



## President's Message



The big news this month is the return of the rare palm auction on Sunday, March 27. We had to move the date around in an attempt to catch a lull in the waves of covid19, but the current case numbers on the Big Island are looking pretty good. When we began planning for the auction last fall, we decided that an indoor event was not feasible with public

health restrictions. Consequently, we opted to move to the covered pavilion at the Leilani Estates Community Center. HIPS has had several events at that site in the past, and the open-air layout should provide plenty of ventilation for a safe gathering. The biggest change is that we will not be serving a meal this year. Please visit one of the eateries in Pahoia for lunch before the auction. See the links in this newsletter to the live auction flip book and list of palms, cycads and other plants in the silent auction. After two years, I'm guessing members will be very eager to get some unusual new babies for their gardens. If anyone has any last-minute, pest-free palm donations they would like to make to the auction, please contact me so we can have a customized bid sheet ready. As always, we encourage everyone to bring seeds to share with other members.

We will have a very brief business meeting just before the live auction. The only item on the agenda is election of new officers. Please review the slate of candidates posted elsewhere in the newsletter. This is my last year as president. Having experience on the board will be super helpful to whoever will be stepping up to be president next year. If you have ever thought you might like to lead the society, please volunteer now to serve on the board. We only have four quarterly meetings plus a fifth that focuses on planning for the auction, so it is not an excessive amount of work. Serving on the board is a great way to get to know more of the members. And it's fun.

It's anybody's guess if and when the next variant of covid19 will hit the island. I'm looking at you, BA.2. The HIPS board is planning a full lineup of great garden tours this year, but obviously everything depends on the public health precautions in place. We are trying to schedule events

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earlier in the year so everyone can focus on welcoming the International Palm Society Biennial Tour set for October.

Rick Kelley

## 2022 Rare Palm Auction: It's Really Happening!

**Sunday, March 27**

**Leilani Estates Community Association Pavilion**

**13-3441 Moku St. in Leilani**

**Doors open 1:00 for socializing**

### Program of Events

1:30pm - 2:30pm: Silent Auction

2:55pm – 3:00pm: 2022 Elections

3:00pm: Live Auction Starts with Jeff Marcus

There is no event that we look forward to more each year than the annual rare palm auction and dinner. A time for catching up with old friends, and a little good natured competition for some of the most rare and beautiful palms to be had on the island. For years we have gathered at Auntie Sally's and brought in catering from Don's Grill. But this year we are reimagining the festivities and trying something new. Thanks to our supporting vendors and generous members we will still have a large number of palms in our silent auction, free seeds and seedlings, and the choicest selection of palms in the live auction. The difference from years past is that we will be meeting in the afternoon at 1:00pm, outdoors under the covered pavilion at the Leilani Estates Community Center, 13-3441 Moku Street. We will serve free drinks and cookies throughout the event. There is no limit to attendees at the event, but please RSVP if you haven't already.

### Check out the plants!

Thanks to **Tim Brian** who put together another lovely flipbook this year with photos and descriptions of the live auction plants.

[View flipbook](#)

We are planning to have photos and descriptions of plants on the bid sheets for the silent auction plants, but here is a list of plant names that will be available if you want to look them up in preparation for the big event.

[View List](#)

There will be free seeds available from members' gardens too. So start looking around your garden for seeds to share.

If you are interested in donating plants, please contact Rick Kelley at [rickkelley@att.net](mailto:rickkelley@att.net).

### Review the slate of officers

Rick Kelley, President - incumbent  
Sara Wagner, Vice President - incumbent  
Chris Friesen, Treasurer – incumbent

[View incumbents' profiles](#)

Gunnar Hillert, Secretary - NEW

[Read December 2020 newsletter profile.](#)

## 2022 Garden Tours

We have putting together a wonderful line up of garden tours this year. With the IPS Biennial coming to Hawaii Island in October, we hope to complete our touring season ahead of their arrival. A schedule of dates will be sent out via email to members as soon as we can confirm exact dates.

**Floribunda Nursery:** A curated tour through possibly the most extensive palm collection in the world with owners Jeff and Suchin Marcus. There is simply nothing in the world like this jaw dropping, mind blowing garden! Check out his fabulous website: [Floridunda Palms and Exotics](http://Floridunda Palms and Exotics)



**Bill Austin's Garden and Nursery Plant Sale:** HIPS last visited Bill's garden in torrential rain in 2015, and it goes to show just how fabulous Bill's garden and nursery is, that the crowd toured his whimsical and species rich garden with umbrellas and waders for a full hour before staying after and loading their cars with beautiful palms and other garden gems. We hope the weather is better this year.



