Pritchardia

June 2023 Newsletter

Issue #38



President's Message



So far 2023 has been a smashing success for the Hawaii Island Palms Society. We have had a fabulous auction, two tremendous garden tours, and have two tours coming up. With heartfelt sincerity, I would like to thank all our hosts and all the volunteers that make these events possible.

Our next tour will be August 5th and hosted by Lars Woodruffe and Irene Francis in Waiākea-Uka. In preparation for the upcoming tour, I visited Lars and Irene at their home. Casa de las Palmas was originally the Hawaii residence of the late California Landscape Architect and nurseryman Jerry Hunter. I learned that Jerry's designs are found throughout the San Diego area and include the San Diego Zoo and Wild Animal Park, Balboa Park, and a host of other public and private venues. Mr. Hunter introduced many previously uncommon species into cultivation at his Rancho Soledad nursery in San Diego (famous among cycad collectors) and Palms of Paradise in Keaau. His design for Casa de las Palmas reflects his expansive knowledge of horticulture. The property contains a well curated collection of species and cultivars.

The overall layout of the landscape is simultaneously park-like and yet suggestive of a natural environment with nearly every ecological niche filled.

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This garden is graced with a multitude of large bromeliad colonies, a variety of uncommon aroids, mature palms, and naturally occurring water features. There are a series of interconnected room-like gardens, each with their own unique vantages and character. Some spaces offer expansive vistas that reach down the lower flanks of the Mauna Loa volcano. Other areas are more intimate and evoke the feeling of a magical glade in an ancient forest. The entire garden is replete with hidden treasures and surprises that will bring innumerable smiles to any horticultural enthusiast. Look for the registration for this event in your email around mid-July, hope to see you there.

Save The Date: August 5, 2023



Irene Francis and Lars Woodruffe's Casa de las Palmas garden was a huge hit on the IPS 2022 Hawaii Biennial. HIPS has toured the seven acre garden in the past, but it has gotten even better.

The garden was originally built by the late nurseryman Jerry Hunter, owner of the southern Californian nursery Rancho Soledad. Since Lars and Irene purchased the property in 2017, they have added to the lovely bones of the garden and brought it to perfection.

The garden was recently featured in <u>Ke Ola magazine</u>, by Sara Stover and with great photos by Patrick Stover.

Invitations for registration will go out by email mid-July. There will be a morning and an afternoon tour. See you there!

International Palm Society's 33rd Biennial to New Caledonia September 22, 2024 – September 30, 2024

After over two years of intense planning and following the successful procurement of land visitation rights from several tribal and provincial leaders, the International Palm Society is thrilled to announce the upcoming biennial to New Caledonia.



New Caledonia is an incredibly scenic and botanically diverse archipelago in the southwestern Pacific ocean. UNESCO inscribed the spectacular barrier reef and the approximately 9,000 sq miles of lagoons surrounding the islands a World Heritage Site in 2008.

The archipelago was named by British explorer James Cook on his second expedition to New Zealand in 1774 because it reminded him of the Scottish highlands, Caledonia being the Roman name for Scotland. New Caledonia was annexed by the French in 1853 to prevent the British from claiming the territory. The discovery of nickel in 1864 led to a rise in the usual exploitive practices associated with colonization. In 1953 France made New Caledonia an overseas territory and granted French citizenship to all residents. It's indigenous people are the Kanak and make up 39% of the population today, European descendants comprise 27% and the majority of the remainder are other islander ethnic groups and Vietnamese. France is debating how to define a decolonization process – either making the region part of France like Reunion, or allowing it a degree of independence and self-determination. New Caledonia is the source of 25% of the world's supply of nickel, mostly going to China and used in the growing manufacture of batteries, making the territory economically and politically important. Nickel mining and economic pressures for its expansion pose the greatest threat to the island's natural environment. In the face of inevitable change, a trip to see the native forests with their diverse and endemic palms is without exaggeration a once in a lifetime trip.

