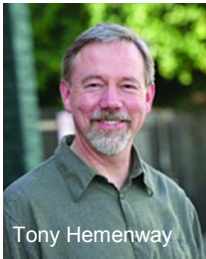




## The Virtual Gardener—Toby Hemenway, In Memoriam



Toby Hemenway

Toby Hemenway, noted permaculture author, lecturer, and practitioner passed away on December 20, 2016 after a short battle with pancreatic cancer. He was 64.

After receiving his degree in biology from Tufts University in 1974, Toby began a career as a researcher in genetics and immunology, working first in university laboratories and later moving to a position with a private company. After nearly 20 years working in this field he became increasingly disenchanted with the direction these research efforts were taking. Then one day he picked up a copy of Bill Mollison's *Permaculture: A Designer's Manual* and his life changed forever. The holistic systems approach of permaculture resonated with his personal philosophy and opened new horizons.

Permaculture, a term coined by Australians Bill Mollison and David Holmgren in 1978, is a mashup of the words "permanent culture" and "agriculture." Although there are as many formal **definitions** of the term as there are permaculture practitioners, the basic concept is simple. As defined in **Wikipedia**, "Permaculture is a system of agricul-

tural and social design principles centered on simulating or directly utilizing the patterns and features observed in natural ecosystems." By utilizing the same principles as Mother Nature, we can design agricultural and landscape systems that are both self-maintaining and self-perpetuating.

After discovering permaculture, Toby quit his job and moved to the Rogue River valley in southern Oregon where for the next ten years he and his wife applied permaculture design patterns to their own rural property. During this time, Toby became involved in the national permaculture movement as editor of *Permaculture Activist* (now published as *Permaculture Design Magazine*) from 1999 to 2004. In 2004 the Hemenways moved again, this time to Portland, Oregon where Toby spent the next six years writing, teaching, lecturing, and working on problems of urban resource sustainability.

In 2001 he published the first edition of *Gaia's Garden—A Guide to Home-Scale Permaculture* (Chelsea Green Publishing, White River Junction, VT), the first full-length book to discuss how to apply permaculture principles to home-scale gardens. [Click [here](#) for a peek inside the

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COLLEGE OF AGRICULTURE AND LIFE SCIENCES  
COOPERATIVE EXTENSION  
Cochise County

**Cochise County Cooperative Extension**

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book.] This was followed by a second edition in 2009 which became an instant classic, named by the *Washington Post* as one of the ten best gardening books of 2010, winning the Nautilus Gold Medal award in 2011, and becoming the best-selling permaculture book in the world. Copies of the book are available in the Cochise County Library System.

Toby begins the book with a question: “Why is it that nature can splash riotous abundance across forest or prairie with careless grace, while we humans struggle to grow a few flowers?” The book documents his discoveries as he seeks to answer that and related questions and passes the knowledge he discovers on to his readers. He assumes readers have had some gardening experience but tries to explain new concepts and techniques clearly enough for even novices to follow.

Former Master Gardener Cheri Melton—herself truly a master of ecological gardening—reviewed *Gaia’s Garden* in the **January 2000** issue of the Cochise Country Master Gardener newsletter and began her article by stating that the book was the best book on gardening she had ever read—period! Strong words but well deserved.

*Gaia’s Garden* is written in three parts. As proper, the first part begins with definitions of terms and concepts and then moves on to give the reader a preview of what is to come and an overview of the process of designing an ecological garden. Part Two provides details on the major components of the ecological garden—soil, water, plants, and critters and how they work together. Part Three focuses on designing plant communities.

Most gardeners have heard of companion planting, for example, carrots love tomatoes, *etc.* The concepts of companion planting are

often built around the idea that some plants protect other plants from insect pests by repelling the pests, luring them away from the protected plant, or attracting the predators of the pests. Unfortunately scientific research has shown many of the pairings recommended in companion planting lists to be ineffective and in some cases even deleterious.

