

# OAK NEWS & NOTES

The Newsletter of the International Oak Society  
Winter 2000

Volume No. 4, Issue No. 2



## Sudden Oak Death Threatens California's Oak Forests

In 1995 a new type of oak mortality was observed in Marin County, California by the local University of California Extension Agent. At first it only affected tanoak (*Lithocarpus densiflorus*), but within a couple of years, both coast live oak (*Quercus agrifolia*) and California black oak (*Quercus kelloggii*) were also dying. The Extension Agent (or Farm Advisor, as they are called in California) Pavel Svihra, a pathologist by training, had never seen anything quite like this before. First, the shoots of the new growth in the spring would droop and look like shepherd crooks. Next the foliage on the trees would turn yellow, and then completely brown. Dr. Svihra called this new mortality complex "Sudden Oak Death", or SOD, a name that has stuck, despite the fact that we now know that trees do not die as quickly as once thought.

In addition to terminal branch drooping of tanoaks and discoloration of the foliage of all three species, there were other symptoms as well. Most trees were attacked by tunneling insects, including two species of ambrosia beetles and one species of oak bark beetles. Generally there was also bleeding of a dark viscous sap from the main trunk and dead, discolored areas under the bark. Finally, many trees had dark circular fruiting bodies of *Hypoxylon* fungi growing up and down the bole.

So what was causing this new mortality? This question remained unanswered until the summer of 2000 when a pathologist at the University of California at Davis, Dr. David Rizzo, was able to isolate a new, previously undescribed species of *Phytophthora* from trees exhibiting these symptoms. By the end of the year this disease had been isolated from trees in six coastal California counties near the San Francisco Bay Area. This new *Phytophthora*, which is really a brown algae but is commonly called a fungus, was very similar to *Phytophthora lateralis*, a disease responsible for extensive damage to Port Orford cedar trees in the

Pacific Northwest. However it had unique morphological characteristics and had never before been described in the literature. Was it a new, introduced species, or perhaps one that was already in California but had remained dormant until environmental conditions became favorable? California has had some rather unusual weather conditions during the past decade—wet 'El Nino' winters, interspersed with unusually dry years—which would lend support to the latter theory. Or perhaps this new species was a hybrid between two existing *Phytophthoras*. These questions remain unanswered, but are being investigated by a team of researchers. One of the most critical questions being asked is, how is the disease spread? Similar diseases are often spread by soil and/or water, but it is possible that this one is transmitted through the air, or even vectored by the insects which attack infected trees, so all of these pathways are being investigated. It is critical to learn the answer to this as soon as possible so that effective management recommendations that will curtail the spread of the disease can be made.

### Calendar of Events

**OCTOBER 22-25, 2001**

**Oaks in California's Changing Landscape**

San Diego, California, USA  
Contact: Doug McCreary  
8279 Scott Forbes Road  
Browns Valley, CA 95948 USA,  
[ddmccreary@ucdavis.edu](mailto:ddmccreary@ucdavis.edu)



**OCTOBER 26-28, 2001**

**Oak Open Days**

Spain and Portugal  
Contact: Francisco Vazquez  
[fvazquez50@hotmail.com](mailto:fvazquez50@hotmail.com)

Even though trees with similar symptoms have been observed up and down the California Coast, this new *Phytophthora* has only been isolated in a few of these locations, and it is believed that other diseases are probably responsible for many of those other tree deaths. Common oak diseases such as *Phytophthora cinnamomi* (crown rot) and *Armillaria mellea* (oak root fungus) can cause similar symptoms and may be responsible

**"SOD" continued on page 4**



left of Ron), Maricela Rodriguez (second row, standing at far left), Allen Coombes (second row, third from left), Eike Jablonski (second row, fourth from left), vice president Thierry Lamant (second person directly above Ron), secretary Dorothy Holley (far right), and treasurer Peter van der Linden (second row, third person left of Thierry, fifth person right of Eike).

Nearly fifty International Oak Society members participated in the business meeting this year. Incoming president Ron Lance (front row, second from right) expects his dark beard to be as white as that of retiring president Guy Stenberg (seated next to Ron, against wall at front) by the time his term expires! Other board members for 2000-2003 are editor Doug McCreary (behind Guy), membership chairman and webmaster Dick Jensen (third person



## Oak Symposium To Be Held In California

### DATES:

OCTOBER 22-25, 2001

### LOCATION:

BAHIA RESORT HOTEL,  
SAN DIEGO

In October 2001, the University of California Integrated Hardwood Range Management Program will host an Oak Woodland Symposium titled *Oaks in California's Changing Landscape*. This will be the fifth in a series of oak symposia which began in 1979. For this meeting, we expect there to be about 10 separate sessions in a variety of subject areas ranging from oak regeneration and restoration to land use planning to conservation strategies. A unique feature this year will be a special session devoted to Sudden Oak Death and the research and educational efforts that are underway to solve this potentially devastating problem.

