



**SHORT SUBJECTS
AND TIMELY TIPS
FOR PESTICIDE USERS**

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BIOLOGICAL CONTROL, IPM, AND EXOTIC PESTS PEST CONTROL

**A REFERENCE GUIDE ON BIOLOGICAL CONTROL
OF INVASIVE PLANT SPECIES**

Biological Control of Invasive Plants in the Eastern United States by van Driesche, et al (FHTET Report 2002-04) is a reference guide for field workers and land managers concerning the historical and current status of the biological control of invasive plant species in the eastern United States. Discussed in the book are weeds associated with lakes, ponds and rivers (section 1); wetlands

(section 2); prairies and grasslands (section 3); old fields and pastures (section 4); and forests (section 5). The book is available in hard copy and on CD ROM. For a copy –

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ELM DISEASE BACTERIUM IDENTIFIED

(Source: *Agriculture Research Magazine*, January 2003, Vol. 51, No. 1)

The plant pathogen elm yellows (EY) was originally thought to be the cause of the death of 1,000 American elms during the last decade in Illinois. However, tests for EY phytoplasma conducted by a commercial diagnostic company were inconclusive. To find out what was causing the disease syndrome, Agricultural Research Service plant pathologist Ing-Ming Lee, together with the Molecular Plant Pathology Laboratory in Beltsville, MD and scientists from the Illinois' Morton Arboretum "used a tool Lee developed to systematically hunt for any phytoplasma that may be present in the diseased" elms. The tests showed that the phytoplasma from the diseased trees was unrelated to the EY phytoplasma. Instead, it was representative of a new subgroup "of clover proliferation phytoplasma". The carrier is thought to be most likely a leafhopper. Dr. Lee now plans to "concentrate on locating the leafhopper vector, determining its species, and finding its origin".

The article is available online at <http://www.ars.usda.gov/is/AR/archive/jan03/elm0103.htm> or contact Pat Skyler (916) 454-0817, pskyler@fs.fed.us. For additional information -

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NON-OAK NATIVE PLANTS ARE MAIN HOSTS FOR SUDDEN OAK DEATH PATHOGEN IN CALIFORNIA

(M. Garbelotto, J.M. Davidson, K. Ivors, P.E. Maloney,
D. Huberli, S.T. Koike, and D.M. Rizzo)

(Source: *California Agriculture*, Vol. 57, No. 1, pp. 18-23)

Abstract – The finding of *Phytophthora ramorum* – the pathogen that causes sudden oak death in four California native trees – on rhododendron in Europe led us to hypothesize that its host range in California's natural forests was much greater than previously suspected. In addition to the affected oak species, we have now identified an additional 13 species from 10 plant families that act as hosts for *P. ramorum* in California. Our data indicates that nearly all of the state's main tree species in mixed-evergreen and redwood-tanoak forests – including the coniferous timber species coast redwood and Douglas fir – may be hosts for *P. ramorum*. The broad host range of *P. ramorum*, the variability of symptoms among different hosts and the ability of the pathogen to disperse by air suggests that it may have the potential to cause long-term, landscape-level changes in California forests."

The article is available online at <http://danr.ucop.edu/calag/0301JFM/pdfs/SOD.pdf> (requires Adobe Acrobat) or -

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REGULATORY

EPA'S RESTRICTED USE PRODUCT REPORT

The restricted use product (RUP) report provided by EPA is a compilation of both active and cancelled pesticide products classified as "Restricted Use." The "Update List" contains a list of pesticide active ingredients with restricted use product changes occurring within the last six months and the "Restricted Use Products (RUP) Report (December 2002 update) [Ascii text](#)" provides information on each product. The report is available online at <http://www.epa.gov/opprd001/rup/>.

GOVERNMENT SEEKS TO IMPROVE THE ENDANGERED SPECIES CONSULTATION PROCESS FOR PESTICIDES

EPA, the U.S. Department of the Interior, and the U.S. Department of Commerce, in consultation with the U.S. Department of Agriculture, have published a notice in the Federal Register, announcing their intent to improve the Endangered Species Act (ESA) consultation process through counterpart regulations, nonregulatory changes, and other appropriate actions. The notice seeks comments on ways that the consultation process can be made more effective and efficient with respect to pesticide registration actions that may have effects on listed threatened or endangered species. The agencies are coordinating this effort with the U.S. Department of Agriculture to ensure that any modifications to the current processes or regulations take into account the need to minimize the impact on food and fiber producers and other pesticide users. For more information on this action, consult the [January 24 Federal Register](#) or –

