

Horticultural News and Research Important to American Gardeners

SUDDEN OAK DEATH QUARANTINE AFFECTS CALIFORNIA NURSERIES

In March, after nursery stock infected by a disease known as Sudden Oak Death (SOD) was discovered at two major California nurseries, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) issued an amended quarantine requiring that all of the estimated 1,500 nurseries in California be inspected and found free of the SOD fungus before susceptible plants could be shipped over state lines. These include popular ornamental plant genera such as *Rhododendron* and *Camellia*, some selections of which were in short supply this spring in eastern nurseries and garden centers.

SOD was first identified in the 1990s, when tanoaks (*Lithocarpus densiflorus*) in Marin County, California, began dying from a mysterious disease. The disease was traced to a funguslike organism (*Phytophthora ramorum*) that is associated with no fewer than 59 host plants. Shortly after, when SOD was found in 11 more counties in coastal California, all 12 counties were quarantined.

This year's amended quarantine restrictions came at the height of California nurseries' spring shipping season and has caused additional losses in a business that has already been slowed by the fear of contagion. Even before the amended quarantine, Canada and 16 U.S. states—Alabama, Arkansas, Delaware, Florida, Georgia, Indiana, Kentucky, Louisiana, Mississippi, Montana, North Carolina, Oregon, Tennessee, Washington, West Virginia, and Utah—had established their own guidelines, restricting shipments of plants, soil, wood products, and greenery from California.

Many California nurserymen view the quarantine and other restrictions as unfair or misguided. "There's growing concern about the possibility of unfair or retaliatory trade practices in horticulture



Top: Coast live oaks, weakened by SOD, are easy prey for ambrosia and other beetles. Above: The boring of adult western oak beetles produces a tell-tale red frass.

products by states and U.S. trading partners," reports the California Farm Bureau Federation.

Many in the nursery industry believe not enough is known about the disease to predict its capacity to spread to unaffected areas. "USDA's recent action to quarantine all California nurseries... reflects a

balance between what we know about the pathogen, and the many uncertainties," says Craig Regelbrugge, senior director of government relations with the Washington, D.C.-based American Nursery & Landscape Association. "Theories abound, with some scientists fearing impacts elsewhere in the country, and others seeing a 'perfect storm' of favorable climate and highly susceptible hosts in the coastal areas of California and the Pacific Northwest, but less risk elsewhere," adds Regelbrugge.

In May, responding to industry concerns, Agriculture Secretary Ann M. Veneman announced that \$15.5 million is being made avail-

able to APHIS to finance a study of the pathology of SOD and ways to halt the spread of the disease to uninfected parts of the country.

To see a list of plants that are known hosts for SOD, visit the APHIS Web site at www.aphis.usda.gov/ppq-ispn.sod.

STEWARTIA 'SCARLET SENTINEL'

In 1992, a decade after planting what he thought was a seedling of the Korean stewartia (*Stewartia pseudocamellia*) in front of his house, Peter del Tredici, a senior research scientist at the Arnold Arboretum in Boston, Massachusetts, was disappointed in his tree's bark. Unlike the showy exfoliating bark of *S. pseudocamellia*, his tree's bark flaked off in linear strips. Del Tredici had begun to contemplate replacing the tree with a "proper Korean stewartia" when, one fine morning, he spotted a spent flower on the ground.

"I picked it up," says del Tredici, and

Gardeners: Get Your Tetanus Booster

Up until the 1940s, when tetanus and diphtheria immunizations (abbreviated Td) became routine, there were 500 and 600 cases of tetanus each year in the United States, many fatal.

Today, most adults under 60 years of age have received a primary series of Td shots, but the Centers for Disease Control and Prevention (CDC) estimates



The bacterium that causes tetanus is present in soil.

that fully 53 percent of adults over the age of 20 are not or are no longer protected against these diseases. The reason is that immunity expires; those who were immunized as children will remain protected only if they receive a Td booster shot every 10 years. Most people over 60 years old, who never received the initial immunization, are totally unprotected.

While diphtheria is now extremely rare in the United States, it has been contracted by travelers to other parts of the world, including Africa, South America, the Caribbean, the Near and Far East, and all countries of the former Soviet Union.

Tetanus, on the other hand, is a bacterium that is widespread in the environment and naturally present in soil, potting media, and manure. This puts gardeners at great risk of contracting a tetanus infection. In a 2004 National Gardening Association (NGA) survey, 80 percent of respondents reported incurring some type of tetanus-prone injury while working around the home, garden or yard, while 40 percent reported that they have not had a tetanus shot in the last 10 years.

"Since minor breaks in the skin due to gardening injuries can allow the tetanus bacteria to enter the system," says Susan Rehm, president of the National Foundation for Infectious Diseases (NFID), "it is doubly important for everyone who gardens to be up to date on their tetanus vaccine."

The symptoms of tetanus can appear up to three weeks after exposure and may include elevated blood pressure and heart rate, fever, sweating, and muscle spasms, as well as lockjaw—neck stiffness and trouble swallowing—the onset of a paralysis that starts at the top of the body and works its way down. Even with prompt medical treatment, the disease is fatal in one in 10 cases.

The NGA has joined with the NFID and the National Coalition for Adult Immunization (NCAI) to spread the news about these two diseases. The message is simple: Immunity doesn't last forever. "A simple injection, once every 10 years," says Rehm, "provides protection against this serious—and potentially fatal—disease."

Nursery in Hamden, Connecticut (www.brokenarrownursery.com), and is now available by mail-order through Roslyn Nursery in Dix Hills, New York, (631) 643-9347, www.roslynnursery.com.