- ✓ Day 1: Sept.22,2024 : Le Méridien Nouméa Hotel Check-in, Welcome Reception
- ✓ Day 2: Sept. 23rd : Rivière Bleue Botanical Reserve. 64 Miles
- ✓ Day 3: Sept. 24th : La Madeleine Forêt du Pic du Pin AND Prony , South, Goro, Yaté
- ✓ Day 4: Sept. 25th: Col d'Amieu, Plateau de Poro & Côte Est, Kua Valley. (<u>East Coast</u>)
- ✓ Day 5: Sept. 26th: Nodela Botanical Reserve (<u>West Coast</u>) and Rivière du Cap
- ✓ Day 6: Sept. 27th: Col d'Amos (Very North and a long 12 hour day, 3.5 hour each way w/ stop at). Only North Province viewing
- ✓ Day 7: Sept. 28th: Forêt de palmiers Royaux de Moindou (tallest R. oleracia). Mont Koghi and Lavoix Property
- ✓ Day 8: Sept. 29th: Tontouta nickle mine, Pierson propriety, and Farewell Banquet.

Capacity 150

Spanning nine days and eight nights, this will be the longest biennial in our history. Registration includes:

All breakfasts All lunches Most dinners, including speakers All transfers and park entrance fees Local expert guides Internationally renowned academic botanists A special cultural Kanak Bougna lunch Spectacular closing banquet

More information about pricing and registration will be available in the next couple months.

Checklist of 27 Possible Species planned for viewing

BASSELINIA:

Basselinia deplanchei (Pending) Basselinia eriostachys Basselinia favieri Basselinia glabrata Basselinia gracilis Basselinia iterata Basselinia moorei Basselinia pancheri

BURRETIOKENTIA: Burretiokentia dumasii Burretiokentia grandiflora Burretiokentia hapala Burretiokentia koghiensis Burretiokentia vieillardii CHAMBEYRONIA: Chambeyronia divaricata Chambeyronia houailouensis Chambeyronia macrocarpa Chambeyronia magnifica Chambeyronia oliviformis Chambeyronia pyriformis

CLINOSPERMA; Clinosperma bracteale Clinosperma vaginata

CYPHOKENTIA: Cyphokentia cerifera Cyphokentia macrostachya CYPHOPHOENIX; Cyphophoenix alba Cyphophoenix elegans Cyphophoenix fulcita SARIBUS: Saribus jeanneneyi (Pending) Non-endemic: Cocos nucifera

Emerging Threats From Long Present Invasive Plants By Miles

Anyone that has been gardening in Hawaii for any length of time is all too familiar with invasive species. We don't always see the effects of an introduced species immediately. The rate of reproduction for many invasive plants can be measured in geometric terms. Once a population reaches a certain threshold their encroachment starts to become something measured in years instead of decades or lifetimes. For decades those of us in wetter regions have been scouting for Albizia (*Falcataria moluccana*) and Melochia (*Melochia umbellata*) seedlings while our counter parts on the leeward side have been trying to keep haoli koa (*Leucaena leucocephala*) and Brazillian pepper (*Schinus terebinthifolia*) from establishing in the landscape. In recent years *Schefflera actinophylla* (octopus tree, umbrella tree), *Cecropia obtusifolia* (trumpet tree, snakewood tree), and *Clusia rosea* (autograph tree) have begun appearing in residential areas with greater frequency.

Established in Hawaii prior to 1935, these species differentiate themselves from other invasive tress by their adaptability. They can all survive in both wet and dry regions and they all have the capacity to be hemiparasitic - germinating readily on other plants. Because their seeds are dispersed by birds, these trees can be found germinating in gutters, on utility poles, and within the canopy of other trees. They are of particular concern to palm growers because the seedlings often appear by the dozens within the crowns and remnant petioles of palms.



Schefflera seedling germinating in leaf litter (Johannesteijsmannia magnifica)



Clusia seedlings in leaf bases (Marojejya darianii)



A young Schefflera in Loulu (Pritchardia sp.)

These nuisance plants will often host other organisms damaging to palms. Scales, aphids, the ants that feed from them, and the associated sooty mold is often found on and around these invasives. The debris

accumulated near their roots creates an environment that can be attractive to a variety of other pests including insects, mollusks, and pathogens.

