UH Insect Museum

Keiki reading earlier

Getting your grant proposals off to a good start

Dr. Dan Rubinoff, Director of the UH Insect Museum, holds up a local Citrus Swallowtail butterfly (*Papilio xuthus*)
From the Associate Dean and Associate Director for Research

Land grant colleges are amazing places. No other academic entity performs the type of practical research that is done in a land grant university. But beyond doing the research, we also strive to get that information out to our stakeholders and bring our cutting-edge science into the classroom. Pretty wonderful, isn’t it? Without the passage of the 1862 Morrill Act, land grant colleges wouldn’t exist. Providing practical higher education to the masses – and not just to the wealthy – was the philosophy in the development of the land grant system. As we approach the centennial of the University of Hawaii, we must be mindful that CTAHR was the founding college of UH and that foundation was based upon the need to conduct practical research to serve Hawaii’s stakeholders. In this issue of CRN, we continue to share your great works and highlight the efforts of some graduate students and a number of our technical field staff located on Hawaii Island.

We continue our efforts to push-out possible grant opportunities to you. Grants, as you know, are lifeblood of a high performance educational organization. Doug Vincent tells me that we are ready to eclipse last year’s grant amounts if we stay on our current pace. This is exciting news for all of us and we thank everyone who has done their part to bring in money to CTAHR and we appreciate those who process all the paperwork to start the tap flowing – mahalo!

One topic I want to share from my office’s perspective is an understanding of competitive grants verses “formula” funds. Formula funds are funds allocated to each state based on its population. For many you who have been in the land grant system awhile this might be old news, but with many things changing in Washington, DC, there are new threats to the continuation of formula funding. We need to keep our ears to the ground and be ready to be as competitive as any and all land grant colleges.

On a related note: One of the requirements for receiving federal formula funds is to file annual financial and progress reports for all our projects. I am pleased to inform you that as if January 4, 2006, 276 reports were filed. Thanks to everyone for helping us file these reports. Our goal for next year is to have them all done by December 15.

This month we did not list any new “Faculty Output,” because we did not hear from you in December. Please take the time to write and send us your latest accomplishments as we want to recognize and celebrate your efforts. Happy New Year to all, and have a successful 2006!
UH’s Insect Museum Located at CTAHR

By Dan Rubinoff
Entomologist, Plant and Environmental Protection Sciences (PEPS)
Director, University of Hawaii Insect Museum (UHIM)

The College of Tropical Agriculture and Human Resources has many wonderful assets in its people and facilities. One such gem is the UH Insect Museum (UHIM). The museum was established early last century and was built by such giants in Hawaii entomology as Drs. Elmo Hardy and John (Jack) W. Beardsley, among others. The UHIM contains over 10,000 specimens covering about 25 percent of the estimated 10,000 total species in Hawaii. Our museum is one of the three largest insect museums in the state; the others are the Hawaii Department of Agriculture and the private Bishop Museum.

The collection full of wild and wonderful animals that fly, crawl, spin webs and inject toxins – provides evidence of the abundance of unique life in Hawaii. In fact, in just the last year we added over 1,000 new specimens (some may be of the same species) to the collection, and identified at least a dozen species that have never been cataloged in Hawaii. The Museum also contains Dr. Ken Kaneshiro’s (Director of the UH Center for Conservation Research and Training) life’s work on the native Hawaiian Drosophila flies – over 500 species!

The collection’s main purpose is to support and enhance the College’s and University’s insect-related research, conservation, and education programs. This type of resource is typical of high quality land grant colleges such as the University of Kansas, UC Berkeley, Cornell University, UC Davis, Oregon State, and many private universities like Harvard and Yale. These collections provide a benchmark on the current status of a species and these benchmarks can then be referenced over time to understand what is happening with an insect’s range, hosts, conservation or pest status.

Currently there are four graduate students (Jesse Eiben, Luc Leblanc, Cynthia King and Will Haines), and a staff member (Shep Myers), maintaining the collection like worker bees tending a queen bee – they do a super job providing a critical service and deserve our thanks. The UHIM is funded by small amounts of money coming through Plant and Environmental Sciences (PEPS) and from CTAHR, but we are seeking federal grants and angel benefactors to help improve the infrastructure of the museum. Our goal is to grow the collection and make it even more accessible to researchers, as well as developing its Web presence with products the public can enjoy <http://www.ctahr.hawaii.edu/peps/museum>.

