

A lush tropical garden scene with various plants, including palm trees and a large bush of purple flowers. The background is a cloudy sky.

Conservations News (2018 - 2020)

Queen Elizabeth II Botanic Park

Cayman Islands



Overview

It has been an exciting couple of years at the Cayman's Botanic Park. With the help of an amazing volunteer force, Park staff have contributed greatly to what we know about the flora of the Cayman Islands and how we can preserve them for future generations. To recognize the potential role the QEIBP can play in conserving our native flora, DoE and NCC granted us permission to work with all schedule 1 and schedule 2 plants, provisioned until 2022.

Park employee Earl Lewis rescues Banana Orchids from a building project in East End, Grand Cayman
Photo credit: Nick Johnson

Cayman Islands Seed Bank

At the end of 2019, the Department of Environment entrusted the park with the Cayman Islands Seed Bank. Staff at the park have expertise in how to collect and store native seed. The seed bank is now up and running and the small store of native seed is slowly growing. Seed will be available for use in restoration or landscaping projects.



Seed of *Margaretaria* being prepared for storage
Photo credit: Nick Johnson

Woodland Trail

In order to fully understand and protect the Park's biodiversity, our volunteers are setting up permanent survey plots throughout the woodland trail. This will enable us to apply for TIPA (Tropical Important Plant Area) status and to understand long term changes to our habitats

Park Volunteers, Stuart Mailer and Nick Ebanks measure out a surveying quadrat on the woodland trail
Photo credit: Nick Johnson



Ghost Orchid

Orchids are the most sensitive to changes in the environment and the Ghost Orchid is one of the most critically endangered. Park staff have been working in partnership with Verdant Isle Orchids to hand pollinate, monitor and collect seed from our transplanted populations. So far, it has been successfully germinated in-vitro at our partners laboratory and we are collaborating on the next steps for introduction to an inter-situ site within the Park.



Ghost Orchid, *Dendrophylax fawcettii*
Photo credit: Nick Johnson



Park employee, Andrew Williams hand pollinates a Ghost Orchid flower
Photo credit: Nick Johnson

Banana Orchid

Banana Orchids have been rescued from several building sites across East End for relocation to our Orchid Boardwalk, which serves as a repository of wild genetics for our Island's national flower.



Banana Orchid, *Myrmecophila thomsoniana*
Photo credit: Nick Johnson

Rescued Orchids prepared for transport back to the Park at a building site
Photo credit: Nick Johnson



Dollar Orchid

A visiting botanist confirmed in 2019 that the native Dollar Orchid is more closely related to continental populations than Caribbean populations of this species. Samples of the triandrous nature of this populations have been made and protocols have been undertaken in our micropropagation lab for in-vitro production.



Dollar Orchid, *Prosthechea boothiana*
Photo credit: Nick Johnson



Dollar Orchid flowering on the woodland trail
Photo credit: Nick Johnson

Encyclia kingsii

This iconic Sister Islands orchid has now been germinated en-mass, in-vitro at the Park. While we are still in the early stages of propagation, if the work undertaken by our skilled volunteers and staff is successful, this endemic species could be far more secure for the next generation.



Encyclia kingsii flowering in the wild in Little Cayman
Photo credit: Nick Johnson

Vanilla

Park staff, with permission from land-owners, rescued and successfully established the Vanilla orchid species native to Grand Cayman. Work can now begin on monitoring the small population for the flowers needed to determine its identity at a species level.



Vanilla Orchid growing onto
a tree on the Orchid
Conservation Boardwalk
Photo credit: Nick Johnson

Consolea millspaugii

Cuttings of this critically endangered cactus were collected from individuals on Little Cayman in early 2019. A small seed orchard has now been established in the Xerophytic garden and will be used for study, seed banking and reintroduction.



Consolea growing in the wild on Little Cayman
Photo credit: Carla Reid



Consolea flowering in the seed orchard at QEIBP
Photo credit: Nick Johnson

Epiphyllum phyllanthus var. *platsii*

The jury is still out on the real identity of this enigmatic cactus from the Brac. A germination protocol and seed banking has been undertaken, the Park now holds a large research population and staff are consulting with Cactus experts from around the world to understand this beautiful, rare species.



