Big Island Nurserymen fund UH Hilo Agriculture scholarship

The Big Island Association of Nurserymen, Inc. (BIAN) has pledged $15,000 to establish the BIAN Excellence Scholarship Endowment to provide scholarships to Agriculture students. “We're excited to do our part and plant the much-needed seeds for the future generation of horticulturalists,” said BIAN president Sean Spellicy.

As tuition and enrollment both continue to increase, “We are especially grateful for the BIAN endowment that will provide ongoing support for CAFNRM students,” said Steiner. Enrollment over the last four years has increased from 135 to 190 students, with many of the students in the College specializing in Tropical Horticulture.

This new scholarship provides financial assistance to graduates of Hawai‘i high schools who are enrolled in the College of Agriculture, Forestry and Natural Resource Management and have a minimum 3.5 GPA.

Dr. Tanabe, plant tissue culture guru

By Noah Hegerfeldt

Dr. Michael Tanabe, a Big Island native, is one of the original founders of the UH Agriculture school. Tanabe is the head professor of Plant Tissue Culture at UH Hilo and is a firm believer in its technology. Tanabe has taught Plant Science for 36 years now and is the only original founder that is still teaching in the UH system.

Tanabe teaches various horticulture classes that are the backbone of the plant tissue culture curriculum including HORT 264 (Plant Propagation), HORT 303 (Introduction to Plant Tissue Culture), HORT 304 (Plant Tissue Culture Acclimatization), and HORT 450 (Advanced Plant Tissue Culture). The Plant Tissue Culture certificate is “designed to prepare the student for turn-key employment in the tissue culture industry” and the majority of students who utilize this either open a tissue culture lab, become lab supervisors, or work as lab technicians.

This technology is relatively new and there is still a lot of research and discoveries being made. Some hot topics in tissue culture include encapsulation, artificial seed technology, and in-vitro grafting. He is conducting research on in-vitro germplasm storage of taro, and other native and endangered species. Tanabe is also doing research on culture media to lower costs.

Tanabe’s most recent ac-
Farewell Dean Steiner

After nearly seven years, Dean Bill Mokahi Steiner is stepping down this month as Dean and retiring in June.

Steiner was born in Hawaii and raised on a 16,000 acre ranch in Owyhee County, Idaho. Steiner returned to Hawaii for school, earning his Ph.D. in genetics at Mānoa. Steiner then worked as a scientist for the USDA Research Service in Columbia, Missouri, where he also served as an adjunct associate professor at the University of Missouri.

Steiner once again returned to Hawaii to direct the Pacific Islands Ecosystem Research Center in Honolulu, overseeing federal research related to natural resources management and conservation for the Pacific Basin. While in Honolulu, he also served as an adjunct professor at UH Manoa. He has authored or co-authored over ninety refereed scientific publications and book chapters, and has been the editor of multiple books, scientific reports, and abstracts. He was appointed Dean of the College of Agriculture, Forestry, and Natural Resources Management at UH Hilo in 2005.

Accomplishments as Dean

In his capacity as Dean, Steiner has worked to move the College forward on many fronts. The equine facility at the UH Farm consisted simply of a finished structure when he first arrived. Steiner fund-raised about $30,000 to outfit the facility with corrals and other infrastructure so that it can be used for equine competitions, roping, and other events and activities.

Steiner also successfully worked to secure additional support to establish an endowed scholarship for CAFNRM students and an endowed fund for faculty research that should start up over the next year. He has also helped establish a program for graduating seniors to obtain inexpensive farm land leases and low-interest, easy-payback loans for small start-up farms to make it easier for new graduates to get started in farming.

His involvement with small, diversified farms and local organizations has strengthened the connection between the community and College. He worked with the Kohala Center, for example, to help re-establish gardens in schools to expose youth to sustainable agriculture. He also helped set up a field station in the Hākalau Forest Reserve enabling students to take educational field trips and conduct research there.

