Bermuda Botanical Society

NEWSLETTER

AUTUMN 2008

PRESIDENT'S CORNER

Many of you attended the Annual General Meeting in May. We had close to 40 in attendance who witnessed some spectacular photographs of butterflies by Ras Mykkal. Recently my ego was boosted when I was able to identify a buckeye chrysalis to friends and family.

Botany Camp went well. There were many young counselors to keep the young children under control. Both Steve Burgess and Neville Richardson took turns overseeing the event as both had commitments to attend.

At the Annual General Meeting we elected four new people to the executive: Marijke Peterich, Helle Patterson, Paul Harney and Barry Gibbons. Subsequently we were able to appoint Andrew Hudson as Treasurer. It is exciting times to have this new interest. Each of the new executive has undertaken an area of responsibility. Our meetings have been well attended, so look forward to great events.

Our year end is August 31st, so the weekend was spent taking inventory. A big thank you to Hiroko Okawa, who, with Lyn's guidance, spent many hours preparing inventory sheets. This is the first year we had these and it made counting much easier. While there was a fair bit of stock, we were more organized this year, so it didn't take as long. Many thanks to the helpers for spending their Saturday on such a menial task.

Please read the newsletter and note the special dates of the events we are planning, especially the Fall Festival on Sunday October 12th. Hope to see you there.

Bill Ingham
President

FROM THE VISITORS' CENTRE

We have joined the Volunteer Centre on the Centre on Philanthropy website. It has gained us a number of new volunteers in various areas but we still need more. We welcome Ianthia Carmichael on Wednesday and Friday afternoons. She is a godsend as she likes to tidy and clean the tables and counters and chat with the visitors. Hiroko Okawa responded to a request for helpers with the inventory count. This would not have been as successful without her careful listing of items in the various sections, and help on the day with counting. Vicky Oliver was much help for three months, but she is working full-time now. She will still give us hours when she can. Our other long-term volunteers solider on cheerfully, but need vacations now and then. Please speak up if you have a few hours any day. We can use you!

We said a sad goodbye at a party at the Visitors' Centre at the end of may, along with six other organisations and other friends, to Marilyn York, volunteer extraordinaire. She helped on Thursdays for several years at the Centre. We have also lost the help of Joyce Watlington after 3 years' faithful and wonderful service to the Centre and the visitors.

Lyn Vaughan.

What's new at the Bermuda Botanical Gardens

Economic Collection

Plants that were first brought to Bermuda were grown to be eaten locally but also as cash crops to be exported. The early settlers sought economic stability through the production of a number of these crops.

Bermuda arrowroot was at one time an important crop, and the product was known and used in many parts of the world, being valued especially as a food for children and invalids. The flour is derived from the roots which are carefully ground and thoroughly washed.

Beans, carrots, cucumbers, parsnips, peas, onions, cabbages, radish, lettuce, melons, figs, potatoes, oranges, lemons, limes, pineapples, plantains, cassava, pomegranates, and sugar cane, could mostly have been for local use but there are many references to the export of some of them.

Mulberries were established in the hope that a silk trade might be started. Tobacco was the largest crop, so large that men were paid in it. Madder and indigo come in the same category as dye plants, and flax and hemp were also grown. Hemp was used for rope and working clothes.

Honey was the main source of sweetening until sugar cane was brought from India to the West Indies.

The economic collection

By the 1740s, there were several Acts passed forbidding the export of several plants as the people were in such want. In this collection, plants of economic importance have been planted for educational purposes.

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Renovation of the Formal Garden

In 2003 a Management Plan was developed which created a long-term phased improvement plan for the Botanical Gardens. The purpose of the management plan was to present a phased programme for the management, improvement, and maintenance of the Botanical Gardens, in order to successfully;

"Educate and promote interest in botany and horticulture through the development, maintenance and display of botanical collections and demonstration gardens, while continuing to serve Bermuda as a passive park and as a venue for events that are in keeping with its primary goal of environmental education."

