



Bermuda Botanical Society

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FEBRUARY NEWSLETTER 2021

FROM THE PRESIDENT:

Well, the January storm certainly put paid to the vegetable garden and wreaked havoc on the bananas and fruit trees. Do hope your gardens fared somewhat better! Meanwhile, the BBS is working on a number of projects. Hope you will consider joining in with some of these. Look forward to hearing from you!

Citizen Scientists – looking for first flowering of Bermudiana, *Sisyrinchium bermudiana*, Allspice, *Pimenta dioica* and later in the year Bay Grape, *Coccoloba uvifera*. Include the children/grandchildren looking for these, photographing and send their results to bdabotanicalsociety@gmail.com

Subject: Citizen Scientists

Surinam Cherry, *Eugenia uniflora* was spotted in flower on February 1st, West Pembroke

QEII Platinum Jubilee 2022 sees the anniversary of the accession of QEII. A few years ago QE initiated the Green Canopy project. To celebrate this anniversary and in keeping with the mission of the project, a new initiative has been proposed: 70 trees for 70 years. It will be formally launched in March. Felt this was something Society members could get involved with. Project framework suggested as collecting a number of olivewood seedlings from Nonsuch Island (where there is an amazing abundance!!), asking members to foster a few to ensure they are growing well, before planting in 2022. An ideal project for those with children or grandchildren! If you would be interested in helping with this, please contact bdabotanicalsociety@gmail.com Subject: 70 for 70

Working with others

Chamber of Commerce: A number of meetings have been held and sub-groups formed to examine issues facing the Third Sector, preferred solutions and courses of action. Meetings are held every two weeks.

Plastic Waste: meeting with other environmental groups on this issue which affects all of us. The most pressing need is for the Government to finalize the Ban on One-Use Plastics. However, in gardening we use plastic pots, plastic seed trays, plastic labels among other things. Research is increasingly showing the harm plastic waste does not only to marine life which we are all familiar with but also plant life. Do you use alternatives? Share your ideas on how to reduce use of plastic at bdabotanicalsociety@gmail.com subject: plastics

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Endemic/Native Area at the BBG Parks Dept staff initially created a cedar log border, removed invasives and added a large quantity of mulch. BBS members have been working here, weeding, pruning and planting new shrubs and trees. A yellow wood *Xanthoxylum flavum* has been planted in the area next to the former Parks office where there is a female yellow wood. Let's hope the new sapling is a male!
NEEDED – Bermudiana to complete the front border, and ground cover plants such as Darrell's Fleabane, Inkberry, Bermuda Wood Grass, Peperomia

Anyone interested in helping with this project should contact the Society at bdabotanicalsociety@gmail.com Subject: Endemic/native garden

Jennifer Flood

Designing a Landscape without Grass

Jameka Smith, Acting Park Planner, Department of Parks

Beautiful landscaping doesn't have to rely on grass lawns. While visually appealing, growing healthy, lush, green grass can sometimes be a challenge and often requires a lot of water and care to maintain. There are other options for having a captivating landscape without including grass or other high maintenance plants.

Consider these tips for a unique and amazing low grass landscape:

Plant native and endemics. Because native and endemic plants are adapted to our local environmental conditions, they require far less water than lawns. Many native and endemic shrubs and trees offer beautiful flowers and produce abundant colourful fruits and seeds. Consider introducing Turnera, bermudiana, olivewood, snowberry, and dogwood to your home landscape.

Plant alternative ground covers. Your choices of lush green perennials to replace grass depends on a range of factors, including sunlight. If you're ditching the lawn because shade makes it hard to keep grass healthy, consider shade loving perennials. For no-mow options that can take some foot traffic and shade or sun, consider ornamentals such as liriop and mundo grass.

Create an edible landscape. Your home landscape may be harbouring a gardener's dream...flat or gently sloping stretches of sunny ground. If so, consider devoting the majority of that grassy area to vegetables and fruits. Raised beds or a garden plot is ideal.

Xeriscaping. If you want to dig up your lawn because of water conservation reasons, establish beds of striking cacti and succulents such as agave, aloe, and cochineal as well as drought tolerant ornamental grasses. This type of low-water gardening, known as xeriscaping, works well in warm climates and is set off best by sand or gravel mulches and paths.

Hardscape your landscape. An attractive alternative to grass is hardscaping, that is using rocks, wood, bricks or other non-living materials to cover the surface of an outdoor area. Consider the entire area you're designing and its intended purpose before you begin. Will you have patios, barbecues or ponds? Where will the walkway lead? Keep some greenery around. Find a balance with two or three textures. Choose materials that look complimentary to your home's style.

What would you rather be doing on a summer afternoon? Mowing the lawn? Or relaxing with friends and family in your beautiful grass-free areas?