As in the past, the USDA Forest Service will publish the Proceedings as a General Technical Report. We are also working to produce an online version of all of the papers, which should be particularly useful for viewing GIS maps with multiple layers and other articles accompanied by color photos. We will also be utilizing the internet to advertise, register and display the abstracts of papers and posters before the meeting. So check it out and we hope to see you in San Diego!



**CONFERENCE WEB SITE** - <http://danr.ucop.edu/ihrmp/symposium.html>

## TICK ALERT FOR EASTERNERS

Researchers at the Institute of Ecosystem Studies in Millbrook, N.Y., have discovered that bumper acorn crops in eastern U.S. forests have a synergistic effect on mouse and deer tick populations, triggering explosive increases in tick density. The white-footed mouse, the primary reservoir of the bacterium that causes Lyme disease, is an important host of the second, larval stage of the deer tick. Acorns attract these mice and enhance their survival.

An acorn bonanza also attracts large numbers of white-tailed deer, the feeding and mating grounds of adult deer ticks. Female ticks drop off the deer in late winter to lay their eggs in the leaf litter, concentrating the tick eggs in oak stands during years of acorn abundance. In the spring, the newly hatched eggs, or larvae, easily find their mouse

hosts and begin to collect the Lyme disease bacterium. The risk of a human contracting Lyme disease appears highest the following spring, two years after a large acorn crop, when the numerous young ticks—now nymphs—go in search of larger hosts. Nymph tick densities on study plots simulating a large acorn year were eight times higher than normal.

Oaks produce mass acorn crops once every three to five years. And 1998 was just such a year in many eastern forests. This means the tick forecast for spring 2000 is grim, perhaps making this study the shot-in-the-arm people at high risk of Lyme disease need to begin thinking about prevention.

*NOTE: This article is reprinted, with permission, from the Harvard Women's Health Journal.*

### OAK NEWS & NOTES

The Newsletter of the International Oak Society  
8279 Scott Forbes Road  
Browns Valley, CA 95918  
USA



President: Ron Lance  
Vice President: Thierry Lamant  
Secretary: Dorothy Holley  
Treasurer: Peter van der Linden

Editor: Doug McCreary

Send submissions to the address on the left.  
Telephone: 530-639-8807  
Facsimile: 530-639-2419  
E-Mail: [ddmccreary@ucdavis.edu](mailto:ddmccreary@ucdavis.edu)

Two new members were elected to the Board of Directors of the International Oak Society during the last election.

*Dorothy Holley* has been a member of the Society since 1996 and currently serves as coordinator of the Sir Harold Hillier Gardens and Arboretum in England. She has traveled extensively to view private specimen collections and participated in a scheme to revive early nineteenth century ornamental gardens. She sponsored the planting of Mexican oaks in South Africa and participated in the Kassel Conference, the Berlin and Bad Muskau visits, and the Yunnan oaks expedition.

*Eike Jablonski* has been a member of the Society since 1992 and organized the 1998 Oak Open Days in Germany. He was born in Germany, but since 1995 he has been a lecturer for nursery, landscaping and dendrology in Luxembourg. He is especially interested in oak cultivars and Asian oaks. Eike would like to help organize future conferences and Oak Open Days in Europe and continue to spread information about oaks and help establish closer contacts with Eastern European countries.

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## MOVING FORWARD...

