



Bermuda Botanical Society

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SEPTEMBER NEWSLETTER 2022

FROM THE PRESIDENT:

A very long, hot and dry July and August has some of the plants in the endemic/native garden struggling – particularly the *Callicarpa* (Turkey berry) and Doc bushes on the western side. Getting them watered has been a challenge. (Special thanks to Marlie who has worked hard on this task!) On the other hand, the Jamaica vervain is positively thriving – still flowering and plenty of self-set seedlings growing. Perhaps a plant to think about for flower borders. Talks have been held with representatives from Parks and Estates and an agreement for the BBS to have storage space for equipment – and possible more space for meetings – has been agreed in principle. It will certainly be very helpful and save a lot of carrying of garden equipment back and forth.

The Bermuda Botanical Gardens Steering Committee and the Friends of the BBG took a summer break but should be up in action in September.

Tree Tales 3 – Palms

The research is just about finished and final proofreading for signs underway. These should be in place by October. Work on a permanent interpretive sign is in progress. It is hoped to bring in a palm specialist early next year to make presentation(s) on these intriguing and often under appreciated plants. George will also be giving a guided tour of the Palms of Hamilton in November to increase awareness of their diversity and importance.

BBG Summer Activity: a BBS photographic challenge was created inviting young participants to ‘photograph the rainbow’ using the plants at the BBG. There is still time to enter! Details on the BBS website.
www.bermudabotanicalsociety.org

BBS Award for Botanical Sciences: The first BBS Award for Botanical Sciences went to Saltus Grammar School student Chloe Dyer-Fagundo for her research document on hydroponics. The Award was presented by the BBS President during the Year 10 ‘End of Year Awards’ presentation – a very enjoyable and interesting occasion. Looking forward, all senior schools will again be invited to encourage students to participate in this scheme. Details of the award are sent to Principals and Science Teachers.

Seed Swap & Plant Sale proposed date - end of October – please collect lots of seeds from vegetables, flowers, trees etc and see what plants you may have that can be donated.

Questions, suggestions – and help with any of the activities – would be very welcome , we’d love some feedback!

“To encourage and support the study and promotion of the botanical sciences within Bermuda”

DOUGLAS FIR

George Peterich - text and photos

The Douglas fir is a member of the Pineaceae, but is not a true fir. For its looks, like hemlock (*Tsuga*), the genus got the scientific name *Pseudotsuga*. The species name is *menziesii*, after Archibald Menzies, the man who discovered the trees on Vancouver Island in 1791. There are two varieties, the coastal and the rocky mountain one. It is the coastal one that was brought by the botanist David Douglas to Scotland in 1826; since then its common name is Douglas Fir. When we visited Vancouver in 2009, we also visited of course the botanical gardens and we found there a small monument for David Douglas.



Douglas firs have been a welcome addition to forestry in Europe since their introduction in the mid 1800s. They grow fast and they produce a good quality of timber. The trees can grow to an enormous size and there seems to be no limit to their age. Trees that I've seen planted 60 or 70 years ago are now harvestable, although we are hesitating to do so. We want to save especially the one that is perhaps 100 years old. I have known that tree since it was small and I love it.



The photo (above) was taken about 15 years ago, and I can tell you now that this year we could not embrace the tree and touch hands anymore. And I assure you that it is just the tree that has grown.

When we were in Vancouver, we also crossed over to Vancouver Island, where Menzies first saw these trees and although most have been felled, there are still a few remaining in protected areas. This is one of the great attractions of the island. The ones that we have seen (photo right) were very, very old. What a wonderful experience!

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TRIVIUM NO. 39 - Edible

George Peterich - text and photo

Some of the epithets of the scientific names of plants tell us that the plant in question is edible. *edulis*, which is Latin for edible is at the top of the list, followed by *deliciosus* and *esculentus*.

- *Boletus edulis* - King Mushroom, Cep, or Porcino.
- *Monstera deliciosa* – Swiss Cheese Plant
- *Morchella esculenta*. That is better than *deliciosus*! It is the mushroom with the most wonderful taste.

