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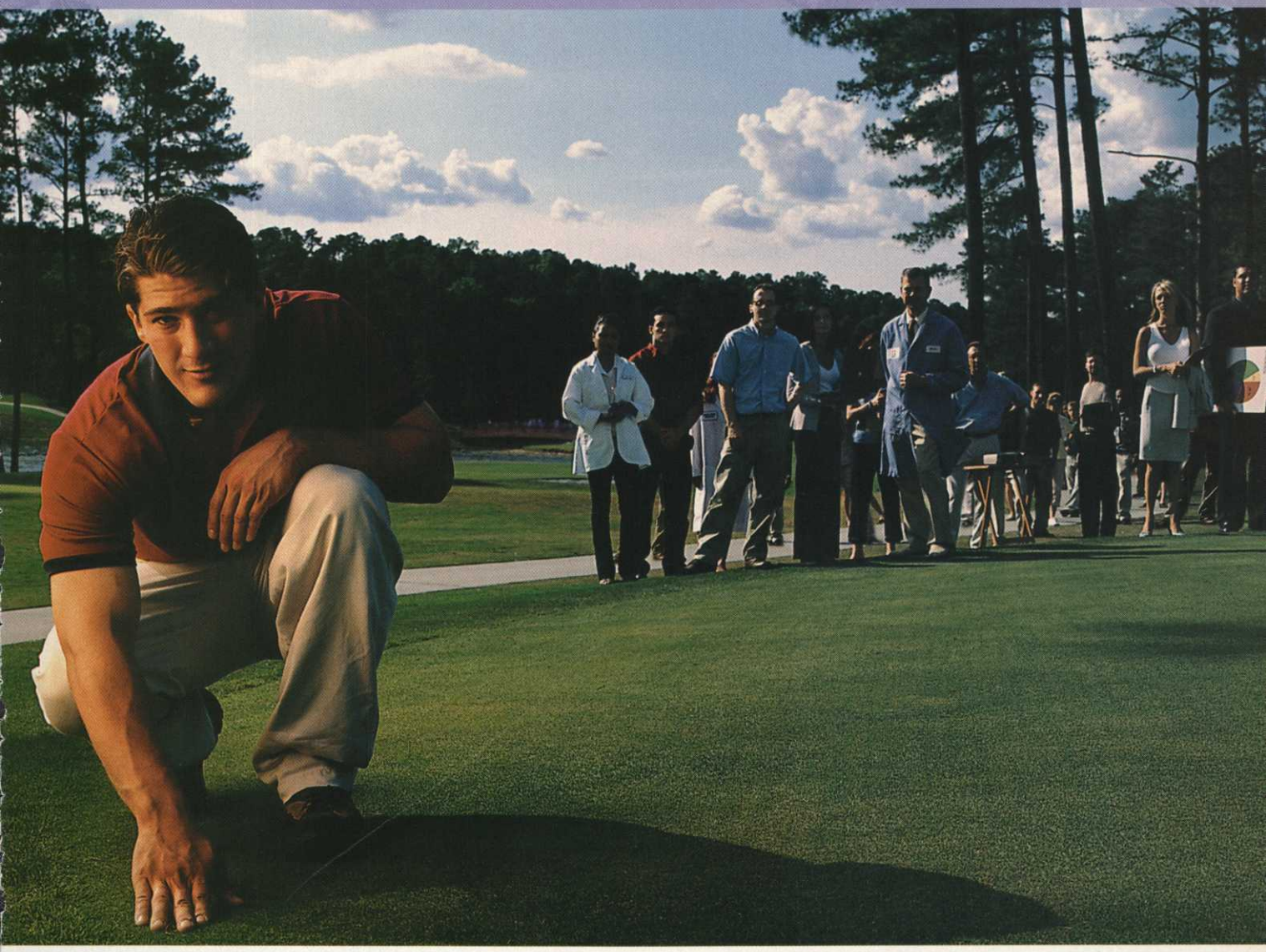

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problem is we're viewed as this big building in Lawrence, Kan., with about 120 faceless, nameless people. But if you dissect this organization, it's about 15 or so small business units operating within a larger structure. We don't see growth for growth's sake. It's not about having 25,000 or 27,000 members because then we generate X thousand more dollars in dues and then have an X million-dollar larger budget. We're seeking out growth objectives for reasons other than pure growth. Sure we want to grow our membership, but the main reason we want to do that is to be able to represent more superintendents and people allied to the organization, which can help us in Washington, D.C., when we're making statements to regulators and legislators. I'm not going to apologize for our growth, either. It indicates a level of success. Having said this, I can appreciate why people think [the association] has turned into this huge faceless mass. The only response I have for that is to [invite you] to come and spend some time with us. You'll see it's not that way at all."

