

Aliens of Kamayca

a newsletter on non-indigenous species in Jamaica

A COMMON ALIEN AMONGST US

Rose Apple

Syzygium jambos (L.) Alston

synonyms: *Eugenia jambos* L;
Jambosa vulgaris DC.



© http://www.tradewindsfruit.com/rose_apple15.jpg

The Rose Apple is part of the Myrtaceae family, and is not a true apple. A native of the Indo-Malaysian and Pacific regions (East Indies), it was introduced to Jamaica in 1762. Since then, it has become naturalised and well distributed all around the island. The Rose Apple plant can be a shrub, but it usually grows to a tree that can attain heights between 8m-12m. It has a dense crown, and its wide spreading branches can make the overall width of the tree surpass its height.

The plant flowers and fruits at ran-

dom throughout the year. Flowers are yellowish-white with between 4-5 flowers in a cluster. These blossoms are pleasantly rose-scented and are a rich source of nectar for honey-bees. The fruit is 3-6 cm in diameter. The skin of the ripened fruit is yellow or white, with a slight hint of pink, and is also rose scented. Inside the fruit is generally hollow with a single large, brown, round seed (sometimes 2 or 3 seeds). The flesh of the fruit is yellowish and mealy, and can be dry or juicy. It is sweet and of course, has a characteristic rose flavour. It is eaten fresh or can be made into preserves or boiled to make syrups. Here in Jamaica, the fruits are sometimes sliced and candied by stewing them in thick sugar and water, and adding cinnamon. In many tropical and subtropical countries, various preparations of the fruit, leaves and flowers are used to treat ailments; however, this is not a common practice in Jamaica.

The heartwood of the tree can be used to make furniture and wooden frames for items such as musical instruments. However, a more popular use for the wood is the production of charcoal. The tree grows back quickly after it has been cut to a stump, and as such can yield a continuous supply of

charcoal. The plant is usually propagated from seeds, which are only viable for a short while after removal. The seeds are polyembryonic, that is it has a single seed that can give rise to a number of plants. The tree can take up to 5 years to bear from the seedling.

The plant tolerates sandy soils and will grow in dry areas, but it prospers best in humid environments, and so will be found growing near rivers or streams and in moist soil. Though the Rose Apple has few insect pests, it can be prone to some leaf spot diseases as well as the notorious sooty mould, which is secreted by aphids which feed on the honeydew plant. The seeds and roots are said to be toxic, and are not eaten or used in preparations.

Other common relatives in Jamaica: The Rose Apple is closely related to another common 'apple' the Otaheite (*Syzygium malaccensis*).

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MITIGATING THE THREAT OF INVASIVE ALIENS SPECIES IN THE INSULAR CARIBBEAN (MTIASIC) PROJECT: JAMAICAN IGUANA CONSERVATION

In this publication we look at the details of the second pilot project for the MTIASIC Project.

Title: Monitoring and Selective Eradication of Vertebrate Predators in the last remaining habitat of the Jamaican Iguana (*Cyclura collie*) in the Portland Bight Protected Area.

Species considered: Dog (*Canis familiaris*), Goat (*Capra hircus*), Cat (*Felis catus*), Small Indian Mongoose (*Herpestes javanicus*), Feral Pigs (*Sus scrofa*)

Pilot site(s): Hellshire Hills, Goat Islands and Portland Bight Cays

What is the conservation priority being addressed? Protection of the endemic iguana (*Cyclura collie*) as well as sea turtles and nesting seabirds found in the Portland Bight Protected Area.

Thought to be extinct in the mid 1900's, the Jamaican iguana was rediscovered in 1970, and again in 1990. The 1970 rediscovery generated surprisingly little interest, within Jamaica or among international conservation organizations. But when pig hunter Edwin Duffus brought a live specimen to the Hope Zoo in 1990, the local Jamaican Iguana Research and Conservation Group (JIRCG) was rapidly formed, and international support quickly materialized. The renamed Jamaican Iguana Recovery Group (JIRG) is a consortium of local Jamaican organiza-



tions and international conservation groups that held a workshop in July 2006 to formulate the present Species Recovery Plan (SRP). The overriding goal of that workshop was to reach a consensus on priority conservation actions and agree on the organizational responsibility for those actions.

The Jamaican Iguana is listed as Critically Endangered in the most recent IUCN Red List, and as an Appendix I Species under the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the species is also considered to be Endangered under the U.S. Endangered Species Act (United States Fish & Wildlife Service). Nationally, the species is protected under the Wild Life Protection Act and on Schedule I of the Endangered Species (Protection, Conservation and Regulation of Trade) Act.

