



Rough life

Roughs populated with native species are not maintenance-free. Key problems to be aware of to keep your native areas from going wild.

By John Torsiello

The pros and cons of the native – or naturalized – roughs is pretty simple. “The pros are that native rough areas are aesthetically pleasing to the eye, easier to maintain and are good for wildlife,” says Tim Moraghan, founder of Aspire Golf Consulting in New Jersey. “The cons are they are a pain in the ass when you hit your \$5 Pro V into them and can’t find it due to density.”

Moraghan’s assessment is intentionally glib, but it strikes a chord. A \$5 hit in the wallet for the paying customer notwithstanding, more and more owners and superintendents are turning to a wide variety of grasses to naturalize rough areas on their courses.

“Converting mowed, irrigated rough areas to native grasses can reduce water, fertilizer, and pesticide inputs and may reduce mowing,” says Dr. Anthony Koski, extension turfgrass specialist, Colorado State University Department of Horticulture and Landscape Architecture. “However, it is important to understand native areas will not be maintenance-free. In fact, if they are neglected they can quickly become weedy and unsightly.”

Older areas must also be maintained to prevent the invasion of shrubs, brambles and trees, Koski says. Grass species – especially if a mix of grasses – will change over time. “The species of weeds, and you will have weeds to deal with, will change over time, as well.”

Major advances in breeding

of turf type tall fescues since the early 1980’s has encouraged more use of tall fescue as primary or secondary rough, says Zenon Lis, vice president of sales at Ohio’s Birmingham Seeds. In traditional cool-season grass growing climates and the transition zone of the U.S., interest in less maintenance has driven the use of tall fescue.

“Tall fescue is used now in areas where there are limits placed on annual fertility and chemical applications,” Lis says. “The turf quality in high performing NTEP-rated tall fescues is excellent, mimicking a wide bladed bluegrass. They can be cut at 1.5 inches or higher, up to natural plant heights non-mowed.”

Another group of species that has garnered more interest in golf rough use, are fine fescues. These species consist of hard, sheeps, creeping red and chewings fescues. The hard, chewings and sheeps fescues have been used more as “no mow” grasses in far roughs and out of bounds areas. They can grow to 8 to 18 inches high and cascade over themselves if left in a natural state.

Fine fescues have an interesting ornamental look, Says Lis says. “In warm-season grass areas in the lower transition zone and further south in the U.S., weeping lovegrass performs similarly as the fine fescue ‘no mow’ grasses above. These all have the potential to be left alone with literally no maintenance when established, except for occasional weed control and spot seeding for fill in.”

A similar scenario occurs regarding mowing height adjustments for roughs further south where Bermudagrass is the prevailing fairway grass. The roughs are also defined as primary and secondary by height of cut. So, the cut gets higher the further away from the fairway.

Out of bounds or far rough areas may be near or around sensitive waterways, so “no mow” grasses can be used here, says Lis. Native grasses such as buffalograss, little and big bluestem, switch grass, wildrye and other species are being used to define extreme far rough and out of bounds areas of play. Some native grasses take a year or longer to show their “true potential,” and weed control can be difficult in the establishment year. Some of native grasses above have a far reaching geographic potential for usage, in both cool- and warm-season grass areas.

Traditional cool-season grasses for golf roughs are the normal species used in fairways, including Kentucky bluegrass, perennial ryegrass, fine and tall fescues.

“Generally, the roughs start as a higher cut area from normal fairway heights,” Lis says. “So superintendents mow at 1.5 inches for a primary rough, and a further out secondary rough would be mowed at a 3-inch or higher height of cut.”

An easy way of transforming mowed rough to native is to simply stop mowing and irrigating the grass, Koski says. Unmowed bluegrass and fes-

cues (both tall and fine fescues) can make for an attractive rough. Similarly, unmowed Bermudagrass in the south can provide a native look as well. This can be a good test to see what the native rough will look like in certain areas of the course. If the look isn’t a good one, the grass can be mowed back to down to turf height.

While grasses are generally the plant of choice for native areas, wildflowers are an option. The advantage of using grasses is they are familiar to the superintendent when it comes to management. Further, weed control is easier with grass roughs; selective weed management in wildflowers is complicated (for some mixes) to impossible. An added plus of going native, says Dr. Koski, is that, “Conversion to the native look – and especially if using true native species – can be attractive for many forms of wildlife on golf course: birds, butterflies, and bees and native pollinators.

