

Aliens of Kamayca

a newsletter on non-indigenous species in Jamaica

INSIDE THIS ISSUE:

Invasive Alert
New Species Found
Ficus Whitefly 1

Great-tailed Grackle
A Wetland
Invasive Species 2

A Familiar Alien
Ackee 2

A Piece from the
Past
Biological Control in
Jamaica 3

Children's Corner 4

**INVASIVE ALERT
NEW SPECIES FOUND
FICUS WHITEFLY**

The Fig or Ficus Whitefly (*Singhiella simplex*) is a small, winged insect that belongs to the Order Hemiptera, which also includes aphids, scales, bugs and mealy bugs.

They feed on the underside of leaves and can seriously injure host plants by sucking juices from them causing wilting, yellowing, stunting, leaf drop or death.

Leaves of Ficus trees infested with Whiteflies turn yellow before the leaf falls from the plant. Ficus trees without any leaves is one obvious symptom of Whitefly infestation.



A leaf infested by Whiteflies

The adult Whitefly has a yellow body and white wings with a faint grey band in the middle of the wings. Eggs and nymphs are found primarily on the under-surface of the leaves. The under-surface of infested leaves are dotted with small, silver or white spots that are empty skins of the pupae after

adult emergence.

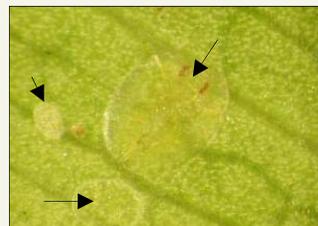


Adult Whitefly



Leaf infested with Whiteflies

The life cycle of the Whitefly is approximately one month. The eggs are laid on the under-surface of the leaves and hatch to a crawling stage (nymphs). The nymphs are oval, flat and simple in appearance. They remain on the leaf and begin to feed until they emerge as adults.



Immature Whiteflies

The Whitefly has been recorded in Florida (USA) and

the Caribbean (Barbados, the Cayman Islands and Jamaica). In Jamaica, it is currently causing serious damage to Ficus plants across the island.

Control options for the Whitefly are dependent on the site, the size and number of trees and the surrounding environment. The presence of natural enemies have been noted to play an important role in long term control of this pest.

The natural enemies of the Whitefly in Jamaica are the Ladybird Beetles and a parasitoid that are significantly reducing the Whitefly population.



Ladybird Beetles and a parasitized Ficus Whitefly pupa
©Juliet Goldsmith, MOA

Persons who see the Ficus Whitefly are asked to contact the local Ministry of Agriculture office and/or the Rural Agricultural Development Authority @ 977-1158 or 977-1161.

Extracted from "Ficus Whitefly - A New Pest in South Florida" Fact Sheet. University of Florida, IFAS Extension Photos © C. Mannion, H. Glenn and A. Hunsberger

THE GREAT-TAILED GRACKLE A WETLAND INVASIVE SPECIES



Great-tailed Grackle (female)
(Photo © John Fletcher)

On June 13th 2005, Mr. Herlitz Davis, one of Jamaica's most experienced and perceptive birders, observed two large Grackles close to Kingston's Norman Manley International Airport. He subsequently identified them as Great-tailed Grackles (*Quiscalus mexicanus*), a bird previously unknown in Jamaica or elsewhere in the Caribbean archipelago.

This sighting was reported in Broadsheet No.82, published by BirdLife Jamaica in September 2005. In the next issue No.83 (March 2006), confirmatory sightings in the

same location were reported by Dr. Ann Sutton, Mr. Brandon Hay and Mr. Robert Melbourne.

On June 24th 2007, four other members of BirdLife Jamaica made an early morning visit to the Portmore sewage ponds in St. Catherine. Before entering the fenced area, 5-7 Great-tailed Grackles were found foraging in a drain close to the southernmost residential area. This was a mixed group of males, females and juveniles.

Excellent photographs were obtained by Dr. Hugh Vaughan, Mr. Claude Fletcher and Mr. Jan van den Broeck, one of which appeared with the sighting report in Broadsheet No.86 in September 2007.

Most recently (November 6th 2008) these birds have been reported by Charles Swaby's boat captains on the Black River, St. Elizabeth.

The boat captains recognized the differences to the Greater Antillean Grackles they normally saw i.e. substantially larger size and more marked bluish iridescence of the males' plumage.



Great-tailed Grackle (male)
(Photo © John Fletcher)

The Great-tailed Grackle is a fairly common resident of Central America, coming as far north as the U.S. border. It is reported to be aggressively extending its range, but it is believed that its arrival in Jamaica is its first incursion into the Caribbean islands.

Its normal habitat is near water where it often forages in

mangroves for invertebrates and seeds. Its impact on native biodiversity is however unknown.

Persons who have seen the Great-tailed Grackle are asked to make a report to the National Environment and Planning Agency (NEPA) @ 754-7540 or toll free @ 1-888-991-5005 or by email, pubed@nepa.gov.jm.



Great-tailed Grackle at the Portmore Sewage Ponds (June 2007)
(Photo © Hugh Vaughan)

A FAMILIAR ALIEN - ACKEE

The Ackee (*Blighia sapida*) is a native of West Africa. It is Jamaica's National Fruit and may have arrived in the island via African slaves.

Reputedly, the fleshy yellow part of the fruit, the aril, is eaten as a food in Africa. The seeds were also beaten to a pulp and thrown into rivers where they acted as a narcotic on the fish which rose to the surface and was caught.

Ackee is commonly cultivated in Jamaica but is rare or absent in many of the West

Indian islands.