Beginning in 1991, the JIRG has been protecting the known communal nesting areas, operating a

successful head-start release programme, and attempting to divert charcoal burners away from a core conservation zone. Beginning in 1997, the group has been controlling mongooses, cats, and pigs in and around the known iguana nesting areas, and has expanded the collection of hatchlings from wild nests to facilitate the expansion of the Hope Zoo head-start programme. On-going research continues to provide the informed foundation for adjusting and implementing the evolving plan for the recovery of this iconic species.

As with so many insular endemic species in the Caribbean and elsewhere, the Jamaican Iguana has been decimated by the combination of habitat loss and predation by introduced mammals. Agricultural and urban development, together with timber extraction, caused extensive habitat loss along Jamaica's southeast coast in the centuries following colonization, and the species was ultimately restricted to the Hellshire Hills and nearby Goat Islands. Today, illegal tree cutting

for charcoal production is the greatest source of continued loss of the iguana's dry forest habitat.

Invasive alien species represent the greatest threat to the iguana where its habitat is still in prime condition. Dogs were brought to Jamaica by the Tianos, and are the only predator capable of killing large adult iguanas. The mongoose (*Herpestes javanicus*) was imported in 1872 to contain damage due to sugar cane pests, and quickly established itself as a major threat to the island's endemic wildlife. Recent field studies have underscored the importance of this predator as a threat to the iguana's persistence. Feral cats are also virulent predators of small iguanas, and roam throughout the Hellshire Hills. Wild pigs represent a threat to iguana nests, and the European rats (*Rattus* sp.) may also be a problem but this has not been documented. As a result of the proximity of urban settlements the area is under threat due to the presence of these invasive feral animals. Due to ongoing conservation activities of the JIRG the impact of pigs have been significantly reduced and there is also a slight decrease in the impact of cats and dogs to the core conservation site. The impact of these invasive animals has spread to the Portland Bight Cays where their presence has threatened the existence of sea turtles and nesting sea birds.

M T I A S I C P R O J E C T - J A M A I C A N I G U A N A C O N S E R V A T I O N C O N T ' D

Through the efforts of the IAS Project the following activities will be undertaken to support the regeneration of the Jamaican Iguana.

1. supporting the implementation of a predator trapping programme in the Hellshire Hills and Goat Islands.
2. live traps set for the removal/eradication of mongoose and cats in the core nesting areas.

3. Removal of wild pigs and dogs using snares and large cage traps.
4. enclosures around nesting sites to protect hatchlings from predators that often prey on the eggs and hatchlings.
5. goat removal exercise focused on lessening the competition with the iguanas for food (vegetation)

and allow for the measurement of vegetation regeneration.

6. experiment with the use of buried mesh barriers in an attempt to protect sea turtle nests
7. periodic monitoring of 7 primary turtle nesting cays to evaluate the need for removal of IAS if present.

All activities will be evaluated to see their effectiveness at decreasing the IAS population and also the impact of IAS removal on the regeneration of the endangered Jamaican Iguana and any other native species within the Pilot area.

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T H E R O S E - R I N G E D P A R A K E E T (P S I T T A C U L A K R A M E R I) : A N E W I N V A D E R T O T H E J A M A I C A N A V I F A U N A L L A N D S C A P E



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First noted by the author in March 2008 as what appeared to be a flock of strange parakeets flying over the suburbs of St. Andrew, Jamaica, was soon revealed in an image by photographer, Wayne Sutherland, to be the Rose-ringed Parakeet (*Psittacula krameri*). Native to Africa and Asia it has proven to be one of the most successful species of Psittacines, able to thrive in urban settings. They have feral and naturalized populations in cities within their normal range as well as in Australia, Great Britain, the

United States, and other western countries to now include Jamaica.

The Rose-ringed Parakeet is a favourite among the pet trade, owing to their beauty, large size and ability for mimicry. This species is sexually dimorphic (distinct characteristics for male and female). The male has a black neck ring which becomes bright pink at the back of the neck (nape). The female and immature of both sexes either have no ring or a very pale grayish line. They are on average approximately 40cm long from head to the tip of the tail. Both sexes are entirely green but have been bred to produce colours such as yellow, gray and albino.

It is believed that the most likely mechanism of introduction in Jamaica was by means of escaped pets. At the moment the entire population seems to be confined to St.

Andrew. A count by the author in 2009 revealed a diffused flock of 55 individuals that flew easterly over the Barbican community just before sunset. In September 2010 Wayne Sutherland also reported that he observed them nesting in trees on the Constant Spring Golf Course in St. Andrew. Considering that they have been in the wild now for several years and show signs of nesting it is safe to assume that the population is growing and is therefore expected to be larger than 55 individuals.