Other specialty nurseries are also picking up 'Scarlet Sentinel', but because *stewartias* tend to be tricky to propagate, del Tredici knows this rare and beautiful selection is unlikely to become a staple at high-volume nurseries. "Most of the *stewartias* have propagation issues," says del Tredici, "so this is always going to be a collector's plant."

LOCATE LOCAL LANDSCAPING BUSINESSES

Looking for a garden center or landscape firm in your area? Visit the American Nursery & Landscape Association's (ANLA) Web site, www.anla.org, click on the consumer search button, and plug in your zip code. Your search will yield the 25 ANLA member firms closest to your location, along with their contact information.

NEW ORCHID SPECIES DISCOVERED

Bud Ewacha, President of the Conserve Native Plants Society, Inc. in Winnipeg, Manitoba, is a man who has so spent many years studying orchids, he can spot them through his car window. And that is what he did while driving to a seeding project in the summer of 2000; he spotted showy (*Cypripedium reginae*) and yellow (*C. parviflorum*) lady-slipper orchids growing in the wild. Mixed in



among them was a natural hybrid between the two species. It was named *C. xherae* by Charles Sheviak, curator of botany at the New York State Museum in Albany, who is a plant systematist specializing in North American orchids. Sheviak named the golden lady slipper after the goddess Hera, who reputedly wore golden slippers.

"It flowers at the same time as the showies and the yellows, at the end of June or July," says Ewacha.

The orchid is being propagated for eventual commercial sale, but it will take at least three years for enough plants to be grown from seed.

found, in contrast to the standard yellow filaments of *S. pseudocamellia*, "to my amazement, it had a ring of bright, cherry-red anther filaments."

Finding the flower spurred del Tredici to learn the tree's identity. His tree had grown from a seedling found under mature specimens of *S. pseudocamellia*—originally collected in Korea by plant hunter E.H. Wilson in 1918—growing on the Chinese Path at the Arnold Arboretum. Del Tredici specu-



lated that his plant was a hybrid between Wilson's Korean *stewartias* and a native mountain *stewartia*, *S. ovata* var. *grandiflora*, collected in North Carolina by T.G. Harbison in 1925, and growing nearby. Later, genetic analysis confirmed his hypothesis.

"It's a great plant and really different," says del Tredici of the tree, which has been introduced under the name 'Scarlet Sentinel'.

The new *stewartia* has been propagated by Richard Jaynes of Broken Arrow

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| ④ FLOWERING | And TO GET MORE FLOWERS, LONGER and MORE BEAUTIFUL | |
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| ⑩ LAWN | To Make QUICKER, deeper, TOUGHER TURF from SEED, SOD, Stolons, Sprigs, HYDRO-seeding | |
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'PRINCETON' ELM RECOGNIZED BY GARDEN CLUB OF AMERICA

The Garden Club of America, based in New York City, has awarded its 2004 Montine McDaniel Freeman Horticulture Medal to the 'Princeton' elm (*Ulmus americana* 'Princeton'). The annual award recognizes a North American native plant that is "little known but deemed worthy to be preserved, propagated, promoted and planted."



This 25-foot 'Princeton' elm was just eight to 10 feet tall when it was planted at AHS headquarters at River Farm three years ago.

This elm was found growing at Princeton Nurseries in New Jersey and introduced in 1922. In tests at the National Arboretum in Washington, D.C., it was found to be highly resistant to Dutch elm disease. Many specimens planted along New Jersey streets in the early 1930s are still healthy and now about 70 feet high. This fast-growing tree can reportedly be grown in most regions of the country.

One mail-order source for 'Princeton' elm is Riveredge Farms, (888) 680-1922, www.americanelm.com.

NEW STUDIES CITE DANGERS OF PESTICIDE EXPOSURE

In April 2004, after a comprehensive review of research on the effects of pesticides on human health, the Ontario

College of Family Physicians (OCFP) issued a strong recommendation that people avoid exposure to all pesticides. Citing consistent links to serious illnesses, the review also shows children are particularly vulnerable.

Among the diseases linked to pesticide exposure are cancer of the kidney and brain and hematologic tumors in children, including non-Hodgkin's lymphoma and leukemia. According to the OCFP findings, children exposed *in utero* to lawn and garden insecticides and herbicides had an overall increased risk of acute leukemia. A separate study, conducted at the Marshfield Clinic in Wisconsin, indicates exposure to low levels of common pesticides may harm developing embryos before a woman even knows she's pregnant. That research was published in the May 2004 issue of the journal *Environmental Health Perspectives*.

"We're basically in agreement with [the OCFP] report," says William B. Weil Jr., a retired pediatrician and member of the American Academy of Pediatrics (AAP) Committee on Environmental Health. He points out that while there are not scientific data to prove that a specific pesticide causes a specific disorder, there is plenty of guilt by association. "The more pesticides that are being used," says Weil, "the more you find problems after being exposed. It's indirect, but kids are a lot safer in their absence. The data are strong that people who do use stuff in their yards will have kids with more pesticides in their urine."

In the United States, says Weil, "you have to have good scientific data to ban something. Europe and Canada tend to use the precautionary principle: If it looks dangerous, stay away from it." In the absence of government bans, says Weil, "we're trying to get people to avoid using pesticides on their own."

If pesticides must be used, says Janice Kim of the AAP's Committee on Environmental Health, "We recommend when possible looking for alternatives that are safer." Organic and less-toxic products for lawn, garden, and indoor pest control are widely available now.

To view the OCFP study, visit the Ontario College's Web site (www.ocfp.ca). To view the study published in *Environmental Health Perspectives*, visit ehp.niehs.nih.gov/docs/2004/6774/abstract.html.