Depending on the grasses established, the native area will require some sort of vegetation/biomass management. This might entail mowing in the fall or spring and clipping collection. Burning every other year is an effective biomass management tool, where practical and allowed. Dr. Koski says weed management is essential during the establishment years one to three. When established successfully, weed management can be done on a spot basis. He adds, “Fertilization of native areas should not be

necessary. Fertilization often encourages weed growth and provides little benefit to the establishing grasses. However, on some very poor soils, including those low in organic matter, some starter fertilizer might be warranted."

The most common mistake made in the establishment and ongoing maintenance of native grass areas is excessive irrigation – especially once the grass has become established, leading to weed problems in native areas. Excess irrigation creates a stand that is so dense that it is impossible to find a lost ball – much less give the golfer an opportunity to attempt a shot.

Depending on whether grasses are warm- or cool-season species, there are specific windows of time when they can be planted in rough areas for optimal success. While combinations of cool- and warm-season species are "natural" and commonly sold by seed companies for native conversions, weed management is complicated with a cool/warm mixture. Herbicides safe for use on warm-season species (imazapic; Plateau, for example) are often not safe on cool-season grass, and vice-versa. If burning is desired as a biomass management tool, then warm-season grasses are a better choice, since they burn more easily. If true natives are preferred, it is important to do your homework to find the best-adapted natives for your area – and a good source of seed for those grasses.

One true native grass that seems well-adapted for use throughout the U.S. is little bluestem, Koski says.

"This is a native, warm-season, shorter-growing species that has a remarkably

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broad native range, from the Northeast to California, and fairly far south into the humid Southeast," he says. "A couple of other widely-adapted natives, though taller than little bluestem, are indiagrass and switchgrass. The grama grasses, particularly blue and side-oats, can also be used throughout a broad range of the U.S."

While not native, the fine fescues (hard, chewings, sheeps) can provide a native look and will do well everywhere except the deep Southeast.

Dr. Fred Yelverton, co-director of the Center for Turfgrass Environmental Research and Education at North Carolina State University, cites studies that show a wide variety of plants are used in naturalized rough areas. "The main thing people need to know about these naturalized areas is that they are not low maintenance. Superintendents who have these areas on the golf course will tell you they are pretty high maintenance."

He says plant species sometimes best for naturalized areas are Andropogons, but probably the most common species used are fescues. "Fine fescue is very common but many of these areas have other plants

(Andropogons) planted in the naturalized areas. The more species you put in these areas, the greater the difficulty in managing them. Weed management is typically the most important part of maintaining naturalized areas."

Choose a plant that performs well in your area. If not, you will be in constant re-establishment mode, says Yelverton. The most common symptom of poorly adapted plants is weed invasion. "For instance, fine fescue typically gives the desired look for most of the country, but in the warmest climates or the desert, fine fescue will not work."

If unsuitable plants are used in a region, they may not survive, leading to the cost of

replanting something else, says Chris Hartwiger, a USGA senior agronomist.

"If the proper plant is used in the wrong location, extra maintenance may be required to facilitate less searching for lost golf balls," he says. "If expectations are not communicated clearly to management and staff, the finished product may be disappointing to some, leading to a change in species or different management."

Plants suited for native areas run the gamut and should be researched and selected based on the region a course is located in," Moraghan says. "I constantly preach do not force a square agronomic peg into a round hole."

Fescues, broom sedges, and red top bent grass may work well in cool-season arenas," he adds. Tall fescues for "way out of the way" areas can work. Wildflowers "look great" but are time consuming to establish and can end up with weed patches. Warm-season golf courses may have a limit to fine fescues, but the further south the less successful you will be, Moraghan adds. **GCI**

John Torsiello is a Torrington, Conn.-based writer and frequent GCI contributor.

For more...

Looking for more info about what to plant in your roughs? Just enter the following link into your browser to check out the following articles.

