

# CTAHR RESEARCH NEWS

February 2008  
Volume 4, Issue 2



Hara lab staff and colleagues in a refrigerated freight container converted into a hot shower chamber to disinfest potted plants of coqui frogs and other invasive pests.

**Cost sharing basics**

**Continuing to battle invasive species**

**CTAHR priority staffing**

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# From the Associate Dean and Associate Director for Research

Welcome to the Year of Rat! *Kung Hee Fat Choy!* A greeting commonly used during the Chinese New Year, it means “wishing you happiness and great fortune.” According to the Chinese zodiac, the rat represents the first of 12-animal cycle, so the Year of Rat signifies a time for renewal. As CTAHR enters its second century, we are ready for the new challenges and adventures.

The rat is also considered a feisty pest by most people, and it is just one of many invasive species that have caused much damage to our agriculture. Many others have since arrived in Hawaii; therefore, we have arranged to have Dr. Arnold Hara of Plant and Environmental Protection Sciences (PEPS) Department to talk about his research in this first issue *CRN*. Dr. Hara is an entomology researcher based in Hilo, with a 50:50 Research:Extension FTE. His work serves as an excellent example of integrating research with outreach, working closely with agents, specialists and stakeholders. He has worked on many major invasive species that have great (grave!) economic and environmental impacts on the islands. Dr. Hara is another fine example of CTAHR's world-class programs working to mitigate invasive species. We have showcased Drs. Russell Messing and Mark Wright (November 2006), Dr. Ania Wiczorek (December 2006), Dr. Anne Alvarez (January 2007), and Dr. Cerruti Hooks (December 2007) in past editions, and we still have many others to introduce. We are pleased to share Dr. Arnold Hara's exciting story with you this month!

On February 4, 2008, President Bush forwarded the Fiscal Year 2009 Budget to Congress. The CSREES budget can be viewed at <http://www.csrees.usda.gov> – click on Budget Information under more

quick links to see the FY 2009 Budget Proposal table. Hatch funds are reduced from \$195,812 to \$139,208 million: a 29% decrease from 2008. If Congress approves the President's budget, we will see our Hatch funding reduced substantially next year. McIntire-Stennis funds will be reduced by 21.5%, and Animal Health and Disease funds will be eliminated. This reduction of formula funds is linked to the increase in the NRI competitive grant programs. Again, the Administration wants to distribute research funding through a competitive process, rather than by formula, something for us to think about in our internal funding process. In his State of Union address, President Bush also warned Congress to reduce earmarks to HALF of 2008 or to face his veto of the appropriation bills. Congress is also busy working on the new farm bill. We have a lot riding on the new farm bill also, so we are keeping our fingers crossed as the process moves forward. Hopefully, we will have good news to report in the coming months.

Finally, we provide you with an update on our latest round of priority staffing, information about cost sharing and Doug Vincent updates you through his research calabash: more grants received, papers published, and funding opportunities are listed for your perusal. Please keep sending your newsworthy items to me as they are available. *Happy reading!*



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and Associate  
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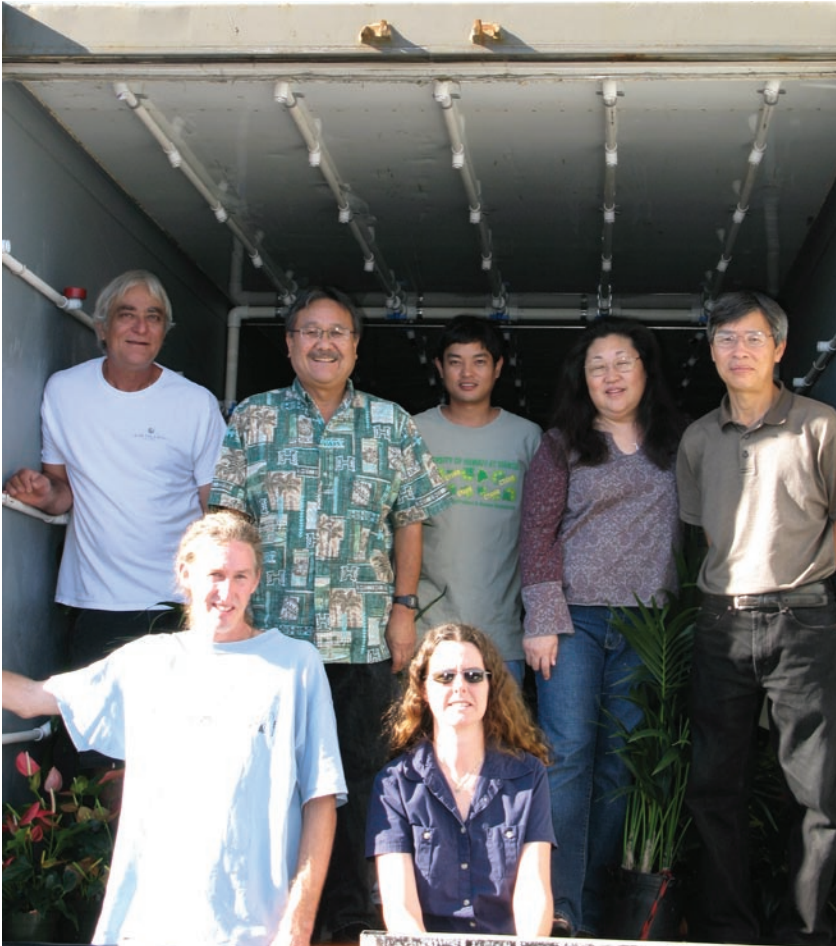
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# Tackling the invasive species crisis in Hawaii

By Arnold H. Hara  
Entomologist  
Department of Plant and Environmental Protection Sciences

See the video,  
*Turning up the Heat*, by clicking  
on this icon.



The Hara team. Front row: Christopher Jacobsen (Minnesota), Shenandoah Marr (California). Back Row: Charles Nelson (Oahu), Arnold Hara (Big Island), Erik Ouchi (Big Island), Ruth Niino-DuPonte (Oahu), Marcel Tsang (Mauritius).

Hawaii is the worst-case example of alien species invasion in the United States, and possibly the entire world. Once an invasive species is discovered in Hawaii, eradication is nearly impossible. Between 1959 and 2000, of the 56 eradication projects implemented by the Hawaii Department of Agriculture (HDOA), only 10 projects (18%) were successful. Each year Hawaii has unwittingly welcomed an average of 15 to 20 alien mollusks, insects and other arthropods, amounting to over 1000 alien species since 1943, including the little fire ant, nettle caterpillar, leafminers, papaya mealybug, pink hibiscus mealybug, silverleaf

whitefly, spiraling whitefly, giant whitefly, citrus blackfly, Asian citrus psyllid, oriental fruit fly, western flower thrips, banana rust thrips, erythrina gall wasp, hibiscus erineum mite, crab spider, African snail, golden apple snail, brown slug, and several vertebrates (coqui frogs, giant day gecko, veiled chameleon) and weeds (*Salvinia molesta*, fireweed, gorse). Many of these invasive species have become serious invasive pests to Hawaii's agriculture, landscape and forests, and have negatively impacted human and animal health (painful stings, noise stress) and quality of life. Moreover, these invasive species, in becoming quarantine pests, hinder exportation of agricultural and floricultural products from Hawaii to other states and Asia.

## Why is Hawaii the invasive species capital of the world?

There are 3 major reasons: Hawaii's island ecology and diverse habitats; its tropical and temperate climates; and its role as a major transportation hub. As the most remote land mass in the world, the Hawaiian Islands are surrounded by a 2,500-mile ocean moat. Before human settlement, only a few plants, insects and birds arriving by ocean

or air currents managed to colonize and evolved into thousands of species, > 90% of which are endemic or unique to Hawaii. Without enemies, native species did not develop physical, chemical or behavioral defenses, and are therefore easily out-competed by invasive species. Mild temperatures that vary slightly between seasons, rainfall ranging from 10-300 inches per year, and elevations from sea level to 13,000 ft create diverse tropical to temperate niches within 100 miles of each other. Hawaii's climate added to the fact that Hawaii residents import 98% of their goods from Asia and the Americas, and it is easy to understand why Hawaii is



Effectiveness of imidacloprid injection against the erythrina gall wasp attacking tall or upright wiliwili (erythrina).



Personnel from the agro-chemical industry, Hawaii Department of Agriculture, Plant Pest Control Branch and UH-CTAHR respond to the devastating erythrina gall wasp by installing a chemical control trial soon after its invasion to Hawaii.

prone to invasion. Honolulu International Airport is one of the nation's 15 busiest airports. Upsurges in invasive species introductions correlate to post World War II, Korean, Vietnam, and now the Middle East conflicts. Huge aircraft and ocean freight containers arrive at this major port of entry, and transport hitchhiking species on cargo, plants, and animals. According to HDOA, only 10% of all incoming cargo of fresh produce and plants are inspected, intercepting only 25% of infested shipments.