The governing factors in the decision to renovate the Formal Gardens were largely guided by the following goals:

- The promotion of Bermuda Botanical Gardens as the island's premier reference centre for local and global botanical education and displays.

The formal garden

- To increase the aesthetic impact of the demonstration garden such that it would serve as a major attraction for visitors to enjoy.

- To reduce maintenance procedures and regimes within Botanical Gardens, while increasing the aesthetical appeal and maintaining the highest standards of horticultural displays.

This newly renovated collection showcases four gardens based on historical formal styles that have had a major influence on modern garden design. Visitors to the gardens will be able to stroll through and experience a Japanese Zen Garden, a seventeenth century style English Parterre Garden, a twelfth century style Persian Garden, and a Tudor style children's Maze Garden.

Each garden is approximately ninety square feet in size. There is a central viewing gazebo that serves to divide the four gardens and within each garden the planting beds consist of a mixture of plants that are significant to the gardens theme. The plant lists will consist of native and endemics and localized plants of the following: palms, trees, ornamental grasses, annuals and perennials, herbaceous shrubs and groundcovers. The planting border that boundaries the western edge of the overall garden has been converted into a Bermuda Rose Collection.

The Parks Department envisions that these two new collections will enhance the park's ability to fulfill its mission to educate and promote interest in botany, horticulture and garden design.

Jameka Kelly
Assistant Park Planner

Calendar of Upcoming Events

Oct. 12	**Fall Festival**. **1:00 pm-4:00 pm** Please e-mail Marijke Peterich at peterich@northrock.bm if you are able to help.
Nov. 15	**Plant Sale:** **8:30 am Members, 9:00 am general public**. To donate plants or provide assistance, please e-mail Sharon Vesey at tres@logic.bm
Dec. 3	**Volunteers' Christmas Party**
Jan. 25	***Herbal Remedies from Locally Grown Plants***: presentation by Nell Johnston and Lisa Greene
Feb. 22	***Yunnan Plant Life:*** presentation by George & Marijke Peterich..

AROUND THE ISLAND

Lisa Greene & Nell Johnston

Screw palm (*Pandanus utilis*), also known as the common screw pine has just finished flowering. I have only just registered that these trees are either male or female and it is the males that produce the long, fluffy inflorescences that look like a collection of tails hanging down. The females produce a much less noticeable flower that looks like a very small fruit and quickly grows into the large, obvious fruit that hang from the tree for many months. Yellowood (*Zathoxylum flavum*) – native - is also either male or female (I learned this thanks to the enthusiasm of Robin Marirea).

Also flowering now: Sweet clematis (*Clematis flammula*) is blanketing many spots with a mass of creamy-white flowers. The Madeira vine (Anredera baselloides) is also blanketing many spots around the island and is noticeable now because of its tail-like clusters of creamy-white flowers. African tulip trees, black ebony, oleander and hibiscus are worth looking for now.

Spanish bayonet (*Yucca aloifolia*) – native to Bermuda - and spider lilies (*Hymenocallis* spp.) put on a fantastic show the first two weeks in August, particularly along the South Shore, while in June the royal poincianna, golden shower were spectacular in their flowering and, of special note, the pink shower (*Cassia* sp.) at the entrance to the Port Royal Golf Course. Also of note was the flame tree (*Brachychiton acerifolia*) with its red flowers at the South Shore roundabout. Allspice, which produced masses of flowers earlier in the year is bearing fruit now. Keep an eye out for fruit forming on the mock orange (which flowered beautifully recently) and flowers on the golden rain tree (it should flower in October)

Of note in the Botanical Gardens Shrub Border:
Chenile plant (Acalypha hispida)
Ixora (Ixora spp.)
Crape myrtle/Queen of Shrubs – several different colours (Lagerstroemia indica)
Jatropha (J. integerrima)

If you're not sure what these plants look like and you have access to the internet, do an *image* search on Google – put the name of the plant in quotation marks.