While the UHIM is not generally open to the public, we do occasionally host school groups. PEPS’ student outreach program – lead by the PEPS graduate student organization, Ka Mea Kolo – does a great job reaching youngsters and the public, but they typically use the insects found in the “teaching collection” which is housed elsewhere. The UHIM is open, however, to visiting research scientists and we also loan parts of our collection to other scientists around the world. Some researchers have traveled from as far as Australia and Europe to peer into our unique collection. This professional interaction brings notoriety to CTAHR and UH and allows us to build our collection with the reciprocal help of others who supply us with new species and identifications for specimens found in Hawaii.

The collection also helps us address very practical issues. Museum collections

continued page 10
One of the exciting aspects of working for CTAHR in Hawaii’s communities is that we “grow” people (as well as crops) by providing critical information and resources for families. Research has shown that the early years of a child’s life – from birth through five – are a critical time of development that providing the foundation for future learning throughout his/her life. Parents, as their child’s first teacher, play a key role in nurturing this early development and learning. I am excited about some of the high-impact work we are doing with Hawaii’s families to support them in this role. Through the UH Center on the Family (http://www.uhfamily.hawaii.edu), the Learning to Grow (LTG) team (Mary Ann Nemoto, Traci Hisatake, Lori Furoyama, Ann Tom, Sylvia Yuen and myself), is implementing several interconnected LTG programs that are making a difference in the lives of many in our communities. Now is in its sixth year, LTG is annually funded by the Hawai’i’s Department of Human Services, ranging from $424,997 in 2000 to $587,672 in 2005. Each of the following programs contributes to achieving the State’s vision that “all children will be safe, healthy, and ready to succeed in school.”

- The LTG Kith and Kin Outreach Program
- The LTG Parent Consumer Education Program
- The LTG Family Resource Network Centers Program
- The Dolly Parton Imagination Library Program

The cornerstone of LTG is our Kith and Kin Outreach Program, which develop and disseminates educational materials monthly to low-income parents who choose family and friends rather than licensed child care providers to care for their children under age five. We provide parenting and child development information and resources as well as ideas for simple, inexpensive activities that promote early learning. Books are also provided to the children to build their home literacy environment. We have been working on this program since 2000, and serve about 4,000 families each year. To enhance our outreach efforts, we work closely with other family service agencies and programs (Healthy Start, PACT, and Child and Family Service) that provide more direct services to families and can help them understand our materials when language or other issues may hinder their use.

Building on the Kith and Kin Outreach program, we have developed the LTG Parent Consumer Education Program which provides information on the importance of quality child care and criteria to consider when choosing a child care provider to parents seeking DHS child care subsidies. Through LTG’s “Choosing Child Care” video, resource booklet and brochure, the program reaches 200-300 families each month.

Another establishment in our endeavor to support

![Frequency of Reading to Child Before and After Caregiver Receives LTG Books.]

CTAHR Helps Grow Kids, too!

By Grace Fong
Researcher, Family and Consumer Sciences (FCS)
families with young children is the Family Resource Network Centers in easily accessible sites. Families are provided resources they can use to develop a more solid foundation for their growing child. So far, seven centers have been established in public elementary schools and family service agencies on Oahu and we are looking into other locations to meet new demands (to the extent that our funding will allow).

Our newest effort is the Dolly Parton Imagination Library Program sponsored by the Dollywood Foundation. In this pilot program, LTG covers the registration fee of $27 per child which provides the child with a book a month for a year. The program aims to enhance the home literacy environments of young children and to build family-school relationships. The program currently operates in selected communities on Oahu, Hawaii Island, Maui, Molokai and Lanai, with elementary schools serving as registration sites. While this program has only been running for about 3 months, we have reached 1,176 children: half of our target goal for the year. Part of this success is due to our strong partnerships with organizations such as the Department of Education, Kamehameha Schools, PATCH, Read-to-Me International, Head Start, and our own CES.

Measuring impact of these programs is challenging, but evaluation research is on-going for each component for LTG. The chart (page 4) shows an increase in children being read to and exposed to books: from “once a week or less” to “once a day or more.” This is exciting progress!

