

Hawaii Tropical Botanical Garden

A Garden in a Valley on the Ocean

A non-profit 501 (c) (3) organization dedicated to the preservation of nature and its beauty

Dan Lutkenhouse, Founder



Calathea warscewiczii

Marantaceae, the Prayer Plant Family

When Garden Co-Founder Dan Lutkenhouse first began creating the Hawaii Tropical Botanical Garden in Onomea Valley, he knew he wanted to keep the atmosphere of a deep rainforest jungle intact. Of course he wanted to remove the strangling vines and noxious weeds that had grown up to make the valley virtually impassable, but he knew that building a traditional, finely manicured botanical garden might not be the best fit.

Not only would a traditional specimen garden be costly to maintain, it would permanently alter the ecological balance that nature had achieved. Since our mission is to teach the public about the beauty and uses of tropical plants and the

rainforests which sustain them, he opted to preserve the existing rainforest ecosystem as much as possible.

With this in mind, Dan worked his way through Onomea, clearing paths but leaving most of the forest as it was. As the weeds and rampant vines were removed from the valley floor, instead of planting grass, attractive or botanically interesting plants were introduced as ground cover and mid-level plants. Like any rainforest, life continues to thrive everywhere you look; from the bottom of the valley floor to the uppermost reaches of its tallest trees. The difference here is that what looks natural, actually had a lot of thought and planning behind it. (Continued pg 4)

A Word from the Director



I first visited HTBG in February of 2004. Like so many of you, I was enraptured by the magic of this hidden gem of a garden and the amazing story of its humble beginnings.

After eleven years with the Garden this feeling has not diminished. I have learned so much and coming to work here each day is a pleasure. I love being a part of this team that is wholeheartedly devoted to its mission, and to witness the joy and wonder the Garden evokes from our guests never gets old!

2014 was a year full of challenges. Hurricanes Iselle and Anna forced us to close for two days and operate without power for an additional four days. The lava flows from Kilauea threatened to overrun one of our major towns and possibly change the landscape of the island forever. However, our staff pulled together and not only did we make it through it, we had one of our most successful years to date.

The Garden had 90,330 visitors and 700 students took advantage of our free program for school groups. 2015 promises to be even better with 26,339 visitors and 206 students in the first quarter.

Our Garden could not exist without the generosity and enthusiasm of our guests and this is especially true of our members. President and Co-Founder Pauline Lutkenhouse, the Board of Directors, the staff, and myself would like to thank all of our members with a couple of special events this summer, to enhance their Garden Experience.

The first offering is for photography enthusiasts. Professional photographers Ken and Mary Goodrich of Volcano have been members of HTBG for many years. Their business, Hawaii Photo Retreat, <http://www.hawaiiphotoretreat.com>, offers photo tours and workshops to people who wish to improve their photographic skills.

Whether the camera is an iPhone or a DSLR, Ken and Mary offer tips on composition and exposure,



as well as their insights on expressing one's personal vision through the camera.

Now Garden Members can have a walk-through in a small group with Ken and Mary. They will help you make the most of your photos and offer suggestions. The special member cost for an approximately 3 hour garden photo tour with instruction and informational handouts is \$99. We will start at 9am, rain or shine, with a brief introductory prep session.

The first workshop will be on Saturday June 6th, and is devoted to getting the most out of your iPhone or Ipad.

The second workshop will be on Saturday June 27th, which will be all about getting the most out of DSLR camera.

Member Events

Classes are limited to six people so be sure to reserve your spot as soon as possible. RSVP with David or Suzanne at 964-5233 or htbg@ilhawaii.net.

We are also very happy to invite members to attend an Exclusive Early Evening Horticultural Tour on Saturday, June 20, 2015 from 4:30PM to 6:30PM.

This free tour of the Garden will be led by Jeff Boggeln, Garden Manager and Sean Callahan, Horticulturist, who are ready to share their combined 60 years of Garden knowledge and horticultural experience.



Horticulturist Sean Callahan Leading a Group

You'll learn about the history of Onomea Valley and hear stories from the early days when Dan and Pauline Lutkenhouse created Hawaii Tropical Botanical Garden. You'll also learn some of the history behind some of our plants and have the opportunity to ask any questions you may have.

The tour will last approximately 1 hour, ending at Twin Rocks, then you will be able to explore the Garden on your own until 6PM. After the tour enjoy some pupus on the Gift Shop Lanai.

This Event is free for our Members, but to ensure the best experience for all, reservations are limited to 30 people.

Please RSVP by June 1, 2015 to David or Suzanne at 964-5233 or htbg@ilhawaii.net.

