

THE NEWSLETTER OF THE INTERNATIONAL OAK SOCIETY, VOLUME 13, NO. 2, SUMMER 2009

# **Oak Wilt Rears Its Ugly Head**

n 2008 one red oak hybrid (Quercus rubra × *ellipsoidalis*) was diagnosed with oak wilt disease (Ceratocystis fagacearum) at Starhill Forest Arboretum in Illinois. The tree was removed to below grade and burned to prevent Nitidulid sap beetle vectors from spreading the fungus. The roots were treated with butoxyethyl ester of triclopyr (Garlon-4 herbicide) to try to prevent them from conducting the disease to adjacent trees via root grafting. One of the adjacent trees was another red oak (Q. ×subfalcata), and that tree has been watched very closely for any sign of infection. The other two closest trees were a white oak (Q. mongolica) and a Cerris oak (Q. variabilis), which presumably would be unlikely to root graft with the red oak and were considered comparatively safe.

In mid May of 2009, it was noticed that the Q. mongolica was displaying typical symptoms as normally seen on systemically infected white oaks (scattered wilt throughout the tree). A few days later, the Q. variabilis wilted rapidly with a similar pattern, and was defoliated within about 10 days. The following week, the Q. ×subfalcata began to wilt, showing the classic red oak symptoms (large branches wilting, beginning near the top of the tree and progressing rapidly downward).

Because each of these new infections occurred adjacent to the first tree, no new infections were found elsewhere in the stand, and there was no pruning activity or other noticeable damage that would have attracted the beetle vectors, it can be presumed that the fungus has been moving via root grafts across taxonomic sectional boundaries. To our knowledge, this has not previously been reported to occur. Confirmation would require full root excavation, which we are not prepared to do, but there is little doubt of the circumstances involved.

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## **New Pest Threatens** California's Oaks

s if life wasn't tough enough already for Califor-Ania's oaks with Sudden Oak Death (see International Oaks issues 15 and 18), continuing drought, and anthropogenic impacts from residential developments, firewood harvesting and agricultural conversions, a new pest has emerged in the last several years that is decimating some oak species in southern California. This pest, called the gold-spotted oak borer or GSOD (Agrilus coxalis), has been killing thousands of oaks in the mountains in eastern San Diego County. This flatheader borer attacks the trunks and branches of mature oaks, feeding primarily at the interface between the sapwood and the phloem under the bark. To protect Southern California's majestic oaks, federal, state and local officials are urging San Diego County residents not to bring in firewood from outside the county, and to avoid chopping down backcountry oaks for burning in the fireplace. They worry that without intervention, GSOB will continue to spread in San Diego County and will then move north into Riverside County and other parts of the state. For this reason, some districts in the Cleveland National Forest have also stopped issuing permits to cut oaks for firewood. While officials recognize that the range of the pest will likely continue to expand, they feel they can slow its progress by educating the public and modifying firewood harvest regulations.

Experts think the GSOB (who some refer to as the Golden SOB!!), arrived in the county sometime in the last few years, hidden under the bark of imported firewood - most likely from Mexico or Arizona -- though that has yet to be confirmed. To date it has attacked coast live oaks (Quercus agrifolia), California black oaks (Q. kelloggii) and canyon live oaks (Q. chrysolepis), but has not been found on any white oak species. The beetle is about 10 mm long and 2 mm wide, with gold spots on its dark green forewings. It is a native of

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#### **Book Review: "The Oaks of Chévithorne Barton**"

the science of growing oaks and, although not every specimen is mentioned, one gets the feeling from what is written that Michael holds a deep personal relationship with all of his trees; this is surely what accounts for the poetry of his comments.

Introductory texts covering oak propagation (James MacEwen), the origin of oaks (Richard Jensen) and oak classification (Allen Coombes), beautiful and detailed photography by James MacEwen, faultless editing and proof-reading, plus a sober and elegant graphic design, all contribute to make this a truly valuable addition to any botanic library. Appendices include a map of Chevithorne Barton, a complete accessions list, a glossary and a conversion table, to name but a few.

The book may be ordered from timesonline.co.uk/ booksfirst or through amazon.uk and costs £25.00.

Béatrice Chassé



## Oak Wilt Rears Its Ugly Head

We are treating all surrounding oak trees via macroinfusion root-flare injection of propiconazole (Alamo fungicide) and preparing to severe root connections with a trencher. Once that has been completed, the symptomatic trees will be removed and burned to prevent beetle access. Meanwhile, we are seeking any observations from other Society members regarding previous observations of natural root grafting leading to disease transmission across sectional lines.

Please forward comments (or condolences!) to Guy@StarhillForest.com .

Guy Sternberg



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### New Pest Threatens California's Oaks

Arizona, Mexico and Guatemala. "The jury's still out on whether this is a natural expansion of the territory of this beetle or whether it is an introduced species," said Bob Atkins, San Diego County Agricultural Commissioner. A recently written Pest Note on the GSOB can be viewed at the Cleveland National Forest web site: (http://www.fs.fed.us/r5/cleveland/).

Unlike some pests that seem to only target weak or stressed trees, the GSOB also attacks large, vigorous, and healthy trees, including urban trees in people's yards. As yet there is no recommended treatment, largely because so little is known about the insect. So far, more than 17,000 oaks have succumbed to the borer at elevations ranging from about 650 m above sea level to almost 2000 m. While residents of the affected areas watch in dismay as this new pest takes its toll, scientists are trying to learn more about the beetle and understand its life cycle and behavior so that treatments and management recommendations can be developed and tested. Until then, efforts are focused on educating the public and preventing the spread through the movement of firewood.





#### Continued from page 3, col. 2 Highlights from Recent SOD Symposium

• It is anticipated that Symposium presentations (oral and visual) will be posted by mid-July, to the California Oak Mortality Task Force website: http://www. suddenoakdeath.org/. A Conference Proceedings will also be published.

Doug McCreary

