I hope you enjoy this issue of our newly redesigned magazine, which is filled with ideas and inspiration for garden travel, cooking with herbs, botanical reading, and some of the best plants and gardening ideas for our Mid-South region. You’ll also find our program calendar, with details online, packed with great events, educational programs, and workshops for each of the Gardens sites across the state. From the new film series in the Knoxville Gardens to the fabulous plant sales in Jackson, there is something for everyone.

We know the UT Gardens is a special place, and it’s wonderful when others recognize it, too. Best Masters Programs, an online guide that helps students identify master’s degree programs that suit their goals, recently published its list of the fifty most amazing university botanical gardens and arboreta in the United States. We are eighth on the list! You can check out the full article at tiny.utk.edu/bestmastergrading, and learn more about the organization and our peers who are also adding value to the learning and research opportunities that students won’t find anywhere else.

It was an exciting spring and summer at each of our UT Gardens sites, as all three hosted successful special events. The thirteenth annual Blooms Days Festival in Knoxville attracted 1,800 visitors and was a great way for many to celebrate Mother’s Day. The twenty-sixth annual Summer Celebration in Jackson was a big success with 2,200 attendees. The fantastic speakers, plant sale, and many botanical vendors make this a very popular event in the western region of the state. In Crossville, the Fall Gardens Festival continued to grow as a highly anticipated event, attracting a record-breaking 800 visitors this year.

Those events are just the tip of the iceberg! In Knoxville, the Gardens had its most successful Gala yet this past spring with more than 200 in attendance. Net proceeds of $65,000 will help us fulfill our mission and support staff positions and student internships. In addition, several projects—like our Children’s Garden and treehouse—opened in the western region of the state. As all three botanical vendors make this a very popular event in the western region of the state. In Crossville, the Fall Gardens Festival continued to grow as a highly anticipated event, attracting a record-breaking 800 visitors this year.

Those events are just the tip of the iceberg! In Knoxville, the Gardens had its most successful Gala yet this past spring with more than 200 in attendance. Net proceeds of $65,000 will help us fulfill our mission and support staff positions and student internships. In addition, several projects—like our Children’s Garden and treehouse—opened in the western region of the state. As all three botanical vendors make this a very popular event in the western region of the state. In Crossville, the Fall Gardens Festival continued to grow as a highly anticipated event, attracting a record-breaking 800 visitors this year.

Those events are just the tip of the iceberg! In Knoxville, the Gardens had its most successful Gala yet this past spring with more than 200 in attendance. Net proceeds of $65,000 will help us fulfill our mission and support staff positions and student internships. In addition, several projects—like our Children’s Garden and treehouse—opened in the western region of the state. As all three botanical vendors make this a very popular event in the western region of the state. In Crossville, the Fall Gardens Festival continued to grow as a highly anticipated event, attracting a record-breaking 800 visitors this year.

Those events are just the tip of the iceberg! In Knoxville, the Gardens had its most successful Gala yet this past spring with more than 200 in attendance. Net proceeds of $65,000 will help us fulfill our mission and support staff positions and student internships. In addition, several projects—like our Children’s Garden and treehouse—opened in the western region of the state. As all three botanical vendors make this a very popular event in the western region of the state. In Crossville, the Fall Gardens Festival continued to grow as a highly anticipated event, attracting a record-breaking 800 visitors this year.

Those events are just the tip of the iceberg! In Knoxville, the Gardens had its most successful Gala yet this past spring with more than 200 in attendance. Net proceeds of $65,000 will help us fulfill our mission and support staff positions and student internships. In addition, several projects—like our Children’s Garden and treehouse—opened in the western region of the state. As all three botanical vendors make this a very popular event in the western region of the state. In Crossville, the Fall Gardens Festival continued to grow as a highly anticipated event, attracting a record-breaking 800 visitors this year.

Those events are just the tip of the iceberg! In Knoxville, the Gardens had its most successful Gala yet this past spring with more than 200 in attendance. Net proceeds of $65,000 will help us fulfill our mission and support staff positions and student internships. In addition, several projects—like our Children’s Garden and treehouse—opened in the western region of the state. As all three botanical vendors make this a very popular event in the western region of the state. In Crossville, the Fall Gardens Festival continued to grow as a highly anticipated event, attracting a record-breaking 800 visitors this year.
Whether you’re traveling and searching for a fun activity for the younger crowd—or you’re just looking for inspiring ideas on how to garden with children—visiting a public children’s garden can be rewarding. Following are four children’s gardens that staff members of the UT Gardens have visited and highly recommend.

By Sue Hamilton, UT Gardens Director

The Children’s Garden of Atlanta
Botanical Garden
atlantabg.org/kids-schools/
childrens-garden

As a father of three little ones, one of our stops in Atlanta during a recent visit had to include the Children’s Garden at the Atlanta Botanical Garden. This 2-acre center of fun and learning was built through a partnership with Children’s Healthcare of Atlanta to promote wellness. The garden has many elements for kids to explore—a tree house, a beehive meadow, a soggy bog, a caterpillar sculpture, and even a dinosaur garden. One of my family’s favorite features of the garden was the bee dance. This exhibit informs visitors of the importance of bees and even has stepping stones laid out to mimic the dance that bees perform to show the colony where nectar sources have been found.

—Derrick Stowell

The Michigan 4-H Children’s Gardens
4hgarden.cwplex.com

Located on the campus of Michigan State University, this amazing children’s garden encompasses fifty-six theme gardens that “create a place of wonder, enchantment, and delight for people of any age.” The space includes interactive play areas, schoolyard demonstration areas, indoor and outdoor gardens, and even a G-scale model train garden that runs on Thursdays during the summer.

—James Newburn

The Coastal Maine Botanical Gardens
Children’s Garden
www.mainegardens.org

This extensive Bibby and Harold Alfond Children’s Garden is full of fun, visually interesting kid-scale structures and plant collections. There are daily activities for children including story time, puppet theater, nature investigations, and chicken feeding.

—Beth Wills

Brooklyn Botanic Discovery Garden and Children’s Gardening Program
www.bbg.org

One of the most unique features of this children’s garden is that it is a hands-on learning laboratory for children ages 2-17 with more than 1,000 children participating each year to grow their own vegetables, herbs, and flowers. The Discovery Garden features many interactive exhibits to encourage exploration and learning.

