



# Bermuda Botanical Society

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## NOVEMBER NEWSLETTER 2009 FROM THE PRESIDENT'S CORNER

This is a great time of year to be in the garden. Your compost should be ready to be turned into some beds and grow numerous vegetables ready for your Christmas dinner.

In August our inventory count went well. The executive was out in full force under the direction of Lyn and Samantha. We had great count sheets again with the help of Hiroko. Thank you to the great team that turned out to do this task.

The 2008 audit is complete, but the auditors are being cautious and wish to release the results once 2009 figures are firm. We are progressing well in this area and the switch to the new computer was seamless with Samantha training Lyn and Lesley. Samantha is now a signatory and has implemented online bill payments.

As you know we moved the plant sale to be earlier than normal. We were also in the Jack King building. Both the timing and the building seemed to work well. Thank you to Nigel Chudleigh who was the main co-coordinator. We had a fine selection with donations from Tulo Valley, the Mowbrays, Aberfeldy, Save Open Spaces as well as a number of members bringing their own plants. We also had the Rose Society participate. Many thanks to all who helped on the day. It was a really enjoyable event that raised \$5,600.

As we go to print we are about to have our Fall Festival. This year we have invited other organizations to celebrate the season with us. In the future it could be even bigger, because as we know the Botanical Gardens are dear to many people.

It is with regret that I report that two people are stepping aside; Helle Patterson from the executive and Lesley Stovell, the Café Manager. Helle no longer wishes to be on the executive, but continues to help with events and is still the Newsletter Editor. Thank you to Helle for your continued support. We wish Lesley well as she moves on to other pastures. It is hard to realize Lesley has been here almost a year, but December 4<sup>th</sup> will be her last day. Lesley's enthusiasm and efforts will certainly be missed. Thank you Lesley.

It is a pleasure to inform you that we now have a Vice President. Paul Harney was elected to the position at the last executive meeting. Best wishes to Paul.

At a well attended workshop to grow vegetables, at Aberfeldy, the speakers emphasized the need to fertilize your crop. They promoted a number of different types, some were organic. The same result can be done using compost to side dress your plant or make a tea with your compost to spray on the leaves. Whatever you do, plants like to eat just as we do. Happy gardening.

**Bill Ingham**  
President



## DETECTIVE STORY

by Helle Patterson

*My husband is an inveterate beachcomber. When there is nothing more interesting to search for, he brings home tubfuls of sand and shells from the wrack line, and sorts his finds into specific jars. In June this year he found the following tiny objects, hard and shell-like, but they did not correspond to any shells he could find in his reference books. For further information he gave a selection to Lisa Greene.*



**From:** Lisa Greene

**Sent:** July 2, 2009:

Hi Bob,

We're a little puzzled by the 'things' you gave me for id. They look like bone, but between me, Robbie Smith (the new Curator) and Wolfgang, we don't know what they are. We are wondering if they are otoliths, perhaps ... I've taken pictures and will show them to Tammy Trott who has experience with otoliths. Will keep you posted.

Cheers, Lisa.

Lisa Greene (Mrs)  
Collections Officer,  
Museum of Natural History,  
Bermuda Aquarium, Museum and Zoo.

**From:** Lisa Greene

**Sent:** July 15, 2009:

Hi Bob,

Dr Tammy Trott, Sr Marine Resources Officer, says those little 'things' are not otoliths. Dr Robbie Smith ... has suggested that we test them with hydrochloric acid to see if they are calcium carbonate or not. Can we do that to one of them? It will probably ruin it.

Cheers, Lisa.

**From:** Lisa Greene

**Sent:** July 20, 2009:

Hi Bob,

It's not made of calcium carbonate. It did not fizz in the muriatic acid.

That's all for now.

Lisa.

*At this point – as they were NOT otoliths and needed a name – the “things” became “**notolith s**”. A sampling of them was mailed to our daughter in Florida.*

**From:** Maia McGuire

**Sent:** Aug. 17, 2009

Hi Harry,

I don't think these are molluscan in origin, but am hoping that perhaps you might be able to help me figure out what the items in the attached photos are. They are about 2 mm in thickness, and similar in appearance on both sides. My father found several while looking at samples of Bermuda sand under a microscope. They don't seem to be calcium carbonate (someone he showed them to tried putting one in hydrochloric acid and it did not react) ... Any ideas? Or suggestions of where to send these?

Thanks for any suggestions!

Maia

Maia McGuire, PhD

Florida Sea Grant Extension Agent

University of Florida.

