

island resources

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FIELD TRIP RECONNAISSANCE REPORT

Great Camanoe and Little Camanoe

British Virgin Islands

October 24 to 27, 2014

Prepared for the BVI Environmental Profile Programme
by Island Resources Foundation (IRF)

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Summary

On October 24 to 27, 2014, Island Resources Foundation (IRF) biodiversity researchers, Jean-Pierre Bacle and Kevel Lindsay, undertook a field reconnaissance investigation of Great Camanoe and Little Camanoe Islands as part of the British Virgin Islands Environmental Profile Programme. This Field Trip Report summarizes activities that took place, while also highlighting important findings and issues. The reconnaissance trip was made possible thanks to donations from residents, friends and organizations from or associated with Great Camanoe. We are very grateful for their contributions, as acknowledged at the end of this report.

Friday, October 24, 2014 – Great Camanoe Island

The IRF team arrived on Great Camanoe from Trellis Bay, thanks to the assistance of our boat pilot, Trish Baily. For the duration of our stay, the team members resided at Sea Sight Cottage, located in Indigo Plantation, thanks to property owner Marillyn Suzuki.

Later that afternoon, the IRF team undertook a coastal reconnaissance of both Great and Little Camanoe. Sandra Grisham provided boat transportation for the circumnavigation trip assisted by Trish Baily.

Great Camanoe is the seventh largest island in the territory and covers about 833 acres (1.3 sq. miles). Unlike most other islands, its longest axis is oriented north-south for 4.3 km, while the average width along its east-west axis is about 1 km with the narrowest section at Cam Bay (about 200 m wide). Cam Bay, highlighted by a salt pond and barrier beach complex, is essentially an isthmus that connects the two main land areas of the island. At one point in geological history, these two formed separate islands.

Great Camanoe is rugged in topography that is dominated by coastal cliffs. It is steep with elevations easily reaching 150 m (500 ft) within 600 m (2,000 ft) from shoreline. This made it difficult and mostly inaccessible to the IRF team. **Photo 1** depicts the rugged western coastline of Great Camanoe. Given the island's relatively large size, the IRF team could only capture a fairly small snapshot of the island's flora, fauna, geology, landscape, and natural features; therefore, the narrative provided herein has to be viewed in this context.



Photo 1.

The west coastline of Great Camanoe is dominated by rocky cliffs.

The circumnavigation provided excellent views of the island, exposing its diverse landscapes, vegetation, and geology, as well as many rare and enigmatic species. It also provided evidence of goat damage and the extent of this damage.

(1) Indigo Plantation: Flora

After landing at the Indigo Plantation side of the island, the IRF team discovered a few wild trees of the very rare and critically endangered Lignum Vitae tree (*Guaiacum officinale*). The team also photographed at least one large and very old Lignum Vitae tree high on the slopes. This suggests that Great Camanoe may have the single largest population of this species remaining in all of the Virgin Islands. These were great finds and boded well for what was yet to be discovered during the remainder of our visit. **Table 1** provides a preliminary list of rare plants of special concern for both Camanoe Islands.

Some of the more unusual and interesting species observed during the circumnavigation of the island include the possible occurrence of the rare endemic bromeliad, *Pitcairnia jareckii* (**Photo 2**), a species previously only recorded for Guana Island and endemic to the BVI. Also recorded are the West Indian endemic columnar cactus, *Stenocereus fimbriatus*, especially on the western

and northern coasts, and the very rare globular cactus, *Mammillaria nivosa*, a species becoming increasingly rare in the Virgin Islands and the West Indies due to severe damage by goats, other feral livestock, and over-collecting by humans for the horticultural trade.

Other discoveries included the West Indian endemic cactus, the Turk's Cap Cactus (*Melocactus intortus*), and possibly the West Indian Thatch Palm (*Leucothrinax morrisii*) (see **Photo 3**). The team would need to visit the site to be able to confirm its presence.



Photo 2.

The BVI endemic bromeliad, *P. jareckii*, on the north coast of Great Camanoe.

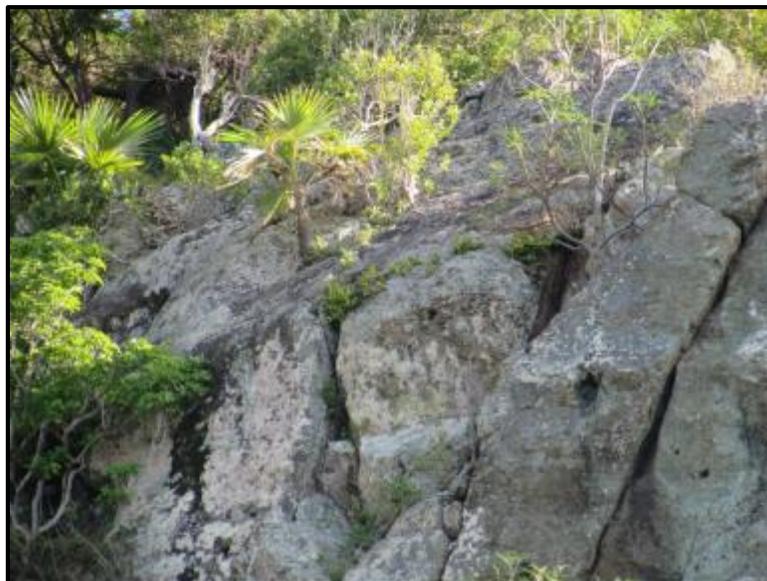


Photo 3.

A dwarf palm, possibly *L. morrisii*, on the north coast of Great Camanoe.