—Beth Wills

The Children’s Garden of Atlanta Botanical Garden
atlantabg.org/kids-schools/childrens-garden

As a father of three little ones, one of our stops in Atlanta during a recent visit had to include the Children’s Garden at the Atlanta Botanical Garden. This 2-acre center of fun and learning was built through a partnership with Children’s Healthcare of Atlanta to promote wellness. The garden has many elements for kids to explore—a tree house, a beehive meadow, a soggy bog, a caterpillar sculpture, and even a dinosaur garden. One of my family’s favorite features of the garden was the bee dance. This exhibit informs visitors of the importance of bees and even has stepping stones laid out to mimic the dance that bees perform to show the colony where nectar sources have been found.

—Derrick Stowell

1 The Coastal Maine Botanical Gardens Children’s Garden
2 Michigan 4-H Children’s Gardens
3 Brooklyn Botanic Discovery Garden and Children’s Gardening Program
4 Children’s Garden of Atlanta Botanical Garden
MY FAVORITE THINGS

GOLD-FOLIAGED PLANTS PART III
By Jason Reeves, UT Gardens, Jackson, Research Horticulturist

Need some sun in your shade garden? Then ‘Sun King’ Aralia cordata is the plant for you.

In mid-spring, just as the sun brightens the sky and warms the soil, from the earth arises one of the most spectacular golden perennials. The large compound leaves develop on red stems and lend a somewhat tropical feel to the summer shade garden.

Aralia ‘Sun King’ forms a dazzling 3- to 4-foot-tall by 3-foot-wide clump, but reportedly grows larger in cooler parts of the country. Two-foot-tall spikes of tiny white flowers in small umbels produced in late summer attract all sorts of pollinators, especially bees, to the garden. The flowers are followed by dark purple berries that birds will later enjoy.

Perfect for any partly shaded border or woodland garden, Sun King’s sprightly form will steal the show. It looks good paired with dark-leafed plants such as black mondo, Ophiopogon planiscapus ‘Nigrescens’, or Crimson Fire and Sparkling Sangria Loropetalums. Blue or dark green large-leafed hostas such as ‘Blue Angel’, ‘Guardian Angel’, and ‘Empress Wu’ would provide contrast in color and texture. Holly fern, autumn fern, and lady fern also make for interesting companions. For added summer color, several good annuals include New Guinea impatiens, caladiums, and ‘Dragon Wing’ begonias. Sun King also looks great grown in large pots.

Sun King prefers fertile, organic, rich, moist soil. When grown in two to three hours of sun its brilliant gold foliage persists into the fall. As long as the soil is kept moist it will perform well in more sun, but it is best protected from the scorching afternoon sun in the hotter parts of the country. In full shade it loses some of its luster, becoming chartreuse to lime green while still adding texture and form to the garden. This plant has proven its durability across our region, and deer resistance is an added virtue.

Reportedly discovered in a Japanese department store’s nursery, Aralia ‘Sun King’ was brought to the US by noted plantsman Barry Yinger and is one of the most impressive herbaceous perennial introductions to come to market in years. Hardy to zones 4-8.
“Many hands make light work,” is true on a hot summer morning. Interns Jacob Yelton, Makai Edwards, and Alex Smith tackle weeding the trial beds and appear to have fun while doing it. (photo by James Newburn)

Plant evaluations are a large part of what takes place in summer. Here All-America Selections and breeder bedding plant trials are at their peak providing a rainbow of color. (photo by James Newburn)

Education intern Lydia Harrison provides leadership for “Song Time” at the weekly Books & Blooms nature education program, our longest running outreach program. (photo by Derrick Stowell)

Tranquility—The Cornelia B. Holland Hosta Garden was designed and constructed in-house with master’s candidate Ben Ford providing leadership for his thesis project. Significant support also was provided by student interns and Gardens staff. Here Ben Cordes and Bobby Cook build the deck and pergola that are central features of the shady space. (photo by James Newburn)

Garden writer extraordinaire John Tullock gives timely tips on edible gardening at a workshop during Blooms Days 2015. (photo by Lien Nguyen)

UT Gardens Gala Honorary Chair Sharon Millar-Pryse gives encouragement to bidders in the live auction. This year’s gala had more than 270 guests and raised $65,000—both records for the event. (photo by Hurley Co Photography)

Volunteer Marcia Griswold looks warily at Andy Pulte and interns Alex Smith and Alice Kimbrell in the UT Gardens “Sun and Shade” plant sale booth at Blooms Days. (photo by Buzz Smith)

Education intern Angelia Rateike worked hard all summer alongside Derrick Stowell encouraging young gardeners with educational and fun programming. Here a group of “L’il Gardeners” are fascinated by a fairy garden in the kitchen garden. (photo by Derrick Stowell)

It was a beautiful day for the dedication of Tranquility—The Cornelia B. Holland Hosta Garden. Here Holland (right) is joined in the garden by a representative of the American Hosta Society. (photo by Jean Hulsey)
A new addition to the demonstration garden is the “Human Sundial within an Herb Bed” designed and planted by the Cumberland County Master Gardener Class of 2014. It includes four classifications of perennial herbs: culinary, fragrant, teas, and medicinal; although many serve multiple purposes. To activate the sundial, visitors follow the pavers to the center, face forward (north), and raise an arm. A shadow will fall on a numbered plaque positioned around the circle, indicating the approximate time of the day.

For the third consecutive year, the UT Gardens, Crossville, was host to the annual Cumberland County Master Gardener training course. Here, guest lecturer and Gardens Director Sue Hamilton directs the class through the Gardens during her presentation on herbaceous ornamentals.

A very successful second annual Spring Plant Sale benefited the Plateau Discovery Garden Pavilion Building Fund. Classes are underway at the Crossville site! Here, Gregg Upchurch teaches proper tree planting at one of the thirty-five classes held in 2015.

A homeowners greenhouse was added during the summer. This particular structure was chosen to demonstrate options a homeowner has when choosing a greenhouse. The new addition was the topic of two Fall Gardeners’ Festival sessions: greenhouse construction and growing microgreens in a home greenhouse.

The seventh annual Fall Gardeners’ Festival welcomed more than 800 visitors. It offered twelve educational sessions, gardening exhibits, wagon tours of the facility, and much more.

Accepting the challenge from UT Extension specialist Natalie Bumgarner to conduct research trials on vegetable varieties for the home gardener, Cumberland County Master Gardeners instituted a tomato trial. In addition to Extension Master Gardener volunteers, members of the community attending the highly popular “Tomato Class” offered annually by Fred Mullen were invited to assist with the process.