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THE PROBLEM WITH COW CANE AND NAPIER GRASS

David B. Wingate - September 2020

Cow cane, *Arundo donax*, and Napier grass, *Pennisetum purpureum*, are two very tall African fodder grasses which are now widely used all over the tropics for cattle fodder and other uses such as paper manufacture. But they cannot be easily eaten by cattle *in situ* because of their height and almost woody stems. As a result, they have grown so tall along our marsh edges, where they have mainly been planted as fodder for marsh-edge cow grazing, that they now block the view into most of our peat marshes along with the more aquatic and tall growing cattail.

All we need to do to solve this problem is introduce elephants and hippopotamus, because those are the mammals that it was primarily evolved to be eaten by! I say this facetiously, of course, but it does serve to point out the problems that selective introduction of new species can cause when introduced out of context. Now that cattle are being withdrawn more and more from marsh edge grazing the problem of spread by these two giant grasses is becoming more acute.

We are fortunate in one respect that cow cane does not disperse by seed on Bermuda. Rather it grows laterally from rhizomes. This means that established patches can theoretically be contained within their original planting site. In Bermuda, it has mostly been spread in rubble fill dumped in the marshes. I say theoretically controllable, however, because in practice this has proven to be extremely difficult to do.

At the Bermuda Audubon Society's Somerset Long bay reserve, where it originally became established in rubble fill when that marsh was being used as a garbage dump, and now more recently at the Buy Back Bermuda's Eve's pond nature reserve, where it had a similar origin, many thousands of dollars have been spent on contracts to try and eliminate it. The only sure way is to carefully dig out all the rhizomes, and this is most easily done by scooping up the soil deeply enough with a payloader and then screening it, but in practice many rhizomes get missed or broken during removal and each individual piece can start a new plant. It is also essential to follow through with year-long monitoring to capture the re-growth. Where it is established amidst other trees and shrubs that we want to preserve, the only option is labour-intensive hand removal of rhizomes with a mattock.

The more recently introduced Napier grass is an even greater challenge to control because it can spread by seed. This means that it might appear anywhere, but in Bermuda it most commonly invades wet bottomlands where cattle are being grazed. In addition to blocking views of the marshes from our roadsides it also poses more of a fire hazard. At the society's Freer Cox nature reserve in Devonshire marsh, it became established only recently from seed after the roadside fodder crop field was abandoned. During the most recent marsh fire there the Napier grass burned right up to the roadside, posing a serious threat to the Old Devonshire church.



Cow cane, *Arundo donax*, with rhizomes in foreground.

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One wonders why on earth the grass cutting in the marsh edge fields has nearly been abandoned when the wet bottomlands provide the richest and lushest grass, not affected by drought or erosion, and when we still seem to have the same number of milking cows, though sadly concentrated in muddy and smelly holding barns and pens where the cut fodder is brought to them.

I hypothesize that there are three contributing factors:

One might be labour costs and logistical challenges in marsh grass cutting. Another might be the accelerating sea level rise which is raising the water table in the marshes and making the “wet pasture fields” even wetter and more difficult to operate grass cutting machinery on without getting bogged down.

A third might be the lack of a suitable grass cutting machine which can handle muddy fields without bogging down. It may be that such a machine is just not economical to import because our wet pasture fields are too limited in extent to be able to achieve economies of scale.

I believe that nearly all the foregoing problems could be resolved if we were to pool resources to import a wide-track tractor, designed to cut the grass in front and feed it automatically into a large bin on balloon tires which is towed behind. With such a machine those fields could be restored efficiently and economically for their original purpose, providing enough green fodder to serve all the dairy farms without the need to import any. In the process those fields would be restored as optimum habitat for marshland birds, along with the view of same. Only where these fields are directly adjacent to the road would there be an additional problem to deal with in the form of roadside litter, mainly thrown bottles, which can cause severe damage to mowing machinery. That litter would be easier to find and remove once the grass is regularly cut.



Napier grass, *Pennisetum purpureum*



Have you ever seen this with fruit?

Lisa Greene

Dracaena reflexa, commonly known as Song of India, but perhaps more commonly known in Bermuda as Pleomele. It is most often used as a house plant but is also planted out in gardens, where it is usually much smaller than it is in the photo. Pleomele is being seen, more and more frequently, growing in uncultivated areas. This indicates that it is naturalising (which means that it is now spreading naturally, without the help of man). I don't believe I've ever seen this plant in fruit, but a quick search on the internet shows images of small red berries. Red fruit is very attractive to birds, and birds, of course, have the ability to eat a fruit in one location and deposit the seed in a different location, thus spreading the plant, if the seed germinates. If you have the plant in flower or fruiting in your garden, I would be interested in hearing from you.

