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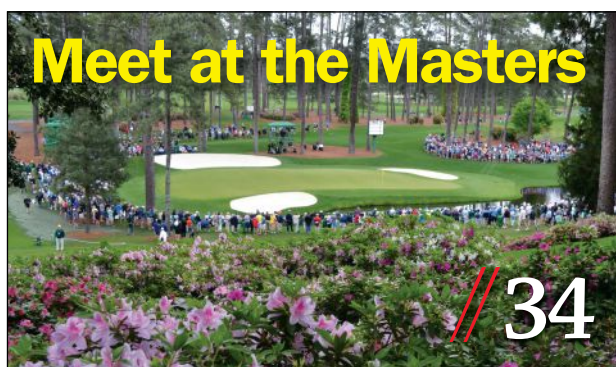
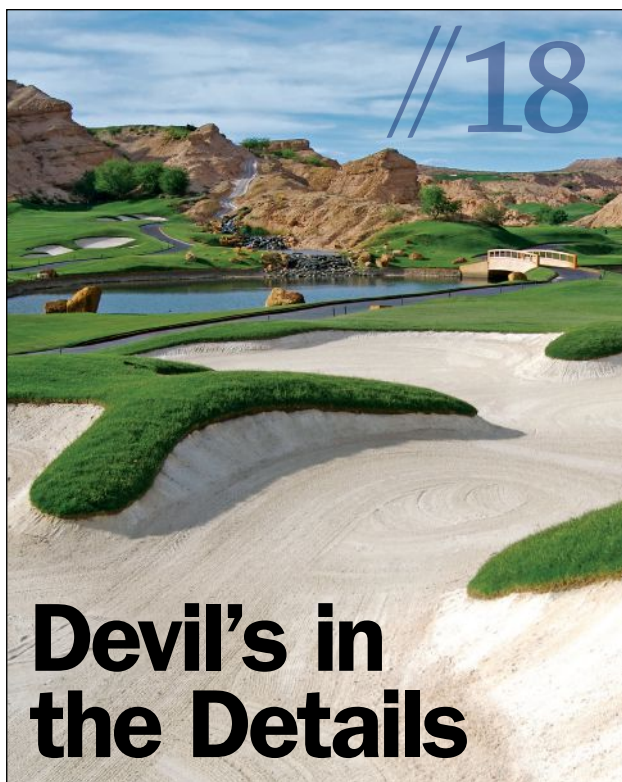


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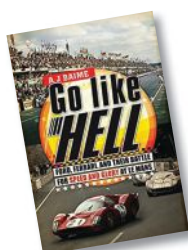
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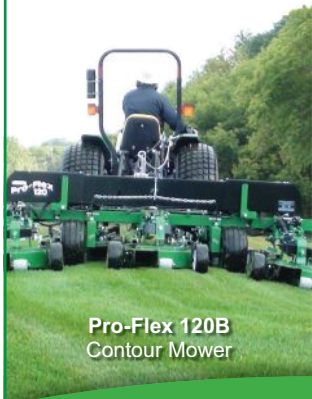
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**GOLFDOM** (ISSN 1526-4270) is published monthly by North Coast Media LLC, IMC Center, 1360 East 9th Street, 10th Floor, Cleveland, OH 44114. **Subscription rates:** For US, Canada and Mexico, 1 year \$58.95 print and digital; two years \$88.95 print and digital. All other countries, 1 year print and digital \$109.95, 2 years \$169.95. For air-expedited service, include an additional \$75 per order annually. Single copies (prepaid only) \$10 plus postage and handling. For current single copy or back issues, call 847-513-6030. **Periodicals postage paid** at Cleveland OH 44101-9603 and additional mailing offices.

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THE LEADER.





"I've arrived in Stillwater, Okla., at the home of Mike Kenna, Ph.D. ... Call me old-fashioned, but I like to meet with people in person, preferably over a meal or a drink, and close a deal with a handshake."

**SETH JONES**, *Editor-in-Chief & Associate Publisher*

# Any given Sunday

**A**s I write this, it's been two Sundays since the Kansas City Chiefs won the Super Bowl. It was a long time coming, that win against the San Francisco 49ers. We went crazy here at my house. My old friend Bart hugged me so hard he picked me up right off the ground. There was champagne, fireworks, everything.

And yet I wonder ... will the following Sunday be more memorable in the long run? Allow me to recap.

**Sunday, Feb. 9th, 2020,**

**6:30 a.m.** – Grab a couple magazines, a 5-Hour Energy drink, and hit the road. It's a four-hour drive to my first stop, and if I want to be back in time for dinner, I have to get moving.

**8:15 a.m.** – I've heard a lot of people complain about how boring it is to drive through Kansas. Those people must be driving east-west across the state, because driving northeast-southwest via I-35 takes me through the Flint Hills, which I view as one of the most beautiful stretches of highway around.

**9:40 a.m.** – Oklahoma has a lot more wind turbines than

the last time I was here.

**10:15 a.m.** – I pull up to my first stop, a hospital in Enid, Okla. An old friend of mine, Travis, who is one year older than me, recently suffered a stroke. Fearing the worst when I entered, I was relieved that he looked good, but he was wheelchair bound. Thankfully, he was upbeat, and after a few serious minutes, we were our old selves, joking with each other. It was an emotional goodbye. As I walked back to the car, it started raining. I couldn't help but feel deflated to see my friend this way. What a stark reminder about how uncertain life is, every minute of every day.

**12:50 p.m.** – I'm at my next stop on my one-day road trip. I've arrived in Stillwater,

Okla., at the home of Mike Kenna, Ph.D. The two of us have been in discussions about him joining the staff of *Golfdom* as the magazine's research editor. Call me old-fashioned, but I like to meet with people in person, preferably over a meal or a drink, and close a deal with a handshake.

We're off to a good start. Mike's first words to me? "How's Travis?" We discuss family and friends before getting into business following lunch at Stillwater CC. By the end of the meal, I'm reaffirmed that we found the right guy to lead our research section in the magazine (see story, page 8), and my mind is racing with thoughts of what Mike could bring to the magazine.

**1:50 p.m.** – Mike and I close the deal with a handshake in his home office. His lovely wife takes a photo of us together in his office. Time to get on the road again.

**2:15 p.m.** – I'm at the What-a-Burger in Stillwater because I never miss the opportunity to bring What-a-Burger home to Adrianne and the kids.

**4:45 p.m.** – I stop in my hometown of Mulvane, Kan., just to say a quick hello to my best friend, Mike. Dad taught me this rule: Never drive by when you can stop by for a quick hello. We're on Mike's back patio when he looks up and says, "That's a big bird!" I look up and say, "Dude, that's a bald eagle!" We both excitedly watch this majestic creature fly directly overhead. We're kids again.

**5:30 p.m.** – I stop in Wichita to put flowers on Mom and Dad's graves. Another reminder of the uncertainty of life.

**8:05 p.m.** – I pull back up into the driveway, later than I hoped, but with two sacks full of What-a-Burger cheeseburgers. The wife and kids and I sit around the table, and I tell them all about my day, my visit with Travis, with Mike, with Mike. It was a busy, productive, memorable day.

**10:30 p.m.** – I settle down and try to go to sleep. I need to be in Cleveland in a few short hours. My journey is unending, but rewarding. **G**

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# Starter

NEWS, NOTES AND QUOTES



## // FROM USGA TO GOLFDOM

### KENNA JOINS GOLFDOM

BY SETH JONES // Editor-in-Chief

➔ STILLWATER, OKLA. — “Dr. Kenna ... what kind of doctor are you?” asked the waitress at Stillwater CC.

Mike Kenna, who holds a B.S. in ornamental horticulture from Cal State Polytech, an M.S. in agronomy and a doctorate in crop science, chuckled. “My mom,” he said, “likes to say I’m the kind of doctor who can’t help people.”