The grand opening of the KinderGarden, a hands-on interactive garden designed for children ages 3 to 7 years, was held on June 23. The KinderGarden is now open daily during daylight hours. Read more about this newest addition to the Crossville Gardens on page 20.

The glorious golden foliage of the UT Gardens, Jackson, ginkgo typically peaks in early to mid-November.
BOOK REVIEW

DEEP-ROOTED WISDOM

By Joan Worley, Tennessee Extension Master Gardener, Blount County

“If this sounds a bit wifty, rest assured that “Jenks” (author, horticulturist, and owner of a field nursery in Columbia, South Carolina), is eminently practical: in eleven topical chapters averaging twenty-some pages, he mixes garden history, culture, and how-to wisdom on Saving Seeds, Tools, Rooting, Hand-Made Structures, Scavenging, et al. Different special features may be included in each chapter, but all include a section called The Teachers, who may be 70-year-old home gardeners or professional horticulturists. Although most of them are in the South, he has interviewed “teachers” all over the world and gleaned their garden insights. Jenks is Erica Glasener on paper. (On HGTV’s “Gardener’s Diary”: years ago, her tours and interviews were almost always with garden elders.)

In the chapter “Watering by Hand,” for example, the teachers are garden designer Ryan Gainey of Decatur, Georgia, and horticulturist Jim Martin of Charleston, South Carolina. There are brief bio; a partial story of Gainey’s cottage and garden; a discussion of automated, drip, and hand watering; a short history of nursery pots; insets on Tin Can Gardening, A History of Water Relations, and Rehydration Therapy; and a final piece on Watering In.

In the Updates and Adaptations part of each chapter the author examines old garden skills and practices in light of more recent developments, seeking a harmonious combination. Did we leave valuable knowledge back on the farm with the old folks when we left two generations ago? Jenks says academic research and contemporary industrial developments often validate the old rural ways. So there.

Deep-Rooted Wisdom is written with such effortless grace that it seems the author is simply chatting with the reader—telling about favorite plants and ways to garden, and about Bennett Baxley of Homingway, South Carolina, who’ll “… start out talking about some vine he pulled up from the swamp, then . . . taking a freighter bound for Tangiers and sleeping in a churchyard in Kenya and ending up . . . with a visitor dropping by who’s connected to all of those places and the very same vine.” If you like gardens, good stories, and people, you’re bound to love it. (Full disclosure: I grew up with two grandmothers in the house.)

“My earliest memory is playing with my grandmother’s terra cotta pots. I always helped her in the garden, or thinking about watering the flowers in my grandmother’s garden. She grew everything!”

—Blount County Master Gardeners

Ask any gardener about his or her first garden memory. Five’ll get you ten, she’ll get a faraway look in her eye and tell you about her Aunt Ruth. Or he’ll tell you about his dad, or his special friend, the old woman next door who seemed glad to have a small boy trailing after her in the garden. I’ve asked many a time, and there’s always an older relation guiding the baby steps, which must be why Deep-Rooted Wisdom: Skills and Stories from Generations of Gardeners, by Augustus Jenkins Farmer (Portland: Timber Press, 2014) leaped off the library shelf and into my hand, even before I read this in the author’s introduction:

When I walk through the product-lined shelves of some big-box store’s own and garden section, I inevitably find myself asking . . . How did we go from cuttings and manure and seeds and fun to this commercial maze? What happened to trading plants between friends and strangers? To letting things go to seed so they’ll come up next year? To watering with a hose? I want to honor the people who taught me and share their lessons, their charms, and their gardens with you.

Volunteers in the UT Gardens, Knoxville, have been hard at work this year. From assisting with trials to setting up the spring plant sale, they’ve made their mark on our beautiful Gardens. Thank you, volunteers!
KNOXVILLE

CLASSES/WORKSHOPS

All programs require preregistration. Contact Derrick Stowell, garden educator, at dstowell@utk.edu or 865-974-7151, or visit utgardens.wildapricot.org/UTGardensEvents to register. Times listed are in Eastern Time.

Home Grown
Enhance your home-school program with hands-on fun and educational sessions. Each session will follow the seasons as the garden grows. You can register for all five sessions or for one session at a time. Cost for all five sessions $25. Cost for each individual session $6.

Wednesday, January 13, 1-3 p.m.
Wednesday, February 10, 1-3 p.m.
Wednesday, March 9, 10-11:30 a.m.
Wednesday, April 6, 10-11:30 a.m.
Wednesday, May 11, 10-11:30 a.m.

Sunday Garden Walks and Talks
Join us throughout the year as the Gardens offers Sunday afternoon lectures, seminars, and guided walks on a variety of topics by noted garden experts and UT Gardens staff. These informal opportunities to meet, learn, and discuss with content specialists usually last from one to two hours. Many walks focus on key plants at the peak of performance during the different seasons of the year. Free for members/$3 for nonmembers.

Garden Sprouts
Get your youngest ones gardening with our preschool program. Watch your child learn how a garden grows. These activities are designed for preschool-aged children and at least one adult. Cost for all five sessions is $25 members/$35 nonmembers. Cost for each individual session $6 members/$8 nonmembers.

Wednesday, January 13, 10-11:30 a.m.
Wednesday, February 10, 10-11:30 a.m.
Wednesday, March 9, 10-11:30 a.m.
Wednesday, April 6, 10-11:30 a.m.
Wednesday, May 11, 10-11:30 a.m.

SPECIAL EVENTS & COMMUNITY OUTREACH

UT Gardens, Knoxville, Spring Plant Sale
Preview sale for members
Friday, April 8, 4-7 p.m.
Plant sale
April 9, 9 a.m.-2 p.m.

Specialty Plant Sales
In addition to the Spring Spectacular and Fabulous Fall Plant Sales, the Gardens offers a variety of specialty plant sales throughout the year, which focus only on a genus or two. Each sale starts with a one-hour educational lecture about the special plant or plants, followed by a two-hour plant sale. Join your fellow plant enthusiasts for these fun and informative opportunities to acquire some choice, hard-to-find plant selections.

Plant Sale: Conifers November 15
Plant Sale: Hellebore & Epimedium March 6, 2016

SUNDAY HORTICULTURE FILM SERIES

Expand your horizons as we showcase documentaries and films with horticulturally related themes on a Sunday afternoon followed by a Q&A session with a UT expert. Admission is $5 to benefit the UT Gardens. Concessions are available to add to the fun.

