

# Matthaei Botanical gardens and Nichols arboretum

# friends

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## Adaptation to a Changing Planet

*Rosina Beirbaum, Dean, School of Natural Resources and Environment*

As I write this editorial, the media is reporting that the Bali climate conference has just concluded, dramatically, with the adoption of the "Bali Roadmap." This last minute breakthrough includes the promise from all countries to accelerate negotiations and complete them by 2009 and to help developing countries now by facilitating the transfer of clean technologies as well as funding projects to help cope with the impacts of climate change (<http://unfccc.int/2860.php>). New emissions reduction targets were not adopted, but the world recognized the importance of helping the poorest and the most vulnerable in the world to confront climate change now.

The discussions about global change have finally shifted. *Adaptation* is no longer a dirty word. For the last two decades, many feared uttering that term lest it imply we would let greenhouse gas emissions continue unchecked and simply manage or engineer—that is, "adapt"—our way out of any uncomfortable predicaments that ensued. This year, several international consensus science reports, including the 4<sup>th</sup> Intergovernmental Panel on Climate Change (IPCC) Report ([www.ipcc.ch](http://www.ipcc.ch)) and *Confronting Climate Change: Avoiding the Unmanageable and Managing the Unavoidable* ([www.unfoundation.org/SEG/](http://www.unfoundation.org/SEG/)), made it clear that if we hope to avoid irreversible damage, we need to not only rapidly mitigate or sharply reduce the burgeoning greenhouse gases, but to also cope with the changes already underway and

prepare for those yet in store. It is no longer possible to choose either mitigation or adaptation; we need both, urgently.

As we begin to understand the "devil in the details of climate change," it is becoming apparent that allowing global average temperatures to rise more than 2-2.5°C (or 3.6-4.5°F) higher than they were in the pre-industrial era risks significant, if not catastrophic changes to species, ecosystems, and society. The world is already "committed" to more than half of this increase from greenhouse gases emitted to date. In order to avoid passing potentially dangerous temperatures, industrialized countries would need to reduce their emissions some 60-80% by 2050, and by the end of this century, world emissions can only be one-third of what they are today—truly a prodigious task! Rapid deployment of clean energy sources will be key to achieving such reductions, but additional storage of carbon in low-till soils, restoration of natural landscapes, and reduced deforestation can also contribute significantly.

Recent estimates, such as the report by Nicholas Stern, suggest the cost of controlling emissions can be less than the damages incurred by allowing emissions

**Continued on p. 16**



## Special Features In This Issue



### Meet the Interns!

Learning on the job, p. 4



### Growing a Naturalist!

Children and Nature, p. 5



### Meet our Volunteers!

Ford, school groups, and more p. 19

# Conservatory Displays and Exhibits



## Plant Conservation: Rare, Threatened and Endangered

Fall Exhibit *October 16 - November 30*

Botanical gardens and arboreta around the world are participating in a strategy for plant conservation. Locally and globally plants and habitats can be rare or at risk through habitat loss, invasive species, over-collection, and climate change. We can preserve plant diversity and take actions to protect plants and habitats. This display will feature plants in our collections and habitats we are restoring. Please check our website for the date and time of a lecture on plant conservation.

## Chrysanthemums

Fall Display *October 16 - November 30*

Visit the botanical Gardens to see a beautiful exhibit of fall mums and enjoy a wonderful family photo opportunity.

## Plants of Mexico

Winter Exhibit & Display

*December 3 - January 4*

This winter, our Conservatory will take on a Mexican theme starting with a brilliant display of poinsettias (*La Flor de la Noche Buena* - The Flower of the Good Night), evergreens, and *ristras* - strands of dried chile peppers. We will explore the traditions and history of the holiday season in Mexico and the plants that have given life to these traditions: corn that provides the base for both tamales and *atole*, a beverage traditionally served at this time of year; chocolate that flavors a special blend of *atole*, *champurrado*; and we can't forget the margarita made with tequila fermented from the agave plant.

Plus, on Wednesday evenings the Conservatory will be beautifully lit with luminaria. We hope to see you!



## Conservatory Hours:

Tuesday through Sunday

10 am – 4:30 pm

Wednesdays

10 am – 8 pm

Mondays

Closed

(Above left) The American Lotus is one of the species featured within the Fall Exhibit.

(Above right) Colorful chrysanthemums enliven the fall display.

(Below) Poinsettia are among many plants that originate from Central America.



## friends

Fall 2008 / Vol. 5, No. 1

Matthaei Botanical Gardens and  
Nichols Arboretum Newsletter

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Matthaei Botanical Gardens and  
Nichols Arboretum  
University of Michigan

Robert E. Grese, Director  
Karen Sikkenga, Associate Director



# Director's Message



I want to share with you how much I appreciated the opportunity to be away on sabbatical during this past year. While it's great to be back, it was wonderful to spend more time focused on research and writing. I also had a chance to visit several other botanical gardens and arboreta around the U.S. and Canada, particularly those affiliated with universities and colleges. I learned much about these other institutions, gathered numerous ideas, and came to appreciate many of our own unique opportunities.

Now more than ever, botanical gardens and arboreta have the potential to be places of hope in a drastically changing world. With the challenges of global warming as outlined by School of Natural Resources and Environment Dean Rosina Bierbaum, we have a critical role to play in conserving plant diversity and ecosystems both at home and around the world. By joining with others world-wide, we can form a vast network for monitoring the health of plants in the face of a changing climate and work together to protect those species and ecosystems most at risk. This includes not only natural ecosystems but also our agro-ecosystems and the rich horticultural heritage of gardens. Botanic Gardens Conservation International has proposed that plants can serve as an "early warning system"

for the climate (<http://www.bgci.org/worldwide/climatechange/>) and has recently published the report *Plants and Climate Change: Which Future?* ([http://www.bgci.org/files/Worldwide/climate\\_change.pdf](http://www.bgci.org/files/Worldwide/climate_change.pdf)) that provides a blueprint for plant conservation activities world-wide.

Of course, we don't want our messages to only be of gloom and doom. We know that people come to the Matthaei Botanical Gardens or Nichols Arboretum to enjoy and learn about plants, connect with nature, and restore their spirits. If we are savvy, we can also inspire visitors to care about our changing world and encourage them to think about sustainability in their own lives. We have already made many changes to our own practices, leading by example. Here are a few things we have done recently:

- Our recent upgrades to the Conservatory included an "energy blanket" that helps to keep warm air inside during the winter and reduces heat loading during the summer. This drastically cuts our energy use.
- We are mowing less on a regular basis and have established several alternative "lawn" displays using plants that require little water and no inputs of fertilizer.
- Our newer gardens will feature native plants of our region, demonstrating their value in landscaping and encouraging their use.
- Through our Project Grow community garden, our student-led Cultivating Community project with its gardens both on Central Campus and at the Gardens, and our new "Growers Garden" at the Gaffield Children's Garden, we are helping people learn about growing vegetables at home.

In addition, we continue with concerted efforts to restore ecological integrity to many of the ecosystems found on our properties. Through the help of hundreds of volunteers, we are removing invasive alien plant species, restoring natural processes such as fire, and propagating and planting hundreds of native

plant seedlings in badly degraded areas.

Our new Great Lakes Garden will serve as a model "conservation garden," featuring both the rare and unique plants of our region as well as many that were once quite common but have become rare in recent years. Our hope is to help people appreciate the unique beauty and biodiversity of our region as we struggle to protect it for the future. The Great Lakes mosaic panels created by Yulia Hanansen and the many volunteers who worked with her now greet visitors at our west entry and remind them of the special beauty of our state. Through all of these efforts we hope to engage our visitors in the challenges facing our region and planet, particularly in a warming climate.

I would like to thank Dr. Paul Berry, Director of the University of Michigan Herbarium, for serving as Interim Director during my sabbatical. He worked closely with Associate Director Karen Sikkenga and other staff to move forward on many of our initiatives while I was away. With Paul's dedicated help and direction, we have also begun new collaborations with the Herbarium—particularly around our new Great Lakes Garden—that I only hope will continue to grow in the future. To staff and members, I must say that I've missed seeing you regularly and look forward to working with you in the months ahead! 🌱

**Bob Grese**  
Director  
Matthaei Botanical Gardens  
& Nichols Arboretum

# The Importance of Being Interns

Dorothea Coleman

In May, thirty enthusiastic, energetic, and talented interns joined our staff for the summer. We provide them with meaningful on the job training. All gain a new respect and love for nature and the environment. In return, we benefit from new ideas and extra hands to help with the work. Many will leave at the end of the summer with concrete additions to their portfolios. But what do they do? Read on and discover the depth and breadth of some of their activities while they are here. 🌿



As a Lands intern, Kelly Welter waters the Herb Knot Garden.

