



August 2022

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<http://www.tgcfersoc.org>

Our meeting this month will be “blended” by meeting in-person at the Judson Robinson, Jr. Community Center (2020 Hermann Dr., Houston, 77004) and/or via *GoToMeeting* – member’s choice.

A message from our President:

Howdy everyone,

I sure enjoyed July’s presentation by Dr. Feldman. I especially enjoyed all of his great photos. Please take the time to review the minutes that Ceil worked hours on. I’ll definitely have to put U.C. Berkeley on my Got-to-See list next time I’m in the Bay area.

Most of us received some much-needed rain lately. Finally! Just hope it will keep coming for a while. But not too much at once.

Many thanks to all the folks that brought food to the July meeting. This month’s meeting is coming up fast. We need to contact Larry Rucker, if you haven’t already, and let him know what you plan to bring so he doesn’t have to go out and buy all the food & beverages for us. Larry’s contact information is: herbie39L@att.com, 832-453-2992. Put his phone number in your contact list so it’s an easy call each month. So please don’t wait till the last minute. If you miss him in person, he will reply to your message to confirm. I see some of my ferns are about to shed spore. If there is anyone who is looking for spore of any kind, or a specific kind, please let me know. If I don’t have it (very possible) I might be able to find some for you.

This month’s meeting and workshop will be at the Judson Robinson Center. The workshop will be led by our own Ceil Dow. This sounds like it will be great fun and an opportunity to try a different way of growing our ferns. For those of you at home this will be a virtual meeting. You can gather your own materials and work with us as we assemble them. A suggested list of materials is included at the end of this Newsletter.

The raffle will be held after the meeting, as usual. Last month’s Raffle was amazing. The generosity of our group is heartwarming. I’ll have to poke around my garden and see what I can find to bring. I encourage others to continue to share your plants and join in the fun of getting some new ones.

See ya Sunday!

Patrick



**In Memorium
Jere Noerager**



I’m saddened to share the news of the passing of our friend and fellow Fern Society member Jere Noerager. As many of you knew Jere has had a bad couple of years, and it finally caught up with him. When all the different things that has gone wrong (any one of them could have killed him) he said he was at peace, he said someone has to draw the ‘Black Bean’! What a courageous attitude this man always displayed. He approached everyday with how to tackle it with good humor and grace.

Those that took the time to know Jere will tell you he was quick with a funny or a story. He was full of stories! I especially enjoyed his trekking across the Pacific Islands searching for ferns on his off days from his engineering job with the oil company. Back in the day you could actually get plants back to the United States with very little issue. He loved his Platyceriums and Draynaria. He has grown them continuously over the years.

Jere served the city of Houston well, working as a volunteer with the Mercer Botanical Gardens and the Houston Zoo. It was Mercer where I first met Jere, putting together and working the Tropical Plants booth. I will tell

you he knew his plants and it was not limited to ferns. If it was cool or rare it was at Jere's house. His love of plants is widely known, but his love for animals is what showed me what a compassionate and loving person Jere was. He would always have a dog on his lap, or by his side! He would be talking about his dog of many years ago, and would choke up with the love that was lost to him. Right up to his last love little Sonny that only had eyes for Jere. Jere was tied to and oxygen machine these past two years but still managed with his walker and oxygen to take Sonny on his walks twice a day. A greater love you seldom find.

It was so nice to see Jere at the July meeting, he was his normal funny self. It was with great surprise that he left us so soon after that.

Jere and his wife of 57 years had three children two boys and one daughter and several grandchildren. Jere was 80 years old and a service will be announced later on for those that would like to attend.

We miss you, Jere!

Darla



2022 Officers and Committees:

President:	Patrick Hudnall
Vice President:	Lisa George
Secretary:	Ceil Dow
Treasurer:	Beth Ayer
Board Members-at-Large:	Darla Harris (Past Pres) Jacqueline Smith Malcolm McCorquodale
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Ways and Means:	Larry Rucker
Raffle, Store, etc.	Rick Dow
Web Master:	Malcolm McCorquodale
Welcoming at Door:	Faye Stansberry



New Members

We are happy to announce the addition of two new members of the TGCFs. They are:

**Barbara O. Anderson and
Elle Shebay**

Please give them a warm greeting at our next meeting



Dues! Dues! Dues!

Reminder: Dues are still payable for 2022.

Ruby Adams is handling membership. She may be contacted at: radams13@sbcglobal.net or cell 281.830.4633



Minutes of Blended Meeting via "GoToMeeting" and In-person

July 17, 2022

Texas Gulf Coast Fern Society

Meeting was held at 2:00pm at the Justin Robinson Community Center in Hermann Park. Members unable to attend the in-person meeting could still participate on the "GoToMeeting" app.

Called the meeting to order at 2:00 pm.

Approximately 19 members present in person & 12 present online.