Symphony of the Soil January 17, 2 p.m.

Additional Films (Titles TBA)
February 21, 2 p.m.
March 20, 2 p.m.

Films will be shown in Hollingsworth Auditorium in the Ewing Plant Sciences Building on the UTIA Knoxville Campus. For directions visit utk.edu/maps.

ABOUT “SYMPHONY OF THE SOIL”

Drawing from ancient knowledge and cutting-edge science, “Symphony of the Soil” is an artistic exploration of the miraculous substance called soil. By understanding the elaborate relationships and mutuality among soil, water, the atmosphere, plants, and animals, we come to appreciate the complex and dynamic nature of this precious resource. The film also examines our human relationship with soil, the use and misuse of soil in agriculture, deforestation and development, and the latest scientific research on soil’s key role in ameliorating the most challenging environmental issues of our time. Filmed on four continents, featuring esteemed scientists and working farmers and ranchers, “Symphony of the Soil” is an intriguing presentation that highlights possibilities of healthy soil creating healthy plants creating healthy humans living on a healthy planet.

UT Soil Science Professor Neal Eash will lead a Q&A session after the film.

CROSSVILLE

CLASSES/WORKSHOPS

For more information on all events, visit west.tennessee.edu or call 731-424-1641. All event start times are listed in Central Time.

Master Gardeners Spring Plant Sale May 2016 (details TBA)
Summer Celebration Lawn & Garden Show Thursday, May 12, 2016 9 a.m.-8 p.m.

Fall Gardeners’ Festival May 2016 (details TBA)

JACKSON

CLASSES/WORKSHOPS

UT Gardens, Crossville, classes and events are held at the UT Plauto AgResearch and Education Center, 120 Experiment Station Road, Crossville, Tennessee. Crossville is in the Central Time Zone, and all class start times are listed accordingly. For information regarding the 36 classes scheduled for 2016, visit plateau.tennessee.edu, call 865-464-0034, or email ccmgnws@gmail.com and request to be placed on the UT Gardens, Crossville listserv.

Spring Plant Sale May 6-7, 2016

Fall Gardeners’ Festival August 30, 2016
BENEFITS OF CHILDREN’S GARDENS

GARDENS AREN’T JUST FOR GROWN-UPS
By Derrick Stowell, HGTV-UT Gardens Educator

The sights and sounds of a garden are beneficial for kids, whether they’re just learning how plants grow or exploring a whole world of careers related to flora and fauna. That’s why the UT Gardens is growing spaces for those of us who aren’t so grown.

On June 23, the UT Gardens, Crossville, dedicated the KinderGarden, and in the spring of 2016, the UT Gardens, Knoxville, will dedicate the Children’s Discovery Garden. Each is the first children’s garden in its respective region of Tennessee to be operated and managed by a public garden, meaning both gardens are free to the public and open year-round.

Although public children’s gardens may be new to Middle and East Tennessee, the idea of building them has been around a long time. The oldest continually running children’s garden was built in 1914 as part of the Brooklyn Botanic Garden (bbg.org). Created by Ellen Eddy Shaw to give children a plant experience beyond books, the Garden’s annual National Children and Youth Gardening Symposium brings garden experts from around the country to teach and learn how to impact lives of children using gardens (ahs.org).

So, how do these gardens impact children? Research shows that there are many benefits for youth who take part in gardening programs. One of the most obvious benefits is the physical aspect of gardening. Kids love to dig, run, jump, and play, and gardening provides opportunities for children to do all of these—and be away from electronics. Another benefit? Gardening has been shown to improve children’s nutritional choices. Several research studies have documented that children are more likely to eat fruits and vegetables that they grow.

Gardening also has been shown to help improve academic performance in children. Children’s gardens can reinforce topics taught in traditional classrooms such as ecology, life cycles, plant growth and development, and much more. Getting children in a natural setting also helps enhance cognitive abilities, reduce stress, and reduce symptoms of ADD. Additional research shows that children who garden are more likely to be more environmentally aware and appreciate gardening as adults.

These benefits are key in the drive to develop gardens designed specifically for children. For adults, simply viewing plants and other garden elements from afar is perfectly acceptable. However, children need to utilize all of their senses when exploring a garden. Adding interactive elements is key to keeping children engaged, and choosing plants that offer opportunities to feel, smell, and touch also allow our youth to learn.

While children’s gardens provide an opportunity to connect children to the natural world in a safe and educational setting, they are also a great place for the whole family. Be sure to stop by the new children’s garden in Crossville and Knoxville!

Check out UTIA’s report on Crossville’s KinderGarden at tiny.utk.edu/HJCDG

GROUND COVERS THAT GRAB ATTENTION
By Carol Reese, UT Extension Western Region Horticulture Specialist

Does the term ground cover make you yawn? While we often see ground covers recommended as practical solutions for challenging situations, study some for more artistic uses.

Consider the dark-foliaged heucheras, that are appearing in today’s garden centers. In luminous shades of burgundy, plum, and mocha, they are being bred for better heat tolerance, widening their appeal to the Tennessee gardening clientele. It’s too bad that placed in the shady settings they prefer, and against dark mulch, they virtually disappear.

Score them with a bright ground cover to provide brilliant contrast. Golden creeping jenny, dwarf golden sweet flag, or variegated forms of Vinca minor, such as ‘Illusion’, would serve. Be careful not to use plants that will overwhelm others, and some forms of vinca can certainly do that. However, ‘Illusion’ is demure and not a thug.

Don’t forget about using texture for contrast as well. Prostrate, finely textured ground covers such as Mazus reptans are wonderful as a background for boldly textured hostas. Grassy textures are also a good foil, so take a new look at old standards such as liriope or mondo grass.

Liriope, sometimes called monkey grass, is a plant despised by some and beloved by others, while I think it is just misunderstood. Those that hate it likely had a bad experience with the aggressive species Liriope muscari, and probably didn’t realize there are different species. This species spreads by rhizomes, eventually forming a sweeping carpet that doesn’t know where to stop. Many a homeowner has battled its forays into turfgrass areas, far from its original plantings.

DTS

Ground sweet flag makes a perfect island setting for these crane sculptures.

Lamb’s ear and golden creeping jenny provide textural contrast as well as color in this garden vignette.

