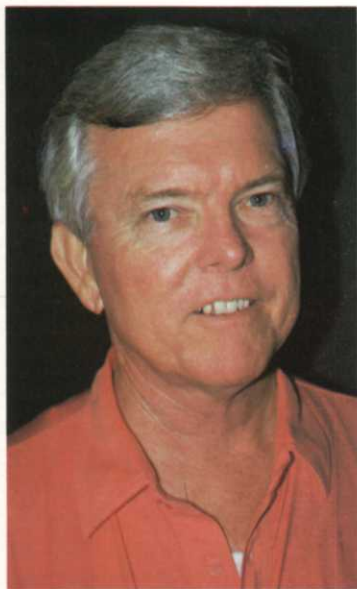


'Germ warfare' against the mole cricket appears to be working

It's still too early to tell about the red-eyed fly



Golf Course Manager
Banyan Golf Club
West Palm Beach

As we reported last quarter, a new arsenal has been unveiled in Florida to help fight the state's number-one golf-course pest, the mole cricket. A red-eyed fly and a prolific nematode are joining forces with turf professionals to try to bring mole crickets under control.

J. Howard Frank and J. Patrick Parkman, entomologists from The University of Florida, are spearheading this experimental program. Funding is being provided by The Florida Turfgrass Association. Each of the 30 golf courses participating in the project has paid the FTGA \$8,000.

In late January, a three-hour seminar was held to teach each golf course superintendent how to run the program.

The parasitic nematode project consists of two 3-foot funnels, a million nematodes and two electronic "callers" which imitate the mating calls of the male tawny and southern mole crickets.

The nematodes are placed in the ground under the funnels.

When the female mole cricket comes to the mating call of the male, she falls through the funnel to the ground. She burrows into the ground and a nematode enters her body through a breathing port or through the mouth.

The nematode releases a very specialized bacteria which kills the mole cricket. The nematode lays 50,000 eggs inside the mole cricket and lives off the decaying carcass and the bacteria.

Dr. Parkman came to Banyan GC in mid February to install our callers and deposit the nematodes into the ground. We started to see activity under the funnels the next day.

A serious problem developed on the

third night when the local armadillo population discovered a new restaurant. The grass under the funnels was really torn up so to protect the mole crickets and nematodes, we had to put a fence around the funnels and callers.

By the fifth day, rumors were rampant around the clubhouse about the mole cricket experiment site, which was located next to the 10th green. The best one was that the apparatus was a spaceship.

We had a sign made: *Mole Cricket Research by the University of Florida*. The rumors have abated.

After four weeks, we have had so much mole cricket activity under the funnels that almost all the grass is gone. Weeds are sprouting everywhere. And for this experiment, that is good.

So far, I believe the experiment site at Banyan has been successful in attracting the mole crickets to the nematodes. Now I hope the process spreads throughout the entire golf course.

The red-eyed fly is also a host-specific organism for the mole cricket.

It seeks the mole cricket out at night and lays an egg on its abdomen. The resulting larva then proceeds to eat the mole cricket until the cricket dies. The larva emerges as an adult and seeks out another mole cricket and the cycle repeats itself. Fifty red-eye flies are to be deposited at each participating golf course.

There is hope that, with these latest weapons, the mole cricket will eventually go the way of the dinosaur.

The twin funnels and mole-cricket callers shown here off the 10th green at Banyan GC in West Palm Beach may someday become as common a sight on golf courses in the South as ball-washers. More photos of the installation on next page.



FTGA-funded mole cricket control research project



- ## Participating Golf Courses
- Sun City Center Golf Courses
Sun City Center
 - Cypress Run CC
Tarpon Springs
 - City of Ocala Golf Courses
Ocala
 - Interlachen CC
Winter Park
 - Citrus Hills GC
Hernando
 - Quail Ridge GC
Spring Hill
 - Woodfield CC
Boca Raton
 - Tournament Players Club
Ponte Vedra
 - Silver Oaks GC
Zephyrhills
 - Countryside CC
Clearwater
 - Cypress Creek CC
Orlando
 - Riviera CC
Ormond Beach
 - Riviera GC
Naples
 - Fiddlesticks CC
Fort Myers
 - The Bay Hill Club
Orlando
 - Royal Poinciana GC
Naples
 - Banyan GC
West Palm Beach
 - North Dale CC
Tampa
 - Foxfire GC
Sarasota



DAN JONES

Drs. Howard Frank, left, and Pat Parkman of the University of Florida's Institute of Food and Agricultural Sciences assemble the two funnels and mole cricket callers off the 10th green at Banyan GC in West Palm Beach. A million nematodes get watered into the ground beneath the funnels, right. The electronic callers entice the mole crickets into the funnels, from which they drop straight onto the nematode-infested turf. The crickets burrow into the ground beneath the funnels and are attacked by the nematodes, which carry bacteria that are lethal specifically to the mole crickets. The nematode-bacteria combination is a natural enemy of the mole cricket in its native South America.