With all due respect to Kenna’s mom, the opposite is true. Throughout his career, Kenna has helped thousands of superintendents around the world, working the last 30 years as the United States Golf Association’s director of Green Section Research. He has been the point person for all USGA-funded research projects, has spoken at conferences and has served as editor of multiple books on turfgrass biotechnology, environmental issues, water conservation and reuse.

Kenna now steps into the role of research editor of *Golfdom*, a position recently vacated by

the now-retired Clark Throssell, Ph.D.

“I’ve been involved with turfgrass research all my professional career ... I’ve been involved with more than 600 projects in that time,” Kenna told *Golfdom*. “(This is) an opportunity to give my perspective on what’s been going on in the last 30 years and, more important, what is coming in the next 10 years.”

A thorough search was done to find Throssell’s replacement, and according to *Golfdom* Publisher Craig MacGregor, getting Kenna to join the magazine is a major coup.

“We wanted to find the very best candidate out there,” MacGregor said. “Having someone of Dr. Kenna’s pedigree on the staff of *Golfdom* sets us apart. We’re thrilled to have him join our team and assist us in creating the best magazine in the industry, consistently, every issue.”

Kenna’s first issue leading the magazine’s research section will be the May issue, where he will also begin his column, “Off the Record.” Kenna can be contacted at [mpkenna@gmail.com](mailto:mpkenna@gmail.com).



*Golfdom* Editor-in-Chief Seth Jones (left) and Mike Kenna, Ph.D., with the December 2019 issue of *Golfdom*.



## // GOING THE DISTANCE — OR NOT

### USGA, R&A RELEASE FINDINGS ON IMPACTS OF DISTANCE

The United States Golf Association (USGA) and the R&A issued the Distance Insights Report, which provides comprehensive research and analysis of hitting distance in golf, including its contributors and long-term impacts.

Among other items, the study found:

A 100-year trend of hitting distance increases in golf across the game globally, as well as a corresponding increase in the length of golf courses.

USGA and R&A officials see this continuing cycle as detrimental to the game’s long-term future.

The study found that hitting distance increases compromise the inherent strategic challenge presented by many golf courses. Additionally, courses’ continued lengthening is at odds with growing societal concerns about the use of water, chemicals and other resources. Longer distances and courses, longer tees and longer times to play are taking golf in the wrong direction, the study asserted.

## // JOINING FORCES

### AQUA-AID PARTNERS EXPAND DEALER NETWORK

Aqua-Aid Solutions expanded its dealer network for its Cultural Solutions products of Imants equipment and Vredo seeders with the addition of Hector Turf in Deerfield Beach, Fla.

Aqua-Aid’s Cultural Solutions include the Imants equipment, featuring aeration solutions with the Imants ShockWave and RotoKnife, and surface hygiene solutions in the Imants FTM series and RootPruner. Also included is the Vredo Seeder line, which provides germination rates of 96 percent, according to the company.

Hector Turf will support Cultural Solutions in southern Florida from Vero Beach to Key West. Additional distribution areas include the Caribbean.





Attendees at the 2018 Golfdom Summit take a look at the Cub Cadet RG3.

## // COMMITTED TO EXCELLENCE

### GARETT C. HEINECK TO RECEIVE MUSSER AWARD OF EXCELLENCE

The Musser International Turfgrass Foundation has selected Garrett C. Heineck as the 2020 Award of Excellence recipient.

The award is given to outstanding Ph.D. candidates who, in the final phase of their graduate studies, demonstrate overall excellence throughout their doctoral program in turfgrass research.

Heineck received his B.S. degree in crop and soil science with a minor in horticulture at the University of Wisconsin-River Falls. He went on to earn his M.S. from the University of Minnesota in applied plant science in the Plant Breeding and Molecular Genetics track. He then received his Ph.D. from University of Minnesota in the same program.

"To be counted among the list of recipients for this award is a tremendous honor," Heineck said. "It will certainly have a lasting impact on my scientific career, and I hope that my future endeavors warrant this prestigious accolade and continue to fulfill the vision of Professor Musser."

## THEY SAID IT

### ANDY EICK

SUPERINTENDENT, MOHAWK GC, SCHENECTADY, N.Y.

During the FMC/Superintendents Panel at the 2020 Golf Industry Show, on the challenges of the job.

**"We deal with the two most uncontrollable forces in the world: people and weather, and on top of this with a perishable product."**

## // ON HOLD

### CUB CADET SUSPENDS ROBOTICS PROGRAM

BY SARAH WEBB // Associate Editor

➔ Cub Cadet has suspended support of its RG3 robotic greens mower.

"We identified some technical challenges during field testing ... so we're refocusing our efforts in other areas of the business," said Tony Whelan director, sales and marketing, Cub Cadet - Golf & Sports Turf. "MTD is serious about our commitment to quality, and we are not willing to bring a product to the market that doesn't meet our customer-facing specifications and quality demands."

Whelan stressed that the company

will still develop other products in the golf and sports turf market.

Scott Ramsay, CGCS at The Country Club at Farmington (Conn.), said he thinks remote-controlled and autonomous mowers will still be prevalent in the industry.

"The first person to market usually is plowing ground for other people. It might just have been a product before its time," Ramsay said. "I think (Cub Cadet) probably prepared us for other companies and other groups to move forward with what they've originated."



## // PICTURE PERFECT

A group of GCSAA employees, past and a few present, assembled recently in Lawrence, Kan., to wish Joe O'Brien, former GCSAA COO, well with his recent retirement from the First Tee. Joining O'Brien (center) from left to right, are: Pam Smith, Hannes Combest, Penny Mitchell, Julia Ozark, Bryce Gartner, Margo Campbell-Szabo, Bonnie Stephenson, Deena Amont, Lisa Wick (seated), Julie Sigourney, Lyne Tumlinson, Mark Kind, Jeri Lynne Kind, Caroline Gollier, Sarah Clopton, Scott Smith, Cynthia Smith, O'Brien, Chuck Borman, *Golfdom* Editor-at-Large Ed Hiscock, Mick Urban, Kim Heck, Don Bretthauer, Mischia Wright, Terri Harris, Andy Parker, Bob Shively, Paul Chaussee and *Golfdom* Editor-in-Chief Seth Jones.

PHOTO BY: GOLFDOM STAFF



# Golfdom Gallery

**GOLF INDUSTRY SHOW**  
EDITION



**1 Ain't no party like a Golfdom party**  
We're biased, but we think the Friends of Golfdom (FOG) party was the best party at GIS. Were you there? Agree or disagree?

**2 And the winner is ...** At the Golfdom booth, Alan FitzGerald (center), superintendent, LedgeRock GC, Mohnton, Pa., was presented with the 2019 Herb Graffis Businessperson of the Year award. On hand to present the award (from left to right) Bryce Swanson, Rees Jones Inc.; Golfdom Editor-in-Chief Seth Jones; Rees Jones; and Golfdom Publisher Craig MacGregor.



**3 What about Bob?** Bob Eichenberg is retiring after 30 years with The Andersons. To thank him for his years of service, Golfdom made him a special cover.



**4 An East Lake reunion** Golfdom Managing Editor Clara McHugh (center) caught up with her pals Charlie Aubry (left), superintendent at Atlanta's East Lake GC, and Ralph Kepple (right), agronomist at East Lake, at the FOG party at GIS. McHugh and Aubry, both native Michiganders, don't hold it against Kepple that he's an Ohioan.



**5 See you in Florida** Though Golfdom Group Publisher Bill Roddy (left) and George Furrer, CEO of United Turf Alliance, both live in Ohio, they're most likely to meet up at the various turf shows.



**6 Will run for breakfast** Adam Manwarren, FMC; Roddy; McHugh; Golfdom Editor Christina Herrick; and @groundsmaiden Ellie Parry were up bright and early to run the Health in Action 5K. It's not easy to get out of bed before dawn, but the promise of bacon, eggs and pancakes proved to be the motivation they needed.







