



The BACK FENCE

Check out the local MG website: www.muextension.missouri.edu/gkcmg/

A Message From The Editorial Staff

Our gardening plans are shaped by our experiences. It is our hope that this issue provides many experiences that will serve as nitrogen for a fertile mind. We are confident that you will find some ideas in this issue that will make the 2008 gardening year memorable.

The **Ten Commandments** article will help you set some resolutions for your 2008 gardening year. Augment that with **Edible Landscaping (p. 2)** and **Some Green Thoughts (p. 3)** to set your 2008 goals.

Now is the time to plan your winter, yes winter, garden for next year. Your winter garden is actually the skeleton of your summer garden. See what we mean in **A Different Kind of Pretty (p. 6)**. Have you been using only the soil upon which to grow your flowers? You are missing out! Read **Flowers in the Sky (p. 14)** and get ready for their arrival in ten to twelve weeks. What you do now, will insure they grow at your house.

Nothing beats looking at the physical representation of different gardens to get ideas for your own. An article and glorious photos on **gardens in Italy (p. 10)** will fuel your thoughts. A gorgeous **orchid (p. 13)** will enhance the inside of your home now, and enjoy a vacation on the front porch this summer.

Have you ever thought about dabbling in growing plants for profit? There is a information-packed **Online Learning (p. 5)** class available and starting soon to provide the basic knowledge to determine if, when and how you might pursue your dream.

We hope you enjoy the planning stimulation we have packed in this issue as much as we have enjoyed gathering it for you. Enjoy!

Jim and Becky

The Ten Commandments of eco-gardening

By Becki Bardin, Class of 2004

The Sunday *Times* of London ran The Ten Commandments of Eco-Gardening in its January 7, 2007 edition. An adaptation of that article appeared in the July 7, 2007 newsletter from www.treehugger.com. Here is an Americanized version of the *Treehugger* article:

1. Thou shalt conserve water. Gardeners should use whatever means works in their own gardens to conserve as much water as possible. Use a rain barrel to collect run-off rainwater throughout the year and if you have space have a rain garden. Water generously only when necessary instead of a little and often. This will encourage deep rooting rather than shallow surface roots and enable plants to search more effectively for water in dry weather. Whether it is container plants or plants in the ground, water only in the evening or early morning to minimize evaporation. Direct the water at the soil rather than the leaves. A generous layer of mulch, either organic material or gravel, will maximize the retention of moisture in the soil. Recycle household "gray" water if that is possible in your area.

2. Thou shalt put the right plant in the right place. If you choose your plants carefully, once they are

established, it should be possible to achieve a non-irrigation policy in most gardens. Young plants will need to be watered while they settle in, but then they can survive on their own. Accept that what doesn't survive without extra help is unsuitable anyway.

3. Thou shall not use cypress mulch. Cypress-tupelo forests are being clearcut at a rate faster than they can regrow, causing the loss of wetlands necessary for flood control and wildlife habitat. Instead use mulches made of pine bark, pine needles, cotton burr compost, straw, melaleuca or eucalyptus. Other options are to buy recycled yard waste from your city, make your own from your compost or use fall leaves which have been shredded by your lawn mower. (The original British versions of this article said "thou shalt not use peat." The peat bogs of Scotland and Canada are an essential part of the ecosystem and once they have been harvested, they are gone forever.)

4. Thou shalt recycle garden waste. Composting is the key to successful garden management. There is nothing more satisfying than producing home-made compost and there is also nothing easier. Just

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throw kitchen waste, grass clippings, weeds, ripped-up newspaper, fallen leaves and shredded sticks and prunings in a pile.

5. Thou shalt reuse non-biodegradable products. Re-use those plastic containers. Give those plastic pots a good scrub and give them another use. Before you throw anything out ask yourself: is there still life in it?

6. Thou shalt minimize the use of chemicals.

7. Thou shalt leave a messy bit. A pile of logs, some long grass and fallen leaves are an ideal habitat for wildlife. Providing bugs and animals shelter may later provide just the bug or animal to eat those aphids or slugs.

8. Thou shalt use hard landscaping with sensitivity. Consider the source of materials such as stone, lumber and gravel and the impact of the transportation of those materials. Concrete is particularly ecologically unsound and in some cases you could use something reclaimed or recycled.

9. Thou shalt use lighting responsibly. Light pollution is irritating for neighbors, confuses birds and is a waste of electricity. Have fun with sparkling lights for parties or Christmas, but for everyday try solar or motion activated lights for practical security or safety lights.

10. Thou shalt teach your children where food comes from. If we are going to change habits in the future we have to tempt them away from electronic devices and help them find a respect for nature.



Design with edible and eco-friendly landscaping

By Kellie Rodriguez, Class of 2005

There's no better time for planning your garden and landscaping than in the clutches of winter. Dreaming of lush greens, soft flowers and ripe tomatoes can carry you through the throes of any wintry storm.

While mulling through seed catalogs and marking up graph paper, consider something ages old, yet finding resurgence: incorporate edibles into your landscaping. Invest your money and efforts into creating an eco-friendly and productive environment that adds value for your table and nature. Plant an ecosystem for both human and wildlife consumption, while inviting songbirds, bees, hummingbirds, and butterflies into your small part of the world.

Choose multifunctional plants and trees that not only look good, but serve as valuable resources. There are hundreds of plants suitable in our Midwest climate for this purpose. Select plants and elements that work together to achieve a small ecosystem. For instance, enjoy gorgeous flowers and fresh fruit from fruit-bearing trees such as the Liberty apple cultivar, all while providing visiting bees the opportunity to do their thing. Buy local honey and you'll really come full circle in your ecosystem.

Bear in mind site characteristics and needs. Design using energy, water and soil-saving techniques. Develop a garden site where elements, including you and the efforts you can offer, co-exist in an integrated and harmonious fashion. Whether planning for the garden on the terrace or a large acreage, beginning and old green thumbs can find immense satisfaction from developing synergy between existing and

future elements.

Instead of adding a bush that just looks great, choose a bush that looks great *and* provides delicious berries for you or wildlife. Slip blueberry bushes into your design. Blueberries are packed with fabulous flavor and nutrition. Why pay grocery store prices when you can have a rich harvest right in your own back yard? Add that blueberry bushes turn a stunning red or gold in the fall, and you can see the worthwhile investment.

Triple your assets and select edible plants that are visually wonderful and provide heady fragrance. Many herbs fall into these categories. Take rosemary and lavender. These are exceptional for culinary and gift products, look beautiful and smell divine. Herbs can be readily available for a quick snip for the cook pot. What's better than fresh cilantro for your guacamole or rosemary for that roast chicken? Chives are hardy and so striking with their succulent spikes to the purple seed-heads. You don't have to be a gourmet cook to appreciate fresh herbs!

What about newly picked produce? Think about tucking onions, endive, carrots and other garden produce throughout your gardens. They don't have to be restrained to the veggie plot. Add berry bushes for border and foundation plantings. Harvesting nutrient-rich produce straight from your garden is much better for you than produce that has traveled many miles to get to your dinner plate.

Make the most of space by inter-planting with companion plants. Companion plants can repel pests and even enhance the soil for the other. Plant basil and oregano at the foot of

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tomato plants. Plant marigolds and borage near other crop plants to deter pests. Reduce or discontinue chemical pesticides and make your yard eco-friendly for the sustainable future.

