

HAWAIIAN CIVIC CLUB OF HONOLULU

Established December 1918

P.O. Box 1513, Honolulu, Hawai'i 96806, Website: <http://hcchonolulu.org>

NEWSLETTER

March – April 2008

2008 Officers

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Pat Brandt-
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Maylene Enoka-
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Louise Gerboe
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Ulu Parker
Pat Rivera

Holulu Ball - 2008 Highlights

Photos available on website <<http://hcchonolulu.org>> [Holoku Ball Link](#)

A night that created memories for all those who attended.

Corporate Sponsors:

\$10,000 Tables-Abigail Kinoiki Kekaulike Kawananakoa and First Hawaiian Bank

\$ 5,000 Tables-Mr. and Mrs. Watters O. Martin, Jr., Dolores F. Martin Foundation, Michael Haig, Abigail Kawananakoa, Family of Lehua Conrad, Thurston-Pacific/Kathy Thurston, Central Pacific Bank and Muriel Lighter

\$2,500 Tables-Warren and Ottina Haight, Abigail Kawananakoa, Gertrude Berger, Bishop Museum, R. M. Towill Corp. Alexander and Baldwin, and Kamehameha Schools

Mahalo to the Office of Hawaiian Affairs for their generous support of the HCCH Scholarship Program

The entrance to the lawn area was graced with two Hawaiian flags and the reception table were hosted by Tina Haight, Ku'ualoaha Baudrau, Marlene Ebeo, Roberta Oneha, Marsha Bolson, Moana Heu, and Susan Malterre-Htun.

The Silent Auction chaired by Mona Bernardino with assistance from Macky Shea, Luana Sala, Tina Haight, Eloise Bruns, and others were well received for being put together only a month before the Ball. The club will make approximately a little over \$4,000 to be applied towards the expenses of the Ball from everyone's efforts.

A special Mahalo Nui Loa to Mr. and Mrs. Watters O. Martin, Jr. for their generous donations and to our club member; Kathy Keala for her generous donation of the Niihau necklace and earrings that drew so much attention. We are also so thankful to Ted Takai for his beautiful Likolehua framed photographs that our people look for each year.

The elegant evening started with Puamana providing their nahenahe music on the lawn. The resolution honoring Lehua Conrad presented by our club at the annual Association of Hawaiian Civic Clubs convention held in Alaska in October, 2007 was framed and presented to Lehua's family on the lawn by Henry Gomes. A holoku parade was presented right after with Debbie Nakanelua-Richards narrating.

The doors to the Monarch Room opened with the melodic music of Paahana and MC, Brickwood Galuteria inviting all the guests to be seated. Soon, Manu Boyd did the oli-"Ea Mai Hawai'inuakea" to escort Princess Abigail Kinoiki Kekaulike Kawananakoa to her table.

Kaiolohiaomamala, our choir, directed by Manu sang Na Lei Hanohano and the medley Na Molokama-Kani U'ina. The Doxology-Ho'onani was sung by all to be followed by a tasteful dinner with red and white wine donated by Better Brands for everyone.

The Monarch Room was beautifully decorated with red ginger, heleconia, hugh monstera leaves, red anthuriums, curly liko branches, proteas, laeua and more. These were done by Julie and Tommy Boyd, Likolehua, Louise, and Harvey Gerboe, Luana Sala, Macky Shea, Momi Clark, Bucky Leslie, Marsha and Bob Bolson, and John Williams assisted with delivery. The red color gave so much elegant ambiance to the room. You can see it glow in the pictures.

The Pelekikena, Leatrice Kauahi, thanked everyone for coming and recognized the members of HCCH along with the corporate sponsors. Manu presented the gift of oli-"He Manu Ha'i Kupuna no Hainalu", a 41 line genealogy of Princess Abigail Kawananakoa while she and David Kawananakoa stood on the stage next to Prince Kuhio's portrait with Manu's pahu drum right in front on a lauhala mat. The presentation of the framed lei hulu, a gift from the members of HCCH to Princess Kawananakoa was done by Watters Martin Jr., Anita Naone, and Leatrice Kauahi, co-chairs of this year's Ball. Hula pahu-"kaulilua I ke Anu o Wai'ale'ale" was the gift from Halau o ke "a'ali'i Ku Makani with Manu chanting.