### **Strategies against invasive species**

Hawai'i's major strategies against invasive species are: 1) eradication, 2) containment, 3) classical biological control, 4) integrated pest management, 5) prevention and quarantine, and 6) do nothing. As an entomologist and extension specialist for CTAHR's Department of Plant and Environmental Protection and located in Hilo at the Komohana and Waiakea Research and Extension Centers for over 25 years, I have been tackling the alien species invasion with the latter three strategies.

### **The "Do Nothing" strategy**

This is my favorite strategy because it is the least expensive and it works! Many invasive species have successfully been brought under control by natural enemies that fortuitously arrived or were already established in Hawai'i. The giant whitefly that invaded Hawai'i in May 2002 was immediately attacked by a parasitic wasp purposely introduced in 1980 for the biological control of the spiraling whitefly. Another parasitic wasp species was fortuitously found in March 2003; plans were in place to import this parasite from California but were not needed. The giant whitefly has since been kept under excellent control by these biological control agents.

### **Integrated Pest Management**

Integrated Pest Management (IPM) is a complement of chemical, cultural, biological and physical control strategies against an invasive species. Often, the first line of defense is identifying effective insecticides that are environmentally-safe. Our research team immediately conducted insecticide trials soon after the erythrina gall wasp, nettle caterpillar, little fire ant, and papaya mealybug were discovered in Hawai'i. Here are some more details about these pests.

### **Killer Erythrina Gall Wasp**

Our lab collaboration with Dr. Qing Xiao Li (MBBE,) promptly screened for effective insecticides when the devastating erythrina gall wasp (EGW) was first discovered in Hawai'i in 2005. Trials revealed that imidacloprid, a modern neonicotinoid, systemic insecticide, was the most effective when applied by trunk injection and also determined the best injection delivery system (see photos on page 4). We used the enzyme-linked immunosorbent assay for the analysis of imidacloprid in wiliwili tree that was developed by Dr. Li. The long-term strategy for EGW will probably be classical biological control with the importation and establishment of natural enemies from Tanzania and Kenya by HDOA and CTAHR.

### **Stinging Nettle Caterpillar**

Insecticides were also immediately tested against the stinging nettle caterpillar when it suddenly appeared at a palm nursery in Hilo, Hawai'i, in 2001. We discovered that the biological insecticide, *Bacillus thuringiensis* (B.t.) was effective against the nettle caterpillar, but while B.t.-treated caterpillars immediately stop feeding, they were still able to sting for up to a week until they die. Other chemical insecticides (pyrethroids) cause immediate death.



Invasive nettle caterpillar from Taiwan.

### *Stinging Little Fire Ant*

The little fire ant (LFA) first discovered in the Puna area of the Big Island in 1999 continues to affect Hawai'i's agriculture, urban landscape, and forests because of its painful sting to humans and animals and injury to plants by forming a complex of honeydew secreting insects (soft scale insects, mealybugs, aphids). Amdro Fire Ant Bait (hydramethylnon) is presently the recommended treatment for LFA in non-crop areas, but newer bait products may be more effective. Our laboratory tested other bait insecticides for LFA and developed LFA quarantine treatments for potted plants. We evaluated a combination bait insecticide, Extinguish Plus (hydramethylnon and the insect growth regulator, methoprene), and found it more effective than Amdro. In collaboration with Mr. Kyle Onuma (HDOA), we determined a pyrethroid insecticide (Talstar) to be highly effective when applied as a drench to potted plants. Hot water drench at 114 oF for 12 min was also effective. Further LFA control research necessitates collaboration with other ant researchers in South America, Australia, New Zealand, Pacific Islands, Florida and the Caribbean.

### *Devastating Papaya Mealybug*

First found in Hawai'i in 2004, the papaya mealybug (PM) feeds on numerous plants including avocado, citrus, tomato, eggplant, peppers, beans, peas, sweet potato, and mango. Although generalist predators (ladybeetles, lacewings, hover flies) and a tiny parasitic wasp are parasitizing PM to some extent, PM is seriously damaging plumeria, hibiscus, jatropha, and papaya. In support of the papaya industry in the Puna area of the Big Island, our research team and Mr. Kyle Onuma (HDOA) immediately installed an insecticide trial and identified a new insect growth regulator, buprofezin (Applaud for food crops) as effective against PM for over 3 weeks after application. Imidacloprid, applied as a foliar spray (Provado) provided shorter, immediate control while the drench systemic application (Admire) supplied slower, longer term control. Imidacloprid applied to the bark of papaya trees with a new bark penetrant shows promise as a more efficient systemic application method.



Invasive coqui frog from Puerto Rico.

### *The noisy Coqui frog*

One of the worst invasive species in Hawai'i is not an insect but a tree frog. Introduced to the Hawaiian Islands in 1988, Puerto Rican coqui frog populations have reached epidemic proportions on the Big Island far exceeding those in their native homeland. On April 12, 2004, Hawai'i County Mayor Harry Kim declared a state of emergency for the Island of Hawai'i, citing that frogs emit excessive noise which pose a threat to human health, impact the island's ecosystems and threaten its economic welfare, calling for government

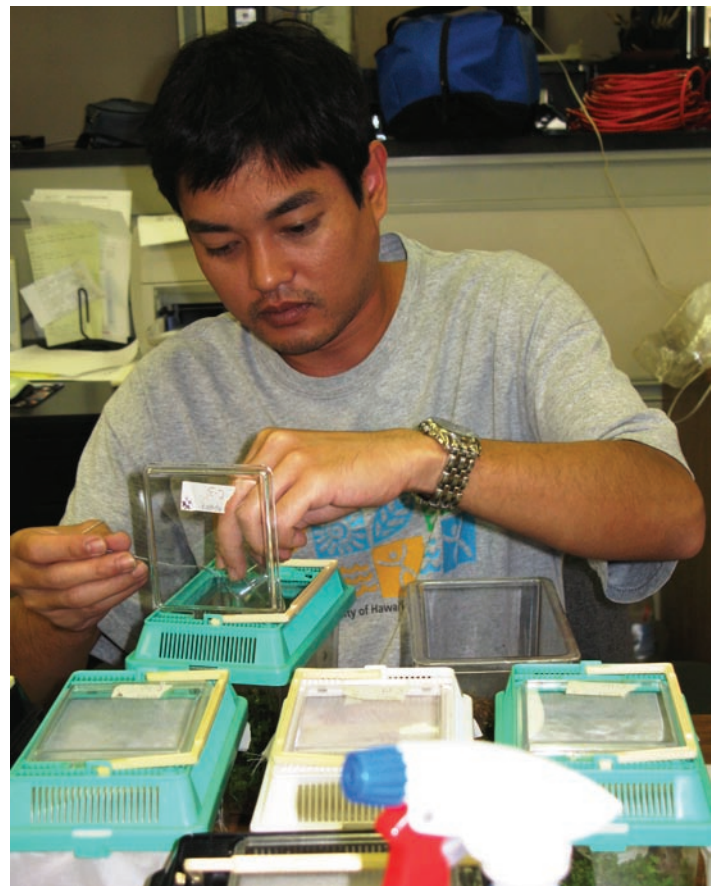


R to L: Larry Nakahara, retired HDOA entomologist, Dr. Don McInnis, USDA, ARS, insect geneticist and Christopher Jacobsen, research support, searching for coqui frogs and its predators in Puerto Rico.

agencies and the private sector to mobilize and provide immediate action. The coqui frog is ranked among the most successful invaders in the world, one of only three amphibians to be so classified. The coqui frog also sets the stage for the invasion of the brown tree snake as coqui frogs will serve as an excellent prey. In 1988, the coqui frog was not on the radar screen as an aggressive invasive species and was not considered a quarantine pest, but once established in Hawai'i, control strategies were unknown. Many frog species throughout the world are threatened or endangered with no documented research on control and management. The USDA, National Wildlife Research Center, was the first agency to identify a chemical against the coqui frog, caffeine, but due to environmental and health issues, caffeine was never registered or legalized as a pesticide against frogs. We were awarded a T-STAR invasive species grant in 1999, and partnering with HDOA and the University of Hawai'i at Hilo (UHH) Biology Department (Dr William Mautz), have made significant strides in developing control strategies with heat treatments, traps and natural pyrethrins against the coqui frog. We conducted three explorations for natural enemies in Puerto Rico and parasite surveys conducted by UH-Hilo graduate student, Ms. Shenandoah Marr, detected a nematode, *Rhabdias* sp., in coqui frogs from Puerto Rico at prevalences of 30% but none in coqui frogs in Hawai'i. The pathogenic effects of these parasites are not known; further research is needed to determine the biological control potential of this nematode.

#### *Environmentally acceptable heat treatments*

Physical control or non-chemical methods involve the use of forces such as heat, cold, electricity, pressure, and barriers to deter and/or kill insects. Fifteen years ago, our research team revisited heat as an effective field and post harvest treatment of agricultural and ornamental plant material to control invasive species, with inspiration from Mr. Benjamin Hu. Mr. Hu, the former Inspector-in-Charge, USDA, Animal and Plant Health Inspection Service (APHIS), in Hilo, Hawai'i, had extensive experience with vapor heat, hot forced air, and hot water dips used on papayas for fruit flies. We developed heat treatments for tropical cut flowers and foliage, potted foliage plants and propagative materials to eliminate invasive species including the coqui frog, little fire ant, nettle caterpillar, foliar and root mealybugs, scale insects, and plant-parasitic



Erik Ouchi feeding vinegar flies to lab reared coqui frogs for growth and development studies.