## Curation and Information Technology

**Ed Cable** ✂, **Erika Hassle** and **Yasu Ishihara**

- Create digital mapping system
- Assemble and GPS-confirm records
- Develop web-based information sharing

## Development and Marketing

**Emily Grekin**

- Write articles for newsletter (see next page.)
- Creates fundraising materials

## Education and Interpretation Services

**Erin Allen**, **Nikole Bork**, **M'Lis Bartlett**, **Jenna Jones**,  
**Liana Mulholland** and **Andrew Sell** ✂

- Create kiosk panels
- Design interpretive signs for gardens and trails
- Develop educational materials for programs
- Helps staff school/scout tours and activities
- Design and produce visitor materials

## Education and Community Outreach

**Stacey Mates** and **Maddie Morely**

- Manage and implement Cultivating Community (see back page)
- Helped to create the Adaptive Spaces Garden

## Lands- Nichols Arboretum

**Sean Dorsey**, **Sean Lewandoski**, **Alex Miranda**, **Elizabeth Padalino**  
and **Yousef Rabhi**

- Maintain the Gateway Garden
- Maintain the Centennial Shrub Collection
- Collect native shrubs for river installation
- Remove exotic invasive plants from natural areas

## Lands- Matthaei Botanical Gardens

**Danny Booker**, **Ed Cable** ✂ and **Joe Ciadella**

- Manage natural areas at MBG and Horner Woods
- Monitor hotspots for long term management
- Conduct Floristic Quality Surveys
- Implement photo monitoring

**Julia Dodd**

- Assist in Conservatory
- Produce and maintain plants for classes
- Support reserachers using facilities

**Rebecca Steiner** and **Kelly Welter**

- Produce and maintain:  
Alexandra Hicks Herb Knot Garden, Peony Garden,  
the Perennial Garden, Gateway Garden of New World Plants,  
Groundcover Display Garden and annual display beds.
- Production of plants for Conservatory displays

**April Warnock**

- Assist with the care and management of:  
Bonsai, Bromeliad, Orchid and Woody Plant Collections
- Coordinate volunteers in the Helen V. Smith Woodland  
Wildflower Garden

**Mark Ferrall**, **Eliot Johnson**, **Eric Kampe** and **Jozi Zwerdling**

- Maintain trails, grounds and gardens
- Plan and maintain new gardens

## Projects

**Eric Bauer**

- Refine design of proposed Bonsai Display Garden
- Spearhead the installation of wetland boardwalk
- Fine tune site work on Gaffield Children's Garden

**Britt Zimmerman**

- Improve Sam Graham Trees Trail
- Prepare Gaffield Children's Garden
- Rescue snake and turtle eggs

**Jessica Neafsey**

- Plan and prepare Gaffield Children's Garden
- Conduct surveying and site layout
- Construct fence and arbor
- Install stonework and pavers

**Celia Haven**

- Update Sue Reichert Discovery Trail
- Construct boardwalk
- Prepare Gaffield Children's Garden

## Profile: Emily Grekin

# Growing a Naturalist

*Emily Grekin*

When I was six years old, I had my very own acorn museum.

This might sound weird, but it's true. I lived near San Francisco, and I attended an extremely environmentally-friendly elementary school. Every aspect of learning was intertwined with nature and, though I didn't know what it was at the time, sustainability. We often had class outside, beneath beautiful oak trees. Acorns littered the grass, and so I began collecting them. My teacher noticed and helped me set up an acorn display for all my classmates to see.

We also spent time learning about recycling. We had recycling bins all over the classroom, and we even took a field trip to the local recycling plant, where we learned what "bio-degradable" meant and how landfills were overflowing.

In our classroom, we had activities in which we used pieces of trash to create "junk sculptures," which taught us the value of turning something used and ugly into something creative and expressive. I remember one time I made a cat out of an old Christmas ornament, masking tape and a milk carton. I was very proud.

Even the little things I remember. We learned to ask for paper bags rather than plastic at the grocery store. We learned to cut the plastic rings that hold cans of soda together, so that birds don't get their necks tangled in them. We learned to appreciate nature at a young age by simply being surrounded by it constantly. The next step seems inevitable—learning to care about the environment and the animals that live in it, and we were taught simple ways to do so.

I'm twenty-one years old right now. Fifteen years have passed, and I still remember these experiences as if they were yesterday.

I'll be honest. I'm not really the nature-type. I prefer air-conditioning to humidity. I prefer a walk through the mall to a hike up a mountain. But because I internalized the importance of preserving and respecting nature and the environment at such a young

age, I've always valued sustainable practices, and I'm appalled when I see people who do not. I just learned that two of my best friends don't recycle—at all. They throw away plastic, aluminum, and paper with the rest of their trash, simply because it's more convenient than spending a few minutes sorting the different materials and placing them in their respective bins.

I wonder: if these friends of mine had learned sustainable practices at a young age, and had been familiar with nature as I was, would they be helping to preserve the environment right now? Obviously, they know the value of recycling. We hear about it on television; we read about preserving the environment in newspapers and magazines. Maybe learning about sustainability when you're older just isn't enough.

When I learned about the Gaffield Children's Garden that's opening at Matthaei Botanical Gardens, I was immediately intrigued. The thought of a garden designed especially for children really struck a nerve, summoning all of my kindergarten memories with great clarity. The more we can surround children with nature, and encourage them to love the natural world, the more adults we'll have promoting sustainable practices in the years to come.

**"...because I internalized the importance of preserving and respecting nature and the environment at such a young age, I've always valued sustainable practices..."**

The three-acre Children's Garden will be located on the southern side of the Matthaei Botanical Gardens display area. A key feature of the Gaffield Children's Garden is a universally accessible tree house. A long ramp will wind up to the tree house, ensuring access for people using wheelchairs, walkers, and strollers.

The children who come to the garden will

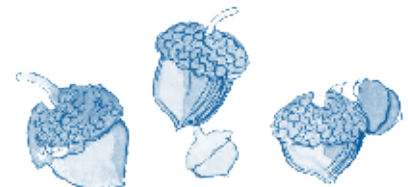


have boulders to climb, hills to roll down, and logs to turn over. We're not talking plastic structures surrounded by nature—children will directly interact with natural objects.

As if the need for sustainable practices, now and in the future, isn't enough, there are also personal benefits of exposing children to nature. Frances Kuo, an environmental psychologist at the University of Illinois, found that children ages 7-12 diagnosed with ADHD had a 20% increase in their ability to concentrate after playing outdoors.

MBGNA understands the many benefits of connecting children with the natural world, and the Gaffield Children's Garden is a manifestation of the Garden's desire to take action. Two years ago, plans began for this garden. Now, the land is prepared for construction and trail work has begun.

It's amazing to me that so many of my environmental values stemmed from my kindergarten experience. I can only hope that Gaffield's Children's Garden will touch children now and in years to come, and instill within them the same appreciation for nature that I learned fifteen years ago. 🌱





# Updates

Karen Sikkenga

## Thank You

On behalf of Matthaei Botanical Gardens and Nichols Arboretum, I would like to thank Professor Paul Berry for giving generously of his time, expertise and leadership during Bob Grese's sabbatical year. His contribution made it possible for us to continue our momentum on new initiatives. He enhanced our horticultural knowledge, introduced greater links between the Herbarium and MBGNA, and increased our participation in University research.

In the coming years, we plan to continue to collaborate with the Herbarium. An immediate project in the works is a web and printed guide to Michigan flora that will be hosted jointly by our two organizations. We'll also be working with Professor Berry on the programming for the Great Lakes Garden at MBG. We look forward to additional collaborative projects as they unfold.

## Mosaics

If you have not been by MBG to see the beautiful mosaics mounted at the western entrance to the conservatory building, don't wait another minute. They are more beautiful than we dared hope. Thank you, Yulia Hanensen of Mosaic Sphere and volunteers, for these deeply moving pieces of art.

## Arb Road Repairs

Nichols Drive and a portion of the Huron River were closed in May to repair the road and stabilize the riverbank to prevent further erosion. Rock vanes were installed in the river to redirect its flow and provide a quiet place for canoeists to rest. The road's surface is much easier for our walkers, joggers and emergency vehicles to traverse.

## MBG Drive and Parking Lot

Good news! The Provost has approved our request for funds to repave the MBG driveway. Thank you for your patience. We're all looking forward to a fresh new look and a firmer surface sometime next spring.



## Orchid Award

Congratulations to MBGNA horticulturalist Connie Crancer and the Ann Arbor Orchid Society for cultivating yet another award-winning orchid. Our *Coelogyne South Carolina* won a Highly Commendable Certificate (HCC) from the American Orchid Society. All divisions of this plant are now to carry the full name *Coelogyne South Carolina 'Matthaei Gardens.'* See the most recent edition of *Orchids* magazine for more details. This makes eight total orchid awards, with four carrying our name. Next time you visit, be sure to check out our award winning orchid collection displayed throughout the year in the Conservatory.

(Above) *Coelogyne* South Carolina 'Matthaei Gardens'

## Ann Arbor #1 Healthiest Hometown in the U.S.

On Wednesday, July 23 a national press conference was held at the Arb as Ann Arbor was named the number one healthiest hometown in AARP's annual listing of Top Ten Healthiest Hometowns. The AARP article profiled a local Ann Arbor couple who noted that one of their favorite ways to stay healthy is to take walks through Nichols Arboretum. Look for the article in the September - October issue of AARP Magazine.

(Below) Dr. Bob Kelch, U-M Executive VP for Medical Affairs and CEO of the U-M Health System, addresses the crowd. Listening are Jesse Bernstein, CEO of the Chamber of Commerce, Carol and Bob Mull, and Mayor John Heiftje.



