

# Master Gardener Update

## May 2019

<p><b>In this Issue</b></p> <p>Cuckoo Bees</p> <p>Success with Solitary Bee Houses</p> <p>RPMGA: Plants that Changed the World</p> <p>Rotary Gardens: Earth Day, Spring Plant Sale, Volunteer, Garden Art</p> <p>Other Events of Interest</p> <p>More Volunteer Opportunities</p> <p>Education Calendar</p>	<p><b>Pollinator Project</b></p> <p><b>Cuckoo Bees</b></p> <p><i>(Nomadinae sp.)</i></p> <p><b><u>Facts about Cuckoo Bees:</u></b></p> <p><b>Family:</b> Apidae</p> <p><b>Size:</b> adult length ¼ inch to ¾ inch</p> <p><b>Color:</b> black, creamy yellow and red</p> <p><b>Unique characteristics:</b> no scopa, no leg hairs</p> <p><b>Located:</b> All over the U.S., much of Canada and Mexico.</p> <p>Not all bees focus their attention on collecting pollen and nectar. One group, known as the “cuckoo bees”, are sneaky invaders of other bees’ nests. In actual fact, they’re parasites. Their tactics are simple. Female cuckoo bees sneak into the nests of other bees when the host is out foraging. Once inside, cuckoo bees lay their eggs near the food supply already stored inside. The eggs of the cuckoo bees hatch and the young cuckoos live off of the food, and in some instances even the eggs, supplied by the host bee species.</p>	 <p><i>Figure 1- Photo by Ilona Losier.</i></p> <p style="text-align: right;"><i>continues</i></p>
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**Websites**

**UW Extension Rock County:**  
rock.uwex.edu

**RPMGA Blog:**  
rpmga.blogspot.com

**Rotary Gardens:**  
rotarybotanicalgardens.org

**Wisconsin Master Gardener Program:**  
wimastergardener.org

**Wisconsin Master Gardener Association (WIMGA):** wimga.org

This is known as brood parasitism. The invaders lay their eggs primarily in the nests of digger bees and Andrenids (mining bees).

There are many types of cuckoo bees from a variety of bee families. They share a wasp-like appearance and—because they aren’t gathering pollen to feed their offspring—less hair on their bodies and no scopa (pollen baskets). They have much stronger bodies than regular bumble bees, but can range in size from small to large – less than ¼ inch, to ¾ inch.

At least one cuckoo, *Epeoloides pilosula*, is critically imperiled according to the Xerces Society’s Red List for Bees. (See next page.) *Epeoloides* were once common in northern and eastern United States and southern Canada, but from 1950 to 2000, so few were seen that scientists thought they might be extinct. Finally, two males were collected in 2002 in Nova Scotia. The problem: *Epeoloides* depends entirely on host bees of the species *Macropis*, which in turn feed only on yellow loosestrife. So saving the cuckoo *Epeoloides* requires strengthening that entire food chain.



Figure 2 – A mature cuckoo

If you hope to observe cuckoos, watch for bees flying low over the surface of the ground and foliage, hunting for potential victims who are nesting and foraging.

Mary Kay Thompson

## **Xerces Society Red Lists**

### **What are the Red Lists?**

Found at <https://xerces.org/red-lists/>, each list covers one category of insects and includes a table with detailed profiles on the conservation of every listed species. Each profile is a compilation of the current state of the science and includes what is known about the ecology, distribution, and conservation of each species.

### **How do I find information on a particular species?**

To find information on a species click on the links within the table, which will take you to a profile for that species. You can download (in PDF format) profiles of individual species. In the Red List of Butterflies and Moths, there is an additional table containing links to official recovery plans developed for some of the species listed as threatened or endangered under the U.S. Endangered Species Act.

### **What information is included in each table?**

The tables include Latin and common names, distribution, and Xerces Society Red List status. The butterfly and moth table also indicates which species are listed on the U.S. Endangered Species Act (indicated by an \*) or the Canadian Species At Risk Act (indicated by an †). The butterflies have been sorted into two tables – one by Latin name and the other by common name. The bees and aquatic invertebrate tables are only sorted by Latin name, as most do not have a useful common name.