Shenandoah Marr dissecting a coqui frog searching for internal parasites.

nematodes without detrimental effects to the quality of the plant material. Standards were developed for commercial application of heat treatments with the expertise of Dr. Marcel Tsang, Agricultural Engineer at UH-Hilo, College of Agriculture, Forestry and Natural Resource Management (CAFNRM), Mr. Charles Nelson, Agricultural Equipment Development



Mr. Kyle Onuma injecting imidacloprid into a native wiliwili tree at Puu Waawaa Wildlife Sanctuary to test the efficiency of this injection system against the erythrina gall wasp.



Dr. Marcel Tsang inspecting tankless water heaters installed to provide hot water to a freight container converted to a hot shower chamber at Leilani Nursery in Waimanalo, Hawaii to treat potted plants from the Big Island.



Charlie Nelson checking the instant water heater used as a source of hot water for the shower chamber.



Christopher Jacobsen discovered that drenching potted palms in 114 F hot water for 11 min was effective against little fire ant.



Ruth Niino-DuPont at the Hawaii Export Nursery Association tradeshow presenting research results to the foliage industry.



Karen Ostborg, Horticultural Services, and Hara showing a concrete mixer connected to steam generator designed to pasteurize cinder/peat moss potting media for potted plants for Japan.



Supervisor, CTAHR-MBBE, and with the support of the floriculture industry. Today, the commercial-sized hot water dip tanks and showers can efficiently handle large volumes of plant material, significantly reduce use of toxic pesticides, and lower production cost to make the \$100 million floriculture one of the most profitable diversified crops in the state.

### The reality

The invasive species crisis will only intensify in Hawai'i with increasing globalization and rapid, massive international movement of fresh commodities and cargo. Current invasive species programs in Hawai'i are inadequate. Full cooperation and adequate funding among private industries, communities, districts, county, state, and federal agencies are needed to combat this problem. We (CTAHR) find ourselves desperately competing for research funds with other agencies and researchers within Hawai'i. Overwhelmed by the severity of invasive species crisis and in a state of "paralysis by analysis," we need immediately to address the invasive species crisis or Hawai'i will be "paradise lost" within the next century.

### What it takes to win the war on invasive species

Federal and state quarantine programs have begun to refocus on high risk invasive pests from foreign and domestic origins under the leadership of Ms. Carol Okada and Dr. Lyle Wong, (HDOA). Federal quarantine programs in Hawai'i that protect U.S. mainland agriculture against established invasive pests, such as fruit flies, in shipments from Hawai'i, must also prevent invasive species from entering Hawai'i in the first place. Visual quarantine inspection must be replaced with origin inspection programs and improved detection technology (beagles, digital camera/video, X-ray, redesigned ocean freight containers for inspection). Pre-shipment disinfestation treatments should be required before perishables enter Hawai'i. Most of all, we must educate our government leaders, residents, and visitors of Hawai'i on the seriousness of the impact of invasive species with dedicated funding for a comprehensive education and research program. It is critically urgent to implement these collaborative actions to address the invasive species crisis in Hawai'i.

### Thank you to my collaborators, staff and students

I could not have won the many battles against invasive species without my dedicated, committed

and hardworking collaborators, colleagues, staff, and students. Over the 25 years, a big *Mahalo* to my research associates and assistants: Darsen Aoki, Laurie Aoki, Francis Benevides Jr., Brian Bushe, Stacey Chun, James Hansen, Trent Hata, Benjamin Hu, Christopher Jacobsen, Meg Jones, Donn Kansako, Christopher Kishimoto, Linda Larish, Heather Leite, Shenandoah Marr, Cathy Mello, Ruth Niino-DuPonte, Erik Ouchi, Victoria Tenbrink, Audrey Terada, Juliana Yalemarr, and Julie Yogi-Chun, as well as countless student workers.

## Arnold H. Hara

**Born:** Hilo, Hawaii

**Joined CTAHR:** 1982

**Education:** BS and MS, Entomology, University of Hawaii at Manoa; Ph.D. Entomology, University of California, Davis

**Specialization:** Integrated Pest Management for floricultural crops, postharvest treatments, quarantine and regulatory entomology.

**Current Work:** Quarantine heat treatments, chemical control of invasive species including little fire ant, papaya mealybug and erythrina gall wasp, biological control of the coqui frog.

### Selected grants:

A. H. Hara. 2007-2009. Implementing Quarantine Heat Treatments for the Coqui Frog and Other Invasive Species Impacting the Hawaiian Nursery Industry. Hawaii Dept. of Agriculture (HDOA) \$200,000.

A. H. Hara. 2006-2007. Chemical Management of the Erythrina Gall Wasp, *Quadrastichus erythrinae* Kim, (Hymenoptera: Eulophidae) on Native and Landscape *Erythrina spp.* Hawaii Dept. of Land and Natural Resources (DLNR) \$56,800.

A. H. Hara. 2003-2007. Management of the Invasive Stinging Nettle Caterpillar in Hawaii, USDA, CSREES, T-STAR \$186,830.

### Selected publications:

Hara, A. H. and C. M. Jacobsen. 2005. Hot water immersion for surface disinfestations of *Maconellicoccus hirsutus* (Homoptera: Pseudococcidae). *J. Econ. Entomol.* 98: 284-288.

Xu, T., C. Jacobsen, A. Hara and Q. Li. 2006. Application of an enzyme-linked immunosorbent assay for the analysis of imidacloprid in wiliwili tree, *Erythrina sandwichensis* O. Deg, for control of the wasp *Quadrastichus erythrinae*. *J. Agric. Food Chem.* 54: 8444-8449.

Woolbright, L.L., A.H. Hara, C.M. Jacobsen, W.J. Mautz and F.L. Benevides. 2006. Population densities of the coqui, *Eleutherodactylus coqui* (Anura: Leptodactylidae) in newly invaded Hawaii and in native Puerto Rico. *J. Herpetol.* 40: 122-126.



# The research calabash

By Doug Vincent  
Special Program Director for Grants and Contracts

## **IMPORTANT: Sensitive Chemical Inventories due February 22, 2008**

The Department of Homeland Security (DHS) requires that all colleges and universities survey their laboratories for certain chemicals that could be used toward terrorism activities. DHS issued the Chemical Facility Anti-Terrorism Standards for any facility that manufactures, uses, stores or distributes **certain chemicals** above a specific quantity. To comply with these regulations, the University of Hawaii Environmental Health and Safety Office (EHSO) is asking all laboratories to review their current chemical inventories for any of these sensitive chemicals and complete the inventory form (website below) and return it to EHSO by **February 22, 2008**. For additional information and to download inventory forms, go here: <http://www.hawaii.edu/ehso/UH%20Manoa%20DHS%20COI%20Screening%20Information.pdf>. Or contact Hans Nielsen of EHSO at 956-5180 or [labsafe@hawaii.edu](mailto:labsafe@hawaii.edu).

## **IMPORTANT: Kokua Requested: UH Office of Research Services**

The UH Office of Research Services is seeking your help to ensure that all proposals meet Federal, State and Private sponsor's rules and regulations. **ORS reminds you to provide at least five (5) working days prior to any deadline to enable ORS to adequately review your proposal. Add an additional five (5) working days for you to obtain CTAHR fiscal office review of your budget and to gather appropriate signatures on the ORS Form 5.** ORS is now asking for you to provide ORS with an advance notice of any proposal submission so that they may anticipate and prepare for review of the proposal. To that end, **please submit via e-mail to ORS at [helpdesk@ors.hawaii.edu](mailto:helpdesk@ors.hawaii.edu) the following information:**

1. Name of the Principal Investigator (PI)
2. The Campus (Manoa) and School (CTAHR) associated with the proposal
3. The name of the funding agency (or sponsor)
4. The sponsor's deadline for receipt of the proposal

Both the CTAHR Fiscal Office and ORS are woefully short staffed. Please give them a break and do your part to help them manage their ever growing workload.

## **CTAHR Student Research Symposium – April 11-12, 2008**

Mark your calendars today. The 20<sup>th</sup> Annual CTAHR Student Research Symposium will be held on **Friday and Saturday, April 11-12, 2008**. The Symposium provides a forum for graduate and undergraduate students to present their research conducted under the supervision of CTAHR and UH-Hilo CAFNRM faculty. Please inform and encourage your graduate and undergraduate students to participate. Abstracts are due **March 14, 2008**. Go to the Symposium website for more information: <http://www.ctahr.hawaii.edu/symposium/>.

