



June 2021

Vol. 23 No. 6

<http://www.tgcfernsoc.org>

Due to COVID-19 restrictions our meeting this month will be another “virtual” one.

A message from our President:

Hi Everyone,

Well, they say some like it HOT! It has been pretty warm the last week, maybe a little earlier than we are used to, but we knew it was coming. We will see if we will get any rain off this tropical disturbance out in the Gulf. The weather has been a big topic this year, from cold to hot, from wet to dry. I hope everyone's ferns are growing well under all the changing conditions.

We are excited to have a speaker from the San Francisco Fern Society this month. Mary Dee Beall will be speaking to us on the 'Ferns of the Washington DC Botanical Garden' For those that have not been there please put it on your list, the gardens are really nice, and show the rich diversity of ferns. They have some really rare ferns and the setting is just beautiful; what you would expect out of an English fern book from yesteryear. Mary Dee herself is an avid supporter of the Golden State Botanical Garden as well as the Berkley Botanical Garden in the Bay area. Those two are a must see if you are traveling about in that area. So, she knows her gardens.

We have not gotten word yet on when we will be meeting in person yet at our normal place: The Juddson Robenson Community Center. I'm hopeful we will have our September meeting there. If not, we may want to consider a new temporary place to meet. We will have to talk and decide our next step.

Our July meeting will be virtual as well. We will be having a member of the British Pteridological Society speaking with us on the ferns of Britain. More details in the next issue.

For our August meeting, we plan to have a Party! We will let you know if our first volunteer is still able to do the party. If not, we may be asking for a volunteer home. I think we are good however.

For our September meeting, we are hoping to do a hands-on project. That way everyone will be able to talk and mingle a bit more than a formal meeting. We will let you know for sure once we know.

I would like to thank Dan Yansura for his great presentation. on the Ferns of Bali last month. I have added a few pictures that I took of just Bali to show you how lovely a place it really is.

Talk care everyone!! And stay safe and hydrated! See you Sunday.

Darla



The American Fern Society (AFS)

The American Fern Society is over 120 years old. With over 900 members worldwide, it is one of the largest international fern clubs in the world. It was established in 1893 with the objective of fostering interest in ferns and fern allies. It exchanges information and specimens between members via their publications and spore exchange.

AFS non-professional membership (\$20) includes access to the Spore Exchange and subscription to the Fiddlehead Forum.

Professional membership (\$40) includes the benefits above plus access to the American Fern Journal.

Please note that donations to the AFS are not tax deductible.

To find out more about the Society and/or join, visit <https://www.amerfernsoc.org/>



2021 Officers and Committees:

- President: Darla Harris
- Vice President: Patrick Hudnall
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Minutes of Virtual Meeting via “GoToMeeting”

May 16, 2021

Texas Gulf Coast Fern Society

A virtual meeting was held due to COVID-19.

Darla called the meeting to order at 2:00.

There were approximately 23 members in attendance.

Presentation: ‘Finding Ferns in Bali Indonesia’

By Daniel Yansura

Darla Harris reported that the county has not opened the Hermann Park Community Center to the public so GCFs will continue with online meetings.

Patrick Hudnall mentioned that the Plumeria Society started in person meetings. He will look into where the meetings take place.

Guest Jolanda Nel joined the meeting from South Africa. A new member, Lisa Ann Reed joined TGCFS on Friday, May 14.

The newsletter for May was delayed until the week of May 16 due to Darla’s busy work schedule.

Daniel Yansura is an avid fern grower from spore and is a tree fern expert.

After winning an auction item for a trip to Bali, he suggested that some members of the Fern Society join him on an expedition to Bali to explore its fern population. The following members went on this trip: Dan Yansura, Fernando Orellana, Jenifer Chungafung, Darla Harris, Joe Harris and Jim Herman. This was scheduled at the end of the rainy season in mid-March.

Indonesia has more than 17,000 islands. Being on the equator, it has very tropical weather. To find where the most variety of ferns were located, he made extensive internet searches. Mt. Agung, an active volcano, started to erupt earlier that year, so he concentrated on the next highest point on the island which is Mt. Batukaru. At an elevation of 6800 feet, mountainous regions receive more rain so he expected to find more fern varieties there. He was looking for Bali ferns, ferns in the Bali cloud forest, Bali tree ferns and Bali filmy ferns. There are 75 species of ferns in Bali. Each day they went to a different part of Bali to explore. They started their journey at the Golden Buddha Beach Resort.

