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Forest Health Protection Staff (2150)
Forest Health Technology Enterprise Team

**SHORT SUBJECTS AND TIMELY TIPS FOR PESTICIDE
USERS**
Issue No. 02-2

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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 and Timely Tips*. Please include the name, State, and telephone number of the individual who can be contacted for further information.

CONTACT: PAT SKYLER (CA) (916) 454-0817 - FAX (916) 454-0820

IBM: Pat Skyler/r5,rsl
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The Washington Office, Forest Health Protection, Forest Health Technology Enterprise Team sponsors, compiles, edits, and distributes this informal newsletter as a means of providing current information to forestry pesticide users. 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, e-mail <Pat.Skyler/r5_rsl@fs.fed.us>, or IBM: Pat Skyler/r5,rsl. Reference to a commercial product or source in this newsletter does not constitute endorsement by the USDA Forest Service. Information should be verified by contacting the original source of information as neither the editor or the USDA Forest Service guarantees the accuracy of the information provided in this *Short Subjects*. 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.

BIOLOGICAL CONTROL, IPM, AND EXOTIC PESTS PEST CONTROL

REMOTE SENSING OF SALT CEDAR CONDUCTED

(Source: NorthernPlain Facts, September/November 2001, USDA-ARS Northern Plains Agricultural Research Laboratory (ARS), Sidney, MT)

USDA ARS research ecologist Dr. Gerald Anderson is leading a remote sensing effort targeting saltcedar (*Tamarix*) infestation sites in five Western States (Wyoming, Utah, Nevada, Colorado and California). It is part of a \$3 million project funded through a CSREES National Research Initiative Competitive Grant, to look for new biologically based control methods for the area wide management of saltcedar and two other invasive weeds found in the western U.S., giant reed (*Arundo*) and yellow starthistle (*Centaurea*). Remote sensing information collected by Dr. Anderson "will be used to both assess the extent and spread of saltcedar in the Western states and to monitor the impact of biological control agents introduced to control it."

For additional information -
CONTACT: DR. GERALD ANDERSON (MT)
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TECHNIQUES FROM TNC STEWARDS FOR THE ERADICATION OF LYTHRUM SALICARIA

(PURPLE LOOSESTRIFE) AND PHRAGMITES AUSTRALIS (COMMON REED/PHRAG) IN WETLANDS

(Edited by Mandy Tu, Wildland Invasive Species Program, The Nature Conservancy, Dept. of Vegetable Crops & Weed Sciences, University of California at Davis)

"This past summer (2000), Betsy Lyman, the Assistant Director of Science & Stewardship for TNC's Pennsylvania Field Office, sent out a call in both Stew News (an in-house TNC publication) and on TNC's Invasive Species Listserve requesting control information for *Lythrum salicaria* and *Phragmites australis*. There was a large response to these questions, and we gathered this information, and lightly edited it. If you have either of these weeds on your preserve, you may benefit from reading about others' control experiences.

The publication is online at <http://tncweeds.ucdavis.edu/moredocs/lytsa01.html> or
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INTERACTIONS BETWEEN BACILLUS THURINGIENSIS AND PARASITOIDS OF LATE-INSTAR LARVAE OF THE SPRUCE BUDWORM (LEPIDOPTERA: TORTRICIDAE)

(Source: Canadian Journal of Zoology, Vol. 79:1697-1703, 2001)

