



# *Ka Lono Pua*

*"The Flower News"*

Vol. XIII No. 1 February 2006

Oahu County

Cooperative Extension Service,

## Hawaii's Invasion

Often there are news reports of how Hawaii is being invaded by pests of all sorts. Recently there have been a number of invading species moving across the islands: the papaya mealybug, ohia rust, coqui frogs, nettle caterpillars, Miconia and the Erythrina gall wasps. Some – like the ohia rust and gall wasps - seem impossible to stop from spreading from island to island.

Others can be stopped, but it will take a concerted effort from everyone – HDOA, UH, the military, nurserymen, shippers, and all travelers. We all must be aware of the potential for spreading these noxious pests from island to island and take measures to prevent their movement.

Also we must be especially vigilante when importing plants to Hawaii to ensure that they are pest free and don't have the potential of becoming pests themselves. For more information about our invasive species see: <http://www.hawaiiag.org/hdoa/npa.htm> and <http://www.ctahr.hawaii.edu/ctahr2001/PIO/FreePubs.asp>. Check under "Insect Pests", "Miscellaneous Pests" or "Plant Disease".

## In This Issue...

- ◆ New Workers Protection Manual
- ◆ Free Insect Management Publication
- ◆ Whitefly Resistance Technology Found
- ◆ New CTAHR Publications.....and more

## Future Happenings

- Feb 1-4 ANLA Management Clinic, Louisville KY (202) 789-2900  
[www.anla.org](http://www.anla.org)
- \* Feb 4 Plant Sale at Pearl City Urban Garden Center 8 – 2 p.m.
- Feb 14 Tue Valentine's Day
- Feb 20 President's Day
- Feb 22-24 Southern CA Plant Tour Days (760) 431-2572  
[www.planttourdays.org](http://www.planttourdays.org).
- \* Feb 23 Fusarium Disease of Orchids, 7:00 p.m. Urban Garden Center.
- Mar 5-12 Philadelphia Flower Show (215)988-8800  
[www.theflowershow.com](http://www.theflowershow.com)
- Mar 10 - 12 AIFD Southern Conf., Kingsport, TN, Teleflora (410) 752-3318
- Mar 15 - 17 World Floral Expo 2006, Miami, FL, [www.worldfloralexpo.com](http://www.worldfloralexpo.com)
- Apr 7-8 CTAHR Student Research Symposium, Ag Science Bldg, U.H. Manoa
- Apr 14 Good Friday Holiday
- Apr 16 Easter
- Apr 26 Administrative Professionals' Day
- \* See newsletter for details

## Free Insect Management Publication

Farmers need insect pest management strategies that are effective, affordable and environmentally sound. To help meet that need, the Sustainable Agriculture Network released "Manage Insects on Your Farm: A Guide to Ecological Strategies". It is a primer designed to help farmers improve their farms' natural defenses against insect pests.

While every farming system is unique, the principles of ecological pest management apply universally. "Manage Insects on Your Farm" outlines the principles of ecologically based pest management and illustrates the strategies used by farmers around the world.

Some of these strategies include: increasing farm diversity, encouraging beneficial insects, enhancing plants' natural defenses against pests and managing soil to minimize crop pests.

"Manage Insects on Your Farm" gives a framework for understanding ecologically based pest management and many useful details to help minimize insect pest problems. Examples of successful pest management strategies demonstrate how to address insect problems and develop a more diverse farm ecosystem.

Readers will learn how to minimize insect damage with wise soil management and identify beneficial insects to put these "good bugs" to work.

"Manage Insects on Your Farm" is available at: [www.sare.org/publications/insect.htm](http://www.sare.org/publications/insect.htm) for free. To order print copies (\$15.95 plus \$5.95 s/h) visit [www.sare.org/WebStore](http://www.sare.org/WebStore), call 301/374-9696 or send check or money order to Sustainable Agriculture Publications, PO Box 753, Waldorf, MD 20604-0753. (Please specify title requested when ordering by mail.) Allow 3-4 weeks for delivery.