On day 2, they went to Ubud, a touristy area with lots of shops. They needed to purchase sarongs to wear because the temples that they planned to visit required sarong attire. In this area, they observed *Platyserium willinckii*, *Goniophlebium subauriculatum* and *Lemmaphyllum microphyllum* growing on palm trees. Nearby, there was a facility called the “Monkey Forest” which is a sanctuary for monkeys. Here they saw *Tectaria*, *Diplazium*, *Pteris* and *Thelypteris*. This is also where Joe Harris lost his shirt to a monkey. He purchased a shirt at the gift shop and a monkey grabbed it and ran away with it. Joe eventually got it back.

On day 3, the group travelled to Pura Lempuyang, a major temple and one of the 7 temples on the way up to the mountains. It was a long 1100’ trek to the top. Here they found *Pyrrosia lanceolata* and *Belvisia mucronata*. Both have thick leaves and found in lower elevations. In the cloud forest, they found *Asplenium salignum* and *Pityrogramma calomelanos*. Daniel was careful when collecting these spores. Higher in elevation, they discovered *Adiantum philippense*. This is easy to identify because its leaf edge curls over sori to form an indusium. They also found *Asplenium sumatra* which is a terrestrial Bird’s Nest Fern with a runner rhizome and *Asplenium tenerum* which has bulbils on some of the frond tips. Up the mountain they also saw the second tree fern, *Dicksonia blumei* which is the only *Dicksonia* to grow in Bali. They noticed the climbing tree fern, *Lygodium circinnatum* rambling up a tree and *Diplazium proliferum* displaying its long fronds.

On day 4, they traveled to the Bali Botanical Garden. It took 2 ½ hours to get there with a maximum car speed of 30mph. It is in the Cloud Forest. It was arranged that the director, Mr. Bayu Adjie, give the tour of the facility. The high humidity of the cloud forest promotes growth of epiphytes so trees are loaded with them. At first sight, they saw a beautiful grove of the tree fern, *Sphaeropteris contaminans*. They also observed *Huperzia sp.* and *Dicksonia timorensis* which is a rare tree fern found only on the island of Timor. They actually got to see *Dipteris conjugata* which is never seen in cultivation. *Selaginella (velutina)* was also spotted. A lot of the ferns were not labelled. *Calochlaena javanicum* has no tree trunk but is in the tree fern family. *Angiopteris* (or *Marattia sp.*) was seen as well as *Christensenia aesculifolia* which is an unusual small fern. *Oleandra pistillaris* is also never seen in cultivation. They detected the pretty clumping tree fern, *Cyathea sp* and the terrestrial fern *Goniophlebium persicifolium*. They also noticed the epiphyte *Asplenium nidus* and well as the tree fern, *Dicksonia blumei*. Mr. Adjie, the director showed the group his personal fern collection in the garden’s greenhouse. There they observed *Davalia pusilla*, *Asplenium robustum*, *Adiantum reniforme* – the Canary Island fern, *Diplazium sp* – a terrestrial fern with simple leaves, *Loxogramme avenia* – an epiphyte with herringbone patterns of sori, and *Asplenium thunbergii* which produces bulbils. *Helminthostachys zeylanica* displayed a stalk of sori. This fern is found in lower elevations and the natives eat it.

On day 5, they traveled to Lake Batur which is at the base of Mt. Abang. During his preliminary internet search, Daniel found a temple at the top of the mountain that he would like to visit. However, the driver couldn’t locate the temple so the group made do and just looked around the area. They found *Chingia feroz* which has giant 5’ fronds that weep down. It was difficult to get spore from the fronds

but he managed to get some. He is presently growing the plant from the spores that were collected.

On day 6, they travelled to Gitgit Falls which is at a lower elevation on the island. They noticed *Adiantum concinnum* which is a fern that starts out with reddish fronds that eventually turn green. They also spotted *Adiantum philippense* here. It is a touristy place with stunning waterfalls. After touring the area, the group decided to visit the plant nurseries that were located at the front of the Bali Botanical Gardens. The plants that were on sale were probably collected from the wild. Here they found *Selaginella apoda*, the Siam Queen. Purchasing plants then getting them to the US is difficult without a phyto certificate.