## **Science Fair Judges Needed – April 1, 2008**

Want to peer into the future while helping the next generation of scientists? The Hawaii Academy of Sciences is seeking judges for 51<sup>st</sup> State Science and Engineering Fair on Tuesday, April 1<sup>st</sup> at the Neal Blaisdell Center Exhibition Hall. Science Fair participants tell organizers that interacting with the judges is the highlight of the science fair experience. CTAHR has a proud history of judging at past State Science Fairs. Let's maintain that tradition. Mark your calendars and plan on participating. Download the judging form here: <http://www.ctahr.hawaii.edu/vincent/JudgesForm.pdf>. **Fax or mail the form back by February 29, 2008.**

## **CTAHR Faculty in *Na Leo O Ka Aina***

The Department of Land and Natural Resources Division of Fish and Wildlife has just published its Winter, 2008 edition of its newsletter, *Na Leo O Ka Aina*. CTAHR new faculty, **James Leary, Chris Lepczyk** and **Creighton Litton** are featured in the newsletter along with another article by **J.B. Friday, Travis Idol, James Leary** and **Kathleen Vickers** about CTAHR's efforts to restore Koa forests. To read this interesting newsletter on line, go here: [http://www.state.hi.us/dlnr/dofaw/newsletter/newsletter\\_Winter\\_08.pdf](http://www.state.hi.us/dlnr/dofaw/newsletter/newsletter_Winter_08.pdf)

## **Grant Coaching Available Now**

The CTAHR Office of Research is offering grant coaching support for individuals or small groups who are currently writing grants that have indirect cost returns. We are using RTRF funds to pay for this pilot program; therefore, it is important that we

invest in opportunities that result in a return to that investment. Indirect cost returns provides CTAHR, college units and PIs (that generate the RTRF) with additional, highly flexible funding that can be used to support and expand research programs. We hope that by increasing our success rates in obtaining competitive grants, we will have greater direct and indirect costs to support our research activities. So if you are currently writing grants (or you plan to write a proposal) and want help developing, polishing and refining your proposal to meet an upcoming deadline, contact CTAHR grants specialist, **Sharee Pepper** at 956-8140 or by e-mail at [spepper@hawaii.edu](mailto:spepper@hawaii.edu).

### **New CTAHR Plot Allocation Forms Available Online**

The **new plot allocation forms** are now available here: <http://www.ctahr.hawaii.edu/ctahr2001/Research/Stations.html>. After considerable review and revision, the forms for all projects are now available. Two versions are available –a fillable Adobe Acrobat Form (.pdf) and an MS Word (.doc) file. Please use these forms for new and/or revised plot allocations.

### **Got Worms? Vermicomposting Virtual Field Day Online Now**

CTAHR “worms” its way onto YouTube. The use of earthworms to reduce waste and create usable compost is known as Vermicomposting. It’s a popular technique for organic farmers and advocates for sustainable agriculture. Funded through the Western SARE program, CTAHR’s Ted Radovich and Jody Smith have created an online streaming video “virtual field day” on vermicomposting to introduce the wormy subject. Go here to view the video: [http://www.ctahr.hawaii.edu/sustainag/video/vermicompost\\_win.html](http://www.ctahr.hawaii.edu/sustainag/video/vermicompost_win.html). Or search [www.youtube.com](http://www.youtube.com) for vermicomposting.

### **Agriculture Sustainability Day – March 27, 2008**

“**Farm to Table: Sustainable Agriculture, Economy and Communities**” is this year’s theme for the Agriculture Day at the Hawaii State Capitol on **March 27, 2008**. This year’s sponsors are Hawaii Farm Bureau, Hawaii Food Manufacturers Association, Hawaii Food Industry Association and the Hawaii Restaurant Association. For more information, contact the Hawaii Farm Bureau at 808-848-2074.

### **Agricultural Leadership Program seeking Class XII members**

Since 1982, the Agricultural Leadership Foundation of Hawaii has provided leadership training for individuals demonstrating a commitment to Hawaii’s agriculture and rural communities. Through a series of seminars and a national trip, the Agricultural Leadership Program prepares individuals to assume leadership roles in support of Hawaii’s agricultural industries and rural communities. The course covers a 16-month period and includes four three-day and four four-day seminars encompassing leadership training and education about Hawaii agricultural infrastructure, production and policies. During a 14-day national trip, the participants gain a broader perspective on national and international agricultural policies and the trip culminates with a trip to Washington, DC where they meet with Hawaii’s Congressional delegation. CTAHR, along with the Foundation sponsors this program. The program is seeking applications for its Class XII with the class starting in July 2008. All application materials and additional information can be found at the ALFH web site here: [http://www.agleaderhi.org/program\\_recruitment.htm](http://www.agleaderhi.org/program_recruitment.htm). **Applications must be postmarked by March 14, 2008**. Or contact, **Donna Ching** in the FCS Department at 808-956-2255 for more information.

### **Hawaii Community Foundation Sponsoring PONO Leadership Training**

The Case and Hawaii Community Foundations are sponsoring leadership development training program for mid-career, non-profit organization executives. **Promoting Outstanding Nonprofit Organizations (PONO)** is a year-long, peer-centered, leadership development program designed to focus on non-profit organizations. For more information and to download application materials go here: [http://www.hawaiicommunityfoundation.org/doc\\_bin/grant\\_rfps/2008/PONO\\_6\\_Application\\_2008-2009\\_fillable.pdf](http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/2008/PONO_6_Application_2008-2009_fillable.pdf). Postmark deadline is **April 15, 2008**.

### **CTAHR’s Plant Disease of the Week**

For most of us, we don’t have a clue about what’s causing our orchids to get splotchy and have that rust look about it. Or why our gardenia fails to thrive, in spite of all of our good intentions. Living in Hawaii provides us with a pleasant, year-round growing season but that warm, moist, tropical environment also provides a perfect medium for plant diseases. One of CTAHR’s experts in plant diseases, **Scot Nelson**, from the Plant and Environmental Protection

Sciences Department is producing a weekly e-mail newsletter "**Plant Disease of the Week**". If you haven't been receiving Scot's informative newsletter, you can go here to subscribe to it. <http://visitor.constantcontact.com/email.jsp?m=1101940814295>. To view an archive of previous entries, go here: <http://archive.constantcontact.com/fs082/1101940814295/archive/1101942635896.html>

### **Statewide Agriculture Conference Scheduled for September 4, 2008.**

CTAHR, the Hawaii Farm Bureau, the Agricultural Leadership Foundation of Hawaii and the Hawaii Department of Agriculture will sponsor a state-wide agriculture conference on **Thursday, September 4, 2008**. "All Ag Day for Ag" will be held at the Hawaii Convention Center. Statewide commodity groups will be encouraged to meet on Friday, September 5, 2008. Mark your calendars today and stay tuned for more information.

### **Western Sustainable Agriculture Research and Education Workshop in Kona, September, 23-24, 2008.**

The Outrigger Keahou Beach Resort will be the home of the USDA Western Regional Sustainable Agriculture Research and Education (SARE) workshop scheduled for **September 23-24, 2008** on the Kona side of the Big Island. Mark your calendar today and stay tuned for more information.



### **Grants.gov Transition to Adobe Systems**

Now that you finally figured out PureEdge Viewer, Grants.gov is switching over to an Adobe Reader system. PureEdge Viewer, the initial forms reader for Grants.gov is being phased out and a full phased transition to Adobe Reader 8.1.1 is underway. Adobe Reader 8.1.1 can be downloaded for free from the Adobe web site here: [http://www.adobe.com/products/acrobat/readstep2\\_allversions.html](http://www.adobe.com/products/acrobat/readstep2_allversions.html). Adobe Reader 8.1.1 offers greater flexibility because it is compatible to both Apple Macintosh and Windows Vista, whereas for the PureEdge Viewer, additional software had to be downloaded for Macintosh users and it was completely incompatible with Windows Vista. While typically Adobe Reader software does not permit creating and saving .pdfs, we are told that the Grants.gov forms can be saved using this

software. After April 1, 2008, the PureEdge Viewer will no longer be available and by June 20, 2008, Grants.gov will no longer accept applications submitted using the PureEdge Viewer. If you've already upgraded your Adobe Reader from 8.1.1 to 8.1.2 – don't worry, Grants.gov is compatible with Adobe Reader 8.1.2!



The USDA Economic Research Service puts out an on-line monthly magazine, entitled "Amber Waves." Each month there are articles summarizing the extensive economic research on "Food, Farming, Natural Resources and Rural America" done by USDA ERS. The feature articles summarize current research findings but also contain links back to the original data. Go here to read the most recent issue of "Amber Waves." But the USDA ERS is far from just the online newsletter. Data on specific commodities or statewide or regional fact sheets are available; new information and analyses are released regularly. There is a robust search engine available on site. So if you are seeking economic analyses on a particular commodity or an aspect of rural America, you might check out the USDA Economic Research Service Web Site here: <http://www.ers.usda.gov/>.

### **Hawaii DBEDT 2006 State of Hawaii Data Book updated:**

Searching for recent statistics about Hawaii? The Hawaii Department of Business, Economic Development and Tourism has recently released its 2006 State of Hawaii Data Book. Find it online at the DBEDT web site here: <http://hawaii.gov/dbedt/info/economic/databook/db2006/>. The Data Book contains twenty-four sections of data, from population to foreign and interstate commerce. If you are searching for information that can help you make your compelling case on your grant proposal, you might try looking here.