Steiner’s vision of a new program within CAFNRM focusing on food and fuel technology, which he secured $300,000 from the legislature to start, continues to move forward. His original vision has evolved into a multidisciplinary program including research and education that spans several fields including biofuels, computer engineering, and microelectronics and robotics.

Future directions

Over the next six months, he will work on several projects with the Chancellor. He is developing a new set of short courses in applied agriculture in conjunction with the County geared towards farmers. Courses will be offered on topics ranging from Soil Science to Farm Mechanics, and may also cover Federal laws and government regulations relating to farming. Courses will take about six weeks to complete, with completion of six courses required to earn the certificate.

Other projects may include helping to transition the USGS Fish & Wildlife Service Cooperative from UH Manoa to UH Hilo, which would create new course offer opportunities and campus jobs for students, and developing a biofuel program at UH Hilo. The College already owns a small biodiesel refining system that can process 150 gallons of cooking oil a day into biodiesel. Steiner envisions a new certificate program in biodiesel processing, including collection tanks on campus open to the community. Plans are in the works to set up the refinery at the nearby Armory, and the refining system could be used to produce diesel to power campus vehicles.

When asked if he plans on staying in Hawaii, he says, “I’m thinking more and more about doing a vineyard,” referring to the 160 farm he bought in Missouri when he worked there. Missouri, he says, was once the second largest wine producer in the country before prohibition. “There’s probably about a dozen wine growers in the area now,” he says, “But when I first bought [the land] there weren’t any.” He may also continue his work on biofuels.

Dr. Bruce Mathews will succeed Dr. Steiner as Interim Dean. Depending on State funding, it will be at least one to two years before a search is initiated to officially fill the position.

Thank you Dean Steiner for all you have done. May you have a long and enjoyable retirement.
Tanabe (Continued from page 1)

accomplishments include demonstrating several ways to reduce costs and improve efficiency of tissue culture labs. He has demonstrated, for example, that photoautotrophy (culturing plants without sugar) is a more economical and productive means of in-vitro culturing. Tanabe also demonstrated that stationary liquid cultures are as productive as agitated liquid culture or solid media, which saves money on resources and equipment.

Tanabe has been managing the Plant Tissue Culture lab and replacing equipment to maintain efficiency. Thanks to the owner of HPM, the tissue culture program has been able to improve its facilities. Tanabe would like to eventually have a building dedicated to plant tissue culture. This would provide a better learning platform for students who study the subject.

Tanabe is motivated and passionate about teaching and a very pleasant person to be around. If you have any questions or want to know more, send Dr. Tanabe an email or drop by his office.

Dr. Michael Tanabe. Photo credit: Norman Arancon.

Crop of the month: ʻUala
By Daithi K. Martin

The sweet potato (Ipomoea batatas, known as ʻuala in Hawaiian), although distantly related to the common potato, Solanum tuberosum, belongs to the Convolvulaceae family while the common potato belongs to the Solanaceae or night shade family. The sweet potato, like the normal potato, is from South and Central America. Two varieties are prevalent on the Big Island, the green-leafed Hawaiian and the purple-leafed Okinawan. Cuttings from both of these are easily obtained allowing college students the opportunity to easily grow their own food.

Propagation of this plant is extremely simple and can be successfully done by anyone whether you have a green thumb or not. For those with back yards, sweet potatoes can be cultivated with some basic techniques and can greatly supplement your household food requirements. A raised bed garden is the most effective and simple way to grow these in a small amount of space.

To make a raised bed simply outline a flat rectangular area in your yard with cinder blocks. Remove all grasses and weeds inside of and around the cinder-blocks. Lastly, fill the rectangle with a soil mixture. I recommend 60% peat moss and 40% composted cow manure, or ideally, vermicompost. You will also want to supplement this mixture with other organic fertilizers such as composted chicken manure. If you want a deeper soil bed to allow for more root and potato formation, increasing yield, stack another row of cinder blocks on the first to make the soil twice as deep.

Sweet potatoes are incredibly easy to propagate compared to most other crop plants. Simply find a growing plant and cut a piece that is as long as your forearm plus your hand. Remove a couple of the bottom leaves and bury the bottom 8 inches in the dirt. Water the newly transported cuttings and wait for them to grow. Depending on the variety, they will be ready to harvest in 3 to 8 months.