**From:** Harry G. Lee

**Sent:** Aug. 17, 2009

Dear Maia,

Although opercula of certain turbinid gastropods may resemble these, no candidate species of that family survives to the Recent in Bermudian waters, and a truly spiral pattern of growth is not really evident. I think we can rule out molluscan origin ... How about I ask a palaeontologist?

Harry.

**From:** Harry G. Lee

**Sent:** Aug. 18, 2009

Dear Roger and Greg,

As Managers of major invertebrate paleontology, you came to mind as referees for this ID conundrum.

Any ideas?

Harry.

**From:** Roger W. Portell

**Sent:** Aug. 18, 2009

Dear Harry,

*Opuntia* seeds?!

Roger.

Roger W. Portell

Invertebrate Paleontology Division

Florida Museum of Natural History

University of Florida.

**From:** Maia McGuire

**Sent:** Aug. 19, 2009

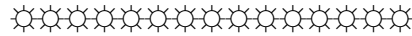
Dear Mum and Dad,

Courtesy of the Florida Museum of Natural History,  
Dad's "notoliths" have been identified as seeds of the  
prickly pear cactus (*Opuntia* sp.)

[http://www.prairiemoon.com/images/D/Opuntia\\_humifusa\\_Eastern\\_Prickly\\_pear.jpg](http://www.prairiemoon.com/images/D/Opuntia_humifusa_Eastern_Prickly_pear.jpg)

*The next day we collected and bisected a prickly  
pear.*

*Bingo!*



## PLANT SALE PICTURES





## INDIGO BLUES

The blue dye known as indigo blue has been used by man since at least 2,500BC. Large quantities are still used for dyeing cotton fabrics, notably the denim used for making blue jeans. Since the late 19th. Century most of the dye is manufactured synthetically, though there is still some demand for natural dye for folk craft textiles and in the manufacture of inkjet printer inks.

Until the opening of the shipping route to India in 1498, Europe obtained its indigo dye from the woad plant *Isatis tinctoria* of the brassica family. But, dye obtained from indigo plants, a legume, is of superior quality to that made from woad. When dye from the East Indian *Indigofera tinctoria* and from the West Indian *Indigofera suffructicosa* became available, the woad industry rapidly declined.



The dye was made by processing the foliage of the indigo plants. It was fermented in water for 12 - 48 hours, and frequently stirred. During this process the precursor Indican oxidises into Indigotin, the blue dye, which precipitates out. Apparently, this fermentation process, carried out in large vats, released a most obnoxious odour. The Caribbean Indians, who were employed in the indigo fields, were said to be particularly susceptible to diseases that bred around the fermentation vats and so black slaves were hired in to do the processing.

Indigo was a very important commodity in the early days after colonisation of the West Indies and at one time was the principal export of Jamaica, until supplanted by sugar. Later, South Carolina became the biggest producer in the western hemisphere.

According to Governor Lefroy, writing in his Memorials of Bermuda, the indigo plant was introduced to Bermuda for growing commercially by the early settlers but was never profitable.

In a footnote in his Memorials, written in the late 1800s, Lefroy noted that indigo had become naturalised and could still be found growing wild.

He identified this plant as *tinctoria*, “the East Indian, not West Indian, species”.

Either Governor Lefroy mis-identified the plant or *I. tinctoria* has since died out, because the plant now growing in the wild, which can readily be found in the Walsingham / Tom Moore’s jungle area, appears to be *I. suffructicosa*. Britton, in Flora of Bermuda, identifies only *I. suffructicosa* as growing here.

If Lefroy was correct about *I. tinctoria*, then how did *I. suffructicosa* get here? Was it introduced also or was it here all along, i.e. native? After all, it is native to the Caribbean, South America and possibly the southern US, so it is conceivable it could have made its own way to Bermuda.

A member of the pea family, indigo grows as a pale green upright shrub reaching from 3 to 6 feet in height. It grows best in dry, mostly sunny locations and is quite happy with indifferent soil.



*I. suffructicosa* has compound pinnated leaves, each leaflet being about an inch in length. It flowers in the summer and fall, with multiple tiny flowers on each raceme (flower spike). The flowers, when mature, are a delicate salmon pink. The seed pods are produced abundantly and each is no more than an inch long.

Indigo makes an attractive garden plant and is culturally undemanding. Though an individual plant only lives for a year or two, its propensity to self-seed should ensure a succession.

