**Contributors:**

- ◆ Amy Grandpre



With a professional career ranging from being an engineer, an attorney and to presently, a naturopathic physician, it is easy to deduce that Joy Stevens is a driven person with an unquenchable thirst for knowledge. This curiosity for insight and additional information led her to sign up for Master Gardener classes in 2013. Unsurprisingly, she completed her Master Gardener Levels I, II and III within one year!

Joy finds that what she has learned in her Master Gardener classes has become part of her life and way of living. “You just do, it’s subconscious,” she says. She believes that the foundation of health includes a clean diet, curbing stress, and being physically active. As such, she eats organic food most of the time, gardens to de-stress, and engages in activities like karate and skiing. She

knows that plants contain powerful medicine, so she grows many herbs in her yard for personal consumption. In her naturopathic practice, she administers botanical medicine as a tincture, as a tea, or even topically.

After one of her beloved dogs contracted cancer from pesticides in the grass, Joy decided to make her large backyard pesticide- and herbicide-free. She applied her Master Gardener know-how on what fertilizer to use or add to help control unwanted plants in her backyard. “I enjoy weeding and feel the need to get soil in my hands,” she says. When Joy noticed ants on her trees, she concluded the presence of aphids and released ladybugs to take care of the pest. Integrated Pest Management at its best!



Joy’s orchard of fruit trees in her yard brings her much satisfaction and amusement. When her critter camera revealed evidence that her pear tree attracted deer, rabbits, raccoons, skunks, foxes, and porcupines to the ‘pear buffet’, she decided to plant more fruit trees so that the animals would have some food to forage in the fall.

Joy is an active volunteer and coordinator for the annual Science Expo, a regional science fair organized by Montana State University and Billings Clinic

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and affiliated with the Intel International Science and Engineering Fair, where students from grades 1-12 compete for prizes and scholarships. For her, this is an ideal way of giving back to the community and getting kids interested in science and engineering from an early age.

Joy appreciates the camaraderie of fellow Master Gardeners and she participates in gatherings when time allows. She admires that fact that Master Gardeners are passionate about preserving the beauty of plants and are always willing to share their knowledge in helping people with any plant questions.

~Submitted by Suri Lunde

## Ostrich Ferns



*Matteuccia struthiopteris* has the apt common name of Ostrich Fern because its fronds resemble the elegantly graceful plumes of the ostrich. Native to North America, once established, this Zone 3 fern performs well under conditions that few garden plants prefer, while offering a culinary spring treat to boot.

Ostrich ferns in the wild thrive in rich moist soil in part to full shade, yet they are one of the best performing ferns in our area. They tolerate our drier alkaline clay soil and with a little love will colonize an area with a northern exposure that few plants, much less ferns, will enjoy. Better still, they survive with benign neglect: no pruning and the deer and rabbits seem to leave them alone. If you have a difficult shaded area on the north side of your house, this plant will take that spot from barren to lush in a few years' time.

When planting ostrich ferns, choose a site that will shelter the delicate fronds from burning sun and the strongest winds. It's also a good idea to prepare the bed with an addition of sphagnum peat and compost. This will lighten the texture, provide nutrients and improve water holding capacity. In future years, a nice topdressing of compost and an occasional feeding will keep them happy. Plant them 18 to 24" apart, making sure to keep the crown just above the soil level, mulch lightly to hold moisture and prevent weeds and water in well. They will need regular water, especially in the first season, during which they should never be allowed to dry out. After they are established, they will survive with consistent but less generous amounts of water, while still appreciating a little extra during periods of drought. The first year or two they will work hardest on establishing a strong root system, spreading underground by rhizome. The fronds may appear shorter than the expected 36 to 48 inches and a little sparse. Don't worry, in a few years' time, your patience will be rewarded with a lovely soft colony of lush, almost tropical looking ferns. (Ostrich ferns can be feisty in wetter climates, but our dry conditions limit their ability to spread more than we want them to.) They provide a graceful backdrop for other shade loving plants such as Dicentra and Hosta. It's also fun to mix in early spring woodland plants that go dormant for the summer such as Dodecatheon, known commonly as Shooting Star. Although the leaf fronds die to the ground in autumn, once the ferns reach maturity, they will produce shorter, fertile spore-producing fronds which remain standing attractively through the winter.