Liriope muscari has better manners. Each clump will be more robust each year, but individual clumps stay put. For this reason, clumping monkey grass is often used for edging beds, sidewalks, driveways, or swimming pool decks. This is also why some people don’t like it, as this usage became ubiquitous and tiresome. I was part of this crowd, but in my travels have seen it used more imaginatively, perhaps as a mass in an intriguing patchwork with other perennials, or as a curvilinear directive to draw the eye toward a garden feature.

I’ve also come to appreciate it as a single plant, used simply for its grassy texture as accent in a plant vignette, especially the more vibrant cultivars. Even one of the most common variegated forms called ‘Silvery Sunproof’ can be uncommonly beautiful.

In luscious shades of burgundy, plum, and black, they are being bred for better heat tolerance, widening their appeal to the Tennessee gardening clientele. It’s too bad that placed in the shady settings they prefer, and against dark mulch, they virtually disappear.

Score them with a bright ground cover to provide brilliant contrast. Golden creeping jenny, dwarf golden sweet flag, or variegated forms of Vinca minor, such as ‘Illusion’, would serve. Be careful not to use plants that will overwhelm others, and some forms of vinca can certainly do that. However, ‘Illusion’ is demure and not a thug.

Don’t forget about using texture for contrast as well. Prostrate, finely textured ground covers such as Mazus reptans are wonderful as a background for boldly textured hosta. Grassy textures are also a good foil, so take a new look at old standards such as liriope or mondo grass.

Liriope, sometimes called monkey grass, is a plant despised by some and beloved by others, while I think it is just misunderstood. Those that hate it likely had a bad experience with the aggressive species Liriope muscari, and probably didn’t realize there are different species. This species spreads by rhizomes, eventually forming a sweeping carpet that doesn’t know where to stop. Many a homeowner has battled its forays into turfgrass areas, far from its original plantings.

DTS

Ground sweet flag makes a perfect island setting for these crane sculptures.

Lamb’s ear and golden creeping jenny provide textural contrast as well as color in this garden vignette.

Liriope muscari has better manners. Each clump will be more robust each year, but individual clumps stay put. For this reason, clumping monkey grass is often used for edging beds, sidewalks, driveways, or swimming pool decks. This is also why some people don’t like it, as this usage became ubiquitous and tiresome. I was part of this crowd, but in my travels have seen it used more imaginatively, perhaps as a mass in an intriguing patchwork with other perennials, or as a curvilinear directive to draw the eye toward a garden feature.

I’ve also come to appreciate it as a single plant, used simply for its grassy texture as accent in a plant vignette, especially the more vibrant cultivars. Even one of the most common variegated forms called ‘Silvery Sunproof’ can be uncommonly beautiful.
The lovely heuchera ‘Sweet Tea’ goes underappreciated against bark mulch. Dark-foliaged heucheras have more interest when paired with bright ground covers. This is *Liriope spicata* ‘Silver Dragon’. A common plant such as variegated *Liriope* can be used imaginatively. The gold foliage of ‘Peedee Ingot’ *liriope* makes the blue and purple flowers especially intense. ‘Angelina’ *sedum* has performed beautifully across Tennessee and quickly forms a bright carpet when flanked by the right companions. Another spectacular form is the gold-foliated ‘Peedee Ingot’, which is a fantastic plant for this type of specimen use, and has become one of my favorites for a spill of exciting foliage in mixed containers. There may be times when the vigorous *Liriope spicata* is useful for anchoring slopes, but in general, I avoid its use. A tempting variegated cultivar called ‘Silver Dragon’ is slower growing, still it can be more pushy over time than a gardener may prefer. This attention to species and cultivar is crucial in other genera as well. I cringe when I run across a broad recommendation of *sedum* for ground cover use. There are hundreds of *sedum* on this planet, and at least a few dozen species in the landscape trade. While the clump-forming types could be considered a ground cover when planted in mass, there are others that have spreading, carpet-like growth that might lend themselves better to ground cover status. Research should also include variation in cultural needs. While *sedum* deserve a reputation for being tolerant of drought, that does not always mean tolerant for hot, humid summers. Often the *sedum* species that prosper in the far north don’t fare well in the southern US, and may even benefit from a bit of shade during the heat of the day. A couple that have shown themselves to be reliable ground cover types throughout Tennessee’s variety of climate zones are the Chinese *sedum* *Sedum tetractinum* and *Sedum rupestre* ‘Angelina’. They are tolerant of sun or partial shade, and evergreen, though their colors shift in winter. ‘Angelina’ is gloriously gold in the spring and stays gold where it enjoys plenty of sun, dimming to light green in shade. In winter, the foliage can get lovely orangish tones. Chinese *sedum* is a jade green that reddens in winter, especially on the leaf margins. Both of these have a pleasing tendency to keep dense foliage, where some of the other ground cover types get lank and leggy. I find these two useful for container combinations, and they forgive me for the occasional watering crime whether it is neglect or overabundance. I can split a clump whenever I like if it gets a little greedy for space and pop the new piece into another pot or tuck it into a spot in the garden. So next time you are browsing the garden center and find yourself walking past the ground cover area, take another look. Ground covers are usually tough, evergreen, and offer a variety of foliage colors and textures that lend themselves to experimentation. Covering the ground is not their only virtue.
KINDERGARDEN

SERIOUS PLAY, SERIOUS LEARNING

By Nancy Christopherson, Extension Master Gardener, Cumberland County

It is through play that children at a very early age engage and interact in the world around them. And what better way for children to learn about the agrarian world than to play in a garden? Cumberland County Extension Master Gardener Beth Morgan’s vision to bring a hands-on, interactive garden to young children was officially unveiled Tuesday, June 23, in Crossville, as a crowd gathered to celebrate the new KinderGarden.

The KinderGarden is designed as a sensory garden—a garden filled with activities to stimulate auditory (hearing), visual (sight), tactile (touch), kinesthetic (movement), olfactory (smell), and gustatory (taste) modalities. As children explore each area of the KinderGarden, serious learning does happen. Rocky the Raccoon (designated wild animal for the state of Tennessee) greets children near the green tunnel, bridge, and root viewing box. Seeing the world from each of these vantage points fosters observational skills, motor planning, body awareness, language, and imaginative play.

Open the door to the learning cottage to find all of the treasures needed for KinderGarden adventures. Children know exactly what to do with tubs of materials: explore, build, create, perform, and yes, play! To guide accompanying adults through the various activities, an activity card explaining the importance of each dominant area is available.