A nostalgic evening for many guests was of Andrews Restaurant when Mahi Beamer played and sang at the piano. Sunbeam Beamer's singing brought back memories for many as well and the younger crowd was wowed by her baritone voice with velvety tones. More memories came to mind when Sunbeam was joined by Nina.

We were in store for more when Ho'okena came on stage. Manu and Nani Dudoit danced. On the floor we saw Keola Beamer, Mahi Beamer, Gaye Beamer, and Bucky Leslie. We were treated to the hula stylings of Frank Kawaikapu Hewitt, our club member; Kealoha Kalama Cabral, Lehua Galuteria, Debbie Nakanelua-Richards, Lemomi Sukanuma and others. Princess Abigail Kawananakoa also shared a dance with us.

The lovely evening ended with our Club song: "Liholiho" by Emma A. K. DeFries.

The Holoku Ball 2008, subject to the final report should be contributing approximately a little over \$70,000 to the scholarship fund.

Congratulations to members of the Hawaiian Civic Club of Honolulu and much mahalos to Watters O. Martin, Jr., Anita Naone, and Leatrice Kauahi for a job well done.


Holoku Ball 2009: We appreciate Mona Bernardino agreeing to chair Holoku Ball 2009 and welcome members to volunteer to assist Mona. Some examples of how your participation in becoming members of the committee with Mona's guidance will help to spread out the responsibilities are: selling of tickets by calling for corporate sponsors, calling individuals interested in attending to save the date, computerizing mailing lists, decorations, Silent Auction Chair, Entertainment Chair, Invitation Chair, Program Chair, Holoku Parade Chair, How to Encourage wahine guests to wear a holoku, Honoree recommendations to the Officers and Board of HCCH and others. We will be providing information at a later date on how to go about volunteering. Mahalo for considering. *Leatrice Kauahi, Pelekikena*

MEMBERSHIP

KOKUA – To submit your membership dues **OR change of address or email???** Please contact Chairperson, Uilani Souza, Phone: 235-4859, or email usouza@awlaw.com, and please mail your annual membership dues to: **Attention: Membership Dues**, c/o Uilani Souza, P.O. Box 1513, Honolulu, Hawai'i 96806. Reminder...Regular Membership: Individual \$30 and Couples \$45. *Note: a fee of \$20 will be assessed for all return checks.*

WELCOME TO OUR NEWEST MEMBERS:

Trisha Kehaulani Watson and her son Kawika Dallas Kekoa Perreira, sponsored by Allen Naone Jr.

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*With prayerful thoughts of wellness to our members... Wanda Camara's husband, Jonathan Dela Vega. Ahi Takai.*

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Remembering their contributions and leadership, our fondest Aloha... Aunty Ethelreda, Aunty Freda Gomes, Nalani Gersaba

SCHOLARSHIP

March 1, 2008 HCCH Scholarship Committee launched our website for the new scholarship year. The deadline to submit an application is May 15, 2008. *Mahalo...Momi Clark*

HCCH 100TH ANNIVERSARY HISTORY BOOK PROJECT

Please contact Aunty Margaret Boyd at 834-1756 or write 990 Ala Nanala Street #4B, Honolulu, HI 96816, to help with this project.

Prince Kuhio Federal Credit Union

Credit Union membership is for the entire family! Sign up and join today! For your application, call 946-1904 or email: pkfcu@hawaiiantel.net

HCCH VOLUNTEERS NEEDED

Club members who are interested in volunteering to help demonstrate lei making March 9 at Bishop Museum (9 to 5 pm) and/or March 22 at Royal Hawaiian Shopping Center (12 to 8 pm), please call Macky at 254-2269. Our club will get a \$150 honorarium for each of these demonstrations. *Mahalo*

WONDERING...Did you ever wonder WHY?