**Nigel Chudleigh**

*Many thanks to those who responded to my appeal in the last newsletter for unwanted used plant pots. The response was most gratifying and my reserves are now well replenished!*

## FROM THE VISITORS' CENTRE

### by Lyn Vaughan

#### ASTRONOMY AT THE GARDENS

If you are interested in astronomy or just coming out and looking at the stars, please email [eddimac@logic.bm](mailto:eddimac@logic.bm). We will list events in future but the details will only go to those who sign up with Eddie McGonagle on email.

#### Coming Events

Tuesday, 17 November, a very good Shooting star show is predicted. 5 pm.

Sunday, 13 December at 9pm into the wee hours. Shooting stars again.

#### Andromeda on 18 September 2009

The weather was not great so Mr McGonagle spoke about the early astronomers and Galileo to a group of about 35 adults and children. This is an extract below. Full report on request.

“Galileo's contribution to astronomy began in 1609 and reviewing this is timely, given that Bermuda also commemorates her 400th anniversary at this time.

“We single out the Greeks for a lot of credit on early discoveries but it should be remembered that it was the Egyptians who discovered the Year of 365 days. This was at a time when the calendar was lunar and a month of 29 and a half days soon got out of whack. In addition, the climate of Egypt was such that they had 3 seasons instead of 4 and these seasons were related to the River Niles' behaviour - Flood, Emergence and Harvest.”

There was a quick look at Jupiter at 10 pm when late enthusiasts came by and the skies had cleared a little.

#### Andromeda again! 25 September!

Those who stayed late were thrilled to view this

constellation and also Jupiter and its moons.

**Thanks, Eddie.**

**In September**, Executive, Volunteers and staff joined together to provide a celebration for Lyn Vaughan's over the Hurmph, Hurmph birthday. **Thank you all!**

I

**Fall back at last!** I love the early mornings at this time of year. The Gardens are green and fruitful; people are out and about thinking of gifts and looking for bargains. Our shop is full of great buys with some very healthy discounts on our popular items such as Ahler.

We are now the only store with Susie Hayward's whimsical work. Here is a picture of her hand made cats, purrfect for that special gift.



Special opening nights for members!  
Mondays & Wednesdays! Friday for all. Open from 5:30 pm till 7:30 pm.

We will have soup and hotdogs and our usual snacks and hot and cold drinks. Call us at 236-5291 or email [bdabotanical@logic.bm](mailto:bdabotanical@logic.bm) for info.

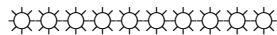
## LYN'S BIRTHDAY PARTY



Monica, Neville and Samantha with Lyn



The cake



## FRUIT AND THE NIGHT BLOOMING CEREUS

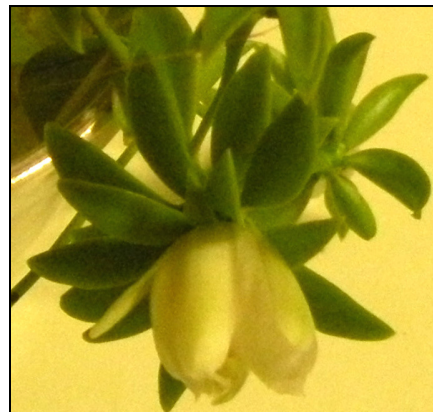
by Lisa Greene

If you have triangular-stemmed night blooming cereus (*Hylocereus undatus*) in your garden, I would like to know if the plant has ever produced any fruit – recently or ever. I grew up with a night blooming cereus growing on our garden wall and it flowered every summer, but I don't ever remember seeing fruit on it. The fruit are red and spherical and I have only ever seen two in Bermuda, both in the last two years. Please email me at [elgreene@ibl.bm](mailto:elgreene@ibl.bm) with your observations.



I'm also curious to know if you know the location of any Barbados gooseberry plants (*Pereskia aculeata*). It is not always visible but

if it is flowering there is a distinctive smell in the air as though someone has just sprayed a smelly pesticide. Barbados gooseberry is a vining cactus and is probably the least cactus-looking cactus you will ever see. It has typical cactus flowers and spines but unlike most cacti it has leaves. The flowers are creamy white, nearly two inches in diameter. Some plants flowered several weeks ago, and some more recently. The fruit turn orange when ripe. If you know of any Barbados gooseberry plants, please send me an email and let me know where it is growing and if you think it was planted on purpose or if it self-seeded.