On day 7, they journeyed to Tenganan Village which is billed as an authentic Bali Village. Their tour guide gave them a tour of his home. They observed at the entrance to the homes, personal temples made out of limestone blocks. Each home had a customized temple from blocks of elaborately carved limestone. The residents seem to collect *Platynerium wallinckii* out of the forests and then grow them on trees around their homes. The group also saw *Aglaomorpha quercifolia*.

On day 8, Joe and Darla left Bali for home. Darla had a previous commitment to be a vendor at Mercer Botanical Garden's March Mart. The rest of the group travelled to a hotel where the owner claimed that he was not expecting them so they had to find new lodgings. Eventually, they wound up in Munduk at a hotel with breath taking views and great food. They even had a gorgeous swimming pool all to themselves. Here they observed more *Platynerium wallinckii*.

On day 9, they proceeded to Camp 2 Geothermal Site. Unfortunately, the guard at the site refused to let them drive to where they wanted to go but he did allow them to hike the 2 miles from the guard station to the geothermal site. When they arrived, they just saw a bunch of pipes emerging from the ground. The road up to the site was full of ferns and tree ferns. They detected *Selaginella ornata*, *Davallia solida* and *Microlepia speluncae*. Daniel tried to collect bulbils from *Asplenium caudatum* but they did not survive. They also noticed *Asplenium nidus*, *Alsophila latebrosa* – a tree fern fast growing from spore & fairly easy to cultivate. *Loxogramme avenia* - with thick leaves, *Asplenium salignum* growing in the cloud forest. *Monogramma trichoidea* – growing on a tree with fronds that look like stringy, 3” long strands. The group also observed *Ophioglossum pendulum*, *Hymenophyllum sp.*, *Lindsaea regularis*, *Sellguea enervis*, *Coniogramme fraxinea* and *Tectaria melanocaula*.

On day 10, they travelled to the last location, the burial site of Makam Habib. The trek took them through the Bali Botanical Garden and along the way, they saw a small shelter used to get out from the rain. They discovered *Antrophyllum* with its distinctive spore pattern.

Goniophlebium subauriculatum, *Diplazium proliferum* and its sori, and near the Hindu temple, *Aglaomorpha coronans*. Growing on trees, was *Pyrrosia sp.*

Questions & Answers

Fernando Orellana asked if Daniel had a chance to check the DNA of *Platynerium bifurcatum wallinckii*. Daniel responded that he had not had a chance but was sure that the fern was probably *P. wallinckii*.

Ruby asked if *Platynerium wallinckii* was good for the Houston area. Darla said that it needed winter protection. She has hers hanging from trees and then pulls them inside when winter temperatures are predicted. Fernando mentioned that it grows well in the San Francisco area. Norm grows it outside closer to the ocean in 55% shade. It grew well even when temperatures reached 118 degrees and it did survive freezing temperatures for a few days. Consensus was that *Platynerium wallinckii* is pretty easy to grow, fairly hardy and takes heat well.

Jere Noerager asked about logistical issues getting around Bali. Daniel said that they needed to hire drivers. They were pretty cheap and the hotel had drivers on staff. Tourism is Bali's biggest industry. Everyone seems to speak English so it is easy to communicate with drivers, tour guides, hotel staff and shop owners.

The meeting adjourned at 4:00 pm.

Respectfully submitted,

Ceil Dow



New Members

We have new members!: Don and Karen Roberts. Please welcome our latest members (when you get a chance).



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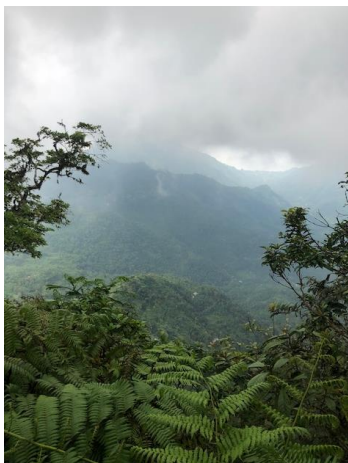
Darla Harris on: A great Trip To Bali

All photos submitted by Darla Harris

These are from the first climb and where we saw the most ferns:



Cloud forest at the top of the mountain:



Unforgettable scenery:

