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flowers; but some gold-colored cultivars, like Silky Gold, have recently been introduced. I've trialed Silky Gold as a cut flower and found it to be reliable, uniform, high-yielding and a great host for monarch caterpillars and butterflies. Actually, I've cheated a bit by including this plant on the list. It does attract great numbers of monarchs, but they won't attract birds. You may be aware that monarchs are distasteful to birds because of the glycosides they accumulate in their bodies by feeding on butterfly weed. Still, monarchs are such beautiful insects that it's worth including this plant in any garden.

Butterfly bush (*Buddleia x davidii*) is actually a woody plant that reaches a height and width of about 4 feet each summer. In all but the most protected sites in Minnesota, it dies back to the ground in fall and resprouts new shoots each year, thereby functioning much like an herbaceous perennial. But in open, cold locations and in northern Minnesota, it dies in the winter and should be treated as an annual, grown from cuttings. Even where it functions as an annual, it is cost-effective because of the garden space it fills. Butterfly bush flowers at the end of the season, producing slender 4- to 8-inch long clusters of small lilac-like flowers. The color range includes white and a wide range of violets from pale lilac to intense purple. Flower scent is very sweet, and the fragrance wafts through the air on still evenings (plant a few near the clubhouse). Many butterflies feed on butterfly bush, and hummingbirds constantly hover over it in late summer.

Pink Cosmos (*Comos bipinnatus*) is an old-fashioned favorite that can be direct-seeded or transplanted as a seedling. The bushy plants have very fine-textured, fern-like foliage and 3-inch pink, lavender or white daisy-like flowers. Pink Cosmos is a great plant for the background of a border, but it does perform better when deadheaded periodically throughout the summer. The 4- to 5-foot height of most cultivars would limit their use on the golf course, but there are a few lower growing types available.

Annual Blanketflower (*Gaillardia pulchella*) is an interesting annual. It is a daisy, but its flowers are tubular instead of flat, and they are arranged so that the flower heads form 2-inch globes of red, yellow or red-and-yellow. Perennial gardeners are familiar with the perennial species of blanketflower, but this annual type

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was not grown much until 1991, when the cultivar "Red Plume" received an All-America Selections (AAS)award. This cultivar is excellent, forms a loose 12-inch mound of foliage, with flowers rising to 24 inches on wiry stems. They make great cut flowers and add an element of movement as they sway in the breeze. Occasional deadheading helps keep them in color. Annual blanketflower performs best in perfectly drained soil, and it tolerates droughty summer conditions well.

Globe Amaranth (*Gomphrena globosa* and *Gomphrena haageana*) is a popular dried flower valued for its clover-like flower clusters that are available in magenta, pink, red and orange. There are white types, but they are a little muddy in color; there are better white flowers for the annual flower garden. Glove amaranth is upright and bushy, reaching a height of 24 inches with minimal maintenance. It tolerates great drought during the summer.

Most cultivars of **Lavender** (*Lavandula angustifolia*) are tender perennials, but one cultivar called "Lady" can be grown as an annual. Lady lavender won a much-deserved AAS award in 1994. It is small, reaching a height of 10 to 12 inches, and it is not reliable as a perennial. Still, as an annual it is delightful. It produces its flowers in August, at a time when there are not many blue-lavender flowers in the garden. During the heat of August, blue is a welcome cool color. The fragrance of the flowers is pleasant not only to us but to many species of butterflies as well. Even when the plant is not in flower, its narrow gray-green foliage makes a high-quality edging plant for a garden.

Sweet Alyssum (*Lobularia maritima*) is a popular edging plant. Pinks and lavender cultivars are available, but the white ones are still the best. This fragrant little plant is a member of the mustard family; like most of its relatives, it performs best in cool weather. That means that it flowers in spring and fall, but less during a hot summer. Here in Maine, especially along the coast, it flowers relentlessly from late May through mid-October. In the hot summers of the upper Midwest, it generally stops flowering in summer. In those locations, it can be sheared back to 2 to 3 inches in height and allowed to produce another crop of flowers in fall. Sweet alyssum is an important source of nectar in early spring and late fall, when many other plants produce few flowers.

Some of them, like parsley, provide excellent leaf tissue for caterpillars (after all, if you don't have caterpillars, you won't have butterflies).

