Volume 5, Issue 2 March 2012

Aliens of Xamayca

a newsletter on non-indigenous species in Jamaica

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Invasive plants and jewellery making

Jamaica has about 45 known invasive alien plants that can be found in all 14 parishes. Of these, three plants, Job's Tears, Red Bead Tree and Lead Tree are used to make hand-crafted jewellery.

Job's Tears

Job's Tears (*Coix lacryma-jobi*) is native to Asia and is a common weed of ditches and stream-banks in Jamaica. Job's Tears is a bamboo-like grass that can grow to heights of 50-150cm in flower; flowering occurs October to May. The seeds are ideal for jewellery making as they have a hole in both ends, are hard with a shiny coat, and are tear-shaped. Seed colour is generally of various shades of grey, but in Jamaica, are bluish-white. Job's Tears are used to make rosaries, earrings, bracelets, and necklaces.

Job's Tears seeds (left) and hand-crafted necklace using Job's Tears (right)
©http://jennyhoople.com/blog/handmade-movement/every-gift-has-a-story-job-tears-jewelry/

Red Bead Tree

Red Bead Tree (*Adenanthera pavonina*) is native to India and Malaysia and was introduced into Africa and the Americas. The Red Bead Tree can grow as tall as 15m and is often planted as an ornamental and/or as a shade tree. As such, the Red Bead Tree has become naturalized in Jamaica. In other parts of the world, Red Bead Tree is used for food, furniture, fuelwood and medicinal purposes.

Red Bead Tree can invade intact, undisturbed forests as well as disturbed areas to form large colonies. Fruiting and flowering occurs sporadically throughout the year. The seeds are bright scarlet red, 6-10mm wide and are sometimes called "jumbie beads" or "Circassian seeds." In earlier times, Circassian seeds were used by goldsmiths in Asia as a standard measure for weighing gold, silver, and diamonds. The seeds of the Red Bead Tree are also used to make earrings, bracelets, and necklaces.

Seeds (left) and jewellery made from seeds (right)
©www.issg.org; www.jedmaxseeds.com.au/products-page/sets/red-bead-seeds-adenanthera-pavonina-with-designer-silver-necklace-bracelet-earrings-set-1d/

Lead Tree

Lead Tree (*Leucaena leucocephala*) is a nitrogen-fixing tree or shrub that can reach heights of 3-6m. Lead Tree is usually found in sandy waste places, thickets, and along roadsides in Jamaica. Lead Tree has also been found in agricultural areas, coastlands, natural and planted forests, grasslands, riparian zones, disturbed, degraded and ruderal sites around the world.

The tree is grown mainly for fodder, but is also used as green manure, windbreak, biofuel and for reforestation. Despite its many uses, Lead Tree is an aggressive invader of disturbed areas and forms mono-specific stands. Since this plant threatens native plants and can make extensive areas unusable and inaccessible, it has been placed on the "100 of the world's worst invasive alien species." Numerous shiny brown seeds are produced by the Lead Tree and are used to make necklaces and belts.

Necklaces made from seeds of the Lead Tree and nickernuts (*Caesalpinia* spp.)
©http://waynesword.palomar.edu/ww0901c.htm

Contributor: Shakira Azan, NEPA

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The Global Invasive Species Database (http://www.issg.org/database)

BAOBAB TREE—A NATIVE OF AFRICA IN JAMAICA

The Baobab Tree (*Adansonia digitata*) is a native of tropical Africa and belongs to the family Bombacaceae. Baobab Trees are quite large, with thick trunks and can attain heights greater than 18.3m (60ft). The trunk is thicker at the base, where it is often 7.2m (25ft) in diameter. In November, the tree is leaf-less and remains bare until new leaves appear in spring and early summer.