## FROM THE SMITHSONIAN, SEPT. 2009:

“Why do the variegated leaves of the Ecuadorean rain forest plant *Caladium steudnerifolium* mimic the appearance of solid-colored caladium leaves infested with parasitic moth larvae? Defense, say researchers in Germany. Moths mistake variegated leaves for already infested ones and avoid laying eggs there. For the variegated plant, the trade-off may be less energy: white streaks reduce photosynthesis.”

(Thanks to Lisa Greene.)



## PHOTO CREDITS:

DETECTIVE STORY

Helle Patterson

PLANT SALE PICTURES

Paul Harney

INDIGO BLUES

Nigel Chudleigh

FROM THE VISITORS' CENTRE

Lyn Vaughan

LYN'S BIRTHDAY PARTY

George Peterich

FRUIT AND THE NIGHT BLOOMING CEREUS

Helle Patterson

*Apologies to Lyn Vaughan, whose photo of the view from the Visitors' Centre in the last issue was uncredited.*



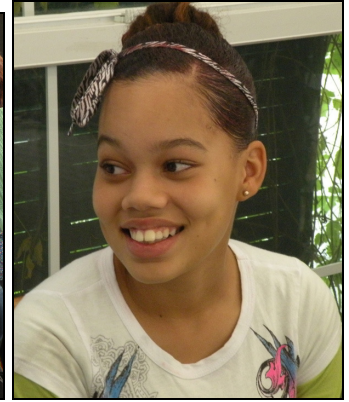
And may we be the first to wish you a merry  
christmas



## FALL FESTIVAL 2009







### ***Match a leaf to a flower competition during the Fall Festival***

The right answers were given by:

Yvonne DeSilva, K. Hayward, Zoe, Elaine Harris, Ella Burt, Nigel Chudleigh, Evie Graham, E. Stovell and Quincy Burgess.

The two gift certificates of \$30.00 went to Evie Graham and Quincy Burgess.

***A Big Thank You to all who helped with the Fall Festival 2009:***

**VOLUNTEER ROLL CALL**

LISA TALBOT  
 JEVON TALBOT  
 JANAE TALBOT  
 TARIK  
 TAYLOR  
 HEATHER MEYER  
 DEZHANE WEST  
 TAJAHNA TUCKER  
 KADEEM LYONS  
 KELLY LYONS  
 MAHOGANY BEAN  
 MAHIRA FOX  
 M SIMMONS  
 JORDAN SIMMONS  
 JADA SIMMONS  
 KIRA KELLY  
 CATHRYN MINORS  
 CAROLITA JOSEPH  
 SIAIRAH MINORS  
 COURTNEY KROMER  
 SHENIQUA HUNT  
 PAUL HARNEY  
 BARRY GIBBONS  
 MARIJKE PETERICH  
 BILL INGHAM  
 LISA GREENE  
 SHARON VESEY  
 NELL JOHNSTON  
 JOANNE LINBERG  
 CHRIS WATLINGTON  
 SARAH PIETILA  
 ADRIENNE MILLER  
 NIGEL CHUDLEIGH  
 JURKKI PIETILA  
 RUTH VALLIS  
 MARIJKE PETERICH  
 HELLE PATTERSON  
 AND MANY MORE!

**STATIONS**

CASH REGISTER  
 FOOD DRINKS  
 FOOD DRINKS  
 PING PONG/BEAN BAG  
 PING PONG/BEAN BAG  
 CR CARDS/TICKETS  
 CUP CAKES  
 CUP CAKES  
 CUP CAKES  
 FALL ITEMS  
 ORIENTAL BAZAAR  
 ORIENTAL BAZAAR  
 POPCORN  
 POPCORN  
 POPCORN  
 BOOKMARKS  
 BOUNCYCASTLE &  
 HAY RIDE TICKETS  
 CRAFT TABLE  
 CRAFT TABLE  
 PINGPONG/BEANBAG  
 PINGPONG/BEANBAG  
 ORIENTAL BAZAAR  
 FLOATER SUPREMA  
 APPLE BOBBING  
 FIBRE  
 FIBRE  
 BOOKMARKS  
 CRAFT TABLE  
 CRAFT TABLE  
 CUP CAKES  
 ORIENTAL BAZAAR  
 FLOATER  
 FLOATER  
 CUP CAKES  
 CUP CAKES  
 PHOTOGRAPHER

THANK YOU TO MARQUIS STABLES & MR & MRS BEAN FOR A  
 GREAT JOB WITH THE HAYWAGON RIDES!

*The Bouncy Castle was very popular as always, and thanks to Diamond  
 Party Rentals for overcoming some obstacles and setting up and taking down  
 expeditiously.*