The cutting will soon grow into vines and become vigorous. I do not recommend trying to plant anything else next to sweet potatoes because they will easily overgrow the other plants.

Jean Shimose (far right), among friends. Jean is retiring this month (please see article on page 4). Photo credit: Norman Arancon.

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National Tropical Botanical Garden posts four job opportunities on Kauai

The National Tropical Botanical Garden is looking to fill four positions at their Kauai location:

**Biological Field Technician**
Candidate should have a college degree in biological sciences or natural resources, or a related field (preferably with graduate or professional training), and at least three years of experience in animal control, and similar work. Must be willing to participate in extended overnight camping trips to work in remote locations for up to two work weeks per month. Preference will be given to candidates with experience in conducting ecological monitoring and invasive species control projects. Must have or obtain valid Hawaii hunting license and hunter safety certification. Experience with endangered seabirds a plus.

**Nursery Manager**
Candidate will be responsible for all aspects of the gardens nursery operations including plant propagation, pest control and facilities maintenance.

**Plants Records Manager**
Ideal applicant will have a B.A. in Botany or related field and is proficient in MS Access, Word and Excel. Working knowledge of GIS and mapping preferred. Position is full-time and with benefits, located at the Conservation and Horticulture Center in Lawa’i Valley, Kaua’i.

**Assistant Director of Conservation**
Candidate should have a college degree in biological sciences or natural resources, or related field (preferably with graduate or professional training), and at least three years of experience in ecological restoration, animal control, and similar work. Candidate must have a willingness to travel to other Hawaiian Islands and mainland locations on occasion, and to participate in extended overnight camping trips to work in remote locations. Preference will be given to candidates with supervisory experience in conducting invasive species control projects. Knowledge of ecology and horticulture would be useful, as well as experience with grant proposal writing and project reporting.

Experience with native Hawaiian plants is desired. Position is full-time and includes benefits, and will be located at the Conservation and Horticulture Center in Lawa’i Valley, Kaua’i.

Applications for these positions will be accepted at NTBG Headquarters, 3530 Papalina Road Kalaheo, HI 96741. For more information please contact Shantell San Agustin (808) 332-7324, Ext. 229, Fax (808) 332-9765 or email your resume to sanagustin@ntbg.org.

‘Uala

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Within a couple weeks the thick mat of vines and leaves that is produced will almost eliminate the need for weeding. At harvest time, you can cut the vines and place them into another raised bed to perpetuate the next crop.

Sweet potatoes are a staple throughout much of the world and make delicious snacks like fried chips. Not only are the root tubers edible, the leaves and young shoots are used in numerous recipes. With a little work, the motivated college student can easily grow sweet potato and greatly reduce household food costs.

Jean Shimose retiring

Congratulations to Jean Shimose, one of the College of Agriculture, Forestry, and Natural Resources Management’s (CAFNRM) office clerks, who is retiring at the end of December 2011. Jean has been at the University of Hawaii at Hilo (UHH) for 27 years, and has served CAFNRM for the last 11 years.

She joined UHH in 1985 as a Library Assistant III, then worked with David Sing as Clerk Typist II from 1990 to 1992. In that same year, she rejoined the library as Library Assistant III and moved to Student Counseling at HCC as Clerk Typist II. Before joining CAFNRM in 2001, she was Clerk III working under Kolin Kettleson at the Auxiliary Services from 1994-2001.

In her honor, friends, family and co-workers celebrated her retirement in a well-organized and well-attended party last December 9, 2011 at the UHH campus.

Jean will always be remembered as “a co-worker who always put students first”, according to Dr. Bruce Mathews, incoming acting Dean of CAFNRM, and “A very smart worker, indeed”; according to one of her previous supervisors. “She’s one of the nicest people I’ve met,” says one student. We wish Jean well as she leaves the University environment, and wish her a long, healthy, happy, and very fruitful retirement.