Other ecological and money-saving techniques include succession planting to draw out the harvest of your plants over several weeks. Add aged organic matter into the soil before planting or around existing plants to enrich the soil. Read up on vermiculture and see how those little earthworms are gold for your garden! Consider rain gardens to prevent water run-off. Choose techniques to produce maximum yields to minimum area of land, while simultaneously improving the soil.

Whatever the size of your garden, you can create a multifunctional ecosystem good for you and the environment. Let your landscape do double duty for you and your family! Incorporate these methods and save money, create earth-friendly practices, all while enhancing your health and well-being.

There are many good books and resources for eco-friendly and edible landscaping. Visit the USDA website on *Native Plants and Eco-Friendly Landscaping* or the University of Missouri Extension website at <http://extension.missouri.edu/mg/> for related information. Happy planning!



Some green thoughts from the Mother Ship

By Becky Peck, Class of 2003

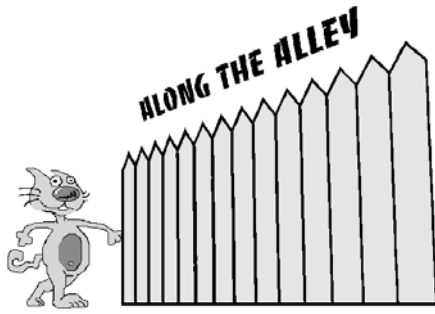
On a recent trip to Chicago, I did as I always do and stopped at Borders on North Michigan Avenue. As a treat for myself, I bought a *Gardeners' World* magazine that is published by the BBC. With the exchange rate as it is, a British magazine costs as much as a hearty lunch! This issue had a focus on growing green. The British pride themselves in their gardens, so I started leafing through for some new ideas I might share with you about growing green. Here is what I came up with:

- Recycle your plastic grocery bags by cutting them in strips, braiding, and using to tie up your plants. Seal the ends with tape.
- Rather than using chemicals to control slugs, let microscopic nematodes help. You add the nematodes to water and pour on your garden. You will see effects within three days. Order from www.wigglywigglers.co.uk. Priced from US\$20.
- There is a house for ladybugs (called ladybirds by our British friends). The house provides an environment for 100 of the spotted red bugs to hibernate and breed. Buy one for US\$25 from www.naturalcollection.com.
- Create a home for beneficial bugs by putting bamboo sections inside of a box that is open on one end. Set the box so the bamboo is running parallel to the ground. The bugs can lay eggs inside and find shelter. Place the box at eye level so it is easiest for you to glance inside for bug activity when you walk by.
- Install what the British call "water butts" at the end of your downspouts to collect rain water for irrigation.

- Dump the contents of your sweeper bags into your compost pile. They are particularly good when mixed with grass and plant material. If you have a lot of grass clippings to add to your compost pile, mix them with shredded newspaper.
- Build a wildlife stack. This is a place for creatures big and small that help your garden, to live and breed. Pick a location in the sun or light shade. Put a layer of bricks down as the base. Leave a little space between them for the toads to hide. Stuff a pallet full of straw and stuff a few bricks around the edges of the pallet. Stack two of these pallets on top of the bricks. Then, make a more open habitat for spiders and larger insects with pebbles and roof tiles, using clay pots as the supporting pillars. Put another pallet on top, and fill it with thin, twig-like branches to provide shelter for larger insects like butterflies. Now add a sheet of roof felt or heavy duty UV-stabilized polythene to the top of the third pallet to keep the upper layers of the stack dry. Finally, top with old ridge tiles, logs, cane bundles, pine cones, etc. Drilling holes in the end of the logs provides additional hiding places for bugs.

I plan to add the above ideas to one I just implemented from *Organic Gardening Magazine*. This fall, I put two hog panels in my garden (the hog panels are my adaptation) that I wired together on the end to create round metal cages. Hog panels have smaller spacing between the wires at the bottom and they are larger at the top. I am filling them with leaves, old straw,

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By Joanne Couture, Class of 1991

Play GARDEN JEOPARDY: Don't snack on this winter/early-spring-blooming perennial. Even its name declares it very poisonous. WHAT IS...? (Solution at end of article)

A few words about the April freeze of 2007: Many “iffy” plants made it and leafed out later. As in real estate, “Location! Location! Location!” was the answer for many survivors. Larry Theiss (2005) and his neighbor both planted ‘Elizabeth’, a rare, yellow-flowered magnolia in 2006. The freeze devastated the neighbor’s shrub on the north side of his house, while only a hundred feet away in an unprotected area, Larry’s leafed out profusely, later. Hardest hit overall for MGs seemed to be the Japanese maple.

Birdlovers: Remember, the freeze affected the production of many nut, berry, and seed-bearing plants and trees, making it a hard winter for species that depend on these sources. Keep your feeders well-stocked and the water source filled. Plus, if the 2008 winter is as dry as last November, occasionally water those trees, shrubs and perennials you planted last year. (Don’t I sound like a nagging mom?) Dry, cold months can be as stressful as summer’s heat. Yet last November’s comparatively mild days kept blossoms alive on many hardy bloomers such as alyssum and salvia. And my ornamental cabbage (*Brassica oleracea*) even hosted a gang of caterpillars the week before Thanksgiving. But were they foodie snobs! They snacked only on white

cabbage, ignoring the adjacent purple-leafed variety.

The Class of 2007 proudly boasts its share of “garden junkies”—the sign of a true MG! **Bob Bonack**, a 1995 transplant from Green Bay, Wisconsin (“but still a cheesehead”) appreciates the extra two and a half months of gardening Missouri offers him. Bob’s 70’ X 140’ lot boasts about 50 trees: his favorite dogwoods, plus ginkgo, maple, evergreens, autumn olive, magnolia, ironwood...the list goes on. And about 25 shrubs. Plus ground covers and ornamental grasses. Plus hundreds of iris (his favorite) and daffodils and tulips. Another favorite perennial is the hardy *Hibiscus moscheutos* ‘Mammoth’. Of annuals, Bob favors faithful re-seeders like the fragrant moonflower and four-o’clocks. Favorite shrubs: *Vitex agnujs-castus* or ‘Chaste tree’* [Note: plants marked with asterisks will be described at the end of this article] and *Nandina domestica* ‘Harbor Dwarf’ and ‘Heavenly Bamboo’ (no relation) whose new leaves appear red before turning green; later, it’s red berries are enjoyed by birds. Bob even planted one on the side of his house with vines—*Clematis jackmanii*, morning glories, and trumpet vines to attract hummingbirds and offer shade to birds on hot summer days.

So you think you have a water garden? **John Parks** has “a ten-thousand gallon koi pond that is large enough for me to float around in. I have nineteen adult fish that all average about two feet apiece. They all have names . . . several are over ten years old. One follows me around the pond like a puppy waiting for a treat... a nice juicy earthworm.” Favorite plants? Possibly *Juniper horizontalis* ‘Mother Lode’, “a brilliant bright gold groundcover sport of ‘Wiltoni’, the common ‘Blue Rug’ juniper — a 4’ x 6’ spread for a sunny slope or rock garden.” A successful container combo

last year was lemon grass combined with *Gomphrena* ‘Strawberry Fields’ and the popular *verbena* ‘Obsession Eye’—intense red with a white eye... With white *Calibrachoa* ‘Million Bells’ for accent, it made a pretty lush pot.” John’s big disappointment of 2007: *Thuja* ‘Green Giant’. “Bambi struck again. A male rubbing his antlers stripped nearly five of them to the ground.”