## Revised Worker Protection How-to-Comply Manual

EPA is releasing its revised 2005 Worker Protection Standard for Agricultural Pesticides How-to-Comply Manual. This compliance assistance tool has been updated to reflect amendments to the Worker Protection Standard (WPS), a regulation designed to protect agricultural workers and pesticide handlers. The revised manual provides detailed information on who is covered by the WPS and how to meet regulatory requirements. The updated manual will facilitate better protection of pesticide workers and handlers in agriculture from the potential risks of pesticides.

The new 2005 WPS How-to-Comply (HTC) Manual supersedes the 1993 version. Changes to the WPS since 1993 have made the earlier version obsolete and its continued use may lead an employer to be out of compliance. The 2005 HTC Manual revision was coordinated by EPA's National Agricultural Compliance Assistance Center and several state agencies, with input solicited from USDA and other state and tribal pesticide agencies.

For further information about the revised manual and how to obtain print and/or CD-ROM versions of the manual or for additional information about the WPS, visit: <http://www.epa.gov/agriculture/htc.html>.

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The minister selected a 50-cent item at a convenience store, but then discovered he didn't have any money with him.

"I could invite you to hear me preach in return," he said jokingly to the clerk, "But I'm afraid I don't have any fifty-cent sermons."

"Perhaps," suggested the clerk, "I could come twice."

-George Dolan

## Seminar: Fusarium Disease on Orchids

Dr. Janice Uchida, graduate student Cassandra Swett, and technician Chris Kadooka will present a seminar on the Fusarium fungus attacking orchids.

The seminar will be held at the

**Urban Garden Center in Pearl City  
Thursday, Feb. 23<sup>rd</sup>  
7:00 p.m. – 8:30 p.m.**

The presentation will include a look at some disease samples, an agar test of fungicides and some other interesting activities.

Growers are encouraged to bring samples of their diseased plants. All diagnosis is confidential. When we report results, it is by commercial nursery #1, #2 or #3 etc.

The Urban Garden Center in Pearl City is located at 955 Kamehameha Hwy. Access is through the Diamond Head end of the Home Depot parking lot. For more information contact Ed at 622-4185 or mersino@hawaii.edu.

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The news isn't good when a guy visits the doctor for his annual checkup. "You've got to do something to improve your health," the doctor says.

"What?" the patient asks.

"I recommend walking or jogging."

"But, doc," says the worried guy, "I already jog a few miles every morning."

"In that case," replies the doctor, "you'd better give it up."

-Alex Thien

## Plant Sale at the Urban Garden Center

The Friends of the Pearl City Urban Garden Center will present their annual plant and produce sale on:

Saturday, February 4<sup>th</sup>, 2006  
8:00 a.m. – 2:00 p.m.  
955 Kamehameha Hwy

The Urban Garden Center in Pearl City is located at 955 Kamehameha Hwy. Access is through the Diamond Head end of the Home Depot parking lot.

There will be a good selection of plants and produce available. Admission and parking are FREE.

For more information call 453-6050.

## ***Paracoccus marginatus* is Found on Oahu**

The Papaya Mealybug was originally found on Maui in May of 2004. It was found last September in Laie on papaya. Now it has moved to Waimanalo where it was found on potted hibiscus. Besides attacking papaya, it also uses plumeria, hibiscus, mango, citrus, avocado and a number of vegetables as hosts.

There are a number of predaceous and parasitic insects already associated with the mealybug and giving some control. In addition the Hawaii Department of Agriculture (HDOA) is exploring the release of another tiny parasitic wasp that is controlling the mealybug on Guam.

For more information see:  
<http://www.hawaiiag.org/hdoa/npa/npa04-03-PMB.pdf>.

## New CTAHR Publications

The free publications listed below by their **subject category** are now available for downloading from the CTAHR free publications Web page,  
<http://www.ctahr.hawaii.edu/freepubs>

If you would like a copy of one of these publications and do not have internet access, (public libraries have free internet access) contact our office at 622-4185.