### Points of Contact

#### MEMBERSHIP RENEWALS OR APPLICATIONS:

Dick Jensen, Membership Chairperson  
Department of Biology  
Saint Mary's College  
Notre Dame, Indiana 46556, USA  
219-284-4674, FAX 219-284-4716  
e-mail [rjensen@saintmarys.edu](mailto:rjensen@saintmarys.edu)

#### SUBMITTALS FOR THE JOURNAL OR NEWSLETTER:

Doug McCreary, Editorial Committee Chairperson  
University of California  
8279 Scott Forbes Road  
Browns Valley, California 95918, USA

#### BUSINESS ISSUES:

Guy Sternberg  
Starhill Forest  
Route 1, Box 272  
Petersburg, Illinois 62675, USA

#### EUROPEAN CONTACT:

Thierry Lamant, Vice President  
Office National des Forêts  
Conservatoire Génétique des Arbres Forestiers  
Avenue de la Pomme de Pin  
BP 20619 Ardon, 45166 Olivet cédex, France

#### CONFERENCE 2003:

Allen Coombes  
Sir Harold Hillier Arboretum  
Jeremy's Lane  
Ampfield, near Romsey  
Hampshire SO51 OQA, United Kingdom

#### QUESTIONS FROM THE MEDIA:

Ron Lance, President  
The North Carolina Arboretum  
PO Box 6617  
Asheville, North Carolina 28816, USA

How many of you were able to participate in the 2000 Triennial Oak Conference ("Q2K") in Asheville, North Carolina this past October? That was a trick question, because every member participates in some way! More than 20% of you from all around the globe attended in person. The rest had an opportunity to vote by mail, and everyone will benefit from the proceedings, information exchange, planning, member recruitment, and renewed energy that our organization achieves from such an event.

The conference was a complete success, and we covered our costs without a subsidy from our treasury. We juggled our speaker list slightly, and thus were able to include fascinating unscheduled presentations on the new sudden oak death syndrome in California and the TEMA Foundation project to plant 10 billion oaks in Turkey, in addition to most of the presentations originally scheduled on the program. They will all be published in the proceedings, which will be sent to all members in late 2001.

We had a very successful plant sale, and another record seed exchange. (I hope no one was injured seriously in the frenetic scramble to obtain samples of the more than 100 oak taxa available!) The field trips arranged by Ron Lance, other Arboretum staff, and volunteers such as Todd Lasseigne and Bob McCartney offered unique opportunities to visit some of the rarest and most magnificent oaks on the planet in some of the most obscure, difficult to find places. We saw more different oak species than could be seen in such a short time in almost

any other region, and many photos (and acorns) were taken along the way.

For me personally, this was a milestone event in several other ways. I have attended every Oak Society triennial conference since the first one I organized for you in Chicago. I still keep learning, reinforcing old friendships, and forging new ones with members from more different countries than I could ever hope to visit in my lifetime. This was also the first international oak conference that my wife Edie was able to attend with me (although she previously has been able to join me for the Oak Open Days events in Germany and France). I was very privileged as president to be able to present our first official awards to two legends of the oak world: Stelian Radu of Romania and Dick van Hoey Smith of Holland. I was also fortunate, perhaps, to receive some surprise birthday "gifts" and a tree-cake on my birthday during our field trip, from 42 well-meaning (?) fellow travelers!

Finally, since our by-laws require rotation of terms for president and vice president, this was my last conference as your president. I can say that with great satisfaction and optimism, because I am so very confident in the capabilities of our new president, Ron Lance. He is a knowledgeable botanist who, like me, had attended all of our previous conferences, and who was the chairman for this one. He knows our organization like few others. His leadership skills, patience, and tireless energy served this conference well, and they will serve the Society well during his three-year term. I expect him to help us build in different ways than I did, because he has different strengths and boundless

*"MOVING" continued on page 4*

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### MEMBERSHIP RENEWALS DUE

In October 2000, membership renewal notices were sent to all whose membership expired on December 31, 2000. If you have not mailed your renewal, please do so as soon as possible (members who have not renewed by July 1, 2001 will be dropped from the membership list). If you are not sure of your membership status, check the mailing label for this Newsletter. The number in the upper right corner of the mailing label indicates the last year for which you have paid your dues (e.g., if it is 2000, then your membership expired on December 31, 2000). Contact Richard Jensen if you have questions, tel: (219) 284-4674, fax: (219) 284-4716, email: [rjensen@saintmarys.edu](mailto:rjensen@saintmarys.edu).



**"SOD" continued from front page**

for many deaths that are occurring even in the zones where SOD has been detected. It is also important to point out that at this time it appears that members of the white oak subgenera of *Quercus*, which includes both blue oak (*Q. douglassii*) and valley oak (*Q. lobata*), do not appear to be susceptible. To date, this disease has been limited to fairly cool and wet coastal locations. This is good news because it would have an even more devastating impact if it spread inland to the Sierra foothills.