## Success with Solitary Bee Houses

Many commercial bee hotels and DIY instructions mean well, but their designs lack the forethought that comes from knowing what can harm bees.

Bee hotels should aim to mimic natural nesting sites and this can be a hard task to undertake. They must be maintained in order to keep diseases and parasites from easily moving from one nesting hole to the next. Below are common design mistakes and how to avoid them.

**Structures that are too large.** A large hotel may look impressive but its size may actually hinder its purpose. In the wild, nesting sites are spread out among dead branches, standing dead trees, and broken bush stems. Smaller hotels spread out along a path can work better.

**Materials permanently installed in place.** Nesting materials should not be glued, nailed, or stapled within the protective bee house. Nesting materials should be easy to remove at the end of the season and refreshed as needed. Hand-rolled paper tubes are easy to make and the used tubes are easy to replace once all the new young bees have left the nest.

**Bird wire flush with nesting holes.** If you are attaching bird wire over the front of your bee house be sure it is not flat against the front of the nesting holes so it doesn't restrict the bee's ability to approach and land. Bees would appreciate us taking the time to design a bee hotel with a landing area.

**Not enough wind and rain protection.** The bee hotel will protect nesting materials from wind and rain if it has 2-3 inches of overhang. All bee houses should be designed with an overhang to protect nesting materials from rain and wind. Tilting the open end downward just slightly can help assure that moisture that does not get in or if it does will not stay there. Make a removable "roof" for your bee house.

**Unnatural nesting materials.** Plastic does not allow the pollen and nectar loaf to breathe. Plastic pipes are typically much too large for hole-nesting bees.

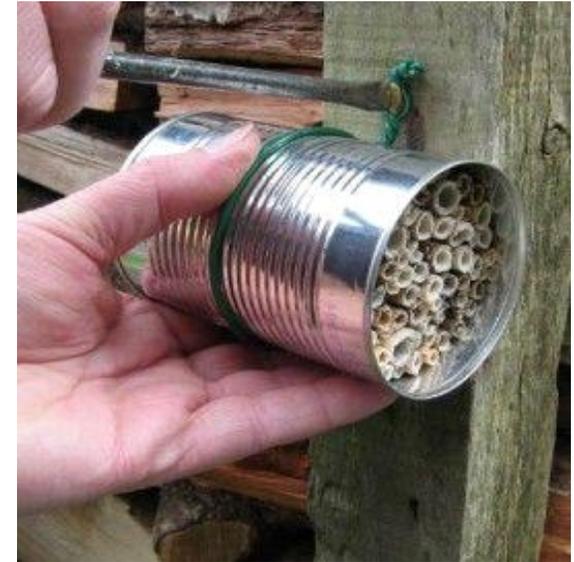
**Huge nesting holes.** Nesting holes should range in size from  $\frac{3}{32}$  to  $\frac{3}{8}$ " at most. Anything larger will force the bee to lay its egg chambers in an awkward orientation which could lead to the death of some of the larvae. Tubes of larger or smaller inside diameter are often not chosen by the female bee looking to create a brood.



**Shallow nesting materials.** Nesting materials that are too short can force female bees to lay eggs that result in the wrong ratio of female to male bees. The optimum length is between 4 and 6 inches.

**Placement of your bee house.** Select a bee house location that receives early morning sun to awaken and warm your bees. However, if summer temperatures can be very hot, ensure the house is in afternoon shade. Hang the bee house on a wall, fence or flat surface. Make sure it is firmly attached and does not rock or swing in the breeze. An easy hanger can be made with coated wire wrapped tightly around the can at the mid-point with the end twisted into a round hole that can be nailed or screwed to whatever you're attaching it to.

**How high should it be?** Attach the house at eye level – about 5 to 7 feet from the ground, for easy viewing and to help protect the bees from pests. If you have a bird house, position your bee house out of its line of sight. Birds love to munch on bee larvae. Locate the house within 100 to 300 feet of a pollen source.

