

Ten days later the mole cricket is dead, the grubs then pupate and emerge as adult flies to chase after more mole crickets.

About the size of a house fly, *Euphasiopteryx depleta* is also targeted to mole crickets and will harm nothing else in Florida.

Releases usually use fly pupae in damp sand, in a system developed by Susan Winewriter, an IFAS technician. She is the first person in the world to lab rear the Brazilian fly, or any of its cousins that parasitize crickets and katydids.

The fly is established near Gainesville and has spread over a mile on its own accord, Frank said.

"We plan another release site for the fly funded by FTGA at the Doral Golf and Country Club in Miami. Doral will run a monitoring station for us and send a portion of trapped flies to us, releasing the rest," he said.

Two fungi that kill mole crickets are research targets in Dr. Drion Boucias' IFAS lab at UF.

Frank says, "Preliminary attempts

to infect mole crickets by pouring buckets of the fungi in water onto the soil did not work. But we do know that mole crickets will take the bait Rod Kepner developed. We'll try that same bait to incorporate the fungal pathogens and do trials to find out whether that works. If it does, that will give us another non-chemical method to control mole crickets."

Frank said the research is three to four years away from proving itself.

Meanwhile other pathogens — protozoa and viruses — are being investigated for IFAS by Dr. Sergio Alves in Piracicaba near São Paulo in Brazil.


Then there's the wasp that another member of the mole cricket research team, Dr. Jim Castner, researched for his Ph.D. at Florida. It was only a partial success.

"The population still exists at Ft. Lauderdale on the IFAS research center there and on land nearby," Frank explained. "Castner's dissertation showed that it was taking only the short-

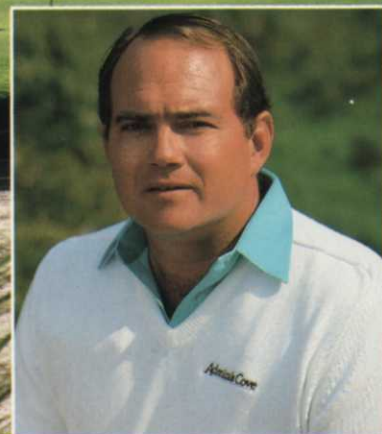
winged mole cricket, not the tawny and Southern mole crickets. In the lab, it had attacked all three. It surprised us."

Frank said researchers are looking at related wasps that parasitize mole crickets in Bolivia at slightly higher altitudes. The hope is they'll tolerate cooler temperatures and be able to survive winters farther north.

One of Frank's favorites in nature's arsenal against armies of mole crickets is the bombardier beetle. So called because it sprays a brown "defensive secretion" when disturbed, it eats a smorgasbord of small insects as an adult. However, its larvae are specialist predators of mole cricket eggs. Without mole crickets, it can't survive because it has nothing to eat.

There are a lot of questions left to ask in mole cricket research: What happens when you introduce more than one natural enemy? What conditions favor which biological control agent? What's the best way to raise and deliver the biocontrols? Research continues. We'll keep you posted. 

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Golf Course Superintendent, Admiral's Cove, Jupiter, Florida

FGCSA research green to grow green real soon

University of Florida plant pathologist Dr. Monica Elliott is looking forward to studying bermudagrass decline and rhizoctonia on this large green under construction at the Institute of Food and Agricultural Sciences Research and Education Center in Ft. Lauderdale.

Begun in July, the green was built mostly with donated materials and funds from golf course superintendents, she said. Seeding will begin in the spring now that a part-time technician has been found to take care of it.

The real story lies underneath the graded earth.

The research green is half built according to modified U.S. Golf



CHUCK WOODS/IFAS

Association standards, like most of the greens in Florida," Elliott explained. Missing is the choker layer, a layer of medium grade sand, coarser than the fine sand on top, but much finer than the gravel that forms the base.

One fourth exactly meets USGA specs, and another quarter

has a geo-textile material substituted for the choke layer.

"Eventually we can collect drainage water and compare different methods of construction," said Elliott.

Also to use the research green: Drs. John Cisar and Robin Giblin-Davis.

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Mister Lee is really a good ol' Joe

*An early champion
of golf course
superintendents
lets his courses do
the talking*

By
MARK JARRELL, CGCS

When talking to him, his name, is Joe; when talking about him, most superintendents refer to him as Mister Lee.

Whenever architect Joe Lee is asked about himself, the answer always begins with "We," as in "We try to design golf holes that are visible from the tee, so that guests have an equal chance at par with the regular member."

The "we" is not an imperial pronoun, however. The only vestige of Joe Lee's aristocratic heritage (he's descended from Robert E. Lee's older brother, John) is his incredibly courtly manner.