Barbara Kauzlarich’s garden was on the Martha Lafite Thompson Nature Sanctuary Tour last June, so at this writing, she understandably plans to add nothing, though the April freeze killed a favorite double-ruffled hollyhock. Daughter Kristin Middleton (also a 2007 MG grad) made a water garden for her out of a black container with an old pump and rocks around it. Barbara likes container gardens, especially a tour favorite: an old wheel barrow featuring purple, pink and white annuals such as cosmos and ‘Million Bells’ petunias, contrasted with chartreuse sweet potato vines. A bird-house nestled in the plants completed the display. A serious gardener for ten years, Barbara is originally from northeast Missouri (Brookfield), but has lived in Liberty for thirty-eight years.

Think you’re devoted to your alma mater? **Brenda Carpenter** and her husband, both grads of the University of Tennessee, landscape with their school colors—orange and white impatiens lining their sidewalk and shrubs, and orange and clear (white doesn’t show well) Christmas lights. The impatiens appreciate the shade of two large ash trees. A retired elementary school teacher, Brenda and her husband have five children, ages 39 to 18. (Should be a potential MG in there somewhere, Brenda!)

Stacey Fortin, an “Iowa farm girl” transplant, has a genetic love for growing things—both grandmothers “had HUGE gardens!” Now she lives

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on 2-2/3 acres with old trees providing shade for lots of “old dependable green hostas,” planted years ago by the property’s former owner. Stacey divides them frequently, using them for ground cover. (Stacey, note: the MGs have a plant exchange every spring—hint hint!). When not on the lookout for hardy, drought-tolerant shade perennials, Stacey’s a part-time nurse “who specializes in wounds, ostomies, and continence nursing.”

Though **Kathy Bark** lost “a lovely ‘Doublefile’ viburnum and a young Kwanza cherry tree” to last April’s freeze, her many varieties of *Echinacea*, *Hibiscus moscheutos* (rose mallow), *Hemerocallis* (daylilies), and *Aquilegia* (columbine) “didn’t miss a beat.” And her *Scutellaria alpina** “wasn’t even aware that we had a late freeze.” Kathy’s most reliable shrubs are barberry ‘Crimson Glow’ and ‘Crimson Pigmy’ and *Cotinus coggygia* ‘Royal Purple.’* Favorite annual: ‘Clown Blue’ *Torenia*, “forming

lovely mounds of true blue flowers.” Other thriving annuals were *Perilla frutescens* var. ‘Crispa’ (notorious for self-seeding), snapdragons, *Spilanthes acimella** and ‘Profusion’ zinnias.

Extra information on plants:

**Vitex agnujs-castus*. Actually a shrub, the chaste tree’s showy summer bloom resembles the panicles of butterfly bush and attracts bees, butterflies and hummingbirds. It’s odd name supposedly derives from herbal qualities that helped medieval monks remain celibate. Other names: the “hemp” plant—its leaves resemble marijuana—and “sage tree” for its aromatic leaves. Sun to part shade in Zone 6, but best protected from north winter winds by a wall.

**Scutellaria alpina* has blue, yellow or pink flowers with cream lips from mid spring to September. Also called ‘Alpine skullcap,’ it is found in the wild in central Europe and Russia. Morning sun only. Hardy to Zone 5.

**Cotinus coggygia* ‘Royal Purple’, aka smoke tree is prized for panicles of small flowers that give the shrub a smokey appearance. It’s prized for oval, dark purple foliage with red veins and stems that turns scarlet in autumn. Best in full sun.

**Spilanthes acimella* has long been known as the “toothache plant” — chewed, it’s leaves stimulate saliva and make the mouth tingly, then numb. Native to India and Malaysia, it’s being clinically studied for modern dental hygiene. Yellow, cone-shaped flowers with a brown cap spring from thick glossy leaves. Light shade. A tender perennial in our area.

GARDEN JEOPARDY solution: What is HELLEBORUS? From the Greek hellein (to kill) and bora (food). Commonly known as ‘Christmas Rose’ and ‘Lenten Rose’ (depending on time of bloom) but is not in the rose family. (Source: *100 Flowers and How They Got Their Names* by Diana Wells)

Online learning

By Becky Peck, Class of 2003

In a previous job, a coworker was a gardener. It was fun to bring in our produce or seedlings to share. The conversation was enlightening as well. We have both moved on, but continue to have lunch on occasion. Michael suggested I try an online class called *Growing Plants for Fun and Profit* through Johnson County Community College’s online offerings. He had just enrolled. It was such a quality course, I felt the need to tell you about it in case you’d like to give it a try during the sedentary winter months. A new class session starts January 16, 2008 and February 20, 2008. The cost is \$85. It takes six weeks to complete the course, at times that are convenient for

you. Here is how the class works:

The instructors are Linda and Michael Harlan, who have grown and sold their plants for profit. Their depth of knowledge is readily apparent. I printed all my class materials and committed them to a notebook. This is a valuable book to me that I know I will reference again. You can submit questions online and the instructors get on frequently and answer them for you. You can read your questions as well as those of others and the instructors’ responses.

Each of the twelve lessons involves about four little chapters, with pictures, a series of references to many sites I had never heard of, and a little

quiz. The quiz is not part of your grade, but the final grade is made up from the quiz questions, so you get my drift: Do the quizzes. There are only a handful of questions in the quizzes and you get immediate feedback of your right and wrong answers. If your answer is wrong, it doesn’t tell you the right one. Try it again, and when you get it right, print off your test questions and correct answers. The two lessons per week are released on Wednesday and Friday. There are two weeks after the last release before you must take your final exam. You may use your lesson material you have printed off as well as your quizzes in answering the final exam.

The class material covers the gamut from the permits and licenses you need to raise and sell plants, to the creation of microclimates, where to find

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A different kind of pretty

By Becky Peck, Class of 2003

In the summer, we marvel at the rolling hills covered in green grass, shaded by deciduous trees swaying in the wind. The ground is sprinkled with colorful perennials and annuals. It is pretty. If you went to Hawaii, you'd see lots of sand, tall palm trees with year-round huge leaves. It, too, is pretty; a different kind of pretty.

Now, winter is here. The scenery is like a black and white television show. We have gray highway, gray sky, black and gray trees reaching their silhouettes into the gray sky, highlighted with white snow or frost. It is ugly. But it doesn't have to be. If we plan our gardens for winter interest, those gray days while we are inside our homes can be blessed with a different kind of pretty.

"Planting for winter interest" is becoming a more frequent topic of conversation. Some botanical gardens now have special sections devoted to demonstrating how to create winter interest. If your travels allow, try visiting the Mullestein Winter Garden (<http://www.plantations.cornell.edu/collections/botanical/winter.cfm>) at Cornell Plantations (part of Cornell University) in Ithaca, New York. The garden features plantings with colorful bark, winter fruit or evergreen foliage. You'll see blazing dogwoods, lush conifers, berried hawthorn and coral bark willow. In the west, there is Seattle's Washington Park Arboretum (<http://depts.washington.edu/wpa/general.htm>) where there is a 230 acre internationally renowned woody plant collection, including the second largest collection of species hollies in North America. To the north, in Madison, Wisconsin, the Olbrich Botanical Gardens (<http://www.ci.madison.wi.us/Olbrich>)

will inspire you with deciduous trees and shrubs partnered with perennial skeletons and conifers to make a backdrop that harmonizes with arbors, fences and walls. You'll find Harry Lauder's walking stick and red-twig dogwood amongst the residents. Polly Hill Arboretum (<http://www.pollyhillarboretum.org/>) on Martha's Vineyard in Massachusetts has witch hazels, camellias, winter hazels, hollies, conifers and early spring-blooming magnolias.