# Fall 2008 Calendar

## September

- 1**  
Monday **Conservatory Closed**
- 4**  
Thursday 8 – 10 am Fall Migration Bird Walk - Arb  
4 – 5:30 pm Youth Group Activity ☼  
6 – 7:30 pm Youth Group Activity ☼
- 8**  
Monday **Conservatory Closed**  
7 – 9 pm Evening Herb Study Group Meeting
- 9**  
Tuesday 7 – 9 pm Huron Valley Rose Society Meeting  
7:15 – 9:15 pm Michigan Mushrooms Lecture ☼  
7 – 8:30 pm Seed Savers Volunteer Info Sessions
- 11**  
Thursday 8 – 10 am Fall Migration Bird Walk - Arb  
4 – 5:30 pm Youth Group Activity ☼  
6 – 7:30 pm Youth Group Activity ☼  
9 am – noon Volunteer Eco Workday at the Arb  
9 am – noon Michigan Mushrooms Field Trip ☼  
10 am – noon Curator's Tour ☼
- 13**  
Saturday 2 – 3:30 pm Seed Savers Volunteer Info Session
- 14**  
Sunday 2 – 4 pm Ann Arbor Orchid Society Meeting
- 15**  
Monday **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens ☼  
7:45 – 9:45 pm Michigan Botanical Club Meeting
- 16**  
Tuesday 7:15 – 9:15 pm Michigan Mushrooms Lecture ☼  
7:30 – 9:30 pm Sierra Club Meeting
- 17**  
Wednesday 9 am – noon Wednesday A.M. Hiker, Fall ☼  
7:30 pm – 9:30 pm Audubon Society Meeting
- 18**  
Thursday 8 – 10 am Fall Migration Bird Walk - Arb  
4 – 5:30 pm Youth Group Activity ☼  
6 – 7:30 pm Youth Group Activity ☼  
9 am – noon Volunteer Eco Workday at the Gardens  
9 am – noon Michigan Mushrooms Field Trip ☼  
10 am – 4 pm Great Lakes Judging Meeting  
10 am – 1 pm Prairie Explorer Walk ☼
- 20**  
Saturday 1 – 5 pm Willow Furniture Workshop
- 21**  
Sunday **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens ☼
- 23**  
Tuesday 7 – 9 pm After You're Gone: Earth Friendly Funerals and Burial ☼  
7:15 – 9:15 pm Michigan Mushrooms Lecture ☼
- 24**  
Wednesday 9 am – noon Wednesday A.M. Hiker, Fall ☼  
7 – 9 pm Ann Arbor Bonsai Society Meeting
- 25**  
Thursday 8 – 10 am Fall Migration Bird Walk - Arb  
4 – 5:30 pm Youth Group Activity ☼  
6 – 7:30 pm Youth Group Activity ☼  
7 – 9 pm Green Endings ☼
- 27**  
Saturday 9 am – noon Michigan Mushrooms Field Trip ☼  
10 am – 12:30 pm Children's Harvest ☼
- 29**  
Monday **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens ☼

**30**

Tuesday 7:15 – 9:15 pm Michigan Mushrooms Lecture ☼

## October

- 1**  
Wednesday 9 am – noon Wednesday A.M. Hiker, Fall ☼
- 2**  
Thursday 8 – 10 am Fall Migration Bird Walk - Arb  
4 – 5:30 pm Youth Group Activity ☼  
6 – 7:30 pm Youth Group Activity ☼
- 4**  
Saturday 10 am – 4:30 pm Bonsai Society Show and Sale  
9 am – noon Michigan Mushrooms Field Trip ☼  
10 am – noon Bonsai Basics Workshop ☼
- 5**  
Sunday 10 am – 4:30 pm Bonsai Society Show and Sale
- 6**  
Monday **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens ☼  
7 – 9 pm Evening Herb Study Group Meeting
- 7**  
Tuesday 7 – 9 pm Garden for Wildlife ☼
- 8**  
Wednesday 9 am – noon Wednesday A.M. Hiker, Fall ☼  
7:30 – 9:30 pm Ann Arbor Garden Club Meeting
- 9**  
Thursday 8 – 10 am Fall Migration Bird Walk - Arb  
4 – 5:30 pm Youth Group Activity ☼  
6 – 7:30 pm Youth Group Activity ☼  
7 – 9 pm Shrubs for Wildlife Lecture ☼
- 11**  
Saturday 9 am – noon Volunteer Eco Workday at the Arb  
10 am – 12:30 pm Children's Harvest ☼  
10 am – noon Shrubs for Wildlife Field Trip ☼
- 12**  
Sunday 2 – 4 pm Ann Arbor Orchid Society Meeting
- 13**  
Monday **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens ☼
- 14**  
Tuesday 7 – 9 pm Garden for Wildlife ☼  
7 – 9 pm Huron Valley Rose Society Meeting
- 15**  
Wednesday 8 am – 4 pm MI Garden Club Environmental School, Course III ☼  
9 am – noon Wednesday A.M. Hiker, Fall ☼  
7 – 9 pm Local Forest Ecosystems Lecture ☼  
7:30 – 9:30 pm Audubon Society meeting
- 16**  
Thursday 8 – 10 am Fall Migration Bird Walk - Arb  
10 am Fall Exhibit and Display Opens  
8 am – 4 pm MI Garden Club Environmental School, Course III ☼  
4 – 5:30 pm Youth Group Activity ☼  
6 – 7:30 pm Youth Group Activity ☼
- 18**  
Saturday 10 am – 4:30 pm MI State African Violet Society Show and Sale  
9 am – noon Volunteer Eco Workday at the Gardens  
9 am – 3 pm Fall Photography Class Field Trip  
10 am – 1 pm Local Forest Ecosystems Field Trip ☼  
10 am – 4 pm Great Lakes Judging Meeting  
1 pm Walk to Remember at the Arb ☼
- 19**  
Sunday 10 am – 2 pm MI State African Violet Society Show and Sale  
9 am – 3 pm Fall Photography Class Field Trip (rain date)  
10 am – 1 pm Local Forest Ecosystems Field Trip ☼  
10 am – 1 pm Hosta Hybridizers Meeting

## October *continued*

- 20** **Monday** **21** **Tuesday** **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens 🌿  
7:45 – 9:45 pm Michigan Botanical Club Meeting
- 22** **Wednesday** 9 am – noon Wednesday A.M. Hiker, In Between Seasons 🌿  
7 – 9 pm Southeast Michigan Wildlife Habitats  
7 – 9 pm Ann Arbor Bonsai Society Meeting
- 23** **Thursday** 4 – 5:30 pm Youth Group Activity 🌿  
6 – 7:30 pm Youth Group Activity 🌿  
7:30 – 9:30 pm Garden Clubs Meeting
- 27** **Monday** **29** **Wednesday** **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens 🌿  
9 am – noon Wednesday A.M. Hiker, In Between Seasons 🌿
- 30** **Thursday** 4 – 5:30 pm Youth Group Activity 🌿  
6 – 7:30 pm Youth Group Activity 🌿

## November

- 1** **Saturday** 10 am – noon Yard Hens 🌿
- 3** **Monday** **5** **Wednesday** **Conservatory Closed**  
noon – 1 pm Yoga at the Gardens 🌿  
7 – 9 pm Evening Herb Study Group Meeting  
5:30 – 7 pm Food for Winter
- 6** **Thursday** 4 – 5:30 pm Youth Group Activity 🌿  
6 – 7:30 pm Youth Group Activity 🌿
- 8** **Saturday** 10 am – 4 pm Ann Arbor FiberArts Guild Sale  
9 am – noon Volunteer EcoWorkday at the Arb  
10 am – noon Plant Explorers 🌿
- 9** **Sunday** 2 – 4 pm Ann Arbor Orchid Society Meeting  
2 – 4 pm Huron Valley Rose Society Meeting
- 10** **Monday** **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens 🌿  
6 pm – 9 pm Ann Arbor Bonsai Society Banquet and Meeting
- 12** **Wednesday** 7 – 9 pm Wild Ones Meeting  
7:30 – 9:30 pm Ann Arbor Garden Club Meeting
- 13** **Thursday** 4 – 5:30 pm Youth Group Activity 🌿  
6 – 7:30 pm Youth Group Activity 🌿
- 14** **Friday** 9 am – noon Public Goods Open House
- 15** **Saturday** 9 am – noon Public Goods Open House  
9 am – noon Volunteer Eco Workday at the Gardens  
10 am – 4 pm Great Lakes Judging Meeting
- 17** **Monday** **18** **Tuesday** **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens 🌿  
7:45 – 9:45 pm Michigan Botanical Club Meeting  
7:30 – 9:30 pm Sierra Club Meeting

- 19** **Wednesday** 7:30 – 9:30 pm Audubon Society Meeting
- 20** **Thursday** 4 – 5:30 pm Youth Group Activity 🌿  
6 – 7:30 pm Youth Group Activity 🌿
- 22** **Saturday** 10 am – noon Plant Explorers 🌿
- 24** **Monday** **27** **Thursday** **29** **Saturday** **Conservatory Closed**  
Noon – 1 pm Yoga at the Gardens 🌿  
**Conservatory Closed**  
10 am – 4 pm Spinner's Flock Holiday Sale