As children describe the creations made with natural materials found in the arts and crafts area, they strengthen their cognitive, fine motor, and language skills. Simply digging and planting is calming in itself, but doing so also elicits creative thinking. Learning to plant seeds teaches not only early science theory but also responsibility as plants are cared for. And growing edible plants often results in an appreciation for eating fruits and vegetables.

The fort and pavilion structures provide children the opportunity to explore, build, climb, hide, and move about. Here motor development, curiosity, and creativity are enhanced.

Traveling the single pathway in the labyrinth provides children with a sense of trust and security while fostering independence.

Incorporating music, props, and stories in the movement area encourages independent mobility, using creativity to further understand the relationship between their physical and mental selves.

“Play is often talked about as if it were a relief from serious learning. But for children, play IS serious learning.”

—Fred Rogers

In addition to hand-held instruments, the permanent bongo drums, xylophone, cymbals, chimes, and drum found in the music section provide an opportunity to experience the richness of nature’s sound, pitch, rhythm, and tonality.

Investigating herbs is a fun way to help children categorize different smells while stimulating hearing, cognition, and olfactory development. Exposing children to a variety of smells is believed to influence eating habits as well.

While the KinderGarden was designed for children ages 3 to 7 years, let us remember those wise words of George Bernard Shaw, “We don’t stop playing because we grow old; we grow old because we stop playing.”

Free of charge and open daily during daylight hours, the KinderGarden is located within the UT Gardens, Crossville: Plateau Discovery Gardens at UT Plateau AgResearch and Education Center, 320 Experiment Station Road, Crossville, Tennessee. For more information, please call 931-484-0034.

Photos by Erin Conley, Extension Master Gardener, Cumberland County
INVESTING IN TENNESSEE’S HORTICULTURISTS OF TOMORROW THROUGH THE JUNIOR MASTER GARDENER PROGRAM

By Natalie Bumgarner, UT Extension Residential and Consumer Horticulture Specialist

For several mornings in a row, the youngsters in my summer school class burst through the door and ran past cardboard castles, handmade decorations, and life-size paintings to check on a row of Styrofoam cups. These 6- to 8-year-olds didn’t know it, but the awe-inspiring objects holding their rapt attention were, in fact, cotyledons. Bean cotyledons to be exact.

Several lessons emerged as I watched my summer school class ignore their art project efforts in preference for bean seeds in cups. First, most kids are waiting to be introduced to the wonders of horticulture. Second, an appreciation for the plant world seems to be present whether children have been raised visiting botanical gardens or movie theaters. Third, these youngsters were able to sustain their enthusiasm because they did not associate the amazing emergence of bean cotyledons with the sweaty, itchy process of bean picking destined to follow. I still carry these lessons (well, most of them) with me as I engage with the excellent junior club activities in Tennessee and contribute to expanded youth horticulture education programs in Tennessee and throughout the state. I hope this statewide training meeting contributes to long-term Junior Master Gardener and youth horticulture education efforts because the joy of cotyledons is certainly meant to be shared!

As I travel and visit with Extension Master Gardeners volunteers across the state engaging students and families, the future of the Junior Master Gardener program is certainly exciting in Tennessee. I hope this statewide training meeting contributes to long-term Junior Master Gardener and youth horticulture education efforts because the joy of cotyledons is certainly meant to be shared!

To support current Junior Master Gardener leaders and assist others in beginning programs, the 2016 Tennessee Extension Master Gardener state conference will incorporate a pre-conference day dedicated to supporting and expanding junior club activities in Tennessee. Trainers from the Junior Master Gardener headquarters in Texas will be present to teach and share. Additionally, this event will enable experienced junior club leaders around Tennessee to connect and strengthen their programs while assisting those who are interested in beginning new programs.

As I travel and visit with Extension Master Gardeners volunteers across the state engaging students and families, the future of the Junior Master Gardener program is certainly exciting in Tennessee. I hope this statewide training meeting contributes to long-term Junior Master Gardener and youth horticulture education efforts because the joy of cotyledons is certainly meant to be shared!
Today his legacy and many elements of his and Sarah’s nursery live on six miles away on Flicker Street, site of Greg’s two operations: Urban Earth by Greg Touliatos, a retail gift, garden, and home store, and Greg Touliatos and Associates, Inc., a landscape design and installation firm. Greg’s store also has an education center, its walls adorned with a number of Plato’s nature tiles. At the beginning of talks, Greg asks participants if they shopped with his dad. Usually half raise their hand. “People say, ‘I’ve got Sarah’s Favorite (a white crapemyrtle named for his wife by distinguished Alabama plantsman Tom Dodd Sr.) growing in my yard. ‘I’ve got this,’ or ‘I’ve got that,’ or ‘Your dad helped me with this.’

“I’m reminded of him every day,” he says. “It’s really quite a tribute to him, of his largeness as a person, that things like this continue to go on.”

Across Memphis, there are five formal memorials to Plato. But countless informal ones—the trees, shrubs, and perennials he cultivated and sold—grow in home and garden landscapes throughout the Mid-South. Others’ memorials live on in the hearts and minds of plant lovers who learned to appreciate and care for them through Plato’s wise tutelage and encyclopedic knowledge.

You can watch a YouTube video of Plato Touliatos discussing how nature arranges plants and the lessons we can derive from that to become better landscapers at tiny.utk.edu/ag/Plato.

I

n 2011 Memphis and the Mid-South lost a towering figure in the horticultural world. For half a century, Plato Touliatos and his wife Sarah sold plants and dispensed a wealth of plant advice from their sprawling 20-acre nursery in south Memphis. Trees by Touliatos was a destination in the Delta, drawing customers from across the Tri-State area and well beyond. Sarah recalls a Memphian transplanted to the North who rented a truck and came home to buy inventory for his property. The Cincinnati Zoo also came calling. The Memphis Zoo was a steady customer for decades with Touliatos providing plants for Cat Country, Primate World, and the elephant house.

To call the operation a nursery, though, falls far short of the mark. It was also a level II arboretum. Eighty-five tagged arboretum trees along with thousands of plants filled the grounds. The nursery was popular with birders: three species of herons dwelled the grounds. The nursery was a steady customer for decades with Touliatos providing plants for Cat Country, Primate World, and the elephant house.