***Calabash continued on page 22 . . .***

# Cost sharing basics

By Doug Vincent  
Special Program Director for Grants and Contracts

Many grant programs ask for cost sharing. It represents the sharing of the costs of a particular project by the funding agency and the University of Hawaii and should not be taken lightly. If you are awarded the grant, it becomes a financial obligation for the University to share in the costs of a project. It must be documented and it is auditable. There are two kinds of cost sharing: mandatory and voluntary. **The bottom line about cost sharing is do not voluntarily commit resources unless you have to do so as a condition of the grant.** Some might argue that by voluntarily committing resources to a grant proposal, it makes your proposal more “competitive.”

In most cases, however, voluntary cost sharing rarely helps a proposal get funded. Most proposals are judged on merit alone.

*Avoid this trap.* Even though a grant proposal may not specifically ask for cost sharing, it will often ask for a description of the quality of expertise and resources available for the project. Although unintended, these descriptions – especially if they are written into the budget narrative – could be construed as cost sharing. Avoid unintended cost sharing by being vague: describe what is available but don't specify dollar values or FTE commitments unless explicitly asked for by the funding agency. Any commitment in time or dollars, or even

The screenshot shows the website interface for the Office of Research Services (ORS). At the top, there is a navigation bar with links for Grants, eRA, File Cabinet, Knowledge Base, and Contact. The main content area is titled "Knowledge Base > Cost Sharing" and "Cost Sharing". On the left, there is a sidebar menu with categories: Institutional Profile (Award Definitions, Basic Types of Awards, Cost Sharing, Post doc stipends, Roles and Responsibilities), Grants (Funding, Proposal, Startup, Management, Closeout), eRA (Grants.gov, File Uploader, Fastlane), File Cabinet (Forms, Reports, Rates, Policies, Agreements, Memos), and Knowledge Base (Institutional Profile, Award Types, Roles and Responsibilities). The main content area includes a "Tutorials" section with a list of links: Cost Sharing 101 (Basics), Attachment - Acceptable Narratives, Cost Sharing 102 (Third Party), Attachment - Commitment Letter, and Attachment - Confirmation Letter. Below this is a "Fast Track Input System" section with a list of links: General Information, Cost Sharing Input System Handbook, Cost Sharing Reports, Error Messages (Report 1911A), Add New Cost Sharing Record, Change Existing Cost Sharing Record, Search Function, and Account Deletion Procedure. At the bottom of the main content area, there is a link for "Instructions for using PageCenter".

University of Hawaii's Office of Research Services's website.

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equipment usage, becomes a financial obligation should the grant be funded.

*So what if cost sharing is required?* There are specific items that can and cannot be cost shared. Personnel salaries is the most obvious cost share. Laboratory supplies, new special purpose equipment purchased, travel costs and recharge center costs (such as ADSC charges) can also be cost shared. You cannot cost share federal dollars on a federal grant. And in most cases, you can't use federal grants for cost sharing on non-federal grants. Items that cannot be used for cost sharing: salaries of administrative or clerical staff, office supplies, lab and office space, existing equipment, renovations. If the program does not permit indirect costs or at a reduced percentage compared to the UH fully negotiated rate – unrecovered indirect costs can be used as a cost share. If you are proposing cost sharing – please take the time to work with your fiscal officer to make sure what you propose is appropriate. Once the grant is funded, it becomes an obligation for the University.

*So what about "in-kind" cost sharing?* We often work with other institutions, or non-profit organizations, or do projects on producer farms. These "costs" can be cost-shared. The rental value of a field plot on a producer's farm could be cost shared. Or if a farmer provides product, the value of the product can be cost shared. Salaries of technical staff at another institution or the "value" of volunteer time can be also used for cost sharing. Items unallowable for cost sharing by the University are also unallowable for third parties. Be careful, costs must be reasonable, fair market, and documented. Third party cost sharing must be documented and a letter from the organization detailing the cost sharing must be attached to the grant proposal.

The letter must include dollar amounts of the cost sharing and be signed by some one in authority at that organization.

Finally, CTAHR has an additional burden with respect to cost sharing. CTAHR receives over \$2.5 million federal formula funds from USDA. Hatch, McIntire-Stennis, Animal Health and Smith-Lever funds are provided to CTAHR by USDA CSREES to support research and extension activities. CTAHR has a dollar-for-dollar "offset" requirement for these formula funds. To meet this obligation, CTAHR uses our state-funded salaries to cover this federal cost-share. It gets further complicated because we also have to meet stipulations of USDA on the use of the funding. For example, 25% of our formula funds must be used for multi-state research and extension projects and another 25% must go to "integrated" projects. If we don't meet these obligations, we must return these important federal dollars. So depending upon what sort of projects you are involved in, we must "pigeon hole" your salary toward a particular obligation for "offset." So before you commit your salary to a cost share on a grant proposal and as you are developing your budget, please work with your departmental and CTAHR fiscal officers to ensure that we can use your salary for cost share.

While we all want you to seek extramural funding for your research or other activities, be careful about cost sharing. Don't commit to it unless you have to. The UH Office of Research Services website has several excellent items about cost sharing, including sample letters of commitment. Go here for more information for cost sharing: [http://www.hawaii.edu/ors/cost\\_sharing.html](http://www.hawaii.edu/ors/cost_sharing.html)

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## New faculty publications

### **Russell Messing (PEPS)**

Wang, X. G., A. H. Bokonon-Ganta and R. H. Messing. 2008. Intrinsic inter-specific competition in a guild of tephritid fruit fly parasitoids: Effect of co-evolutionary history on competitive superiority. *Biological Control* 44: 312-320.

# CTAHR priority staffing results

By C.Y. Hu  
Associate Dean and Associate Director for Research

One of the items on the January 23, 2008 leadership meeting agenda was CTAHR's Round 8 priority staffing plan. A total of 22 faculty and 4 APT position requests were submitted by all units. Each unit head was given five minutes to provide justifications and descriptions of their requests, and the opportunity to persuade their colleagues to vote for their requests. Each member of the leadership ranked all requests on a scale from 1-5, votes were tallied, and a combined priority order was established. Dean Hashimoto and the Associate Deans met on January 24 to discuss and finalize the priority list. Thirteen positions are approved for filling: nine faculty and four APT positions.

Among the nine faculty positions were three Center on the Family junior specialist positions, provided by the Legislature, and five positions to re-fill recent vacancies. These include: a community nutrition assistant professor (HNFAS); a biological engineering instructor (MBBE); an invasive plant control and management specialist in (NREM-Maui); an entomology assistant professor (PEPS); and a livestock and range management assistant agent (HNFAS-Kauai). The new position added is an organic farming systems assistant specialist (TPSS).

The four APT positions are for an academic support staff in FCS, two administrative officers for grants and contracts in the CTAHR fiscal office, and a new administrative assistant to the Dean. FCS is desperately in need of a new academic support person

to handle the rapid expansion of their enrollment, so this new position will improve their ability to serve their students. The addition of two more administrative officers will ease chronic work overload in the fiscal office, and significantly improve the work flow.

With the departure of the directors of our Development Office and Office of Communication Service, we are restructuring the responsibilities of these two positions. The new administrative assistant will assume the alumni relations, major event coordination, legislative liaisons, and other external affairs assigned by the Dean. During the staffing deliberations, the need for statistical support was also raised by several unit heads. Since this is not a top priority to any one individual unit, but a critical need for the entire college, we have decided to fund a temporary non-tenure track faculty position to meet this urgent need. An ad hoc committee has been formed to draft the position description and advertisement. Andy Reilly (FCS), Sarah Yuan (COF), Steve Ferreira (PEPS), Chris Lepczyk (NREM), Pratibha Nerurkar (MBBE), Halina Zaleski (HNFAS), Bob Paull (TPSS), and Susan Miyasaka (CA rep) are members of this committee to be chaired by Doug Vincent. Please contact your unit representative to have your ideas and comments included in the committee deliberations. Additional information can be found in the leadership meeting notes at the *for employees* section on CTAHR website.

