

Aliens of Kamayca

a newsletter on non-indigenous species in Jamaica

INSIDE THIS ISSUE:

| | |
|--|---|
| The Convention on Biological Diversity and Jamaica's alien species | 2 |
| The Small Indian Mongoose – A threat to Biodiversity | 2 |
| <i>Dendrobium crumenatum</i> | 2 |
| Brood Parasitism by the Shiny Cowbird | 3 |
| Establishment of the invasive White-tailed Deer in Portland | 3 |
| Invasive Alert – New Species: Lime Swallowtail Butterfly | 3 |
| Children's Corner | 4 |

I N V A S I V E A L I E N S P E C I E S

Alien species are plants or animals, which are introduced deliberately or unintentionally into areas where they are not naturally found.

The presence of alien species may threaten biological diversity or biodiversity, which is "life on earth" and includes plants, animals, micro-organisms and their habitats. When this happens, the species are termed invasive alien species (IAS).

IAS are successful as they often give birth to numerous offsprings, have no known predators, grow rapidly, have high survival rates, rapidly colonize areas, live in flocks or communities, are aggressive and tolerate a wide range of

environmental conditions.

Humans are primarily responsible for the introductions of



Ginger Lily, *Hedychium gardnerianum* - displaces native vegetation

IAS. These introductions may be intentional e.g. through smuggling, biological control or bio-control, trade (such as agriculture, horticulture and the pet industry) or unintentional e.g. transportation of species within a country during

flood events and between countries via airplanes, trains, packaging material and ships (ballast water).

When present, IAS threaten the survival of other species through predation, competition, parasitism and introduction of new pathogens. They also alter the natural state of ecosystems, threaten economic sectors such as agriculture, industry and commerce and recreation and can introduce public and animal health diseases (e.g. cholera, Salmonella food poisoning, Weil's disease [Leptospirosis] and Trichinosis, which are transmitted by rats).

*Contributor: Shakira Azan, NEPA
Photo @Marsha Mason, NEPA*

**T H E C O N V E N T I O N O N B I O L O G I C A L
D I V E R S I T Y A N D
J A M A I C A ' S A L I E N S P E C I E S**

The Convention on Biological Diversity (CBD), adopted in 1992, recognizes that if biodiversity loss is to be averted, action is needed at the national and international levels and must be facilitated through cooperation amongst all countries (Global Biodiver-

sity Outlook, 2001).

The objectives of the CBD are the:

- conservation of biological diversity;
- sustainable use of its compartments; and

- fair and equitable sharing of the benefits arising out of utilization of genetic resources.

In 1995, Jamaica became a Party to the CBD. Article 8(h) requires Contracting Parties to

THE CONVENTION ON BIOLOGICAL DIVERSITY AND JAMAICA'S ALIEN SPECIES CONTD.

prevent the introduction of, control and/or eradication of those alien species which threaten ecosystems, habitats, or species.

The National Strategy and Action Plan on Biological Diversity in Jamaica (2003) in recognising the impacts that have or may result from the introduction of alien species proposed the following strategic directions:

- undertake research and assessments of introduced species that now threaten Jamaica's biodiversity;
- identify appropriate measures to reduce further impacts;
- develop guidelines for the eradication and monitoring of IAS;
- request risk assessment of species prior to granting an import permit;
- improve management and strengthen enforcement capacity to implement quarantine control measures in order to control unintentional introductions at ports of entry; and
- develop contingency plans and action programmes to ensure rapid eradication of newly established and undesirable alien species.



Red-eared Slider Turtle, *Trachemys scripta*—introduced via the pet trade
Photo © www.greglasley.net

“The Small Indian Mongoose has contributed to the extinction of five endemic vertebrates, a lizard, a snake, a mammal and two birds”

THE SMALL INDIAN MONGOOSE – A THREAT TO BIODIVERSITY

The Small Indian Mongoose (*Herpestes javanicus*) was introduced to Jamaica in 1872 as a bio-control agent for rats in sugarcane fields.

The Mongoose became established in Jamaica but was not successful in controlling the rat population.

It is thought to be responsible for the decline and likely ex-

tinction of five endemic vertebrate species, a lizard (Giant Galliwasp); a snake (Black Racer); a mammal (Jamaican Rice Rat) and two birds (Jamaican Paruraque and Jamaican Petrel).

They can be found in a wide variety of locations, urban areas, agricultural areas, coastlands, natural forests, wetlands and grasslands.

Presently, the Mongoose is a major threat to the Jamaican Iguana and other endemic and endangered animals.

Contributor: Shakira Azan, NEPA



Photo © www.issg.org

DENDROBIUM CRUMENATUM SW.