**7 Among legends** At the Anuvia Legends Initiative induction ceremony, David Stone (center) was honored by fellow Legends (left to right) Ted Horton, Matt Shaffer and Jones (who is a legend in his own mind), as well as Anuvia's Hugh MacGillivray, CCO.



**8 Getting crazy with Gracie** Mike Gracie, superintendent, Redlands (Calif.) CC, and Herrick share a laugh at the FOG party.



**9 Model men** Both have been on the cover of *Golfdom*, and both are among our favorite superintendents. Bill Larson, CGCS, Town & Country Club, St. Paul, Minn., (left), and Chris Dalhamer, Pebble Beach (center), with Jones.

**10 Quality convo with Quali-Pro** Curtis Clark, executive vice president of Control Solutions (parent company of Quali-Pro), with North Coast Media President and CEO Kevin Stoltman.



**11 Setting the bar high** Why are these three smiling? Because they had the best seats in the joint, right by the TV and the bar! From left are *Golfdom*'s Jake Goodman, PBI-Gordon's Abbey Barry and Sipcam Agro's Sam Wineinger.

**12 Trade show floor talk** Jones picked the brain of Brad Poole, CGCS, Rolling Hills CC, Newburgh, Ind., and his wife of 43 years, Gayle, on what was the coolest thing at this year's show.



**13 Best for last** (From left) Cody Frederick, assistant superintendent, LedgeRock GC; FitzGerald; Tiffany Koss of Kafka Granite; and Glenn Kafka of Kafka Granite close out this year's *Golfdom* Gallery from GIS. We couldn't find anyone nicer to close it down for us!





# Keeping nematodes at bay

One Florida superintendent's success with Indemnify allows him to focus on other challenges at his busy course

**H**ighland Reserve Golf Club in central Florida is a busy place. As a midtier course inside the “Disney bubble,” it does about 48,000 rounds annually — 23,000 of them during the first three months of the year.

“We put out a lot of rounds of golf in a short period of time,” says Travis Addison, golf course superintendent for the 18-hole public facility in Davenport, Fla. The course is also known for its elevation changes and lack of water elements, a rarity in Florida.

“Tee to green is pretty wide open and playable, but the greens are the equalizer,” Addison says.

“All of my greens have some undulation to them.”

The emphasis on the greens is what makes one of the course's agronomic challenges — nematodes — so critical to stay on top of. For Highland Reserve, which has fast-draining, sandy soil, the two most problematic types of nematodes are sting and lance.

In addition to creating aesthetic problems like yellowing and thinning turf, untreated nematodes eventually will affect play because of the significant damage they can do to the turf's root system.

“If you have no roots or very shallow roots, you're more

susceptible to disease,” explains Brian MacCurrach, Bayer's area sales manager for Southeast Florida. “And with the amount of play Highland Reserve has, all of the sudden, you're going to start losing grass.”

That's precisely what Addison and his team of seven maintenance crew members are trying to avoid.

About three years ago when Addison was the assistant superintendent, Highland Reserve was having trouble with its sting nematode counts because of its nematode-friendly environment.

“The sandy soil is pure nematode heaven,” Addison says. “We would find combinations of



*“I’ve been consistently using it for the last three years, three times a year, and I always get positive results.”*

TRAVIS ADDISON



**Plant health impacts.** Bayer Sales Representative Brian MacCurrach says Indemnify knocks down nematodes to help develop healthy roots that in turn prevent disease and overwatering.

products that would set them back, but none that would give us the 120-day window we needed to grow good, quality turf.”

At the recommendation of a distributor rep, Addison’s predecessor tried Indemnify, a broad-spectrum nematicide product from Bayer designed to control sting, root-knot, ring and *Anguina pacifica*e nematodes and provide activity on many other nematode species.

After some discussions with MacCurrach, their Bayer rep, they gave it a shot.

“Indemnify was a game changer for the quality of our greens,” Addison says, noting he has used the product consistently since he was promoted to superintendent two and a half years ago.

His Indemnify application schedule

changes based on the weather, how the greens look and the results of quarterly nematode assays he conducts for peace of mind.

“I’ve been consistently using it for the last three years, three times a year, and I always get positive results,” he says. “My root structure has reacted well, and Indemnify has helped me sustain that.”

The plant health benefits of Indemnify are important to note, MacCurrach says.

“Indemnify knocks those nematode populations down, which helps develop healthy roots, which prevents disease, overwatering and more,” he says. “Healthy roots are the key to attaining healthy turf, and it’s definitely the key on putting surfaces that are being cut at a low height that doesn’t encourage

root growth. But with Indemnify, you can still have that height of cut and get a full, thick root as well, so that’s a huge benefit.”

Working together on Highland Reserve’s nematode challenge has created a solid working relationship between Addison and MacCurrach.

“We keep in touch, and he can call whenever he has an issue,” MacCurrach says. “We’re about an hour from each other, so it works out well.”

It’s also led to Highland Reserve participating in the Bayer Flex Solutions early order program and using some of the company’s other products, such as TopChoice insecticide for mole crickets and fire ants and Signature Xtra Stressgard fungicide, among others.

“Whether it’s dealing with nematodes, disease or any problem, if I’m unsure of myself, I always like to get a second opinion to see if I’m going down the right track,” Addison says. “I can give Brian or anyone from Bayer a call if something’s not right and they’re out here pretty quickly, which in this industry speaks volumes.”



**Root health.** Highland Reserve Golf Club’s undulating greens have benefitted from Indemnify applications three times per year to keep nematode populations down.







"As I moved through this process, I altered my approach. There are many lessons, but the takeaway is that terminating an employee can be a learning experience for both parties."

**CARLOS ARRAYA**, CGCS, Bellerive CC, St. Louis

## I was The Terminator

**A** mentor blatantly lied to me, and it took years of experience to learn the truth. It didn't feel like a lie back then, but I believed him when he told me that terminating employees would get easier the more I did it.

"The more you fire folks, the easier it gets," he said. My friends, colleagues and aspiring young leaders, listen up. It doesn't get easier. The more terminations you conduct, the harder it becomes. Even when an employee's conduct is egregious and immediate termination is warranted, it's still difficult.

Why is a well-deserved termination still so difficult? You are altering life paths. They won't have income until they can gather themselves, while their bills and expenses pile up. Terminated employees have families or loved ones who depend on them for financial stability. These realities keep you awake prior to and after the termination. After terminations, several professionals I currently mentor have mentioned experiencing the seven stages of grief: shock, denial, anger, bargaining, depression, testing and acceptance.

Terminations being difficult doesn't devalue the importance of making a change, and you shouldn't delay them for no good reason. I was so uncomfortable terminating employees early in my career that I developed my own coping mechanisms. Essentially, I became like an actor getting through a movie scene, becoming stoic and hard-nosed. Unknowingly, I had started behaving strangely and even wore specific clothes to conduct terminations. I was known as The Terminator. But I wasn't proud of the title.

As I moved through this process, I altered my approach. There are many lessons, but the takeaway is that terminating an employee can be a learning experience for both parties.

To make terminations educational, develop a standardized procedure to collect key performance indicators on team members. Make de-

velopment plans part of any process so team members can access and receive feedback to improve. Establishing development plans and having performance review evaluators provide the reference point for difficult conversations that could lie ahead.

Preparation prior to a performance issue is vital to employee education if a termination becomes necessary. However, terminations because of poor conduct, harassment or contributing to a negative work environment can be tricky. Clear and detailed communication about what is permissible in the team's operation — and frequent ethics training — will provide managers with documentation to conduct a termination brought on by a behavioral violation. Documentation makes executable the difficult process of terminating a high-performing employee.

Prior to a recent termina-

tion, I had to channel anger I felt over having to fire a productive staff member, and despite firing dozens of employees over the years, I even was a bit anxious. Fortunately, rather than letting out that anger, I used the opportunity to teach and learn.

I shared with the employee that because of his behavioral issues, several of his developmental goals were not being met. I hoped to discourage the employee from repeating similar behavioral and performance shortfalls at his next stop. The information made the conversation flow better than anticipated. A lightbulb went off, and it was evident that we need post-employment development in our operating procedures.