You may recall our speaker at the spring seminar was the from Chicago's Parks and Recreation Department. They do a phenomenal job with plantings and baskets down Michigan Avenue as well as many ancillary streets. Here is what winter interest looked like on Michigan Avenue on December 2, 2007.



When winter arrives, you look out upon your garden and see the skeleton of your garden—the form and structure that the summer plants embellish. When you design a garden, you are essentially designing with winter in mind. A good skeleton leads to pleasing summer garden portrait as well as

a winter interest. Plants that provide winter interest also seem to provide year-round interest with flowers, colorful foliage, or other features. To invest in them would be a year-round investment. So, if you are starting a garden or enhancing one, be sure to get some plants that add winter interest in your garden and build upon them. They are part of your skeleton.

Now that the trees are bare—take a hard look. What are you missing? Let's look at some basic ways of adding winter interest that you might consider in your own garden. These elements should be scattered through your gardens, not all grouped in one area, for the best effect. Remember that the lighting in the winter is different. It comes from a more horizontal angle. That is part of what adds to the winter effect.

Hardscape and structures can be as simple as a grouping of pots, shimmering from the morning's frost. Do remember to bring in the terra

cotta and glazed pots and planters as frost will likely crack them. Perhaps you have or could add some fencing, arbors, benches, masonry, statues or other structures as anchors in your landscape. Little puffs of snow or a glaze of frost would make any of

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them shimmer.

Evergreens provide exactly what they say—all shades of green throughout the year. Hybridization has extended their colors beyond green. Included in the evergreen discussion are conifers—the trees and shrubs with needlelike or scale-like leaves that bear cones. They too can be in various shades of green, as well as purple, green/yellow, gold, copper, bronze or brown. The green of the lovely towering evergreen trees and conifers gives the perfect backdrop to more fully appreciate trees and shrubs placed in front of them with texture, colored bark, or bright red berries. In our location, dwarf varieties of evergreens can be scattered in too, as they do not have to worry about being encased in snowcover for months.

To set the stage for looking at some options for evergreens in your landscape, let's address deer. If the food sources are low, deer will be prone to strip more than the usual trees or shrubs. The usually will avoid firs, spruces, pines, boxwoods, hollies, Oregon grape and holy grape and andromedas. Focus on these evergreen options if deer are an issue for you.

Conifers can form windbreaks or hedges that will screen your property from the cold north wind. Research their ultimate size so you allow plenty of room to grow. **Firs** will provide a tall, slender and conical silhouette with short, stiff needles. They do suffer with hot, dry summers. One of the most adaptable is *Abies concolor*, white fir. If you have a smaller garden, consider a dwarf balsam fir.

False cypress, is an upright form, that can reach 10 to 15 feet tall. Some are upright and conical while others are low and rounded with a variety of foliage colors, including variegated. The **Siberian cypress** tolerates shade and forms a groundcover. Keep it moist and well-drained.

Junipers come in lots of varieties and are easy to grow. The female plants will bear little blue fruit. They all like full sun and well-drained soil. They are not tolerant of wet soil. For an upright form, try *Juniperus scopulorum* 'Pathfinder' and 'Wichita Blue' which have broad cones and stand 15 feet tall. Their foliage is a silver blue. *J. chinensis* 'Robusta Green' and 'Torulosa' have dense, irregular twisted growth with their bright green foliage. For a juniper that hugs the ground and spreads, try a variety of *J. horizontalis* called 'Mother Lode.' In the summer, the needles are bright yellow, in the fall they are golden orange, and for winter they are purple.

Spruces are easy to grow, but they can outgrow most lots. Two of the most popular varieties are the Norway Spruce *Picea abies*, with dark green needles and drooping branches, and the Colorado blue spruce *P. pungens*, with blue or blue-green needles. Both are available in dwarf or prostrate cultivars. The dwarf Alberta spruce *P. glauca* 'Conica,' is upright and conical, and rarely gets taller than 8 to 10 feet.

Pines start out with a Christmas-tree shape, but typically develop an open crown as they mature that is very attractive in the winter landscape. They come in short or long needles that are soft or stiff. Their cones have seeds that attract chickadees and other songbirds. Be reminded of the current swath of pine tree disease that is killing many of our pines.

The **yews** are slow-growing and small, with the female plants bearing red fruit. They will tolerate some shade and they grow well on the north side of a building. They will not, however, tolerate being waterlogged. Widely grown for their green winter color, consider *Taxus cuspidata* 'Greenwave' or 'Nana.' Also consider *T. x media* 'Hatfieldii' or 'Hicksii.' Each will grow to ten feet.

Arboretum make good specimen

plantings, hedges and foundation plantings. They grow upright and have small, woody cones. Consider *Thuja occidentalis* 'Aurea' which grows three to five feet tall with fragrant foliage that is bright gold in summer and golden bronze in winter. The moist or heavy soils of Missouri are a preferred culture for this plant.

How about a little grace for your garden? Consider the Canadian **hemlock**, *Tsuga canadensis*. It is slow-growing and spreads wider than it is tall. There are dwarf varieties and a few with gold or white-variegated foliage. The Canada hemlock prefers a north or east exposure that provides some sun in the summer and shade in the winter. Cool moist soil with winter mulch is preferred.

Broadleaf evergreen shrubs need to be selected with caution. Many of them require well-drained acid soil. They can't tolerate heavy clay, lime-bearing rocks or lime leaching from a concrete house foundation. Therefore, you may need a raised bed to be successful with them. Let's mention a few as you make your selections.

Boxwoods have shallow roots. Apply heavy mulch to protect them from the extreme elements. *Cercocarpus ledifolius*, or **curl-leaf mountain mahogany**, has stiff dark green foliage with a silver underside. In late summer or fall, it produces silver-plumed seedheads. It needs well-drained soil. *Euonymus fortunei*, **Euonymus, winter creeper**, is very susceptible to scale insects. Keep your horticultural oil handy and try one of the varieties that grows upright, drooping, trailing, with plain green or variegated leaves. Keep your **hollies** in part-sunshine as full-sun in the winter can scorch the leaves. The female plants will produce berries if there is a male nearby. They like slightly acidic, well-drained, moist soil that is topped with a thick layer of organic mulch.

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The Longstalk holly, *I. Pedunculosa*, has spinless leaves that resemble mountain laurel, tiny red berries that dangle on stalks and a bushy silhouette. It will reach over 20 feet tall.

Mountain laurel (*Kalmia latifolia*) are very showy when in bloom, with clusters of red or pink buds that turn into red, pink, or white flowers. The more sun they get, the more flowers and the faster the plant grows. The **Leucothoes** *L. fontanesiana*, is a drooping **leucothoe** that will grow in Zone 5.

