

BRIEFS



HONORS DONORS

CHATTANOOGA, Tenn. — The Honors Course has given \$5,000 toward the new pesticide-exposure study being sponsored by the Golf Course Superintendents Association of America. The study will examine deaths among superintendents over the past 23 years to determine if there have been any unusually high rates of cancer or other diseases that could be linked to pesticide exposure.

HIERS MOVES ON

NAPLES, Fla. — Tim Hiers, CGCS, superintendent at John's Island West Inc. in Vero Beach for eight years, has assumed the position of superintendent at Collier's Reserve, a facility under construction here. Before working at the 54-hole Johns Island West, Hiers was at 36-hole Quail Ridge in Boynton Beach for four years and Suntree in Melbourne for five years. He is a 1976 graduate of Lake City Community College. Collier's Reserve is being designed by Art Hills and built by Central Florida Turf.



NTEP FIELD DAY SCHEDULED

BELTSVILLE, Md. — The National Turfgrass Evaluation Program (NTEP) will conduct a turfgrass research field day at its research plots at Beltsville Agricultural Research Center-West on Aug. 5. The 8:30 a.m. to 12:30 p.m. program will include discussion and display of NTEP tests on Ken-



tucky bluegrass, perennial ryegrass, tall fescue, fineleaf fescue, bentgrass, Bermudagrass, buffalograss, zoysiagrass, and zoysiagrass/cool-season grass mixtures. Experts will also speak wear tolerance; endophyte-enhanced grasses; low maintenance performance of tall fescue; Kentucky bluegrass and zoysiagrass; growth rates and management of tall fescue cultivars; organic fertilizer use on turfgrass; and other turfgrass topics

ELM TREES AVAILABLE

HARRISVILLE, N.H. — Golf course superintendents may tap into the Elm Research Institute's Liberty elm program by contacting the institute here. Superintendents nationwide may call 800-FOR-ELMS, according to Assistant Director Yvonne Spalthoff. Participants buy 100 or more one- to two-foot saplings.

Death stalks the forests and fairways of U.S.

By MARK LESLIE

You look out in the forests, and it's devastating," Winged Foot Golf Club superintendent Bob Alonzi lamented after he lost his famous American elm tree to disease this winter. America's golf courses — indeed, its forests — are under attack by diseases for which scientists nationwide are trying to discover cures and treatments.

The "ash yellows" disease is killing white and green ash from

Nova Scotia, Canada, to the Missouri River Valley. The dogwood anthracnose fungus has destroyed an estimated half of all the dogwoods in Pennsylvania and affected 9.5 million acres, primarily in the Appalachian Mountains from Virginia southward. And Dutch elm disease has made the United States a graveyard of American elm trees.

These are the stories of the dogwood and ash trees, and the battle being waged in laboratories and in forests to save them.

Fungus ravages nation's dogwood

"The carnage is unbelievable," Virginia Tech's Dr. R. Jay Stipes said of dogwood anthracnose fungus, which has ravaged populations of the native American flowering dogwood, *Cornus florida*.

Stipes called the fungus vicious and voracious, adding that when it strikes, it causes lesions and large brown spots with purple borders on the leaves. It then spreads to branches and trunks, causing cankers and eventually killing the tree.

It is more prevalent at high elevations — areas where high disease pressure and conducive conditions are the highest. Dogwood trees are dying by the millions in the Great Smoky Mountains of Tennessee and North Carolina, said Stipes, a plant pathologist at the Blacksburg, Va., campus.

"It's our third Trojan horse," he added, eluding to the fact that, like Dutch elm disease and chestnut blight, dogwood anthracnose came to America on imported trees — in this case, the Oriental dogwood, *Cornus kousa*.

"The dogwoods are about half dead in Pennsylvania," said Stipes.

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Dogwood anthracnose causes major, and obvious, growth problems to dogwood trees, starting on the leaves and spreading to branches and trunks.

Photo courtesy of Dr. R. Jay Stipes

Yellows disease destroys ash trees

Dr. Wayne Sinclair, Cornell University professor of plant pathology, said ash yellows has probably been around for 40 years, although the kind of organism that causes it was unknown as a group of plant pathogens until 1967.

"We only recently learned about diseases in that group because we haven't had that much time," he said. "Also, the symptoms of ash yellows are often subtle and, in most affected trees, not expressed well enough for diagnosis in the field.

"Very few people can recognize the disease. Diagnostic procedures involving laboratory work are usually necessary."

If an ash tree shows "die-back" of branches, there is some chance ash yellows is involved, Sinclair said. "In the Northeast, there is a good chance of that."

White ash grows from Nova Scotia to the Great Lakes and south to Kentucky. Green ash has a much wider range: throughout the Eastern half of the United States and Eastern Canada. It is one of the major forest species in the inland portion of the Mississippi River delta.

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Tour of Duty

MARK ESODA
Atlanta Country Club
Marietta, Ga.
PGA's BellSouth Classic
May 6-9, CBS



Esoda, 34, is in his fourth year at Atlanta CC. Previously the University of Georgia alum spent time at several Peach State layouts, including Dunwoody Country Club, Hidden Hills CC in Stone Mountain and Ansley Golf Club in Atlanta. Ansley is a nine-hole city course that underwent extensive renovation during Esoda's tenure.