Historically used by Native Americans, fiddleheads are a treasured wild forage food which appears fleetingly in restaurants and farmers' markets in the spring. Once your ferns have established a healthy colony, you too can harvest the early unfurled leaves. Remembering to never take more than half of the shoots from a crown and only the early sterile leaf shoots, the fiddleheads must be tightly coiled at harvest, and must be washed and husked of their brown papery covering, then fully cooked before being consumed. When steamed for 10-12 minutes, they are reminiscent of asparagus. I have also boiled and pickled them success-

fully, which is an easy way to preserve them for later. They are especially tasty when boiled for 15 minutes then drained and quickly sautéed in bacon drippings with a little garlic. They can also be served cold on a salad by boiling them and chilling in an ice bath. A quick Google search will return lots of recipe ideas but, however you choose to eat them, make sure that you are eating *Matteuccia struthiopteris* and not a similar looking fiddlehead.



Even if they never make it into your kitchen, ostrich ferns are a beautiful plant for a difficult location in your garden.

[http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?](http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=e180)

[kempercode=e180](http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=e180)

<https://extension.umaine.edu/publications/4198e/>

<https://food52.com/blog/6583-fiddlehead-fern-a-controversial-coil>

<http://wild-harvest.com>

~ Submitted by Ann McKean

## An Editorial: Cut Flowers, Potted Plants, or ...?

We gardeners love plants of all kinds, including flowers. They bring beauty to recipient(s), often representing love or sympathy. Many folks send potted plants, especially blooming ones, during holidays or times of stress. To do so is simple, either on the internet or from a local florist, especially if you happen to have an account.



Then why choose an alternative to cut flowers or a blooming plant? Hospital rooms seldom have extra space, or plants may not even be allowed, as some patients or staff may be allergic. When a patient is moved, flowers can get lost, frozen, or wilt in the process. Delivery people are hardly integral to real estate in a hospital setting. Even in a home, flowers absorb counter or table space which might be needed for medical devices, prescription medications, or new baby stuff. Relatives might be there to help for days or weeks, bringing their bundles along.

Cut flowers need to be trimmed and their water needs changing daily to maintain their beauty. They should not be near a draft, plus flowers die quicker if in sunlight. Put these burdens on top of caring for a family member or new baby and recovering new mother. I speak from recent experience when all I could manage for my daughter's family were household duties too numerous to mention. Plus my daughter does not have a knack for perpetuating flowers or plants, so she was consumed with guilt over sustaining them. She was worried too that her cats would eat the new plants and get sick. Of course she was too polite to tell givers her concerns.

I cannot resist mentioning environmental aspects of this topic. If flowers or a plant come from your garden, indoor or out, I'm impressed! Snip, maybe tie a ribbon around it, and cruise across town to your destination. However many flowers, especially in winter, arrive in trucks, maybe even planes from abroad. Transportation pollutes and uses fuel that could be utilized for vital supplies. I don't know of any greenhouses in this area that produce flowers in the winter. Cut flowers often swell with forced, timed fertilizers so they bloat into beautiful yet brief renditions of their species. The plastic packets, usually included, contain stimulants. I would think twice before tossing remains into compost. Fortunately many local flower shops re-use vases; so, if you don't recycle the glass or plastic, call around to ask who accepts the vases.

Ironically, I have received several potted plants as gifts that thrive many years later, such as an African violet now divided into five, a Christmas cactus, and a bonsai, but I love gardening. Not everyone does. Giving plants won't guarantee that switch flips.

So what alternatives might work as a supportive gesture? Each situation/recipient is unique. Cards are reasonably priced, and they don't interrupt people when they are resting or running to appointments. And no thank you note looms as a future task. My favorite is food, because I love to eat; however, first check on dietary preferences or allergies. And don't call a day after surgery to ask, unless you are part of the inner circle. A gift certificate to a nearby restaurant that does take-out works well, or offer pet care, or companionship with transportation to appointments. Perhaps choose a night when you can bring supper and let the family know. Consider an offer to buy groceries, as in, "I'm on my way to Albertson's... what do you need? I'll swing it by." They may prefer rotisserie chicken, fresh bread, and ice cream to a dozen dahlias.



~ Editorial submitted by Bess Lovec

### **For the planet**



Plastic recycling has always been a challenge in Montana. China's rules for accepting mixed bales of plastics from the U.S. changed on January 1st, 2019 so we now need to think more of reusing or reducing than recycling. Purchase plants in peat or compostable pots when possible. Your plastic plant containers and flats are gladly accepted back by many local nurseries. Ask when you purchase plants if you can return the containers. Clean all soil from the inside and exterior surfaces so that they are debris free when you drop them off. If your plant purchasing location does not want the containers returned, they can be dropped off at Canyon Creek Nursery at 1730 S 48th St W.