I'm confident that every employee who has worked with or for me will say that I remain a disciplinarian, hold everyone equally accountable, have an insatiable appetite to improve myself and others and am still a Terminator. However, terminating is becoming harder and harder for me. I terminate to teach, learn and ensure everyone affected is fully capable of moving forward through the process.

Whenever the need arises to make difficult staff changes at your operation, take the opportunity to teach, learn, evolve. You want to be known as "The Educator," not "The Terminator." **G**

Carlos Arraya, CGCS, is director of grounds and agronomy at Bellerive Country Club in St. Louis. Follow him on Twitter at @carrrayacgs.



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"The five and a half hours with my 6-foot, 4-inch body folded into the smallest seat ever and my carry-on squashed under my feet gave me plenty of time to reflect on the need for clear communication."

**ALAN FITZGERALD**, *superintendent, LedgeRock GC, Mohnton, Pa.*

## Say what you mean

**O**n a recent transatlantic flight, between the boredom of yet another movie and waiting for the best time to climb over "Vegetable Lasagna" — my new seatmate — for the bathroom, I drifted back over my life in the United States. I suddenly realized that somehow, I'd skipped a decade — 2000 is actually 20 years ago — and that I'm actually 10 years older than I thought. I started thinking about what, if anything, I would change.

The good news is that I wouldn't change much, but I dwelled on the importance of communication. I arrived in the States — with a thick Irish accent — at a time where the biggest worry was how PCs would handle the change from 1999 to 2000 without vaporizing humanity. I then had to adapt to a south Jersey/Philly accent and ended up in Amish country. While that sophisticated accent is one thing, adapting communication styles to those diverse areas has been a big part of my life.

A number of years ago, while waiting on standby for a transatlantic flight, my wife and I were bumped up

to better seats, although a seat apart on different sides of the aisle. I noticed by the activity at the gate that someone hadn't shown up for the flight. The ripple this created bumped others to business class, and my wife and I were gifted the emergency row. Now with priority boarding, we smugly slipped past the squabbling horde.

A few minutes later, Ms. Gate Agent came to us and said, "We have two seats for you together in the back — would you like to move to them?" Naturally, we'd rather stretch out for six hours and said no. Ms. Gate Agent asked the same question three more times — emphasizing

together — each time receiving the same answer from my perplexed wife.

At this point, I noticed a bit of a kerfuffle at the front. The first-class guy had shown up late, and Mr. Gate Agent frantically was trying to reshuffle everyone to their original seats. My wife — not seeing this and therefore not knowing why Ms. Gate Agent was visibly frustrated — was taken aback when Ms. Gate Agent snapped and said, "Well, you're flying standby and are in someone's seat, so you have to move. I'm in charge of this plane, and you have to do as I say, and if you don't, you'll be escorted off and never fly again."

I tried to calm the situation by saying we'd happily move, that her actions were unnecessary and all she needed to say was that she needed the seat, not offer us an option. My wife, embarrassed by now, was trying to work out what had just happened as we shuffled back through packed rows of curious stares.

The five and a half hours with my 6-foot, 4-inch body folded into the smallest seat ever and my carry-on squashed under my feet gave me plenty of time to reflect on the need for clear communication. All Ms. Gate Agent needed to say was that she needed the seat back, and that would have been the end of it. Instead, my wife, the nicest, quietest woman in the world, nearly ended up on a do-not-fly list because of someone who was unable to communicate, and who then doubled down on her ineffective communication.

We know communication is essential, but do we really pay attention? Do you take the time to listen to people? Is it time to reevaluate your communication skills? The world has changed since 2000, but has the process of communication changed? Don't assume others know exactly what you are thinking. Think about what you are trying to convey, and attempt to understand if your message is being communicated in the manner you desire. Don't be Ms. Gate Agent. **G**

**Alan Fitzgerald** ([alan@ledgerockgolf.com](mailto:alan@ledgerockgolf.com)) is superintendent at LedgeRock GC in Mohnton, Pa.



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# Devil's in the

**B**unkers can make or break a course, aesthetically and financially. ¶ “One of the major downfalls of any property is really bad bunkers — it drags everything down,” says Reid Scholes, vice president of agronomy for the CBONS International Golf Group. “It is an extremely important part of the game because details matter.”

And while all courses eventually have to revamp their bunkers, superintendents have a few secrets about what makes their bunkers distinctive and share lessons they've learned through renovations.

“If you're going to be investing the money in this, it's the perfect time for you to first look at reducing the amount of bunkers,” Scholes says.

This is exactly what he, Ian Gallagher, superintendent at Mayfield Sand Ridge Club's Sand Ridge campus in Chardon, Ohio, and many others have learned as well.

“One of our holes has 24 bunkers on it ... we eliminated four off of that hole to save labor,” Gallagher says. “Any bunker we've eliminated has been a clump of three or four, where it's the third or fourth bunker that doesn't really affect how the course plays.”

He and the team at Sand Ridge worked with Tom

Marzolf, course architect with Fazio Golf Design, to streamline bunkers on the Tom Fazio-designed course. CBONS, which owns Moon Valley Country Club in Phoenix, also eliminated bunkers and reduced bunker sizes.

“We make it a point to limit the use of a Sand Pro in all bunkers,” Scholes says. “That might sound like more labor, but when you actually reduce or get rid of a lot of bunkers, you can easily hand rake all bunkers, even with a smaller crew.”

Moon Valley experimented with several bunker liners. It ended up using ZLine Bunker Systems and worked with Casey Jones, national sales and product manager for ZLine, to revamp the course and devise a system that worked best for Arizona soils.

*Continued on page 20*



# DETAILS

When it comes to bunkers, superintendents say  
there's more to them than meets the eye

**BY CHRISTINA HERRICK**





## // BUNKER TALK

*Continued from page 18*

“Key things I like about ZLine (are) the structure keeps sand in place on slopes after heavy rain, and the color helps to hide thin areas before your crew can adjust sand levels. The liner is extremely durable and is well suited to all soils and climates,” Scholes says.

Sand Ridge also used ZLine bunker liner, but Gallagher’s team opted to renovate his course’s 87 bunkers in-house. He liked the ease of application.

“When you have a good day or when you’re good to go, you’re not waiting on anybody, you can just grab it and go,” he says. “We did get a demo bunker, and we liked it. All the liners are great products, but this one has kind of a two-part system.”

Gallagher explains the system includes permeable mesh that edges the bunker and covers the drain, where pea gravel is



ZLine was installed at Tour 18 Golf Course in Humble, Texas, another CBONS-owned course.

put on top. Then, the white impermeable liner, glued together in pieces to fit the bunker, is brought up to the edges.

Bunkers used to be a big issue at Moon Valley, says General Manager Brett Evans.

“It was probably our No. 1 complaint,”

he says. “Now, they’re just amazing. The soil here doesn’t always take the water in very rapidly when we have a heavy rain. There’s standing water in the fairway and nothing in the bunkers.”

*Continued on page 22*

PHOTO BY: REID SCHOLES

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## // BUNKER TALK

*Continued from page 20*

### *The Natural*

How Erin Hills GC bested the pros during the 2017 U.S. Open while impressing guests with its distinctive bunker style

The erosion-style bunkers at Erin Hills Golf Course in Hartford, Wis., set the tone for the course, which hosted the U.S. Open in 2017.

"They're unique to the area, and they're an attribute of the golf course that I don't think initially we thought was going to be so impactful," says Erin Hills Director of Course Maintenance Zachary Reineking. "But the response that we get from our guests is, 'God, I love all your bunkering out here.'"

The bunkers made a name for themselves during the 2017 Open.

"When they did the analytics from the 2017 U.S. Open that we hosted, for that year, the percentage of recovery shots that professional players had from our bunkers was the lowest of any tournament that year," Reineking says. "So, they were incredibly difficult for professional players, but for whatever reason, they're easier for amateur players."