Lisa Greene is the author of the Bermuda's Flora (Vols. 1 & 2), Nell Johnston has been a tour guide in the Botanical Gardens for more than 15 years.

VISITORS' CENTRE 2

In February 2008 I visited the UK, going to Hylands, near Chelmsford, the location of the Scouts' 100 years'jamboree, where there is a memento placed by the Bermuda contingent; Birmingham with the 175-year-old Edgbaston Botanical Gardens, and Wisley with its Millenium Glasshouses and a plaque to the donation by the Garden Club of Bermuda. Wonderful weather and wonderful gardens. I cannot recommend too much visits to all and any.

Lyn Vaughan

JARDIN BOTANICO XMUC'H' HALTUN

The Mexican city of Campeche has perhaps the smallest botanical garden in the world. It is surrounded by high walls. This was once the *Baluarte de Santiago* (the Bastion of St. James), part of the extensive fortifications that were necessary, first, to defend this Spanish colony from European invaders and then in the 18th century from the numerous attacks by Caribbean pirates. These walls now serve to protect the plants inside from the frequent hurricanes that come across the Yucatan peninsula.

One enters through a gate, next to a Donkey tail tree, which is an indigenous tree of the Yucatan. The lower part of the trunk is painted white, probably to save it from mishaps with the traffic in the night! This is done all over in Mexico. The name of the garden is in large wrought iron letters above the gate, probably paid for with UNESCO money as Campeche is one of the World Heritage Sites. Many of the bulwarks have been restored with money from overseas. The garden is less than a fifth of an acre. But it is a delightful and peaceful place to be, especially because the walls keep the noise of the city outside. The path that takes you through the garden is cleverly laid out so that the length of it is probably more than the circumference of the walls. In the middle of the garden is a small pond with water lilies and a fountain in a very rustic style. This is not simply a small park, but indeed a botanic garden. Every plant and tree has a label, a real a place of study for the botanical aficionado. There will be pictures in the Visitors' Centre of this Botanical Garden, plus perhaps a few to persuade the viewer that Campeche is really worth a visit.

The name of the garden has an X in it, a letter that one finds a lot in the Maya language. I have tried hard to find out the meaning of the word XMUC'H' HALTUN and looked on the Internet. First, I tried *Haltun*, because I had seen that word before in the Yucatan. What came up was: "a certain type of water catchment or reservoir". The ancient Mayas carved a small basin out of the rock in caves collect the precious dripping water (the area is mostly very dry). So I assume that perhaps there once was a water reservoir in this bulwark. But when I typed in the full word XMUC'H' HALTUN nothing came up. So I tried *Xmuch a*nd lo and behold: up came the Campeche Botanic Garden, even with a few pictures of some beautiful waterlilies in it's pond! If you want to see that, you can try for yourself. But I warn you... there are many who want to make themselves more noticeable by just adding an X on the word *Much.*

With *Xmuch* love to you from

Tumbleweed

NEWSLETTER INVITATION

If you would like to contribute articles or anecdotes to the Botanical Society Newsletter (next issue comes out in November), please e-mail newsletter editor Helle Patterson at helle@northrock.bm

INVASIVE SPECIES

Lisa Greene

"Invasive species are those which have been introduced into an environment (often accidentally) in which they did not evolve. As such they usually have no natural enemies to limit their spread. They are usually species with high reproductive rates, fast growth rates and good dispersal mechanisms. Invasive species are typically good at establishing themselves in new habitats, where they thrive, to the detriment of native species. The characteristics that make a species a good 'invader' are also those that will enable a species to adapt to climate change fast enough to survive i.e. most of the species which have shown rapid evolutionary response to climate change have short generation times."
From *Plants and climate change: which future?*
Published by Botanical Gardens Conservation International, May 2008.