ERS for free

SUPERINTENDENTS' CONCERNS:

(*Editor's note: GCSAA's employment referral service (ERS) is a members-only weekly bulletin to help superintendents find jobs and keep current on employment trends. It costs $50 a year.*)

"Provide the ERS for free with [paid] dues."
– Charlie Fultz, superintendent of the Country Club of Culpepper (Va.)

"Change the ERS."
– Bruce Williams, certified superintendent of the Los Angeles CC

Mona's response:
"This has come up before and has been discussed as long as I've been here. We can give the ERS away for free, absolutely. But the question is: What do we start charging for [in place of the ERS], or what do we reduce, minimize or eliminate [to save the money lost in ERS subscriptions]? There's a consequence for every decision we make. It's a simple equation and we can do it, but something else has to give."

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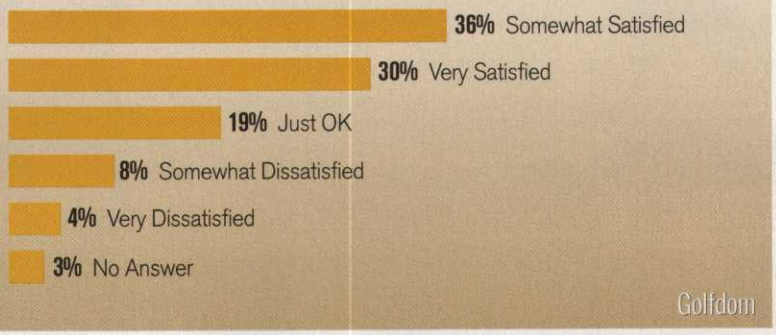

What about the little guys?

SUPERINTENDENTS' CONCERNS:

"Cater to the smaller golf courses. They never take the little guy into account or truly acknowledge them. Trust me, I know."
– Patrick Blum, superintendent of Colonial Acres GC in Glenmont, N.Y.

"Focus not only on the big high-budget clubs, but also the low-budget facilities."
– Scott Wohlers, superintendent of Arrowhead GC in Spencerport, N.Y.

"Support ALL superintendents, not just big budgets."
– Jeff Normandt, superintendent of Valley High GC in Houston, Minn.

"Quit catering to the rich and famous."
– Donald Pleger Sr., superintendent of the Cypress GC in Glendale, Ariz.

Mona's response:
"Obviously, there are strongly held beliefs that we're not about the little guy, and we're just about the big-budget elite clubs. But the reality is different than the perception. A few years ago, we launched what was then known as our Limited Budget Outreach Program — which was not a membership recruitment program but designed to make available the resources of the association and its chapters to superintendents at limited-budget facilities. The program evolved and is now called the Technical Assistance Network because the stigma of 'limited budget' was deemed to be a negative. The program now works through our chapters, which identify facilities within their jurisdiction and region that qualify for the program. The chapter can actually award a scholarship to a facility to be a member of the GCSAA for a year for free. Second, within our own public outreach efforts, I've instructed our staff to look for people and facilities to feature that are not the usual suspects. Are we 100-percent perfect with this? No. If someone from a big-budget facility wins a national award or does something outstanding, we feel an obligation to publicize that." ■

"OBVIOUSLY, THERE ARE STRONGLY HELD BELIEFS THAT WE'RE NOT ABOUT THE LITTLE GUY."

TURFGRASS TRENDS

COLLAR MANAGEMENT

Treat Collars Like Greens for Best Performance

By Matt Nelson

Look through the *Rules of Golf*, and you will not find any mention of a collar. This section of the golf course falls into that all-encompassing category of "through the green." But golfers know the collar (or fringe) as that area of closely cut turf immediately surrounding the green.

Although the width and height of cut vary among golf courses, all collars serve the important role of providing the golfer an intermediate surface between the green and surrounding rough. The collar helps prevent the player from being severely penalized for shots that barely miss or roll through the putting green. These small, distinct portions of the golf course are often taken for granted, but collars can cause superintendents real grief in certain situations.