If you'd like to take matters into your own hand and make your own seedling pots out of newspaper, you can find instructions online: <https://www.hgtv.com/design/make-and-celebrate/handmade/create-newspaper-pots-for-seed-starting-pictures>

### **ANOTHER WAY TO READ THE NEWSLETTER - WORD PRESS**



Enjoy the Yellowstone Master Gardener quarterly newsletter online! Share with friends and access recent editions in the archives. Find local interviews, interesting articles, tasty recipes, upcoming activities and opportunities, plant features and more.

Save the URL in your favorites or bookmark it for quick and easy access from your computer, phone, or other connected device. Comment, share ideas, and encourage

others to become a Master Gardener. [www.yellowstonemastergardenernewsletter.wordpress.com](http://www.yellowstonemastergardenernewsletter.wordpress.com)

TEAMING WITH MICROBES—The Organic Gardener’s Guide to the Soil Food Web

By Jeff Lowenfels and Wayne Lewis

If you look closely at the title of this book, you will think there is a misspelling. But it is not by mistake that the authors use the word “teaming” rather than “teeming.” The purpose of the book is to help gardeners understand the inhabitants and activities of the teeming microbes in the soil food web and to learn to team with these organisms to create the healthiest possible soil and plants in their gardens.

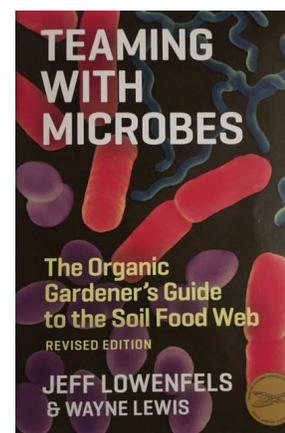
The soil is indeed teeming with microbes. The sheer number of each type is mind-blowing. “A mere teaspoon of good garden soil, as measured by microbial geneticists, contains a billion invisible bacteria, several yards of equally invisible fungal hyphae, several thousand protozoa, and a few dozen nematodes.” (p. 19) Bacteria are so small that a few hundred thousand can fit in a space the size of the period at the end of this sentence. The importance of these tiny soil microbes in supporting the health of plants cannot be underestimated. Yet many people (even some gardeners) have little understanding of the role and importance of these organisms and how to support their functioning.

(Continued on next page)

The authors divide the book into two parts. The first part has a summary of soil science and a chapter devoted to each of the major participants in the soil food web: bacteria, archaea, fungi, algae and slime molds, protozoa, nematodes, arthropods, earthworms, gastropods, and larger animals. The role and functions of each group of organisms are described as well as their connection to gardening.

The second half of the book is devoted to explaining how to assess the health of the soil food web in your own soils and how to employ three major tools to build the health of that web: mulching, composting and making compost teas. The application of these tools for annuals and perennials is explained. At the end of the book there is a gardening calendar and a summary of the authors’ 19 soil food web gardening rules.

The information in this book is dense and concise and, as such, it is not an “easy” read. It resembles a textbook more than a gardening handbook. But it is worth wading all the way through to gain a better understanding of what should live in our soils, how these tiny organisms partner with and support our plants, and how not to interfere with their work and maybe even learn to support it. Over time we are learning not to disrupt the soils in our gardens, yards and fields and instead help the food web to live and thrive in incredible balance, resulting in healthier plants and better crop yields. Teaming with Microbes is an important addition to the literature of no-till, restoration gardening and agriculture.



~ Submitted by Ann Guthals

CREAMED SOUP FROM FRESH VEGETABLES

- 1 ½ cups chicken broth
- ½ cup chopped onion
- Desired vegetable and seasonings (see list)
- 2 Tbsp. butter
- 2 Tbsp. flour
- ½ tsp. salt
- Few dashes white pepper
- 1 cup milk



VEGETABLE	SEASONINGS	TIMING	YIELD
2 cups broccoli cuts	1/2 tsp. dried thyme, 1 small bay leaf, dash garlic powder	10 minutes	3 1/2 cups
1 cup sliced carrots	1 T. snipped parsley, 1/2 tsp. dried basil	12 minutes	3 1/2 cups
1 1/2 cups cut green beans	1/2 tsp. dried savory	20 to 30 minutes	3 cups
1 1/2 cups shelled peas	1/4 c. shredded lettuce, 2 T. chopped ham, 1/4 tsp. dried sage	8 minutes	3 1/2 cups
1 cup sliced potatoes	1/2 tsp. dried dillweed	10 minutes	3 cups

In saucepan, combine the chicken broth, onion and one of the vegetable-seasoning combinations from the list below. Bring to boiling. Reduce heat; cover and simmer the time indicated below or till vegetable is tender. (Remove bay leaf if you're using broccoli.) Place vegetable mixture in a blender container or food processor. Cover and blend 30 to 60 seconds or till smooth. In same saucepan melt the butter. Blend in the flour, salt, and pepper. Add the milk all at once. Cook and stir till thickened and bubbly. Stir in the vegetable puree.