"Abstract: We investigated interactions between *Bacillus thuringiensis* Berliner var. *kurstaki* and parasitoids that attack late instars of the eastern spruce budworm, *Choristoneura fumiferana* (Clemens). In a petri-dish arena, females of *Tranosema rostrale rostrale* (Brishke) (Hymenoptera: Ichneumonidae) were able to discriminate between untreated fourth instars and fourth instars that had been given a known dose of a commercial product (Foray 48B). When the choice tests were conducted before host mortality due to *B. thuringiensis* had occurred among treated larvae (24 h post ingestion), the parasitoid attacked untreated larvae more readily. When females were given a choice between control larvae and treated larvae that were still alive 72 h post ingestion, they were able to discriminate between the two only when the larvae had been treated with at least 50% lethal dose. Under laboratory conditions, female *T. r. rostrale* were thus able to detect and avoid treated larvae that exhibited a lethal response to the pathogen, and to a lesser extent larvae that had survived pathogen exposure. The ability of the latter was not apparent under field conditions. When treated and untreated larvae were exposed for 1 week to a complex of indigenous parasitoids in the field, there was no difference between treatments in the rates of parasitism by either *T. r. rostrale* or *Actia interrupta* Curran (Diptera: Tachinidae). Parasitism averaged 91% for larvae in the control treatment compared with 92% for larvae treated with Foray 48B. The field data suggest that spruce budworm larvae that survive exposure to *B. thuringiensis* are just as likely to be parasitized as unexposed, healthy larvae. This means that prolonged development of late-instar spruce budworm larvae after treatment with *B. thuringiensis* could possibly result in increased attack rates by parasitoids."

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ARS RESEARCHERS WINNING BATTLE WITH NOXIOUS WEED

(Source: Agricultural Research Magazine, Vol. 50, No. 1, January 2002)

"Small victories are being reported by the Agricultural Research Service (ARS) in the war against tropical soda apple (*Solanum viarum*), a nonnative, invasive weed of pastures, row crops, forests, and urban areas throughout the southeastern United States."

Just 6 years after tropical soda apple (TSA) was first observed in Florida in 1988 researchers are estimating that there are now more than 1 million acres infested. Added to the Federal Noxious Weed List in 1995, the species is native to South America. A recent report shows that "a combination of late summer mowing, fall herbicide application, and normal winter conditions can prevent TSA survival"; however, alternative control methods are being sought. TSA is a member of the nightshade family and plant pathologist, C. Douglas Boyette, is "looking at nightshade fungal pathogens to use as bioherbicides for controlling exotic invasives and agronomically important weeds." Work has been successful in the greenhouse but only limited field tests have been done. Also being tested as a biocontrol agent for TSA is the South American tortoise beetle, *Gratiana boliviana*.

A copy of the article is available online at <http://www.ars.usda.gov/is/AR/archive/jan02/weed0102.htm> or

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For additional information on the research -

CONTACT: CHARLES T. BRYSON (MS)

(662) 686-5259

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RED IMPORTED FIRE ANTS THREATEN AGRICULTURE, WILDLIFE AND HOMES (Karen M. Jetter, Jay Hamilton, and John H. Klotz)

(Source: California Agriculture, Volume 56, Number 1, pp 26-34)

"Abstract: The red imported fire ant, a pest newly introduced into California, threatens households, agriculture and wildlife. This study estimates the costs and benefits of a public program to eradicate the ants. The results show that almost all agricultural activities would be affected should the ants become established; however, households would incur the majority of costs. The total estimated cost if red imported fire ants become established would be between \$387 million and \$989 million per year in California. Given current funding levels for eradication of red imported fire ants, for the expected benefits to be at least as great as the expected costs, the probability of successfully eradicating the ants needs to be at least 0.65% if the annual costs of establishment are \$989 million and 1.67% if they are \$387 million."

The article can be found online at <http://danr.ucop.edu/calag/> or
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INOCULATION OF STUMPS WITH HYPHOLOMA FASCICULARE AS A POSSIBLE MEANS TO CONTROL ARMILLARIA ROOT DISEASE (Bill Chapman and G. Xiao)

(Source: Canadian Journal of Botany, Vol. 78:129-134, 2000)