**C/T/A/H/R**  
College of Tropical Agriculture and Human Resources  
University of Hawai'i at Mānoa

Aloha! | publications | clothing industry | environment | foods & nutrition | home horticulture & commercial agriculture | people & community

- administration
- academic & student affairs
- extension/outreach
- research
- about us
- ctahr board of advisors
- departments and units
  - counties
  - international
  - alumni affairs
  - for employees
- employment opportunities

**HAW-FLYPM: "Government at Its Best"**

**CTAHR CALENDAR**

- First International Conference on the Coqui Frog, 2/7/2008 - 2/9/2008, 8:00 am-5 pm, Naniloa Volcanoes Resort, Hilo (Big Island) [More >>](#)

[Add events](#) | [Update events](#)

**CTAHR NEWS**

- Luau (taro leaf) is a nutritious green vegetable grown locally, but the leaves contain irritating calcium oxalate crystals and must be well cooked before eating, caution Jari Sugano and Steve Fukuda. --- The Honolulu Advertiser, 1/11/2008 [More >>](#)

**WHAT'S NEW**

- Hawaii Foods

# CTAHR tops \$7 million in extramural funding

By Doug Vincent  
Special Program Director for Grants and Contracts

Funds keep coming in. Congratulations to those that have taken the time to seek out and receive funding for their important programs. For the 2008 state fiscal year, CTAHR has earned 82 extramural awards for \$7,006,958. Did you notice that funds this month have been received by both senior and junior members of the faculty? Good projects get funded

and funding agencies don't discriminate among faculty ranks. Don't let your faculty rank stop you from going after extramural support for your important work. Thanks and congratulations to all those who have been successful. I hope we see some new names on future lists. *Give it a go!!*

## CTAHR grants from 1\_14\_08 to 2\_14\_08.

First name	Last name / Dept	Project Name	Funder	Amount
Anne	Alvarez / PEPS	Ralstonia Soanacearum Race 3 biovar 2: Detection, Exclusion, and Analysis of a Select Agent Pathogen	Univ. of Wisconsin - Milwaukee	\$139,840
Jonathan	Deenik / TPSS	Evaluating Cover Crop Effects on Soil Quality, Insect Population Dynamics, and Economic Return for Diversified Farms in Hawaii	Oahu Resource Conservation and Development	251,445
Chris	Lepczyk / NREM	Research to Improve Estimates of Game and Harvest and Hunting Participation in the State of Hawaii	Hawaii Dept. of Land & Natural Resources	22,344
Qing	Li / MBBE	Pesticide Registration: Quality Assurance	Hawaii Dept. of Agriculture	63,920
Wayne	Nishijima / Admin	Hawaiian Home Land Agriculture Education Program	Hawaii Dept. of Hawaiian Home Lands	450,486
Richard	Ogoshi / TPSS	Hawaii Statewide Biofuels Assessment	Black and Veatch	41,400
Goro	Uehara / TPSS	Field Evaluation of Oil Seed Crops at Benchmark Locations	Hawaii Agriculture Research Center	25,000
Douglas	Vincent / Admin	Hawaii Pineapple Improvement	DA-Dept. of Agriculture	189,970
Douglas	Vincent / Admin	Protecting Papaya from Pests and Diseases	DA-Dept. of Agriculture	189,970
Sylvia	Yuen / COF	Memorandum of Agreement Relating to Quality Care for Home-Based and Center-Based Child Care Providers	Hawaii Dept. of Human Services	15,750
<b>Totals</b>			<b>10 grants for a total of: \$ 1,390,125</b>	



# Look here for funding opportunities

By Doug Vincent  
Special Program Director for Grants and Contracts

As the new year moves along, we are seeing a surge in new funding opportunities. As funds are being released for the federal FY2008 fiscal year, lots of new federal programs have opened up. I must have added over 25 new opportunities since we last published *CRN*, including several local or regional opportunities. For those of you interested in community development projects, the Hawaii Community Foundation (HCF) has several new opportunities for grants. Most HCF projects involve working with non-profit groups but if you have a good idea and stakeholders willing to participate, these opportunities present a chance to build communities. The USDA Rural Development and Risk Management Agencies have also been busy releasing new opportunities. Most require partnerships with individual producers or with commodity groups, but these opportunities do exist. There is also a new opportunity for Integrated Pest Management Projects from USDA CSREES. A cautionary note: *CRN*'s list of open grants is hardly

exhaustive. Several times a month, I find opportunities that should have been published in earlier editions, but I didn't see them in time. So don't be afraid to use the valuable resources available to you as a member of the University of Hawaii to find funding opportunities. Besides Grants.gov at [www.grants.gov](http://www.grants.gov), the Illinois Research Information Service (IRIS) is available for holders of @hawaii.edu e-mail addresses. You can find IRIS here: <http://www.library.uiuc.edu/iris/>. Ever try Community of Science? Community of Science provides many services, including e-mail notification of grant opportunities. Try COS at their web site here: <http://www.cos.com/>. Want to avoid slogging through grants.gov and are particularly interested in NSF or NIH grant opportunities? Try the NSF and NIH funding sites here: <http://www.nsf.gov/funding/> and <http://grants.nih.gov/grants/guide/index.html>. Take advantage of these new opportunities to find support for your important programs.

University of Hawaii  
University Research Council

## Faculty Travel Funds

Proposal Deadline: rolling – applications must be in >4 weeks before travel.

[http://www.hawaii.edu/urc/pdf/factravel\\_g.pdf](http://www.hawaii.edu/urc/pdf/factravel_g.pdf)

[http://www.hawaii.edu/urc/pdf/factravel\\_f.pdf](http://www.hawaii.edu/urc/pdf/factravel_f.pdf)

Money Management International Financial Education  
Foundation

## Financial Education Grants

Proposal Deadline: rolling – applications accepted year round

<http://www.mmifoundation.org/GrantSeekers.asp>

CHS Foundation

## Rural Youth and Leadership Development

Proposal Deadline: rolling – applications accepted year round

<http://www.chsfoundation.org/programs/ryld.htm>

CHS Foundation

## Returning Value to Rural Communities

Proposal Deadline: rolling – applications accepted year round

<http://www.chsfoundation.org/programs/rvrc.htm>

U.S. Department of Health and Human Services  
Administration for Children and Families

## Federal-State Partnerships to Build Capacity in the Use of TANF and Related Administrative Data

Letter of Intent Due: February 27, 2008

Proposal Deadline: March 28, 2008

<http://www.acf.hhs.gov/grants/open/HHS-2008-ACF-OPRE-PD-0059.html>

Oregon State University

## Sun Grant Western Center Competitive Grant Program

Letter of Intent due: February 28, 2008

Proposal Deadline (invited): April 15, 2008

<http://sungrant.oregonstate.edu/grants/index.html>

University of Hawaii

University Research Council

## Undergraduate Summer Research Award

Proposal Deadline: February 29, 2007

[http://www.hawaii.edu/urc/pdf/uheh\\_g.pdf](http://www.hawaii.edu/urc/pdf/uheh_g.pdf)

[http://www.hawaii.edu/urc/pdf/uheh\\_f.pdf](http://www.hawaii.edu/urc/pdf/uheh_f.pdf)

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
**Dean John A. Knauss Marine Policy Fellowship**  
Proposal Deadline: February 29, 2008  
<http://apply.grants.gov/opportunities/instructions/oppOAR-SG-2009-2001198-cfda11.417-cid2096905-instructions.pdf>

Hawaii Community Foundation  
**Medical Research Grants**  
Proposal Deadlines: February 29, 2008, August 15, 2008  
[http://www.hawaiicomunityfoundation.org/doc\\_bin/grant\\_rfps/2008/MedResRFP2008.pdf](http://www.hawaiicomunityfoundation.org/doc_bin/grant_rfps/2008/MedResRFP2008.pdf)

Hawai'i People's Fund  
**Social Change Grants**  
Proposal Deadlines: March 1, 2008, September 1, 2008  
<http://www.hawaiipeoplesfund.org/grantmaking/>

Civic Ventures Foundation  
**The Purpose Prize (for Americans leading with experience.)**  
Application Deadline: March 1, 2008  
<http://www.purposeprize.org/index.cfm>

Motorola Corporation  
**Innovation Generation Grants**  
Application Deadline: March 1, 2008  
<http://www.motorola.com/content.jsp?globalObjectId=8153>

Hawaii Community Foundation  
**Cooke Foundation Grants**  
Proposal Deadlines: March 3, 2008, September 1, 2008  
<http://cooke.hawaiicomunityfoundation.org/>

U.S. Department of Agriculture  
Food and Nutrition Service  
**FY 2008 Team Nutrition Training Program Grant**  
Letter of Intent Due: March 3, 2008  
Proposal Deadline: April 14, 2008  
<http://apply07.grants.gov/apply/opportunities/instructions/oppUSDA-FNS-CNTN-08-cfda10.574-instructions.doc>

Burroughs Wellcome Fund  
**Population and Laboratory Based Sciences**  
Letter of Intent Due: March 3, 2008  
Proposal Deadline: May 15, 2008  
[http://www.bwfund.org/programs/population\\_lab\\_sciences/pup\\_lab\\_main.html](http://www.bwfund.org/programs/population_lab_sciences/pup_lab_main.html)

U.S. Department of Agriculture  
CSREES – NRI  
**Air Quality**  
Letter of Intent Due: March 5, 2008  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/airqualitynri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

United States Green Building Council  
**Green Building Research Grants**  
Pre-proposals due: March 7, 2008  
[http://www.usgbc.org/Docs/News/ResearchFund\\_RFPP\\_Feb4.pdf](http://www.usgbc.org/Docs/News/ResearchFund_RFPP_Feb4.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Animal Genome (D): Functional Genomics**  
Letter of Intent Due: March 14, 2008  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/animalgenomefunctionalgenomicsnri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Animal Genome (A): Translational Animal Genomics**  
Letter of Intent Due: March 14, 2008  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/animalgenometranslationalgenomicsnri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Arthropod and Nematode Biology and Management (B): Suborganismal Biology**  
Letter of Intent Due: March 14, 2008  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/arthropodnematodesuborganismalbiologynri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Arthropod and Nematode Biology and Management (C): Tools, Resources and Genomics**  
Letter of Intent Due: March 14, 2008  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/arthropodnematodetoolsresourcesgenomicsnri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Plant Biosecurity**  
Letter of Intent Due: March 14, 2008  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/plantbiosecuritynri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