*Why the sun lightens our hair, but darkens our skin?
 Why women can't put mascara with their mouth close?
 Why is a man who invests all your money called a broker?
 Why didn't Noah swat those two mosquitoes?
 Why is the time of day with the slowest traffic called rush hour?
 Why "abbreviated" is such a long word?*

Kawaiaha'o Church Ali'i Sunday Schedule 2008

March 16	Queen Kaahumanu-March 17
March 23	Prince Jonah Kuhio-March 26
June 8	Kamehameha Ekahi-June 11
August 24	Queen Liliuokalani-September 2
August 31	Blessing of the Aloha Week Court
October 12	Princess Kaiulani-October 16
December 7	King Kamehameha V-December 11
December 14	Princess Bernice Pauahi Bishop-Dec 19

SPECIAL INVITATION

Aloha Family & Friends,

You are cordially invited to a reception and reading to launch my recently published book of poetry, "Uluhaimalama", Kuleana `Oiw Press. The reception and reading will take place:

Saturday, March 15, from 5:30 - 8:30 p.m. at the Art Auditorium (across Kuykendall Hall)
U.H. - Manoa

I will be joined by musicians as well as Ku`ualoha Ho`omanawanui and Brandy Nalani McDougall, co-editors and poets; acclaimed writers and artists Joy Harjo, Victoria Nalani Kneubuhl, Albert Wendt and Imaikalani Kalahele.

Books will be available for sale that evening for \$12.95. If you are unable to attend and interested in purchasing a copy, please let me know.

Otherwise, I believe the book will be available for sale at the usual retail outlets.

With aloha, xxx Mahealani Wendt

PRINCE KUHIO CELEBRATION

Island of O`ahu

Sponsored by the Association of Hawaiian Civic Clubs and the Hawaii Tourism Authority

The City & County of Honolulu, the Office of Hawaiian Affairs

Department of Hawaiian Home Lands, Kamehameha Schools, Papa Ola Lokahi,

Queen's Medical Center, Queen Lili'uokalani Trust

Bishop Museum and Hawai'i Maoli

March 1, 2008: Hawaiian Civic Club of Honolulu Holoku Ball, Royal Hawaiian Hotel Monarch Room, chaired by Watters Martin. Honoree: Princess Abigail Kekaulike Kawananaoia. Tickets: Individual \$150; Prince Kuhio Corporate Table \$10,000; 'Ilima \$5000, Maile \$2500. Contact Susan Malterre-Htun, Hawaiian Civic Club of Honolulu, phone 732-2468, e-mail: hcchhb@yahoo.com. Public Invited.

March 9, 2008: Native Hawaiian Health Festival and Ho'ike'ike, Bishop Museum, 9:00 a.m.-6:00p.m. Celebrating the 20th Anniversary of the Signing of the Native Hawaiian Health Act. Honorees: Dr. Kalani Brady and Dr. Claire Hughes. Featuring Native Hawaiian and other health organizations, speakers, cultural demonstrations and entertainment. Free Admission. Call Kaho'onei Panoke, 224-8068, e-mail wpanoke@cpe-hawaii.com. Public Invited.

March 15, 2008: American Diabetes Association Walk, "Step Out". Join Hawai'i's citizens in a walk for diabetes around Kapiolani Park. Our goal is 500 participants. Help raise funds through pledges. We meet at 7:00 a.m. to sign in at Kapi'olani Park. Walk around the park begins at 8:00 a.m. For more info, contact Leila Pleasant, 428-9784. Public Invited.

March 19, 2008: Prince Kuhio Choral Concert, "Kua 'Aina" produced by Kawaiolaonapukanileo, conducted by Nola Nahulu, Mission Memorial Building, downtown Honolulu next to City Hall, 6:00 p.m. Featuring Kawaiolaonapukanileo, Hawai'i Youth Opera Chorus, UH Manoa Music Department, and the Hawaiian Ensemble, UH Manoa Music Department. Free Admission. Public Invited.

March 22, 2008: Pualeilani Festival of the Arts (Visual/Traditional/Performing Arts), Royal Hawaiian Shopping Center. Free. Featuring Native Hawaiian artists and cultural demonstrators. Entertainment throughout the day with civic clubs and community choral groups and halau hula. Noon to 9:00 p.m. Validated parking at the Royal Hawaiian Shopping Center for special fee of \$5. Call Wayne Panoke, 224-8068, e-mail wpanoke@cpe-hawaii.com. Free Admission. Public Invited.

March 23, 2008: 8:30 a.m. Ali'i Sunday Services at Kawaiahao Church in honor of Prince Kuhio Public Invited.

