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, one-person 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 club-wide recycling effort; the continued use of a comprehensive, "natural-organic" integrated pest management program; and the creation of sediment-traps 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 Association 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.

Zebra mussel menace threatens South

By MARK LESLIE

GAINESVILLE, Fla. — The Southeast is bracing for what scientists 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 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

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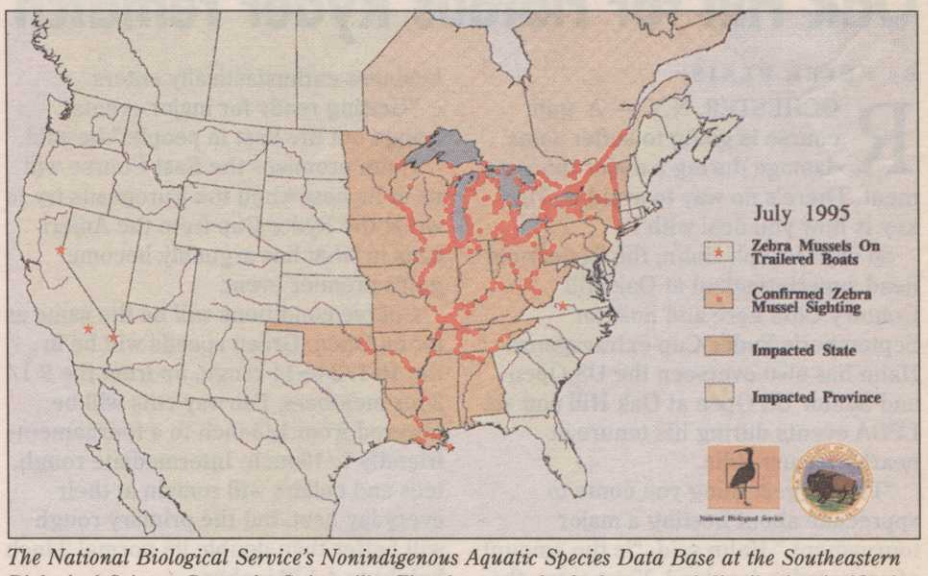

The National Biological Service's Nonindigenous Aquatic Species Data Base at the Southeastern Biological Science Center in Gainesville, Fla., keeps track of zebra mussel distribution in North America. This map depicts the zebra invasion as of July.

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 "dead-air 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 year-round 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 worst-case 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. Twenty-eight cultivars and five blends grace the green.

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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 one-week 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.

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Zebra invasion

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has run rampant in the Great Lakes Region. "We were fortunate we had a filter, or it could have been a lot worse," said Fernando Fernandez, superintendent at Green Acres Country Club in Palatine, Ill.

Two years ago Green Acres had zebras two inches thick coating the sea wall around its irrigation pond. Fernandez, who buys water from Lake Michigan, told water plant operators about the zebras and, "very mysteriously, they all died within three or four weeks," he said.

Fernandez believes the water company injected chlorine or sodium hyper chloride into his water "because our turf got very yellowish and faded."

Fortunately, Fernandez mixes the lake with rain and well water.

"I would have had some bad problems if I had used it straight," he said.

A marine biologist took samples and recommended that Fernandez lower the pond down to the mud in the winter, so the mussels wouldn't have anything to stick to. Basically, the exposed mussels would freeze to death.

Bill Aiston was not as fortunate as Fernandez. Superintendent at Lake Shore Country Club in Glencoe, Ill., Aiston buys Lake Michigan water for his three small irrigation ponds before that chlorine-treated water can kill the zebra mussels. And since his ponds contain a lot of filamentous algae, the water would clog a filter as fine as 50-micron mesh.

"They're going right through to the sprinkler heads, so we spend a lot of time cleaning strainers on individual heads," Aiston said. "A lot of it is teeny slivers of broken shells, and in their juvenile stage they are mushy and can be wiped off."

The mussels stick on submerged golf balls, aerators, the filter screen, anything, he said, adding, "Monthly I have to knock them off my filter screen."

This fall Aiston will completely drain the ponds and let them sit for two weeks. "We'll have to do that every year. There is no chemical or electrical means to control them that is feasible for a golf course."

By blowing out the irrigation system before winter, he will knock a lot of debris out, he said.