Deciduous trees and shrubs with novel bark. Some of the bark textures such as the peeling bark of the white birch, can be enjoyed from afar. The more subtle barks may need to be closer to the pathway for better viewing.

Maples include the Japanese maple *Acer Palmatum* ‘Sango Kaku’ that has coral bark. For a little extra form, try the cutleaf Japanese maple *Acer palmatum* var. *dissectum* which has a mounded, sprawling form that is often twisted and gnarled. *Acer buergerianum*, the trident maple, has an orange-brown shaggy bark that becomes rough and plated on established trees. It is tolerant of poor, infertile soil, but give it room. It can grow 35 feet tall, with a spread half that size. The paperbark maple (*Acer griseum*) lives up to its names with reddish brown peeling bark, even with the youngest of stems. This tree works well in the woodland setting as well as a small specimen tree for the front yard. Striped or snake-bark maples run on the smaller side with green stems and trunks that are highlighted by prominent white or silver streaks. The most common one is called moosewood (*Acer pensylvanicum*). “White Tigress” is a hybrid, common variety with very pronounced white strips. Snakebark prefers being an understory tree. It, therefore, is ideal for your woodland

garden. The bark pattern isn’t easy to see from a distance, so site it close to the walkway.

Amelanchier spp. Is the proper name for **serviceberry** aka shadbush aka juneberry. This is actually a large shrub where the branches display red, pointed buds. As the shrub ages, it becomes upright, dense and irregular in its growth pattern. Serviceberry is also an outstanding shrub for edible fruit that ripens in June. It looks natural in a woodland setting or by a pond or stream.

Birch (*Betula* spp.) is quite identifiable in the winter landscape. The mature trees reflect light off the white bark, which peels to reveal other colors. The young stems of birch also have noticeable lenticels. These are small glands irregularly arranged along the surface of the bark. Their purpose is to allow gas exchange between the tree and the environment. In addition to the peeling bark, birch trees provide male catkins on the branches. These are dangling flowers that can reach several inches. Watch your birches for insect infestations. The bronze birch borer and the leaf miner find them particularly tasty. Most birches are of medium size except for the river birch, and it is much larger. Consider the paper birch (*Betula papyrifera*), Himalyan birch (*Betula utilis* var. *jacquemontii*), or one with glimmering white bark that doesn’t peel—white-spire birch (*Betula platyphylla*). If you have the room, go for the river birch. It is very tolerant of our heat, humidity, pests, and poorly drained clay soil. A well-known variety called Heritage (‘Cully’) is particularly beautiful with salmon tones in the bark. Heritage is also a fast-growing variety that will establish quickly.

Dogwoods in the winter probably conjure up visions of the red twig dogwood (*Cornus sericea*). The stem color is most prominent on the young stems. Selectively remove the older



stems every few years to keep the red ones coming. Prune them at the ground in late winter. If you combine pruning with decoration, you’ll find the red twigs a great holiday decoration. A variety called ‘Flaviramea’ has bright yellow stems. ‘Winter Flame’ has yellow-orange stems.

Seven-son flower (*Heptacodium miconioides*) can be trained as a small tree. Along with lush green leaves in the summer, it has white flowers late in the season, deep red calyces (appendages that surround the flower), and flaking bark.

Have you looked closely at your **oakleaf hydrangea**? It has flaking bark in the winter. The dried flowers will often persist well into winter as well. This hydrangea is one of the more drought-tolerant and pest-resistant.

American hophornbeam (*Ostrya virginiana*) is a birch cousin with grayish brown shaggy bark. The **Persian parrotia** (*Parrotia persica*) is native to Iran and is from the witch hazel family. It grows fast as a youngster and slower as it ages, providing twisted branches and exfoliating bark. The **Amur corktree** (*Phellodendron amurense*) is an Asian species that is upright, spreading and picturesque with a corky, fissured bark. A tough tree, it tolerates the poorest of soil. The **Common Ninebark** has peeling bark, but the ornamental cherry (*Prunus* spp.) takes bark to another level. Its bark features an irregular pattern of horizontal lenticels. If you

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are short on space, try the “Hally Jolivette” cherry.

Two varieties of the **Hankow willow** (*Salix Matsudana*) have curly stems that twist and weep to the ground. ‘Golden Curls’ has golden stems and ‘Scarlet Curls’ has scarlet stems when young and golden to brown older stems. These trees are fast-growing and need a regular pruning. If you are looking for a small thicket, try **cutleaf stephanandra**. The dense branches are thin and deeply intertwined. The tree I am going to try is the **Japanese stewartia** (*Stewartia pseudocamellia*). This one is a real four-season plant with bark that looks like big splotches of tan, brown, gray and beige. Although it needs some time to get established, the pests seem to leave it alone. Use this one as a specimen tree. Last, but not least, the **Japanese tree lilac** (*Syringa reticulata*) has noticeable lenticels like the cherry bark.

Deciduous trees and shrubs with winter flowers. The majority of winter flowering trees are forms of Prunus, the ornamental cherry. Consider the following for winter blooms. Many of them can be cut from the plant and brought in to brighten your table: Common flowering quince, Cornelian cherry, heathers, spring heath, witch hazel, winter honeysuckle, pussy willow, ‘Dawn’ viburnum, or my favorite: Harry Lauder’s walking stick. Harry has catkins and the coolest gnarly branches that are gorgeous when a little snow lands on the squiggly mass.

Deciduous trees and shrubs with fruit would include varieties of Red chokecherry, Cotoneaster, Deciduous hollies, crabapples, sumac, and viburnum.

Hellebores is a herbaceous perennial that will bloom in the depths of winter. Hellebores will collapse after a frost or snow, but quickly recover

when the temperature rises. The *Helleborus niger*, or Christmas rose, is easily recognizable. The Lenten roses are *Helleborus X hybridus*. The range of colors is nearly endless. They will build up into huge clumps of flowers that are happy growing in the shade. Tuck them under deciduous shrubs, or give them their own open area within viewing range of your window or walkway.

Evergold foliage. To give some contrast to your evergreens, consider a plant with gold foliage. A few are rated to live in Zone 5: *Ilex crenata* ‘Golden Gem’ is a low-growing holly. The heather *Erica carnea* ‘Foxhollow’ and ‘Ann Sparkes’ have gold foliage and white or purple-pink flowers respectively. Yellows and golds tend to intensify in color with the onset of winter. The conifer *Thuja occidentalis* ‘Reheingold’ is another such plant.