Please email me at elgreenebda@icloud.com.

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Have you seen a blue scarlet pimpernel?

Lisa Greene

Scarlet pimpernel, *Anagallis arvensis*, is a delicate-looking little weed whose flowers close when the weather threatens to rain, so it is also known as shepherd's barometer, shepherd's clock and poor man's weatherglass. It is flowering now (winter through summer according to N.L. Britton's *in his "Flora of Bermuda" - 1918*) and can be seen growing in sandy, uncultivated areas (like Spittal Pond Nature Reserve) throughout the island.

As one would expect from its common name, the flowers are orange/red BUT they can also be white or blue! Britton also says that "the blue-flowered race is frequent on St. David's Island." I had a report of a blue one last year in St. David's and would love to know if anyone sees any blue or white ones this year, anywhere on the island. If you do, please email me at elgreenebda@icloud.com.



TRIVIUM no. 32

By George!

Plant names, or aberrations in the English language.

I have written before that the English pronunciation of Magnolia does not do right to the name of the man for whom it was named, the French professor Magnol.

Here we have two other examples. We start with one about pronunciation:
Aloe is pronounced AHLOH and should be AHLO-EH.

The other one is of spelling: Bromeliad should be Bromelia, after Magnus von Bromel. It should be Bromelia, because Bromeliad means like a Bromelia.

PS. Today (Feb 10th) I saw the first freesia flowers in our garden!

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Lemon Curd Tartlets

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

6 servings, Prep & Cooking Time = 90 minutes

Sweet Pastry Crust

Ingredients:	1c brown rice flour	1 tsp ground cinnamon
	1c garbanzo and fava flour	¼ tsp sea salt
	1/3 c arrowroot starch	½ c vegan butter (1 vegan buttery stick)
	1 tbsp organic caster sugar	½ c vegan shortening
	1 tsp xanthan gum	½ c cold water

Method:

1. Combine by pulsing in food processor*, both flours, starch, sugar, xanthan gum, cinnamon, salt
2. Cut cold butter and shortening into cubes, add and pulse until texture of mixture is sandy
3. Add water a little at a time, each time pulsing
4. Remove mixture, divide into 2, shape with hands into flattened boules, wrap in waxed paper and refrigerate for minimum 1 hour to overnight
5. Preheat oven to 375 F, spray tart tins with canola oil
6. On a well-floured surface, roll out dough to ¼ inch thickness and cut out circles. Dough scraps can be rerolled
7. Press dough circles into tins, prick bottoms with fork
8. Bake 14 – 16 min or until golden but not too toasty, remove and cool completely

*If preparing all by hand, combine using a pastry blender or potato masher and room temperature butter and shortening.

Curd (Makes 1 cup)

Ingredients:	½ c Canned coconut milk	1/3 c melted organic coconut oil
	1/3 + 1 tbsp organic caster sugar	¼ c water
	1/3 + 1 tbsp fresh lemon juice	1/8 tsp sea salt
		2 tbsp arrowroot starch

Method:

1. In a saucepan over medium heat, whisk together and continue to whisk until cooked (2-3 min.), coconut milk, sugar, lemon juice, oil, water, and salt
2. Add arrowroot starch and continue whisking a few more minutes until mixture thickens (should be like custard)
3. Remove from heat, cool and whisk occasionally
4. Fill cooled tartlet pastry shells and garnish if desired

Pastry and curd can be made ahead and stored separately in fridge for up to a week. The curd is also delicious on its own or with other pastries and cakes. Suggest garnishing tartlets with fresh berries.

Contributed by Marlie & Jocelyn Powell, Vegan/Vegetarian chefs at Kingston House B&B KingstonHouse@BBBermuda.com



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More about CATTAILS.

George Peterich

In the last newsletter there was an article by David Wingate who wrote about cattails, actually about the problem with cattails. I have planned to write an article about cattails for quite some time now, in fact my interest was so much aroused when I read it, that I printed it, and have read it several times. David writes that he spent a lifetime studying it, and that is not a mean number of years. And after all this time we now receive his insights.