But Aiston doesn't describe the zebras as a big problem — yet. "Since our lakes are only 3 years old, we don't have any mature zebras in them," he said. "They grow to the size of 1-1/2 inches and get four or five deep."

National Biological Service (NBS) fishery biologist Amy Benson said water heated to 100 degrees also kills zebra mussels, which can withstand water temperatures in the 80s. Then again, a course's irrigation system would have to be shut off.

Even with these treatments, the zebra mussels return "if you don't take preventive measures," Clarke said.

To prevent an infestation of a irrigation system, "take precautions," advised Nancy Balcom, Extension educator with the Sea Grant Marine Advisory Program at the University of Connecticut. The mollusks have expanded their range most quickly through the major river systems — flowing with the currents or being transported on the hulls of barges and large vessels, she said. Some are also being transported from one body of water to another by unwitting boaters and anglers, she said, adding, "We educate people to rinse off and dry out their boats, to scrape off aquatic weeds, to not transport bait from lake to lake..."

Zebras enter water intakes several ways: in the form of veligers they are carried by the water flow; as juveniles they can crawl in using their clamlike foot; and as adults they can break loose from colonies and travel to intake mouths with the currents.

Balcom said superintendents could install 50-micron-mesh in-line filters, but they would clog quickly. "A better alternative is to use a fine sand filter like those used for swimming pools, or an automatic backwash filter," she said.

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So invasive are the zebra mussels that a Zebra Mussel Information Clearinghouse has been initiated at New York Sea Grant, and the NBS is mapping their movement and operates a worldwide web site devoted to zebra mussels.

"The prognosis is grim for all of the continental U.S.," Balcom said. "If there are appropriate water temperatures, enough calcium in the water for shell formation and a good food supply [plankton], they can spawn when water reaches 54 degrees, so that's seven to eight months of the year or longer. They can survive in eight to 12 parts per thousand of salinity in a laboratory. And they're prolific. Over a season one zebra can produce more than one million eggs."

Once zebra mussels arrive in an area, they are there for good. Europeans have dealt with them for more than 100 years and have succeeded by engineering infrastructures with the little creatures in mind.

"Our problem is that we're playing catch-up," Balcom said.

Teleconference aims to raise defenses before zebras arrive

GAINESVILLE, Fla. — A free satellite teleconference on the predicted zebra mussel invasion of the Southeast will be held from 9 a.m. to 4 p.m. Sept. 27. One of the four case studies scheduled to be aired deals with impacts on golf courses.

Sponsored by Florida Sea Grant in cooperation with the Southeastern Sea Grant Programs, the conference will bring together experts from around the country who have first-hand experience in tracking, analyzing and fighting zebra mussels.

"We're uplinking in Gainesville and will go out to any Extension office across the Southeast," said Marion Clarke of the University of Florida campus here. Although anyone can tune in to the teleconference, it is being targeted to states from Texas to Florida, up the Atlantic Coast to North Carolina and as far as Oklahoma, Arkansas and Tennessee.

For more information and downlink sites, people should contact their Sea Grant Program offices: Texas (512-994-8426); Louisiana (504-388-6305); Mississippi (601-388-4710); Alabama (334-438-5690); Florida (904-392-1837); North Carolina (919-515-2454); Georgia (912-264-7268); and South Carolina (803-727-2075).

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Meanwhile, the Florida Sea Grant Program is funding research into the most vulnerable environments in the state.

Ernie Estevez at Marineland will look at the environments where the zebra is flourishing in the Northern states and comparing those environments with Florida," Clarke said, adding that other states are undertaking similar studies.

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Sources of zebra mussel information:

Marion Clarke, Sea Grant Extension Program, University of Florida at Gainesville (904-392-1837).

Amy Benson, fishery biologist, National Biological Service (904-378-8181; FAX 4956). The NBS has a zebra mussel database ;on the worldwide web, address: WWW.NFRCG.gov

Chuck O'Neill, Zebra Mussel Information Clearinghouse at New York Sea Grant (716-395-2638; FAX 2466).

Nancy Balcom, Sea Grant Marine Advisory Program, University of Connecticut (203-445-8664), which has produced the 10-minute videotape, The Invasion of the Zebra Mussel: Just a Matter of Time?