## December

- 1** **Monday** **2** **Tuesday** **Conservatory Closed**  
10 am Plants of Mexico opens
- 4** **Thursday** 10 am – noon Members Only at AA Woman's Farm & Garden Greens Market  
noon – 4 pm Ann Arbor Women's Farm & Garden Greens Market
- 6** **Saturday** 10 am – 1 pm Ann Arbor Garden Club Greens Workshop  
6 – 10 pm Stewardship Network Potluck
- 8** **Monday** **Conservatory Closed**
- 11** **Thursday** 4 – 5:30 pm Youth Group Activity 🌿  
6 – 7:30 pm Youth Group Activity 🌿
- 13** **Saturday** 9 am – noon Volunteer Eco Workday at the Arb  
1 – 4 pm Winter Solstice 🌿
- 15** **Monday** **16** **Tuesday** **Conservatory Closed**  
6:30 – 9:30 pm Sierra Club Potluck and Meeting
- 18** **Thursday** 4 – 5:30 pm Youth Group Activity 🌿  
6 – 7:30 pm Youth Group Activity 🌿
- 20** **Saturday** 9 am – noon Volunteer Eco Workday at the Gardens  
10 am – 4 pm Great Lakes Judging Meeting
- 22** **Monday** **24** **Wednesday** **25** **Thursday** **29** **Monday** **31** **Wednesday** **1** **Thursday** **Conservatory Closed**  
**Conservatory Closed**  
**Conservatory Closed**  
**Conservatory Closed**  
**Conservatory Closed**  
**Conservatory Closed**  
**Conservatory Closed**  
**Conservatory Closed**

### Key

- 🌿 part of a series – see listings in Education Brochure
- 🌿 Youth Group Activity – see listings in Education Brochure
- 🌿 Family or Group Activity – see listing in Education Brochure
- 🌿 Members Only Event for members at Sustaining level and above
- 🌿 class offered by MI Garden Clubs – see their website at: [http://www.michigangardenclubs.org/public/environmental\\_school](http://www.michigangardenclubs.org/public/environmental_school) for more information.
- 🌿 Tree planting and memorials for perinatal and newborn loss



## Come Learn at MBGNA!

### Michigan Mushrooms

**Lectures: Four Tuesdays, September 9, 16, 23, and 30**

**7:15 – 9:15 pm**

**Field Trips: Four Saturdays, September 13, 20, 27, and October 4  
9 am - noon**

Wild mushrooms are studied through slide lectures concentrating on their natural history, identifying characteristics, and edible and poisonous qualities. Field trips to four different natural areas. Each ends with display, identification, and discussion of the morning's finds, plus sautéing and tasting some of the edibles. Former students may register for the complete course or for field trips only.

Instructor: Robert Schaffer, Ph.D, & Jocelyn Shaffer

**Fee: Lectures and Field Trips: \$148 Members and U-M Students (\$185 Non-members) #08-AE-30**

**Field trips only: \$96 Members and U-M Students (\$120 Non-members) #08-AE-31**

### Yoga at the Gardens

**Session F: #08-AE-32**

**Six Mondays, September 15, 22, 29 October 6, 13, 20,**

**Session G: # 08-AE-33**

**Six Mondays: October 27, November 3, 10,17, 24,**

**Both Sessions, noon – 1pm**

Following Vinyasa Yoga this class is a flowing sequence of sun salutations and postures coordinated with music. Class will be at a moderate pace. For students with yoga experience. Held in the auditorium of Matthaei Botanical Gardens. Please enter from the west entrance and bring a yoga mat and bath-sized towel. Drop-ins welcome, \$10/class.

Instructor: Janine Bennett

**Fee: \$48 Members and U-M Students, (\$60 Non-Members)**

### Wednesday A.M. Hiker, Fall

**Five Wednesdays, September 17, 24, October 1, 8 and 15  
9 am - noon**

Hikes take the inquisitive plant seeker to remote habitats of woods and wetlands. Edible plants and mushrooms, as well as the interesting plants and intriguing habitats of little-known and out-of-the-way places, are emphasized in our academic but playful atmosphere. Wear long pants, long-sleeved shirt, and sturdy shoes. Potluck lunch on last day.

Instructor: Ellen Elliott Weatherbee

**Fee: \$120 Members and U-M Students (\$150 Non-members)  
#08-AE-34**

### Art, Nature and Function: Willow Furniture

**Sunday, September 21, 1 - 5 pm**

Once willow furniture graced front porches, gardens and summer homes. Crafting willow furniture has become a traditional American craft. It's time for you to learn this craft. Leave with a handcrafted heirloom. Materials are provided, you need to bring a small hammer (8oz) and pruning shears. Select from one of the projects listed below; sizes are estimated. Pre-registration required two weeks prior to the class date. Project photos are available on our website. Instructor: Bim Willow

- Trellis (Flat and Tripod): 84"x24" (trellis) or 36" (tripod)  
**Fee: \$70 Members (\$84 Non-members) #08-AE-35**
- Garden Bench: 48"x40"x14"  
**Fee: \$100 Members (\$120 Non-members) #08-AE-36**
- Bent Willow Chair: 46"x32"x28"  
**Fee: \$230 Members (\$276 Non-members) #08-AE-37**
- Bent Willow Loveseat: 46"x50"x28"  
**Fee: \$320 Members (\$384 Non-members) #08-AE-38**
- Garden Arbor: 84"x40"x40"  
**Fee: \$260 Members (\$312 Non-members) #08-AE-38**

**Green Note:** Willow when cut will resprout from the stump. When harvested properly willow will continue to grow year after year.

### After You're Gone: Earth Friendly Funerals & Burials Tuesday and Thursday, September 23 and 25, 7 - 9 pm

Many of us are committed to making our lives more environmentally friendly—choosing organic produce, driving more fuel-efficient cars, and living and doing business in green buildings. Did you know that there are ways to make your death more environmentally friendly as well? Join the Blueprint for Aging and MBGNA for a lecture series on natural burial options, land conservation and low-impact funeral care and memorials. Tuesday, Joe Sehee, of the Green Burial Council, and Donna Folland, of the Six Rivers Regional Land Conservancy, will discuss sustainable burial practices and how you can help protect Michigan's land resources - even from beyond the grave! Thursday, Erika Nelson, MSW and licensed funeral director, will discuss the reawakening of historically traditional practices of home funerals and natural death care. Early registration for this workshop is strongly encouraged.

Instructors: Joe Sehee, Donna Folland, Erika Nelson  
**Fee: \$5 for all attendees, no discounts. #08-AE-39**

## Garden for Wildlife

**Two Tuesdays, October 7 and 14, 7 – 9 pm**

MBGNA has partnered with the National Wildlife Federation to help you get your homesite certified as a Wildlife Habitat with the National Wildlife Federation. Habitat gardens attract beautiful songbirds, butterflies, frogs, and other interesting wildlife. Native wildflowers, shrubs and trees will increase the beauty of your property and provide a nurturing refuge for wildlife. Gardening practices that help wildlife: reducing the use of chemicals, conserving energy and water, and composting also improve air, water and soil quality. This class will cover the basics; other classes this fall and spring will dive into details and help you to learn more about our local habitats.

Instructors: Catriona Mortell and Dorothea Coleman

**Fee: \$32 Members and U-M Students (\$40 Non-members)**

**#08-AE-40**

## Shrubs for Wildlife

**Lecture: Thursday, October 9, 7 - 9 pm,**

**Field Trip: Saturday, October 11, 10 am - noon**

Habitats rich in shrubs can provide excellent wildlife habitat. Since the 1930s wildlife biologists have sought to improve wildlife habitats through shrub plantings. Although mistakes were made, and some of our worst invasive shrub species were introduced, the concept of “shrubs for wildlife” remains valid. Join Sylvia Taylor to focus on identification and management of both exotic and native shrubs, their growth habits and their importance to wildlife.

Instructor: Sylvia Taylor, Ph.D.

**Fee: \$32 Members and U-M Students (\$40 Non-members)**

**#08-AE-41**

## Local Forest Ecosystems

**Lecture: Wednesday, October 15, 7 - 9 pm,**

**Field Trips: Saturday and Sunday, October 18, 19, 10 am - 1 pm**

Forest ecosystems are more than just the sum of their trees. This course will investigate the ingredients which comprise our local forest ecosystems; including climate, topography, pleistocene landforms, soil, vegetation, and animals. On Saturday we will venture into an Oak-Hickory Forest on the botanical gardens property, Sunday we will tour a Beech-Maple Forest at Springhill Preserve in Superior Township.

Instructor: Robert Ayotte

**Fee: \$45 Members and U-M Students (\$54 Non-members)**

**#08-AE-42**

## Capturing Color: Fall Photography Class

**Saturday, October 18, 9 am - 3 pm**

Learn more about shooting fall colors and using techniques to capture the essence of the season. The class will meet at the MBG parking lot and carpool to the western edge of Washtenaw County and photograph in the Sharon Hollow area (bring a lunch). Rain Date: Sunday, October 19.

Requirements: Any digital or film camera, an SLR is preferred for some of the techniques demonstrated.