Presentation: "UC of Berkeley, a Tour of the Fern Gardens" by Lewis Feldman, Director of the UC of Berkeley

University of Berkeley has 400 different ferns in their collection. Some are grown outdoors and some are displayed in indoor greenhouses. Ferns grown indoors are mainly used for teaching. The fern collection at Berkeley is divided geographically with a strong representation from meso-America, South America, Asia and Australia.

Their database is available for research & teaching. On the database, it lists information like who collected it, the field collection place, conservation category, whether it is rare, the flower color & the time of the flowering and even the fruiting habits. A number is assigned to the plant and helps to identify where the plant is located in the garden. The map of the garden displays the number associated with the plant.

Xerophytic ferns inhabit rock faces or rocky slopes and grow in full sun. Landscapers and gardeners may need to plant more of these kind of plants as water gets scarce. These ferns have characteristics that help to conserve water: a thick waxy cuticle, folding of the pinnae or whole leaf, shedding or loss of the pinnae, developing scales to reduce water loss, losing up to 90% of its water and becoming dormant. Also, it has the ability to rapidly rehydrate when water is available. They develop a life cycle which does not need water. Recall that the fern life cycle needs water for the male sperm to fertilize the egg. This happens in the gametophyte generation and this is the sexual life cycle. But ferns living in low water environment often do have the possibility of a sexual life cycle and rather reproduce vegetatively or a fern biologist designates this as *apomixis*. *Astrolepis sinuata*, the Cloak Fern, loses its pinnae so it can conserve water. Hair and scale help it to reduce light as well as conserve water.

Pellaea mucronata var. mucronata, the Birds Nest Fern, is native to California. It is tolerant of wind, drought, and sun to partial shade. *Pellaea mucronata* grows in full unprotected rock cracks. Leaf edges may be rolled under to help reduce moisture loss. The sporangia are located under the edges.

Pleopeltis plebeian, native to Mexico and Central America, is part of a genus comprising about 90 species of ferns of which nearly 20 species are found in the UCBG. It is mainly new world but with a very few species in Africa, India & Sri Lanka. This genus was first described by Linnaeus in 1753 and has been extensively studied at Berkeley.

Pleopeltis lepidotricha is species with thick waxy covering (the cuticle) which greatly reduces water loss through evaporation.

Pleopeltis rosei, ranges from Mexico to Honduras. A member of a large genus which is widely distributed in tropical and temperate regions of North America and Eastern Asia. Known for species able to recover from severe water loss. Often an epiphyte and part of the so-called Resurrection Fern Group.

Pleopeltis polypodioides, is commonly called the Resurrection Fern. It is an evergreen fern that is typically found growing on trees, fallen logs, stumps, ledges, and rocks. It is considered an epiphytic plant. The fronds of this plant are curled when they're dry but rehydrate quickly in the rain. It is a difficult plant to get established. It spreads by creeping rhizomes. The rhizomes are covered with lance-shaped, brown scales with ciliate margins. UCBG has a large collection of ferns from Australia, New Zealand and East Asia. The garden has a particularly rich collection of the genus, *Polystichum*, with over 25 species. Their center of diversity is China, although they are also well represented in the flora of both Brazil and Mexico. They are often found in disturbed habitats such as road cuts.

Polystichum squarrosum, is a type of shield fern with the highest diversity of the genus on eastern Asia. *Polystichum* species are terrestrial or rock dwelling and generally found in warm temperate and montane tropical regions.

Phlebodium pseudoaureum, have smooth, rounded, & very attractive sori. It is from Costa Rica. *Phlebodium* is a relatively small genus with three species found in the UCBG. They are epiphytic ferns with creeping, densely hairy of scaly rhizomes. The fronds tend to persist for at least two years.

Davallia a genus of about 40 species of which at least 10 are represented in the collection at UCBG. The plants have furry rhizomes which cover the surface of the potting mixture as well as root down into it. The fronds are triangular shape and about 1 ½ feet long and 11 foot wide. They divide into three to four pinnae which subdivide into many pinnules. *Davallia* are often used in hanging baskets because the rhizomes split into sections and the surface is

covered quickly. Unlike other ferns, *Davallia* tolerate low levels of humidity.

Thelypteris are represented by 23 species in the UCBG, although the taxonomy of what is a species is currently being rethought. They are mostly terrestrial, though some grow on rock and the bulk of the species are tropical; a number are temperate species. It can have “mildly” dimorphic fronds.

Thelypteris nevadensis, Nevada Marsh Fern or Sierra Water Fern, is native to North America from BC to Northern California in marshes wooded areas.

Doodia aspera, commonly known as Prickly Rasp Fern, is a widespread and common plant, growing in eastern Australia. Often seen in rainforest margins or eucalyptus forests in Victoria, New South Wales and Queensland, it is a terrestrial fern with reddish new growth. The UCBG has 2 of the 19 recognized species.

