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SEPTEMBER NEWSLETTER 2019

FROM THE PRESIDENT:

After the hottest July on record, there can be little doubt that we are experiencing climate change (whatever our neighbours to the West might say) and if this trend continues it will have a considerable effect on weather patterns, what we can grow, the cost of food, sea levels, etc. Can our individual actions make a difference?

There are many actions that we can take -

- organic gardening which sequesters more carbon dioxide than alternatives along with reducing all sorts of problems that the manufacture and transport of chemical fertilizers and pesticides create
- growing plants that support our local and migratory birds and insects
- · choosing organic or locally grown produce whenever possible
- · choosing appropriate plants for our gardens
- supporting other local organizations, eg. BEST, KBB, FridaysforFuturebda and/or international organizations eg. Meat Free Mondays, AVAAZ, Greenpeace which are working on ways to inform and/or mitigate climate change.
- ask questions of our MPs
- reduce energy consumption the list is endless

An initiative the Committee would like to see to fruition is a campaign to Plant a Tree for Every Child Born in Bermuda in a given year. There are various aspects of this that need developing and it is hoped there will be some of you interested in being part of this programme. Whilst Bermuda's contribution to climate change mitigation may be small, it is nonetheless important that we act. Planting trees is an excellent way of reducing carbon dioxide we produce through energy use and transportation, protecting the soil, and maintaining biodiversity – along with the health benefits to humans when they have contact with nature and trees. If you would be interested in this please contact the Society at bdabotanicalsociety@gmail.com

What sort of a world do you want for our children and our grandchildren? Look forward to hearing from you.

Jennifer Flood President

"What you do makes a difference, and you have to decide what kind of difference you want to make."

Jane Goodall.

<u>In Our Garden – Bermuda snowberry, Chiococca alba</u>

Bermuda snowberry is an attractive indigenous shrub that is a useful ground cover in both the ornamental and native and endemic sections of our waterfront garden but it comes with a mystery or two.

Is it a native or an endemic plant and why was its botanical name changed from *Chicocca bermudiana* to *Chicocca alba*?

Nathaniel Lord Britton writing in *Flora of Bermuda*, in 1918 describes it as an "endemic", ie unique to Bermuda and gives its botanical name as *Chiococca bermudiana* but the then named Department of Conservation Services in the *Bermuda Plant Finder*, released in 2013, describes it as a native shrub "once thought to be endemic" and its botanical name as *Chiococca alba*.

I had assumed that this status and name change was a result of DNA sampling by the UK based Millennium Seed Bank Project in Bermuda in 2007 but our contact in the Department of Environment and Natural Resources doesn't think that the DNA sampling was completed for snowberry.

Whatever its status or name, it thrives well in our exposed garden. It is a sprawling shrub or vine and a member of the coffee family, *Rubiaceae*. It has green glossy leaves and sweet smelling yellow bell-shaped flowers that are attractive to bees.

It flowers repeatedly during late summer and autumn, yet another mystery which I have not seen explained in anything published on or off line. Is this flowering perhaps triggered by rain?

We find snowberry easy to propagate by digging up plants that have naturally layered into the ground. After planting, it takes time to become established, but then spreads by layering and the runners can extend up to 15 to 20 feet.



Words by Diana Chudleigh, photo by Nigel Chudleigh

Bermuda snowberry in flower, late August 2019

DRACAENA — by George Peterich

On a recent visit to La Jolla, on the coast of Southern California, I saw two dracaena trees. I had never seen one before. But I knew what they were because of a picture in the Michelin guide of Spain, that shows the world's most famous one, which can be seen on Tenerife in the Canary Islands. The famous Dragon Tree! It actually is the national tree of Tenerife and can be found also on Madeira and in places of Morocco. The climate on the coast of San Diego is obviously similar to that of Tenerife. The photo shows me and the two trees, all three probably the same age!



The genius *Dracaena* is quite large. There are quite a few species that that serve as house plants and as ornamentals in our gardens. A very nice specimen is in the Bermuda Botanical Gardens, which was in full bloom in the spring. This is *Dracaena marginata* in the photos below.





For some time, the African *Dracaena massangiana* has been popular as a house plant. Its common name is Mass Cane. They were sold, just as wooden sticks. One would put them in a pot with soil, and water them. Very soon, buds would appear on them, and then lovely green foliage. I have seen that in Brazil the sticks were used to make fences, which then turned into hedges. There is also a variegated one. One of these two has also the epithet *fragrans*. We discovered this when we came home after a long trip, and were greeted by a cloud of perfume. Related is also the very popular Lucky Bamboo (*Dracaena sanderiana*), of which also small sticks are sold, green, and sometimes corkscrew-shaped. It will give a nice result, if just kept in water.