Baobab Tree
©http://www.seedsplants.com/Fiche2.php?Lang=en&Ref=9&Designation=Adansonia%20digitata

The Baobab Tree has alternate compound leaves, each composed of a long leaf stalk with three to seven oval-shaped leaflets radiating from the top resembling fingers from a hand. The flower buds usually arrive after the growth of new leaves and bloom as early as May and as late as November. The flowers are large (up to 20cm in diameter), white or creamy, scented and pendulous (hanging down loosely). The flowers fall within 24 hours and are brown, with an unpleasant smell. Fruit bats pollinate these flowers at night.

Flower of the Baobab Tree
©http://www.botanicalgarden.ubc.ca/potd/2007/11/adansonia_digitata.php

The fruits are large (>12cm), oblong in shape and are covered by a furry velvet-like coat. The fruit does not open at maturity, but remains on the tree until it is blown off by the wind or picked. Within the fruit are 30 or more, brown or black, smooth, kidney-shaped seeds. The seeds are embedded in a dry pith, which is a white or creamy acidic pulp laced together to form a mass of tough, stringy fibres. The fruits mature through the summer and autumn months. They fall from the tree in the winter, spring and early summer.

Fruit (left) and seed (right) of the Baobab Tree
©http://www.zimbabweflora.co.zw/cult/image-display.php?species_id=139770&image_id=3; http://www.seabean.com/guide/Adansonia_digitata/

The fruit is also known as "Monkey Breadfruit", a name derived given the preference of monkeys for the fruit. The acidic pulp of the fruit can be used to make a cooling drink, akin to lemonade and is recommended for fevers. The pulp can also be mixed with other ingredients and used to cure dysentery and uterine discharges.

The fruit is not the only part of the fruit used for medicinal purposes. The leaves are also rich in vitamin C, sugars and calcium. In Africa, the leaves are cooked as a vegetable, crushed or dried. The dried leaves are used to make a dish called "couscous", which can be used to moderate excessive perspiration, fever and diarrhea. The leaves and fallen flowers are often used as fodder for domestic animals.

The sprouts and roots of young trees are reported to be edible. The seeds can be roasted and used as a substitute for coffee. The hollow stems of the tree are used to make houses, prisons, pubs, storage barns, bus stops, and coffins for persons of distinction. The stem, branches and roots of the tree also serve as a water reservoir. African honey bees often use the hollow stems of the Baobab Tree as their home. The bark, which is fibrous, are used to make mats, ropes, fishing nets and lines, sacks and clothing. The Baobab Tree is also linked to legends and superstitions. In Africa, the tree is worshipped as a symbol of fertility.

The Baobab Tree is not invasive in Jamaica. The tree was probably introduced for ornamental purposes. The earliest mention of this tree in Jamaica was in 1796. Around the world, the Baobab Tree can be found in parks, botanical gardens, nurseries, home gardens, on public and private grounds, and along roadsides and walkways. In Jamaica, Baobab Trees have been observed at several locations in Kingston: the Convent of Mercy Academy (Alpha) Girl's School, at the intersection of Old Hope Road and Wellington Drive (at the side of the Mountain View Gully), Alpha Boy's School, and along Hopefield Avenue.

Contributor: Shakira Azan, NEPA

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LOGWOOD

Haematoxylum campechianum, commonly known in Jamaica as Logwood, is native to Central America. This tree was introduced and is now widely naturalized in the Caribbean and some other tropical countries. *Haematoxylum* means bloodwood and refers to the dark red heartwood of the tree. *Campechianum* refers to the coastal Mexican city of Campeche on the Yucatan Peninsula, the type locality of the tree. It was in England that the tree was given the name "Logwood" (also "blockwood") because it was transported as three-foot logs or blocks.

The tree, common in Jamaica on limestone hills and dry thickets, grows up to 10m in height and is described as being bulky and heavily limbed with a ridged trunk. The peeling bark is pale grey and is usually armed with long spines. The fragrant creamy yellow flowers contain nectar which attract bees and contribute to the tree being an excellent honey plant.

