



Newsletter of the

Hawai'i Bromeliad Society

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TILLANDSIA TO CHINA — A VISIT FROM MARTIN SIAW

Some people come away from bromeliad conferences informed by the lectures, amazed by the exhibits, and gleeful about the plant sale bargains. HBS members Gail and John Ishihara came away from the World Bromeliad Conference in San Diego in early June with a new friend, Martin Siaw, who has graciously agreed to speak at our June meeting about his ground-breaking efforts to introduce bromeliads to the People's Republic of China.

A native of Singapore, Mr. Siaw is a Ph.D. candidate at Beijing Forestry University (BFU), where he is mentored by Dr. Guo Ling, the Research Director of the Beijing Botanical Garden, and Dr. Gao Yike, Head of Horticultural Science at BFU. Martin comes to bromeliads with a distinguished background in horticulture. After graduating from Cornell University's School of Hotel Administration, where he specialized in the culinary history of Eastern China, he worked as personal assistant to John Holdridge, the former US ambassador to Singapore and Indonesia, at Holdridge's West Wind Farm, an early leader in the organic management of pasture and grasslands; curated the Dong Hai Flower Exposition; and at the request of the governments of Kenya and Ecuador, promoted their horticultural products at the 2010 Shanghai World Expo. In 2014, Martin established Inca Garden, offering landscape and floral products design services, and curating themed horticultural exhibitions. His projects include the Shanghai Garden Festival Air Plants Exhibition at Raffles City in Singapore, and the Tillandsia and Kokodame Spring exhibit in Chengdu.

Midway through his horticultural journey, Martin discovered the unconventional beauty of *Tillandsia*. He also learned that *Tillandsia*, and bromeliads in general, are often dismissed in China—collected only by two botanical gardens and the most enthusiastic of hobbyists. Subsequently, with the founding of Inca Garden, since 2014 Martin has gone about designing and organizing standalone exhibitions, and in the past few years he has already started to see *Tillandsia* gain in mass appeal across Mainland China. In his talk to HBS, Martin will share his insights into the global journey of *Tillandsia*, focusing on what has led to the shift in consumer perception in China, and whether it is sustainable. Martin and his team at Inca Garden hope that their experiences in sharing their love for *Tillandsia* will inspire HBS members, and provide practical ideas that we can implement in Hawai'i to attract a broader audience, beyond gardeners and plant lovers, to appreciate and grow *Tillandsia*.

Complementing his interest in bromeliads, Martin is the author of a research paper on frangipani (better known in Hawai'i as plumeria), and the editor of *Cultivation and Appreciation of Wild Begonias*, and of the International Malus Registration site (that's apples, to us non-scientific folks). Besides *Tillandsia*, he is working on projects involving *cryptanthus*; *Platyserium*—a genus of ferns often commonly known as staghorn or elkhorn ferns; and the Bearded Iris collection at the Beijing Botanical Garden. With Dr. Sven Landrein of Xishuangbanna Tropical Botanical Garden, he is investigating the performance of different *Epiphyllum* (a genus of cactus) species and cultivars in Yunnan, and with Dr. Ding Youfang, curator of tropical collections at Xiamen Botanical Garden, he is building comprehensive bromeliad and begonia collections. And in his spare time!, with his cousin, Dr. Johnnie Sugiarto, Martin is working in Pacitan, East Java, to collect, conserve, and protect Southeast Asian begonias and Gesneriads, while preserving vanishing Indonesian natural habitat.

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JUNE MEETING

This Saturday, June 30,
we meet at **Lyon Arboretum**
at **12:30.**

Our hospitality hosts are
Leslie and Wendie.

REPORT OF THE MEETING OF MAY 26, 2018

Lyon Arboretum

ATTENDING: Susan Andrade, Merrill Cutting, Naty Hopewell, Terese Leber (presiding), Wendie Liu, Larry McGraw, Ed Nishiyama, Dolores Roldan, Jaime Roldan, Stan Schab, Tom Stuart, Lynette Wageman. GUEST: Aziz Agis.

CONVENED: 12:50; ADJOURNED: 2:50.