Reineking suspects the firmer sand makes for easier shots for amateur golfers who can scoop underneath the ball as easily as the pros.

"I think for a lot of players, they just feel like when they get into the bunker, it's not an immediate two-stroke penalty," he says. "They can get in and out a little bit easier than at their typical facility."



Erin Hills' Architect Michael Hurdzan, Ph.D., (left) and Zach Reineking during the 2017 U.S. Open.



PHOTO BY: GOLFDOM STAFF



Crews prepare Erin Hills' bunkers during the 2017 U.S. Open.

And, Erin Hills' bunker design follows the natural topography of the course and area.

"It looks like they've been carved out of just years of water eroding a cavity, and then the sand gives the impression that these things are natural," he says. "We take great care and pride in creating the illusion that they've always been here and that they fit into the landscape well."

A natural-looking bunker might seem easier to manage, but Reineking acknowledges it's much harder to intentionally create a natural look. It also makes mechanical maintenance obsolete.

"Because of just the irregular shape and style of all the edges, we can't use a mower to maintain any of the grass around the edge. We need to use a string trimmer to do all the mowing,

*Continued on page 24*



Erin Hills' bunkers tested pros at the '17 U.S. Open, as players posted the lowest percentage of recovery shots of any tournament that year.



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*Continued from page 23*

which is much harder to do," he says. "A lot of these are very steep. The edges going into them are steep. There's no good way to get in and out."

Although it's not easy to make these bunkers look natural, Reineking says they've developed management strategies

to make hand raking and edge maintenance manageable. That's thanks, in part, to how the bunkers were constructed. This includes selecting sand that is angular and stays in place well.

"We wanted sand to be a low-maintenance opportunity for us. So, when we get an inch of rain or a half-inch rain

that comes down fast, a lot of golf courses have to go back out there and remaintain, rake all their bunkers, all their wash-outs," he says. "We might have two or three that we need to go back and do a modest amount of work to them."

When the course was constructed,

*Continued on page 26*

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## WORDS OF ADVICE

When asked about bunkers, Shawn Emerson, director of agronomy for Desert Mountain Golf Club in Scottsdale, Ariz., rattled off analogies: A good bunker is like a good lasagna or a layer cake. "You can't just look at the top — you have to look all through the profile."

He also says that good bunkers are like a great frame for a golf course. "You can have the greatest golf course or the greatest picture, but if you have a crummy frame, everyone notices."

Frames, layered food and golf course hazards may not go hand in hand, but Emerson has a point. There's more to bunkers than meets the eye.

To say he speaks from experience is an understatement — Emerson and his team at Desert Mountain have completed four bunker renovations in the last 18 months at the operation's six Jack Nicklaus-designed courses. He shares advice for any superintendent embarking on a bunker renovation.

**TRY A FEW** — "I would tell any superintendent, you need to try a few (liners) that match up for yourself: the maintenance practices and what you do at your own golf course," he says. "Not all liners are the same for everybody. You have to be very particular for where your location is for what kind of liner you want."

**GET HELP** — "I feel very strongly that you should not do these projects alone. You should have an architect help you. We made some alterations to the bunkers that we looked at from a playing perspective and a maintenance perspective," Emerson says. "I wanted to make it easier for the golfer without taking away the characteristics of the golf course, but I also wanted it to help me lower my expenses and costs."

**UNDERSTAND WHAT YOUR COURSE NEEDS** — "Some people need to get water completely out of a bunker, and some people may have to add water. So, it depends on where you're at," Emerson says.

**MAKE A PLAN** — "You need to put in maintenance programs for how often you want to sift and clean your bunkers, how often you want to add more sand. This is an ongoing program," Emerson says.

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# IN THE FIGHT AGAINST SPRING DEAD SPOT AND DOLLAR SPOT...

## // BUNKER TALK

*Continued from page 24*

bunkers were lined with a sand mat. Reineking says this system has worked well, but some of the liners are starting to break down. So, the course is planning for bunker renovations of some of those high-priority, greenside bunkers. He says they're looking for good filtration and the ability to handle heavy rains without erosion to the edges, while still keeping the natural look golfers have come to expect from Erin Hills.

### *An unconventional application*

**How Spring Hill GC found a novel application for a polymer barrier product**

Spring Hill Golf Club in Wayzata, Minn., hasn't changed sands in its bunkers for more than 15 years.

"I just tested our bunker sand that we put in 15 years ago, and it still has zero contamination in it. One of the best features of Klingstone is that contamination of bunker sand just does not happen," says Superintendent Tim Johnson.

Johnson discovered Klingstone, a liquid-applied polymer bunker barrier, in a somewhat happenstance manner. He found the product in a supply catalog as he was looking for other erosion fabrics. The sandy/clay loam soil in his area makes bunker barriers a challenge, he says. Soil moves a lot in the winter as the soil expands and contracts during freezing and thawing.

"I was looking for some sort of a polyurethane that would bind the soil together," he says. "I wanted to get the water down into the drains quickly. A couple of things that stood out was how environmentally friendly it is. They were using this product in seawall reconstruction and dam solidification. Also, it created an impermeable membrane."

At that time, the product was not used on golf courses, let alone in bunkers. So, Johnson and the team at Spring Hill developed an application process through trial and error. And they liked what they were seeing.

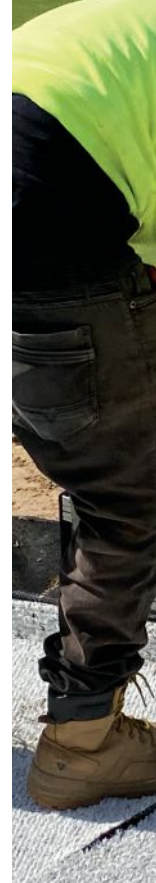
"We started to order more, and the owner of the company called me and said, 'What are you doing with my stuff?' I explained it to him, he flew out, we documented what was going on out here and they came up with a Klingstone process from that."

Spring Hill has Kafka Granite's material on some maintenance pads and slopes. Johnson, though, also uses it in a relatively unconventional way for the five bunkers on his course's driving range. Those particular bunkers chronically backed up and were underwater.

"We found the struggle was to keep those looking good, like the bunkers on the golf course," Johnson says. "Because of our storm-water management plan, some water had to be held just to release



**Tim Johnson**







The ZLine system has a permeable mesh that edges the bunker and a white impermeable liner that's glued in pieces to fit.

it with proper hydrology into the lakes around the golf course.”

His team applied a 3-inch layer of Kafka's white mix and packed it to the practice bunkers with exposed drains. Kafka matched the product color to the sand color of the golf course. Johnson says they look just like the course's standard bunkers.

“The guys can walk through and pick out the golf balls,” he says. “We don't rake them anymore. We just have to mow around them and keep them edged. We just have to blow out the material that was captured in there when they were underwater. It's been a tremendous labor savings for us just on those five bunkers.”

Johnson likes that Klingstone and Kafka Granite products can be applied in-house and are easy to tote around in a utility vehicle.

“It's a very simple process that really causes no disruption. A superintendent can do it in-house easily within a couple of hours on either product,” Johnson says of Klingstone. “Once your preparation is made, (a) 1,000-square-foot bunker takes probably 30 minutes to treat, you can start putting your new sand back in and the bunker can be open in a couple of hours.”

In addition to a quick application and ease of use, Johnson likes the long-term labor savings and return on investment.

“If you start looking at the 10-, 15- and 20-year return on the investment of Klingstone in your bunker sand, it's much easier to sell to a board or an owner when you start looking at long-term payoffs of 20 years of not replacing bunker sand or bunker liners.”<sup>©</sup>

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# A new pest in the desert Southwest

Two researchers discuss the emerging flea beetle pest



**Photo 1.** Adult *Chaetocnema minuta* isolated from damaged perennial ryegrass in southern Utah.

BY ADAM VAN DYKE, M.S., CPAg, and BEN MCGRAW, Ph.D.