National Science Foundation  
**Assembling the Tree of Life**  
Proposal Deadline: March 14, 2008  
[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf08515](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08515)

U.S. Environmental Protection Agency, Region 9  
**Strategic Agricultural Initiative / Food Quality Protection Act Grant Program**  
Proposal Deadline: March 14, 2007  
<http://www.epa.gov/region09/funding/food-quality.html>  
<http://www.wripmc.org/Research/R9%202008%20FQPA%20RFP%20Final%20Version.pdf>

William T. Grant Foundation and Spencer Foundation  
**The Development and Improvement of the Measurement of Classroom Quality**  
Letter of Intent Due: March 14, 2008  
Invited Proposals Deadline: June 13, 2008  
[http://www.wtgrantfoundation.org/usr\\_doc/2008\\_Classroom\\_Measurement\\_RFP.doc](http://www.wtgrantfoundation.org/usr_doc/2008_Classroom_Measurement_RFP.doc)

Wildlife Conservation Society  
**Research Fellowship Program**  
Proposal Deadline: March 15, 2008  
[http://www.wcs.org/media/file/Factsheet\\_RFP\\_070130.pdf](http://www.wcs.org/media/file/Factsheet_RFP_070130.pdf)

University of Hawaii at Manoa  
**Manoa Fund Grants**  
Proposal Deadline: March 15, 2008  
[http://www.ctahr.hawaii.edu/vincent/MF\\_final.pdf](http://www.ctahr.hawaii.edu/vincent/MF_final.pdf)

U.S. Environmental Protection Agency  
**Community Action for a Renewed Environment (CARE) Program**  
Proposal Deadline: March 17, 2008  
<http://www.epa.gov/air/grants/08-02.pdf>

U.S. Environmental Protection Agency  
Office of Pesticide Programs  
**Pesticide Environmental Stewardship Program (PESP) Regional Grants**  
Proposal Deadline: March 17, 2008  
<http://www.epa.gov/pesticides/grants/proposals/bppd-fy07-08-final-funding-ann.pdf>

U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention  
**Nutrition, Physical Activity and Obesity Program**  
Proposal Deadline: March 17, 2008  
<http://www.cdc.gov/od/pgo/funding/FOAs.htm>  
<http://apply.grants.gov/opportunities/instructions/oppCDC-RFA-DP08-805-cfda93.283-cidNCCDPHP-NR-instructions.doc>

County of Hawaii  
**Research and Development Supplemental Funding Awards**  
Proposal Deadline: March 17, 2008  
<http://www.hawaii-county.com/rd/sfa/R&D%20Solicitation%20for%20Proposals%200809.pdf>

U.S. Environmental Protection Agency  
**Environmental Economics Workshop**  
Proposal Deadline: March 24, 2008  
<http://yosemite.epa.gov/ee/epa/eed.nsf/Webpages/GrantSolicitations.html>

National Association of Counties  
**Coastal Counties Restoration Initiatives**  
Proposal Deadline: March 24, 2008  
[http://www.naco.org/Template.cfm?Section=New\\_Technical\\_Assistance&template=/ContentManagement/ContentDisplay.cfm&ContentID=26051](http://www.naco.org/Template.cfm?Section=New_Technical_Assistance&template=/ContentManagement/ContentDisplay.cfm&ContentID=26051)

U.S. Department of Agriculture  
Risk Management Agency  
**Commodity Partnerships Small Sessions Program**  
Proposal Deadline: March 24, 2008  
<http://www.rma.usda.gov/aboutrma/agreements/>  
<http://apply07.grants.gov/apply/opportunities/instructions/oppUSDA-RMA-RME-2008-03-cfda10.459-instructions.doc>

U.S. Department of Agriculture  
Risk Management Agency  
**Commodity Partnerships Program**  
Proposal Deadline: March 24, 2008  
<http://www.rma.usda.gov/aboutrma/agreements/>  
<http://apply07.grants.gov/apply/opportunities/instructions/oppUSDA-RMA-RME-2008-01-cfda10.457-instructions.doc>

U.S. Department of Agriculture  
Risk Management Agency  
**Community Outreach and Assistance Partnership Program**  
Proposal Deadline: March 24, 2008  
<http://www.rma.usda.gov/aboutrma/agreements/>  
<http://apply07.grants.gov/apply/opportunities/instructions/oppUSDA-RMA-OUTREACH-2008-01-cfda10.455-instructions.doc>

U.S. Environmental Protection Agency, Region 9  
**Wetlands Program Development Grants**  
Proposal Deadline: March 25, 2008  
<http://www.epa.gov/region09/funding/wetlands-08.html>

U.S. Department of Health and Human Services  
Administration for Children and Families  
Office of Community Services  
**Assets for Independence Grants**  
Proposal Deadline: March 25, 2008, January 15, 2009  
<http://www.acf.hhs.gov/programs/ocs/afi/applying.html#about>

U.S. Department of Agriculture  
Rural Development Agency  
**Assistance to High Energy Cost Rural Communities**  
Proposal Deadline: March 28, 2008  
<http://www.usda.gov/rus/electric/hecgp/overview.htm>

Jordan Fundamentals – Nike Foundation  
**Jordan Fundamentals Inspiration and Innovation Grants**  
Proposal Deadline: March 30, 2008  
<http://www.nike.com/jumpman23/features/fundamentals/overview.html>

U.S. Department of Agriculture  
Rural Development Agency  
**Rural Business Opportunity Grants**  
Proposal Deadline: March 31, 2008  
<http://www.rurdev.usda.gov/rbs/busp/rbog.htm>

U.S. Department of Agriculture  
Rural Development Agency  
**Value Added Producer Grants**  
Proposal Deadline: March 31, 2008  
<http://www.rurdev.usda.gov/rbs/coops/vadg.htm>

Department of Health and Human Services  
Centers for Disease Control and Prevention  
**Program to Assess Health Effects Associated with Exposures to Volcanic Emissions and Environmental Pollutants (R01)**  
Proposal Deadline: March 31, 2008  
<http://www.cdc.gov/od/pgo/funding/EH08-001.htm>

U.S. Department of Agriculture  
Natural Resource Conservation Service  
**FY 2008 Pacific Islands Area Conservation Innovation Grants**  
Proposal Deadline: March 31, 2008  
<http://apply07.grants.gov/apply/opportunities/instructions/oppUSDA-NRCS-HI-08-01-cfda10.912-cidUSDA-NRCS-HI-08-01-instructions.pdf>

Hamburger Helper – General Mills  
**My Hometown Helper Grants**  
Proposal Deadline: March 31, 2008  
<http://www.myhometownhelper.com/>

Hawaii Community Foundation  
**Atherton Family Foundation Grants**  
Proposal Deadline: April 1, 2008  
<http://atherton.hawaiicommunityfoundation.org/>

Hawaii Community Foundation  
**Kuki'o Community Fund**  
Proposal Deadline: April 1, 2008  
[http://www.hawaiicommunityfoundation.org/doc\\_bin/grant\\_rfps/2008/KukioRFP2008.pdf](http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/2008/KukioRFP2008.pdf)

Hawaii Community Foundation  
Bernice and Conrad von Hamm Fund  
**Business and Entrepreneurship Education Grants**  
Proposal Deadline: April 1, 2008  
[http://www.hawaiicommunityfoundation.org/doc\\_bin/grant\\_rfps/2008/vonHammRFP2008.pdf](http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/2008/vonHammRFP2008.pdf)

Hawaii Community Foundation  
**Ka Papa O Kakuhihewa Fund Grants for Kapolei and Waianae, Oahu**  
Proposal Deadline: April 1, 2008  
[http://www.hawaiicommunityfoundation.org/doc\\_bin/grant\\_rfps/2008/KPOKRFP2008.pdf](http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/2008/KPOKRFP2008.pdf)

Department of Health and Human Services  
Health Resources and Services Administration  
**Targeted Rural Health Research Grant Program**  
Proposal Deadline: April 2, 2008  
<https://grants.hrsa.gov/webExternal/FundingOppDetails.asp?FundingCycleId=575E7D5B-F3E6-4529-8811-0A944D0F2C74&ViewMode=EU&GoBack=&PrintMode=&OnlineAvailabilityFlag=&pageNumber=&version=&NC=&Popup=>

U.S. Department of Agriculture  
Food and Nutrition Service  
**FY 2008 WIC Special Project Grants**  
Proposal Deadline: April 3, 2008  
<http://www.grants.gov/search/search.do;jsessionid=HYTDvKQ9Gwg1p0hllNthp1VnLG5tpFj8mBJGdtXGvLdb0GI1ZHRWI-1098938542?oppld=40494&flag2006=false&mode=VIEW>

National Science Foundation  
**Ethics Education in Science and Engineering**  
Proposal Deadlines: April 3, 2008, March 2, 2009, March 1, 2010  
[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf08530](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08530)

U.S. Department of Agriculture, CSREES  
**National Extension Integrated Pest Management Special Projects Program**  
Proposal Deadline: April 8, 2008  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_eipm.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_eipm.pdf)  
<http://www.csrees.usda.gov/fo/nationalextensionipmspecialprojectsprogram.cfm>