"Abstract: *Hypholoma fasciculare* (Huds. ex Fr.) Kummer was paired with *Armillaria ostoyae* (Romagn.) Herink in a variety of ways in the laboratory and then it was inoculated onto *A. ostoyae* infected stumps in the field. The ability of *H. fasciculare* colonies to overrun *A. ostoyae* colonies in culture was confirmed. *Hypholoma fasciculare* fully colonized discs of tree roots where *A. ostoyae* was well established, and prevented *A. ostoyae* from occupying root segments when both fungi were introduced simultaneously. A simple method for inoculating *H. fasciculare* into stumps is described, and data supporting successful field inoculations are presented. The ability of *H. fasciculare* to invade freshly killed stumps, even those occupied by *Armillaria*, is demonstrated, and it is speculated that the ability of this saprophyte to invade fresh stumps is dependent upon its inoculum potential."

For a copy of the article -
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CHEMICAL CONTROL

TESTING FOR EFFECTS OF STUMP FUMIGATION WITH CHLOROPICRIN ON VEGETATION IN AN EARLY SERAL DOUGLAS-FIR STAND (M.V. Wilson, C.A. Ingersoll, and W.G. Thies)

(Source: Canadian Journal of Forest Research, Vol. 29, No. 8, pp. 1254-1258, August 1999)

"Abstract: The biocide chloropicrin has been suggested for the control of laminated root rot (caused by *Phellinus weirii* (Murr.) Gilb.), a widespread and economically important disease of Douglas-fir (*Pseudotsuga menziesii* (Mirb.) Franco) forests. This study investigated the effects of chloropicrin use on vegetation. A 65-year-old stand in northwestern Washington dominated by Douglas-fir was harvested by

clear-cutting in 1988. At time of harvest, the stand was severely affected by laminated root rot. After harvest, plots were either left unfumigated or fumigated with 3.0-18.2 kg of chloropicrin per 0.04 ha. We used multivariate analyses to investigate the effect of chloropicrin on the abundance of vegetation, accounting for pretreatment plot differences. Five years after harvest and fumigation, no significant differences in vegetation composition or cover were found. Chloropicrin fumigation significantly increased diversity (Hill's measure) but not richness. Of the 10 most abundant species, only two showed significant effects: higher levels of chloropicrin application led to lower *Veronica serpyllifolia* L. var. *serpyllifolia* cover and to more *Linnaea borealis* L. cover. The power of statistical tests to detect effects of chloropicrin on vegetation was high (0.75-0.99) for large effect sizes, lending confidence to the conclusion that chloropicrin use caused few prominent adverse effects."

For a copy of the article -
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REGULATORY

NEW PROPOSED FAST TRACK PROGRAM FOR REVIEWING CERTAIN EXPERIMENTAL USE PERMITS (EUPs) ANNOUNCED FOR PUBLIC COMMENT

The office of Pesticide Programs (OPP) is issuing a draft Pesticide Registration Notice (PRN) that proposes guidelines for the expedited review of experimental use permits (EUPs) for certain conventional pesticides. The objective of this expedited EUP program is to bring to the Environmental Protection Agency's attention those EUPs that could be approved based on existing hazard characterizations and exposure assessments without the need for substantial additional review. Availability of this draft PRN was announced in the December 19, 2001 Federal Register. The public has 60 days to comment.

For a copy of the article -
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HUMAN HEALTH

BETTER MOSQUITO, TICK REPELLENTS IN THE WIND? (by Judy McBride)

(Source: ARS News & Information, January 3, 2002)

"The Agricultural Research Service[ARS] is seeking a patent on a method for selecting the most effective version of a repellent discovered by ARS researchers more than 20 years ago." Called 220 the original repellent is based on piperidine, a molecule found in trace amounts in black pepper. Jerome Klun, an ARS entomologist has "identified one version that is three to four times more effective at preventing yellow-fever-transmitting mosquitos from biting than the original repellent." This version is also the most optimal one against the species that transmit the West Nile virus. Toxicological testing of the original piperidine-based repellent has been done at a U.S. Army laboratory "and passed muster for experimental use on people." Bayer Pharmaceutical Company is currently selling a related repellent overseas, but any product that would be sold in the United States will require additional toxicological testing required by the Environmental Protection Agency.