Without intervention these seedlings may eventually interfere with the emergence of the new fronds, damage the trunk, or cause the crown of the plant to snap off.

Even when found as small plants with only a few leaves, they can be difficult to extricate. Like banyan trees, rope like rootlets can be found snaking their way around the trunk and through leaf bases and thatching.



A young Cecropia in a mature mango tree

Though early detection and removal is the ideal, there are some steps to be taken that can help control these landscape pests once established. If possible, sever the roots as close to the plant and attempt to dislodge or loosen the parasite from the host. Depending on the circumstances a reciprocating saw, kama (hand sickle), and pruners can be used to separate the growing portion of the plant from the roots. If the plant proves difficult to remove after pruning loosen it as best as possible and return to in a few weeks to try again. (It is sometimes advisable to leave some trunk to use as leverage or as an herbicide application site.)

Larger plants may require repeated pruning and root removal, professional intervention, and/or an herbicide application. (Great care should always be exercised when applying herbicide in close proximity to desirable plants.)

More information on these trees and some control techniques may be found here:

BIISC - Schefflera: https://www.biisc.org/plant/octopus-tree/ BIISC - Cecropia: https://www.biisc.org/plant/trumpet-tree/ BIISC - Clusia: https://www.biisc.org/plant/autograph-tree/ https://www.biisc.org/plant/autograph-tree-2/

Finding The Future in Kew's 200 Year Old Herbarium



Photo by Michael Dibb, CC BY-SA 2.0, https://commons.wikimedia.org/w/index.php?curid=70619215



Dr. William Baker unwrapping a specimen of Calamus tenuis collected by Joseph Hooker and Thomas Thomson and identified by Odoardo Beccari 1850s.

Laid out before us, deep in the basement of the famous herbarium at the Royal Botanic Gardens, Kew, sat the botanical equivalent to the British crown jewels. We had come to Kew for the International Palm Society midterm meeting and our hosts Dr. William Baker and Dr. John Dransfield arranged for us to experience the full glory of one of the botanical world's greatest resources. Baker had pulled down a dozen or so oversized shoe boxes from the endless row of shelves, each containing bits and pieces of palms that he knew would leave us gobsmacked.

Peeking into the boxes we saw pressed and dried palm leaves, inflorescences, and seeds, the work of celebrated botanists like Odoardo Beccari and Joseph Hooker from the 1800s. (You might be more familiar with some of their namesakes in your garden, like *beccariana* or *hookeri*.) The material was so well preserved that I couldn't tell the really old stuff from the newer collections, except that Baker pointed out the transition from attaching the plant pieces to paper and filing them away like tax returns, to storing the loose pieces in roomier boxes.

As we moved along the counter we came to new species discoveries HIPS members might recognize – the holotype (specimen used to describe a new species) of *Tahina spectabilis* recently introduced to Hawaii gardens,

Sabinaria magnifica from Saúl Hoya speaking to HIPS a few years back, and the holotype of *Chrysalidocarpus leucomallus (Dypsis leucomalla*) collected from a palm we saw in Jeff Marcus' Floribunda nursery during the Floribunda Master Class last year. The most recent additions on the counter were new species collected from New Guinea by Baker who has twice made the long trip to give talks at HIPS meetings, speaking in 2017 about field work leading to these discoveries.



Herbarium samples: Tahina spectabilis from Madagascar(left), Dypsis leucomalla from cultivation at Floribunda Palms and Exotics in Hawaii (middle), the spikey sections of a Calamus sp. from Indonesia (right).

There was a box containing the holotype of *Johannesteijsmannia magnifica* collected in 1967 by a young John Dransfield in an even younger Malaysia. Dransfield was in the field only 4 years after multicultural Malaysia was formed from the union of what was once British Malaya and British The valley where this newly discovered palm was collected was eventually dammed and flooded and anything else that was there is now lost underwater.

Every box or file in the herbarium is a time capsule telling its own story, and there are hundreds of thousands of these specimens on rolling shelves filling multiple floors and expanded wings of the original 1800s Victorian building. A vast warren of rabbit holes to go down. According to the Kew website, there are more than 7 million specimens representing 95% of the genera of vascular plants in the herbarium – stored in boxes, files, or pickled in jars. And at least 10,000 new specimens are added to the collection every year.