Polypodium colpodes. A relatively uncommon fern from the genus, *Polypodium*. The genus, which is well represented in Mexico, consists of 75-100 species of which the UCBG has 7.

Adiantum Peruvianum, Silver Dollar Maidenhair Fern or Peruvian Maidenhair Fern has black stems and large flat pinnules and frequently grown as a houseplant. The genus epithet, *Adiantum*, comes from the Greek “*adiantos*” meaning unwaterable, referring to the water repellent fronds.

Blechnum penna-marina, Little Hard Fern, is mainly terrestrial or grow on rocks; a few species are epiphytes. The genus has about 250 species of which about 25 are found in the UCBG. They generally form stolons which is characteristic of the genus.

Blechnum gibbum, Miniature Tree Fern. It grows to 1-2 meters with a vertical “trunk” (actually a rhizome). It has bright green fronds. It does not tolerate temperatures below 59 degrees F. In temperate zones, it must be cultivated under glass year round. It is a suitable subject for a greenhouse or conservatory. It requires an acid soil and a partially shaded position.

Blechnum discolor, Piupiu Crown Fern, is native to New Zealand and is found in a number of quite diverse forest communities and sometimes is the dominant understory component. Spores are produced on distinctive fronds which often appear dark and shriveled.

Blechnum chilense with coiled, cranberry red stems unfurl upright fronds cloaked in thick glossy evergreen leaves. It looks so good, people think it's fake! If really happy, it can reach 5', but usually 2-3'; eventually young ferns will come up around the original plant from rhizomes. These can easily be removed and shared or you can have a little colony of these beautiful plants. Shady, moist and cool is best but takes some sun with lots of water.

Blechnum microphyllum is useful as a thick ground cover. Does well in both sun and shade. It is quite hardy. Reaches far south in South America.

Lophosoria quadripinnata, or Palmilla, is a species of fern spanning from Cuba and Mexico south to Chile. Its common name is Diamondleaf Fern. Medium sized plant grows to 4-5' usually. Though in a sheltered location in Scotland it grew to 10-12 feet. It has a massive rhizome that is covered with hairs. Evolutionary evidence suggests that the *Lophosoria* genus was located in the southern part of Gondwana and subsequently migrated to Australia and South America. The UCBG grows 1 of the 2 recognized species.

Dryopteris lepidopoda. The genus *Dryopteris* is commonly known as the Wood Fern. The UCBG has about 23 of the reported 300-400 species. Many of the species have stout, slowly creeping rhizomes/rootstocks that form a crown, with a vase-like ring of fronds.

Dryopteris decipiens, hails from the subtropical evergreen forests in South Central China and into Japan, but is much more winter hardy than its origins would indicate and has been reported hardy down to -25C. New growth is red flushed. Decipiens means deceptive or not obvious, but it is not obvious what part of the fern is not obvious.

Microlepia marginata, or Fumoto-shida, is native to the temperate region of East Asia and Southeast Asia (China, Nepal, Indonesia and New Guinea) and is an evergreen perennial fern plant of the family *Dennstaedtiaceae*. The plant height is about 60 cm. The genus was first described in 1836, with most species native to Asia but a few also occur in Australia, Africa, the West Indies, Latin America and on some oceanic islands.

Dicksonia antarctica, from southeastern Australia, typically grows to about 15' tall but can reach heights of nearly 50 feet. Hardy to about -5C. The UCBG grows 8 of the 20+ recognized species. Many species of *Dicksonia* (especially *D. antarctica*) are suited to garden planting and landscaping. *Diplazium esculentum*, or Vegetable Fern, is the most common fern that is eaten in the tropics. Found throughout Asia and Oceania. Up to 50 cm high with fronds reaching up to 1.5 meters in length.

Angiopteris evecta, Turnip Fern. *Angiopteris* is a genus of large evergreen ferns found throughout the paleotropics from Madagascar to the South Pacific Islands. Leaves can reach 16 to 26 feet long. *Angiopteris* is unique among ferns in having explosively dispersed spores. The UCBG has three of the supposedly 200, poorly defined, named species.

Pyrrhosia lingua, has a shallow slowly growing and long creeping rhizome that produces simple upright fronds 12" – 18" tall with a tapered base. The olive green fronds have an undulating margin with a slight twist to show off its felted tan underside. The round sori accompanying stellate hairs and scales make for a soft, felty feel to the fronds.

Pentarhizidium orientale (syn. *Onoclea occidentalis*), or Oriental Ostrich Fern, is native to eastern Asia and eastern North America. The ferns are deciduous producing both

sterile and fertile fronds with the latter appearing in late summer. The UCBG has 2 of the 14 recognized species.

Pentarhizidium intermedium, had been placed with other ferns having dimorphic leaves but has been moved into its own genus which has only two species.