The article is available online at <http://www.ars.usda.gov/is/pr/2002/020103.htm> or
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For additional information on the research -

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MISCELLANEOUS

GRANT AWARDED TO STUDY EFFECTS OF FIRE AND LIVESTOCK GRAZING ON GRASSHOPPER POPULATIONS

(Source: Northern PlainFacts, September/November 2001, USDA-ARS Northern Plains Agricultural Research Laboratory (ARS), Sidney, MT)

USDA ARS research entomologist, David Branson and research ecologist, Greg Sword have been awarded a USDA Forest Service grant to "study the effects of fire and livestock grazing on grasshopper population dynamics in the Northern Great Plains." The 5-year cooperative project will be conducted on the Forest Service's Little Missouri National Grassland. "Although fire is known to affect grasshopper population dynamics in grassland ecosystems, neither its direct effects nor its potential interactions with different grazing management strategies have been previously studied in the Northern Great Plains."

For additional information on the research -

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PURGE SPURGE: LEAFY SPURGE DATABASE

The latest version of "Purge Spurge: Leafy Spurge Database" is now available. The CD, which was produced by Team Leafy Spurge, contains more than 800 journal articles, Extension publications, symposium proceedings, scientific abstracts and other resources pertaining to research and management of the noxious weed leafy spurge. You can order a free copy by mail, phone, fax or email.

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ON THE INTERNET

Visit the USDA Forest Service, Region 8, Forest Health Protection, Southern Forest Health Atlas of Insects and Diseases. The online Atlas offers an interactive interface to view insect and disease data for the Southern Region. Access it at <http://fhpr8.srs.fs.fed.us/atlas>.

If you've got a question about honey bees, visit the Expert Forum on Honey Bees at <http://gears.tucson.ars.ag.gov/expertforum/index.html>. The site is part of the Agricultural Research Service's Carl Hayden Bee Research Center in Tucson, AZ.

Agricultural Research Service's Image Gallery is provided as a complimentary source of high quality digital photographs available for downloading in three sizes. Categories of photographs include: Lab Research, Plants, Animals, Illustrations, Crops, Education, Insects, Fruits/Veggies, and Field Research. Visit the site at <http://www.ars.usda.gov/is/graphics/photos/>.

For information on gypsy moth defoliation in Virginia 2001 visit the Virginia Department of Forestry website at <http://www.dof.state.va.us/resinfo/trans/gypsy.htm>. The site includes a status report and defoliation maps by county.

EPA's pesticide/water models, used to estimate pesticide concentrations in water, are now available on the internet. Access them at

<http://www.epa.gov/oppefed1/models/water/index.htm>.

USDA Agricultural Research Service has developed a website to summarize the questions and information about the risks of Bt corn to monarch butterflies. An Information bulletin and the website are located at <http://www.ars.usda.gov/is/pr/2001/011005.htm>.

The Smithsonian Institution has developed a website which provides detailed information on the effects of mail irradiation on biological materials and other items (photos, film, floppy disks, cd's etc.). The website can be accessed at http://www.si.edu/scmre/mail_irradiation.html.

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PUBLICATIONS

Cross, D.H. and K.L. Fleming. 1989. Control of Phragmites or Common Reed, Fish and Wildlife Leaflet 13.4.12.

Hastings, F.L., Holsten, E.H., Shea, P.J. and R.A. Werner. 2001. Carbaryl: A Review of Its Uses Against Bark Beetles in Coniferous Forests of North America. Environ. Entomol. 30(5):803-810. For a copy of this publication contact Ed Holsten (907) 271-2573, eholsten@fs.fed.us.

Skyler, P. and H. Thistle. 2001. Eleventh Report - National Spray Model and Application Technology Working Group Meeting. FHTET 01-08. USDA Forest Service, Forest Health Technology Enterprise Team, Morgantown, WV.

