### MAINTENANCE

### BRIEFS



### KNOTTS EARNS CERTIFICATION

NAPLES, Fla. - Prentis C. Knotts of Eagle Creek Country Club here has been designated a certified golf course superintendent (CGCS) by the Golf Course Superintendents Association of America. Superintendent at Eagle Creek since 1991, Knotts passed a rigorous examination and his course was inspected by two CGCSs.

### ..... **ISS INKS PENNBROOKE PACT**

LEESBURG, Fla. - ISS Golf Services of Tampa has reached an agreement with Florida Leisure Communities for maintenance of the nine-hole Pennbrooke Fairways golf course here. Florida Leisure has added three Gordon Lewis-designed holes at Pennbrooke Fairways and plans to expand to 18 holes in 1996.

#### ..... LARGE-ROLL SOD HARVESTING A HIT

OMAHA - Large-roll sod harvesting and delivery systems captured the imagination of the 850 registrants at the Turfgrass Producers International (TPI) Summer Convention and Field Days held July 26-28 at Todd Valley Farms 35 miles west of Omaha. TPI officials said highly automated, oneperson roll sod harvesting machines also drew interest, as did improvements in forklifts, large mowers and irrigation systems. The event was attended by 60 representatives from 14 countries.

#### ..... FIDDLER'S ELBOW QUALIFIES

FAR HILLS, N.J. - Fiddler's Elbow Country Club has earned full certification in the Audubon Cooperative Sanctuary Program (ACSP). Specific projects undertaken at Fiddler's Elbow include the release of two rehabilitated American Kestrels on the property; the use of bluebird nest boxes as 150-yard markers; a clubwide recycling effort; the continued use of a comprehensive, "natural-organic" integrated pest management program; and the creation of sedimenttraps and buffer zones around many on-course waterways. In addition, Fiddler's has set a total of 107 acres of property aside as "no-mow" areas.

### ..... **GEORGIA GIVES STEWARDS \$3,000**

EATONTON, Ga. - The Georgia Golf Course Superintendents Associa-



tion has donated \$3,000 toward creation of a new exhibit at Rock Eagle Natural History Museum here. The Stewards of

the Land exhibit will introduce visitors to the world of urban agriculture, including turf and landscape. GOLF COURSE NEWS

## Zebra mussel menace threatens South

### By MARK LESLIE

AINESVILLE, Fla. — The Southeast is bracing for what scien tists feel is the imminent invasion of the zebra mussel - a menace that has plagued the Great Lakes area since arriving in the ballast of a ship from Europe nine years ago.

Already, the clamlike shellfish have invaded golf courses in Illinois, Minnesota and New York, and shut down water-management and power companies. So minute in their veliger, (the larval form, which is 70 microns or larger), zebra mussels swim right through conventional water filters. They have been found up to two feet thick on the intake of a water system.

"All of us from North Carolina on down the coast are trying to set up preventive programs," said Marion Clarke of the Sea Grant Extension Program at the University of Florida in Gainesville. "Northern Florida will be the first vulnerable area because our waters are cooler longer. They [zebra mussels] are becoming more tolerant of warm water and are developing immunities to salinity."

Golf course superintendents should



The National Biological Service's Nonindigenous Aquatic Species Data Base at the Southeastern Biological Science Center in Gainesville, Fla., keeps track of zebra mussel distribution in North America. This map depicts the zebra invasion as of July.

be most concerned if they draw from open water, Clarke said, adding: "Zebras get into the irrigation system and clog up their sprinkler heads and pipes. You can be [closed] down weeks doing chlorination treatments and scraping and blowing out pipes.

"It is very labor-intensive. You

intensively chlorinate the pipes, let it sit and then pressure-blowout the pipes; then keep chlorine in there to kill whatever larvae survives.'

The Great Lakes area has spent millions of dollars combating zebras. Indeed, if not money then at least fear Continued on page 23



The dead-air green at Atlanta Athletic Club is divided into 5-by-10-foot plots for 28 cultivars and five blends of turfgrass.

### Dead-air green's gift: Life to the industry's turfgrasses of the future

### By MARK LESLIE

DULUTH, Ga. - Dead air oftentimes means dead grass. But Georgia superintendents and researchers hope the "deadair green" they built at Atlanta Athletic Club (AAC) here will help produce turfgrasses that survive regardless of air movement.

"I think we'll wind up with better yearround conditions on the putting greens," said AAC Director of Golf Courses and Grounds Ken Mangum. "The more information we have, the better decisions we can make."

The Georgians built almost a worstcase scenario when they constructed this 9,000-square-foot green. Trees edge two sides of the putting surface and eight- to nine-foot-high mounds enclose it on all sides. Cut to a height of 9/64 inch, it is being maintained like the other greens on the golf course - even to the extent of double-mowing and rolling during the state amateur tournament in July, Mangum said.