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HUMAN HEALTH

VECTOR COMPETENCE OF CALIFORNIA MOSQUITOES FOR WEST NILE VIRUS

(L.B. Goddard, A.E. Roth, W.K. Reisen, and T.W. Scott)

(Source: *Emerging Infectious Diseases*, Vol. 8, No. 12, December 2002, serial online)

Abstract – To identify the mosquito species competent for *West Nile virus* (WNV) transmission, we evaluated 10 California species that are known vectors of other arboviruses or major pests: *Culex tarsalis*, *Cx. pipiens pipiens*, *Cx. P. quinquefasciatus*, *Cx. stigmatosoma*, *Cx. erythrothorax*, *Ochlerotatus dorsalis*, *Oc. melanimon*, *Oc. sierrensis*, *Aedes vexans*, and *Culiseta inornata*. All 10 became infected and were able to transmit WNV at some level. *Ochlerotatus*, *Culiseta*, and *Aedes* were low to moderately efficient vectors. They feed primarily on mammals and could play a secondary role in transmission. *Oc. sierrensis*, a major pest species, and *Cx. p. quinquefasciatus* from southern California were the least efficient laboratory vectors. *Cx. tarsalis*, *Cx. stigmatosoma*, *Cx. erythrothorax*, and other populations of *Cx. pipiens* complex were the most efficient laboratory

vectors. *Culex* species are likely to play the primary role in the enzootic maintenance and transmission of WNV in California.”

The research article is available online at <http://www.cdc.gov/ncidod/EID/vol8no12/02-0536.htm> or –

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LABOR, ENVIRONMENTAL GROUPS AND VICTIMS SUE EPA TO BAN ARSENIC AND DIOXIN-LADEN WOOD PRESERVATIVES

(Source: Press Release (PR), Beyond Pesticides, Washington, DC, December 10, 2002)

“A lawsuit was filed today in federal court by a national labor union, environmental groups and a victim family to stop the use of arsenic and dioxin-laden wood preservatives, which are used to treat lumber, utility poles and railroad ties. The litigation charges that the chemicals, known carcinogenic agents, hurt utility workers exposed to treated poles, children playing near treated structures, and the environment, and cites the availability of alternatives.”

Access the PR at http://www.beyondpesticides.org/wood/MEDIA/lawsuit_PR_12_10_02.htm as well as an update to the lawsuit at <http://www.beyondpesticides.org/main.html> or contact Pat Skyler at (916) 454-0817, pskyler@fs.fed.us. For additional information –

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MISCELLANEOUS

THE INFLUENCE OF A RIPARIAN BARRIER ON A FOREST STREAM

(M.E. Teske, G.C. Ice, and H.W. Thistle)

Abstract – A riparian barrier captures airborne spray material, reducing the downwind deposition past the barrier. This reduction can significantly impact the loading to a forest stream, and its consequences on downstream concentration patterns. This paper proposes a solution approach for the flow field pattern around and through the barrier, and the collection of spray material by the barrier, summarizes the results of a sensitivity study on pertinent barrier parameters, and outlines the need for a field study that would help quantify the assumed barrier interception behavior. This model will be interfaced to the ambient wind field assumed in A gDISP, and provide an additional tool for drift mitigation into forest streams.

For a copy of the paper (ASAE Paper No. 022047) –

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NONINDIGENOUS SPECIES INTRODUCTIONS: A THREAT TO CANADA'S FORESTS AND FOREST ECONOMY

(E.A. Allen and L.M. Humble)

(Source: *Canadian Journal of Plant Pathology* 24:103-110, 2002)

Abstract: When organisms are moved from their natural range to new ecosystems, they are considered nonindigenous, invasive, or exotic species. Movement of exotic or native species may be international or from areas within Canada. Historically, Canada's forests have felt the effects of nonindigenous species introductions, as for example, Dutch elm disease, white pine blister rust, gypsy moth, and pine shoot beetle. With changes in global trade patterns, novel introductions will continue to occur. Although most of the research and regulatory efforts to control the movement of nonindigenous species has focused on insects, projects are underway to study fungal organisms and their association with insect vectors. International quarantine standards are being developed to minimize the risk associated with solid wood packing materials, a major entry pathway for nonindigenous organisms. Research needs include the development of enhanced detection capabilities, improved diagnostic tools, effective mitigation measures, as well as socio-economic impact assessments and basic biological information about nonindigenous species and their interactions with hosts.