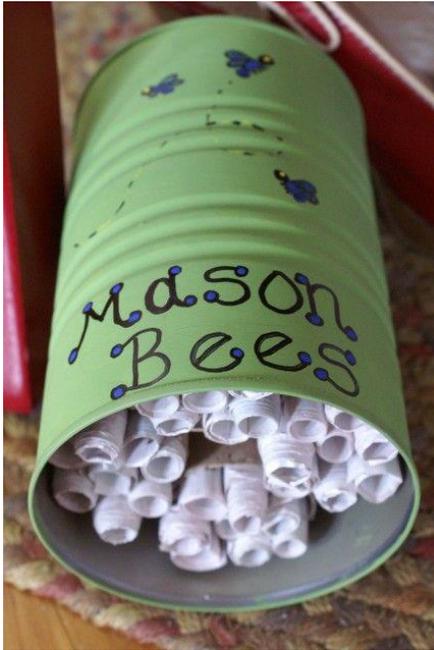


## Using recycled materials to build bee houses

### Materials:

- Clean tin cans – don't go any smaller than a condensed soup can. These are about 4 ¼" long which can accommodate a 4" long rolled paper tube, hollow plant stem, or piece of bamboo. Bees will use an area between 4 and 6" long to create a brood, so the 4" tubes are just about perfect.
- Non-toxic glue sticks
- Small sheets of non-glossy craft paper. At the dollar store I found small tablets of paper that were 4" wide and 5 ½" long. Rolled on the short axis these are a perfect size to use to make hand-rolled tubes without cutting. Seal the loose edge with the non-toxic glue stick.
- An unsharpened pencil to use as a form.
- Scissors

When building habitats out of recycled materials begin with a clean tin can. A soup can works well. It's important that the can be opened using the kind of can opener that does not leave a lip or sharp edge where the lid has been removed. The edge must be smooth and safe for bees to brush up against when entering the can to attend to their broods so as not to damage their wings. The inside diameter of the



tubes should be between 3/32" and 3/8" in diameter. Too small and they won't use them. Too large and they may have difficulty establishing their broods in them. You can use the unsharpened pencil to roll the paper around – or a pen, or some other suitable instruments.

**How to attract bees to your bee house:** Bees are attracted to certain colors – specifically blue, white, yellow and black. (The photo at right shows a can painted green. Although that color will not serve to attract bees, this is a good illustration showing how hand-rolled tubes are set into the can at the right depth.) If you hope to attract bees to your bee houses give them a paint job. Don't start work on them until you are sure they are completely dry before you paint them a bee-friendly color. Use non-toxic and waterproof acrylic craft paint. Do NOT paint the interior of the can. Only the exterior. Make sure it is completely dry before attempting to make a bee hotel.

**Roll your tubes!** This is the fun part. Start the short edge of your sheet of paper along the side of a pencil or whatever item you are using as a guide. Rock it back and forth until the paper begins to curl a bit and once that has begun, roll the sheet of paper until you reach the end and then glue it shut using the non-toxic glue stick. Let it dry. Once all your tubes are dry, begin stacking them inside the can. Try not to flatten them as you go. In order for the bees to use them they need to be round and smooth inside. You can notice inside the can there is a toilet paper tube with rolled tubes inside it at the

bottom. This kind of 'marker' can make it easier for the mother bee to locate her brood when she's working.

NOTE: The illustration of the green tin can shows the words "mason bees" painted on it. There seems to be considerable confusion about the differences and similarities between mason bees and solitary bees. Think of it this way – all mason bees are solitary bees, but not all solitary bees are mason bees. Mason bees are known for pollinating orchards but many other bees do so as well. To learn more about solitary bees visit this website: <https://hort.extension.wisc.edu/articles/wisconsin-bee-identification-guide/>

*Mary Kay Thompson*



## **RPMGA May Program: Jim Haseman on Plants That Changed the World, Thursday, May 2, 5:30-7:00 p.m., at the Community Room of Premier Bank**