Instructor: Mark O'Brien

see his photos at: <http://www.flickr.com/photos/mfobrien/>

**Fee: \$40 Members and U-M Students (\$50 Non-members)**

**#08-AE-43**

## Wednesday A.M. Hiker: In-Between Seasons

**Two Wednesdays, October 22 and 29, 9 am - noon**

Take a relaxing break from holiday preparations to keep botanically sharp and in shape for holiday “pig-outs.” These field trips feature invigorating hikes to little-known nature areas, state land, or turn-of-the-century classic botany localities. Plants, habitats and people encountered will be identified and enjoyed. Come dressed to be outdoors for both sessions. Stay the last day for a potluck lunch.

Instructor: Ellen Elliott Weatherbee

**Fee: \$48 Members and U-M Students (\$60 Non-members)**

**#08-AE-44**

## Southeast Michigan Wildlife Habitats

**Wednesday, October 22, 7 - 9 pm**

Learn how various species of wildlife interact with the rich and varied ecosystem in which we live. The Beech-Maple and Oak-Hickory forest communities constitute a major component of the complex mosaic of southeast Michigan wildlife habitats. (Refer to Forest Ecosystems class for more information on this topic.) This class will examine various parts of that mosaic from floodplains and grasslands to farm fields and residential landscapes.

Instructor: Sylvia Taylor, Ph.D.

**Fee: \$16 Members and U-M Students (\$20 Non-members)**

**#08-AE-45**

## Food for Winter or What I did last summer

Wednesday, November 5, 5:30 - 7 pm

A discussion in the Nichols Arboretum Reader Center Classroom

Eric Kampe set up a task for himself this past summer and that was to grow, preserve, pickle, ferment, dry, can and simply store his garden's summer produce. Join Eric and others in a round table discussion about food preservation.

Free: Reservation Required #08-AE-46

## Yard Hens: Introduction to Keeping Chickens

Saturday, November 1, 10 am - noon

Curious about what it takes to have happy chickens in your yard and tasty eggs in your fridge? Join us for this class covering the basics of keeping chickens. We will cover where and how to get chicks, breeds, housing and feeding.

Instructors: Judy Dluzen and Andy Sell

Fee: \$8 Members and U-M Students (\$10 Non-members)  
#08-AE-47

## Youth & Family Programs

### Youth Group Activities

offered every Thursday by reservation

at 4 - 5:30 pm or 6 - 7:30 pm

Fee: \$5.00 per child

Phone: 734-647-7860 or 734-763-6667

**Discover the World of Plants:** Join docents on a guided adventure in our conservatory of plants from around the world. Learn about the basic needs of plants and build a terrarium to take home. For children ages 7-10.

**Trail Treks:** A docent leads you through woodlands, savanna, wetland, and fen. Activities might include quick sketching in nature or exploring different plant communities. These nature explorations happen at either Nichols Arboretum or Matthaei Botanical Gardens. For children ages 9-13.

**Environmental Careers:** Would you like to be a plant specialist? A landscape designer? A natural areas steward? Learn what it takes to become a horticulturist, a landscape architect, or a natural areas preservation specialist. Explore our gardens and nature trails and learn how to plan a garden or natural area for your home. For children ages 10-15.

**Outdoor Surroundings: Artists and Scientists:** With our interpretive guides, discover the similarities and differences in how artists and scientists perceive the natural world. Take a walk through our conservatory or trails and observe the special traits that help identify plants. Using a quick sketching technique, make sketches of what you discover. For children ages 7-15.

Outdoor gardens and trails  
open every day 8 am - dusk,  
free admission



The Reader Center at  
Nichols Arboretum  
Mon. - Fri. 8:30 am - 4:30 pm



Matthaei Botanical Gardens Conservatory

Mon. closed  
Tues. 10 am - 4:30 pm  
Wed. 10 am - 8 pm  
Thurs. - Sun. 10 am - 4:30 pm

## Here's How to Register:

*(form on opposite side)*

**Phone:** 734 - 647-7600 *(During Conservatory hours listed above)*

**Fax:** 734 - 998 - 6205. Send completed registration form with credit card information.

**Mail:** MBGNA - University of Michigan  
1800 N. Dixboro Road  
Ann Arbor MI 48105

**On-line:** [www.mbgna.umich.edu](http://www.mbgna.umich.edu)

**In Person:** Stop by the Information Desk at Matthaei Botanical Gardens during the hours listed above.

**Make checks payable to "MBGNA."**

**Note:** Adult Education classes are open to those at least 16 years of age. Classes meet as designated at Matthaei Botanical Gardens or Nichols Arboretum. Classes may meet off-site (call for location and directions if you miss a class). Field trips may be physically challenging – call if you have questions about the difficulty of any class or trip. Classes are popular and fill quickly – early registration is suggested.

### Are You a Member?

To become a member of Matthaei Botanical Gardens and Nichols Arboretum, send a **separate** check made out to "MBGNA." Fees are \$55 for a family membership, \$45 for a single membership, and \$20 for University students. (See form page 16.)



# Community Education

Fall 2008  
September - December

*(Family/Youth group) Activities are geared toward giving families/youth groups an opportunity to explore natural areas at Nichols Arboretum and Matthaei Botanical Gardens. Two weeks advance notice required.*

## Prairie Explorer Walk at Nichols Arboretum

**Saturday, September 20, 10 am - 1 pm**

Our interpretive guides will lead you through a fascinating exploration of Nichols Arboretum's prairie. Visit different stations and discover amazing native plants, insects and animals that call the prairie home. For children ages 9-13.

**Fee: \$3.00 per participant 08-YE-49**

## Children's Harvest - From seeds to the dinner table

**Saturday, September 27, 10 am – 12:30 pm OR**

**Saturday, October 11, 10 am – 12:30 pm**

Explore our Children's Garden; learn about some of the fruits and vegetables we're growing there. Learn how to make a salad from garden ingredients, learn how to make sauces with fresh herbs. Take home a special herb mix. For children ages 9-13.

**Fee: \$2.50 per participant 08-YE-50**

## Bonsai Basics – Parent/Child workshop

**Saturday, October 4, 10 am – noon**

During the Bonsai Show a special opportunity will be offered to families. Connie Crancer and members of the Bonsai Society will teach the basics of bonsai. The aim of bonsai culture is to develop a tiny tree that has all the elements of a large tree growing in

a natural setting through pruning and shaping roots and branches. Pre-registration is required. Price is per plant, family pairs may work on a plant.  
**Fee: \$20 Members (\$25 Non-members) 08-YE-53**

## Plant Explorers

**Saturday, November 8, 10 am – noon at the Arboretum OR**

**Saturday, November 22, 10 am – noon at the Gardens**

Why do plants do what they do? Discover the amazing range of sizes, shapes and textures of plants. Take a guided hike, and go on a scavenger hunt to find weird and wonderful plants. For children ages 7-10.

**Fee: \$2.00 per participant 08-YE-51**

## Winter Solstice

**Saturday, December 13, from 1 – 4 pm**

Explore traditions that celebrate the return of light and the turning point of winter. Make winter-themed bird feeders, take a winter walk, and share in the wonders of winter. For children ages 7-10.

**Fee: \$3.00 per participant 08-YE-52**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_ Parent's name (if student is under 18): \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Member of Friends of MBGNA (Member Exp. Date \_\_\_\_\_ )

Non-member

U-M student: (Student ID Number \_\_\_\_\_ ) Is this your first class?  Y  N



Student's Name	Class Code	Also attending (if family class)	Member Fee	Non-member Fee
List additional classes on a separate sheet and include with original form.			<b>Total</b>	

Payment:  Check made payable to: MBGNA  
 Visa  Mastercard  Discover  
 American Express

Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_

Cardholder Signature \_\_\_\_\_

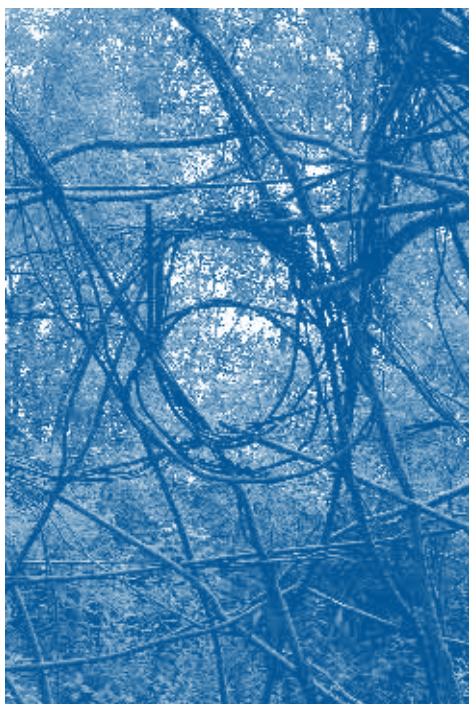
Get Lost in the Arb and Gardens!

## Get Lost!

### Children's Hide-a-way

*April Pickrel*

Just around the bend on the Sue Reichert Discovery Trail is a perfectly sized lodge for young explorers. Woven of bent willow planted right in the ground, this structure makes a great hideout! Sneak in through the arbor entrance and take in the views through its porthole windows. You'll find green thickets in all directions, trails leading off to more discoveries, and if the wind is just right, the glimmer of a pond in the distance. Let your imagination take you. Can you Get Lost? 🌿



*Explore the branch twists and views through Willow Lodge on the Sue Reichert Discovery Trail.*

### Putting the Garden to Bed Ask the Experts



*Prepare your beds this autumn to see the fruits of labor next spring!*

**Q** Fall is coming and I don't know what to do to get my yard and garden ready for winter. Please help.

**A** First, don't start too soon. The plants need several severe frosts to prepare themselves for winter and enter dormancy. Here's a simple list of what to do and when.