Malformed Frogs, Legislative Fact Sheet, Minnesota Pollution Control Agency, January 2, 2001.

State of the World's Forests 2001. Food and Agriculture Organization of the United Nations, Rome, 2001. Available online at <http://www.fao.org/docrep/003/y0900e/y0900e00.htm>.

If you are unable to access the online documents or would like a copy of any of the above publications sent to you - contact Pat Skyler, (916) 454-0817, pskyler@fs.fed.us.

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UPCOMING EVENTS

26-28 February 2002
National Pesticide-Use Coordinators' Meeting

San Diego, CA.

Contact: Jesus Cota

(703) 605-5333

jcota@fs.fed.us or Dave Bakke (707) 562-8916, dbakke@fs.fed.us.

24-27 February 2002
The 15th Biennial International Plant Resistance to Insects Workshop

Baltimore, MD

Contact: Michael McMullen

(573) 882-7606

Email: mcmullen@teosinte.agron.missouri.edu

Online and printable registration forms along with further information is available at

http://www.oznet.ksu.edu/entomology/plantresist/IPRI_2002_workshop.htm

25 February - 1 March 2002
National Invasive Weeds Awareness Week 2002

Washington, DC

Contact: Rita Trostel

(970) 498-5767

<http://www.nawma.org/niwaw.htm>.

5-6 March 2002
**Silvicultural Options for Sustainable Management of Pacific Northwest Forests:
Integrating Research Results into Management Practice**

Corvallis, OR

Contact: Conference Coordinator

(541) 737-2329

email: outreach@for.orst.edu

<http://www.outreach.cof.orst.edu/silvopt/index.shtml>

Presented by Oregon State University, College of Forestry, Outreach Education.

7-11 April 2002

223rd American Chemical Society National Meeting

Orlando, FL

For registration information call toll free 1-800-650-2512 or (480) 443-4058 ext. 243

email: acs.help@matrixreg.com

<http://www.chemistry.org/portal/Chemistry/orlando2002.html>.

23-26 April 2002

Noxious Weed Management Short Course (Session 1)

Loveland, CO

Contact: Celestine Duncan, Course Coordinator

(406) 443-1469

Email: weeds1@ixi.net

http://wsweedscience.org/events/event_list.php.

28 April - 1 May 2002

Noxious Weed Management Short Course (Session 2)

Loveland, CO

Contact: Celestine Duncan, Course Coordinator (406) 443-1469

Email: weeds1@ixi.net

http://wsweedscience.org/events/event_list.php.

23-25 April 2002

Western Forest Insect Work Conference

Whitefish, MT

Contact: Ken Gibson

(406) 329-3278

Email: kgibson@fs.fed.us

Sandy Kegley

(208) 765-7355

skegley@fs.fed.us

17-21 June 2002

Fourth International Conference on Forest Vegetation Management: Technical, Environmental and Economic Challenges of Forest Vegetation Management

Nancy, France

Contact Henri Frochot
Fax: 33-3-83-39-40-34
Email: ifvmc4@nancy.inra.fr
<http://www.ifvmc.org>.

29-31 July 2002
American Society of Agricultural Engineers Annual International Meeting

Chicago, IL
Contact: Brenda West
(616) 428-6327
Email: west@asae.org
<http://www.asae.org/meetings/am2002/index.html>.

2-5 September 2002
Methodology of Forest Insect and Disease Survey in Central Europe

Krakow, Poland
Contact: Michael McManus
(203) 230-4321
Email: mlmcmanus@fs.fed.us
<http://iufro.boku.ac.at/iufro/iufro.net/d7/wu70310/krakow/>.

9-13 September 2002
50th Annual Meeting of the Western International Forest Diseases Work Conference

Powell River, B.C. Canada
Contact: John Muir
Fax: (250) 387-8740
Email: john.muir@gems1.gov.bc.ca
<http://www.fs.fed.us/foresthealth/technology/wif/index.html>.

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