- The Fescue of Your Dreams. If you want it wispy...it must be crispy! By Bob Vavrek <http://bit.ly/1pwibr5>
- The Use of Non-Mowed Fine-Leaf Fescue Grasses on Golf Courses. Fine-leaf fescue is a versatile candidate for use in many areas around the golf course. By M. Alihari Vandi and Kevin N. Morris <http://bit.ly/1m3V0E9>
- Fine Fescue Roughs and Fairways. Green alternative or niche grass? By Robert Vavrek <http://bit.ly/1dKnuxS>
- Native Spaces. A growing trend that's good for the environment – and, in some cases, the budget. By Megan Leonhardt <http://bit.ly/1ix2z5v>



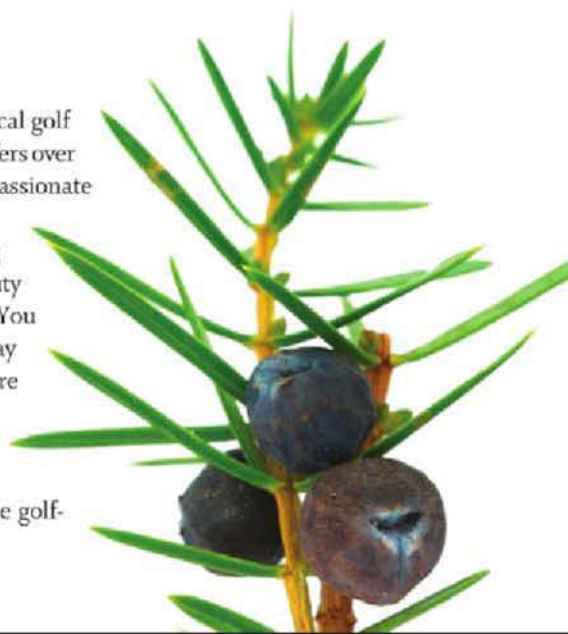
FIRST LINE OF DEFENSE

Maintained ornamentals add just as much to the overall experience at your course as manicured greens and fairways. Pest control expert Joe Cea outlines how to protect that landscaped beauty from varmints looking to make it their lunch.

by Joe Cea

While maintaining the grounds and greens of a local golf course there is one thing I have learned about golfers over the better part of the last decade – they are very passionate about their sport and how they play.

In spite of this zealotry for the game and always striving for personal “bests” even bad play can be augmented by the beauty of the course itself. Every golfer has had “one of those days”. You know “Not my day today but you know what: it’s a beautiful day on a beautiful course...” Even in passing I’ve heard this quote more than a few times while meandering around the course carrying out my responsibilities. As part of the grounds crew I always key in on the last part about the grounds being beautiful. Indeed, I have first-hand familiarity that when it comes to the golf-



ing experience, a well-designed and maintained landscape plays an integral part.

Sculpting that landscape obviously has several purposes and objectives. Visual appeal, especially driving up to and around the clubhouse area, is first and foremost. Specific ornamentals and perennials help guide golfers through the course and/or provide challenges as well as shield certain supplemental areas, such as a pool, tennis court or mid-course bathroom from common view. The challenge not only lies with matching your landscape to the particulars of your course – such as taking into account shade tolerance or having weeping willow trees near ponds – but also taking into account the various wildlife species that typically inhabit a golf course that may damage your hard work.

Obviously, keeping the very character of the course intact and beautiful is paramount to enhance a round of golf. But from a cost standpoint, every superintendent knows it's easy to drop big dollars on ornamental plants only to have

them completely destroyed by deer, rabbits and other native wildlife the very next day.

Realistically, if the majority of your ornamentals live behind netting, burlap or individual wire/wooden coverings to prevent wildlife damage, then not only does it look awful but it suggests a different approach is required.

The first line of defense is to find specific plants that not only bloom brilliantly, but are not palatable for some wildlife species. This is mostly in reference to whitetail deer as there are many lists from both private and public wildlife management agencies, as well as university cooperative extension offices, that specify plants that deer don't like.

Let's first draw a distinction between the terms "resistant" and "repel." Plants that repel deer will usually keep them at a distance. Many plants that fall into this category have a strong odor, such as lilac or sage. Deer resistant plants are ones deer typically won't eat. Even when eaten, they will still retain their character showing little effects of browsing. Common



“Chipmunks are notorious for digging and eating the bulbs of many ornamental flowers, thereby costing golf courses not only for annual flowers but also perennials that you wouldn't normally have to buy year after year.”

examples include barberry, holly and juniper. Other more colorful examples would be snapdragons, alyssum, iris and marigolds.