#### September and October

- Enjoy the cooler weather and fall colors.
- Remove diseased foliage. Do not compost.
- Remove plants that are no longer desired.
- Divide overgrown plants.
- Replant or give away the divisions.
- Continue to water your garden, especially any plantings less than one year old.
- Continue to mow the lawn, but do not cut shorter than normal for the winter.
- Let the clippings remain on the lawn thereby returning nutrients to it.
- Mow over leaves and let them also remain on the lawn.

#### November and December

- Continue to water.
- Mow, if warmer weather makes it necessary.
- Begin to remove spent foliage and flower stalks, if they do not provide winter interest or food source for birds.
- Mulch, but not until after the ground has frozen. (The purpose is to keep the ground from freezing and thawing repeatedly.)
- Prune any diseased or dead branches of trees and shrubs.

#### January and February

- Prune for shape and size now. Some exceptions are: shrubs that flower before June 15, maples, willows and other trees that exude large amounts of sap, oak leaf hydrangeas, certain early-blooming clematis, and roses.
- Cut several branches of spring blooming shrubs to force (make bloom) indoors. Simply cut and place in vase of water.

# Development Matters

## Every Dollar Counts

Sarah Dunn

This summer you may have received a mailing urging you to make a special contribution to our new children's garden, the Gaffield Children's Garden. Through that mailing approximately 175 people contributed \$6,000 toward the completion of this garden.

With this \$6,000 we were able to build all twelve raised beds, two of which were immediately made available to EarthShare Farms and the Jr. Master Gardeners as demonstration gardens. All three of the demonstration rain barrels will now be installed in the spring of 2009, as well as the cold frame hoop house. Finally, ten colorful and decorative birdhouses have been placed with many more to come. Thank you members, supporters, and volunteers for every dollar that you have given and every hour that you have spent helping us create a place for our young visitors! Proof again that every dollar does count.

## Thank you to our new and renewing members *March 1 - June 30*

### Director's Circle \$1,000

Bill and Dorothea Coleman  
Richard and Liz McLeary  
Roger and Coco Newton  
Carl and Sue Van Appledorn  
Lawrence and Sylvia Wong

### Benefactor \$500

Rob Heroux and Cathy Susan  
Philip and Kathleen Power  
John and Marilyn Rintamaki  
Thelma Rivette  
Brooks and Nancy Sitterley

### Sponsor \$250

Martha Agnew and  
Webster Smith  
Martin and Jan Biancalana  
Steve Black  
Jonathan and Trudy Bulkley  
Malcolm and Nita Cox  
Richard and Deanna Dornier  
Linda Gleichert  
Bobby Hainline  
Peter and Rita Heydon  
Art Kitz and Marilyn Pobanz  
Gail Lauzzana and  
Richard Wyatt  
Jerry Lehman  
John and Anna Madison  
David Michener and  
Wil Strickland  
Arthur and Mona Pancioli  
Dennis Purcell and  
Judith Parsons  
Robert and Lynn Raade  
Jeffrey and Kristen Roberts  
Axel and Doris Schremmer  
Robert and Judy Walton  
Jo Ann Ward

### Sustaining \$100

Richard and Ann Abdo  
Robert and Katie Aldrich  
Jean Apperson and Peter Amann  
Michael and Kathy Aznavorian  
Hobart and Valerie Bates  
Deborah Bayer and Jon Tyman  
Peggy Behrendt  
Cheryl Bord  
Bruce and Kathy Bradley  
Marcy Breslow  
Dale and Nancy Briggs  
Carol Buatti  
Bob and Bonnie Burke  
Charles Cares  
John and Carolyn Carr  
Carol and Ted Carzon  
Donald and Maureen Chamberlain  
Gary and Lauren Childs  
Oke Chung  
Phelps and Jean Connell  
Mary Crichton  
Kathleen Crispell and Thomas Porter  
David and Carole Darr  
John and Jean Debbink

Molly Dobson  
Timothy and Irene Eiseman  
Gary and Liz Elling  
John and Carol Eman  
Wayne and Jane Ewy  
Harvey and Elly Falit  
Ruth Fitzgerald  
Barbara Furin Sloat  
Jesse Glacken and Jessica Lehr  
Melvyn and Muriel Gluckman  
Bob and Susan Grese  
Lary Handelsman and  
Joanne Warner-Handelsman  
Gary and Jeannine Hayden  
Wayne and Jean Hazen  
Ruth Heyn  
Daniel and Phyllis Hill  
William and Kathleen Hillegas  
Mark and Mary Carol Hunter  
Chuck and Heidi Jacobus  
Ira and Brenda Jaffe  
Joachim and Christa Janecke  
Scott and Beth Jorgensen  
Alex and Phyllis Kato  
Carol Kauffman  
Hermine Klingler  
John and Anne Knott  
Stephen Kobylarz  
Joanne Kovach  
Edward and Mary Krasny  
John and Carolyn Krienke  
Alison Lang and Mike Kaslik  
Richard and Patricia Lehman  
Diane Macaulay and David Singer  
Andrea Matthes and James Odell  
Laurie McCauley and Jessy Grizzle  
Peter Meek and Eva Mayer-Meek  
George and Eathel Mendenhall  
Ann Meredith  
William Middleton and  
Veronica Santate

Andrew Nagy and Susan Schreiber  
Anthony and Theresa Opiari  
Jeff Porter and Susan West  
Richard and Mary Price  
Hugo and Sharon Quiroz  
David and Alisande Read  
Renate Reimer  
David and Nicole Rever  
Rick and Linda Ridley  
Carrie Riedeman  
Elizabeth Saddler  
Steve and Debbie Stenkiewicz  
Ken Silk and Joan Margeson  
Barbara Sinclair  
Nancy Sippel  
Nancy Smith  
Thomas and Jennifer Smith  
William and Lois Solomon  
Michael and Elizabeth Spitz  
Fran Stoffler  
David and Karen Stutz  
William and Ann Tarrier  
David and Kristina Taylor  
Thomas and Rhona Veling  
Mary Vinovskis

John and Susan Wacksmuth  
Carol Walters  
Ron and Eileen Weiser  
Mary Westhoff  
James and Mary White  
Bob and Beth Wilkinson  
Jack and Norah Williams  
Christine Willis  
Mark and Kathryn Winterhalter  
Nelson and Suzanne Wood  
Jon and Susan Wooley  
Charles Zill

### Family \$55

Roberta Abrams  
Masaki and Michiko Adachi  
Jim Adams and Naz Edwards  
Roopesh Aggarwal and  
Kristine Baker  
Bernard and Raquel Agranoff  
Mark and Sue Alexander  
Erin Allen  
Jane Allen and Mark Doman  
Mark and Mary Ames  
Craig Anderson and Nancy Hertel  
David and Sandra Anderson  
Gregg and Kelly Anderson  
Mike and Barb Anderson  
Steve and Rose Anderson  
Charles and Vivienne Armentrout  
Anthony and Ellen Arruda  
Ella Atkins and Deano Smith  
Jon Ayers and Teresa Gallagher  
Alex and Jan Azary  
Thomas and Zenia Bahorski  
Robert and Mary Baird  
Jennifer Balis and Barbara Wyckoff  
Dan Balon and Mary Ann Edwards  
Noemi Barabas and Peter Jung  
Bruce Barnes  
Jerry and Ruth Barnett  
Mary Bartlett  
Ruth Bartman and Peter Jackson  
Joe and Tammy Bauer  
Steve and Mary Bauer  
Angela and Sunny Beach  
Joel and Patricia Beals  
David Beck and Shirley CoeBeck  
Susan Beckett and Peter Wolff  
Wendy Beckwith and Paul Takessian  
Diane Bennett  
Duane and Mary Bennett  
Jim and Sue Bennett  
Steve and Karen Berger  
Corry and Gahl Berkooz  
Scott Bertsch  
Janet Biermann and Victoria Miller  
Charles and Michele Bietler  
Margaret Bignall and Paul Flossler  
Jason and Angela Black  
Ann Bommarito and Allen Marlow  
Robert and Sharon Bordeau  
Nikole Bork  
Harold Borkin and  
Adrienne Kaplin  
Randy and Sandra Borsh