The plant communities created by practitioners of permaculture are called “guilds,” and the relationships sought go far beyond those described in most companion planting guides. The guilds are communities designed to emulate the complex webs of relationships between plants and animals found in nature. Part Three of *Gaia’s Garden* provides guidance on how to go about designing guilds for your area that will help make your gardens self-maintaining and self-perpetuating.

In addition to *Gaia’s Garden*, Toby also wrote *The Permaculture City: Regenerative Design for Urban, Suburban, and Town Resilience* (Chelsea Green Publishing, White River Junction, VT, 2015), and many articles in gardening and permaculture publications. You can also find many lectures by Toby on YouTube.

Until next time, happy surfing!

Gary Gruenhagen, Master Gardener  
virtualgardener@cox.net

## February Reminders

- ◆ Winter prune
- ◆ Prune roses
- ◆ Cold-moist stratify seeds
- ◆ Plant bare-root trees
- ◆ Prepare spring planting beds
- ◆ Clean and repair drip irrigation systems
- ◆ Finalize spring garden plans
- ◆ Keep watering!

## Cuttings ‘N’ Clippings

✿ For Cochise County Master Gardeners Association information contact Valerie at:

[valeriedvidson@email.arizona.edu](mailto:valeriedvidson@email.arizona.edu)  
or the Cochise County Master Gardeners web site at:

<http://cals.arizona.edu/cochise/mg/>

You can also follow them on Facebook at:

[www.Facebook.com/CochiseCountyMasterGardeners](http://www.Facebook.com/CochiseCountyMasterGardeners)

✿ The next Water Wise presentation will be held **Saturday, February 4 from 2:00—6:30 PM** at UA Sierra Vista and will be a Water Film Festival featuring *Beyond the Mirage*. Come and enjoy a free film festival at UA Sierra Vista! This is a family friendly event offering separate area with kid’s activities (ages 5—13). Free popcorn and food will be available during intermission. Several films will be shown including *Beyond the Mirage: The Future of Water in the West*.

Contact the Cooperative Extension at 458-8278, Ext. 2141 for more information. Check out the Water Wise web site for their 2017 schedule at:

<http://waterwise.arizona.edu/>

✿ The Cochise Chapter of the Arizona Native Plant Society’s next program will be held **Friday, February 20 at 5:00 PM**. They meet in the Cochise County Community Development Office conference room, 4001 Foothills Dr. Sierra Vista. The speaker will be Ries Lindley, Tucson Chapter, Arizona Native Plant Society, and the title of his presentation is:

*A Muddle of Mallows: Sphaeralcea (Malvaceae) and SEINet -- Using Aggregate Data to Examine Old Problems*. For more information, follow AZ Native Plant Society on their web site:

<http://www.aznps.com/chapters/cochise/cochise.htm>

## Register for the 2017 High Desert Gardening & Landscaping Conference!

Registration is open for the 24<sup>th</sup> Annual High Desert Gardening & Landscaping Conference to be held Thursday-Friday, March 9 & 10, 2017. The Conference will be held in the Student Union Building of Cochise College whose campus is adjacent to the University of Arizona Sierra Vista campus.

Being produced for 24 consecutive years, this is the longest running 2-day gardening conference in the state of Arizona, and one of the longest running in the Southwest United States. The Conference is sponsored by the Cochise County Master Gardener Association in conjunction with the University of Arizona Cooperative Extension of Cochise County.

A wide variety of speakers and topics are offered this year for your gardening interests. There will be **General Sessions** for everyone to attend and multiple **Breakout Sessions** and **Workshops** from which to choose. Some of the topics being featured are: *Taking the Mystery out of Pruning Fruit Trees*, *Growing Winter Vegetable Gardens with Confidence*, *Favorite Trees for Performance in the Tucson UA Arboretum*, *Pesticide Safety & Knowledge for the Homeowner*, *Fun with Growing Herbs*, *Fun with Back Yard Chickens*, *Landscaping with Cacti & Succulents*, *Plants Surprisingly Toxic to Your Pets*, *Seed Collection & Starting a Seed Library*, *Theme Gardens*, and more.