### Fruits and Nuts

“Noni Seed Handling and Seedling Production”  
Scot Nelson F&N-10 4 pages  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/FN-10.pdf>

### Home Garden

“Small-Scale Vermicomposting”  
Piper Selden, Mike DuPonte, Brent Sipes, Kelly Dinges HG-45 4 p.  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/HG-45.pdf>

“Composting Worms for Hawaii”  
Piper Selden, Mike Duponte, Brent Sipes, Kelly Dinges HG-46 2 p.  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/HG-46.pdf>

### Insect Pests

“Stinging Nettle Caterpillar”  
Stacey Chun, Arnold Hara, Walter Nagamine, Patrick Conant, Clyde Hirayama, Ruth Niino-DuPonte IP-22 color  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-22.pdf>

“Banana Moth--a Potentially Fatal Pest of Pritchardia and Other Palms”  
Scot Nelson, Mark Wright IP-24 4 p. color  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-24.pdf>

### Miscellaneous Pests

“Mite Control Chart for Ornamental Crops”  
Andrew Kawabata, Arnold Hara, Brian Bushe, Christopher Jacobsen MP-4 2 p. Also, a 1-p. tabloid version Web-only  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-4L.pdf>  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/MP-4T.pdf>

### Plant Disease

“Stem Bleeding of Coconut Palm”  
Scot Nelson PD-30 2 p. color  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/PD-30.pdf>

“Rust of Ko'olua 'ula (Abutilon menziesii)”  
Scot Nelson PD-31 2 p. color  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/PD-31.pdf>

### New Plants for Hawaii

“New Protea Cultivars for Hawaii Growers from the University of Hawaii Protea Research Project -- 1999 to 2004”  
Ken Leonhardt, Pam Shingaki, Patty Nakao, Tom Jewell, Tilden Miguel, David Oka NPH-11 28 p., 19 p. in color.  
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/NPH-11.pdf>

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The tour guide at Niagara Falls was showing a group of Texans the spectacular sight. "Do you have anything that big in Texas?" he asked one man.

"No," he replied, "but we've got a plumber who can fix this leak in half an hour."  
- Carren Strock

## EPA re-registers Mancozeb

Mancozeb has completed the U.S. EPA re-registration process. It is the active ingredient in fungicides Dithane and Fore. All pesticides registered before 1984 were required to undergo re-registration. The new registration process takes into consideration health and safety concerns and requires new scientific data.

A number of Label changes were made. The manufacturer, DowAgro Science withdrew five uses. They were the use on residential turf, cotton, pineapple propagation, athletic fields and pachysandra (an ornamental ground cover). All other uses were maintained including nurseries, greenhouses, golf courses, sod farms and other crops.

There was some consideration of expanding the Reentry Interval (REI) from 24 hours to up to 5 days. However, due in part from testimony from Hawaii's floriculture growers, the REI will remain 24 hours.

Mancozeb is a member of the ethylene bisdithiocarbamates (EBDC's) family of fungicides. Dithane accounts for about 60% of the EBDC sales. It is approved on 70 crops for 400 diseases, including botrytis, rusts, anthracnose, and alternaria on ornamentals.

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She left him on the sofa when the phone rang, and was back in a few seconds. "Who was it?" he asked.

"My husband," she replied.

"I better be going," he said. "Where was he?"

"Relax. He's downtown playing poker with you."

*-The Ohio Motorist*

## Ohia Rust Disease Spreading

Last April a fungal disease was discovered on Ohia trees being grown in a nursery in Waimanalo. The fungus causes rust like spots on new leaves and stems. The rust has been found on other members of the Myrtaceae family particularly in the genus Eugenia. Besides Ohia that genus includes guava, rose apple, allspice, jaboticaba, and Surinam cherry.