Flowering Tobacco (*Nicotiana alata*) has been much improved by plant breeders. Years ago, it was a leggy plant that needed deadheading to perform well throughout the summer. Newer types flower much more freely, are more compact (14- to 18-inches), and include an expanded color range of reds, pinks, white and pale green. Many are fragrant. Newer types tolerate heat and a fair amount of drought, but all perform better in a slightly more protected spot, and most tolerate partial shade. This plant is frequented by butterflies and hummingbirds.

Parsley (*Petroselinum crispum*) is primarily known as a cooking herb, but it also makes an excellent edging plant in an annual garden. It is a biennial, so it doesn't produce flowers until its second year. Of course, we grow it as an annual for its foliage. Swallowtail butterflies' caterpillars feed voraciously on the foliage of parsley. Since the plants produce abundant foliage, this feeding rarely causes significant cosmetic damage to the plant. As a crisp edging for a garden, parsley is a high performance plant.

Petunia (*Petunia x hybrida*) is a plant that people either love or hate. It requires fairly high levels of fertilizer, it must be deadheaded frequently, and it usually needs to be cut back once or twice during the season to prevent leggy growth. But when managed well, petunia produces unequaled color in the garden. It has one of the widest color ranges of all annuals: reds, white, blues, purples, pinks, yellow and many bicolors. If you are choosing among the standard petunias, select a multiflora type over a gradiflora. Multifloras produce smaller flowers, but there are more of them, and they recover better after rain.

Blue Salvia (*Salvia farinacea*) is a popular plant for the midground and background of annual gardens. It does well in hot, fairly dry locations, and also lasts long after the marginal frosts of the fall. One excellent cultivar is "Victoria," which reaches 18 inches in height and flowers quite freely. A newer type that is a bit more unusual and very desirable is "Strata," an AAS winner for 1996. This cultivar produces silver sepal tubes and blue petals, giving it a pale blue appearance from a distance and a bicolor appearance at

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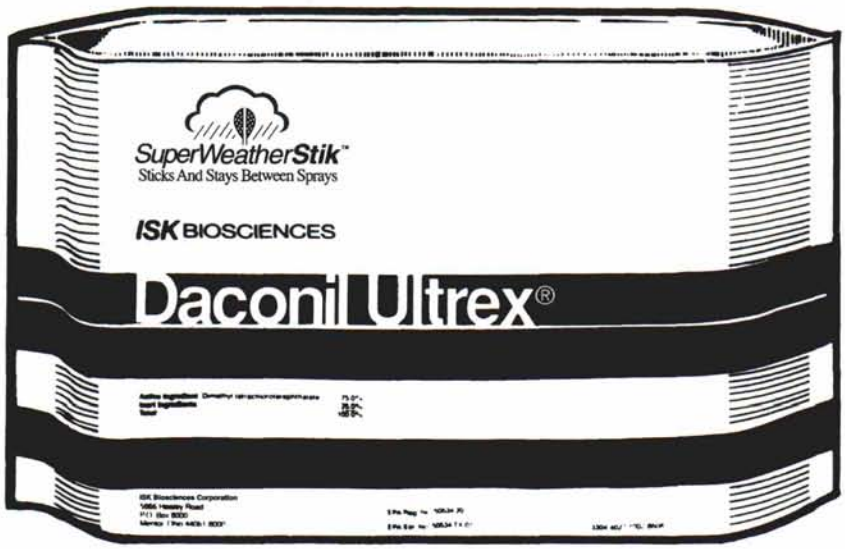

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Endangered Species in Your Backyard

Tod Hopphan
Elgin C.C.

It is time once again for my annual plug for the Audubon International Cooperative Sanctuary Program. Have you joined since I last wrote? I hope so. If not, what's holding you up? This is a great program, and with your membership, you are supporting a great cause and will be improving your image as an environmental steward to your community. Please consider joining, if you haven't already.

I would like to bring to your attention another aspect of the Cooperative Sanctuary Program: threatened or endangered species. Golf courses are becoming some of the only refuges left for species to survive, and more often, these rare species are settling in the areas provided by golf courses. In my involvement at Eagle Brook C.C., I found out from Audubon International that five species on our wildlife inventory are recognized as threatened species in Illinois. These species are: Pied-Billed Grebe, Black Crowned Heron, Great Egret, Sand Hill Crane (one time) and Little Blue Heron. Beyond the obvious definition of being endangered or threatened, I wasn't sure how they were determined.