Dulcis, meaning sweet, is also a clear sign that the plant, or parts of it, are edible. *Pithecellobium dulce* - Manila Tamarind

Then there are three more, that give a hint that the plant can be consumed:

- *officinalis* - of the kitchen, *Salvia officinalis* - Sage
- *sativus* – seeded, *Cucumis sativus* - Cucumber and
- *arvensis* – of cultivated fields. *Avena arvensis* - Oats

Note: *Pithecellobium dulce* will turn up again in a future Trivium

TRIVIUM NO. 40 - Abundance

George Peterich - text and photo

A field full of Purslane, *Portulaca oleracea*. This plant is not only edible, but it is full of vitamins and valuable minerals. Look for a full list on the Internet. It is hard to believe that it is not appreciated here. (I wrote about it before in the Newsletter of September 2021)

I had to look for the meaning of *oleracea* and found to my surprise that the word derives not from *oleo*, which means smell, and that had made me wonder, but from *olus*, which is Latin for vegetable, so that makes it another word that means edible. (See Trivium no.39)



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A Botanical Misconception

By Gary Taylor, M.F.C.

When you think of the plants of a tropical island, or sub-tropical, in Bermuda's case, what is one type of plant that comes to mind? If you need a hint, just walk into any souvenir shop in Bermuda and you'll see palm trees on every other t-shirt, coffee mug, and ball cap. Palm trees scream tropical, but few people are aware that they are not even trees.

I was aware of this misnomer, but had to do some research to determine the appropriate ID box to put palms in. Preliminary online searches found people blogging about palms, acknowledging that they are not trees, as many people generally think, but grasses. Fortunately, further searches steered me in the right direction.

As I remember from a previous Bermuda College Biology class, palms and grasses are monocots, both belonging to the Class Liliopsida. Monocots have leaves that tend to have parallel veins, their vascular tissue is scattered and they have usually fibrous root systems with no tap root. This is true for grasses and palms. They are so similar, they must be closely related, right? Well, their connection ends when we go from taxonomic Class to Order. Grasses are separated into the order Poales, comprised of grasses, cattails, and sedges, while palms are in the order Arecales, comprised solely of palms. Palms are not trees or grasses, they are in an Order all by themselves.

I didn't have the heart to correct the writers on the blogs that I stumbled into on the magical internet, but hopefully the readers of this brief contribution will feel smarter after having read it.

In Progress

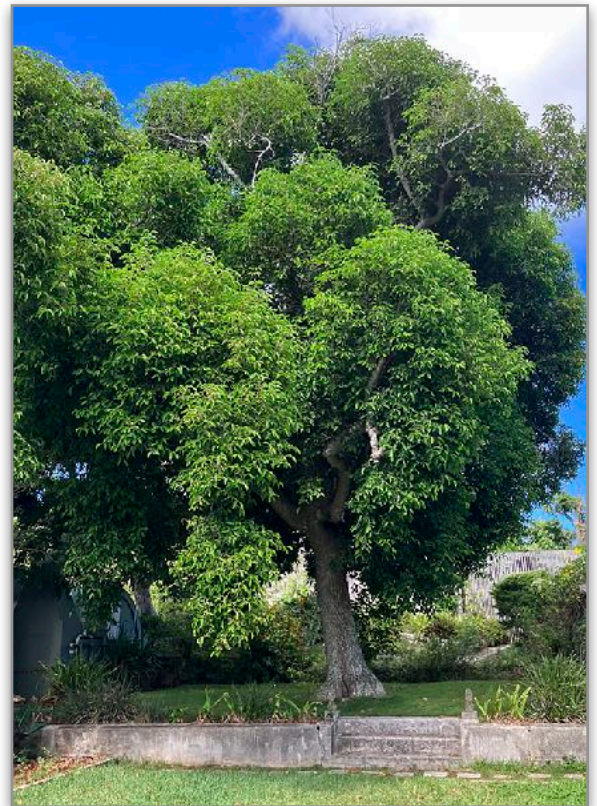
Lisa Greene- text & photos

This handsome tree in the Botanical Gardens, behind the office building of the D. of Env. and Natural Resources, has long been a favourite of mine, but I didn't know what it was. To be more specific, I *thought* it was a mahogany but when I looked at the leaf structure, I realized that it couldn't be a mahogany. Back to square one. On a recent foray in the Gardens, I looked again and was thrilled to see buds and flowers!

Still not knowing what it was, I showed photos to Sarah Vallis who immediately identified it as a *Mimusops* - we think it is probably *M. elengi*, commonly known as Spanish cherry, medlar, and bullet wood. Now we wait for the fruit to develop in order to confirm the identification. (The big question for me is *why*, in all



my years of traversing the Gardens, haven't I noticed the fruit which are orange when mature - and *why* don't I see any of the beautiful, durable seeds under the tree now, hidden in the grass?) There is a specimen of *M. elengi* in the Arboretum that I have seen in fruit (photo left).