But the most impressive are the Dracaena trees and there are a few. The one from Tenerife is *Dracaena draco*. On the Cape Verde Islands you find *Dracaena draco caboverdiana*. It looks quite different, but is considered a subspecies. Looking this up, I came across the origin of the name. It came from the Greek mythology. One of Hercules' labours was to kill the dragon in the Garden of the Hesperides. When he slew the dragon, blood flew out onto the ground and from it dragon trees began to sprout.

This brings us to the fact that some dragon trees do bleed a red sap, or resin, when the bark is wounded. This sap has been used for medicinal purposes for centuries, probably because of some form of superstition. It was used by Stradivari in the 18th century to put a reddish lacquer on violins.

Not all the dragon trees bleed a red sap, but the one on the Cabo Verde Islands does, and so does the most interesting species, very far away, namely on the island of Socotra, south of the Arabian peninsula. There they survive in a very dry climate and are among some extremely rare endemics. This is the *Dracaena cinnabari*, also called the Dragon Blood Tree. To see them, you may go to the Internet. They look like giant shaving brushes, all over the landscape. You will also see the Desert Rose (*Adenium obesum*) in its natural habitat. It would be guite a place to visit.

Ed. note: there is a *Dracaena draco* in the Botanical Gardens on the west side of the Exotic House and there is another in the grounds of the Crawl Post Office, Hamilton Parish.

[&]quot;To encourage and support the study and promotion of the botanical sciences within Bermuda"

Re-locating Rare Plants - A Success Story - by Alison Copeland

On May 19th 2015, I visited Morgan's Point with Frances Eddy to confirm the identity of some ferns that she had discovered and marked during a comprehensive survey of the vegetation there. Most of the specimens were the native Southern Shield Fern or Larger Marsh Shield Fern (*Thelypteris kunthii*). They were growing on an upland hillside facing the Great Sound, surrounded by a tangle of weeds, native shrubs and invasive trees.



Larger Marsh Shield Fern in situ at Morgan's Point hillside, May 19th 2015

Almost a year later, on March 1st 2016, Terrestrial Conservation Officer Peter Drew and I were at Morgan's Point again, this time with the agents of Morgan's Point Ltd. as construction was beginning on the resort. We were there to remove specimens of Bermuda Bedstraw (*Galium bermudense*), a Protected Species Act listed native plant, which would be destroyed when site clearing commenced. On that day we removed 6 large bedstraw plants and 129 bedstraw seedlings from the site. We also took the opportunity to remove the Larger Marsh Shield Ferns– 7 large ones, and 9 smaller ones in total.

The next day, March 2nd 2016, we planted the 6 large bedstraw plants in the walled field at the eastern end of Nonsuch Island. We also planted 2 approximately 3-foot tall Larger Marsh Shield Ferns at the edge of the freshwater pond on Nonsuch Island, near to the bird blind. We had to transport all of the plants to Nonsuch 'bare root', with all soil washed off to avoid transporting any pests to the island. At

this point, the poor ferns looked terrible! They had been dug up, dragged down a hill, waited in a bucket overnight, taken for a boat ride, and replanted in a new habitat. Most of the fronds had been bent or damaged in the process, but I was hopeful they would recover.

I am pleased to report that they did indeed recover. The photo below was taken on August 23rd 2019 at the Nonsuch Pond, where both Larger Marsh Shield Ferns have put on new fronds and are producing spores.



T.kunthii at Nonsuch Island pond August 23rd 2019

The rest of the salvaged Bermuda Bedstraws and Larger Marsh Shield Ferns were planted at the Vesey Nature Reserve in Southampton, in collaboration with Buy Back Bermuda. This location was perfect, as it had an existing bedstraw population, and would keep the plants very close to their point of origin, but in a protected area.

In April 2016, during a work day with the Bermuda National Trust and corporate volunteers from Markel, we planted Bermuda Bedstraw and Larger Marsh Shield Ferns around the cave mouth at the Vesey Reserve. One of the ferns is now quite large, and can be seen between the sign and the cave opening. Those who participated in the BBS field trip to the Vesey Reserve in December 2018 will have seen these plants – those that didn't can read all about it in George Peterich's summary in the February 2019 newsletter.

Many of the bedstraw seedlings we removed from Morgan's Point were kept in pots until November 2016, when they had reached sufficient size to be planted out in the Vesey Reserve. Additionally, Robin Marirea took about 60 of the juvenile bedstraw plants for propagation and use in other woodland restoration projects.



A potted bedstraw from Morgan's Point with unripe fruit

In summary, we were able to save 135 Bermuda Bedstraw and 16 Larger Marsh Shield Ferns from the construction site. With this material we were able to establish two new Larger Marsh Shield Fern populations where this native fern had not grown before; and we were able to use the salvaged bedstraw to augment existing populations of this rare plant in two protected areas. In this instance, digging up rare plants and moving them out of harm's way definitely had a successful outcome.

<u>Get Involved</u> — Volunteer opportunities

Plant Sale:

Assistance needed with the plant sale. Plants needed and assistance on the morning of the sale, October 12th at Windybank Farm. An hour (or more) between 7 am and 11 am helping at the stall would be appreciated.