March 26, 2008:

- 9:00 a.m. Services honoring Prince Kuhio, Mauna'ala (The Royal Mausoleum) Hosted by the Hawaiian Civic Club of Honolulu. Public Invited.

- 9:00 a.m. – 4:30 p.m.: “Mau ke aloha no Hawai‘i – Love always for Hawai‘i”
- On Wednesday, March 26, the Department of Hawaiian Home Lands will dedicate their administrative building, Hale Kalaniana‘ole. On behalf of homesteads state-wide, the Kapolei homestead community joins DHHL in planning a special celebration honoring Prince Kuhio. For detailed information, visit the website: www.kapoleihomestead.com. Free. Public Invited.
- Schedule of events:
 - 9:00 a.m.: Ho‘okupu Processional, Kapolei High School main gate, along Kapolei Parkway to east Kapolei site of Hale Kalaniana‘ole.
 - 10:30 a.m.: Dedication ceremony of Hale Kalaniana‘ole
 - 11:30 a.m.: Ho‘olaule‘a, musical entertainment, displays, vendors
 - 12:00 noon: Prince Kuhio HCC Choral Group Presentation at the Federal Building. Free. Public Invited.

March 29, 2008:

- 4:00 p.m. Prince Kuhio Kalaniana'ole Commemorative Parade, Saratoga to Kapiolani Park, Waikiki. The Association of Hawaiian Civic Clubs, schools, and Hawaiian organizations come together to honor Prince Jonah Kuhio Kalaniana‘ole. Grandmarshals: Dr. Kalani Brady and Dr. Claire Hughes. Public Invited.
- 6:00 – 9:00 p.m. Prince Kuhio Moonlight Concert, Kapiolani Park Bandstand, fabulous Hawaiian entertainment, cultural exhibits, and great dinner plates. Honorees: Charlie Rose and Auntie Elizabeth Lau. Free Admission. Public Invited.

Island of Mau‘i

Royal Ball, **April 19, 2008**, 6:00 p.m., King Kamehameha Golf Club in Waikapu. Theme is, "Ho'omoe Wai Kahi Ke Kao'o"(let all travel together like water and flow in one direction). Cost: \$75.00 which includes dinner, music by Melveen Leed and Keahelawemali'e, a silent auction, and a holoku contest. Honorees: Uncle Stanley Bega, Auntie Hokulani Holt-Padilla, and Auntie Nona Beamer. Corporate tables available. Hosts: Lahaina and Kuini Pi‘olani Hawaiian Civic Clubs. Contact: Kenneth Kauai Souza at 242-8924. Public Invited.

Island of Kauai

Annual Celebration in Honor of Prince Kuhio, Prince Kuhio Park, Poipu, Koloa, Kauai, **March 29**, 10:30 a.m.. Hosted by the Royal Order of Kamehameha. Free. Public Invited.

Island of Hawai‘i

The Kuakini HCC of Kona presents Prince Kuhio Day at Hale Halawai, Kailua, Kona, **March 22**, 9:00 a.m. featuring arts and crafts, baked goods, and lei contest. Interactive activities for children. Contact: Bucky Leslie, 936-2661. Free. Public Invited.

Mainland Council

To be announced

POC: Kaho‘onei Panoke, Chair, AHCC Prince Kuhio Celebration Committee, e-mail: wpanoke@cpe-hawaii.com; phone 224-0868, March 8, 2008.

MAMo: Maoli Arts Month 2008 - Calendar of Events

Contact: Vicky Takamine: 808-754-2301, vtakamine@gmail.com

Noelle Kahanu: 808-848-4169, noelle.kahanu@bishopmuseum.org

Jonie Williams: 226-7188, paifoundation.admin@gmail.com

Now in its third year, MAMo: Maoli Arts Month is a broad community-based effort to celebrate the depth, breadth, and diversity of the Native Hawaiian arts community, to create economic opportunities for Native Hawaiian artists and cultural practitioners by increasing their presence in museums and galleries, and to educate locals and visitors about Native Hawaiian art. PA‘I Foundation will partner with generous funding from the Hawaii Tourism Authority, Ford Foundation and the Office of Hawaiian Affairs, will partner with the Bishop Museum, Outrigger Hotels, Mayor’s Office of Culture and Arts, Hale Kū‘ai, individual artists, arts organizations, and galleries to plan and implement MAMo, a month-long celebration of Native Hawaiian art and artists in May of 2008.