"It was done mainly to research performance to find the best cultivars for those conditions," said Dr. Gil Landry of the University of Georgia. "That's the number-one question for all golf course superintendents. The feeling is, if we can get a grass that will survive that stress it will survive other locations on a golf course."

The green was built to U.S. Golf Association specifications by area shaper Mitch Bourgeois, and AAC crews seeded four replications of cultivars instead of the three common to national trials.

The plots are 5 by 10 feet, which is twice the size of normal test plots. Twentyeight cultivars and five blends grace the green.

# **Mechanics** tune up 1st nat'l conclave

### By MARK LESLIE

COBBLESKILL, N.Y. - The fledgling Golf Course Mechanics Association (GCMA) is gaining momentum in numbers and now plans its first Mechanics School, a five-day program hosted here by State University of New York at Cobbleskill, Jan. 8-12.

"Hopefully, it will be yearly," said GCMA Vice President Brian Alfond of Dedham (Mass.) Country and Polo Club. "It will stay on a regional level for the time being. If [GCMA] really gets rolling, perhaps 10 years from now, we might have a oneweek national conference.'

The \$685 course, consisting of eight half-day sessions, will instruct members on the ins and outs of products made by Jacobsen, Toro, Cushman, Ryan, Ransomes, John Deere, Troy-Built, Melroe-Bobcat, Kawasaki, Honda, Briggs & Stratton, Tecumseh/Peerless, Rainbird, Buckner, Neary, Foley and many others, according to organizers.

Open to GCMA members only, the sessions are structures such that the SUNY-Cobbleskill instructors determine at what experience level classes will begin and cover. Instructors may also look to students' experience to help the class.

Sessions will include repair welding, diesel engine fundamentals, electrical systems diagnosis, hydraulic system diagnosis, carburetion and gas engines, grinding reel mowers, irrigation system repair and sprayer calibration maintenance.

Continued on page 20



#### OUT! OUT! DRY SPOT

### University research finds 'dramatic' results using porous ceramics

By MARK LESLIE

IOWA CITY, Iowa — Advocates of porous ceramics in rootzone mixes feel a University of Missouri study confirms their stance.

"We found pretty dramatic pictures" when top dressing dry spots with ceramics compared to straight sand, said Dr. David Minner, a Iowa State University professor who conducted studies on Profile Porous Ceramic Soil Modifier while at the University of Missouri.

Minner was commissioned for the study by Applied Industrial Materials Corp. (AIMCOR), which manufactures Profile. He said he also discovered lower temperatures both on the surface and in the top three inches of the soil, and higher infiltration rates than sand-peat mix.

# See related stories pages 1, 18 & 19.

With one summer's worth of preliminary data, Minner pointed particularly to results of research on dry spots. He used a 25-by-25foot section of a Research Center putting green that — though built to U.S. Golf Association recommendations — required "extra syringing and was problematic." Maintaining six replications of 2- by 2-foot plots, Minner core aerified them and top dressed them either with sand or Profile.

"As the dry-spot areas started to develop," he said, "there were many more of them in the sand [top-dressed] areas, as opposed to Profile areas. We saw two keys: You had to continue syringing, or hand-watering; and it made your hand-watering program much more effective. The water was pulled down into the soil profile and held there for later on.

"During a three-week drydown phase in August, we handsyringed, treating them just like a superintendent would cooling them once or twice a day."

Meanwhile, Minner also reported temperature relief where ceramics were top dressed into the soil profile. "The plots were wilting less, and there were lower temperatures in the surface and the soil to three inches deep," he said.

"We were seeing surface canopy temperatures as much as 20 degrees cooler. You can expect that when you have a plant that's wilted as opposed to one that is not wilted. The plots with Profile would not wilt as much. The ones with sand would wilt quite readily. Soil temperatures were 1 to 3 degrees cooler, mostly. But on some days it was as much as 7 degrees cooler."

Now that he has moved to Iowa State, Minner said he will construct some plots this fall to continue the study.

### Mechanics set education conclave continued from page 13

SUNY Cobbleskill agricultural engineering instructor Larry Van DerValk actually approached GCMA founder and President Steve Lucas of Weston, Mass., about conducting a school and began planning curriculum in May.

Teaching sessions like this are badly needed, Alfond said, because "it's getting so specialized and the equipment is getting more and more complex. A good course in electronics is a must now. No more is it simple automotive mechanics. You're getting into computerization. And it isn't stopping. I predict it's just the beginning of computerization on this machinery."

Since the association was formed two years ago, its membership has grown to approximately 300.

"Our membership now spans Massachusetts, New Hampshire, Maine, Connecticut, Rhode Island and New York," Alfond said. "We've been in contact with other associations, particularly Florida, and in Colorado. Eventually it will be nationwide. It's in growing pains right now."

More information is available from Alfond at 617-245-6092. Golf Course News welcomes news from all mechanics associations.

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