Actually, the "we" refers to Betty Peter, the one-woman staff whom Lee credits with design, drafting, land planning, public relations, and office management, as an integral part of everything he has created. She's been with him for

26 years, joining the Dick Wilson/Joe Lee partnership a few years before Wilson passed away in 1965.

With Peter's support, Lee has designed or renovated more than 200 golf courses. At age 70, he has another 20 or so projects in various stages of completion.

About a third of his courses are in Florida (See list, page 67). Half of his Florida courses are concentrated in South Florida, his home territory.

He is immensely popular with golf course superintendents there, not only be-

cause of the extraordinary attention he gives "his" courses, but because of his promotion of our profession.

He was one of the first architects to encourage the hiring of a superintendent during the early stages of construction.

And he supports superintendents in their work.

"I'll always remember him going before the membership at Quail Ridge on my behalf during a particularly difficult period," says Tim Hiers, former president of the Florida GCSA, now golf course manager at the John's Island Club in Vero Beach.

Most of all, superintendents who know Lee admire his respect for the land and his understanding of the difficulties faced by superintendents as they try to balance the needs of nature with the demands of golf.

Like most world-famous architects, Lee has a trademark, but it's not an architectural feature such as Jack Nicklaus' mounds or Pete Dye's railroad ties.

Joe Lee's trademark is commitment and dedication to a project.

"We have always taken the position that our job is never done," he says. "As a golf course moves through time, conditions change. It's our responsibility to adapt the golf course to the evolving conditions."

The extraordinary number of visits he makes to a project during construction assures his client — his "regulars" include heavyweight developers Arvida and Marriott — that the job will be done right without costly alterations.

Each course is special to him and is not forgotten after it opens for play.

"Joe is never too busy to answer any questions about the golf course or to help

'A gentleman and a fine human being...'

It has been nearly 20 years since the day I first saw Joe Lee.

I was standing in a sand trap at Sugar Mill CC, shovel in hand, trying my best to please the old fellow directing my shaping efforts. Joe was passing by on an inspection tour with the project superintendent and paused to survey our work and suggest some minor adjustments.

At the time, this first encounter had little significance for me. I was fresh out of high school with no idea that I would ever go into the golf course business. All I really remember is having an impression of Mr. Lee as a true gentleman and fine human being.

Six years later, I knew — among other things — that the correct term was "bunker" instead of "sand trap" and I

officially met Joe Lee when I returned to Sugar Mill as its first trained golf course superintendent.

My first impression not only proved to be accurate; it has come to define the true essence of this remarkable man. As I mature and begin to realize how few people achieve greatness in their fields while retaining their greatness as human beings, my respect and admiration for Joe grows.

He is a real-life hero to many of us who have come to know him. His contributions to golf and especially to the golf course superintendent rival his incredible accomplishments as an architect.



Mark Jarrell

with course improvements," says Ken Anderson, former superintendent of Broken Sound G&CC in Delray Beach.

"When we rebuilt our greens, Joe volunteered to help in any way he could, even though we weren't paying him. He has given me advice on contouring fairways, reshaping sand traps, planting trees and rebuilding tees. He always showed a strong personal interest in whatever we were doing."

One reason Lee makes so many visits to his courses is that he does much of the work for which other architects hire engineers, consulting specialists and subcontractors.

"He got his foundation in dirt," says Peter, explaining Lee's thorough education in earth moving under Wilson. " 'You can't build a golf course if you don't understand about moving dirt,' was how Dick used to put it."

It was Lee's interest in earth moving that got him started with Wilson.

After his release from the U.S. Navy following World War II, the 25-year-old Lee enrolled in night classes at the

University of Miami, from which he subsequently received a degree in education while pursuing a daytime education in golf at the old Biltmore GC.

Lee landed his first teaching job in Boynton Beach, where he continued to pursue his passion at nearby Delray Beach Municipal GC. That's where he met Wilson, already an established golf course architect at a time when the profession had very few practitioners. The two became friends and frequent playing partners.

After a year in the classroom, Lee turned professional and took an assistant's job at the Moraine CC in Dayton, Ohio. Not too long after he started his new career, Lee's interest was piqued by the construction of the National Cash Register Club right next to Moraine.

While Lee was peering over the fence, who should appear but his friend and former golfing buddy Wilson, who designed the course. He offered Lee a job overseeing the construction.

Joe took it and has never looked back.

Playing the game, however, remains a passion for Joe Lee.