Cook till heated through for a warm soup. For a chilled soup, refrigerate, covered, for several hours.

~ Submitted by Ann Guthals

Announcements



Hey Master Gardeners it's party time!! In 1994 Dr. Bob Gough contacted Amy Grandpre about starting a program out of Washington State University called Master Gardeners. Lucky for us she said yes and the program began. In May we are going to have a birthday party for the program. It is the 25th year for us. The party will be May 18th at 12 noon at the demonstration garden at Metra. There will be a potluck lunch and games and other events for the party. **Please RSVP to [bobwix@hotmail.com](mailto:bobwix@hotmail.com) by April 30th if you are planning to come.** See you there!!

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**Be sure to read the emails from Amy to stay up-to-date on Master Gardener events and to learn about volunteer or paid opportunities.**



In honor of Julie Halvorson, Master Gardeners would like to plant a memorial tree in a Billings city park. If you wish to donate to this cause, please make your check payable to City of Billings. Once all funds are collected for the tree and plaque, we will submit the checks to the city to make the purchase. Checks can be mailed to Merita Murdock, 649 Brookwood Dr, Billings, MT 59101-7050. Please mark on the memo area "Julie's Tree". If you have additional questions, feel free to call Merita at 690-3754 or Corry Mordeaux at 545-7166.

Soon, hopefully, it will be time to think about planting lawns, vegetables, flowers, shrubs and trees. Are you planning on a good harvest and growth? What are you doing to insure those results? Are you planting in good soil or just dirt? Does it have the capacity to hold water and nutrients or is it holding too much water and not enough nutrients? Do you know the PH of your soil/dirt?

Checking in our area are two labs that can do soil tests for you. There is paper work to fill out, besides your name and location, like what do you want tested (N, P, K), pH etc.? What are you planning on growing, lawn or garden?

To gather your soil take a hand trowel and dig down to about 6" in about six different places in the lawn or garden and put it all in a pail mixing it together (discard the grass, thatch, rocks, worms and roots). From that amount, fill a 1 gallon zip lock bag with your name on it to half/two thirds full.

While working at the ACE greenhouse I met the true over achiever. He came in every couple days telling me how he had hauled buckets of sand, then manure, then compost. He had a very small vehicle which held two buckets in the rear, two buckets in the back seat and one bucket in the passenger seat. This was not a one trip for each of the above, but many trips. He was so proud of himself I could barely ask if he had ever had the soil tested for his garden. He hadn't.

By mid-summer he came in quite deflated. His dream garden hadn't produced anything. He did however have the soil tested and it was high to very high in N, P, and K. I felt so sorry for him all I could think to say was that maybe by next year it would be a better garden space.

In order to build anything you must have a good soil foundation. Thinking only about the end product is just dreaming.

Local companies who provide soil testing for home gardeners:

**B & C Ag Consulting** – taking Soil Tests between 10 am and 2 pm on Mon., Wed. and Fri.

315 So. 26<sup>th</sup> St, Billings – 259-5779 <http://bncag.com/> MG price \$30.

**Energy Laboratories** 1120 So. 27<sup>th</sup> St, Billings – 252-6325

<https://www.energylab.com/services/soil/> Lawn and garden analysis with recommendations \$85.

~Submitted by Sheri Kisch



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.



Merita Murdock receiving an award from Amy Grandpre and Steve McConnell

When an opportunity came up to elect someone to receive the Outstanding Urban Forestry Volunteer Award, Master Gardener Merita Murdock popped into my head. Her booklet "A Short Tree Tour of Selected Trees of Downtown Billings" was such a wonderful labor of love, that I wanted to at least brag about her a bit. So I did, and she received the award.