**A**s if growing turf in the Mojave Desert (the area surrounding southeastern California, southern Nevada, southwest Utah and northwest Arizona) isn't difficult enough, turfgrass managers in the region may be dealing with an emerging insect pest issue. Regular sampling of courses in southern Utah over the past two seasons has determined that a flea beetle (Coleoptera: Chrysomelidae) is responsible for damage to perennial ryegrass decline in tee boxes and fairways during the months of July and August. Samples submitted to the Pennsylvania State University Turfgrass Entomology Laboratory in 2018 un-

covered both flea beetle adults and larvae in damaged turf samples. DNA analyses were unable to provide a species match to those in genomic databases. Therefore, specimens were submitted to the USDA Systematic Entomology Laboratory in Beltsville, Md., where taxonomists identified the samples as *Chaetocnema minuta* Melsheimer, an insect that little is known about. Much more research is needed to answer basic questions surrounding the pest's biology, ecology and management in turfgrass systems. Here, we report our preliminary findings to raise awareness of the problem and reduce unnecessary insecticide applications.

The flea beetle (which at present does

not have a common name) is relatively small (0.08-0.12 in. or 2-3 mm) in length, ovoid and has a dark metallic coloration (Photos 1, 2). They are capable fliers but generally move by jumping. They possess large, flealike legs that allow them to spring when disturbed. The elytra, or forewings that cover the beetle's abdomen, are lined with a series of pits. Larvae are slender worms, ranging between 0.04 to 0.2 in. (1 to 5 mm) in length, with white and brown speckled coloration, a blackened head capsule and three pairs of true legs (Photo 3).

Turf damage appears to originate in roughs along edges of holes that bor-

*Continued on page 30*

PHOTO BY: BEN MCGRAW



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- Ian Daniels,  
Superintendent, Teugega Country Club



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Continued from page 28

der native areas (Photo 4). Damage can quickly develop on fairways where it may be exacerbated from lower mowing heights and stress from traffic (Photo 5). Damage has been documented on perennial ryegrass and to a lesser extent, Kentucky bluegrass. Anecdotal evidence indicates the flea beetle will also feed on annual bluegrass and creeping bentgrass in predominantly bermudagrass fairways. However, damage has not been reported to date on bentgrass/annual bluegrass putting greens, even though adults have been found in adjacent ryegrass collars.

It is unclear as to when and where flea beetle damage first occurred, though some turfgrass managers believe the insect may have been causing damage in southwestern Utah in the early 2000s.



**Photo 2.** Relative size of *C. minuta* adults next to a U.S. penny. **Photo 3.** A second instar *C. minuta* larva (inset).

We have reason to believe that this insect damaged turf in the Mesquite, Nev.-St. George, Utah, area in 2002. One area course that experienced extensive turf loss during this period opened in the late 1990s with mostly bermudagrass surfaces. Damage appeared when in-play areas were overseeded in the fall with perennial ryegrass. The exact cause was

not identified at the time, but a decision was made to transition to year-round perennial ryegrass/Kentucky bluegrass in 2003-2004 for improved winter tolerance. Newly constructed courses followed suit, and each summer more superintendents experienced turf decline. Superintendents were puzzled but attributed the decline to summer drought stress. This region is the

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driest desert in North America, receiving an average of 5 in. (~ 12.5 cm) of rain annually, and therefore, summer drought stress is common. However, several superintendents at this time noticed very small insects jumping out of the turf when inspecting damaged areas.

More attention was given to this mystery insect in each successive summer. In 2006, the first known insecticide applications were made, targeting what was thought to be the adult stage of the unknown insect. At this time, superintendents believed damage was caused by the dichondra flea beetle (DFB) (*Chaetocnema repens*) — a close relative of *C. minuta* — which is known to damage dichondra and bermudagrass in California home lawns. This seemed a logical conclusion since the adult DFB have a similar appearance and seasonal activity as *C. minuta*, and the bermudagrass sod and sprigs used to



**Photo 4.** Damage to a perennial ryegrass rough bordering a tee box.

establish the Utah courses were shipped from Palm Springs. Thus, superintendents sought to manage the pest with the same approach and chemistries as those used in DFB management. However, curative insecticides provided minimal relief and often required reapplication one week later. Further complicating matters, insect and damage seemed to appear out of

nowhere in late summer and vanish without a trace, leaving the turfgrass manager with only the option to regrass in fall.

A search of the literature has provided little to no insight on *C. minuta* ecology, apart from appearing on annotated lists of flea beetles or in faunal surveys locating the beetle within different North

*Continued on page 32*



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Continued from page 31

American cropping systems. Even these papers do not shed light on the ability of the insect to utilize different plant families. Some *Chaetocnema* species have been associated with cool-season grasses used as a cover crop during winter, but to our knowledge, this is the first instance of a *Chaetocnema* spp. utilizing a cool-season turfgrass as a summer host. Therefore, our approach has been to generate as much basic information on the insect's seasonal activity and occurrence to develop strategies for mitigating turf loss.

Flea beetle populations were monitored weekly on untreated perennial ryegrass fairways on two golf courses in southern Utah. Regular vacuum sampling of adult populations was performed in conjunction with sticky card trapping. Sticky card traps were placed along rough-fairway borders directly above the canopy, with one side of



**Photo 5.** Flea beetle damage may be exacerbated with stress from mowing and traffic.

the sticky card facing toward the fairway and one toward the desert surrounds to intercept adults and to determine directional migration. The traps were replicated on different fairways, changed weekly and shipped to Penn State along with soil cores to isolate stages from the turf. Since larvae are small and suspected to reside within the turfgrass plant, we opted to heat extract (97 degrees F/36 degrees C) soil-turf cores using Berlese funnel traps. This

method also extracts adults residing in the turf canopy. Stages drop into a collection tube over several days, counted using a microscope, and larval head capsules are measured to determine larval age.

Larvae were detected as early as April 16, though present in consistently low levels until a surge in activity was observed in the last two weeks of July. This presumed first-generation larval peak was followed a week later by the adult detection on sticky

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cards and within turf-soil cores (July 31). However, vacuum sampling found adults on July 25 and may be a more efficient manner to detect adults in the future. More first-generation adults were collected on sticky traps than turf cores, and greater numbers of adults were collected on sticky traps facing outward (toward the desert) prior to the first peak. These data suggest that larvae present in the turf prior to July likely contribute to only a small portion of the summer adult population, and that some adults migrate into fairways from surrounds to oviposit. Oddly, a second generation of larvae appeared in the first week of September, one week after a second peak in adults. All flea beetle activity declined sharply after mid-September.

Larval head capsule measurements revealed three distinct widths or larval instars. In general, only first and second instars were observed within the turf prior to mid-May, with the first appearance of third instars in June. It appears that the larvae present in the turf prior to July develop slowly, but rapid development from egg to adult is observed in July through September. These limited data sets would suggest that second-generation adults oviposit in fall, and some eggs and/or larvae overwinter within the turf, but adults move to the surrounds.

Much more research is needed to understand the distribution and development of *C. minuta* populations on turf in the desert southwest. It is important to recognize that the results presented here are preliminary and require validation over time and space. The main impetus of presenting early findings is to notify area superintendents to be vigilant, but also to avoid making unnecessary insecticide applications. Several courses managing the insect apply a battery of insecticides starting as early as February. Our observations would suggest that applications prior to July are of little value. The observed rapid development of populations in summer imply that controlling adult populations with contact insecticides will require extreme precision in timing given their ephemeral nature. Larvae are less likely to be affected by contacts as they are protected within the stem of the plant. Preventive applications with systemic larvicides may be more appropriate.