MAMo 2008 Calendar of Events - www.maoliartsmoonth.org

MAMo Awards 2008 Ceremony and Gallery Reception - May 1, 6-9 pm, Bishop Museum

Bishop Museum hosts the awards ceremony that honors this year’s MAMo Award recipients: revered *lauhala* weaver **Elizabeth Lee**; painter **David Parker**; sculptor **Hanale Hopfe**; and painter and arts organizer **Al Lagunero**. The MAMo Award recognizes Native Hawaiian visual artists who have devoted a lifetime to championing Native Hawaiian arts. Also related to the MAMo Awards is the Museum’s exhibition in the J.M. Long Gallery, which celebrates these artists through

the presentation of artworks that attest to their lifetime achievements. The exhibit remains on view through September 7, 2008.

First Friday Gallery Walk - May 2, 5-9 pm, Downtown Chinatown

Join thousands in experiencing the artwork, poetry and prose of over 20 Native Hawaiian artists in galleries throughout the Downtown Chinatown area. Participating galleries include the ARTS at Marks Garage, Louis Pohl Gallery, and the Nu'uuanu Gallery at Marks Garage

3rd Annual Native Hawaiian Arts Market & Keiki Art Festival - May 3-4, 9 am -5 pm, Bishop Museum

Co-sponsored by Bishop Museum and PA'I Foundation, the two-day Annual Native Hawaiian Arts Market will feature over 40 Native Hawaiian visual artists, from fine arts to contemporary craftwork. Highly collectible and of extraordinary quality, featured works will include feather work, silk scarves, turned bowls, carved images, decorated gourds, weaponry, and weaving. Throughout both days, there will be demonstrations, workshops, arts and crafts for the keiki, and outstanding food and Hawaiian entertainment. For the first time, the 3rd Annual Keiki Art Festival will also be taking place at Bishop Museum. **Ma Ka Hana Ka 'Ike: Keiki Art Festival** enables keiki and their families to create art and meet native Hawaiian artists and cultural practitioners. The event features hands-on art activities where children can create sand art, watercolors, lei making, kapa beating, weaving, feather work, storytelling, t-shirt screening and much more. A special **\$3.00 admission** rate will apply and will include access to the Art Market, Keiki Art Festival and all the Museum galleries.

2nd Annual MAMo Wearable Art Show - May 16, 2008 5:30 pm Waikiki Beach Marriott Resort, Kona Moku Ballroom

The show will feature cultural practitioners and artists showcasing art that native Hawaiians wear for ceremonial rituals, cultural practices and adornments. Both traditional and contemporary garments will be included, for example: kapa, feather work, shell jewelry, tattoo, weaponry, weaving, carving, traditional Hawaiian musical instruments and many more. The show will incorporate Hawaiian performing arts into an evening of art and entertainment. The show will be a ticketed event. Revenues earned from this event are expected to provide an annual source of income for future festivals. A special tribute to artist & fashion designer the late **Allen Akina** will feature rare artwork and fashions by this talented artist. General Admission: \$250, Corporate Tables \$2500-\$10,000

MAMo Wednesdays at the Outrigger Waikiki - May 7, 14, 21, 28 10am- 12noon, Outrigger Waikiki

Wednesdays throughout the month of May, the Outrigger Waikiki Hotel hosts native Hawaiian artists who will demonstrate traditional arts such as lei making, weaving, fiber arts, and carving.

MAMo Keauhou Art Market - May 31, 10-4pm Outrigger Keauhou, Kona, Hawai'i

For the first time MAMo is expanding to the neighbor islands. The Outrigger Hotels is pleased to co-sponsor the MAMo Keauhou Art Market at the Keauhou Beach Resort in Kona, Hawai'i. This one-day event will feature native Hawaiian artists from who will share, demonstrate, display and sell their works of art. The event will also include hands-on activities where children can create sand art, watercolors, lei making, kapa beating, weaving, feather work and t-shirt printing.