When he comes to Palm Beach National GC for his almost weekly round with course owner and close friend Bob Rich, a drama unfolds at the lunch table as teams are chosen and strokes awarded. The focus of the conversation is always golf: who shot what last week, what new equipment has been tested or purchased to carry into battle, how some recently-learned technique to correct a putting flaw may provide the edge for victory.

His approach to the game as a player mirrors his design philosophy.

"The game provides challenge enough without tricking up a golf course," he is fond of saying. "The golf course must provide a challenge, but it must be a *fair* challenge."

A Joe Lee course challenges players at every skill level. He starts with the premise that a round of golf should be enjoyable. He tries to create safe,

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| Gator Creek | Sarasota |
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| Interlachen CC | Orlando |
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| River Ranch | Yeehaw Junction |
| Sugar Mill CC | New Smyrna Beach |
| Suwanee River Valley CC | Jasper |
| The Hamlet | Delray Beach |
| The International Club | Orlando |
| The Marsh GC | Vero Beach |
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| Lakewood CC | St. Petersburg |
| Orlando CC | Orlando |
| Palm Beach National | Lake Worth |
| Ponte Vedra Club | Ponte Vedra Beach |
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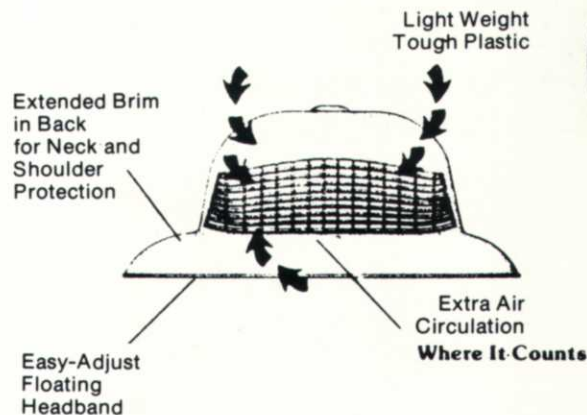
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interesting routes while giving the player an opportunity to use every club in his bag.

He is not offended when a well-played round on one of his courses produces a low score.

He designs courses for the "love of the sport and the opportunity to use many different skills including, above all, unlimited use of the imagination."

Lee stands on the principle that the land dictates the golf course. His penchant for tailoring the course to the property explains his disdain for "trademark" or "signature" features.

He won't compromise his principles just to get a job.

Bill Wright, director of golf course and landscape operations at the Boca West Club, relates a story about the construction of the club's fourth course that illustrates Lee's principles.

"The project manager, a young Harvard MBA, approached Joe about moving a tee to accommodate one more housing unit in a parcel bordering the seventh hole.

"Lee tried to explain the reasons for not moving the tee, but the young turk persisted, going so far as to walk over to his BMW and pull out his plan for redesigning the hole.

"In a very low, unruffled tone, Joe explained that he had told the developer when he started that he was strong enough to tell them when they were making a mistake. And at this point, he said, they were making a mistake.

"He then told the project manager that if he insisted on moving the tee, he should go on down to Walgreen's to find himself another architect."

Lee is not inflexible, however.

He stands his ground on functional matters relating to proper engineering, safety, practical maintenance, and preserving the integrity of the game, but he always does his best to help his clients achieve their goals and realize their dreams.

He listens to his clients. . . even to those who don't realize that water cannot drain uphill.

"Often a different opinion will give

new ideas for improvements which make us all look good," he says.

Nor does he disparage architects who differ with his philosophy.

"Golfers should have the choice of many styles," he says. He fears, however, that some new trends in golf-course design may increase the cost of maintenance to a point that will put the game beyond the reach of some.

Golf is not his only sport. As a young baseball pitcher, he was fast enough to earn a tryout by the Washington Senators, but, as Lee puts it, "Other golfers are safer when I putt than the batters were when I pitched."

He would like to be remembered "as a golf architect who helped perpetuate the conventional style of golf."

"If I were rich," said Gene Sarazen, "and wanted a golf course that everyone could enjoy, I would hire Joe Lee. His traps are good to look at and his courses don't have too many water holes, which I deplore. All in all, Joe Lee is my number-one choice. He is the modern-day Donald Ross."

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For years, great mats of floating and submerged algae frequently turned the nearly three-acre irrigation lake at Banyan GC in West Palm Beach into an eyesore and source of complaints from club members. At times, the algae was so thick it clogged clay valves on the irrigation system, requiring the valves to be cleaned every two or three days.

Golf course manager Dan Jones, like most superintendents in Florida, looked for a solution to the problem. He

DAN JONES

DAVE REAGAN

An aerator can turn an ugly, algae-infested pond into a scene for a photographer's scrapbook in less time than one might imagine. Photo at right was taken on this three-acre pond just two weeks after photo above.