Kathryn Bowring and Paul Reid  
Christine Brandenburg  
Karl and Christine Brenner  
Jerry and Audrey Bricker  
Charles Bright and Susan Crowell  
Marcia Brosnan and Muriel Vearink  
Ann Brothers and Duncan Williams  
Ed and Mary Bruening  
Robert Bryant  
Arno and Pat Buhrer  
Matt and Susan Cantillon  
Baltasar and Marie-Louise Capote  
Marshall and Janice Carr  
William and Patricia Carter  
James and Jane Cather  
Lesley Chace and Peter Rinehart  
Thomas and Johanna Chapel  
Bill and Helen Chase  
Jesse and Juanita Christian  
Lathe and Kathy Claffin  
Lance and Marice Clark  
Peter Cokinovs  
Andy and Gretchen Comai  
Mike and Madelaine Conboy  
Jane Coon and Rees Midgley  
Suzanne Copey and Joe Grengs  
David and Christal Corliss  
Kevin and Pat Corr  
Daniel and Tammy Corwin-Renner  
Reamonn and Melissa Costello  
Robert and Jeanette Cousino  
John Cox and Gail Walker  
James and Catherine Craig  
Connie Crancer  
Michael and Carol Creech  
James Crowfoot and Ruth Carey  
Richard and Michelle Czerniawski  
Curtis and Laurie Daneker  
Diane Danieli  
Paul Dannels and  
Karen Vende Weyden  
Michael and Sharon Darga  
Elizabeth Davenport and  
Doris Hoffman  
Jordan Davis and  
Michelle Hartmann  
Gerald and Jeannine Day  
Jim Dean and June Howard  
Michelle Deatrlick and  
Steven Przybylski  
Lee and Colleen DeKay  
Leo and Cheri Deng  
Jeanine Diller  
Anne Dimitry and Jack Rosenberg  
Bob and Judy Dluzen  
Julia Dodd  
Peter and Julia Dodge  
Rodman Doll and Myrthe Napatstek  
Liang and Monica Dong  
William and Cecilia Donohue  
Elizabeth and Michael Drake  
Chris Dronen and Margi Hannevald  
Mary Duff-Silverman and  
Ray Silverman  
Ted and Sarah Dunn  
Patrice Duquette and Steven Graff

Brian and Anne Eadie  
Chris and Betty Elkins  
Wylma Elzay  
Cory Emal and Tanya Johnson  
Barry England  
William and Susan Euliss  
Gary Faerber and Kathleen Cooney  
Jessica and Brent Feeman  
Steve Feenstra and  
Pamela Ruitter-Feenstra  
Jeffrey and Sheryl Feldkamp  
Len and Char Felgner  
Lilly and Alison Ferguson  
Martin and Elizabeth Fodor  
George and Elizabeth Fomin  
Jean Forrest  
Paul Foringer and Jo Anne Diehl  
Dick Fortune  
Neal and Meredith Foster  
Lawrence and Ruth Foti  
Marcia Fowler and Martha Sheil  
Ben and Shari Fox  
Lisa Frederick and Norwood Catron  
Jason Frenzel  
Robyn Frey-King and Mary Frey  
Tom and Martha Friedlander  
Robert and Elisabeth Galea  
Keith and Larisa Gall  
Dolcy Garfield  
Joe and Joyce Gattyan  
Janice and Anne Geddes  
Eric and Leslie Geiser  
Leo and Renate Gerulaitis  
Bob and Barbara Getty  
Randy and Cheryl Gibbs  
Anne Gilbert  
Edward and Linda Gillis  
Wayne and Zita Gillis  
Bonnie Gilroy  
Paul and Linda Girard  
Rick and Teri Girenti  
David and Margaret Gladd  
Jason Gold  
August and Sharon Golden  
Gene and Judi Graber  
Lee Green and Michele Eickholt  
Berny and Gina Groth  
George and Beverly Grove  
Sondra and Melanie Gunn  
Lionel and Carol Guregian  
Dietmar Haenchen  
Fred and Becky Hankin  
Mark and Sally Hanselman  
Audrey Hanzlian  
John Harding and Laurie Krauth  
Susan Harris and  
Michael Weymouth  
John and Anita Hartmus  
Robert and Sherry Hatcher  
Celia Haven  
Bill and Ousa Hawkins  
William and Kathryn Hawks  
Ryan and Linda Haywood  
Paul and Julie Heinrichs  
Paul and Kathleen Henchey  
Paula Hencken and  
George Collins  
Sandy Heng and Ginny Owens  
John Henkel and  
Jan McCarthy-Henkel  
Paul and Nicole Henry  
Rita Hemann and Merrill Crockett  
John and Diane Hilfinger  
Jim and Phyllis Hiller  
Peretz and Laura Hirshbein  
John and Christina Hoard  
John and Irene Hoban  
Tim and Anne Hoban  
Stefanie Hodgson  
Liam Hoekenga and David Sterling  
Tim and Shirley Hogan  
Bill and Brenda Hogue  
Bill and Brenda Hogue  
Pamela Hoose  
Alan and Lidie Howes  
Jenny Hsu and Michael Baker  
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## Become a Member Today!

As a member of MBGNA you will become part of our family of friends eager to enjoy all that MBGNA has to offer. Plus, you will receive exclusive [members-only benefits](#):

- Free Conservatory admission all year round
- Subscription to our newsletter, *Friends*
- Free entrance to over 200 reciprocal gardens and arboreta all over North America
- 20% off all educational classes at the Botanical Gardens
- Invitations to members-only events
- Special discounts on ticketed events and bulb offerings
- 10% discount at the Spring Plant Sale and the Gift Shop

Your contribution will help us continue to restore declining ecosystems, create public access and interpretation of natural areas, and offer more exciting arts and program opportunities.

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Basic Benefits
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Basic Benefits
- **Sustaining \$100**  
Basic benefits plus invitation to Curator's Tour
- **Sponsor \$250**  
All benefits above plus perennial plant from Spring Plant Sale
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All benefits above plus 2 free tickets for a ticketed event
- **Director's Circle \$1000**  
All benefits above plus invitation to Director's Evening

If your company matches gifts, please include their form.  
 Memberships are tax-deductible as allowed by law.

*friends* Fall 2008 / Vol. 5, No. 1

# Adaptations for a Changing Planet,

Continued from front cover

to grow unchecked ([http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)).

New evidence shows that climate change interacts with other environmental stressors such as habitat fragmentation, pollution, biodiversity loss, and ecosystem degradation. We need to understand these composite impacts in order to make wise decisions, lest we be inefficient or ineffective in our attempted solutions. Botanical gardens with natural or to-be-restored areas can serve as important research sites to evaluate management, planning and planting options that are robust to multiple environmental stresses. Gardens can support university and NGO research projects through site access, student internships, and long-term commitments for study protocols.

Climate change is manifesting itself in both slowly changing “averages” and in alterations in the frequency and intensity of “extreme” events—things society does not handle well now. International, national, and regional institutions are, in many senses, ill-prepared to cope with current weather-related disasters, let alone potential problems such as an increasing number of millions of refugees fleeing environmental damages spawned by rising sea levels in low-lying countries. We will need to improve management of natural resources and

preparedness/response strategies to adapt to or cope with future climatic conditions that will be fundamentally different from those experienced for the last century. Past is not prologue.

The earth has warmed, on average, more than 1°F already, and we could be headed to as much as another 10°F by the end of this century (see <http://www.ipcc.ch/ipccreports/ar4-wg1.htm>). Higher latitudes will warm more. Indeed, parts of the Arctic have already warmed some 7°F this century, causing



thawing of permafrost and the subsequent slumping of forests (called “drunken forests” because of their tipsy appearance) and damaged roads and city infrastructure. Globally, spring is coming earlier by about a week and fall later by about five days. We

are already seeing species shift in response to the warming observed to date. Some 20,000 data sets of more than a decade duration show that many animals and plants are moving an average of 6 km per decade latitudinally toward the poles, or 6 meters per decade altitudinally up mountains (<http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-ts.pdf>). The projected rates of temperature change over this century exceed those seen in the paleoclimate record for the last 10,000 years, the time when humanity “flourished.” We are pushing our agricultural and natural systems at rates that are beyond human ken.

Last year, the National Arbor Day Foundation published a continental Plant Hardiness Zone Map ([http://www.arborday.org/media/map\\_change.cfm](http://www.arborday.org/media/map_change.cfm)) that differs significantly from the 1990 map. **Michigan, which had been mainly zones 4 and 5, is now labeled zones 5 and 6.** Nebraska can grow dogwoods and serviceberries, and Georgia’s winters are hospitable to firebush. Our professors of landscape architecture muse about how and what we should encourage people to plant in their gardens to be truly native. What is “native” in a world where the climate map is moving over the landscape at rates up to 10 times as fast as seen in the historic record?

And more changes are in store: Over the next



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century 20-30% of the world's species could be facing extinction; crop yields in both the temperate and tropical zones could decline; millions of miles of beachfront properties could be inundated; human health will be affected by water borne disease and increasing heat stress; two billion more people may face water shortages; the oceans are acidifying making it hard for shell forming to survive. We best get on with not only understanding the changes, but that "SO WHAT" question—what do the impacts of climate change portend in particular regions, and how can we develop ways to manage our natural resources and socio-economic systems so that they are resilient to these changes? We need to think hard about adaptation.

The University of Michigan's School of Natural Resources and Environment hosted the first "National Summit on Coping with Climate Change" in May of this year. Managers, policymakers, technologists, and scientists gathered to begin the conversation about how to make society more resilient to the expected (and unexpected!) changes in store (see [http://www.snre.umich.edu/climate\\_change](http://www.snre.umich.edu/climate_change)). We discussed managing ecosystems over bigger spatial and longer temporal scales, about preparing for more electricity outages from heat waves and hurricanes, about needed surveillance systems for the spread of disease vectors, about fisheries management in the face of shifting thermal zones. We need many more such conferences to tackle adaptation issues regionally, nationally, and internationally.