Avoid unnecessary damage to the collars by minimizing hard turns with the mowing equipment on the area. Employees should be properly trained to turn their mowers in the rough beyond the collar, space permitting.

Proper construction, turfgrass selection and maintenance programs safeguard turf health and playing quality, while streamlining maintenance efficiency.

When building new greens, the collar should be built as part of the green, using the same root-zone architecture to minimize management differences between them.

With USGA greens, the putting-green cavity wall should be vertical or very steeply sloped at the outside edge of the collar. Burying wire along the perimeter of the cavity enables accurate mowing contours to be maintained over time.

Among the most common construction problems facing collars is the feathering of root-zone mix at the perimeter of the green, which commonly results in shallow root-zone below the collar. This can lead to an overly wet root-zone that offers poor turfgrass vigor, poor traffic tolerance and difficult irrigation management.

Maintain a vertical cavity wall during construction to help assure a uniform root-zone mix depth. Also, install smile drains along the edge of the cavity at any low gradient.

Another construction oversight is the failure to install a wicking barrier in arid or stressful climates. A wicking barrier is a plastic liner installed along the perimeter of the putting green cavity to prevent moisture from being drawn from sandy root zones into fine-textured soils typically found in putting-green surrounds. Moisture drawn from the edges of greens and collars can result in severe drought stress to turf in these areas.

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A good cultivation program for the collars is important to maintain a smooth transition from putting green to collar. Mowing practices on collars is no different than on any other part of the course.

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Treat collars like greens

To as great an extent as possible, maintain the collars with the same program you use on putting greens. When the greens are aerated, aerate the collars. Do the same with topdressing, verticutting, pest control, wetting agent use and fertilization. Adopting this philosophy usually will thwart many turf problems common to collars, including the development of puffy turf, disease activity, reduced density and otherwise poor playing conditions.

A good cultivation program for the collars is important to maintain a smooth transition from putting green to collar. *Poa annua* collars can prove an ideal snack for certain insect pests, particularly the hyperodes weevil. Thorough scouting is necessary to properly identify the problem.

Mowing

Mowing of collars is no different from any other portion of the golf course — lighter machines invariably result in better turf quality.

Walk-mowing is definitely the preferred means of maintaining collars, which can be adjusted to a 22- or 26-inch width to accommodate a single pass with common walk-mowing equipment. Although there is no standard for collar width, this practice saves time.

Many golf courses combine tee, collar, and approach mowing into one task that can be performed with the same machine. Where labor and resources are limiting, these areas may all be mowed with a triplex greens mower. The mowing of collars almost always requires continuous turning; thus, more torque and subsequent wear injury will be imparted to the turf compared to mowing in straight lines. Consequently, triplex mowing of collars often results in turfgrass injury and inconsistent playing quality.

At all costs, avoid mowing collars with fairway mowing units. To maintain good turf quality and playability, keep the fairway units off the approach and collar.

Another task to monitor when assessing collar quality is how the putting greens are mowed. Turning either walk mowers or triplex mowers on the collar (especially the infamous spin turn) can accelerate wear injury and, when the turf is wet, cause direct injury. Check out the preparation of a major championship sometime, and you might notice the greens mowers turning on carpet laid over the collars.

Obviously, most golf courses won't go this far on daily preparation, but the method underscores the importance of protecting the collars. Be sure employees are properly trained to avoid causing unnecessary wear injury to the collars when mowing the greens.

Irrigation

As mentioned above, collars are often maintained at the same height of cut as tees and approaches to streamline maintenance. Under certain conditions, this can lead to water-management problems.

Treat the collars like the putting greens. When the putting greens are scheduled for aeration, aerate the collars as well.

One theory concerning accelerated turfgrass wilt in the collars vs. the greens suggests that collar turf has an increased water demand due to the higher height of cut it receives. Therefore, reducing the height of cut during periods of drought stress may actually equilibrate water demand between the green and collar. This phenomenon is usually more of a problem with new construc-

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tion and seems to diffuse as the water-holding capability of the root zone improves with time.

Of course, hand-watering, soil surfactant use and proper construction also should be considered. Also, be sure to check that accumulating sand displaced from nearby bunkers is not compromising the water-holding capacity of the rootzone.