Terese welcomed everyone, and thanked Ed and Stan for food and drinks, and especially Aziz for his homemade flan (available on order for just \$20!).

ANNOUNCEMENTS: Terese passed out our new name tags, and reminded people to turn them in at the end of the meeting, so they can be collected and brought back next month.

TREASURER: Dolores reported that we made \$315 at the April auction, and that our bank balance as of April 31 was \$12,859.96.

LIBRARY: Merrill (right) circulated two books that would be available at auction—Jack Kramer's *Bromeliads* (which went for \$7) and Victoria Padilla's *Bromeliads* (a steal at \$3)—and described how to sign out material from the HBS library.

HOSPITALITY: Our hospitality hosts for June are Wendie (food) and Leslie (drinks).



NEW BUSINESS—COCONUT CHUNKS: During our April visit to David Fell's nursery, members noticed how he uses coconut chunks as a plant medium. He generally uses it straight: it can hold plants firmly on its own, retains water while allowing for air circulation, and takes a long time to break down. Bricks like the one shown on the left can cost \$16 or \$17 in a store, but David has let us know that if we wish to put in a group order, he could provide it at a substantially lower cost. Members decided to see at the next meeting how many of us are interested, and to consult with David on making a bulk purchase.



AUCTION: Our May auction featured bagfuls of Tom's *Canistrum aurantiacum*, *Portea petropolitana*, and *Achmea gamosepala*; Merrill's *Aechmea blanchetiana*; a variety of *Tillandsia*, including specimens of *schiedeana*, *bourgaei*, *brachycaulos*, *capitata* (the yellow form), *jalisco-monticola*, and *tricolor*; and the *Neoregelia* cultivars '696' and 'Papaya Moonlight' (a Lisa Vinzant cross of 'Sunday Picnic' and 'Scarlet O'Hara').



COMMON BROMELIAD PESTS AND DISEASES

When healthy, plant bodies, like human bodies, tend to stay healthy, as we learned from Lynette Wageman at our May meeting. But plants, like humans, we also learned, are susceptible to a wide range of pests, diseases, and environmental challenges, so cultivating happy bromeliads requires a healthy dose of vigilance. Just as we're more likely to get sick when we're not taking good care of ourselves, bromeliads are more easily attacked by diseases and pests when they are stressed because we are not taking good enough care of them. By paying attention to growing conditions and to the well-being of our plants, problems can be caught early, when they are easier to fix. Not enough light, too much light; insufficient water, too much water; and above all, poor drainage and air circulation—such environmental stresses make plants more likely to succumb to the diseases and pests that are always in the environment.

One of the best things we can do as growers is to learn how to tell when our plants are stressed out. For example, strappy growth—leaves that are too long and thin—usually indicates insufficient light; brown spots point to poor drainage, overwatering, or too much light; white build up on leaves suggests overfertilization or mineral deposits; and quilling and leaf wilt are common signs of inconsistent, insufficient watering.

Lynette focused on two common threats to bromeliads: plant diseases caused by a virus or fungus, and damage caused by insects. One of the most common fungal diseases in bromeliads is leaf spot, which can first appear as pinhead-sized yellow, brown, or purple, blister-like spots that turn into large lesions with bleached centers. The leaves go from purplish, to brown, to light tan, as they become limp, wither, and dry out. Similarly, rust generally first appears as rust-colored bumps or blisters on the underside of leaves, which then show as white or light yellow spots on top. Root rot and crown rot are caused by a fungus that is naturally found in soil, but that only becomes a problem when poor drainage cuts off air circulation. Although sometimes these diseases leave no recourse except to destroy the plant, if you have an infected bromeliad, try cutting off and throwing away the infected leaves—in the garbage, not in green waste or your compost heap—and then isolate the plant in an area where it has good air circulation. Let it dry out and see if it will pup. Plants that appear half dead have been known to produce healthy keiki.