Marcy Scott, author of the book, *Hummingbird Plants for the Southwest*, will present Friday's keynote with her talk, *Plant a Hummingbird Haven*. A conference favorite, Peter Gierlach, lovingly known as Petey Mesquitey, will stir your passion by sharing his stories about celebrating our beautiful High Desert environment. Cochise County Master Gardeners, JoAnne Ehasz and Rita Kingma will offer a new hands-on workshop on building Hypertufa planting containers, after we had several re-

quests to repeat a workshop on Hypertufa! And long-revered entomologist, Carl Olson, will heighten your respect and admiration of the countless crawling critters with which we live each day.

At last month's Master Gardener meeting, we learned how to paint Mandala Rocks which can be used as fun garden art accents or other art display. We had so much fun creating these little beauties, several of us have gotten together for additional painting time. We like them so much, we're taking it a step further! Mary Jackson with Jody Sharp-Webb's help, will be teaching a workshop in *Painting Mandala Rocks*. Be careful . . . this activity can be contagious.

There are a few new features in the Conference this year. For a small additional fee, Wednesday evening will offer a pre-conference get-together with food and drink for gardening enthusiasts to chat and network about new ideas and concerns in their own gardens as well as their gardening communities.

In addition to our regularly featured numerous door prizes, we will offer a Silent Auction for your bidding enjoyment and a Raffle both days where tickets can be purchased for fun pieces of garden hardscape.

Our vendor area this year is enlarging to become "The Master Gardener Spring Market Place" featuring a larger variety of vendors than in the past. The Market Place will be open to the public, so even if you cannot attend the

Conference, you're welcome to come shop with our vendors!

Speaking of sales, we're offering some new items this year at the Master Gardener sales table to include ball caps, mugs, and water bottles with the Master Gardener logo. Also available this year are Conference Logo T-shirts, and Master Gardener Logo long-sleeved denim shirts. Both shirts must be ordered on the Conference registration website or on the mail-in registration form. To ensure shirt delivery, shirts must be ordered by February 21.

High Desert Conference registration includes all hands-on workshops, breakout sessions, and general sessions. And don't forget food! Full breakfast, lunch, and snacks are also included each day! You may register for the full 2-day conference for \$110.00, or just one day at \$75.00. And yes, there is early bird! You may register for the full 2-day conference for \$100.00 if you complete your registration by February 21!

To register online, please visit [www.cals.arizona.edu/cochise/mg/high-desert-conference](http://www.cals.arizona.edu/cochise/mg/high-desert-conference)

To obtain a mail-in registration form or additional information, please call 520-559-7078. See you at the Conference. It's a great time to get together and so much fun seeing everybody there!

*Jan Groth, Master Gardener Program Coordinator*

The Cochise County Master Gardeners Association in Conjunction with  
The University of Arizona Cooperative Extension presents...

## 24th Annual High Desert Gardening & Landscaping Conference

# Save The Date!

Thursday & Friday,  
March 9 & 10, 2017

## High on Hypertufa

Last summer a group of us Master Gardeners in training, class of 2016, had the bright idea to get together and make flowerpots out of hypertufa. We had a breakout class in hypertufa at the last High on the Desert Conference in March 2016, and one of us (we'll call her the ringleader) learned the basics of it and produced a cute little pot she made in class. This, of course, made the rest of us jealous. We were game for a little entertainment in the long desert summer, so we decided to try it, and by the way, make a party out of it. Out here in the high desert, we can make a party out of practically anything.

It probably would have gone much faster if we hadn't had the wine and cheese first. However, it also probably wouldn't have been as much fun, either!