Some of the learning tools shared with clients of the LTG program.
National Movement from Formula Funds to Competitive Grants

By CY Hu
Associate Dean and Director for Research

Scholarship is an important factor for promotion and tenure consideration in any university. For faculty members with a research component, competitive grants and refereed journal papers are the two widely recognized parameters for scholarship. Nationally, more research is being supported by competitive grants these days, in contrast to the past when the majority of the research was supported by non-competitive federal and state funding sources.

Fiscal year 2005 was the first time in USDA history that the National Research Initiative (NRI) competitive grant programs received more funding ($179 million) than Hatch formula funds ($178 million) and last year, the Bush Administration proposed to cut by one half all Hatch and McIntire-Stennis formula funds for FY 2006 and eliminate these formula funds entirely by FY 2007. The proposal would move those dollars into new competitive grant programs. Although that proposal did not go very far, it clearly illustrates that the times have changed and that we are facing difficult challenges in the coming years just to maintain the existing Hatch funding levels. There is an excellent article written by Henry Fribourg, “How does the National Research Initiative Spend our Money,” that appeared in the August 2005 issue of CSA News. Referenced in the article is a report by Bill Randle that provides excellent background information on this subject.

We can sit around and argue about the merits and importance of formula funds to a small state such as Hawaii, but that is not going to change the trend of the continuing decline of the formula funds and the increase in competitive grant programs at the national level. The message to me is loud and clear: for CTAHR to be successful in research, we must continue to emphasize and be successful in grantsmanship. However, we do recognize that opportunities in competitive grant programs in some areas that CTAHR serves is limited, and therefore it is appropriate to use formula funds to support these areas. I would love to hear your thoughts, comments, and suggestions on this subject as we move forward in this transition.

UH Office of Research Services’ New Web Site

The UH Office of Research Services has a new and improved web site. In anticipation of online submission of all federal grants and incorporation of the new UH InfoEd system for online grants management, their new website has made significant changes over the previous versions. A new feature is the “Grant Lifecycle Guide” which takes the reader through every step in the process from finding funding, proposal development, project startup, project management and project closeout. The “File Cabinet” and “Knowledge Base” features provide information and access to forms, reports, rates, policies and other information necessary you may need to complete your grant proposal. We encourage you to explore this new web site and provide us with your feedback. Doug Vincent, Special Program Director for Grants and Contracts, has been asked to serve on the ORS Web Improvement Team. So if you have questions, concerns, or suggestions on the new website, forward them to Doug and he’ll convey them to ORS.
To a successful grant recipient, one must build a strong, compelling case for the need to receive funding. Convincing others to support your project or proposal is one of the most important aspects of writing a grant. For basic science proposals, preliminary data or previous research is critical for building a strong case for the importance for funding a project. For more applied or mission-oriented proposals, it is important to provide statistical data from authoritative sources to make the case that an application should be funded.

For example, if you are writing a proposal on interventions involving juveniles who have committed violent crimes in Hawaii, a Google™ search using three words (juvenile, violent, crimes) retrieves over 1.3 million hits. Include the word “Hawaii” in the search term and you still have over 390,000 hits. This is not the most efficient method of obtaining the information you need. But lucky you live Hawaii! CTAHR’s Center on the Family (COF) Data Center [http://uhfamily.hawaii.edu/Cof_Data/datacenter.asp] can help you find the key statistics. You can browse Child and Family Indicators by subject matter, by age group or by location. The interactive maps providing school and community profiles, data on substance abuse risk indicators and information related to Native Hawaiian children and families are all part of COF’s Data Center. When they say they are “the most comprehensive collection of data and information on Hawaii’s children and families” – they mean it!!