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Saturday, January 27, 2007

To: Senator Russell Kokobun, Chair  
Senator Jill Tokuda, Vice-Chair  
Committee on Water, Land, Agriculture, and Hawaiian Affairs  
From: Dr. William W.M. Steiner, Dean, CAFNRM, UHH

I am writing in support of SB 958 because it is my opinion that Hawaiian Taro, and other heritage plants, do not need a program of genetic engineering to improve the stock. I am writing in my professional capacity as a Geneticist, taking my Ph.D. (Genetics) at the University of Hawaii in 1974 under Hampton L. Carson, Professor Emeritus, former National Academy of Sciences member, and now deceased. I have taught at the Universities of Illinois (Champaign-Urbana) and the University of Missouri (Columbia) and served as Director of the US Geological Survey Pacific Island Ecosystems Research Laboratory based in Honolulu coming to that position after serving as Acting Director of the USDA Agricultural Research Laboratory in Columbia Missouri. After retiring from 23 years in the Federal Service I am currently Dean of the College of Agriculture, Forestry and Natural Resource Management at the University of Hawaii, Hilo. My short Biography is attached.

Several things influence my opinion:

1. It is obvious that current stocks that are native to Hawaii have been developed by my former Hawaiian ancestors over centuries of study and selection. We would not have these distinct varieties if this were not so. That early Hawaiians carried on study and genetic selection of Hawaiian plants based on their naturally occurring mutations and differences is also evident in the many strains of banana, sweet potato and gourd that they also developed for different uses by their communities. This means that the rights of doing any change in these stocks belong to those who developed them, the native Hawaiians.

2. Problems with genetic engineering as a result of directed mutagenesis or gene insertion have been reported in the scientific literature. These are largely ignored by those who would want to accomplish rapid change for the "good of humanity" because they interfere with the opportunity to enhance careers or make reputations. Some of these engineering attempts have resulted in properties that affect allergic reactions in humans or in other undesirable side effects. It is for this reason the European community has banned the production and use of genetically engineered food stocks in their lands.
3. There is no guarantee that genetically engineered food stocks will give any long term protection where disease or pest problems are the target of the effort to make change. Life forms adapt naturally through evolutionary processes and this will continue even with any added benefit that a genetically engineered modification might bring for protection of the plant. This results in an "arms race" between the host plant and the disease or pest long known to occur by biologists.
4. There are reports in the literature of engineered genes escaping their host to contaminate closely related species or even others on a more grand scale. Viruses and bacterial transformation may play roles here. Spreading modified genes into other populations and species is difficult to detect, may present problems that are new and unique in their own right, and are difficult to track and stop. A case in point is the spread of the papaya ring-spot virus resistance gene into other strains of papaya virtually costing papaya farmers millions of revenue and leading to the decline of a major export industry in the state.
5. We do not clearly understand the genetic and biochemical reactions and interactions that occur between genes which often have multiple functions in different metabolic pathways that can be easily disrupted by even a single change in an amino acid, one of the building blocks of the proteins that genes control. This is the reason surprising problems may arise.
6. New techniques that enhance and target gene mutations that occur naturally are now available that work just as rapidly as genetic engineering via mutagenic or gene insertion technologies and which give better yields of balanced genomes. These are in line with accepted traditional practices or developing new strains.

It is my learned opinion that a ten year moratorium actually should be extended to all heritage plants and that it should extend *in perpetuum* that is, not be time limited, and that the bill should be changed to reflect this *until such time as the Hawaiian community is in agreement that genetic interference based on genetic engineering is a necessary and desired way to change any heritage plant including taro*. I say this not just because of the influences I mention above, but because the fate of these plants should remain in the hands of those to whom they are culturally important; in this case native Hawaiians.

It would be better, if funding were available, to support a Heritage Foods Institute for a more traditional and accepted approach to developing pest and disease resistant strains of taro and other culturally important plants. This should be investigated as a solution to the problem. The College of Agriculture, Forestry and Natural Resource Management at the University of Hawaii-Hilo would welcome discussion and support to do this in the future.

I am available for more comment if such need may arise.