Bermuda Botanical Gardens Tour Guide:

Can you give a couple of hours a month? This is a great opportunity to learn more about the plants in the Gardens and meet the visitors from various parts of the world – including Bermuda. Tours are held on Tuesdays, Wednesdays and Fridays beginning 10.30 am. Generally last for one hour.

Email bdabotanicalsociety@gmail.com

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BERMUDA BOTANICAL SOCIETY SCHOLARSHIP REPORT 2019



L. to r: G. Peterich, P. Lee, KySaia Scott-Fishenden, Mr Reid (on behalf of Amber Reid), Jayla Burt, & J. Flood

This year there were 9 applicants for our annual scholarship, however, two were not in relevant areas of study (Marine Biology & Pre-Vet).

The Committee decided to give three scholarships this year.

- 1. \$3,000 was awarded to Amber Reid who is attending Northeastern University in Boston studying for a Bachelor of Science degree in Environmental Science & Business Analytics. She has maintained a GPA of 3.5 and is currently doing an internship in Spain and will return to Northwestern for the last semester. Amber is a past recipient of this award.
- 2. \$2,000 was awarded to Jayla Burt who has completed her first semester at Southwest Minnesota State University with a GPA of 3.25. She is studying for a double major in Chemistry and Biology and was previously at Bermuda Collage where she completed an Associates in Science with a GPA of 3.1.
- 3. \$2,000 was awarded to KyAsia Scott-Fishenden who is attending Cardiff University in Wales and is studying for a BSc in Environmental Geoscience. In September she will be entering her second year of a four year program due to be completed in June 2022. Her third year will be a sandwich year which will give her valuable work experience.

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The presentation was held at City Hall on Thursday August 15th 2019. Scholarship Chairman Peter Lee, Scholarship committee member George Peterich and President, Jennifer Flood were in attendance as the Scholarships were presented to Jayla and KyAsia. Amber's father, Delroy Reid, accepted the award in her absence.

My thanks to the other members of the Scholarship Committee, Helle Patterson and George Peterich, for their valuable input and assistance.

Peter Lee Scholarship Committee Chair

<u>TRIVIUM no.23</u> — by George Peterich CANDLE TREE



One of the peculiarities of the Candle Tree (*Parmentiera edulis*) is that it is cauliflorous. This means that fruits grow on the trunk of the tree. But fruits also appear hanging from the young branches, and seeing that you understand the name of the tree.

Candles used to be made as follows: A wick would be dipped in to hot wax and then it would be hung up to let the wax solidify. This was repeated until he candle was ready. Hence the hanging candles.

Not so trivial may be the question "Why the epithet *edulis*? It means edible. Personally I am not so keen, but you can find a lot about it on the Internet.

Ed. note there is a candle tree on the southern side of the Shrub Border in the Botanical Gardens.

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<u>Calendar of Activities</u> — mark the dates in your calendar!

September 29th, Sun., 4 pm: How many times have you walked through QEII Park and enjoyed the flowers and trees? Did you know there was a beautiful little Yellow Tabebuia, a glorious *Mansoa aliacea*, and a nut bearing *Terminalia catappa*? Find out more about them (and their common names) on a guided tour around this lovely Park.

October 12^{th,} Sat., (time to be confirmed) A slightly different plant sale this year, the Society will have a table at Windybank Farm. An interesting variety of plants will be available and as usual, all proceeds in aid of the scholarship fund.

October 26th, Sat., 9.30 am: Learn about trees and plants that support our local and migratory birds on a walk in the Botanical Gardens with Lisa Greene and Erich Hetzel. Bring your binoculars, if you have them. We're hoping to spot some birds as well!

November 17th, Sun., 2 pm: The Society will travel to Somerset for a tour around Somerset Long Bay, Pitman's Pond and the Audubon Reserve.

November 24th, Sun., 3 pm: The BBS AGM Horticultural Hall, Bermuda Botanical Gardens

December: Annual BBS Christmas Party – details to follow.

For any of the tours please reserve your space by emailing bdabotanicalsociety@gmail.com Members \$5.00, non-member \$10.00

Other items:

The Society would like to thank the family of Claudine Wilson, for their generous donation in Claudine's name.

Membership fees were due in August, and can be renewed online at bermudabotanicalsociety.org. For those who don't have online banking, cheques may be sent to: BBS, PO Box 2116 Hamilton HM JX

Seniors \$5.00, Regular \$10.00, Family \$20.00 Thanks to those who have already responded.

Questions, suggestions, comments - anything botanically related or about the activities of the Society are always welcome. bdabotanicalsociety@gmail.com

Lunch & Learn Series II - Jennifer Flood

Bda College and BEST are co-hosting a second season of lunchtime talks on local environmental matters. First talk will be on September 26th, 1 pm at the Bda College, when the Minister for the Environment will be speaking. All are invited.

Follow us on Facebook at www.facebook.com-Bermuda-Botanical-Society

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