I contacted Glen Kruse, who is the head of the Endangered Species Program for the Natural Heritage Program/Division of Natural Resources. He mentioned that there are two separate listings for threatened and endangered species: federal and state. These lists have similarities; however, the federal one is more generic. The state list is more detailed and is divided into regions. The state definitions of threatened and endangered species are as follows:

Threatened: Any breeding species which is likely to become a state endangered species within the foreseeable future in Illinois.

Endangered: Any species which is in danger of extinction as a breeding species in Illinois.

The animals that are deemed either threatened or endangered are determined by an independent, governor-appointed board known as the Endangered Species Protection Board. They do all the legwork in determining which species are endangered in the state of Illinois. Once on the list of endangered species, the DNR is responsible for managing them and their habitats.

I contacted the DNR's web page at dnr.state.il.us/ (no www) and pulled down their current list of threatened and endangered species. Their list was quite extensive (20 pages) and included the following numbers for endangered and threatened species:

Fish	21/9
Reptiles & Amphibians	9/9
Birds	33/9
Mammals	6/3
Invertebrate Animals	40/9
Plants	306/57

If you would like this list, I can make a copy, or you can download it from the DNR's web page listed above.

Currently, to help manage these species and their habitats, the state has 23 regional/district heritage biologists located across the area. Brad Semel is one of these biologists (McHenry County area); and some of his duties include managing state natural areas and nature preserves, assisting in prairie burns, prairie restoration and keeping track of plant and animal populations. They try to keep up with land development within their districts and offer advice and coordinate these developments so they won't disturb any special habitats. One endangered species project Brad has worked on was assisting on the development of Thunder Hawk G.C. Also, in the Chain of Lakes area, his department is working with the Army Corp of Engineers to help deter the erosion (six acres down to almost one acre) of an island that is the only known nesting site for the Foster's Tern.

Hopefully, this has enlightened you a little bit on endangered species and their management. Once again, it is important to realize the impact we have on the environment. If we can manage our property to its fullest potential, only great things can be reaped from our efforts, and our image in the public will be kept as an asset. Finally, as a last note, join the Audubon Cooperative Sanctuary Program!

Butterflies Are Free . . .
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closer viewing. It is 16 inches tall, very uniform and very floriferous. All of the salvias attract many butterflies, but the blue salvias are less maintenance than the others.

French Marigold (*Tagetes patula*) is an old standby for annual flower gardens, and new types are introduced each year. Generally, the plants are 8 to 16 inches tall with a single or double flowers available in yellows, golds, oranges and red. Although deadheading throughout the summer is essential to keep them in color, the results are worth the work. Few plants can equal the bright spectacle of these annuals.

Scotch Marigold (*Tagetes tenuifolia*) is less known than French or African marigolds, but it is unique. It forms a highly branched mound of fine-leaved foliage, 16 inches across and 12 inches high. The single flowers are small (less than one inch diameter) and either yellow, gold or orange. What this plant lacks in diversity, it more than makes up for in lack of maintenance. It is the one marigold that does not require deadheading to produce all season. A line of these plants at the edge of a garden is attractive all season. There is one caution, however; the plants are not as uniform as the other marigolds, and you must select uniform seedling at planting time in order to achieve a high-quality planting.

The **Verbeneas** have long been popular landscape annuals, known for their intense colors. A rather new and unique one is *Verbena speciosa*, "Imagination." This plant won an AAS award in 1993 for its very fine-textured foliage, its low spreading habit (it easily spreads to 24 inches in diameter by midsummer with a height of 6 inches) and its intense purple flowers. This is an interesting annual for some locations, and it attracts good numbers of butterflies and other insects, but there are two cautions. First, it tends to produce an intense array of flowers that peak in color in mid-August and then diminish in color for the rest of the season; and second, every stem seems to root vigorously.

Zinnias are wonderful annuals for the cutting garden, but they pose some serious challenges on the golf course: powdery mildew and fungal leaf spots can devastate the plants in a humid season. But one species of zinnia, the "Narrow-leaved Zinnia" (*Zinnia angustifolia*), is highly resistant to the fungal problems. It produces 1.2-inch yellow or white flowers all season, regardless of deadheading. The plants are upright and bushy, 24 inches tall and very free-flowering. Like most members of the daisy family, it attracts many insects including butterflies.

These annuals are high-quality landscape plants that will put on a good show of color from mid-June through frost.

Putting Annuals Together in a Butterfly Garden

Generally, annual gardens look best when many plants each of just a few different types are used. For example, a garden with 15 spider flowers in the middle, 30 geraniums around them and an edging of sweet alyssum around them would be more effective than a garden of 5 each of 20 different types of annuals. In other words: keep it simple!