The potential consequences of high levels of oak tree mortality from SOD are severe and far-reaching. First the visual landscape, so characteristic of much of California, could be altered dramatically. There could also be significant impacts to the many wildlife species that are so dependent on coastal oak forests for food and shelter. Deer, turkeys, jays, quail, squirrels and acorn woodpeckers are just a few of the many species that rely heavily on acorns as a food source. And there are countless other animals that utilize oak woodlands for breeding or as stopover points during migration. Ecological processes such as nutrient cycling, storage and release of water, and moderating of soil temperatures could also be affected. Of more immediate concern, however, is the greatly increased risk of fire resulting from the addition of large quantities of highly combustible fuels as the trees die and dry out. This risk is particularly acute because so much of the coastal forest contains urban interface areas where homes and businesses are nestled among trees.

So what is being done? In August, 2000, the California Oak Mortality Task Force was established to provide a comprehensive and unified approach to address the sudden oak death problem. This Task Force has six board members representing a wide range of interests and backgrounds and oversees committees on research, education, fire prevention, management, monitoring, funding and regulation. It was immediately recognized by the Task Force that there was an urgent need for additional funding. Until recently, the research undertaken and described above had mainly been funded by the USDA Forest Service and short-term grants from the University of California's Integrated Hardwood Range Management Program. Educational efforts have mainly been funded by Marin County. But clearly much more money was

needed to effectively address this problem. Recently, Governor Gray Davis allocated \$100,000 to the California Department of Forestry and Fire Protection to fight SOD, much of which will be used to fund and staff a full time statewide SOD Coordinator. The USDA Forest Service has proposed providing \$3.5 million for research and monitoring. Finally, legislation has been introduced to the California State Legislature that would provide as much as \$10,000,000 over 3 years for research, education, monitoring, management, fire prevention and tree removal. Approximately half of this money would be provided to affected counties through grants to assist private landowners to remove dead trees on their property.

While the threat of SOD is very serious and should be of concern to all Californians, it is encouraging to know that there is broad consensus that swift action is necessary and resources need to be allocated to minimize the impacts and find a solution. Hopefully these efforts will succeed and California's majestic oaks, which residents sometimes take for granted, will continue to survive and prosper.

For more info, see the following web sites:

<http://www.suddenoakdeath.org>

California Oak Mortality Task Force

<http://cemar.ucdavis.edu/>

UCCE Marin County SOD Website

<http://camfer.cnr.berkeley.edu/oaks/>

UC SOD Research Team Updates

**"MOVING" continued from page 3**

enthusiasm. And, when his term is finished, I expect him to pass the leadership of an even stronger organization along to his successor.

I am equally confident in the capabilities of past vice-president Allen Coombes, new secretary Dorothy Holley, and their committee to plan for the next conference, in southern England and Belgium in 2003. Doug McCreary and Peter van der Linden will continue their effective work as editor and treasurer respectively, and Dick Jensen, who probably works as hard as any five of us combined, will continue his careful stewardship of the member data base and the web site. These three people in particular have helped us through some difficult periods as we have grown to more than 500 members from 32 nations, and we all owe them a "thank-you" for bringing us to where we are today.

My old friend Thierry Lamant from France has become our new vice president. Our new director Eike Jablonski from Luxembourg is a brilliant and thoughtful person who will bring additional new international perspectives to our board. Former secretary Amy Larson has retired from the board, but Allen Coombes, Maricela Rodriguez, and I will continue to serve in other ways for another term. Member Ed Holm has agreed to continue

his capable service to the Society as our inventory master.

Rudy Light handled our election process very smoothly and efficiently, completing all the necessary mailings and paperwork at his personal expense as a contribution. Several donors contributed major funding to enable us to upgrade the quality of the conference. Other members have stepped forward to help coordinate future fund raising, European Oak Open Days events, the 2006 conference proposal, and other developments.

We are indeed moving forward, and we each are fortunate to be along for the ride. I look forward to seeing as many of you as possible at our next conference, and hopefully at the intervening Oak Open Days planned for Spain/Portugal (2001, with Francisco Vazquez) and Turkey (2002, with Hayrettin Karaca and Nihat Gokyigit).

And now that I finally have less responsibility for keeping the train on the track, I hope to be able to relax and enjoy your companionship and correspondence all the more. Please email me at [starhillforest@msn.com](mailto:starhillforest@msn.com) and let me know how you think we're doing! I might not be able to reply directly to all 500 of you, but I would love to hear from you at any time, and I will pass along any comments or suggestions to Ron and the board.

Best wishes to all,  
Guy Sternberg