Traffic control

Certain portions of the collars invariably will be subjected to concentrated traffic. It is essential that all power golf cars and pull carts be kept off of the collars.

Some golf courses have installed dedicated sprinklers to mist the collar area.

Substantial wear injury from pull-cart encroachment on collars has been observed at numerous golf courses throughout the United States where play is high and traffic control is poor.

Golfers should be made aware that the relatively low height of cut and concentration of both golfer and maintenance traffic put significant stress on the collar.

Where design features such as bunkers concentrate golfer traffic to the extent that severe turf injury and poor playing quality exists, consult with a qualified golf course architect about potential renovations that would allow additional access areas to greens, whereby traffic can be more widely distributed.

The right turfgrass

In most situations, it is preferable to use the same species of grass on the collars as on the putting greens. Creeping bentgrass greens typically have creeping bentgrass collars. Likewise, bermudagrass greens generally have bermudagrass collars. But this arrangement may not be desirable or practical in some locations.

Kentucky bluegrass can provide an excellent collar surface in the Intermountain region of the Western United States. Annual bluegrass can comprise a significant portion of the stand, particularly in coastal climates of the Pacific Northwest and elsewhere.

In the transition zone, maintaining good quality creeping bentgrass collars can be a real challenge because of myriad stresses, including diseases, insects, physiological stress and traffic. Where maintaining bentgrass collars is met with poor success, perennial ryegrass can be a suitable alternative. Perennial ryegrass has good traffic tolerance, can withstand relatively close mowing and, with a reasonable disease control program, will persist.

Watch for slow topographical changes

Another common problem with long-term collar management is the slow, incremental change in grade that can occur in areas adjacent to greenside bunkers.

Displaced sand from normal bunker shots accumulates on banks and collars over time. In some cases, surface drainage patterns are adversely affected and irrigation challenges arise where droughty root zones are created.

Periodic renovation may be necessary where play from popular greenside bunkers alters the drainage characteristics, management feasibility and playability.

Managing collars may require that additional cultivation, overseeding or sod are required from time to time to provide the desired level of playing quality.

This small, distinct portion of the golf course is subject to concentrated traffic and management criteria that pose stressful conditions for turfgrass.

Monitoring quality control throughout construction, incorporating the green management program, using the lightest mowers feasible, controlling traffic and systematically troubleshooting any problems that may occur should help your collars thrive.

Matt Nelson is an agronomist in the USGA Green Section's Northwest Region.

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CIRCLE NO. 123

Black Turfgrass Aetanius's Appearance Often Surprises Superintendents

By R. Chris Williamson

Many superintendents focus their attention to the larger white grub species (such as the Japanese beetle, European chafer, masked chafers and June beetle) and give little or no attention to the black turfgrass ataenius (BTA) (Haldeman).

After several years of dealing with common white grubs, superintendents expect problems associated with grubs in late summer when most grubs cause significant damage to turf. Consequently, BTA, a white grub species that causes damage in late spring through early summer, is frequently overlooked (Potter, 2001).

Although sometimes sporadic, BTA can be a serious pest on golf course greens, fairways and tees throughout the cool-season turfgrass zones as well as California (Vittum, et al. 1999, Gelernter, 1996).

Compared to most other turf-infesting grubs, BTA generally produces two generations per year throughout much of its range (Fig. 1). Turf damage from BTA grubs (first and second generations, respectively) typically appears from late-May to late-June and again in late-August to late-September in Nebraska, Kentucky, southern Ohio and West Virginia (Vittum et al., 1999). There is typically only one generation per year in the Northern portion of the BTA's range, including Michigan, Minnesota, northern New England, southern Ontario and Wisconsin, with damage occurring from mid-June to late-July (Vittum et al., 1999).

To complicate the seasonal biology of BTA even more, it has been reported there are as many as three generations per year in Southern California (Gelernter, 1996).

BTA grubs are measurably smaller than most other white grub species. Nonetheless, these grubs can cause serious damage to short-cut turf, especially to creeping bentgrass, annual bluegrass and perennial ryegrass (Potter, 2001). BTA grubs damage the turf by feeding on living grass roots as well as decaying organic matter.

BTA grub damage consists of dead patches of coalescing turf.

DAVID SHETLAR

BTA adults (left) and third-instar grub (right) are what you should look for when scouting for these pests.