Scale, mealy bugs, and spider mites are among the more common insect pests attacking bromeliads in Hawai'i. Mottled, yellowing leaves can be a sign of scale. Very small insects that don't appear to move, they damage the plant by sucking the sap from the leaves. Mealy bugs are small, white, slow-moving insects, also recognizable by their egg masses. Spider mites are very tiny, yellow or reddish, and commonly found on the underside of leaves that are mottled with rusty-yellow spots. For insect problems, try brushing or wiping off the leaves with rubbing alcohol, or wash the plant with a mild soapy solution—and make sure the plants have good air circulation.

Plants weakened by a fungal disease are also more susceptible to damage by insects, and vice versa, so it is not uncommon to find one plant with multiple problems—but if you do, it is probably a sign that you need to take a good look at your growing environment, especially the air circulation, drainage, light, and water conditions.



An example of a very unhealthy leaf, with both fungal and insect damage, and a very healthy *Tillandsia capitata rubra*.

CRETACEOUS (NOT JURASSIC) PARK



So, as to the question you have all been asking: when dinosaurs like Velociraptors and T-Rexes weren't busy chowing down on time-traveling tourists, could they have been eating bromeliads?

According to the latest research by Thomas W. Givnish, professor of botany at the University of Madison-Wisconsin, published in the October–December 2016 issue of the *Journal of the Bromeliad Society* (available in the HBS library), the answer is definitely Yes. In “One Hundred Million Years of Bromeliad Evolution,” Givnish describes how a project sequencing the DNA of chloroplasts—that’s the part of the leaf that conducts photosynthesis—taken from some ninety species of bromeliads indicates that the ancestors of bromeliads diverged from the ancestors of other plant groups about 100 million years ago, in the Guyana shield area of northern South America, and then spread into the Andes, Central America, the South American coast, and the Caribbean. Dinosaurs like the giant *Argentinosaurus* coexisted in that same Cretaceous period as the early bromeliads—although they weren’t eating pineapples, which probably evolved only about 7 million years ago.

HO’OLAULE’A VOLUNTEERS WANTED

Lyon Arboretum is throwing a party—and looking for volunteers! To honor its centennial, the Arboretum will be hosting a Ho’olaule’a, featuring live entertainment, food trucks, hula performances, arts and crafts and education booths, exhibits, a plant sale and silent auction, games and a special KidZone, tree climbing demonstrations, and tours of the gardens.

Date: Saturday, August 4th. Time: 9 am–4 pm.

Volunteers are needed on Friday and Saturday for three hour shifts: 1) 6:30 am–9:30 am, 2) 9:30 am–12:30 pm, 3) 12:30 pm–3:30 pm, and 4) 3:30 pm–6:30 pm. On Friday afternoon and Saturday morning, volunteers are needed for the set-up crew, and on Friday afternoon, for the decoration crew. On Saturday, volunteers are needed to help with parking and security (shuttles will run from Paradise Park); to help in the food tent with cooking, taking orders, or cashiering; to help with games and in the KidZone; to help the MCs and in the information tent; and finally, of course, to help with breakdown and clean up. Volunteers must sign up in advance. You can sign up on the Lyon Arboretum website, manoa.hawaii.edu/lyonarboretum; we will also bring sign up information to the June HBS meeting.



JULY MEETING TO RECAP FIESTA DE LAS BROMELIAS

Our July meeting will feature a report from the HBS members who attended last month’s Bromeliad Society International World Bromeliad Conference in San Diego, “Fiesta de las Bromelias.” Look forward to lots of tall tales, stories of plant bargains, and striking pictures—like John Ishihara’s photo of David Fell’s award-winning *Vriesea*.



AND TO WELCOME NEW ARBORETUM DIRECTOR

We are very pleased to announce that Rakan Zahawi, new director of Lyon Arboretum, has agreed to speak at our July meeting. A tropical ecologist, Dr. Zahawi has worked extensively in Central America—land of Bromeliads!—primarily in Costa Rica and Honduras, and on a large-scale restoration project in Colombia. Dr. Zahawi received a BS in Botany from the University of Texas at Austin, and a PhD in Plant Biology from the University of Illinois at Urbana-Champaign, and he comes to the Arboretum from the Las Cruces Biological Station and Wilson Botanical Garden in southern Costa Rica. Dr. Zahawi will be speaking both about his personal journey to the Arboretum, and his plans for the facility.