Epiphyllum flowering in the wild
on Cayman Brac
Photo credit: Frank Roulstone

Cayman's fan palms

Seed was collected in 2018 from both of Grand Cayman's endemic species of Fan Palm. Young plants of our national tree are now growing in our nursery and at the Royal Botanic Gardens, Kew where it will be kept as an ex-situ conservation collection and used as a flagship species to explain the importance of Cayman's biodiversity to the world's botanical community.



Park employee, Andrew Williams collects seed of Bull-Thatch Palm



Silver Thatch Palm, *Coccothrinax proctorii*
Photo credit: Nick Johnson

Strawberry Tree

George Proctor (author of Flora of the Cayman Islands) commented on how the strawberry trees around the QEII Botanic Park were different to the rest of the islands. Work is now underway to determine the status of these individuals. Seed germination, storage and growing protocols have been undertaken and plants have been shared with RBG, Kew's botanical experts.

A herbarium sample of Strawberry Tree, *Eugenia aff. axillaris*
Photo credit: Nick Johnson



Cayman Spirit Vine

Working closely with colleagues in DoE, park staff have assisted in finally working out the status of this rare, elusive shrub. Genetic material was collected from all known individuals and sent to RBG, Kew for tests in their laboratories. Early data suggests this species is indeed endemic to Cayman. Park staff are working on propagating the last known individuals in an attempt to set up an inter-situ conservation collection for seed collection and further research



Spirit Vine, *Aegiphila caymanensis* in flower at Health City, Grand Cayman
Photo credit: Nick Johnson



Park staff have set up experiments to determine the best way to propagate the Spirit Vine
Photo credit: Nick Johnson

Aegiphila elata

The sister species of Cayman's Spirit vine is also critically endangered on the islands. Work is continuing at a pace to propagate and establish all known individuals in an inter-situ conservation collection at the QEII Botanic Park



A stump rescued from a building site of one of only two known plants on the island.
Photo credit: Nick Johnson



Park staff are air-layering the last known wild plant of this species
Photo credit: Nick Johnson

Cayman Sage

This beautiful, ephemeral species was thought to be extinct until rediscovered growing in East End. The park has collected seed from several populations and is actively growing individuals for seed banking, display and distribution

Cayman Sage, *Salvia caymanensis*
growing in the park's nursery for
seed collection

Photo credit: Nick Johnson



Cayman Ink-Berry

This coastal shrub native to the Cayman islands has been grown from seed at the Park and planted in the heritage garden to be used as a seed orchard for distribution to households across the islands.



Park employees, Saige Rivers and James Miller plant Ink-Berry in the Heritage Garden

Photo credit: Nick Johnson



Ink-Berry, *Scaevola plumieri*

Photo credit: Nick Johnson

Pisonia margaretae

The park has played host to an inter-situ collection of this critically endangered species for decades. Staff at the park are revising the collection, re-propagating individuals and working with DoE to bring newly discovered individuals into the extant population.



Pisonia, growing in the wild at
Spotts Bay, Grand Cayman
Photo credit: Nick Johnson

Piper amalago

Seed collected from a newly identified population of this rare Cayman native is in the planning stage for planting for display and use in the Park. Staff will be working with DoE and local agriculturists to explore the possible uses of this plant for the benefit of the people of the islands, because this plant has been used in Central America as a black-pepper substitute.



Island Black Pepper, *Piper amalago* growing
in the wild on Grand Cayman
Photo credit: Nick Johnson

Native Seedling Propagation

The park started an initiative in 2020 to propagate all plants found in the gardens on request. Recently, we were approached by Dart to propagate natives for their new landscaping program. We are also actively researching restoration practices with our wild-collected seed bank.

Park employee, Saige Rivers holds a native plant seedling he is about to plant on the woodland trail
Photo credit: Nick Johnson



Upcoming Work

As well as the ongoing work found in this report, the park staff are planning to instigate major seed collection drives for all the storable native trees identified in the woodland surveys in 2021.

Seedlings of native tree, *Hypelate trifoliata* growing in root training plugs used for planting young seedlings
Photo credit: Nick Johnson



Our Partners

“Conservation isn’t just the business of a few people. It’s a matter that concerns all of us.”

- *Walt Disney*

- Verdant Isle Orchids
- National Conservation Council
- Cayman Islands Department of Environment
- National Trust of the Cayman Islands
- Dart Group
- Royal Botanic Gardens, Kew