Things to look for: No major renovations on the course proper have taken place in the past year. Esoda's crew has concentrated on the periphery — mulching and landscaping back in the tree line. "Everyone should notice what a wet year we've had," Esoda said. Last year saw precipitation levels 17 inches above normal. Standing water has resulted in shorter root growth

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DOUG FISHER
TPC at Las Colinas
Irving, Texas
GTE Byron Nelson Classic
May 13-16, ABC

Fisher, 30, started his college career as a forestry major. But a freshman internship at Castle Pines Golf Club in Castle Rock, Colo., under the tutelage of then-superintendent Phil Wycoff, convinced Fisher his future was in turf rather than trees. Since graduating with a four-year degree in landscape horticulture from Colorado State University, Fisher has worked as assistant superintendent at Castle Pines, Green Hills CC in Millbrae, Calif., and The Pinery CC in Parker, Colo. He came to Las Colinas two years ago as construction coordinator and is now in charge of the TPC course.

Things to look for: Water features are the main additions, Fisher said. A drainage ditch has been transformed into a waterfall



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TIM LONG
Barton Creek Country Club
Austin, Texas
Srs. Liberty Mutual Legends of Golf
May 3-9, ABC



Long, 34, oversees all 54 holes at Barton Creek. The tournament will be played over the Tom Fazio layout with the Bill Coore/Ben Crenshaw course available next door and the Arnold Palmer track 20 miles down the road. Long came to Barton Creek eight years ago after stints at La Quinta Hotel Golf & Tennis Resort in Palm Springs, Calif., and Mission CC in Odessa, Texas. He graduated from Texas A&M University in 1981 with a bachelor's degree in agronomy specializing in turfgrass management.

Things to look for: The 2nd, 8th and 13th greens have been nearly doubled in size to approximately 7,000 square feet apiece. Several tees have also been enlarged. Water is the focus on the Fazio

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Sinclair: Once ashes stop responding to 'good care,' death imminent

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Sinclair explained that ash trees labor when under drought stress. A lot of die-back has been discovered in green ash in wood lots through the Midwest lately — probably because of unusual dryness the last 12 years, he said.

White ash also gets into trouble from ash yellow disease, which is caused by microorganisms transmitted by leaf-hoppers.

In both white and green ash, ash yellows causes a dramatic suppression of growth.

In white ash it also tends to cause rootlets to die off and probably branches to die back.

Trees attacked by ash yellow ash are "less able to tolerate drought and other stresses, and they recover from such stresses more slowly or not at all," Sinclair said.

"The good news is that unless trees are in really bad shape — with lots of branch die-back and getting really tired — they are capable of responding to good care," he said.

'If the tree begins to respond, great. If it doesn't, don't keep trying.'

— Dr. Wayne Sinclair

Sinclair defined "good care" as watering in periods of drought and mulching the root zone six inches deep with ground-up trees.

"They love that," he said. "A mulch zone of any size is helpful,

and the bigger the better.

But, he declared: "If the tree begins to respond, great. If it doesn't, don't keep trying."

"For trees in declining health, there is obviously, in concept at least, some point along that scale below which they are incapable of responding to good care."

Research has found nothing promising to fight yellow ash, so there is no major effort going on, Sinclair said, adding that the leaf-hoppers are from more than one family and the vectors for the ash

yellows pathogen are not yet known.

Chemical treatment is not a factor since the tree suffers from a systemic infection that, by itself, may only retard the growth of a tree.

"The idea is to minimize those stresses," Sinclair said.

Pruning? "That helps the owner of the tree," he joked.

"If there are snags and you don't want to see it, prune it out and the tree looks better. That's all it does."

Hope for dogwood

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There may be a couple of solutions to the dogwood problem: fungicides that effectively fight the fungus; and new hybrids with genetic resistance to it.

Stipes said the fungicides Banner (manufactured by Ciba-Geigy) and Daconil 2787 (an ISK Biotech product) are very effective against dogwood anthracnose. Mobay's Lynx would be "superb," he said, but is not yet registered for use on this particular disease.



Dr. R. Jay Stipes

Stipes said an infected tree must be treated once as its buds are about to open up, then twice as the buds are unfolding. If it rains after application, the tree must be retreated, he said.

NEW BREEDS

Meanwhile, Dr. Mark Windham hopes four native dogwoods left on his University of Tennessee campus in Knoxville are resistant to the anthracnose.

Last fall Windham and Stipes collected seeds from the dogwood and inoculated the seedlings with the disease. Windham may know this year if he has resistant dogwoods from which he can start a new variety.

Meanwhile, the Stellar series of hybrids resulting from a cross of Cornus florida with Cornus kousa were believed to be resistant but not immune to the disease. But Francis Holmes of the University of Massachusetts found out that if kousa is subject to extensive and long-period humidity, it becomes more susceptible.

And Dr. Tad Smith of the North Carolina Forest Service put a number of the variety with sick dogwoods and found they were susceptible.

Several dozen species of wild dogwood in China, including many virtually unknown until recently, are being investigated. And species from Asia are being produced in hopes of finding the right cross.

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