Viewing the boxes of palm specimens on the shelves (left), our group assembles at the foot of the iconic Victorian staircase (middle), the floors of specimen cabinets - photo by Andrew McRobb, RGB Kew (right).

As mesmerizing and important as the herbarium objects are, the herbarium is not a museum. Baker points out that the greatest threat to the herbarium is not the preservation of its specimens, but the accessibility of its specimens for current scientific study. The herbarium is an extensive resource for plant taxonomy and

evolutionary studies, conservation planning, agricultural research, environmental and climate science. Hundreds of researchers from all over the world come to the herbarium to further their work and help update the curation. Around 10,000 specimens a year are sent out on loan or exchange to other institutions. There is also a large-scale project to digitize the entire herbarium collection and make the data freely available online to anyone, anywhere.

After visiting the herbarium, we visited the Jodrell Laboratory building where the next generation of scientists at Kew were grinding up bits of UNESCO world heritage to feed into technology that will take taxonomy to a new level. The best and brightest at Kew are kept locked behind a couple of card-keyed doors off dimly lit hallways. This is where we met Sidonie Bellot and Ben Kuhnhaeuser.



Ben Kuhnhaeuser explaining how to get DNA samples from a chair.

Ben is developing a genetic test in collaboration with the furniture giant IKEA that will hopefully allow the company to determine if the rattan used in furniture they buy from Indonesia has been ethically sourced. Rattan furniture is mainly made from climbing palm species in the genus *Calamus*. The canes are directly harvested usually from natural forests and are not grown commercially as a mono crop. This practice might actually help protect the forest from clear cutting as the palms are economically significant to the country. IKEA wants to make sure that the canes in the furniture they buy do not come from endangered palms. Ben has created a genetic reference library for all 400+ species of Calamus from DNA taken from the extensive rattan collection in the herbarium. The species found through genetic testing can be checked against the IUCN list of

endangered species. The furniture itself is made in Indonesia so Ben also had to confirm he could extract DNA from a rattan chair. Ben found 24 species of Calamus and one endemic species from Borneo in a single chair.

Sidonie is interested in the variability and evolution of morphological traits. For <u>her recent 2020 paper</u> in New Phytologist she explores the macro evolution of giant seeds in Lodoicea and its Borasseae relatives. She generated a new phylogeny based on 60 palm specimens, representing all palm subfamilies, all tribes of subfamily Coryphoideae, all genera of the syncarpous clade and 80% of Borasseae species. Without the herbarium resources this data would be difficult and costly, if not impossible to generate.



Lodoicea, the double coconut is the largest palm seed in the world. It's closest relative Latania has a seed surprisingly much smaller.



Sidonie showing us the door.



Ben and Sidonie add their efforts to the ongoing work to sequence all plants for The Tree of Life project. Wolf Eiserhardt who gave a talk to HIPS also used the herbarium to generate phylogenetic data leading to the reclassification of *Dypsis* and relatives. Like the digitized herbarium, Kew is making the <u>genetic data and</u> <u>phylogenetic tree of life</u> accessible to anyone who wants it.

As Ben and Sidonie stood in front of us, I liked to imagine the ghosts of the great Victorian botanists shaking their heads in disbelief seeing the material they contributed to the herbarium being used 200 years in the future to extract DNA to build a tree of life that describes the evolutionary relationships between all plants. And you can just hear that annoying Darwin telling everyone, "That's what I was thinking, I just didn't write it down yet."

Visiting the Rutan and the Andersen Gardens

The Rutan Garden



Left to right: Lise Dowd is at the welcome tent as members mill about before the tour. Michelle Rutan welcoming the group, in the background is Norm Bezona on her left and Ryan Rutan on her right. Jeff Marcus addressing the group, Bo Lundkvist stands ready to speak to his left. Photos by Rick Kelley.

Michelle and Ryan Rutan welcomed us into their garden with the story about buying the property on-line sight unseen during the pandemic and then being surprised that so many people cared about the palm collection.