The paper is available online at <http://warehouse.pfc.forestry.ca/pfc/20158.pdf> (requires Adobe Acrobat) or -

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ON THE INTERNET

The web site for the Sudden Oak Science Symposium held on December 16-18, 2002 in Monterey, CA, has been updated. It contains a general summary of the entire meeting, the abstracts for the 80 plus papers and posters presented at the meeting, and information on the upcoming International Online Discussion Symposium" on SOD. Visit it at <http://danr.ucop.edu/ihrmp/sodsymposium.html>.

The Proceedings of the Symposium on the Ecology and Management of Dead Wood in Western Forests held in December 1999, Reno, NV are now available on the web. Individual papers can be accessed at http://www.psw.fs.fed.us/Tech_Pub/Documents/gtr-181/gtr-181-index.html.

Bugwood Network at <http://www.InsectImages.org> has over 5,400 high-quality insect and insect damage photographs in digital format. Each image is available for download and use for educational purposes with no royalties or fees as long as appropriate credits are given. (*Georgia Pest Management Newsletter*, November 2002).

PUBLICATIONS*

Barber, J.A.S. and C.S. Parkin. 2003. Fluorescent tracer technique for measuring the quantity of pesticide deposited to soil following spray applications. *Crop Protection* 22:15-21.

Briggs, Lucia. 2003. Report to the California Oak Mortality Task Force. California Oak Mortality Task Force, Berkeley, CA. For a copy of the report contact Lucia Briggs (510) 642-5938, lbriggs@nature.berkeley.edu.

Davidson, J.M., D.M. Rizzo, M. Garbelotto, S. Tjosvold, and G.W. Slaughter. 2002. *Phytophthora ramorum* and sudden oak death in California: II. Transmission and survival. General Technical Report PSW-GTR-184, pp. 741-749. USDA Forest Service.

Delisle, J. and C. Vincent. 2002. Modified pheromone communication associated with insecticidal resistance in the obliquebanded leafroller, *Choristoneura rosaceana* (Lepidoptera: Tortricidae). *Chemoecology* 12:47-51.

Dunning, C.E., T.D. Paine and R.A. Redak. 2002. Insect-oak interactions with coast live oak (*Quercus agrifolia*) and Engelmann oak (*Q. engelmannii*) at the acorn and seedling stage. General Technical Report PSW-GTR-184, pp. 205-218. USDA Forest Service.

Garbelotto, M., D.M. Rizzo, K. Hayden, M. Meija-Chang, J.M. Davidson and S. Tjosvold. 2002. *Phytophthora ramorum* and sudden oak death in California: III. Preliminary studies in pathogen genetics. General Technical Report PSW-GTR-184, pp. 765-774. USDA Forest Service.

Garbelotto, M., D.M. Rizzo and L. Marais. 2002. *Phytophthora ramorum* and sudden oak death in California: IV. Preliminary studies on chemical control. General Technical Report PSW-GTR-184, pp. 811-818. USDA Forest Service.

Koenig, W.D., J.M.H. Knops and W.J. Carmen. 2002. Arboreal seed removal and insect damage in three California oaks. General Technical Report PSW-GTR-184, pp. 193-204. USDA Forest Service.

Perkins, D.L. and D.W. Roberts. 2003. Predictive models of whitebark pine mortality from mountain pine beetle. *Forest Ecology and Management*, Vol. 174, pp. 495-510.

Rizzo, D.M., M. Garbelotto, J.M. Davidson, G.W. Slaughter and S.T. Koike. 2002. *Phytophthora ramorum* and sudden oak death in California: I. Host Relationships. General Technical Report PSW-GTR-184, pp. 733-740. USDA Forest Service.

Teske, M.E. and G.C. Ice. 2002. A one-dimensional model for aerial spray assessment in forest streams. *Journal of Forestry*, Vol. 100, No. 3, pp. 40-45.

*Note: For information on how to obtain a copy of a publication contact Pat Skyler (916) 454-0817, pskyler@fs.fed.us.

UPCOMING EVENTS

10-14 February 2003. Weed Science Society of America Annual Conference, Jacksonville, FL. Contact: Rhonda Green (800) 627-0629 ext. 220 or (785) 843-1235 or visit their website at https://timssnet.allenpress.com/ECOMWSSA/Timssnet/Meetings/tnt_meetings.cfm.

24-28 February 2003. National Invasive Weed Awareness Week IV, Washington, DC. Visit their website at <http://www.nawma.org/> and **click on NIWAW** on left side of screen.