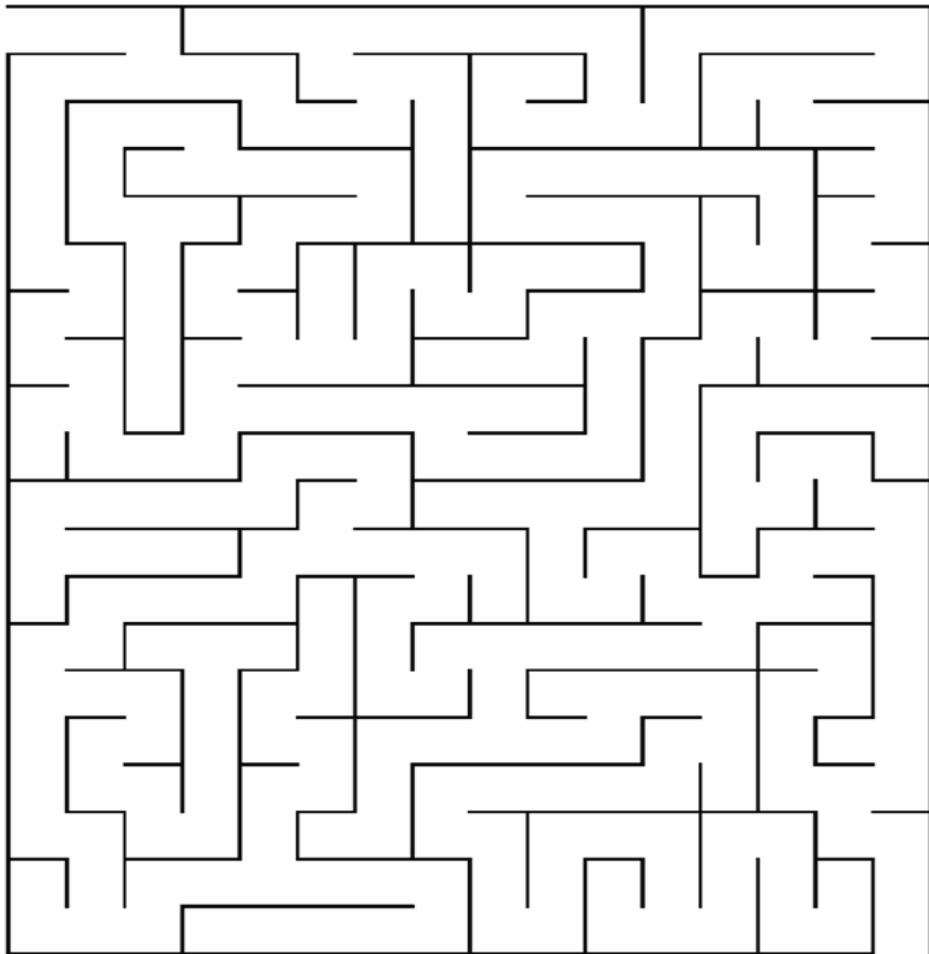
What are the likely implications of this species to the Jamaica avifauna? There may be inter-specific competition between this species and the three native Psittacines species on the island: the Yellow-billed Parrot (*Amazona collaria*), the Black-billed Parrot (*Amazona agilis*) and the Olive-throated Parakeet (*Aratinga nana*). It is the latter species however that

may be most affected as it is more likely to overlap with the present range of these new invaders. Here they may be out-competed for resources. A feral population of Yellow-billed Parrots that reside in the nearby Hope Gardens and its environs may also be impacted by this invasion. In other countries, they have also been documented foraging in farmlands and orchards causing extensive damage.

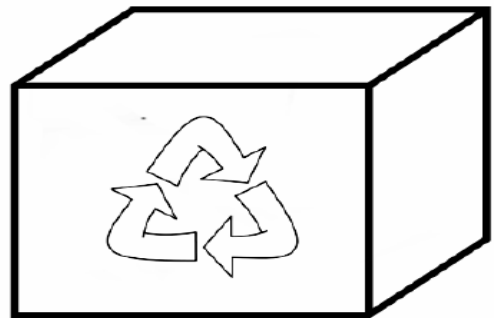
At this early stage, eradication of these invaders is still possible. A combination of active trapping, shooting and nest removal may prove effective. Prior to this however, scouting and monitoring will need to be implemented to understand the feeding habits, movements, roosting and nesting sites of these birds.

Contributor: Ricardo Miller

CHILDRENS' CORNER



Put the bottle
into the
recycling bin.



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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 monique.curtis@nepa.gov.jm.