Pteris dactylina. Native of Nepal. It has pinnate leaves. Belongs to a genus of over 250 species. Native to the tropics and subtropics worldwide. The UCBG has 14 species of *Pteris*.

Asplenium scolopendrium ssp. *Scolopendrium*, or European Hart's-tongue Fern is a large group of over 700 species which in ancient times were thought to cause infertility in women. Over 25 species are found in the UCBG.

Microlepia platyphylla. From Indonesia. Native to India, Asia, & the Phillipines. Blue-green colored foliage, almost iridescent. Height 4-6 feet.

Woodwardia semicordata, or Chain Fern. The genus *Woodwardia* is found, mainly in Eastern Asia & North America. Currently about 15 species are recognized with four species found in the UCBG. They are large ferns with fronds reaching 5-300 cm in length.

Woodwardia prolifera. Native to China, Japan, and the Himalayas. Usually occurs in wet conditions; in coastal locations, mountain slopes and near streams. Plantlets are typically pink-orange in color.

Osmunda spectabilis, or Royal Fern. Five species of *Osmunda* are found in the UCBG. Because of the large mass of sporangia that ripen uniformly at the same time to a showy golden color, the ferns look like they are in flower and hence the common name, "Flowering Ferns" given to the genus.

Microgramma vacciniiflora. *Microgramma* is a genus of ferns represented by 6 species in the UCBG which because of its creeping habit, is commonly called vine fern or snake fern.

Elaphoglossum lingua. *Elaphoglossum* is a genus of over 600 species of which about 25 are found at the UCBG. It is one of the most diverse genera of ferns found mainly in wet montane and cloud forests. Its center of diversity is in tropical America.

Todea barbara, or Crepe Fern. Known as the King Fern; up to 10 feet tall with large fronds, up to 8 feet long. Grows readily in gardens in temperate and subtropical climates. With an elongated trunk, it is sometimes mistaken as a tree fern, which it is not.

Platycerum is a genus of about 18 fern species of which 4 species are found at UCBG. Ferns in this genus are widely known as Staghorn Ferns or Elkhorn Ferns due to their uniquely shaped fronds. This genus is epiphytic and is native to tropical and temperate areas of South America, Africa, Southeast Asia, Australia and New Guinea. These ferns generally show dimorphic leaf development.

Drynaria coronans, or Rock Ginger Fern is from the Bali Province, Indonesia. Dimorphic leaves accumulate debris in the leaf “basket”.

Regnellidium diphyllum, *Regnellidium* is a monotypic genus of ferns of the family *Marsileaceae*. The single living species, *R. diphyllum*, is a two leaf water fern. It is native to southeastern Brazil and adjacent regions of Argentina. It resembles its relatives from the genus *Marsilea* but has 2-lobed leaves. *R. diphyllum* is the single living species of the genus. Named after the Swedish botanist Anders Fredrik Regnell. Native ranger from SE Brazil to NE Argentina. *Azolla filliculoides*, is an aquatic extremely reduced form of a fern resembling duckweeds and some mosses. It is considered to be an invasive plant in the wetlands, freshwater lakes and ditches.

Questions and Answers:

Q – Larry Rucker: What is the coldest it gets there at UCBG?

A – It rarely gets to 32 degrees. The average winter temperature is 38 degrees in the winter time.

Q – How much does it cost for admission in to the UCBG?

A- Admission is \$15.

Q- Where is the Berkley campus geographically located?

A- Across the bay from San Francisco. It is a 20 minute ride from San Francisco.

Note: Volunteers help to maintain the garden. The ferns are grown from spores and are wild collected.

Q – Regarding the Resurrection Fern: Have you actually collected spore? How do you propagate it? We have a problem growing it from spore.

Respectfully submitted by Ceil Dow.

Minutes of TGCFS BOD meeting:

July 17, 2022

Gulf Coast Fern Society

Board members in attendance: Patrick Hudnall, Darla Harris, Beth Ayer, Malcom McCorquodale, & Ceil Dow. Darla needs approval to spend approximately \$200 on a webcam and a wireless microphone.

Beth reminded Darla that she needs receipts to reimburse any expenses.

Ceil Dow made the motion to spend the money needed for the supplies.

Malcom McCorquodale seconded the motion.

All approved the motion.



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/>



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Kokedama Supply List:

You will need:

2 cups wet Kokedama soil mix: 2 parts Miracle Grow potting mix + 1 part nonclumping clay Kitty Litter (Tidy Cat works well as a substitute for the clay in a bonsai soil mix. It helps to hold the soil together.)

2 cups wet sphagnum moss (long fibered)

24’ jute or heavy string

2 pieces jute 36” long each

1 u-shaped nail

Small plant with some roots removed (It must fit inside the soil ball)

Saran Wrap

Scissors