Jamaican logwood honey, pale amber in colour, has a distinctive taste and is highly rated by both locals and visitors to the island. The fruit of the logwood is a papery pod which bears the seeds from which the plant is propagated. The tree commonly produces flowers from December to May and bears fruits from December to March.

Flowers and fruit of Logwood
©Tropicos.org. Missouri Botanical Garden. <http://www.tropicos.org/Image/100127456>

History of Logwood

The extract from Logwood was first used by the Mayans and Aztecs as an ink, a fabric dye, and a treatment for diarrhoea. The Maya called the tree "ek," while the Aztecs called the tree "quamochitl", "uitzquauitl", and "huitzcuahuitl." For many years, the Mayans and Aztecs used the extract to dye woven fabrics. It is said that when Hernando Cortez encountered the Nahuatl Aztecs in 1519, they were dressed in the rich violet and black colours derived from Logwood extract.

When the Spaniards arrived in the Americas they did not initially understand the value of the Logwood extract and used the trees, which they called "pinta de tinto," or "tree of color" as ballast for their trips across the Atlantic. The Spaniards began to harvest the trees for commercial purposes after it was recognised as a dye by the European textile artisans.

By the late 1500s, Spain was harvesting and exporting large amounts of Logwood from the Yucatan to compete with indigo in the textile market. The extract was introduced to England in the 1570s, where it competed with the locally grown wood as a blue, purple, and black fabric dye colours usually available only to royalty.

Logwood is reputed to be responsible for many fights between the Spaniards and the English and the many ships were attacked by pirates in search of the precious commodity. The tree is also noted as being responsible for the creation of the country Belize, which was inhabited by the early log cutters from Britain. The Spanish granted the British settlers the right to occupy the area and cut logwood in exchange for an end to piracy.

Logwood was introduced into Jamaica by Henry Barham in 1715 who acquired seeds from Honduras and it became a well-established crop in the Black River and surrounding areas by the middle of the 1700's, and contributed to the prosperity of several towns in St. Elizabeth. The natural habitat of the logwood tree was swamp land and this explains why it thrived well in the Black River area.

Between 1893 and 1894, the export value of logwood from Jamaica was greater than that for crops such as sugar and coffee. The trade significantly decreased with the introduction of synthetic dyes.

Uses

The heartwood of Logwood is the source of the natural dye called haematoxylin. Haematoxylin is used to dye material black, grey, purple and dark red based on the mordant used. The dye is used on fabrics including synthetics and has also been used to stain floors and dye leather, fur and feathers. Haematoxylin is also one of the most common stains in histology. Logwood tree is also reported to have medicinal purposes and parts of the tree have been used to season food. In Jamaica and several other countries, the tree is planted as a living fence and is an effective barrier due to the presence of the thorns. The fragrant flowers also make it an attractive ornamental plant. The wood is used as fuel and also to make furniture.

The Logwood tree is slow growing and attains its maturity within twelve years. Although the tree is slow growing and has several uses, it is listed as invasive in several countries including Australia, Hawaiian Islands and Mauritius and is a potential invasive in Jamaica. In Australia for example, it likes disturbed sites such as the verges of roads and stream banks and tends to form dense impenetrable thickets.