Recent surveys show that the rust has spread throughout the state. To date there are no approved fungicides available. The HDOA recommends good sanitation for controlling the disease. That includes removing and destroying all plant parts infected and keeping the foliage dry. For more information see:

<http://www.hawaiiag.org/hdoa/npa/npa05-04-ohiarust.pdf>

## Human fungicide could help plants

In 1990 a naturally occurring compound called sampangine was patented to treat human fungal infections. Sampangine has been patented again since it and related compounds have the potential to be used as low-toxicity, broad-spectrum controls of fungal plant pathogens.

The compounds have been found effective against *Botrytis cinerea*, *Colletotrichum fragariae* and *Fusarium oxysporum*. USDA researchers are working with Icoria Inc. in Research Triangle Park, N.C., to study the compounds. Sampangine and related compounds could boost the \$31 billion minor-crop industry by managing fungicide-resistant pathogens before and after harvest.

## Technology to Overcome Insecticide Resistance

Scientists have developed a technique that has potential to control insects that have developed resistance to various insecticides. The method involves the use of an enzyme inhibitor that deactivates the resistance mechanism and then a timed release of the insecticide.

Insecticide resistance in insect pests is a major limitation to economic crop production. Growers when faced with insecticide resistance have to resort to using newer more costly insecticides.

The enzyme inhibitors, such as Piperonyl butoxide, have the potential to overcome the resistance mechanism. They have achieved little success in the field because it takes some time for the inhibitors to act. Once the insect's resistance mechanism has been deactivated a carefully timed second application of the insecticide is necessary. It is generally not logistically or economically possible for farmers to make two applications at precise intervals. Scientists have shown that the insects can deactivate the insecticide before the inhibitor can act if they are both applied together.

United Kingdom and Australian scientists to overcome this problem have developed a product that delivers two burst releases of chemicals. The formulation is designed to release the enzyme inhibitor first. That inactivates the pesticide-degrading enzymes that normally protect the pests. The pesticide is released four to five hours later, killing the disarmed insect. The technique has been successfully tested in some of the world's resistance hot spots.

Only insects with a metabolic mechanism of resistance to pesticides can be controlled. Some of those include the whitefly, diamondback moth, aphids and mosquito species. Patents have been applied for in the UK and internationally.

Source: GPNmag.com Exec. News Summary  
Volume 3, Issue: 39

## Certification and Labeling Book

The Western Extension Marketing Committee announced a new publication - "Certification and Labeling Considerations for Agricultural Producers". This could be useful in working through various branding, labeling, and 3rd party certification options such as relates to food safety, organic, locally grown, private labels, etc.

It is available electronically at <http://cals.arizona.edu/arec/wemc/certification.html> in both a "print" and "screen" format (prints best with color printer). Additional hard copies can be ordered for \$5 each via the website.

Copies of "Western Profiles of Innovative Agricultural Marketing" (includes three Hawaii operations among the 17 profiles) are also available.

### **"Ka Lono Pua" Goes Electronic**

If you would like to receive "Ka Lono Pua" by e-mail, contact us so we can add your address to our listings. If you don't have e-mail or we don't know what it is, you will continue to receive a regular copy of "Ka Lono Pua."

If you have any questions or suggestions, give me a call at 622-4185, Tuesdays and Thursdays or e-mail me at [mersino@hawaii.edu](mailto:mersino@hawaii.edu).

Mahalo!

Edwin F. Mersino  
County Extension Agent  
Agriculture Program

**For information on the difference between Coqui and the greenhouse frogs see+:**  
**[http://www.ctahr.hawaii.edu/oc/freepubs/pdf/coqui\\_id.pdf](http://www.ctahr.hawaii.edu/oc/freepubs/pdf/coqui_id.pdf)**

- What's the latest invading species?
- How can technology overcome insecticide resistance?
- What are the latest CTAHR's publications?
- Where can you go to learn about Fusarium on orchids?
- Where can you get free information on controlling insects?

The answer to these and many other questions can be found inside.