With deepest respect and sincerity I remain

*Bill Steiner*

Dr. William Wallace Mokahi Steiner

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### ***On the Importance of Taro Biodiversity Conservation: A Scientific, Economic and Food Security Perspective***

P. Levin. 27 February 2008

Scientists suggest that the center of origins of a species is also typically the site where the greatest diversity is found. For the case of taro, this is typically considered to be Papua New Guinea or "somewhere within Northeast India and Southeast Asia" but there is growing consensus that the species was domesticated in many places (Matthews 1990 and 2004). Melanesia has now become the focus of the center of domestication for banana, sugarcane, coconut and taro (*Edible Aroid Conservation Strategies*, Global Crop Diversity Trust (draft) 13/05/2007).

In what might be considered a unique situation to scientists, but not to farmers, while the genetic diversity of taro plants in Hawaii is limited suggesting very few originating plants (Lebot and Aradhya, 1991; Lebot et al, 2004), one of the centers of cultivar morphological diversity (physical characteristics that have exhibited remarkable adaptability) seems to have developed in an area most remote from its possible centers of origin with a cultural group - Hawaiians - that centered its life and its cosmology around the plant. This is logical given the distance traveled in small canoes with limited storage space, the necessity of bringing some form of food stocks for planting under the uncertainty of food availability in a new place and the subsequent necessity of developing those few plants into multiple forms that could handle multiple conditions as they moved out over the land.

In that sense, Hawaii can be considered what conservation biologists would call a "center of highest biodiversity" for taro cultivars. The concept, sometimes called a "hotspot", is applied both to ecosystems such as rainforests with a high number of *different species* and crop regions with a high number of *cultivars within a single species*. What this means is that over time Hawaii developed more varieties of taro than many other locales in the world.

The TaroGen Project, a global taro genetic resources network which began in 1998, found that "few major collections of taro exist in the Pacific and Southeast Asia"; one of which is located at the University of the South Pacific in Samoa and has ties to the University of Hawaii. The project also found that globally "not only has the number of farmers varieties decreased overall but, so to, has the number of wild types" (*Edible Aroid Conservation Strategies*, Global Crop Diversity Trust (draft) 13/05/2007:9)

Since the mid-1800's through the 1970's, taro cultivars were collected throughout the Pacific and Asia and brought to Hawaii by researchers, adding to the value of the diversity held here in the islands. The suggestion by some that Hawaii continues to lose its traditional varieties does not bear out. Most of the hundreds of Hawaiian varieties that were lost happened as Hawaiian populations dramatically declined in the early 1800s and their lands were turned to rice growing. Since the early 1900's, and especially in the last five years, the varieties described in Bulletin 84 (Whitney, Bowers and Takahashi, 1939) are still with us and multiplying as farmers and botanical gardens take up the call to preserve and increase their numbers.

*Throughout the world, centers of highest biodiversity are protected in the same way as we protect the principle in a bank account or an endowment. Why?*

Conventional science may not be the best way to determine which cultivars are most important. Hawaii's collection of taro biodiversity may appear genetically similar under the microscope but in the field they carry with them the diversity natural to all traditional crops.

Hawaiian and Pacific cultivars were developed with the capabilities for a broad repertoire of physical form from a known foundation rather than unpredictable and uncontrollable randomness (Pang, personal communication and public presentation, 2007) to meet the unique soil and climatic conditions of the places they grew. These cultivars exhibited tolerance to drought, monsoon-like rains, brackish, warm or cold water, deep shade and full sun, and elevation (hot to cold). They also developed short or long maturation periods related to seasonal environmental conditions (light, temperature, changes in water and mud depth) and human transience (rapidly maturing varieties allowed them to move seasonally or prepare for wars or other unforeseen events). The plant also developed varying degrees of itchiness to defend against predators - from slugs to animals. This is the foundation of how farmers work with diversity and why they value it so highly. The treasure trove of plant capabilities in a single plant species can be lost in the blink of an eye through the deliberate introduction of the chance for random mutations.