Hawaii Community Foundation  
Group 70 Foundation Fund  
**Grants to “create sustainable, compassionate and resilient communities in Hawaii”**  
Proposal Deadline: April 11, 2008  
[http://www.hawaiicommunityfoundation.org/doc\\_bin/grant\\_rfps/2008/Group70\\_RFP\\_2008.pdf](http://www.hawaiicommunityfoundation.org/doc_bin/grant_rfps/2008/Group70_RFP_2008.pdf)

FINRA Investor Education Foundation  
**Research and Education Grants**  
Project Concept Paper Due: April 11, 2008, July 12, 2008  
<http://www.finrafoundation.org/guidelines.asp>

U.S. Department of Agriculture  
Agricultural Marketing Service  
**Specialty Crop Block Grant Program**  
Proposal Deadline: April 11, 2008  
<http://www.ams.usda.gov/fv/fv0715.pdf>

U.S. Department of Agriculture, CSREES  
**Resident Instruction Grants Program for Insular Areas**  
Proposal Deadline: April 11, 2008  
<http://www.csrees.usda.gov/fo/residentinstructionforinsularareas.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_resident\\_insular.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_resident_insular.pdf)

Hawaii Community Foundation  
**'Ewa Beach Community Trust Fund**  
Proposal Deadline: April 14, 2008  
[http://www.hawaiicomunityfoundation.org/doc\\_bin/grant\\_rfps/2008/Ewa\\_Beach\\_Application\\_2008.pdf](http://www.hawaiicomunityfoundation.org/doc_bin/grant_rfps/2008/Ewa_Beach_Application_2008.pdf)

Hawaii Community Foundation  
**Promoting Outstanding Nonprofit Organizations (PONO)**  
Proposal Deadline: April 15, 2008  
[http://www.hawaiicomunityfoundation.org/doc\\_bin/grant\\_rfps/2008/PONO\\_6\\_Application\\_2008-2009\\_fillable.pdf](http://www.hawaiicomunityfoundation.org/doc_bin/grant_rfps/2008/PONO_6_Application_2008-2009_fillable.pdf)

Hawaii Community Foundation  
**Hawaii Children's Trust Fund**  
**Community Awareness Events (to prevent child neglect and abuse)**  
Proposal Deadlines: April 18, 2008, July 11, 2008  
[http://www.hawaiicomunityfoundation.org/doc\\_bin/grant\\_rfps/2008/HCTF\\_CommunityAwareness2008\\_RFP\\_.pdf](http://www.hawaiicomunityfoundation.org/doc_bin/grant_rfps/2008/HCTF_CommunityAwareness2008_RFP_.pdf)

National Science Foundation  
**Integrative Graduate Education and Research Traineeship (IGERT) Program**  
IGERT Traineeship Preliminary pre-proposals due: April 24, 2008  
Deadline for IGERT Resource Center Proposals: April 24, 2008  
Deadline for Invited IGERT Traineeship full proposals: October 20, 2008  
[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf08540](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf08540)

U.S. Department of Agriculture, CSREES  
**National Integrated Water Quality Program**  
Proposal Deadline: April 29, 2008  
<http://www.csrees.usda.gov/fo/waterqualityicgp.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_water\\_quality.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_water_quality.pdf)

U.S. Environmental Protection Agency  
**Consequences of Global Change for Water Quality**  
Proposal Deadline: May 8, 2008  
[http://es.epa.gov/ncer/rfa/2008/2008\\_star\\_gcwq.html](http://es.epa.gov/ncer/rfa/2008/2008_star_gcwq.html)

U.S. Environmental Protection Agency  
**Early Career Projects: Consequences of Global Change for Water Quality**  
Proposal Deadline: May 8, 2008  
[http://es.epa.gov/ncer/rfa/2008/2008\\_star\\_gcwq.html](http://es.epa.gov/ncer/rfa/2008/2008_star_gcwq.html)

National Endowment for Financial Education  
**Innovative Financial Literacy Grants**  
Concept Paper Due: June 3, 2008  
<http://nefe.org/Grantmaking/GrantGuidelines/tabid/127/Default.aspx>

U.S. Department of Health and Human Services  
National Institutes of Health  
**Improving Diet and Physical Activity Assessment (R01)**  
Letters of Intent Due: May 5, 2008  
Proposal Deadline: June 5, 2008  
<http://grants.nih.gov/grants/guide/pa-files/PA-07-259.html>

U.S. Environmental Protection Agency  
**Broad Agency Announcement for Conferences, Workshops and/or Meetings**  
Proposal Deadlines: June 5, 2008, December 9, 2008  
[http://es.epa.gov/ncer/rfa/2008/2008\\_baa.html](http://es.epa.gov/ncer/rfa/2008/2008_baa.html)

National Institutes of Health  
**Diet Composition and Energy Balance (R01)**  
Proposal Deadlines: June 5, 2008, October 5, 2008  
<http://grants1.nih.gov/grants/guide/pa-files/PA-07-218.html>

U.S. Department of Agriculture  
CSREES – NRI  
**Animal Genome (C): Bioinformatics**  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/animalgenomebioinformaticsnri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Animal Genome (B): Tools and Resources**  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/animalgenometoolsresourcesnri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Animal Growth and Nutrient Utilization**  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/animalgrowthandnutrientusenri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI  
**Human Nutrition and Obesity**  
Proposal Deadline: June 5, 2008  
<http://www.csrees.usda.gov/fo/humannutritionobesitynri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Agriculture  
CSREES – NRI

**Agricultural Prosperity for Small and Medium-Sized Farms**

Proposal Deadline: June 5, 2008

<http://www.csrees.usda.gov/fo/smallfarmsagriculturalprosperitynri.cfm>  
[http://www.csrees.usda.gov/funding/rfas/pdfs/08\\_nri.pdf](http://www.csrees.usda.gov/funding/rfas/pdfs/08_nri.pdf)

U.S. Department of Interior  
U.S. Fish and Wildlife Service

**National Coastal Wetlands Conservation Grant Program**

Proposal Deadline: June 29, 2008

[http://ecos.fws.gov/docs/coastal\\_grants/web/pdf/1141.pdf](http://ecos.fws.gov/docs/coastal_grants/web/pdf/1141.pdf)

Hawaii Community Foundation

**Medical Research Proposal**

Proposal Deadlines: August 15, 2008

[http://www.hawaiicomunityfoundation.org/doc\\_bin/grant\\_rfps/2008/MedResRFP2008.pdf](http://www.hawaiicomunityfoundation.org/doc_bin/grant_rfps/2008/MedResRFP2008.pdf)

U.S. Department of Agriculture, CSREES

**Critical Issues: Emerging and New Plant and Animal Pests and Diseases**

Proposal Deadline: September 30, 2008

<http://www07.grants.gov/search/search.do;jsessionid=H0HBC21DQnVBn5CCPqypTBQLf52F396VdNT05VynCrhbCh46ZKZcl834976773?oppld=15582&flag2006=true&mode=VIEW>

U.S. Department of Interior  
U.S. Fish and Wildlife Service

**Coastal Programs**

Proposal Deadline: September 30, 2008

<http://ecos.fws.gov/coastal/viewContent.do?viewPage=home>

U.S. Department of Interior  
U.S. Fish and Wildlife Service

**Partners for Fish and Wildlife Program**

Proposal Deadline: September 30, 2008

<http://ecos.fws.gov/partners/viewContent.do?viewPage=home>

U.S. Environmental Protection Agency

**Broad Agency Announcement for Conferences, Workshops and/or Meetings**

Proposal Deadlines: December 9, 2008

[http://es.epa.gov/ncer/rfa/2008/2008\\_baa.html](http://es.epa.gov/ncer/rfa/2008/2008_baa.html)

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**A Field Guide to Field Guides**

Looking for a field guide for arachnids in Africa? Birds in Bali? Coral reefs off Okinawa? The University of Illinois has a new web site that has organized all published field guides into a single searchable database. For the uninitiated, a field guide is a small, lightweight book, containing illustrations, used to identify plants, animals or other objects. Diane Schmidt of the University of Illinois Library has organized all known published field guides into a searchable database that can provide you with detailed information about the published field guides. Find the International Field Guides database here: <http://www.library.uiuc.edu/bix/fieldguides/main.htm>

**Farm Bill Update**

Inertia appears to have been overcome with respect to the 2007 (now 2008) Farm Bill. House Agriculture Committee Chair, Collin Peterson (D-MN) and Ranking member, Robert Goodlatte (R-VA) have revised the House passed version of the Bill to be in an acceptable form so that the President won't veto the bill. The Senate is now reviewing the proposed changes and further negotiations are underway. Current authorizations of agriculture programs were extended through March 15, 2008, so it is important that work be completed by then. So why is the Farm Bill important for Hawaii and CTAHR? First, there is an authorization for a new program that would provide significant funding for specialty and minor crops; second, the new Farm Bill re-authorizes the Alaska Native Hawaiian Serving Agricultural Education Program, which funds among others, the Agribusiness Incubator Program. TSTAR and ADAP are also included in the Farm Bill and would become line items in the USDA budget. There is also new language creating a Sun Grant Center for the Pacific.