What is hypertufa, you ask? Well, it's a delightful mixture of cement, perlite, and peat moss. Add a sufficient quantity of water and mix thoroughly. It then turns into a mud-like substance that you tend to get all over you and the surrounding area. This is likely to bring out the inner 9-year-old in you. First rule of hypertufa: come appropriately dressed. Don't forget to wear fairly sturdy rubber gloves and hospital masks as there is a fair amount of dust in the initial mixing.

The idea of hypertufa is to produce a pot that is lighter weight and more creative than your run-of-the-mill ordinary concrete pot. We learned several things through trial, error, and a fair amount of laughter. The instructions follow:

### Recipe #1

1 part Portland cement

1 part perlite

1 part peat moss (sift the twigs and big stuff out)

Mix the above together (we found a wheelbarrow and hoe work a lot better than hands). Add a sufficient amount of water to turn it into a cottage cheese texture.

*(Continued on page 6)*

## Meet a Master Gardener



Evie Van de Bogart, MG Class of 2016, completed her certifying volunteer hours by giving her skills in our Discovery Gardens, and we were the great benefactors!

As many of you know, we have a beautiful new storage shed in the Gardens that the Master Gardeners have worked very hard to proudly purchase. However, once the shed was delivered, we were afraid to walk on the new, pristine wooden floor for fear of blemishes and damages. After speaking with Cochise Floor Covering of Sierra Vista for advice on floor protection, they most generously donated several boxes of industrial floor tiles to us to install on our new floor!

We were so grateful, and a couple of us thought, "OK, we can do this! We can install this tile without having to pay someone for

help." Right. Each time we bravely looked for a starting point for the project, we got overwhelmed and froze.

Then . . . along came Evie!! "I know how to do this," she sweetly stated. "I can install all this flooring myself." And that is exactly what she meticulously and perfectly did—on the 10' X 20' wooden floor—and during our early autumn heat!

Evie's father was a teacher and school principal, and during the summers he worked construction for extra money. Evie was one of five children, the first three all being girls. She spent countless summer hours with her dad in the workshop where he let her help him on projects. It was there that she developed an appetite for knowledge on how things worked, and learned to love the workbench and all the tools that were gathered there.

To this day, Evie has an adoration of power tools and table saws and has her own collection which she uses frequently for her own projects.

How lucky are we that Evie shared her talent with us. We have a perfectly installed, beautiful tile floor in our brand new shed. Thank you, Evie!!

*Jan Groth, Master Gardener Program Coordinator*



## It's a Bloomin' Cochise County Native Plant of the Month—Plant Bones

My sister doesn't "get" dried flower arrangements. She doesn't understand why anyone would put dried-up plants in lovely vases for decoration. My mother and I do. We have them all over the place!

What I like about dried flowers is the suggestion of what was, the remnants of a beautiful bloom, the structure of the past—plant bones.

This prompted me into thinking about what to write for this month's Cochise County winter blooming plant. Winter in Cochise County does not offer many opportunities to find blooming plants. Manzanitas can be winter bloomers, but I'm surprised that with all the rain, flowers aren't on Mule Mountains manzanitas that I have seen. (To read a manzanita Bloomin' article go to [January 2014 Master Gardener Newsletter](#).) So, dried-up plants it is.

Gathering plants for the article was great fun. It pushed me outside and helped me look at plants differently. I started looking at shapes and subtle nuances, not color.

Flower bracts  
Photo: Cado Daily



Take for example the perennial, but cold sensitive Chihuahuan brickellbush *Brickellia floribunda*, a common plant growing in the drainages in the Mule Mountains. This woody, small shrub has multiple pithy 2-3ft stems with sticky, fragrant leaves. The flower is not showy and is typical of some *Asteraceae* family plants with clusters of small cream-colored flowers, similar to those on the familiar desert broom.

But now that the plant stems have died and the leaves have curled around the stalk, the plant takes on a different role in the landscape.