**Garden 3 TBD:** We are working on a couple of options and will announce soon for the third garden tour of the season.



## Palm Flowers



*Schippia concolor* with inflorescence emerging like a sea pen. Photo from Hawaii Horticulture blogspot.

***“the calyx is the bride chamber  
in which the stamina and pistilla  
solemnize their nuptials”***

Carl Linneaus

In 1729 Carl Linneaus wrote about botanical reproduction as if writing the second season of Bridgerton, the steamy PBS costume drama. He scandalously drew direct comparisons between the reproductive parts of flowers and human sex organs. He created a taxonomic classification system based on the number of reproductive organs and their arrangement. Opponents to his taxonomic system called themselves “anti-sexualists”, rejecting it as “loathsome harlotry”.

***“The flowers’ leaves...serve as bridal beds  
which the Creator has so gloriously  
arranged, adorned with such noble bed  
curtains, and perfumed with so many soft  
scents that the bridegroom with his bride  
might there celebrate their nuptials with so  
much the greater solemnity...”***



*Cryosophila williamsii* hermaphroditic flower spilling from wooly peduncular bracts. Photo from Palmpedia by Christopher King

Although his taxonomic system has evolved greatly since early in the 19<sup>th</sup> century, much of his milder lingo remains, we still refer to staminate flowers as male and pistillate flowers as female. We stopped short referring to nonfunctional male flowers as eunuchs. The arrangement and function of the male and female flowers still make up useful characteristics in modern classification keys. So, put on some Barry White because this article is going to talk sweet, sweet love – botanic style.

It's hard to fault Linnaeus for pointing out the obvious similarities when it comes to reproduction. The stamen is the male reproductive organ which contains a pollen sac (anther) that produces pollen. Palm flowers can have as little as one stamen as in *Dypsis lantzeana* or more than 1000 as in *Ammandra decasperma*. Palm flowers have only one female organ called a pistil, but its structure varies among species. The pistil sticks out at the center of the flower and is made up of a stigma, style, and an ovary that houses egg cells. When pollen lands on the stigma, a chemical stimulates the pollen to grow a long tubule that travels down the style to the ovule and releases sperm. Fertilization of the egg cell usually follows and leads to the ovule developing into a seed.



*Staminate (male) flowers of Pinanga philippinensis floating in water collected in the fallen spathe. The stamens are the spiky structures sticking out of the petals. Photo by Mike Lock, Haiku*



*Pistillate (female) flowers of Asterogyne martiana. The pistils are sticking out of the flower and the stigma can be seen curling back at the tip. Photo from Palmpedia not credited.*

Plants are rather fluid when it comes to gender. Hermaphroditic flowers have both functioning male and female organs. Staminate (male) flowers have nonfunctioning female organs, and pistillate (female) flowers have nonfunctioning male organs. These nonfunctional organs may be partially developed or completely absent in the flower.

Palms are also a very inclusive family, and possess almost all possible combinations of flower types. A little more than half of palm species are monoecious - having both male and female flowers on one plant. About 30% of palm species are dioecious – having male or female flowers on separate plants meaning you might need a male and female palm to make viable seed, though most palms are self-compatible and may fruit in cultivation. Hermaphroditic species make up 17% and a few species are polygamous – having pairs of one male flower or female flower and one hermaphroditic flower.