Botanical gardens can have prominent public education roles linking climate change to citizen interests by presenting ecologically sound horticultural practices, demonstrating and interpreting steps to reduce carbon footprints and water-use demands, and be information venues on how to become engaged. Program-specific new ties with developing organizations, NGOs, and public agencies may be better fostered at gardens than other institutions, given their wide acceptance as visitor-friendly apolitical institutions.

Our landscapes will be very different as the climate map shifts over them. Preserving

a major proportion of the poorly known biological diversity of the world will involve not only curbing the rates of change but also finding innovative solutions, with adequate financial support, to save as many of the surviving species as possible. Can we design migration corridors that will facilitate the movement of those species that fly or crawl or swim or are wind-dispersed? Should we be designing seed banks for the potentially "lost" Southern ranges of species? How will invasive species fare relative to desired species as climate changes? We need to muster the best and the



brightest to help us answer these questions.

And we need to mobilize citizens to confront climate change. Public gardens can play a key role in helping the lay public understand how climate change will alter their home place. It is only when the global problem is brought to the local that statistics such as a loss of 20-30% of species begins to resonate—no maples in Vermont, no Baltimore Orioles south of Buffalo, loss of loblolly pine from South Carolina. We need an environmentally literate populace capable of evaluating the importance and urgency of climate change to their children's and their grandchildren's future.

Fortunately, there are signs that we have reached a societal tipping point. Cities, states, corporations, and the investment community are seeing the climate crisis as an opportunity. Virtually every religious group in the world has called tackling climate change a moral issue. Efforts are being made to transfer technology to poor countries and to facilitate adaptation. We have the beginnings of a roadmap to a

different future, one of global sustainability.

At the Nobel Peace Prize celebration in December, at which climate scientists and Al Gore jointly received the award, schoolchildren from all over Norway sang about their hope for the future to conquer climate change, about building "Bridges over Troubled Waters," how "We Shall Overcome," and reminding us that "We Are the World." Then they danced in a garden with jumping frogs, frolicking sheep, flitting damselflies and lovely flowers only to have the climate elements destroy and blacken everything and the children struggle to survive and revive. There was not a dry eye in the great hall.

Climate change is this generation's great threat to the future. My generation practiced hiding under our desks to stave off the impacts of a nuclear explosion. What shall we tell the children about climate change? That we could not agree on changing our profligate ways? That it was too expensive to leave them a sustainable planet? I believe, as Carol Browner, former Administrator of the Environmental Protection Agency, asserted, that we are not willing to be the first generation to leave the next generation a truly irreversible problem. Let us hope humanity will act collectively and urgently to chart this new course through leadership at all levels of society. It is the greatest challenge that the human race has ever faced. There is no more time for delay.

**This article first appeared in *The Public Garden*, Vol. 22, No. 4, December 2007. It is reprinted here with permission.**

**Rosina M. Bierbaum is Professor and Dean in the School of Natural Resources and Environment. She will temporarily step down from that position in September 2008 and return in May 2009 in order to be the co-author and co-director of a World Bank report on climate change and development.**



## Curator's Corner

# Help Wanted

David C. Michener

The year 2008 has been a busy one planning for the new three-acre Great Lakes Garden. Our designers are finalizing plans and preparing budgets. As curator, I am coordinating procurement of all the native plants that we will be using to fill the garden.

Michigan's rich abundance of wild species is not one found in stores or for purchase on the web. We've known from the earliest planning that our state's native plant nurseries can't provide us with all the hundreds of species we need. The new garden will need plants grown from seeds of particular native species and those will need to be collected from the wild. More than a dozen Threatened Species or Species of Special Concern will be included in our Great Lakes Gardens. Consequently, special permits from the State of Michigan are required to collect the seed.

Our staff, interns and work-study students have been busy for the past two years collecting seed from our own properties. As we develop our Great Lakes Gardens, we've come to the next step where we're recruiting and organizing teams – including volunteers – to collect and prepare the seeds from around the region and the state. We are forming partnerships with conservancies and other groups throughout the state to collect for us in areas far away, but there are plenty of sites with the required plants closer to home. Perhaps you'd like to join us in our work?

This is an excellent opportunity to learn about collecting seed of Michigan native plants from the experts. Seeds mature from May through October depending on both species and site. So we're interested in help from volunteers who may be able to join us for more than one annual cycle, as well as those whose time is more limited by season or year. We're recruiting seed enthusiasts to work with staff to:



*Though I do not believe that a plant will spring up where no seed has been, I have great faith in a seed. Convince me that you have a seed there, and I am prepared to expect wonders.*

Henry David Thoreau  
*The Dispersion of Seeds*

- Learn the basics of ethical and sustainable seed collecting
- Develop some field-identification skills in order to detect the late-season condition of the plants
- Harvest seeds from designated areas
- Process and clean seeds after harvest
- Assist with basic record-keeping
- Have the intangible satisfaction of knowing you've helped contribute to our experiential knowledge base, as well as steward some of our state's natural heritage.

If you are interested in this project please contact our volunteer coordinator, Tara Griffith at [tgriffit@umich.edu](mailto:tgriffit@umich.edu) or 734-647-8528. We have scheduled two meetings to begin teaching you what you will need to know. Please let Tara know which one you can attend.

### Seed Savers Volunteer Info Sessions at MBG

**When: Tuesday, September 9**

**Time: 7 - 8:30 pm**

**When: Saturday, September 13**

**When: 2 - 3:30 pm**



## Group Volunteer Opportunities

# The More the Merrier

Tara Griffith

At MBGNA, volunteerism comes in many forms. In recent years, we have worked with many volunteers from corporations, universities, high schools, congregations, youth groups and other community organizations. These groups contribute hundreds of hours of service each year to enhance our natural areas, display gardens, and events. Volunteering is a great way for group members to learn more about each other and build a sense of togetherness. Many corporations promote volunteering as a way for staff to work together in a more relaxed atmosphere and gain a new perspective on fellow employees outside of the workplace.



### Tips for Group Volunteering

There are a few things to keep in mind when organizing a group volunteer activity with MBGNA. First, all group projects should be requested in advance. Groups may choose to join an existing volunteer event or create a private service project. We can also make arrangements to host one-time or ongoing service projects depending on your group's interest and availability. In any case, advance notice allows for better planning for both staff and volunteers.

Second, we want to be sure to match your group with an appropriate activity based on the group's size, age range and skill set. These factors may help determine the type of project as well as the timeframe. Volunteer groups may be scheduled for half-day or full day projects. We recommend a minimum of 3 hours for most groups.

Finally, our staff strives to make each group experience an opportunity for learning and well as stewardship. MBGNA staff will provide an orientation and on the job training for each project. We are always happy to offer groups a more formal tour or nature walk if time allows. Group leaders are welcome to request a tour when coordinating the service project.

## Get Involved!

Group projects include ecological restoration projects, trail maintenance, display garden maintenance, and light construction. Groups are also welcome to help out at special events throughout the year, including our Spring Plant Sale (May), Shakespeare in the Arb (June), Greens Market (December) and more! If you would like to schedule a group volunteer activity with MBGNA please contact me at **(734) 647-8528** or **tgriffit@umich.edu**

### DID YOU KNOW?

**In the 2007-2008 fiscal year, 595 volunteers representing community, corporations, University and other groups logged 2,067.5 hours of service. This is equivalent to a full-time staff position.**

**(Left)** Students from Honey Creek Middle School help to restore a natural area.

**(Below)** Ford Motor Company volunteers help construct the Arb's wetland boardwalk.







*Date Sensitive Material*

### For information

734 647-7600

[www.mbgna.umich.edu](http://www.mbgna.umich.edu)

### Matthaei Botanical Gardens

1800 N. Dixboro Road

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### Nichols Arboretum

1610 Washington Heights

Ann Arbor, MI 48104

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Andrea Fischer Newman, Ann Arbor

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Katherine E. White, Ann Arbor

Mary Sue Coleman (*ex officio*)



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## Cultivating Community

Cultivating Community, an urban gardening and food system education program for University of Michigan students, is moving out into the limelight! After years of maintaining a garden that was tucked away between two greenhouses, Cultivating Community was invited to partner with MBGNA and Project Grow volunteers to build and manage the new exhibit garden along the side of the Conservatory.

The *Adaptable Spaces Garden* exhibit will demonstrate small space, urban food gardens built from recycled and scavenged materials: raised beds constructed with reclaimed ash, a compost bin made out of pallets, mattress-spring trellises, even a burlap sack garden! The exhibit will also showcase ways to make gardening more accessible for those with limited mobility or trouble bending.

Cultivating Community student interns Maddie Morley and Stacy Mates are excited to be part of this wonderful project. “The *Adaptable*



*Spaces Garden* is a perfect hands-on education project for students,” says Morley, “They’ll get to practice gardening methods they could use themselves in a small rented yard, patio, or even on a dorm balcony.” Cultivating Community also plants and maintains a demonstration garden at the Ginsburg Center on campus, and provides opportunities for students to visit local farms, volunteer with urban agriculture



projects, and learn how to cook and preserve garden produce.

During your next visit to the Gardens, be sure to stop by the developing Adaptable Spaces Garden, smell the pineapple sage in the Sensory Bed, and wave hello to the Cultivating Community students and other volunteers happily weeding, watering, and learning.