We hope to add Member Events throughout the year so keep an eye on our calendar at <http://www.htbg.com/calendar.html>, our news page at <http://www.htbg.com/wordpress/> and our frequently update Facebook page at <https://www.facebook.com/HawaiiTropicalBotanicalGarden>

Thanks again to you all for your support, I hope to see you around the Garden soon. -

David Tan
Executive Director

Staff Update

We are pleased to welcome two new staff members to the HTBG team, both of which were born and raised on the Hamakua Coast and joined us in October of 2014.

Wallace Ishibashii III is a hardworking addition to our maintenance team and has been invaluable in our repaving and infrastructure improvements.

Kayden Cox-Pacheco has quickly become an integral part of the Garden Staff. His youthful energy and enthusiasm has helped us to keep the trails and boardwalk looking neat and well cared for.

Both are a pleasure to work with and we look forward to having them as part of the team for years to come.

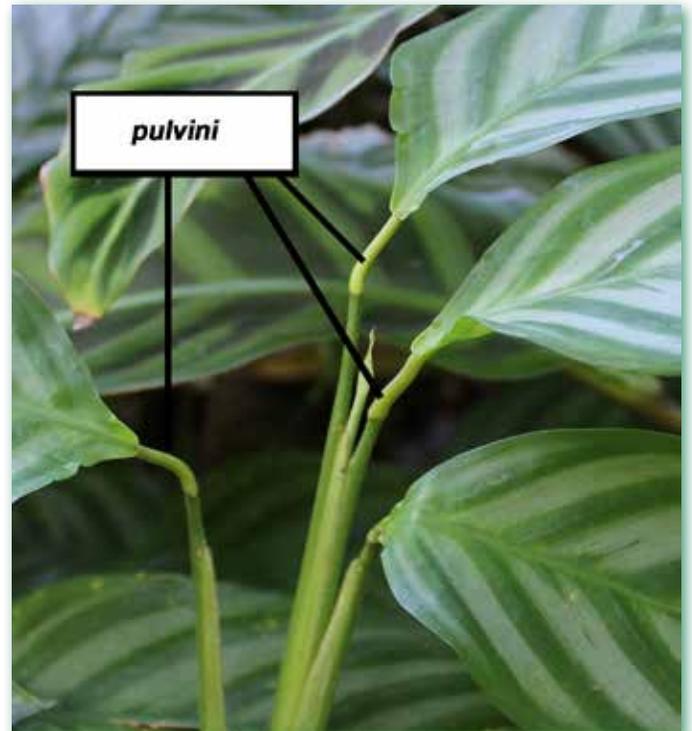
(Continued from Cover)

Each planting has been carefully planned, taking into account its physical requirements as well as its aesthetic appeal. We have found that some of the most attractive plants for ground cover in the deep shade are from the Marantaceae Family. With their dazzling array of patterned foliage, and bracts that resemble rattlesnake tails, beehives and cigars, the Marantaceae bring plenty of flare to the forest understory.

The Marantaceae Family is also called the Arrowroot Family, for the commonly cultivated *Maranta arundinacea* which is the commercially available and familiar arrowroot starch used in cooking. It is also sometimes called the Prayer Plant Family, because of the ability of its leaves to move and close up like praying hands. This ability is possible due to specialized sheaths of tissue at the end of the petioles (the stalks attaching the leaf blade to the stem) called pulvini. The cells that make up pulvini bring about changes in the position of the leaves by rapidly losing water. All members of the Marantaceae have pulvini.



Closeup of *Calathea zebrina* leaf showing its S shaped lateral veins



Pulvini, the specialized tissue allowing for non-growth leaf movement

Another defining trait of this family is the arrangement of veins in the foliage. S-shaped lateral veins with numerous, regular, parallel cross veinlets (attached at right angles) between them and the pulvinus at the base of the leaf blade are unique to Marantaceae making it possible to identify the family from a single leaf. These leaves are very tear resistant making them an excellent choice to display in mass plantings as ground cover.¹

The following photographs showcase some of the spectacular leaf designs and floral bracts of this family that make them so interesting as ground cover and specimen plants. You can see them up close and in person as you walk the winding trails of the Garden.

¹ Kennedy, H. (n.d.). *Marantaceae in Flora of North America*. Retrieved May 9, 2015, from http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=10535

Prayer Plant Family



Calathea fasciata



Calathea leopardina



Calathea picturata 'Vandenneckeii'



Calathea bella



Calathea pseudoveitchiana



Ctenanthe oppenheimiana

Marantaceae , the Prayer Plant Family



Calathea zebrina 'Binotii'



Floral bract and flowers of Calathea burle-marxii



Calathea zebrina



Cigar shaped bracts of Calathea lutea



Calathea lindeniana



Rattlesnake Tail shaped bracts of Calathea crotalifera

Garden Updates

The Garden continues to improve both our plant collections and facilities.