There are other websites locally, nationally and internationally that can help you find those nuggets of information to help you make your case. Many of the sites have search engines and several sites permit you to download the data into an Excel spreadsheet. (Disclaimer: These sites were active and available at the time of this publication). Some examples by category follow:

**Health Statistics**
- National – National Center for Health Statistics [http://www.cdc.gov/nchs/]
- International – UN World Health Organization Statistical Information System (WHOSIS) [http://www3.who.int/whosis/menu.cfm]

**Agricultural Statistics**
- International – UN Food and Agricultural Organization FAOSTAT [http://faostat.fao.org/]

The USDA Economic Research Service (ERS) [http://www.ers.usda.gov/] also serves as a source of economic information from USDA. ERS divides its scope of activities in five research objectives: 1) a competitive agricultural system; 2) a safe food supply; 3) a healthy, well-nourished population; 4) harmony between agriculture and the environment and 5) an enhanced quality of life for rural Americans. Through its publications and “briefing rooms,” information can be obtained about many topics pertaining to its scope of activities. USDA ERS has a “companion” agency relating to foreign agriculture and markets – the USDA Foreign Agriculture Service (FAS) [http://www.fas.usda.gov/default.asp]. The FAS works to improve foreign market access for U.S. products, build new markets and improve the competitive position of U.S. agriculture in the global marketplace. It also has its own site for market and trade data [http://www.fas.usda.gov/data.asp].

**Education Statistics**
- Hawaii – CTAHR Center on the Family Data Center [http://uhfamily.hawaii.edu/index.asp]
CTAHR Grants and Contract Success Continues!

By Doug Vincent
Special Program Director for Grants and Contracts

Success breeds success and CTAHR faculty continue to be successful in obtaining extramural grants and contracts. We are pleased to share with you these additional grants and contracts received since we last reported in November 2005. Since that time, you’ve brought in an additional 24 grants and contracts worth nearly $2.4 million dollars. From July to December 31, 2005 – half of the current FY 2006 fiscal year – CTAHR has received 122 grants and contracts for a total of $15,720,602. We’re only $900,000 behind our total for the entire FY 2005 – excellent work!

These resources are just a few of the great websites that can help you find the data you will need to support a convincing argument that your project is worthy of funding. While Google™ and other search engines are very useful tools, they can be challenging and are often an inefficient method of finding appropriate information. The web cites listed above, especially CTAHR’s own Center on the Family Data Center, can assist you in finding more specific and pertinent information to support the development of a convincing grant application.

Thanks to Eileen Herring, UH Science Librarian, of the Hamilton Library for suggesting some of the web sites. The reference librarians at the library can also assist you in finding appropriate information for your case. Sharee Pepper, ADAP Grant Coach, also contributed to this article. Good luck and may your New Year be productive and prosperous.

Richard L. Bowen (NREM)
Development of a Sustainable Polyculture System for Exotic Tropical Fruits. Utah State University. $51,100.

David A. Christopher (MBBE)
Functional Genomics of the Protein Disulfide Isomerase Family: Unraveling Protein Folding and Redox-Regulatory Networks. National Science Foundation. $330,973.

Barbara D. DeBaryshe (COF)
Learning Connections: Meeting the Needs of Hawaii’s Multicultural Low-Income Preschoolers. ED-Dept of Education. $152,427.

Carl I. Evensen (NREM)
Water Quality Research and Extension Coordination in Hawaii. University of Arizona. $107,726.

Kent D. Fleming (TPSS)

Arnold H. Hara (PEPS)

Naomi A. Kanehiro (HNFAS)

Kenneth W. Leonhardt (TPSS)
Development of New Foliage Cultivars for the Hawaii Commercial Foliage Industry with Emphasis on Dracaena. Hawaii Farm Bureau Federation. $25,000.

Mike A. Nagao (TPSS)
Culture Management Strategies Associated with Macadamia Varieties. Hawaii Farm Bureau Federation. $5,000.

Macadamia Variety Trials. Hawaii Farm Bureau Federation. $4,831.

New Funding Opportunities

Brent S. Sipes (PEPS)
Cropping Systems for Control of Soil-Borne Diseases in Dry-Land Taro. Utah State University. $8,479.

Wei-Wen W. Su (MBBE)

Glenn Y. Taniguchi (PEPS)
Evaluation of All Potential Post-Harvest and Pre-Plant Fungicides for Control of Pineapple Fruit Rot. Fruit Mold and Butt Rot. Hawaii Farm Bureau Federation. $15,732.

C. Alan Titchenal (HNFAS)

Janice Y. Uchida (PEPS)
Koa Dieback Survey: Assessing the Distribution and Severity of Koa Wilt in Hawaii. DLNR-Division of Forestry & Wildlife. $10,000.