Dendrobium crumenatum is commonly known as the Pigeon Orchid and is native to South China, Indo-China and the Malay Peninsula. It is the most common orchid in Singapore and is considered a weed by some. In fact, it is listed in the Global Compendium of Weeds.

This species was introduced to Jamaica many years ago and was first seen by the

author 25 years ago, growing on a Guango (*Samanea saman*) tree on Paddington Terrace, St. Andrew. It was not cultivated.

The plant has tall, thin pseudobulbs (a thickened, bulb-like, fleshy stem located above the ground) with swollen internodes (a section between two nodes) and grows in a wide range of climatic conditions. It could

qualify as perhaps the easiest orchid to grow in a warm climate such as ours.

The flower is triggered by a sudden temperature drop, often after a shower of rain. Blooms are produced about nine days later and are white and fragrant. They last about two days.

This species has become naturalized in Jamaica and is

(self pollinating) or have managed to find a natural pollinator in the wild.

Contributor: Claude Hamilton, Hamlyn Orchids Limited



BROOD PARASITISM BY THE SHINY COWBIRD



Shiny Cowbird male (left); female (right)

Native to South America, the Shiny Cowbird (*Molothrus bonariensis*) has migrated northwards through the Caribbean into southeastern United States.

The species is a brood parasite that does not build a nest. Instead, the

female lays her eggs in the nest of other species, often rejecting or cracking those of the host. They have a shorter incubation period (11-12 days) compared to most hosts, which ensures that the Shiny Cowbird chicks hatch first and out-compete the hosts'.

The Shiny Cowbird have resulted in the decline of several West Indian bird species and have been observed parasitizing on the Jamaican Oriole (*Icterus leucopteryx*), an endemic subspecies.

The native host species have not derived any defenses against brood

parasitism and their strong parental instincts allow them to continue caring for these nest invaders, until they become independent.

As the Shiny Cowbird gets a foothold into the Jamaican avifaunal landscape, the concern is heightened for all native birds, especially the Jamaican Oriole and the endemic and threatened, Jamaican Blackbird (*Nesopsar nigerrimus*).

Contributor: Ricardo Miller, NEPA

Photo @ <http://www.oiseaux.net/oiseaux/passeriformes/shiny.cowbird.html> and Pere Sugranyes (www.camacdonald.com)

ESTABLISHMENT OF THE INVASIVE WHITE-TAILED DEER IN PORTLAND

The White-tailed Deer (*Odocoileus virginianus*) is the most widespread and abundant member of the deer family. They are so named because when alarmed, they hold their tails erect, exposing their white underside.

A small population of about 6 captive deer escaped from their keeper in the 1980's and now roam wild.

The Deer is mostly found in Portland, occupying a relatively small area of about 19km² in and around the communities of Mt. Pleasant, Industry, Shrewsbury, Content, Darley, Little Spring Garden, Eden Wood, Paradise and Swift River. These areas have small agricultural fields growing cash crops of pumpkin, carrot, yam and corn.

Local residents indicate that the Deer is a serious agricultural pest, causing average monthly losses of J\$10,000. The current deer population is estimated at about 182 animals.

Contributor: Shauna-Lee Chai, JCDT

The White-tailed Deer does not appear to have penetrated the forests of the Blue and John Crow Mountains and poses more of a threat to small scale agriculture.

INVASIVE ALERT-NEW SPECIES FOUND: LIME SWALLOWTAIL BUTTERFLY

The Lime Swallowtail Butterfly {LSB} (*Papilio demoleus*) is common and widespread and gets its name from its host species, citrus plants.

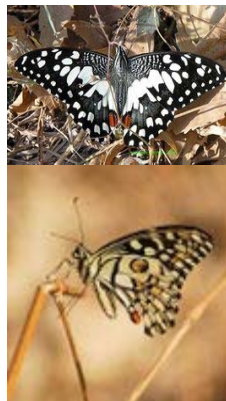
The Butterfly is tolerant and adaptive of diverse habitats and can be found in savannahs, fallow lands, gardens and forests.

It was discovered in Jamaica

on December 12, 2006 in the citrus growing areas of Bog Walk, St. Catherine and Hounslow, St. Elizabeth.

LSB poses a threat to the local citrus industry, as it feeds on the leaf and bark of citrus plants less than two years old.

Contributor: Shakira Azan, NEPA



White-tailed Deer
Photo © www.mynaturephotos.com



Larva of the Lime Swallowtail Butterfly
Photo © Marina Young, RADA

Lime Swallowtail Butterfly (left –upper surface; right–under surface)
Photo © http://en.wikipedia.org/wiki/Papilio_demoleus