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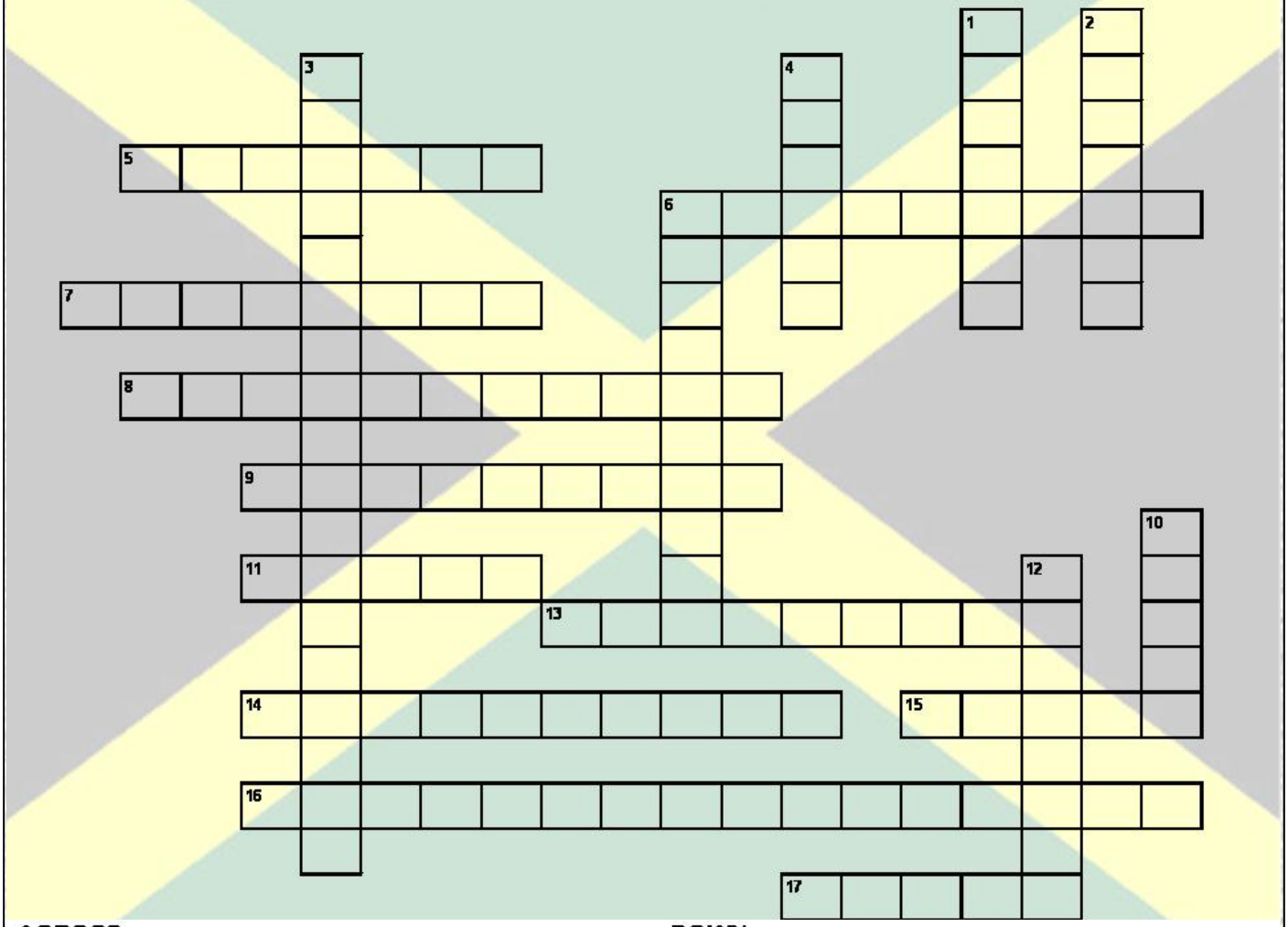
CROSSWORD

Jamaican history at a glance



ACROSS

5. 2nd colonization of Jamaica by the _____
6. National tree
7. Discovered Jamaica
8. National flower
9. Richest and wickedst city in the world
11. Number of heroes
13. Number of parishes in 1841-1865
14. National bird
15. Number of counties
16. First Governor General
17. Parish of first Spanish settlement

DOWN

1. First inhabitants, initially known as _____
2. Fought the British in 1735-1739
3. Motto
4. Independence month
6. First prime minister
10. National fruit
12. Current number of parishes

The Aliens of Xamayca is a bi-monthly newsletter that features non-native species in Jamaica.
Persons interested in writing articles for the newsletter may submit them to the editor at sazan@nepa.gov.jm.