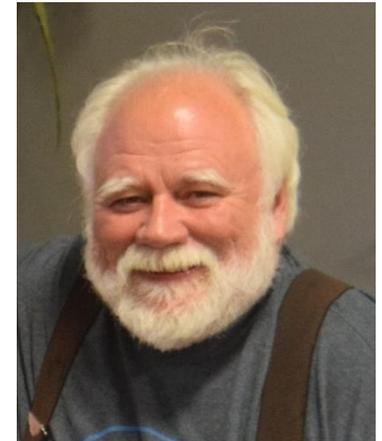
Plants very rarely make front-page news. They seldom get written up in history books. Yet beginning before we even had letters to record our experiences, it was the long development over centuries of our ability to produce plant foods—in a word, agriculture—that was critical to the dominance of humans on our planet. Development, however, is not a smooth, linear process. Sometimes it's fast, sometimes it's slow, sometimes it even moves backwards. But no matter the speed, there's no denying its power.

Please join us as former MGV and RECAP volunteer Jim Haseman shares how some fairly humble plants became movers and shakers of human history. Potatoes. Apples. Tulips. Marijuana. They are literally plants that changed the world.

Note: we'll also have a very short business meeting as well.

**Date/Time:** Thursday, May 2, 5:30-7:00 p.m.

**Location:** Community Room at Premier Bank, 1400 Black Bridge Road, Janesville (behind McDonalds). Please arrive on time as the doors are locked at 5:30.



ROTARY BOTANICAL GARDENS

# Celebrate the Earth!

MAY 4, 2019  10 A.M. - 2 P.M.



Family  
Education

Local  
Food  
Trucks



Community  
Exhibits

Hoo's Woods  
Raptor Program

Children's  
Activities

Free Garden Admission From 10:00 a.m. - 2 p.m.

## Hoo's Woods Raptor Program

11 AM OR 1 PM

\$5/person (ages 2+) per show.

No registration, first come, first served.

Tickets may be purchased at the door, the day of the event. Please note: this event sells out quickly!



## Rotary Gardens Spring Plant Sale May 9-12

Thursday, May 9, Members Only presale from 4:30 to 7:30. Get the best selection, light refreshments and 10% off.

The sale opens to the general public on Friday May 10. Hours: Friday—9 a.m.-6 p.m.; Saturday—8 a.m. to 5 p.m.; Sunday—10 a.m.-4 p.m.

Garden friends who show their membership cards at checkout (and people who purchase memberships at the sale) receive 10% off on any sale date.

To preview lists of available plants, go to <http://www.rotarybotanicalgardens.org/event/spring-plant-sale-6/>

## Volunteer at Rotary This Month— There's lots to do!

Saturday, May 4: Earth Day Celebration

Thursday, May 9 through Sunday, May 12: Spring Plant Sale

Saturdays, May 18 and 25: Volunteer Work Days—8 a.m. to noon.

Bring some gloves and some friends and help plant.

Wednesdays, May 22 and 29: Volunteer Work Nights—6-8 p.m.

Same as work days, above, but in the evening.

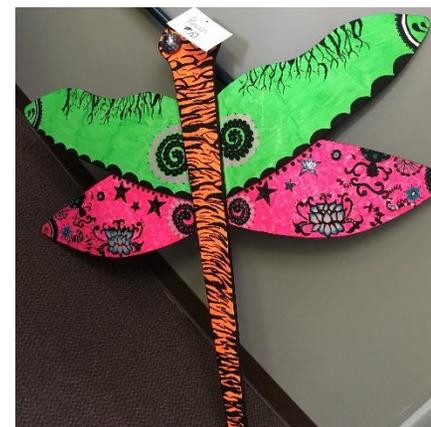
Saturdays throughout May: Compost Sale

For more info on any of the above, contact Laura Peterson, Rotary's Education and Volunteer Manager: [laura.peterson@rotarygardens.org](mailto:laura.peterson@rotarygardens.org), 608-314-8415.

## Rotary's Garden Art Display Opens Friday, May 10

Returning for the tenth year, this year's Garden Art Project features "Dazzling Dragonflies." Thirty large dragonfly silhouettes will be mounted on posts throughout the gardens. Visit any time during the summer and decide which you like best. The Exhibit continues through September 13. Then on Thursday, September 19, you'll have a chance to bid on your favorites, when all the dragonflies are sold at a live auction. Take one home and make it part of your garden art.