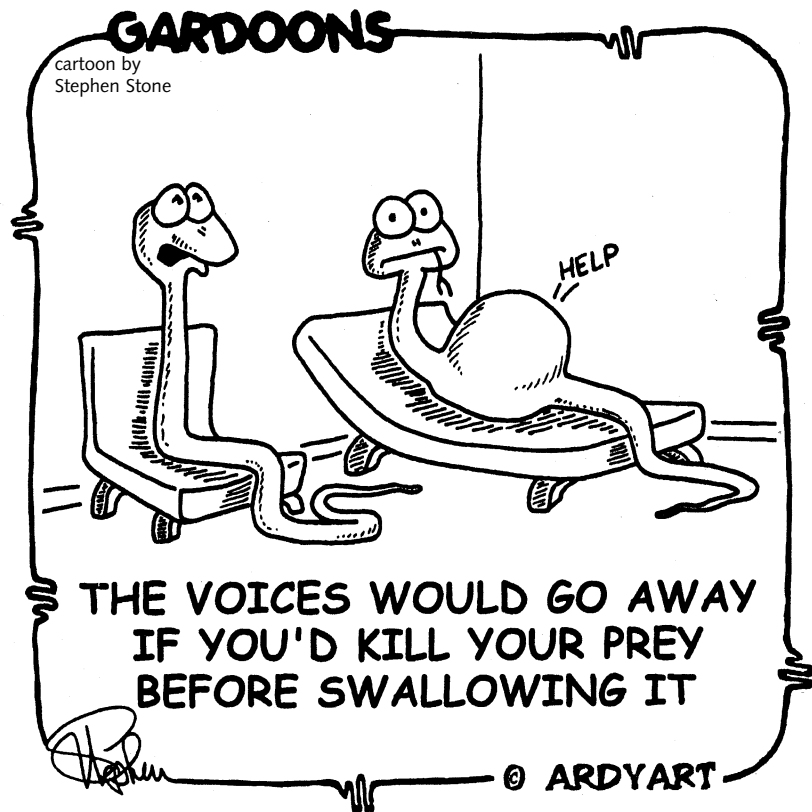
Gold variegated winter foliage. There are several euonymus such as *Euonymus fortunei* ‘Blondy’ and ‘Emerald ‘n’ Gold.’ Vincas such as *Vinca minor* ‘Illumination’ and

‘Aureovarigata’ have green leaves centered or edged, respectively, with gold. The Ivies, *Hedera helix* ‘Goldhear’ and ‘Goldchild’ have splashes and edges respectively in gold.

Vertical accents are easily provided by ornamental grasses with their plumes waving in the wind. Bamboo or yuccas give another horizontal contrast in form.

Summary: There is so much more than what we’ve listed here. Hopefully, this will give you a start. The books I used for this article are *The Winter Garden—Plants that Offer Color and Beauty in Every Season of the Year* by Rita Buchanan (Taylor’s Weekend Gardening Guides), *Wonders of the Winter Landscape* by Vincent A. Simeone and *The Winter Garden* by Jane Sterndale-Bennett. I particularly liked the Taylor book, as it only featured plants that grow in Zone 5 or colder; a perfect fit for us.

“The gardening season officially begins on January 1st and ends on December 31.”—Marie Huston.



The gardens of Italy

By Terrence Thompson, Class of 2006

Imagine a garden built on ten terraces to resemble a sailing ship at anchor. Imagine the garden takes up an entire island and construction on the garden started almost 400 years ago. And in your imagination put this island on a crystal clear lake with the Italian Alps as a backdrop. Don't forget to put an Italian count's palace on the island.

Better yet if you get a chance just visit Isola Bella on Lake Maggiore in northern Italy and see for yourself what must be one of the most beautiful gardens in the world. At least I couldn't imagine a more beautiful garden when my spouse and I toured the island a few years ago on a visit to Italian Lake District.

On this trip we also found several other astoundingly beautiful gardens including Parco Giardino Sigurta near the southern edge of Lake Garda and a very strange garden and villa known as D'Annuzio's Folly in Gardone Riviera, a resort town on the western side of Lake Garda.

Isola Bella (photos page 10) translates to mean beautiful island. The only access for the hordes of tourists



who visit this beautiful island daily is by boat. The boat ride is part of the ticket cost for touring this national treasure of Italy. Isola Bella is one of three islands that comprise the Borromeo Islands, named for Count Borromeo who started construction on the gardens in the 1600s.

We visited Isola Bella and neighboring island Isola Pescatori on a half-day tour. Isola Pescatori was originally a fishing village and home to those who worked on the larger Isola Bella. Now it's a great place to have lunch dining on fish caught in the lake and later



shopping in quaint stores. Because of time constraints we didn't make it to the third island, Isola Madre, with its botanical garden. If we are ever in the area again we definitely will schedule a full day to tour all three islands. A

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half day just isn't enough.

We got off the boat at a dock at the edge of the Borromeo palace courtyard on Isola Bella. We toured the palace first and from there it was just a short walk to the gardens behind.

Each of the ten terraces of Isola Borromeo is a garden in itself. The top-most terrace is designed to be the "bridge" of the ship-like garden and consists of ornate granite structures with niches for Baroque sculptures. Approaching the island by boat viewers can see pots filled with flowers and ornamental plants lining stone balustrades along the edges of the terraces. At places flowers overflow like waterfalls from the edges of terraces toward the lower terraces. Espaliers of flowering plants and shrubs grow upward toward the cascades of draping flowers.

Tall evergreens and even palm trees dominate terraces and flowering trees accent the view. Huge stone vases framed by rose bushes punctuate the terraces. On the "ship's poop deck" terrace just below the "ship's bridge" terrace tight quadrants of intricate knot gardens center around a fountain. Peacocks strut majestically throughout the garden.

It's a breath-taking sight.

Isola Bella is said to be one of the best preserved examples of Italianate Baroque gardens. It originally was a rocky island until Carlo III Borromeo decided to construct a garden on the island in the shape of a ship for his wife Isabella. Construction of the garden and palace was a gradual process not fully completed until the 1950s when the Borromeo family completed the palace based on its original centuries old plan. However, most of the garden area was finished as it now stands by the end of the 1600s.

We visited the Borromeo Islands at the end of our trip to Italy. Earlier we had spent a week in a hotel overlooking Lake Garda in the resort town

of Gardone Riviera. While we were staying at the hotel we discovered that the strange **D'Annunzio's Folly villa** (photos page 11) and garden was just a short walk away. So we took off walking.

The luxurious villa served as home of Gabriele D'Annunzio, a controversial Italian poet who received the villa and garden as a gift from Mussolini in 1925 as a reward for his patriotism. Some said, though, the gift was aimed at keeping the unpredictable writer out of Italian politics.

The D'Annunzio garden shows a formal style with stone columns, trellises, statuary and fountains. However, the plantings appeared to be a little wild and unkempt the day we were there. The garden is broken up into distinct areas and is small enough that a slow stroller can see the entire garden in just a hour or two. We toured the villa and its garden on a hot muggy day and the grounds and building left us depressed and uneasy. The humid garden steamed from dense foliage. The garden's dark architecture seemed almost alien to our Mid-Western tastes. The even darker rooms inside the villa were draped with browns and blacks. One room included an open coffin in which



D'Annunzio would lie to contemplate the meaning of life, we were told in a guided tour of the villa.

It was beautiful place but we were glad to leave to take another short walk from there to Giardino Botanico Hruska, a botanical garden that is reported to grow more than 8,000

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exotic flowers and plants. The plants are tucked into artificial cliffs and around streams in a relatively small area. Situated close to the large Lake Garda and protected by the Italian Alps, the garden can even grow some tropical plants year round. The diversity of plants offered by this garden is amazing.

A few days later we drove our rented Alfa Romeo sedan a good distance around the southern edge of Lake Garda along winding roads and through beautiful countryside to get to our next garden stop, **Parco Giardino Sigurta**, a 125 acre beautifully landscaped area. It's about eight kilometers from Peschiera, a small village near the edge of the lake.

Let me briefly describe driving in northern Italy. The Italians are not keen on marking roads with names as shown on the map. You have to study the map to see what villages are along the route that leads to your destination. Then you get to your destination by following intersection signs that point to the next village.