There are two kinds of Ackee known "hard or cheese" and "soft or butter". Since plants seldom come true to seed, the differences between the two are vast. Ackee is most often grown from seeds.

Jamaicans use the ripened Ackee in many dishes such as "Ackee and Saltfish with Breadfruit and Pear"; "Ackee with Season Rice"; "Ackee Loaf"; "Ackee and Tofu"; "Ackee and Pork"; Ackee and Red Herring" and "Ackee and Mackerel".

Extracted from 'Ackees and Avocadoes'; *Jamaica Journal* Vol. 5, No. 1, 1971 and 'Flowering Plants of Jamaica' by C. D. Adams, 1972.



Ackee (in & out of pod)
(©www.mona.edu.jm/chemistry/appliedandfoodchem/images/ackee.jpg)

Unopened Ackee on the tree (right)
(©www.mona.edu.jm/chemistry/images/unrpacke.jpg)



Ackee and Saltfish
(©www.tasteslikehome.org/2008/02/ackee-saltfish.html)



A PIECE FROM THE PAST BIOLOGICAL CONTROL IN JAMAICA

Over the years certain animals have been introduced into Jamaica to serve as biological control agents. Biological control is the method used to manage pests by using their natural enemies.

This article highlights some of the biological control agents that have been introduced into Jamaica.

Bullfrog (*Bufo marinus*) ?

The Bullfrog or Cane Toad was introduced about 1844.

In some countries, the Bullfrog was used to help maintain control in cane fields by eating “May beetles” or “June beetles”. In banana fields, they were found to eat “Banana borers” and in citrus fields, “Fiddler beetles”. The Bullfrog also eats mice, snails and is a known natural enemy of slugs.

The impact of the Bullfrog as a biological control agent in Jamaica is however unknown and as such, its successes and/or failures cannot be presented.



Cane Toad
Photo © Craig G. Murray

Eddy Wasp (*Eretmocercus sirius*) √

The Eddy Wasp was introduced from Cuba in the 1930’s to control the citrus black fly, which was a serious pest in Jamaica.

The citrus black fly affects citrus trees by sucking the juices out of the leaves. The fly also exudes a ‘honey dew’, which promotes mould growth, that affect leaf functions and encourages ants.

Since the introduction of the Eddy Wasp, there were still other outbreaks of the citrus black fly. Consequently, a tiny wasp of the Aphelinidae family (same as the Eddy Wasp) was brought in from Mexico to assist with the control of the citrus black fly.



Bug typical of family Aphelinidae
Photo © <http://bugguide.net>

Java Beetle (*Plasius javanus*) √

The ‘Java Beetle’ was brought in from Fiji to control the banana borer. However, this beetle did not flourish in areas with a lot of sunlight (e.g. plains) but were found in little pockets and glades along rivers and streams.

Along with hydrophilids or water beetles, which were brought in from Malaya, the Java Beetle successfully controlled the banana borer resulting in increased banana production.



Water Beetle
Photo © The University of Michigan Dearborn

Vedalia Beetle (*Rodolia cardinalis*) √

Within the past few years, the “cottony cushion” scale (*Iceryia purchasii*) was somehow brought into the island. *Iceryia purchasii* is a scale insect that

feeds on several species of woody plants such as citrus and *Pittosporum*.

The Vedalia Beetle, a type of ladybird beetle, has successfully reduced the level of infestation of the scale. The mechanism by which the Vedalia Beetle entered the island is however unknown.



Vedalia Beetle and “Cottony Cushion” Scale
Photos © http://www.ipm.ucdavis.edu/PMG/NE/vedalia_beetle.html

Other ladybird beetles have also been introduced to control scale insects on coconut and the destructor scale, *Aspidiotus destructor*.

Others

In 1937, *Dasyscapus parvipennis* was brought in to control thrip in Jamaica. It was reported to attack mango and avocado and is a serious pest of cocoa trees in Trinidad.

Another parasite was also introduced to control the West Indian peach scale on ornamentals such as oleander.

Extracted from “Bio-Policemen-Two Entomologists Willie Dixon & Tom Farr reminisce about Biological Control in Jamaica”; Jamaica Journal, Vol. 5, No. 1, 1971.



CHILDRENS' CORNER

Can you spot the Aliens?

Below is a table that contains examples of introduced and native wetland species. Look at the names under each heading and circle those that are "aliens in wetlands". If you do not know, ask your parents, older siblings or a teacher to help you.

PLANTS	MAMMALS	AMPHIBIANS & REPTILES	BIRDS	FISH	INVERTEBRATES
Casuarina/Willow	Cow	Cane Toad	Bananaquit	Jack	Pink Mealybug
Red Mangrove	Hutia	Anoline Lizard	Cattle Egret	Mosquito Fish	Firefly
Water Hyacinth	Mouse	Snake	Parrot	Snook	Spider
Water Lily	Rat		Shiny Cowbird	Tarpon	Ticks
Mango	Mongoose		Bullfinch	Tilapia	Crabs
	Bat		Yellow Warbler		

Anyone at home?



Can you find the following in the picture above:

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> • West Indian Whistling Duck • Brown Pelican • Egret • Brown Booby | <ul style="list-style-type: none"> • Green Turtle • Snakes • Barracuda • Snapper • Mosquito Fish • Oyster | <ul style="list-style-type: none"> • Mangrove Snail • Seahorse • Lobster • Mangrove Crab • Swimming Crab • Red Mangroves |
|---|---|--|

Adapted from the Wondrous West Indian Wetlands Teacher's Resource Book



The Aliens of Xamayca is a quarterly newsletter of the Ecosystems Management Branch of NEPA 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.