Gone is the stalwart larval food plant of a moth in the Owlet Family, *Condica albolabes* (a big shout-out to local moth expert extraordinaire Noel McFarland for his extensive research on local moths and their host plants (<http://www.sevenbackyards.org/>). During the summer months, little black caterpillars gorge on the plant leaving polka dots of frass on its sticky leaves.

Examining the bones of *Brickellia* reminds me of the summer feasting, and the holes in the dried, curled leaves tell me that life came of what is now dead. On the top of the plant, stars of flower bracts make great perching platforms for early spring butterflies.

And bracts are one of the best things to look for on a dried plant. Bracts are modified leaves at the base of a flower (imagine the green parts of a rose flower). On dried plants, bracts are often what is left after the petals blow away.

On my walk, I picked a delicate, 9 dried stalk that has tiny, upright bracts shaped like fairy-cups. I wish I knew what plant it was, but I will have to wait until spring perhaps to find out. Bracts left on the Arizona cudweed (*Gnaphalium arizonica*) and evergreen turpentine bush (*Ericameria laricifolia*) almost look like the flowers are still there.

The large, dried bracts, called "spathes," that enclose the flowers of the brilliant blue birdbill day-flower, *Commelina dianthifolia*, are easy to find in the winter, as well as in the summer, because their shape is illustrative of the birdbill's common name with the broad sheath tapering to a long point.



*Commelina dianthifolia*  
Photo: Cado Daily

Arranging all of these "plant bones" together in an earthen-colored or even in a contrasting blue or yellow vase can bring flowers into your home in the winter. Enjoying the stories they tell and suggestions of what will grow again in the spring is a plant-lover's delight. Would anyone mind telling my sister?

*Cado Daily, Guest Author  
Water Resources Coordinator, Water  
Wise Program – Retired! UA Cochise  
County Cooperative Extension*

Cochise County Master  
Gardener Newsletter Editor  
Carolyn Gruenhagen

Cochise County Master Gardeners Association in Conjunction with  
The University of Arizona Cooperative Extension presents.....

**The 24th Annual High Desert  
Gardening & Landscaping  
Conference**

**March 9 & 10, 2017  
Sierra Vista, Arizona**



*High on the Desert*



An educational experience for everyone with an interest in gardening. Contact U of A Cooperative Extension 1140 N. Colombo, Sierra Vista, AZ (520) 458-8278, Ext. 2141. <http://www.cals.arizona.edu/cochise/mg/high-desert-conference> Registration fee \$75.00 for one day or \$110.00 for two days and includes a hot breakfast and lunch each day plus all Workshops and Breakout Sessions. Conference held on Cochise College Sierra Vista Campus. Registration opens in January 2017 and ends March 2, 2017.

*(Hypertufa continued from page 4)*

**Recipe #2**

- 1 part Portland cement
- 2 parts perlite
- 2 parts peat moss

This is a lighter mixture and a bit easier to work with. Your goal with the water is still the cottage cheese texture.

Take a large pot or any other container that you want to be your outer mold. Line it with a garbage bag so you can remove your masterpiece later. Press your mixture of hypertufa into the mold, pressing it tightly around the edges and bottom so you don't leave any air holes. When you have it the way you want it, put a smaller container in the center (this is going to be the inside dimensions of your pot) and continue to pack the mixture around until it is a solid unit. Remember to put a hole in your future pot for drainage before you get too far along. Smooth the top and edges of your new pot.



Go back to the house and clean up and congratulate yourself on an afternoon well spent. The pots will take about a week to cure, depending on your ambient temperature and humidity. You can take the inner mold out fairly quickly, probably an hour or so later. Wrap the remaining masterpiece in the rest of the garbage bag and walk away for a while. Naturally, the larger your pot, the longer the drying period.

If you want to learn more about Hypertufa and other fascinating subjects, in addition to meeting other fun-loving gardeners, please attend our 2017 High Desert Gardening & Landscaping Conference, March 9-10! We are looking forward to seeing you there!

*Kris Williams, RPh,  
Master Gardener*