Other protections against deer include fencing, but the trick is to place them not only to protect, but also to allow your flower arrangements to be seen and admired. Most recommendations for deer fencing include having one 7 foot or higher. However, fencing of this nature is usually in reference to preventing deer from invading the perimeter of a property which you will never be able to do on a golf course consisting of several hundred acres. That said deer can browse some plants such as arborvitae up to six feet and perimeter fencing on some areas

may help protect – at least on a limited basis – in this endeavor. Our main goal, though, is simply to protect some flower beds. In doing so we just have to keep the flowers far enough away from the outstretched browsing reach of a whitetail. Angling a fence pointing outward – at 45 degrees – from a flower bed does just this because deer have a difficult time judging angles, i.e. jumping high and over distance therefore avoid fencing when not up right at 90 degrees. Decorative fencing can be set up in this manner, but I suggest some kind of blunted point at the top that will come right up under the neck of deer to prevent them from advancing. Also elevate flower beds about three feet in conjunction with angled fenc-



Grow your own

To cut down on costs of consistently replacing wildlife damaged plants you may wish to consider a greenhouse to grow your own flowers.

While the start-up costs may prove high, this is definitely an investment where costs will be defrayed over time. Also, if individual gardens and flower beds scattered throughout the course prove too tough with multiple attempts, then you may wish to consider an arboretum with a nature trail. This not only shows off your plants, but can be more easily protected with everything in one area. This can be a fantastic feature to a course.



ing prohibit deer from reaching or jumping to the bed.

Elevated flower beds also prevent damage from our next contestant – rabbits.

Rabbits are endowed with an amazing jumping ability. Even elevated flower beds will not prevent access. So the goal with an animal that is typically more numerous than deer is to reduce damage because 100 percent prevention is next to impossible. If you have flower beds on the ground a smaller fence (maybe 2-3 feet high) can limit rabbit damage.

Reinforce this by attaching either ½ inch x ½ inch or ¼ inch x ¼ inch galvanized hardware cloth to the fence and buried in the ground three to four inches and then folded outward another 3 inches or so to prevent digging underneath. This should cut down drastically on rabbits chewing the tops off your expensive flowers.

Recognition of which species is nibbling is important. Flowers with a clean cut and lower to the ground are usually rabbits because they are smaller and because their lower and upper incisors leave

Spray away

There are dozens of sprays and other repellents that can be applied to ornamentals to prevent various species of wildlife from destroying your expensive plants.

Some work and others don't. The good thing about using any chemical repellents is that on a golf course the superintendent, or another employee, will generally have a pesticide applicators permit to handle the product.

Ultimately, experimenting with plant repellents may cost you more than replacing the plant itself. So you're better off with more long-term solutions. While spraying pesticides to reduce insect damage – which should be done in conjunction to reduce stress on plants to keep them blooming and beautiful – you may stumble on one that helps with other critters. It's important to keep a journal or some other notations until you find a combination that works in more than one maintenance area.

a perfect shear on plant stems. Deer, on the other hand, only have lower incisors and their cut is only sheared from the lower side leaving a ragged edge on top from tearing off the rest of the flower.

Other uses for hardware cloth are to aid in the war on chipmunks. Chipmunks are notorious for digging and eating the bulbs of many ornamental flowers, thereby costing golf courses not only for annual flowers but also perennials.

Chipmunk holes are about 2 inches in diameter and are frequented throughout the day. Obviously, these critters can be trapped. However, dead chipmunks in snap traps may not be

something golfers want to see. A better, long-term solution is to prevent them from taking up residence. The trick here is to prevent them from digging and that's where the hardware cloth comes in.

In each flower bed, in addition to a weed barrier, cut out a section of hardware cloth and stake it down. Holes can be cut with heavy-duty scissors or metal shears to plant seeds or potted plants. The galvanized wire will allow for the plants to grow while preventing chipmunks from digging at and accessing any roots and bulbs. This same strategy will also work for other diggers such as voles that have a tendency to dig shallow

tunnels through mulch and other soft soil.

Moles also dig tunnels, but are usually much deeper. So a shallow wire barrier would be ineffective. While moles, unlike voles, are carnivorous they usually aren't too much of a threat to ornamental flowers. However, it's their tunnels that become an issue for a course. **GCI**

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