1-6 March 2003. American Mosquito Control Association Annual Meeting, Minneapolis, MN. Contact: AMCA Central Office (732) 544-4645 ext. 11 or visit their website at <http://www.mosquito.org/Meeting2003/indexMinn03.html>.

11-13 March 2003. Western Society of Weed Science Annual Meeting, Poipu Beach, Koloa, HI. Contact: Wanda Graves (510) 790-1252, Email: Wgraves431@aol.com

or visit their website at http://wsweedscience.org/events/event_detail.php?eventID=10.

8-10 April 2003. 4th National Integrated Pest Management Symposium, Indianapolis, IN. Contact: Elaine Wolff, (217) 333-2881, Fax: (217) 333-9561, Email: ipmsymposium@ad.uiuc.edu or visit their website at <http://nautilus.outreach.uiuc.edu/conted/conference.asp?ID=244>.

14-17 April 2003. Western Society of Weed Science, Noxious Weed Management Short Course for Land Managers, Loveland, CO. Contact: Celestine Duncan (406) 443-1469, Email: weeds1@ixi.net.

27 April – 2 May 2003. XI International Symposium on the Biological Control of Weeds, Canberra, Australia. Contact: Sharon Corey + 61 (2) 6246 4001, Email: sharon.corey@csiro.au or visit their website at <http://www.ento.csiro.au/weeds2003/index.html>.

15-18 June 2003. 2nd Annual Precision Forestry Symposium, Seattle, WA. Contact: Forestry Continuing Education Program (206) 543-0867 or visit their website at <http://www.cfr.washington.edu/outreach/PreFor/>.

6-11 July 2003. 15th International Plant Protection Congress, Beijing, China. Contact: William Chen (86-10) 6210 3108, Email: cicast@public.bta.net.cn or visit their website at <http://www.plantprotection.org/15THIPPC.htm>.

27-30 July 2003. American Society of Agricultural Engineers 2003 Annual International Meeting, Las Vegas, NV. Contact: Brenda West, (616) 428-6327, west@asae.org or visit their website at <http://www.asae.org/meetings/am2003/index.html>.

7-11 September 2003. American Chemical Society (ACS) Agrochemical Division Symposia, New York City, NY. For additional information visit their website at <http://membership.acs.org/a/agro> and go to the middle of the page.

8-11 September 2003. Biennial National Silviculture Workshop, Silver Creek, CO. Contact: Monty Maldonado (202) 205-5683 or Clark Baldwin (703) 605-5178.

21-28 September 2003. XII World Forestry Congress, Quebec, Canada. Contact: 1 (418) 694-2424, Fax: 1 (418) 694-9922, Email: sec-gen@wfc2003.org or visit their website at <http://www.wfc2003.org/>.

3-6 November 2003. Western Forest Insect Work Conference, Guadalajara, Mexico. Contact: Mike Wagner, Email: mike.wagner@nau.edu or visit or their website at <http://www.fsl.orst.edu/wfiwc/>.

3-7 November 2003. Invasive Plants in Natural and Managed Systems: Linking Science and Management and 7th International Conference on the Ecology and Management of Alien Plant Invasions, Ft. Lauderdale, FL. Contact: Nelroy Jackson, (909) 279-7787, Email: nelroy.e.Jackson@monsanto.com or Carla D'Antonio (510) 643-6341, Email: dantonio@socrates.berkeley.edu or visit their website at <http://esa.org/ipinams-emap7/>.

CALL FOR ARTICLES

Please forward to me all articles, meeting announcements, publications, reports, or other items of interest that you would like included in the next issue of Short Subjects & Timely Tips for Pesticide

Users. Please include the name, State, and telephone number of the individual who can be contacted for further information:

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The Washington Office, Forest Health Protection, Forest Health Technology Enterprise Team sponsors, compiles, edits, and distributes this informal information letter as a means of providing current information to forestry pesticide users. Recent copies can be viewed online at <http://www.fs.fed.us/foresthealth/pesticide/news.htm>. Comments, questions, and items of input are welcome and may be sent to Pat Skyler, Editor, USDA Forest Service, Remote Sensing Lab, 1920 20th Street, Sacramento, CA 95814, or by E-mail: pskyler@fs.fed.us. Reference to a commercial product or source in this information letter does not constitute endorsement by the USDA Forest Service. Information should be verified by contacting the original source of information as neither the editor nor the USDA Forest Service guarantees the accuracy of the information provided in this information letter. Pesticides can be injurious to humans, domestic animals, desirable plants, and fish or wildlife if they are not handled or applied properly. Use all pesticides in accordance with label precautions.

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