For those of you who don't know Merita, she actually joined the Yellowstone County Master Gardener program during 1994...year 1 of our program here. She is a Lev. 3 Master Gardener and has received one of the state's Outstanding Master Gardener awards, plugging in over 1100 volunteer hours of service to our county. She is instrumental in helping me with the record keeping of our most active Master Gardener program....couldn't do it easily without her.

She's been most active in so many areas: Women's Prison, Square Foot Demonstration Garden, 4-H and fair judge, Master Gardener information booths, Billings Annual Flower Show, hoop house construction at MetraPark Education Center, Arbor Day, designing fliers and advertisements, helped create and was treasurer of Master Gardener Association, on nomination committees....and I'm sure I've missed so much more.

I am so excited that Merita was chosen as a winner of this most prestigious award from the Montana Urban and Community Forestry Association, and so grateful for all you have done and do for our Master Gardener program.

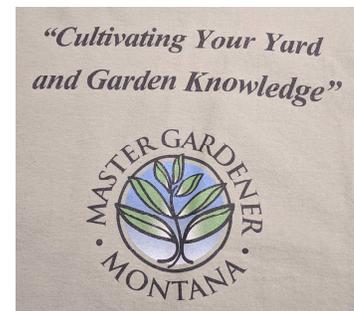
~ Submitted by Amy Grandpre

## HARD WORK AND REWARDS ~ CONGRATULATIONS TO ALL

Here are the folks who have gotten some certificate action:

Level 1 Shirt & Certificate:  
Kristine Brenden

Level 2 Shirt & Certificate:  
Ann McKean



## Important Links

[Yellowstone Master Gardener Association Page](http://www.ycmgamt.com) – <http://www.ycmgamt.com>  
[Facebook page](https://www.facebook.com/ycmga) – <https://www.facebook.com/ycmga>

This year's classes seem to have gone by so fast. With a wonderful crowd of 50 for Level 1 and around 10 for Level 2, it's been a very good year. Of course it helped to have Toby Day come from Bozeman to kick off our class sessions too. Was so great to have him here to energize both a Level 1 and a Level 2 class session. (Love Toby's heart for being there for us and our program.)

I want to especially thank our most dedicated Master Gardeners who have coordinated our Level 1 and Level 2 classes: Bob Wicks, Brian Godfrey, Corry Mordeaux, Sharon Wetsch, Sherry Doty, Tracey King and Tom Kress. You all ROCK!

So now comes spring and the 2019 growing season. I want to encourage all the Master Gardeners who haven't yet set up their [mtmastergardener.org](http://mtmastergardener.org) accounts to do so as soon as possible...and many of you haven't! ☺ This site would have really helped you out during class sessions, but you also need it to enter your volunteer hours. This is an important step, as this site is where all of the state's Master Gardener volunteer hours are compiled and accessed by Toby Day and Dara Palmer. This not only proves the value of Master Gardener volunteer impact in our state, but is also where you qualify to receive your Level 1 and Level 2 certificates and shirts. Once your required hours are entered (20 for Level 1, 30 for Level 2, 40 for Level 3), Dara will be notified and will process and send me the needed certificate/shirt.

When you select your project of interest to volunteer in, do remember to choose a favorite, and then maybe just one more that interests you. It's better to have one or two projects to focus on, rather than half a dozen that you can only lightly dabble in. Then once you see how these projects fit your schedule, you can branch out. Just don't want your spring enthusiasm to lead to a quick burn-out.

I am looking forward to see what our impact will be in 2019....Amy Grandpre

### Backyard Wildlife Habitats to help build a Billings Community Wildlife Habitat



FOOD



WATER



COVER



YOUNG



SUSTAINABILITY

The Montana Wildlife Federation under the auspices of the National Wildlife Federation is working hard to get the entire community of

Billings recognized as *Community Wildlife Habitat*. When we reach that goal, we will share that honor with Missoula and 95 other communities across the nation. We can all help by certifying our own yards and gardens. To get started, go to the NWF links listed below. There is lots of great information on why and how you can provide the four basic elements that all wildlife needs to thrive: food, water, cover and places to raise young. As Master Gardeners, we are already practicing Integrated Pest Management and striving for garden sustainability, and I suspect many of us already meet the requirements of certification. This is a simple way we can show our commitment to the health, resiliency and sustainability of our community and its wildlife, and in so doing, enrich our community and our own lives as well. Let's work together to get Billings on this map!