To call the operation a nursery, though, falls far short of the mark. It was also a level II arboretum. Eighty-five tagged arboretum trees along with thousands of plants filled the grounds. The nursery was popular with birders: three species of herons dwelled the grounds. The nursery was a steady customer for decades with Touliatos providing plants for Cat Country, Primate World, and the elephant house.

Plato was among the first to commercially bring koi and water gardens to the region. The ponds and many other facets of the nursery were a source of education for children who took part in free camps in the summer. Adult education also occurred in seminars and festivals. The nursery had an education center and, in the 1980s, offered programs on a wide range of subjects, especially herbs, another area in which the nursery pioneered.

Pioneering was the word for Plato. His son Greg describes him this way, “Dad was passionate on so many things. He just happened to be there before everyone else.” One of those things was solar energy. Plato built three solar-powered buildings, the first, in 1976, was the Mid-South’s first commercial solar building. Next was a solar-organic building with tropical plants. It later became the nursery’s store and education center. The final and most ambitious was the Solganic 2 Greenhouse, built with a grant from the US Department of Energy under the Carter Administration. This was “Plato’s grand scientific experiment,” a biosphere that linked solar, organic, and aquaculture/hydroponics, using fish waste as fertilizer for plants. These experiments brought people from all over the world. They also sparked frequent media attention. Sarah says the zoo work, solar experiments, and Plato’s advocacy of conservation for West Tennessee’s Wolf River often had TV crews waiting on their lawn when the couple arrived home in the evening.

Admirers might not know that Plato visited every continent in the world except Africa and that he was a member of the Polar Club for swimming in the waters of Antarctica. He served in President Richard Nixon’s administration directing disaster relief for Hurricane Camille before launching his nursery—a promotion to a desk job hastened the transition, Sarah says with a laugh. He researched plants and collected seeds in obscure locations throughout the world. The National Arboretum allowed him and his dear plant collaborator, Tommy Dodd, to have a pick-it day, harvesting all the seeds and cuttings they wished to take home and experiment with.

Today his legacy and many elements of his and Sarah’s nursery live on six miles away on Flicker Street, site of Greg’s two operations: Urban Earth by Greg Touliatos, a retail gift, garden, and home store, and Greg Touliatos and Associates, Inc., a landscape design and installation firm. Greg’s store also has an education center, its walls adorned with a number of Plato’s nature tiles. At the beginning of talks, Greg asks participants if they shopped with his dad. Usually half raise their hand. “People say, ‘I’ve got Sarah’s Favorite (a white crapemyrtle named for his wife by distinguished Alabama plantsman Tom Dodd Sr.) growing in my yard. ‘I’ve got this,’ or ‘I’ve got that,’ or ‘Your dad helped me with this.’

“I’m reminded of him every day,” he says. “It’s really quite a tribute to him, of his largeness as a person, that things like this continue to go on.”

Across Memphis, there are five formal memorials to Plato. But countless informal ones—the trees, shrubs, and perennials he cultivated and sold—grow in home and garden landscapes throughout the Mid-South. Others’ memorials live on in the hearts and minds of plant lovers who learned to appreciate and care for them through Plato’s wise tutelage and encyclopedic knowledge.

You can watch a YouTube video of Plato Touliatos discussing how nature arranges plants and the lessons we can derive from that to become better landscapers at tiny.utk.edu/ag/Plato.
HERBES DE PROVENCE ICE CREAM
By Margot Emery, UTIA Marketing & Communications

Herbes de Provence is a blend of dried herbs grown in the Provence region of southeastern France. Typically you’ll find savory, marjoram, rosemary, and thyme among other herbs and, in North America, often lavender. A flavorful blend also includes orange zest.

The mixture is used to flavor grilled poultry, vegetables, fish, as well as stews. So using it in a dessert is an unusual move. The beauty of this recipe is that you can make the ice cream year-round because it depends on dried herbs—and it is economical for that reason. And beauty is the operative word here: the ice cream is a lovely golden hue infused with a hint of green that utterly surprises the eye.

Once you try this delicious dish, you may find yourself dreaming of lavender ice cream or even one kissed with the resonious flavor of rosemary served alongside a slice of lemon pound cake... adorned with nasturtiums from your backyard garden. The possibilities are endless!

Members of the Memphis Herb Society discovered the delights of herbes de Provence ice cream when they invited a pair of young chefs from the acclaimed Memphis Institute, L’École Culinaire, to demonstrate herbal recipes at one of their monthly meetings at the Memphis Botanic Garden. The Society shares recipes with readers in each issue of the UT Gardens magazine.

**Herbes de Provence Ice Cream**

2 cups heavy cream
1 cup whole milk
3 egg yolks
1 cup sugar
1.5 tablespoons dried Herbes de Provence

Heat milk to 160°F. Remove from heat, stir in herbs, steep for 15 minutes. Strain and discard herbs. Combine milk and cream in a saucepan and heat to 160 again.

Meanwhile, whisk together yolks and sugar until smooth. Use a mixer if possible for efficient blending.

Temper the yolk mixture with hot dairy, then cook over medium heat stirring frequently until custard reaches 185°F. Cool immediately using an ice bath. Stir occasionally to speed the chilling process.

Store tightly covered in the refrigerator for 12 to 24 hours. Spin in an ice cream machine following manufacturer’s instructions.

Notes: If eggs are small, you may wish to add an additional yolk to ensure a rich result. The herbal flavor is fairly subtle, so if your jar has been open a while, either increase the amount of herbs to 2 to 2 1/2 tablespoons depending on age or, better still, buy a new jar for optimal taste. Be patient during tempering because the process takes time.

Meanwhile, whisk together yolks and sugar until smooth. Use a mixer if possible for efficient blending.

Temper the yolk mixture with hot dairy, then cook over medium heat stirring frequently until custard reaches 185°F. Cool immediately using an ice bath. Stir occasionally to speed the chilling process.

Store tightly covered in the refrigerator for 12 to 24 hours. Spin in an ice cream machine following manufacturer’s instructions.

Notes: If eggs are small, you may wish to add an additional yolk to ensure a rich result. The herbal flavor is fairly subtle, so if your jar has been open a while, either increase the amount of herbs to 2 to 2 1/2 tablespoons depending on age or, better still, buy a new jar for optimal taste. Be patient during tempering because the process takes time.