Alapai Ledward heads our maintenance team which has been doing an excellent job of widening and repaving all of our trails for improved safety and visual appeal. The entire Torch Ginger Trail has been repaved as well as the Orchid Garden. Fern Circle has also been improved, with its entrance widened and steps removed in order to ramp it for wheelchair accessibility.



Fern Circle Accessibility Upgrade

Thank you for your continued patience as these trail improvements will proceed throughout the summer. The Cook Pine Trail is the next area that will be upgraded and maybe closed for a short while this summer, although we will do our best to keep it accessible.



Alapai Ledward, Kahele Miura, and Wallace Ishibashi III repaving in the Orchid Garden

On the Garden Collection side, our new Orchid Specialist, Ryan Atiz has made the Orchid Garden shine with a complete clean out and the addition of many new and interesting species of orchid plants for permanent display while at the same time maintaining the colorful and crowd pleasing revolving display of hybrid orchids.

Also, we are enjoying watching some of our new Heliconia Cultivars blooming for the first time and eagerly anticipating the first blooms from our Costus accessions received last year from David Skinner with the Heliconia Society.

We hope you'll come check out our latest acquisitions but you can also keep up with all the latest HTBG news online at <http://www.htbg.com/wordpress/> and <https://www.facebook.com/HawaiiTropicalBotanicalGarden>.



New Cultivar Heliconia vellerigera 'She Kong'

Special Thanks

The Garden extends special thanks to Brooks and Beverly Bauer, The Vance Wall Foundation, Leo and Jonie Dignan, Scott Nehring, Phil and Carla Reed, Andrew Conwell, Marian Kobayashi and all of our recent donors and members whose generous giving allow us to continue our dual mission of conservation and education.

The Garden would also like to thank Kai Quintal of Quintal Orchids for his generous donation of species.

Finally, Thanks to the over 700 Hawaii students that used our free education program in 2014. You are why we are here!

The Board of Directors welcomes Brooks Bauer

After the loss of our longtime Board Member Dr. Yoneo Sagawa last year, the search for a new board member began.

Fortunately, we didn't have to look too long or too far.

Over the past few years we have been fortunate to have as a Member and Garden Benefactor Brooks Bauer and his lovely wife Beverly.

Brooks and Beverly have shown their belief in our mission at HTBG not only as generous donors, but also in the respect and generosity they have shown to our staff. They have taken the time to get to know all of us and the jobs that we do.

In addition to their love of the Garden, the Bauers have over 30



Brooks Bauer

years' experience with many types of agricultural commodities and products and running a family farm and business.

So it seemed like a logical choice to ask Brooks to join our outstanding Board of Directors. We are thankful that he accepted our invitation.

Welcome aboard Brooks! We look forward to having you with us and hearing your input as we move forward.

GARDEN MEMBERSHIP

Has 1,058 members as of , May 1 2015. Our thanks to all of you who so generously support our preservation of Onomea Valley.

If you'd like to become a member or purchase a membership as a gift, please call us at 808-964-5233 or visit our website www.hawaiiigarden.com. Your membership is 100% tax deductible.

PLANT DATABASE

As of this printing, The searchable database of our tropical plants includes 1,581 accessions from 88 different families.

The plant database is available for the public at <http://www.hawaiiigarden.com/search.php>

Dan Lutkenhouse, Founder
Pauline Lutkenhouse, Co-Founder & President

David Tan, Executive Director
htbg@ilhawaii.net

Board of Directors

Pauline Lutkenhouse
Curtis Malia
Kathleen "Pudding" Lassiter
Debi Lutkenhouse-Frost
Gregory Kwan
David Reed
Brooks Bauer
Suzanne Robotham, Secretary

Managers

Jeff Boggeln, Garden manager
Kehaulani Pa, Gift Shop Manager
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Alapai Ledward, Construction and Maintenance Manager

Horticulturist

Sean Callahan, seancallahan37@gmail.com

Gift Shop and Reception Staff

Migdalia Diaz, Nadine Ng, Tammy Silva, Jason Relles, Norman Nishizaki

Garden and Maintenance Staff

Ryan Medieros - Gardener
Kahele Miura - Gardener
Kayden Cox-Pacheco - Gardener
Ryan Atiz - Orchid Specialist
Wallace Ishibashi - Maintenance
Chris Wright - Maintenance
Scott Pondela - Security
Camren Sylva - Security

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Hawaii Tropical Botanical Garden
Nature Preserve and Sanctuary located at Onomea Bay, Island of Hawaii
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