Norm Bezona, Jeff Marcus, and Bo Lundkvist who knew Donn Carlsmith, told us their personal stories about Carlsmith and the garden he created more than 40 years ago. Norm opened the morning session with a lovely thought. He told the group that as an 85 year old guy, he thinks about what type of legacy people leave. Has a person left the world in better shape than they found it? He discussed how Donn Carlsmith's legacy is not only his own incredible personal palm collection, but starting a whole community of like-minded palm enthusiasts who would go on to safeguard dozens of critically endangered species by providing safe harbor in their

landscapes. Carlsmith played a central role in organizing HIPS almost 50 years ago. He was glad to see how Ryan and Michelle have embraced the property and will make this a part of their own legacy.



9-10 foot tall and 20 foot wide Johannesteijsmannia stands in the forest. Photo by Rick Kelley.

Jeff credits Carlsmith for inspiring palm collecting on the Big Island and emphasized the significance of the collection, in particular *Chrysalidocarpus carlsmithii*. Bo told us how he visited the Big Island and met Donn Carlsmith while he was still living in San Diego, and what an impact that had on his decision to relocate to the island. Jeff and Bo led two tour groups starting at different points in the garden. There was plenty of time for socializing and seed collecting. Michelle and Rick Kelly recreated the welcome and stories for the afternoon group.

The Andersen Garden



Members walk the broad paths and gather around Jerry as he points out the wonders of the garden. Jerry pointing out the newly named Chrysalidocarpus titan (left photo). Photos by Sara Wagner.

The Andersen garden is a HIPS favorite. The elegant curved pathways, waterfalls and ponds, garden structures and statuary, with an understory of anthiriums, begonias and philodendrons, makes this garden a botanical oasis in addition to being one of Hawaii's most significant palm collections. Jerry and Cindy are an inspiration of creativity, hard work, and resilience. Having recovered from the eruption in 2018 and the loss of many Ohia trees to rapid ohia death, the garden is transforming into a totally different kind of beauty as the palms are leaping up with all the additional sunlight. Around 80 members toured the garden with Jerry and visited with each other enjoying refreshments and browsing Jerry's nursery for things to take home.





Upper left: Colorful palms and ti plants make a striking border. Upper right: The inviting garden pavilion entices the visitor to slow down. Lower left: Checking in on the double coconut *Lodoicea* one of the garden's rarest palms scarce in cultivation. Photos by Sara Wagner.

Remembering Art Smith 1936-2023 by Rick Kelley



Art Smith and Grace Kissell riding with Dean Ouer at a HIPS tour of the Ouer garden in Kona.

Art Smith passed away on May 8, 2023 at his sister's home in Idaho. He had relocated to Idaho about three years ago due to declining health. Art had been an active member of HIPS for decades. The last event he attended was the February 2020 lecture on the discovery of *Sabinaria*.

Art had an unconventional childhood growing up in a religious commune. He had a difficult relationship with his parents because he was gay. While living in Seattle in the early 1980s, he decided the bar scene was a terrible way to make friends. On his own he organized a gay square dance group that grew exponentially into hundreds of participants in just a few months. Seattle was one of the first cities in the country to have such a wildly popular group, but it quickly spread to every major city. Art's founding

contributions to the community were recognized by being the first recipient of the Golden Boot Award, which has been given to the person who has made the biggest impact on gay square dancing for the past 40 years. Within a few years of square dancing taking off, AIDS decimated the gay community. Art was deeply traumatized by attending over a hundred memorial services for his young friends in just a year or two. Because Seattle was associated with so much loss, Art decided to start a new life to East Hawaii.

He bought a three-acre lot in Orchidland Estates, built a small house, and slowly transformed it into a palm paradise. His garden was notable for its collection of towering exotic tree ferns. He generously shared his expertise on how to propagate tree fern from microscopic spores. Art was a great guy. His life was well lived. He is missed.

Note from the editor:

This newsletter goes out quarterly (more or less), the next newsletter will go out September 31st. If you have any questions, comments, or would like to contribute to the production of the newsletter, contact Mary Lock at <u>marylock@sbcglobal.net</u>.