Mark G. Wright (PEPS)
Stink Bug Feeding Patterns in Macadamia Nut. Hawaii Macadamia Nut Association. $25,000.

C. Alan Titchenal (HNFAS)

Loriena Yancura (FCS)
Dressing Paralyzed Patients: Video Training for Caregivers. Christopher Reeve Paralysis Foundation. $10,000.

Julian Yates (PEPS)
2004 Sentricon System Preferred Texture Cellulose Study. Dow AgroSciences. $2,000.

Sylvia Yuen (COF)
Compassion Capital - Hawaii Moving Forward. DHHS-Dept of Health & Human Services. $950,000.

Data Center on Hawaii’s Elderly. Hawaii-Executive Office on Aging. $50,000.

Relating to the Evaluation of the Uplink Program. Hawaii-Dept of Human Services. $150,000.

U.S. Department of Agriculture
Western Integrated Pest Management Center (UC Davis)
Ongoing Special Issues
Deadline: Open
http://www.wrpmc.ucdavis.edu/research/specialissuesongoing.htm

U.S. Department of Agriculture
Western Integrated Pest Management Center (UC Davis)
Pest Management Strategic Plans (Ongoing)
Deadline: Open
http://www.wrpmc.ucdavis.edu/research/strategicplansongoing.htm

Hawaii Farm Bureau Foundation
Agriculture Research and Market Development
Deadline: January 25, 2006

U.S. Department of Agriculture
Foreign Agriculture Service
Scientific Cooperation Exchange Program with China
Deadline: January 25, 2006

Hawaii Farm Bureau Foundation
Agriculture Research and Market Development
Deadline: February 1, 2006

U.S. Department of Agriculture
Pest Management Alternatives Program, SRGP
Deadline: February 1, 2006
http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1114

U.S. Department of Agriculture
Rural Development, NRI
Deadline: February 1, 2006

U.S. Department of Agriculture
Higher Education Challenge Grants, HEP
Deadline: February 2, 2006
http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1083

U.S. Department of Agriculture
Developmental Processes of Agricultural Plants, NRI
Deadline: February 7, 2006
http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1116

U.S. Department of Agriculture
Agricultural Plant Biochemistry, NRI
Deadline: February 7, 2006

U.S. Department of Education
College Students High-Risk Drinking or Violent Behavior Prevention
Deadline: February 6, 2006
http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/pdf/E5-7783.pdf

U.S. Department of Agriculture
Citrus tristeza Research (CTV) Program, SRGP
Deadline: February 7, 2006

U.S. Environmental Protection Agency
National Network for Environmental Management Studies Fellowships
Deadline: February 13, 2006

U.S. Environmental Protection Agency
A National Student Design Competition for Sustainability Focusing on People, Prosperity, and the Planet
Deadline: February 20, 2006

U.S. Department of Agriculture
Integrated Pest Management: Crops at Risk, ICGP
Deadline: February 13, 2006

U.S. Department of Agriculture
Integrated Pest Management: Risk Avoidance and Mitigation, ICGP
Deadline: February 13, 2006
are the first stop for entomologists needing to identify species to protect Hawaii's crops and environment. Without reference collections like ours, we could not effectively identify pests, track their spread or control, and ultimately provide, and improve upon, the level of protection that is currently available.

Dan Rubinoff
Hometown: Berkeley, CA
Joined CTAHR: 2002

Educational history: B.S. Natural Resources, Cornell University; PhD, Insect Biology, University of California, Berkeley.

Specialization: Insect Systematics, and its applications to invasive species control, native insect conservation and evolution.

Current work: As director of the University of Hawaii Insect Museum, I get to work with a team of interested staff and students to catalog and document Hawaii's native and invasive insect species. This is a perpetual project since we are always discovering new species, and sadly, many new invasive pests are establishing in Hawaii every year. I also supervise a molecular systematics lab with graduate and undergraduate researchers. Our research focuses on identification and control of invasive insects and elucidating the evolutionary patterns and conservation management for native Hawaiian insects. I also teach a class on Invasive Pest Species, and another on Systematics and Phylogenetics, both of which tie in directly to my research foci.
Getting to Know CTAHR Research Station Employees

We are very fortunate to have about a dozen research stations where we can perform client-relevant research. One of the college’s first research stations was established in 1901 and located in Makiki Valley (154 acres on the southeast slope of Punchbowl and Tantalus ridge).