Finally, the distribution of flea beetle is unclear, but there are anecdotal reports of similar damage appearing in the Las Vegas area and parts of northern Arizona, primarily on ryegrass and creeping bentgrass. We will continue to monitor populations in southern Utah to better understand seasonal occurrence, host plant damage and develop management programs. Courses that have reason to believe flea beetles are contributing to turf decline during a similar time frame are encouraged to reach out to the authors or submit samples to the Penn State Turfgrass Entomology Laboratory. 📍

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Complimentary daily admission to the Masters is extended to GCSAA Class A members.

# Meet at the Masters

Turf professionals reap the benefits of being GCSAA Class A members. Is this the year you join?

BY SETH JONES

It's a bucket list item for golf fans around the world. Smelling the azaleas in person, taking in the beauty of Amen Corner with a pimento cheese sandwich, then quietly making the long uphill walk to No. 18 to see where the Green Jacket is awarded each year.

Attending the Masters, whether that's the Sunday final round, the Wednesday par-3 tournament — any day at all — is a dream that sadly, many people will take to the grave unfulfilled. It's simply one of the toughest tickets to obtain in all of professional sports.

As dark as that thought is, here's a lighter one: If you're reading this magazine, there's a good chance you already have a free ticket

to attend any day of the tournament you want (see sidebar.) If you haven't gone already, is 2020 the year you make the trip?

Nate Watkin, superintendent of golf course and grounds at The Seagate CC in Lake Worth, Fla., and a group of friends traveled together in an RV and then rented a house last year to attend the Masters for a few days.

"Coming here and cultivating my relationships with my friends, becoming better friends on a deeper level, has really become the pinnacle of (the trip)," Watkin says. "It's well worth the trip to come here, as far as being a Class A superintendent, just



Attending the Masters allows superintendents to cultivate friendships and make meaningful connections.

## THE POLICY

Complimentary daily admission is extended to all GCSAA Class A, A-Retired and AA Life members with a valid gold membership card. Members are required to present their membership card, along with their driver's license, at the Will Call booth each day to gain admission.

Source: <https://www.gcsaa.org/about-gcsaa/membership/membership-benefits/complimentary-tournament-admission>

## THE PLACE

On Wednesday, April 8, *Golfdom* will host its third annual Friends of *Golfdom* meetup at the Masters, but this time at a new location. At 10:30 a.m., we will be at the No. 12 concessions area, and at 11 a.m., we will take a group photo. Email [sjones@northcoastmedia.net](mailto:sjones@northcoastmedia.net) with any additional questions or to inquire about sponsorship opportunities.

## THE WARNING

A friendly reminder that you must be in the appropriate GCSAA member class and in good standing to take advantage of this benefit. And it's nothing to be trifled with. There are currently 18 GCSAA members who are banned for life from Augusta National and the Masters. Don't be No. 19!

PHOTOS BY: GOLFDOM STAFF



for the experience and to see what golf course maintenance is at the highest level.”

Fellow traveler Ryan Swilley, superintendent at Gulf Stream (Fla.) GC, was attending his third consecutive Masters and said he hoped to keep his streak going for a long time.

“It’s like your favorite old story; you always want to know where you were at when this happened,” Swilley says. “The past three years, the events that have happened at the Masters will stick with me for a lifetime.”

Garrett Luck, CGCS at Hidden Glen at Bentdale Farms in Cedarburg, Wis., attended last year with two fellow industry professionals. Luck said it was a simple process to enter the gates at Augusta National with his Class A membership.

“Everything about the Masters and Augusta National is top notch. Gaining admittance as a GCSAA member is very simple and streamlined,” Luck says. “As you approach the gate for general admission, simply veer to the right and continue moving to the right of the crowds. There you will find a gate that looks like a small house that is dedicated to the admittance of GCSAA and PGA members. Be sure to bring your current GCSAA golf card and valid photo ID. After verifying your information, you will be presented with your pass for the day.”<sup>©</sup>

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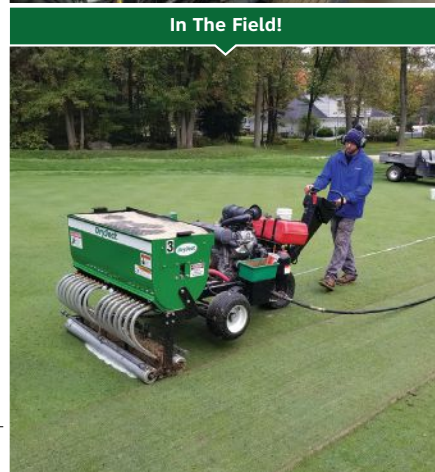
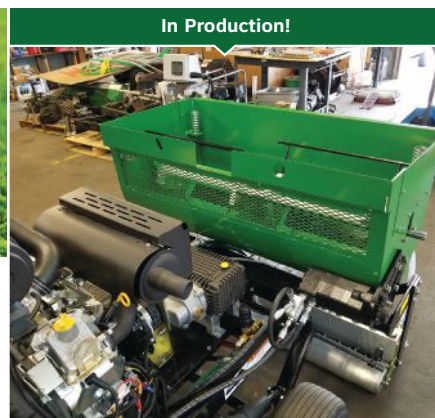
  
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**Nematodes** often can be detected by irregularly shaped patches of declining turf.

## Knocking out nematodes

Because nematodes are microscopic worms that live in soil and feed on turfgrass roots, it's often necessary to send a soil sample to a diagnostic lab to confirm that they've taken over a given area.

However, there are ways to deduce if there's a nematode problem, according to William Crow, Ph.D., professor of nematology at the University of Florida.

"Look for irregularly shaped patches of turf that's declining," he says. "Sometimes you have chlorosis. There may be areas where you have to irrigate more often, where the grass seems to wilt quicker, and that's because the roots are damaged, and the grass can't get the water it needs. You can have increased problems with weeds, because the nematodes don't feed on them, and that gives the weeds a competitive advantage."

Crow also suggests taking a look at the grassroots. "If you have a robust, healthy root system, you probably don't have to worry about nematodes, but if you have a weak or shallow root system, that can indicate a nematode problem," he says.

Generally, nematodes are most active when grass is growing. While nematodes in northern climates may be dormant in the winter, nematodes in Florida may be active year-round. Additionally, different regions contend with different species of nematodes.

Maintaining good turf health and promoting a healthy root system by reducing shade, aerifying and minimizing traffic patterns can help reduce the threat of nematodes, according to Crow.

Crow recommends sampling nursery greens for nematodes and cleaning equipment well after aerating an affected area. He cautions against overseeding in the Transition Zone, because it's warm enough for nematodes to survive in the wintertime, and the population can build if new food is put out for them.

For control, Crow says products with fluopyram and abamectin help eradicate nematodes, but it's important to read the label to determine the application rate and the type of nematodes the product is meant to control. ©

PHOTO COURTESY OF SYNGENTA



## Syngenta

### LANE TREDWAY, PH.D.

Technical services manager



Perhaps the most effective control practice is to prevent nematodes from becoming established in the first place. Once nematodes are established, eradication is not possible, and a long-term management program will be necessary. We can manage nematode populations below established thresholds with cultural practices to minimize turf stress. An ideal growing environment, adequate irrigation and fertilization and increased mowing heights can increase the turf's tolerance to nematode feeding. Also, ensure soil and planting materials (sod or sprigs) brought onto the property are nematode-free. If populations approach threshold values, consider nematicide applications in the spring and fall to help protect new root growth. These times are when nematode populations increase exponentially and when applications will help provide the greatest benefit.

## Seagate CC

### NATE WATKIN

Superintendent



We're in Del Ray Beach, Fla., on an extremely sandy site, and nematodes affect pretty much every property down here in South Florida. We have them (sting, lance and root-knot nematodes) in greens and tees and fairways. We never can eliminate them, but it's something we hope to control. Visually, we see stressed, corroded and thin turf, especially on the greens, and then in the fairways. It looks like a dry spot, and when we put additional water out, nothing happens, so we pull some samples and send them to a lab. They're most active in the summertime, when the soil temperatures are warmer. We try to keep fertilizing the sandier sites with organics and try to build the soil, which makes for a stronger plant, and we put out sludge. Chemically, we use a product with active ingredient fluopyram, and we apply that once in the fall and once in the spring. We always observe turf conditions, and it's wise to get some samples to know for sure what you're seeing.