That works fine until you get to a roundabout that divides into several roads that list the names and directions to a dozen villages and none is the village that points to the way you need to go. I was the driver and my spouse was the navigator. There generally was much shouting and pointing and driving in circles when we reached such a roundabout. These roundabouts were hard on marital relations but we did get to see parts of Italy originally not on our agenda as we searched for a way to our destination.

Sigurta garden began life as a walled garden in 1617 at the Villa Maffie. The owner of the garden, Carlo Sigurta, inherited the ancient right to draw water from a river running along the villa's edge. The garden was opened to the public in 1978. The garden is themed on five flower-

ing seasons that progress from the tulips and irises of spring, the roses of early summer to the asters of fall. There also is a large water garden that has been described as Monet like in its showing of water lilies and water grass in multiple pools.

The garden also features large green, rolling lawns crisscrossed by paths often lined with trees and shrubs chosen for their colorful foliage. Plan to spend at least a half day in this garden to see it all. Also plan on doing much walking.

Note: Information for writing this article came principally from *The Borromeo Islands and the Angera Fortress* published by Silvana Editoriale and *Lombardy and the Italian Lakes* written by Dana Facaros and Michael Pauls and published by Cadorgan Guides.



Orchid awards in Kansas City

By Terrence Thompson, Class of 2006

You might be surprised to learn that orchid growing as a hobby can be a very competitive activity. The best growers can get nationally recognized awards for the plants they exhibit at sanctioned shows.

If you were one of those who visited the Orchid Society of Greater Kansas City Mid-America Orchid Congress show in November you would have seen prize ribbons and special awards galore attached to the best orchids at the exhibit. Not only were orchid growers competing for exhibiting the best orchids at this particular show, the best orchids were reviewed closely by certified orchid judges to see if they qualified to be listed among the best in the nation under guidelines established by the American Orchid Society (AOS).

Growers at the Kansas City show garnered eight national American Orchid Society awards. The orchid awarded best of show, a *Sophrolaeliocattleya* hybrid named Yellow Warbler, received an 86 point Award of Merit. A photo of that plant is with this story.

Yellow Warbler won best of show because of its color, the number of flowers and how the flowers were presented on the plant, explained Mark Prout, a Lee's Summit resident who served as an orchid judge at the show. Yellow Warbler later was selected for a national Award of Merit based on standards set by AOS. Prout explained that Yellow Warbler was a "remarkable example of breeding."

"In the show its color, floriferousness and presentation first won the blue ribbon in its category, then the best of class trophy for the cattleyas although there were other larger, even more floriferous plants in the class," he said.

When judging shows, judges compare plants for their visual impact, looking for the "Wow!" factor, Prout explained. This usually gives the blue ribbon to the best color and form and most flowers on a healthy, well groomed plant. One plant may not possess all the attributes, but one should stand out above the rest.

Since one of the objectives of judging is encouragement and enjoyment of the hobby, judges award ribbons



fairly freely at the show level and sometimes award multiple ribbons in categories where numerous plants are obvious contenders, Prout said. That's why numerous ribbons could be seen at the Kansas City show after exhibit judging was completed. However, the judges get tougher when a plant is selected to be considered for an AOS award.

"Judges will discuss a plant's attributes in comparison to the standards, which generally emphasize color, roundness, symmetry, fullness and floriferousness," Prout said. "They compare the plant to ones of the same species or hybrid that have received past awards, consulting the published record. If one of the judges on the team considering a plant nominates it, they then score the plants using a 100

point scale quantifying its qualities."

The highest flower quality award is a First Class Certificate (FCC) for plants receiving 90 points or more. An Award of Merit (AM) goes to plants scoring 80-89 points and a Highly Commended Certificate (HCC) for 75-79 points. Other AOS awards include Certificate of Cultural Merit (CCM), Certificate of Horticultural Merit (CCH) and Certificate of Cultural Excellence (CCE). At the Kansas City show three AMs, two CHMs and one each HCC, CCE and CCM were handed out.

Once a plant gets an AOS award the grower gets to add the award designated for the plant as part of its official name. And better yet the grower gets to personalize the plant's name by choosing another name. Slc. Yellow Warbler, for example, now is officially named Slc. Yellow Warbler 'Hoosier' AMA/AOS. The personalized 'Hoosier' name was added by its grower, Hoosier Orchids of Indianapolis, IN. Individual growers sometimes will add their own name or the name of a loved-one as part of an AOS award name.

It takes a minimum of six years to become an accredited AOS judge, Prout said. Those wanting to be judges have to attend monthly judging sessions at a judging center and do other study. They serve as student judges for three years and then as probationary judges for three more years. Prout currently is a probationary judge.

"In monthly judging sessions at the judging center, students learn about judging through practice and get the opportunity to demonstrate their own knowledge. They attend lectures and read as widely as they can in orchid publications and books to expand their knowledge," he said.

To see photos of all the orchids that won AOS awards at the show go to <http://www.kcorchidshow.org/MOAC%20Fall%20AOS%20Awards.pdf>.

Flowers in the sky

By Becky Peck, Class of 2003

As the new year begins, I reflect on what went well in my garden in 2007, and what needs improvement. On page one of my 2008 planning notebook, I jot the note “My flowers were only in the dirt on the ground. None were in the sky.” After all, there’s more available space vertically than horizontally! No, not butterflies. Hummingbirds. As their fan club calls them: hummies.

With the assistance of *The Hummingbird Book* by Donald and Lillian Stokes, as well as numerous articles on hummingbirds from the Missouri Department of Conservation (MDC) (www.mdc.mo.gov), I’d like to tell you about the one hummingbird that does nest in Missouri. Sometimes, you will see other types of hummingbirds as they come through on their migration, but only one makes our locale its summer home: The ruby-throated hummingbird.

These little fellows are just under 4 inches long and weigh 3 grams each. That is about the weight of a dime. The MDC site puts this in perspective by telling us you could mail nine ruby hummies for the price of a first-class stamp. Now, that is tiny!

The throat area of the hummingbird is called the gorget (gore-jet). When the sun hits the gorget on the male hummingbird, is it a brilliant ruby red. The gorget is used to attract females and for territorial defense. The females and immature males have white throats with gray flecks. All of the rubies have emerald green backs, wings and tails with white below.

Hummingbirds only occur in the Western Hemisphere. Most of the 320 species of hummies live in Central and South American tropics. About two dozen species are in the western US. The rubies range east of the Rockies,

primarily from the Midwest to the east coast, and up into southern Canada. They like to breed in mixed woodlands and deciduous forest, but are also attracted to our garden flowers and feeders. Frequently you will find them along bodies of water, with the nest on tree branches over the water. In August and September, you will

find them eating voraciously as they increase their body weight by 50% to begin their journey to their winter homes from Mexico to Panama, and occasionally the southern tip of Florida. Their numbers are much larger in the fall, as the population has increased from the summer’s new births. The cool nights and shortening days are what signal the hummingbirds to leave for the winter. In late September the migration begins and usually by October 10 they are gone.



Contrary to popular belief, leaving hummingbird feeders out too long does not prevent them from migrating. Bring feeders in after this date. September is a good month for “hummie-watching” as they are eating to begin their journey. They also dearly love hovering over a water mist. This is how they groom, rather than using bodies of water.