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The Queen Elizabeth II Botanic Park, Grand Cayman— An Intriguing Blend of Culture, History & Nature

Marlie Powell - text and photos

On a recent cruise through the western Caribbean, we had the opportunity to spend a few hours on Grand Cayman. Whilst other passengers were whisked away in coaches to various beach ‘experiences’ recommended by the cruise line, we hired a small car and headed in the opposite direction.

The Queen Elizabeth II Botanic Park is a 40 minute drive across the flat landscape to the rather dry, sparsely inhabited North District on the eastern end of the island. Officially opened in 1994, it is jointly owned by the Government and the National Trust for the Cayman Islands.

We were struck by the lush beauty of the park, which connects a number of distinct areas on its 64 acres including a Heritage Garden, Xerophytic Garden, Orchid Boardwalk, Floral Garden bordering a 3-acre lake (an important wetland habitat), and an extensive Woodland Trail featuring many rare and native palms. Crushed stone pathways connect these areas and wooden signposts guide visitors along. There are particularly interesting displays and features along the way, most notably a one-hundred-year-old restored Caymanian wooden house, set in a typical sand garden with traditional ornamentals, medicinal plants, and fruit trees.

Our self-guided tour began and ended at the Visitors interpretive centre and gift shop managed by a singular employee who sold entry tickets, provided colourful maps and sold Botanical-themed linen tea towels, t-shirts, books and a broad range of high-quality giftware.

Nowhere in this lovely botanic park did we see things evident in our Bermuda Botanical Garden—no dog walking, picnics, bike-riding, or parties. Private vehicles were parked in designated spaces in the tree-rimmed lot at the visitor centre entrance. In the park, no trash receptacles were provided. Plants and trees were clearly labeled and in good condition, and structures including buildings, benches, walkways, and walls were in good repair and attractive.

Our afternoon at the Botanic Park was not nearly long enough. Even in the intense early summer heat it was a delightful experience and provided many ideas for us to consider as we work towards improving our Bermuda Botanical Gardens.



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In Our Garden - Sea Ox-eye (*Borrichia arborescens*)

Diana Chudleigh

The four month drought has taken a huge toll on our garden. The grass is brown and crisp and the plants are looking sad and wilted. Even the leaves of the Bermuda Olivewood Bark (*Cassine laneana*) one of our Bermuda endemic trio of trees, are brown and sick looking.

Our soil depth is shallow and the occasional cloudbursts fall elsewhere. Is climate change upon us? Is it time to look for more appropriate plants for our garden? Should we be looking to succulents, specialised plants that store water in their leaves or stems?

Sea Ox-eye is a native plant that is a succulent as it stores water in its fleshy leaves and may be an answer to some of our problems. It is a hardy coastal perennial shrub that grows to about 2-foot with a high tolerance of salt and wind.

It is part of the Aster family, *Asteraceae*, and produces a bright yellow daisy-like flower. Its leaves are green or silver-grey in colour, sometimes on the same plant but often on different plants. This has given us the opportunity to plant one bed of green and one of silver-grey leaves near the entrance to our garden off North Shore Road. Right now it is quite high maintenance but we are hoping that when the plants spread that there will be less weeding.

Butterflies are attracted to the flowers and birds to the seed heads. It grows from seed and cuttings.

The name *Borrichia* was used to honor the 17th century Danish botanist Ole Borch. *Arborescens* means tree-like.

The bright yellow daisy-like flower



Lisa Greene

Sea Ox-eye can have green or silvery-grey leaves



Lisa Greene

The Surprising Butterfly Pea Vine

Wendy McLeod - text and photos

Origins

Clitoria ternatea, commonly known as Asian pigeonwings or butterfly pea vine is a member of the Pea family (Fabaceae). The species name is thought to derive from the city of Ternate in the Indonesian archipelago, from where Linnaeus's specimens originated. This plant is native to equatorial Asia but has been introduced worldwide. In Bermuda it is a hardy perennial vine or creeper of modest size, doing best in moist, neutral soil. Its most striking feature is the colour of its flowers, a vivid deep blue with light yellow markings.



Uses

I first came across the butterfly pea vine in the locally sold Empress Gin which has a pure blue colour and then magically turned pink with the addition of tonic. After much research ... and according to the label the gin's colour was due to butterfly pea vine. Moving on to less frivolous uses of this versatile plant - in India, it is revered as a holy flower, used in daily puja rituals.

It is grown as a revegetation species (e.g., in coal mines in Australia), requiring little care when cultivated. As a legume its roots form a symbiotic association with soil bacteria known as rhizobia which transform atmospheric N₂ into a plant-usable form (a process called nitrogen fixing), therefore, this plant is also used to improve soil quality through the decomposition of nitrogen rich plant material.