*This dragonfly was decorated by members of Janesville's RECAP program.*



## Update on Horticulture Educator

We can expect to have a new horticulture educator and MGV coordinator for Rock County soon. The position was posted in March and resumes were accepted through mid-April. The listing was for an 80% position, split between Walworth and Rock Counties. The interview process is currently underway and UWEX hopes to have someone working by sometime in June. Keep your fingers crossed!

## Other Events of Interest Coming Up

The Wild Ones Woodland Native Plant Sale at Nicholas Conservatory Gardens, Rockford, IL, Saturday and Sunday, May 4 and 5, 10 a.m to 3 p.m. both days.

On Saturday, May 4 from 10:00 a.m. to 2:00 p.m., in Madison, the UW Dept. of Horticulture and Allen Centennial Gardens are hosting their annual Family Garden Day with free plants, garden questions answered, events for kids and more.

Also in Madison, Olbrich Botanical Gardens hosts the Badger State Dahlia Society's tuber sale on Sunday, May 5; Olbrich's own Plant Sale with the Pros on Friday and Saturday, May 10 and 11, an African violet sale also on Sunday the 11<sup>th</sup>, a bonsai show by the Badger Bonsai Society on May 18 and 19 and an iris show by the Madison Area Iris Society on Sunday, May 26.

Klehm Arboretum Plant Sale, Friday, May 10, 5 to 8 p.m. and Saturday, May 11, 9 a.m to 2 p.m. Rockford, IL. Admission \$5 on Friday evening, free admission Saturday.

Friends of the Arboretum Native Plant Sale, Saturday, May 11, 9 a.m. to 2 p.m, Madison.

Southeast Wisconsin Master Gardeners Annual Plant Sale, May 18, 8:00 a.m. to 1:00 p.m. at State Fair Park. Locally grown perennials, natives, bulbs, herbs, trees, and shrubs for sale. Cash or check only. Free admission.

For tons more MGV plant sales and events, check the events page at [www.wimastergardener.org](http://www.wimastergardener.org)

The American Hosta Society's national convention, Hostaffinity, will be in Green Bay this year, from June 12-15. For more information, go to [www.ahs2019event.org](http://www.ahs2019event.org).

The Midwest Renewable Energy Association's 30<sup>th</sup> annual Energy Fair is a fascinating take on many aspects of renewable and sustainable living—not just energy. This year the fair is also adding tours to several farms and gardens in the area that embrace the sustainability concept. The fair takes place June 22 and 23 in Custer, WI (a little east of Stevens Point).

### **More Volunteer Opportunities** (in addition to Rotary Gardens, above):

**Help Staff Tables at Rotary's Earth Day Celebration**, Saturday, May 4 from 9:45 to noon OR noon to 2:15. We need at least two volunteers per shift. This year, in addition to RPMGA's table, we'll be helping Rotary Gardens staff a table on a project we've been helping them with:

Table 1—RPMGA general table: we'll be handing out free flower and vegetable seeds, talking about pollinators and demonstrating the difference compost makes in the garden. We need help arranging the displays or packing up, but most of the time you'd be chatting with people about gardening and gardens in general. Contact Ruth Flescher to volunteer for the RPMGA table and to let her know which shift you'd like to work (a.m. or p.m.): [yafello2@gmail.com](mailto:yafello2@gmail.com).

Table 2—Earth Day is the rollout of Rotary's updated Family Adventure packs. These backpacks contain easy, fun activities for families to explore habitat, birds and trees. Volunteers at this table will show the packs, their contents and activities, and explain how families can borrow them for use in the gardens. Contact Bev Feltz to volunteer for the Backpacks table and to let her know which shift you'd like to work (a.m. or p.m.): [pengnix@yahoo.com](mailto:pengnix@yahoo.com).

Rotary Gardens also needs other volunteers for the Earth Day Celebration. Go to <https://signup.com/go/iKuVeur>.