The first symptoms of a BTA grub infestation are patches of thin or wilted turf that resemble localized dry spots that do not recover from irrigation or rainfall. These patches of damaged turf eventually coalesce into larger dead areas as BTA grub feeding continues, especially when heat and drought conditions persist (Fig. 2). Upon closer inspection, the turf can be literally rolled up, similarly to loose carpet.

As a result of their relatively small size, BTA grubs typically occur at considerably high densities, up to 250 grubs per square foot. As if this were not enough of a problem, secondary damage often results from birds, skunks and other predators foraging for BTA grubs in infested areas.

When the turf condition reaches this critical point, the only management option is to apply a

curative insecticide treatment to control the actively feeding grubs, apply a supplemental amount of nitrogen fertilizer and irrigate daily to help the turf recover and mask further damage.

Description and life cycle

Similarly to BTA grubs, the adults are considerably smaller to most other white grub species. BTA adults are shiny black beetles approximately three-sixteenths of an inch to one-quarter of an inch long, with distinct longitudinal groves on the wing covers (Fig. 3). Adults hibernate in the soil or in leaf litter along the edges of golf courses (Vittum et al., 1999).

In the spring when temperatures become conducive in late-March to April, adult BTA return to turf areas to begin laying eggs. On warm, sunny afternoons in the spring, they are frequently observed crawling on fairways and putting greens. Subsequent adult egg laying occurs throughout this period and continues into early June, but most eggs are laid around the time that Vanhoutte spirea is in full bloom (Vittum et al., 1999).

Eggs typically hatch in about one week. Immediately thereafter the young BTA grubs begin feeding on fine roots and organic matter. Each grub requires approximately one month to reach maturity, after which they burrow down in the soil profile to pupate.

In most of its range, BTA adults emerge in late June to early July to begin laying eggs that will eventually result in second-generation grubs that damage the turf in the late summer or early fall.

New BTA adults will emerge sometime in September and October, mate and fly to overwintering sites in the northern portion of their range, where there is only one generation. Subsequent BTA grub damage typically occurs in mid-July through mid-August, with adults emerging sometime in August (Vittum et al., 1999).

There are three distinct grub stages called instars. Fully-mature or developed grubs are the life stage that causes the most significant damage (Fig. 3). Third instar grubs are only about three-eighths of an inch long, approximately the size of Abraham Lincoln's hair on a U.S. penny (Potter, 2001). As a result, third instar BTA grubs are frequently mistaken for young Japanese beetles, masked chafers or other large species of white grubs. However, BTA can be easily distinguished from other white grubs by a pair of pad-like warts at the tip of the abdomen, just in front of the anal slit (Vittum et al., 1999).

TABLE 1

Product, rates, and timing of insecticides for control of BTA

Brand Name	Common Name	Rate (lb. ai/A)	Preventative	Curative
Talstar	bifenthrin	0.1	X (adults)	
Sevin	carbaryl	8.0		X (grubs)
Dursban Pro	chlorpyrifos	1.0	X (adults)	
Tempo	cyfluthrin	0.14	X (adults)	
DeltaGard	deltamethrin	0.08	X (adults)	
Mach 2	halofenozide	2.0	X (grubs)	
Merit	imidacloprid	0.3	X (grubs)	
Scimitar	lambda-cyhalothrin	0.06	X (adults)	
Dylox	triclorofon	8.0		X (grubs)

Control options

The most effective strategy for managing BTA is preventative control with either contact insecticide applied to the active adults prior to egg laying or a soil insecticide designed to control newly hatched grubs.

Preventative contact insecticides must be targeted at BTA adults soon after they are first detected in late March to mid-April. Should one miss this opportunity, the only other option is to apply a curative application when the grubs are detected or noticeable damage has occurred. Preventative and curative insecticides currently labeled for control of BTA adults and grubs appear in Table 1.

Regardless of the treatment, an adequate amount of water (at least .2 inches of water) must be applied to the turf to ensure movement of insecticide to the target area in the soil.

Where excessive thatch accumulation is present, it's beneficial to incorporate the respective insecticide into the soil profile by either a slit-type applicator or by core aerator. Most importantly, always read and follow pesticide labels.

R. Chris Williamson is an assistant professor and turfgrass and ornamental specialist in the Department of Entomology at the University of Wisconsin-Madison.

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