Here are just a few ideas for annual gardens, using the plants in the list above:

1. You could achieve a large, rather tall and imposing garden by planting several deep blue or violet buddleias in the middle, surrounded by pale pink glove amaranths, and edged with parsley. In this garden, gomphrena would flower most of the season, parsley would provide caterpillar food all season, and the buddleia would produce great color and attract many species of butterflies from mid-August until hard frost.

2. A simple but very effective "cool color" garden could be created with a central area of Strata blue salvia, surrounded by Lady lavenders, with an edging of white sweet alyssum. The sweet alyssum would produce color and fragrance for golfers and nectar for butterflies in the cooler parts of the year. The blue salvia would be effective from late June until hard frost, and the lavender would provide elegance in August.

3. You could plant a brightly colored garden that would attract a wide range of butterflies with a central area of Silky Gold butterfly weed interplanted with Red Plume blanketflowers. Around that, plant lower growing yellow Scotch marigolds; and as an edging, try some dwarf red French marigolds.

4. On a south-facing slope, try a mass planting of either Imagination verbena or Purple Wave petunia. Either would be quite stunning and would require little maintenance during the summer.

Credit: Hole Notes *5/96*

Don't Let the Legal Beagle Bite You
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protect ourselves and our employers from our somewhat confusing judicial system, in layman's terms, of course.

To do this, I must first give a bit of background information on this case that I am so familiar with. This case involved a golfer being struck by a golf ball on a golf course. Imagine that. To further complicate matters, the individual was struck while playing his golf ball from a temporary teeing area. This temporary tee was set up and was being utilized by the golfers because the original tee was under construction at the time of the incident, an all too familiar common maintenance practice among golf courses these days. It was the contention of the golfer, who was struck by the golf ball (the complainant), that the golf course was negligent in putting the temporary tee in an unsafe position. Our defense to this was prove it, which in the State of Illinois means they would have to prove to a jury beyond a shadow of a doubt that I and the golf course I am employed by willfully and wantonly were negligent in the placement of this temporary teeing surface. In the end, this defense proved to be insurmountable for the complainant.

As you may already have guessed, a case such as this should never have made it to trial; and most of them do not. They are usually settled out of court for a significantly lesser amount than what is mentioned in the lawsuit. This brings me to my first commonsense step to the winning of a liability litigation lawsuit:

1. Do not treat any liability litigation too lightly. Always be prepared to see this case through to the end. Never think that your case will not ever end up in court, because just when you do, you will soon find yourself sitting in front of 12 jurors who do not want to be there anymore than you do.

2. Keep impeccable records, and I am not only talking about those insurance forms we all dread filling out. I mean take photographs or videos of the accident scene on the day it happened. Keep a daily journal and record all significant jobs for that day. Even weather reports may be a factor in proving your innocence. Gather your own witnesses, and do an immediate, thorough investigation. Just remember, it may be two to three years before a case ever makes it to a court. The more information you give yourself initially will only benefit you later.

Do not treat any liability litigation too lightly. Always be prepared to see this case through to the end.

. . . just remember you, the superintendent, know more about your golf course than anyone else. Make sure that point is brought out to the jury.

3. Hire a professional. I truly believe that if I had hired a golf course architect or consultant to do the design work on the newly constructed tee and mark the temporary tee location, my case would have never made it to trial. Do not put yourself or your employer in that position. Any money I saved by doing the entire restoration project in-house is nothing compared to the dollars given away by having to fight in a liability litigation lawsuit, whether it goes to trial or not.

4. Keep to the facts. If you do find yourself giving and listening to testimony in front of a jury, just remember you, the superintendent, know more about your golf course than anyone else. Make sure that point is brought out to the jury. Prepare yourself to find fallacies in the expert witnesses that will be brought in. Most of all, think each answer through before saying it out loud. Remember, lawyers will not ask a question they themselves do not already know the answer for. Throw their timing off by asking them to repeat the question or to be more specific with their questioning. It is perfectly legal without being argumentative, and it also will show the jury you know how to keep your cool while under fire.

5. Last, but not least, the most commonsense step of all is prevention. The best way to winning a long, dragged out liability lawsuit is to avoid it altogether. Keep your safety standards high for the golfers and employees alike, and you, too, may keep the legal beagle from biting you.