Hummies do something rather interesting that has been described as similar to hibernation. This state is called “torpor.” Their heartbeat slows down from 1,260 to 50 beats per minute, with irregular breathing that sometimes ceased entirely for brief periods. On cold nights, their body temperature will drop as much as 20 degrees. They go into torpor only when their energy levels are very low. Torpor conserves energy. This state can last 8-14 hours. Larger hummies may take an hour to fully recover from it in the morning. When the body temperature reaches 86 degrees Fahrenheit, they will fly again. As the cool weather comes in the fall, semiconscious hummingbirds may be found on branches, window sills or in garages. If you pick them up, your hand is sufficient warmth to revive them. I also heard a story about a hummingbird that got hung up in a spider web and was found semi-unconscious. The bird was placed in the palm of the hand and an ice cube dipped in sugar was allowed to melt and drip into the hummie’s mouth. Within seconds, the recharged bird was up and out.

It is believed that when the hummies return to us in the spring, they travel nonstop across the Gulf of Mexico. This is about a 500 miles journey that reduces their body weight in half. They begin to arrive along the Gulf Coast in late February. Some of the rubies make it to Missouri from mid to late April, but most get here in May. The males get here 8-10 days before the females to establish their

territory. Hummies can fly up to 60 mph and can live up to nine years. Their wing muscles, for their size, are much larger than other birds. Although known for their ability to hover, they spend over 60% of their time perched. Of the Missouri birds, chimney swifts are the closest relative to the hummingbirds.

The males and females are only together during the courtship dance, followed by mating. You will know when a courtship dance is happening, because the male will fly a U-shaped looping path starting up to 12 or 15 feet above the female. The female then has total responsibility for creating the nest, incubating the eggs and the resultant babies.

When the females arrive, they start their nests right away. Usually, they are 15 to 20 feet above the ground, near the tip of a down-sloping branch, with a leaf canopy above it. They don’t want to be in strong wind, and prefer a sheltered location. Much to my surprise, there is a “hummingbird nest” that isn’t a box structure like we are familiar with for nests. The following link will take you to a “nest” that mimics what the hummies like: A letter C with the bottom being forked for nest placement. There is also a leaf overhead. See www.hummingbird-house.com.

The nest is about the size of a walnut and is constructed of lichens, plant fluff, and spider webs. The spider web allows the nest to expand as the little ones hatch and grow. There are two white eggs the size of peanuts, that hatch in 12-14 days after they are laid. The little ones fledge in 18 to 20 days. Two and sometimes three broods are raised per season. They take to flight generally without their mom and have the most difficulty perching, as their feet are not that strong.

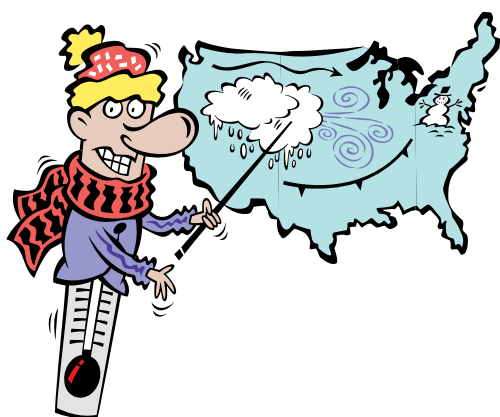
The rubies like nectar. When they arrive in the spring, there are few blooming plants. They will feed on the tree sap from holes excavated by

yellow-bellied sapsuckers. They also eat insects and spiders. It is important to put out your hummingbird feeders before they arrive so they will establish themselves in your yard and continue to stay once the flowers are in bloom. One of their favorite flowers is the trumpet creeper, a woodland vine. Some other preferred native plants are the cardinal flower, jewel weed or touch-me-not, royal catchfly, fire pink, wild bergamot, native honeysuckles, red buckeye tree and columbine. The *Grow Native!* Website (www.grownative.org) will help you select native flowers for hummies. Red and orange flowers are the most magnetic to them because they have learned those flowers contain the most nectar.

Hummies are very territorial around their favorite flowers. Place the flowers meant to draw the birds in different areas in your garden to increase the number of hummies you get. Grow plants at various heights, spaced to give easy access to the birds. Augment with containers of flowers. If you don’t have a lawn, potted flowers will draw them too.

Hummingbirds like a sugar and water mixture that is similar to nectar. Boil four parts water to one part sugar. Let it cool. Add it to your hummingbird feeder and make sure it is out and available by April the 25th. Refrigerate any leftover mixture. Do NOT use honey instead of sugar, sugar substitutes, or red food color. During warm weather, wash out the feeder every two days and replace it with fresh solution. Otherwise, bacteria and/or fungus will grow. The Missouri Conservation Department website mentioned above has instructions for how to build your own hummingbird feeder. Leaving the perch off of feeders discourages larger birds that can’t hover from taking the hummies’ food. Put the feeder near the plants that are attractive to the rubies. Protection from the wind and

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The Back Fence

Quarterly publication of the K.C. Metro Area Master Gardeners

Volume 34, Issue 1
January 2008

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vegetable scraps, etc. over the winter. Next spring, I will plant my tomatoes around the outside, and tie them to the metal to help hold them up. The compost will help nourish the soil and hold in moisture, and it will not be touching my plants. I might find that I need to add a chicken wire lining next year, but I'll let you know how it turns out.



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some shade will enhance the appeal of your feeder. Hummingbirds will try to monopolize feeders and chase others away. If a group gathers, they will dart in and out taking turns.

There are more hummingbirds in Missouri in the Ozark region and southern areas of the state than any other. Fewer are in the Mississippi lowlands and northern half of the plains, largely because this area has extensive cropland and doesn't offer as much of the preferred habitat. Hummies can become quite tame, as you can see from the photos. If you have several hummies in your locality, it is not unusual for them to consume a gallon of sugar water each day.

Did you know that:

- Of all birds, hummies have the largest relative heart size? Their heart is 2.4% of their body weight.
- Hummies lay the smallest egg in the bird world.
- If our metabolism was similar to that of the hummingbird, we would have to eat 285 pounds of hamburger daily to maintain our weight!
- A hummie consumes roughly half

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production supplies, starting seeds, and a good one: how to reduce your growing time. There are sections on growing annuals and bulbs, perennials, woody plants, and trees. Quality standards are discussed as well as methods of marketing your product and which would be best for you.

Do you know what a #5 container is? When you buy a small seedling tree, what does "1-0" mean in describing that tree? Have you heard of e-Greenbiz.com? What does vernalization mean and which plants need it? When do you not have to collect sales tax when you sell plants? You must take the course to find out! Go to www.ed2go.com/jccc and enroll today.

his weight in sugar every day.

- Hummies are very aggressive and will attack much larger birds.
- Hummingbirds are not believed to have a sense of smell. Food is located by sight.
- The hummingbird's tongue has grooves on the side where the nectar is collected.

Just like Elvis, the hummingbirds have imposters. There is an insect that looks and acts like a hummingbird and is even named after the hummies: The hummingbird clearwing from the sphinx or hawk moth family. Look closely and you will see that they have antennae, unlike the hummingbird.

In your 2008 planning notebook, make some notes to plant hummingbird plants and get your feeders out by April 25th. If you want to see if you can be one of the lucky ones that gets a nest within view of the window of your home, try a couple hummingbird nests and let us know how you do. If you get a group of hummies at your house, see if they will eat their nectar from a red cup in the palm of your hand. Fill your sky with flying flowers.