**WCBVI A Day in the Garden, Friday, May 17.** We're working with the Wisconsin Center for the Blind and Visually Impaired to help their students (various ages) explore gardening and learn about plants. Afterwards, the activities developed here will be adapted to a program for adults with the Wisconsin Council for the Blind and Visually Impaired in Madison. If you'd like to help with either aspect of this, contact Bev Feltz: [pengnix@yahoo.com](mailto:pengnix@yahoo.com).

**Farmers Market Volunteers for May 18 in Janesville and May 25 in Beloit.** Do you enjoy sharing your love of gardening? Farmers market volunteers talk with people one-on-one about a whole range of gardening topics. Free seeds help draw people in and make it easy to get those conversations started. Come for 2.5 hours or the whole 5 hours (markets run 8-1, and yes, we have chairs!). Let us know which day/location works for you, when you can be there and how long you'll stay. Contact Mary Kay Thompson: [mastergardenermary@gmail.com](mailto:mastergardenermary@gmail.com).

## May Education Calendar

For details on any of these education opportunities, search the web using the program title and/or organization name.

**NCG = Nicholas Conservatory Garden, Rockford, IL; RPMGA = Rock Prairie Master Gardener Association, Janesville; UWA = UW Arboretum, Madison; OBG = Olbrich Botanical Garden, Madison; SP = Silverwood Park, Edgerton; WEC = Welty Environmental Center, Beloit; WHPS = WI Hardy Plant Society, Madison; UWSP = UW Stevens Point; HHM = Hoard Historical Museum, Fort Atkinson; UIEX = Univ. of Ill. Extension, Winnebago County, Rockford, IL; KA = Klehm Arboretum, Rockford, IL; JUFA & BC = Janesville Urban Forest Alliance and Basics Coop, Janesville.**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Simply Spring: The Butterfly Exhibit March 23 thru June 2 NCG			1	2 Plants that Changed the World RPMGA	3	4 Spring Bird Hike UWA/Magnolias Walk UWA
5 Spring Wild- flowers in Wingra Woods UWA/ Garden Excursion Walk UWA	6	7 Spring Flowers with Flavor OBG	8 Cavity Nesters and Build a Nest Box OBG	9 Grow Salad Bowls OBG	10	11 Lilacs and Crabapples UWA/ (Post) Arbor Day Celebration SP

<b>12</b> Ecosystem Saunter UWA/A Spring in Our Step Family Walk UWA/Wild Flower Walk WEC	<b>13</b>	<b>14</b> Soils for the Home Gardener OBG/Expanding Your Shade Garden Palette WHPS	<b>15</b>	<b>16</b> Gardening for Hummingbirds OBG	<b>17</b> Woodland Plant ID and Sampling UWSP	<b>18</b> Spring Bird Hike UWA/Rare and Uncommon Native WI Trees and Shrubs UWA/Light of the Moon Night Walk UWA/ Farmers Markets HHM/Unusual Perennials in the Spring Garden WHPS
<b>19</b> Springtime on the Savannah Walk UWA	<b>20</b>	<b>21</b> Spring Contain- ers Walk OBG	<b>22</b> Spring in the Wild- flower Garden Walk OBG/An Evening with Nancy Nedveck (of the Flower Factory) UIEX/New Growth Tranquility Walk KA	<b>23</b> Ornamental Container Gar- dens OBG	<b>24</b>	<b>25</b>
<b>26</b> Teal Pond and Curtis Prairie Wetlands Walk UWA/Wetlands Family Nature Program UWA	<b>27</b> <i>Memorial Day</i>	<b>28</b>	<b>29</b> Tree Selection for the Urban Landscape JUFA & BC	<b>30</b> Make Your Own Bonsai OBG	<b>31</b>	

## Looking Ahead to Early June

Klehm Arboretum Garden Fair, Rockford, IL, Saturday June 1 and 2. Admission: \$8 non-members; free for members. This fundraiser for the garden features over 100 vendors selling flowers, antiques and art.

An EEO/AA employer, University of Wisconsin-Extension provides equal opportunities in employment and programming, including Title VI, Title IX, and the Americans with Disabilities Act (ADA) requirements.

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