Today we introduce the hardworking staff at Waiakea and Volcano stations. As you can see from their profiles, we have a good depth in background and skills. Also, here is a photo of the entrance to the Waiakea Research Station and a shot of one of our anthurium greenhouses. Many thanks to this crew for the quality service they provide the college! And mahalo to those supplying the photos.

Dennis Ida
Hometown: Honolulu, Hawaii
Joined CTAHR: 1978
Educational history: HS, Mid-Pacific Institute (Honolulu); BFA, UH-Manoa; BS, General Ag, UH-Hilo.
Current work: Farm Manager for Waiakea, Volcano & Malama-Ki Research Stations.

Angel Magno
Hometown: Hilo, Hawaii
Joined CTAHR: 1982
Educational history: HS, Mid-Pacific Institute HS, Hilo High; AS, Electrical, Hawaii CC; AS, Agriculture, Hawaii CC.
Current work: Farm Foreman; equipment operation, repair, maintenance & hauling; electrical work.

Eric Notley
Hometown: Hilo, Hawaii
Joined CTAHR: 1984
Educational history: HS, Terra Nova High (Pacifica, CA); BS, General Ag, UH-Hilo.
Current work: Nursery & arboretum; grafting, plant propagation, plumeria collection.

Layne Matsushita
Hometown: Hilo, Hawaii
Joined CTAHR: 1990
Educational history: HS, Hilo High; AS, Merchandising, Hawaii CC.
Current work: Arboretum & landscape maintenance; seed production.
<table>
<thead>
<tr>
<th>Name</th>
<th>Hometown</th>
<th>Joined CTAHR</th>
<th>Educational history</th>
<th>Current work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher “Popo” Bernabe</td>
<td>Hilo, Hawaii</td>
<td>1987</td>
<td>HS, Mid-Pacific Institute HS, Hilo High; AS, Agricultural, Hawaii CC.</td>
<td>Arboretum &amp; landscape maintenance; hydroponic tomatoes.</td>
</tr>
<tr>
<td>Mary Kaheiki</td>
<td>Pahoa, Hawaii</td>
<td>1989</td>
<td>HS, Mid-Pacific Institute HS, Hilo High; AS, Electrical, Hawaii CC; AS, Agriculture, Hawaii CC.</td>
<td>Weather data-logging &amp; reporting; seed production.</td>
</tr>
<tr>
<td>Denise Fleming</td>
<td>Lahaina, Maui</td>
<td>1990</td>
<td>HS, Lahainaluna High.</td>
<td>Arboretum landscape &amp; maintenance; hydroponic tomatoes; seed production.</td>
</tr>
<tr>
<td>Jon “JK” Katada</td>
<td>Hilo, Hawaii</td>
<td>1987</td>
<td>HS, Hilo High; BS, General Ag, UH-Hilo.</td>
<td>Arboretum maintenance; anthurium &amp; orchid production; tractor operation &amp; repair.</td>
</tr>
<tr>
<td>Leslie Kodani</td>
<td>Hilo, Hawaii</td>
<td>1981</td>
<td>HS, Hilo High; BS, General Ag, UH-Manoa.</td>
<td>Agronomy; taro production; indigenous trees.</td>
</tr>
<tr>
<td>Noel Nakamura</td>
<td>Keauau, Hawaii</td>
<td>1985</td>
<td>HS, Hilo High; AA, Liberal Arts, Hawaii CC.</td>
<td>Anthurium &amp; orchid production.</td>
</tr>
<tr>
<td>Ryan Kaneko</td>
<td>Hilo, Hawaii</td>
<td>1990</td>
<td>HS, Hilo High; BS, Ag Technology, UH-Manoa.</td>
<td>Ornamental entomology; arboretum &amp; nursery maintenance.</td>
</tr>
<tr>
<td>Eric Magno</td>
<td>Mt View, Hawaii</td>
<td>1981</td>
<td>HS, Hilo High; BS, General Ag, UH-Manoa.</td>
<td>Field &amp; greenhouse vegetable production.</td>
</tr>
</tbody>
</table>