A few of the island's invasive plants featured in this newsletter over the last several issues include the holly fern, zoysia grass, umbrella tree, and Brazil (or Mexican) pepper. Another invasive is the Chinese fan palm, and while many people know that it's invasive, how many people actually know how to tell it apart from our endemic Bermuda palmetto?

Three simple steps to tell the difference between the invasive Chinese fan palm and our endemic Bermuda palmetto:

Look at the leaf from *above*. The point at which the stem joins the frond of the palm on the Chinese fan palm is rounded while on our Bermuda palmetto it is a long triangle and the leaf around the triangle is distinctly pale yellow.

The fruit of the Chinese fan palm are egg-shaped and blue-green in colour while the fruit of the palmetto are essentially round and medium-green.

The final test, if you are in any doubt, about the identity of your palm, is to look at the base of the leaf stem near where it meets the palm's trunk. If there are spines it is a Chinese fan palm. If there are no spines it is a palmetto. (Remember, Bermudians are friendly!)

Bermuda Palmetto Leaf

Chinese Fan Palm Leaf

TAMARIND TREES

by Tour Guide

When one enters the Botanical Gardens through the SW gate there is a Tamarind tree of respectable size.
Many will remember the very old specimen that stood in the garden of Waterville. It was said to be 200 years old. It had become too large to be happy and often showed much damage from the winter storms. The last 2 hurricanes that came to Bermuda were finally too much for it and just a sad stump remains although it still bears some green branches (I must still check this!)

My love for the Tamarind began when Dinah Howes, whom we remember as our faithful cleaning woman, gave us a small seedling that she had grown from a seed that came from tamarind paste that she had used in her kitchen. We gave it a nice spot and it took off beautifully. It is now just over 20 years old and at least 15 feet high. With only a little bit of pruning it has become a lovely tree. Two years ago we noticed that it would outgrow a large Bermuda palmetto that stood close to it, so we transplanted the palm, which was quite an enterprise. (the palmetto took the place of a huge coconut palm that had died after being hit by lightning). On our tree one can see the has small but lovely flowers and it bears fruit every year. (Pictures of it will be on display in the Visitors' Centre.)

The word tamarind comes from the Arab *tamar hindi* meaning Indian Date. The Arabs imported lumps of tamarind paste from India, but the Indians first found the tree in Africa. Tamarind trees are now found all over the world in warm climates.

The beans of the Tamarind contain a pulp in which the seeds are imbedded. This pulp has a sour taste and it has many uses, especially in the various Asian cuisines. But tamarind may be already in your home: it is one of the ingredients of Worcestershire sauce, Jamaican Pickpeppa sauce and various steak sauces.One of the nicer tamarind products is a drink that is popular in Italy, called *tamarindo,* of course. It is sold as a syrup, made with the pulp and sugar to counterbalance the acidity. Just add cool water to taste. It is very refreshing! You can experiment and make your own. It is a bit of a job to separate the paste from the seeds but worth the trouble. Of course you can buy the paste in the market. If you cannot find it look in the Philipino section. Or go to the Philipines and ask for *sampaloke* !
The Indonesians call it *asem* or *asam* and a very fine paste in jars can be bought in Indonesian food stores. A wonderful chutney can be made with it that goes well with Indian food. (See end of this column.)

And here is a hint for those who come more often to Hamilton than to the Botanical Garden: Take look at the SW corner of the parking lot at City Hall. You will find a very large Tamarind tree there and you may even find some beans on the ground among the mopeds.

Banana, Tamarind, and Mint Salsa

From the Great Salsa Book by Mark Miller

4 ripe bananas (approx. 1 pound), peeled and finely diced
2 tablespoons seeded and minced red bell pepper
1 tablespoon minced fresh mint

¼ cup tamarind paste
1 teaspoon brown sugar
1 tablespoon fresh lime juice

First mix the last three ingredients, then fold all the ingredient together in a mixing bowl.

Yield: about 2 cups.