<http://nwf.org/garden>

<https://www.nwf.org/en/Garden-for-Wildlife/Create/At-Home>

<http://nwf.org/certify>



~Submitted by Ann McKean

*Julie Halverson**Left us Feb. 9, 2019*

Julie joined the Yellowstone County Master Gardener program in 2000, and was a true force to be reckoned with, especially when it came to getting volunteers for her pet project ZooMontana and the Geranium festival.

She called herself the “pushy old broad” as she “eagle eye” challenged Master Gardeners to sign up to help at the various stations of the geranium festival...and she did get the volunteers!

It was a rare week through these years, that she didn't show up to the Zoo and work on flower garden care...and this she did all the way up through last fall.

School stories were a big part of her story telling history as her students and friends knew. In 1987 she was honored with a Golden Apple Award in School District 2 (Billings). Even after a full career teaching kindergarten, Julie shared her teaching skills through the Care After School programs and also worked to maintain the MetraPark Gardens.

Julie holds the record for MG volunteer hours, an unbelievable 2500 Volunteer hours in her 18 years.

Julie's Memorial service will be July 11

And this was through just one of her many club affiliations such as Delta Kappa Gamma, Early Literacy, Global Grannies, and the Garden Club.

“She was one of the most energetic, ambitious and positive folks I've ever known. She always had a smile and a very special way of getting you to volunteer for a project. I will remember her for not letting anything stop her, breast cancer or strokes and her deep sparkling eyes. She inspired many a gardener both aspiring young ones and us “more mature” ones”

~Master Gardener Merita Murdock

Most days Julie and her husband had lunch at the Muzzle Loader Cafe and when several old Master Gardeners habitually showed up on Friday for lunch there was always a chat or wave. She never forgot us. She would drive her car to lunch and her husband always sat in the backseat. He might have been thinking of his safety.

Julie was an expert on herbs. One year MSU did not provide an instructor for the M/G class. The Billings MGs had to teach the class themselves. Julie brought her years of teaching skills to help save the day. She was an expert on herbs. She taught a class on herbs which the students really liked.



She was always available to provide advice to learning MGs. In a similar manner, she often gave away plants she had grown in her garden and her emphasis seemed to be angled toward English Garden style.



[http://www.msuextension.org/yellowstone/horticulture/master\\_gardener.html](http://www.msuextension.org/yellowstone/horticulture/master_gardener.html)

#### Amy Grandpre

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#### Dara Palmer, Montana

Master Gardener  
Coordinator Email:  
[dara.palmer@montana.edu](mailto:dara.palmer@montana.edu)

~Master Gardener Corry Mordeaux

What a blessing it was to know Julie. Julie's enthusiasm and wealth of gardening information made being around her such a pleasure. She enriched the lives of many of us Master Gardeners in countless ways.

~Master Gardener Elaine Allard

I knew Julie through the geranium fest and I worked with the group at the Zoo a couple years. I especially liked her nickname that she seemed to actually enjoy having "the pushy old broad". But she always got things done- with a bright smile.

~Master Gardener Sheri Kisch

Julie will be missed by so many. ~Amy Grandpre

### Her family plans Julie's Memorial Service for July 11—date TBA.

#### A Blast from the Past

The late Dr. Bob is the father of Montana's Master Gardener program. When he taught the classes nobody ever fell asleep. He was a writer of a great many articles on gardening. The following is just one of several hundred in my files.

A question to Dr. Bob: "How can I increase germination of my garden seeds?" (March 2002)

Gardeners all over the country are right now wondering how to get better germination in the vegetable and flower seeds. Of course, start with good seeds and in most cases you'll have good germination, but some seeds are notoriously tough with hard seed coats. Now, researchers in Georgia have found a common household substance that increases germination in watermelon seeds.

The seedless watermelon cultivars on the market are for the most part, triploids. That means that they form fruit that has no developed seeds. While they are no good for seed-spitting contests, the melons do make great eating. The triploid cultivars are expensive to produce and, unfortunately, the seeds have thick coats that interfere with germination. Researchers have found that soaking the seeds in 1 percent solution of hydrogen peroxide at room temperature and in the dark greatly improves their germination. After just a day or two in the solution, the seeds germinated readily in petri dishes and would no doubt do so in the garden soil

The 1 percent solution does not damage the emerging radicle, but solutions two percent or higher do severe damage to the young seedling. The hydrogen peroxide is generally available in the drug store and is a three percent solution, so you must dilute it with water. You can do that by adding two parts water to one part hydrogen peroxide. So far, researchers have only tested the solution on watermelon seeds, but they suggest that it might also improve germination in a wide range of "hard-coated" seeds, such as those of cabbage and broccoli.