The fruits are 2–2¾ inch long, flat pods with six to ten seeds in each pod. They are edible when tender.

Blue tea is a typical local drink in other parts of the world. It is made from butterfly pea flowers and dried lemongrass and changes color depending on what is added to the liquid, with lemon juice turning it purple. In Thailand and Vietnam, this blue pea flower tea is commonly mixed with honey and lemon to increase acidity and turn the beverage a pink-purple colour, to produce for a drink usually served after dinner. The tea can be drunk hot or cold. I will be trying this out myself as I bought a package of the dried tea when I was in Canada.

Health Benefits

Butterfly pea flowers are rich in several antioxidants, including ternatins, kaempferol, p-coumaric acid, and delphinidin-3,5-glucoside. Studies suggest that butterfly pea flower may help ensure skin and hair health, promote weight loss, and reduce blood sugar levels.

Here is a link to more information on health benefits. I like this site Healthline because it discards studies funded by biased parties such as food and drug companies and always attaches the scientific reference papers that it used to prepare its articles. <https://www.healthline.com/nutrition/butterfly-pea-flower-benefits>

Where to find it

I could not source the blue tea locally – except in gin form. However it is sold in overseas healthfood stores. However that is moot now as I have my own vine purchased at Brighton Hill/Green Thumb Nursery in Devonshire has a good stock of these versatile little plants.

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Leek & Onion Bhajis

Vegan, Gluten-Free, Wheat-free, Nut-free ~ Choose local organic ingredients for best results

4 servings, Prep & Cooking Time = 25 minutes

Ingredients:

2 Bermuda onions, medium-sized, chopped
1 leek, washed, sliced, chopped
50 g corn flour (or cornmeal or G-F flour)
150g gram flour (or garbanzo/fava flour)
1 tsp each; mustard seeds, coriander powder, turmeric powder, cumin powder
½ tsp each; chili flakes, chilli powder, cumin seeds, black pepper, salt
5 g ginger pulp
150 ml water
juice of 1 lemon
500 ml vegetable oil (for frying)
Lemon wedges and chopped coriander or parsley leaves (for garnish)

Method:

1. Whisk all dry ingredients in a mixing bowl
2. Mix in water and lemon juice to form thick, sticky batter
3. Add chopped onions and leeks and hand mix to thoroughly coat
4. Heat oil in large pan or deep fat fryer
5. Roughly form by hand balls (approximately 2 tbsp size) and drop into hot oil
6. Fry, turning occasionally with a fork until golden
7. Remove cooked bhajis and rest on paper towel to absorb excess oil
8. Serve immediately with lemon and chopped coriander garnish

Bhajis are a popular starter or compliment to any Indian-themed meal.

Variations: Make one-bite-sized Bhajis, skewer with toothpicks and serve on a tray with mango chutney dip for a delicious golden and crispy hand pass or buffet offering.

Contributed by Marlie & Jocelyn Powell, Vegan/Vegetarian chefs at Kingston House B&B



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Children's Corner

Suncatchers are fun to make!

Felicity Holmes - text and photos



What you need:

- Colourful, fairly flat, small flowers, petals or leaves
- 2 circles of transparent contact paper with diameter of about 5"
- 10" piece of thread (for hanging - optional)
- Scissors

Method:

1. Remove the paper backing from one circle and place it on a table sticky side up.
2. Press your thread on the sticky side to form a "V" and then press on your plant material. Tip - it is easiest to cut the stems off small flowers after you place them.



3. Remove the paper backing from the second circle and press it over your design.
4. Hang in your window!



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MEMBERSHIP RENEWALS due annually in August.

Just a reminder that, though the MEMBERSHIP form is available on the BBS Website, PAYMENTS *CANNOT* be made directly from the website. It is simply not cost effective for the Society. Please make a direct debit, giving your name from your bank account or send a cheque. Apologies for any confusion or frustration this may have caused. Many thanks to those who have already renewed.

<https://bermudabotanicalsociety.org/>

Events

October: (Dates to be announced)

- Tour of the BBG Palm Collection
- Seed swap and plant sale

October 30th, Sunday: 9AM - Guided tour - The Palms of Hamilton with George Peterich

November 19: AGM 3 pm

Early 2023 – (Dates to be announced)

- Visiting palm specialist presentation, private garden tour
- March 12th Tour of Keren Lomas' Garden

Questions, suggestions – and help with any of the activities – would be very welcome, we'd love some feedback!