We must realise that here we have a scientific mind that is not only analytic but also keeps looking. Thank you, David! I am enlightened by what you wrote, but now I just want to say in a few words that I have been looking at Cattails from a different point of view. Well, David mentions that the plant can have food value. This has been a hobby of mine, as the readers will have seen in some of my articles. It started with a visit by Roger Phillips, of UK television fame, who came to lecture for the Bermuda Rose Society. The conversation that we had somehow went into the subject of mushrooms, and he turned out to be an expert of North American mushrooms. But most importantly we got his book "Wild Food". That book has opened a world of possibilities, from mushrooms to seaweed. Now on to the next book on the subject: I found "Stalking the Wild Asparagus" by Euell Gibbons, Field guide edition, dated 1970, and I have used it frequently. In it is a whole chapter on the Cattail, which he calls *Typha latifolia*, not *angustifolia*, which is what David Wingate uses, and let me tell you that *latifolia* means broad leaved and they are narrow leaved, as David describes. The chapter is called "Supermarket of the Swamps". There is definitely not another wild plant here in Bermuda, that can deliver as much nutrition as the cattail. Young shoots can be eaten raw, or cooked as vegetable, and they may also be pickled. The green bloom spikes gathered before the yellow pollen shows on the outside, when cooked properly, can make "one of the finest vegetables that can be collected from the wild". Most interesting is the starch that can be collected from the roots. It needs a long story on how to collect and proceed. Gibbons certainly made a thorough study of that, even quoting the "Scientific Monthly" of 1919. To top that, the young plants, when about 2 feet tall, can be eaten, again there is a particular method to follow. In Russia they are called "Cossack Asparagus". Personally, I have been fascinated with the use of the pollen. Year after year I did just not make it on the right time to the swamp (in my case the cattail field at Warwick Pond, that David wrote about) but I have finally been in luck in 2020. I did collect a good amount of the yellow pollen and we used it to make pancakes. We used the recipe from Gibbons, and they were delicious. We collected the pollen as instructed. A picture shows me collecting part of the action. Incidentally when I did it, I 'discovered' that the plants are monoecious. The top part of the flower is male, and the lower half is what stays behind after pollination takes place. They form the 'cigars' that consist of the seeds.



Typha latifolia

Wikipedia

Ed. note: *Typha angustifolia* is the narrow-leaved cattail and is the species that grows in Bermuda. *Typha latifolia* is the Common cattail and is not known to grow in Bermuda. According to Wikipedia, both species are edible. Britton in his "Flora of Bermuda" - 1918 said that the leaves of *T. angustifolia* were used for bedding domestic animals.

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In Our Garden: Chinese hat plant, *Holmskioldia sanguinea*

Words by Diana and photos by Nigel Chudleigh

The orange-flowering Chinese hat plant provided us with glorious colour in our garden in December and January until it was shattered by the late January/early February gale force winds. Alas, nothing lasts long in our exposed waterfront garden.

The Chinese hat plant flowered exceptionally well this winter as it had been spared from the wrath of the two hurricanes we had in 2020. Fortunately the wind direction of both Hurricanes Paulette and Teddy meant that our garden was somewhat, and unusually, sheltered from the two storms.

The colour of the Chinese hat plant was gorgeous this year. It was a rich orange-red, so I tried bringing cut stems inside, but they did not last long in a vase. Perhaps I need to learn the correct conditioning technique.

The Chinese hat plant is a shrub with arching stems. It can be cut back hard. The flower is perhaps the most unusual part of the plant which gains its name from the coolie hat-shape of its orange calyx which remains on the plant after the flower has dropped. Its actual flower is long and tubular.

The Chinese hat plant is in the mint family, *Lamiaceae*. It can be propagated by cuttings or layering.

The genus name, *Holmskioldia*, commemorates Johan Theodor Holmskiold, an 18th century Danish nobleman and botanist, and its species name, *sanguinea*, describes its blood red colour.

Holmskioldia sanguinea is an uncommon plant in Bermuda gardens. It is an introduced ornamental, best planted in a sheltered spot.



The calyx of the Chinese hat plant is shaped like a coolie's hat.



The tubular flower emerges from the hat-shaped calyx.

Activities:

March 6 th .	Fort Scaur guided tour (rain date 13 th)
April	TBA
May	Somerset Long Bay - date TBA

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Children's Corner

DO YOU KNOW THAT water can 'climb' upwards?

Felicity Holmes

Dip a dry piece of paper towel in water and watch it!



TRY THIS

Add a few drops of food colouring to water in a glass.
Cut the end of a stalk of celery with leaves on for best results.
Put the celery in your coloured water and leave it for 3 days.
What happens to the leaves?

Slice through the stalk and look for the coloured spots inside.
These spots show where the water has risen up through thin tubes in the stalk to the leaves.

How does it do this? As water is evaporated from the leaves, water from the roots is pulled up, through tubes called xylem, a bit like sucking through a straw. Amazing that this works in even the tallest of trees!

Take a look on YouTube:

<https://thekidshouldseethis.com/post/how-do-trees-transport-water-from-roots-to-leaves>



Congratulations to 7 year old Andrew who correctly answered the Bermuda Olivewood question on tannins. Andrew received membership of the BBS and a packet of seeds.



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