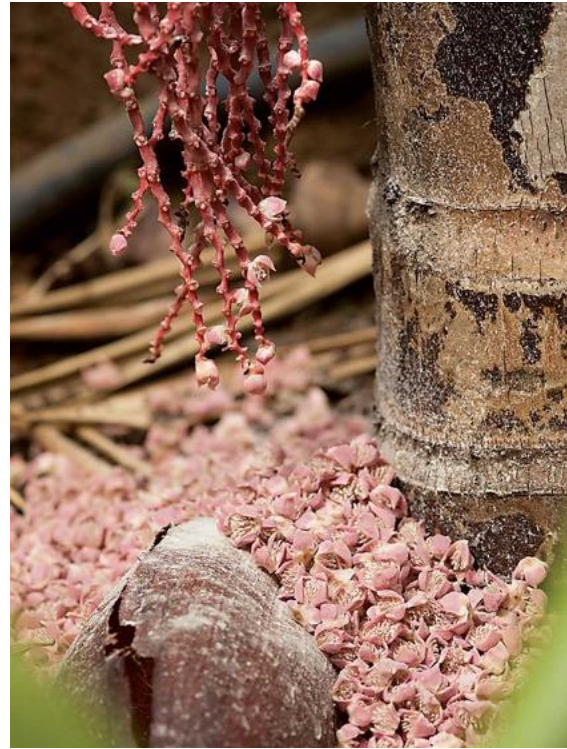
When male and female flowers are on the same plant, they usually flower at different times to promote cross fertilization. In the case of hermaphroditic species, the male and female organs are expressed at different



times. The order of opening varies among species, but it is more common that the male flowers open first. The length of time between male/female flowering or sexual expression varies from a couple of days to almost a year in wind pollinated *Howea* species.



*A Pinanga caesia inflorescence just after slipping the prophyll which lies on the ground below. In Pinanga the female flowers open first and looking closely you can see the tiny dark pink berry like flower with white pistil in between the unopened male flowers. Photo by Mike Lock, Haiku*



*Within days the male flowers open and soon drop off in a snowfall of pollen. Photo by Mike Lock, Haiku*

The photo on the right shows the most common arrangement of male and female flowers in monoecious palms called a triad. It is a cluster of three flowers, two male and one female. Triads are spaced along the branches of the inflorescence. The photo shows the yellowish male flowers, some opened, flanking the green female flower which hasn't opened yet.



*Flower triads along the length of a monoecious inflorescence. Photo by Mike Lock, Hana*

A common pattern in monoecious palms is to have the triads taper to dyads of two male flowers, and then to a single male flower toward the tip of the branch. This is illustrated in the photo to the right. This flower arrangement is why you often see bare tips at the end of an inflorescence since the male flowers fall off and produce no fruit.



*Ptychosperma sanderianum* with white staminate (male) flowers opening. The tall nonfunctional pistil called a pistillode emerges from the middle of the stamen. Photo by Jan Elliott, Hana



The beautiful and perfumed staminate inflorescence of *Arenga engleri*. Photo by Mike Lock, Hana

Some monoecious palms like *Arenga engleri* in the photo on the left produce unisexual (all male or all female) inflorescences. The inflorescences start out covered in the typical triad clusters of two males and a female but sometime before flowering either the male or female flowers abort leaving the inflorescence either all female or all male.



The photo below answers the question, “where do baby palms come from”. It’s not a stork but that answer isn’t that far off. Palms and other angiosperms rely on third party pollinators, in the case of the *Pinanga* shown in the photo, a bee. From the photo it is easy to summarize what we know: *Pinanga* is monoecious, having both male and female flowers. The flowers are arranged all along the inflorescence in triads consisting of two males and one female. *Pinanga* is protogynous meaning the female flower opens first. You can see the roundish pistillate flowers remaining on the rachilla, if fertilized they will produce fruit. The male staminate flowers with their anthers covered in pollen are open and have attracted a bee. The bee’s legs appear like drumsticks and it is a wonder how it can still fly with so much pollen. Some of it will be taken back to be eaten, but some will make their way onto the stigma of other flowers.



*Pinanga* species staminate flowers visited by a bee, the round pistillate flowers have opened just days before. Photo by Mike Lock, Haiku



If you are interested in learning more about the anatomy or reproductive habits of palms, I found these resources very helpful.

[The palm family \(Arecaceae\): a microcosm of sexual system evolution](#)  
[Sophie Nadot, Elodie Alapetite, William J. Baker, James W. Tregear and Anders S. Barfod](#)

[Evolution and Ecology of Palms](#) by Andrew Henderson 2002 The New York Botanical Garden Press

[Genera Palmarum The Evolution and Classification of Palms](#) Kew Publishing 2008

## Volunteer on the HIPS Board

Volunteering on the HIPS board is a great way to meet people and share your ideas about how to make our society better and keep our members engaged and connected. Please contact Rick Kelley if you are interested at [Rickkelley@att.net](mailto:Rickkelley@att.net).

### Note from the editor:

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