To draw from other crop examples;

- In the 1980's, when the US cotton crop was failing, the unique genetic structure and plant hardiness of Hawaii's ma'o (the endemic cotton *Gossypium tomentosum*) saved an industry worth \$100 billion dollars (Letourneau 2004; Wendall 2002); a opportunity created by Hawaii's geographic isolation. With foresight, the EPA recognized this by requiring Monsanto to label its Bt-Cotton seed with the following restriction: "*Not for commercial sale or use in Hawaii*" because of their concern for potential gene transfer from genetically modified Bt-cotton to its wild relatives.
- The same type of "save" occurred with corn. In the 1970's, the US corn crop was hit by leaf fungus destroying a billion bushels of maize, including most of the seed for that crop (Mann 2004). A tiny grass-like wild maize found in Central America and then later, old varieties in Africa saved the industry. Unfortunately today, because of a lack of geographic protections such as the above example many of the regions precious traditional corn varieties and their genetic and morphological diversity have been compromised.
- Charles Mann, a researcher at Amherst, Massachusetts (UMA) has written; "Scientists were shaken by how close the system had come to disaster—they had been lucky that the problem was quickly contained, *and luckier still that the African maize had not been supplanted by vulnerable modern hybrids* [emphasis added]."
- When Samoa was hit by a taro leaf blight in 1993, the many varieties present in Hawaii allowed scientists to find and develop stronger, more disease resistant taro cultivars - by conventional cross-pollination methods - and assisted Samoa in its recovery. The fact that these cultivars from all over the Pacific and Asia came here enough years ago to have been hardy representatives of the taro of the region is a big part of the reason why Hawaii researchers were able to help.

If you are setting up an endowment, you don't gamble with the principle in the bank account. That is just not sound financial practice. As Lorrin Pang demonstrated at the Hawaiian Caucus presentation (Jan 2007), GMO taro is worse than gambling because you don't know the odds of losing. For example, in banking you can stop investing in high-risk mortgages and stem the loss, but in agriculture, once a GMO plant is released, it can't be recalled. The estimated costs of rice contamination on the mainland in 2006 was over a billion dollars. We will be finding traces of this disaster in rice and pay the price in rice sales for years to come.

In 2006, Peru, a country where more than 4,000 traditional potato cultivars exist, decided this incredible resource was so important to the future protection of their food resources that they banned genetically modified potatoes within the region. We would be wise to do the same with all the taro cultivars within Hawaii, not just for ourselves, but for all our Pacific cousins.

What we have here in Hawaii in taro resources is vital to our future. This is supported by the International Treaty on Plant Genetic Resources for Food and Agriculture (FAO). In 2004 and 2005, the Pacific Plant Genetic Resources Network (PAPGREN) prioritized the protection of taro as one of the critical food crops in the Pacific region, using the following basis:

The main criteria for priority ranking, in order of importance, were:

- *role in food/nutritional security* (especially if the crops were important throughout the region or specifically important in atolls);
- *levels of genetic diversity and of genetic erosion* (both in the field and in existing genebanks);
- *cultural value*;
- *potential for income generation* (especially through value-added products).

In 2004, Charles Mann (Ford Foundation 2004) wrote; “The threats to complex biological systems are always difficult to quantify, but the stakes are clearly high. Each of the major food crops is vital to the lives and cultures of millions of people—billions, in the case of cereals. Because a crop’s traditional varieties and wild relatives usually contain most of its gene pool, they are the raw genetic material out of which plant breeders develop new varieties. Understanding their dependence on agricultural biodiversity—the genetic variation in crops—plant breeders have long worried about its loss.”

Maurice Bellon, a researcher at the International Maize and Wheat Improvement Center (known as CIMMYT, after its Spanish acronym) put this another way; “It seems incredible, but maize production throughout the world may depend on the small farmers in southern Mexico, *and this is also true of farmers in the centers of origin of other crops.*” (Ibid 2004)

If other countries decide to pursue genetically modified taro, that is their decision to make. But, let us, in Hawaii, recognize the unique role we play in food and small farm security for the Pacific by not allowing gmo taro - of any variety – to be developed in or introduced into the state.

Let us celebrate this center of taro cultivar diversity and create a protected zone around these critical resources that will give back to us ten-fold in the future.



Club Motto: "Ua Mau Ke Ea O Ka 'Aina I Ka Pono" – The Life of the Land is Perpetuated in Righteousness;  
Club Flower: Ilima Club Colors: Ilima/Red; Club Song: Liholiho  
Onaona wale ia pua, I ka miki'ala mau 'ia, Ua hele wale a nohea, I ka nou i ke kehau  
O beautiful 'ilima, choice of my heart, O sweet and charming flower, Soft and lovely to behold

Hawaiian Civic Club Of Honolulu  
PO Box 1513  
Honolulu, HI 96806

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