**AN ELEGANT EVENING IN THE SHADE**

The early spring dusk hung on to the lingering warmth of the day as couples in cocktail dresses and linen suits or khakis meandered under billowing white tents in the UT Gardens, Knoxville. "Made in the Shade," the 2015 UT Gardens Gala, is the third of its kind held annually in the University of Tennessee Gardens on the Institute of Agriculture campus. It is the pinnacle event and major fundraiser for the Gardens, bringing in a gross total of more than $95,000 through admissions, a silent and live auction, and sponsorships.

"It was an elegant event, well organized and orchestrated," said Cornelia Holland, a Franklin, Tennessee, resident and avid hosta gardener. "2016 is already on my calendar." Holland was the belle of this year’s ball. Her recent gift of over 500 varieties of hostas and shade plants has blossomed into Tranquility—The Cornelis B. Holland Hosta Garden. The evening’s theme honored Holland and her gift, and a video shown at the event told her story and the genesis of Tranquility. View video at tiny.utk.edu/tranquility.

Sharon and Joe Pryse chaired this year’s gala in support of the Gardens. "We are lucky to have the UT Gardens open for all of us to enjoy as well as to learn from," said Sharon Pryse, president of UT administration showed its support with other notable guests including UT President Joe DiPietro and his wife, Deb; UT Institute of Agriculture Chancellor Larry Arrington and his wife, Candy; UT Knoxville Chancellor Jimmy Cheek and his wife, Ileen; UT Vice President for Communications and Marketing Tonja Johnson and her husband, Tony; UT Institute of Agriculture Vice Chancellor for Advancement Keith Barber and his wife, Stephanie; UT Institute of Agriculture Vice Chancellor for Marketing Lisa Stearns and her husband, Norman Hammitt; and UT Institute of Agriculture Vice Chancellor for Retail, Hospitality, and Tourism Politics’ Barbara Culinary Arts Institute. More photos of the event may be seen at hurleycophoto.com/gala.

Next year’s gala is set for April 29, 2016.
COLEUS
WHO CARES ABOUT THE FLOWER WHEN THE FOLIAGE IS TO DIE FOR?
By Amy Dismukes, UT-TSU Extension agent, Williamson County

With an amazing range of color and texture, coleus can transform a once monotonous planting into the Emerald City of landscapes. I mean, seriously, how many plants have foliage so striking that you forget about the flower? Not too many.

Coleus is a member of the mint family, hence the squared stems and shy spikelet of pale, inconsequential flowers. Like mints and other herbs, Coleus plants contain oils that when released produce a scent—camphor—said to deter unwanted cats and dogs from the garden bed or landscape. Many Coleus stems and foliage contain pigments that have long been utilized as dyes or even as artisanal paints for watercolors. Right now you may be thinking, what is this person saying? Plant mint? Rest easy. Unlike mints, Coleus is not a hog and doesn't spread, so it won't attempt to eat your flower bed, lawn, or small tree.

Traditionally considered a shade-loving plant, there are now many spectacular cultivars that have been bred to love the sun. These sun lovers will not scorch or discolor in sun and, actually, will fade in shade. Regardless, great as a container plant or in the ground, Coleus can provide a season of interest in any scape.

Coleus is very easy to grow, providing success even to those who possess what my mom calls a “brown thumb.” They do like water and should receive irrigation, especially if newly installed, and prefer a well-draining soil. Any spiked flowers that begin showing in the summer should be removed. Bushier, more compact growth can be achieved by pinching the growing tips, which will stimulate branching.

Coleus is very susceptible to cold weather. You can preserve the plant by digging, potting, and bringing it indoors to ride out the winter. Just place your newly transplanted baby near a window and remember to water. The amount of water required will decrease slightly in comparison to what’s required when the plants are outdoors.

Coleus also can overwinter as a cutting and is probably one of the easiest plants to propagate. Select a healthy branch and cut directly below the fourth or fifth leaf set. Remove all but the top few leaves and submerge the stem in a clear glass of water so that you can see when the first roots pop. Within a few days, you should begin to see tiny roots pop from the nodes where the leaves were removed. In spring, transplant your rooted cutting into a container. Just remember, these babies have been indoors all winter so a good, heavy dose of sunlight can burn the leaves, just as we humans can burn on first exposure. Coleus can also be propagated by seed; however, many of the more desired cultivars are not available true to type, and what cultivars are available tend to bloom and require a lot of flower removal.

A plant that boasts many talents other than glorious color—be it as a garden deterrent for our favorite critters (aka pets) or as a dye or pigment for a painter’s brush—it’s safe to say, Coleus is here to stay.
$1,000+
Jimmy and Len Chace
Dallas Productions incorporated
Ivan and Donna Davis
Joe and Deb DiPinto
East Tennessee Foundation
Elburn Gardens
Cemex Finland
Hugh and Debbie Hyatt
Joseph and Patricia Johnson
Raja and Michele Johnson
Sam and Mary Mishi
Joseph and Carla Pollock
Pat Ponds
Joseph and Shannon Pryse
Scripps Networks Interactive
Star Boxes and Plants

$500 to $999
William and Wilma
Dr. Mary Alice
Charitable gift fund
Tory and
Dr. Temitila Johnson
Henry and
Sarita McElroy
Pleasant Hill Nursery
The Tuft Company
Scott and Laura Senseman
The Trust Company
Pleasant Hill Nursery

SPECIAL THANKS TO OUR
FURRY FRIEND SPONSORS
Pet Supplies Plus

In Memoriam
Larry and Connie Armstrong
In honor of Cornelia Holland
Richard and Mary Schneider
In honor of Cornelia Holland
James and Janis Spilman
In honor of Cornelia Holland
Patricia Sanders
In honor of Cornelia Holland

In Honor
Thomas and Anne Ford
In honor of Jimmy and Ivan Babcock

In Memoriam
Martha Derreberry
In memory of Lona
Hammond

In memory of
Steve Myers
In memory of Margaret Mehlhoff
Kimme Biggs
In memory of Robert Bryan
Whitney Lee

In memory of Cornelia Holland
Margaret and
Cheek
In honor of Jimmy and Ivan Babcock

In memory of
Jimmy and Ivan Babcock

In memory of Cornelia Holland
Margaret and
Cheek
In honor of Jimmy and Ivan Babcock

The following individuals donated, joined, or renewed their membership between January 1, 2015 and June 30, 2015. Please let us know any additions or corrections by calling 865-974-8265 or by emailing utgardens@utk.edu. You may join the Friends of the UT Gardens or contribute online at alzgardens.utk.edu, membership.html.