## Bayer

### TODD LOWE

Technical services manager



Managing nematode-infected turf requires an integrated approach. Light and frequent irrigation and fertilization are necessary when roots become compromised. Aerification can help improve turf rooting, but avoid excessive dethatching and low mowing when roots are weak. Limit root diseases like *Pythium* root rot, take-all root rot or summer patch with a preventive fungicide program. A number of nematicides currently are available, including some with the active ingredient fluopyram, to control nematodes and improve turfgrass roots. Superintendents should evaluate each product and select what is best for their property based on cost per days of expected control, application flexibility, species controlled and longevity of control. Unfortunately, there are no current effective products that control lance nematodes, which can be a concern for some golf courses.

## Quali-Pro

### IAN RODRIGUEZ, PH.D.

Technical services manager



Managing nematodes requires having a good understanding of the species being targeted and managing expectations. Turf type and soil characteristics have a great influence on if or when a nematode species can become problematic, so becoming familiar with the most troublesome types in a region is a good starting point. Knowing when the peak activity for each species occurs allows superintendents to time nematicide applications preventively, rather than waiting for signs of damage. In a prolonged management program, some rotation between active ingredients is a good idea, but be aware that control spectrums vary. Like most other turf problems, cultural practices that promote root health such as core aeration and raising mowing heights can increase tolerance. Since nematode counts can widely fluctuate seasonally — even just a few feet away from a sample point — comparing results based on the health of the root system compared to an untreated area probably is the best way to judge success.



# The Shop

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## 1 TDR-X contour roller mower

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[ProgressiveTurfEquip.com](http://ProgressiveTurfEquip.com)

## 2 Dakota topdresser

DAKOTA manufactures topdressers in four different sizes. The company features a 310 pedestrian model, all the way up to a 5-yard size for fairways or sports fields. The products can evenly spread wet or dry sand, from light to heavy. Additionally, the products' new digital controller has four presets.

[DakotaPeat.com](http://DakotaPeat.com)

## 3 Tru-Turf roller

TRU-TURF rollers provide a fast, flawless playing surface with no creases or irregularities and less soil compression, according to the company. They also produce a healthy sward and leave no clippings behind, Tru-Turf said. The results are achieved not through weight, but through intelligent, precision engineering.

[TruTurf.com](http://TruTurf.com)





4

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5



6

### 4 Flex Deck mowing attachment

The Flex Deck mowing attachment from **STEINER** helps superintendents get a manicured cut on flat or uneven terrain. It features an 80-inch cut, large-diameter casters and robust construction. Powered by the Steiner 450 tractor, the climbing ability and low ground disturbance characteristics enable operators to mow on sloped or soft ground. The Quick Hitch interface of the Flex Deck also allows for exchanging it with other attachments — such as Steiner's aerator or turbine blower — in a few minutes without tools.

[SteinerTractor.com](https://SteinerTractor.com)

### 5 Turfco WideSpin 1550 topdresser

**TURFCO's** WideSpin 1550 is designed to help superintendents achieve their agronomic goals, increase staff productivity and free up time, according to the company. Patented technology allows even, edge-go-edge applications, decreasing the number of passes on greens by up to 720 times per year. Superintendents can know their application rates, calculate the rates they want and determine how much material to budget with the on-board calculator. They can also save preferred applications into the Smart Calculator, then change widths and rates on the fly.

[Turfco.com](https://Turfco.com)

### 6 Snake Series 2 rough mower

Designed specifically for golf and sports turf, the Snake Series 2 rough mower by **TRIMAX MOWERS** provides high cut quality and articulation and is now available in both 3.2-meter and 4-meter cut widths. It features improvements such as the Trimax LocTEK Roller Retention System, replaceable axle stubs, a 90-degree rotatable jack stand, maintenance-free pivot bushes, automatic belt tension and increased roller thickness for reduced maintenance, the company said.

[TrimaxMowers.com](https://TrimaxMowers.com)





# The 19<sup>th</sup> Hole with...

## Mike Valiant

**CGCS** // Glenwild GC & Spa, Park City, Utah



### Mike, what can I get you?

A lemonade on the rocks.

I haven't had any alcohol in five years. Some of the guys who know me will be surprised by that because it used to be a Sapphire and tonic or a Smithwick's.

**Tell me about Glenwild.** It opened in 2001, the only Tom Fazio course in the state of Utah. It's a high-end club with a quaint clubhouse. We have beautiful views of the mountains and the Park City ski areas. It's been the No. 1-ranked golf course in Utah for a number of years, and that adds to the pressure.

**What are your favorite tools of the trade?** I always carry my Pogo, my hose and a square-point shovel. Out here in the West, we're chasing hot spots more than we chase diseases.

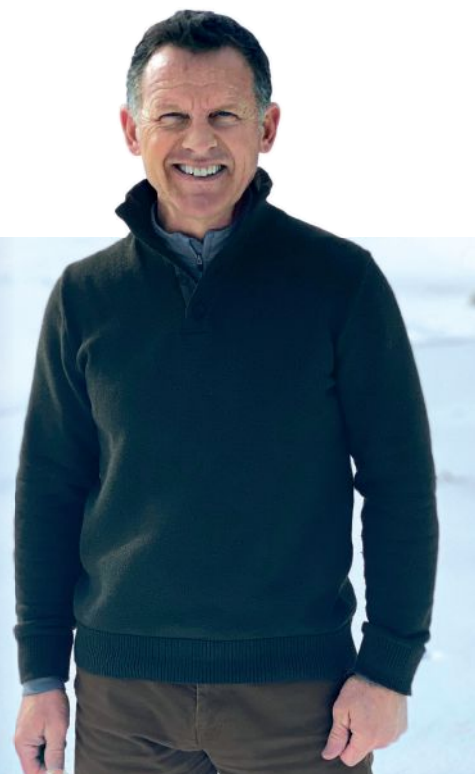


**What was the best thing you saw at GIS 2020?** I spent a lot of time at the Cub Cadet booth looking at their robotic greens mowers. I think that technology in five to 10 years is going to be common. I was disappointed to hear they took action to shut this down (*editor's note: see page 9*); I think the technology is there.

**How did you get into the Tour de France?** I started riding road bikes in college, then I started racing in the '90s. I raced mountain bikes up until five years ago. Greg LeMond and the 7-11 team used to race close to our house. When he

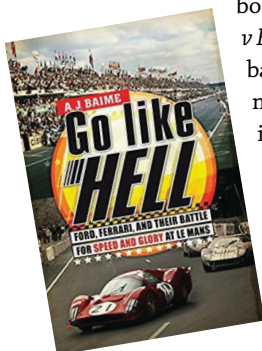
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won the Tour in '86, '89 and '90, that was cool to see an American competing with the Euros. I also got to play golf with him back in '94, '95, when I was working in Vail, Colo.

**Have you read any good books lately?** I just read, *Go Like Hell: Ford, Ferrari, and Their Battle for Speed and Glory at Le Mans* by A.J. Baime. It's the book that the *Ford v Ferrari* movie is based on. I saw the movie first, and it was great and made me want to read the book. The book was well written and a quick read.



### What's the best thing about Glenwild, aside from the golf course?

The wildlife. We have 120 elk that migrate through the course every year, and we also have 10 giant bulls that hang out. Plus, being so close to Park City—it's an old mining town, like Telluride or Aspen, Colo. The Sundance Film Festival is here, and the downtown Main Street is full of great pubs and restaurants.

**Any relation to Prince Valiant?** No, but I get called that a lot. The name is a lot to live up to. I always tell people, I'm more like the Valiant car, and depending on their age, most people say, "the Valiant car?" Yeah, it was a Plymouth, and it was a boxy, normal little car.

As interviewed by Seth Jones, Feb. 14, 2020.



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