That evening, the IRF team explored the coastline east of the Indigo Plantation marina, where researchers observed the nocturnal blooms of several species of cacti, including the rare *S. fimbriatus*. Cacti blooms are rarely observed given their habit of opening during the night. **Photo 4** shows the bloom of the columnar cactus, *Pilosocereus royenii*, with a native roach supping on the rich pollen.



Photo 4.

The night-blooming flower of *P. royenii* with a native roach feasting on pollen.

(2) Indigo Plantation: Fauna

The team observed signs that Red-billed Tropicbirds (*Phaethon aethereus*) and possibly some species of Shearwater (*Puffinus* sp.) may be nesting on the north and northeastern coast of Great Camanoe. Further and closer observations are needed for confirmation. A preliminary list of bird species observed for both islands is provided in **Table 2**.

During the night reconnaissance, the IRF team confirmed that at least one species of frog is found on the island, this being the Red-eyed Frog (*Eleutherodactylus antillensis*). The species was identified by its calls on the slopes above the bay, although no specimens were observed.

Saturday, October 25, 2014 – Great Camanoe Island

Most of the morning was spent exploring the Throw Way Wife Bay and North Bay areas. Trish Bailey, as boat pilot and photographer, accompanied the IRF team. We spent a few hours exploring this remote and intriguing northeastern side of the island, often used by BVIslanders—including BVI families who own this part of the island—for weekend camps, excursions, and family reunions.

The afternoon was spent exploring the flora, fauna and landscapes of the Privateers Estate side of Great Camanoe. Resident Karen Robinson was our guide and provided vehicle transportation.

Her participation was extremely valuable as it allowed the IRF team to cover a great number of sites in a short time period.

That evening, the IRF team surveyed for bats and other night wildlife around Sea Sight Cottage.

(1) North Bay Area: Flora

At North Bay, the team observed many of the island's native and introduced species and habitats, including more colonies of the cactus *S. fimbriatus* and the endangered stinging cherry (*Malpighia woodburyana*), a small tree of dry coastal habitats.

(2) North Bay Area: Fauna

Many species were observed, including birds such as the Scaly-naped Pigeon (*Patagioenas squamosa*) and even a lone Peregrine Falcon (*Falco peregrinus*) perched high up on the ridge above the bay. The team also observed the Puerto Rican Racer snake (*Borikenophis portoricensis*) (Photo 5) on two occasions; many lizards, and numerous invertebrates were also observed.



Photo 5.

Puerto Rican Racer snake at North Bay.

(3) Privateer Estate: Flora

The landscapes, habitats and plants of the Privateer side of Great Camanoe Island are in many respects similar to other areas of the island. Nevertheless, there are many interesting species that may be more common here or experience conditions more favorable. It is a bit moister in some areas, so woodlands are thicker and trees taller. Along with the cacti more commonly observed at Indigo, there is also the vine-like species, the Night-blooming Cereus (*Selenicereus grandiflorus*) and the Strawberry Pear Cactus (*Hylocereus trigonus*).

A great discovery was the rare and endangered native tree, Yellow Satinwood (*Zanthoxylum flavum*), a species that has largely disappeared from much of the region due to overharvesting for its highly sought after yellow and very scented wood. The specimen observed was quite tall and fairly robust, suggesting that it could be at least 20 years old.

(4) Privateer Estate: Fauna

The team observed many species of birds, lizards and invertebrates, but most exciting was the photo of a Virgin Islands Tree Boa (*Chilabothrus grantii*) shown to us by Karen Robinson. The specimen was found in her residence, and she reports she has seen them not infrequently over the years. She also reported seeing skinks (*Spondylurus semitaeniatus*), and, subsequently, after our visit, she was able to photograph a fine specimen sunning itself on her deck (**Photo 6**).



Photo 6.

Skink at Privateer Estate (photo courtesy of Karen Robinson).

(5) Sea Sight Cottage Area: Night Survey

During the evening survey many invertebrates rarely seen because of their nocturnal habits were observed. Bat nets were set along the access road to the cottage, and the IRF team identified Jamaican Fruit Bats (*Artibeus jamaicensis*) flying but did not catch any. However, later that night researchers did catch one Antillean Cave Bat, the first ever bat record for the island (**Photo 7**).

The IRF team also observed a most unusual event, namely, the nocturnal movement of Puerto Rican Racer snakes, which has not been confirmed before this. Three snakes were caught, observed, and subsequently released. It was felt that they were attracted by the numerous house geckos or woodslaves (*Hemidactylus mabouia*) that were commonly seen in the gardens and the

cottage. One of the snakes was badly bitten by a rat, which unfortunately is a frequently noted occurrence during other terrestrial surveys undertaken by the IRF team.



Photo 7.

The Antillean Cave Bat is the first bat recorded and photographed from Great Camanoe.

Sunday October 26, 2014 – Little Camanoe Island

During the morning to early afternoon, the team visited nearby Little Camanoe (**Photo 8**). The team was accompanied on this excursion by Trish Baily, David Hildred, Sandra Grisham, Norman Clothier, and Mo Sallah. Most did some snorkeling, while David accompanied the IRF team for the terrestrial survey.



Photo 8.

The southern half of Little Camanoe showing East End Bay where the team landed. Beyond is Little Mountain (Beef Island) and Tortola.

Although the island is uninhabited, a small herd of goats persists, having devastated much of the island's vegetation, severely increasing erosion, and degrading the habitats of many animals. Great Camano residents report that rats are also on Little Camano, and their numbers are relatively high.

(1) Little Camano: Flora

Despite habitat degradation and loss of many native plant species, some rare gems continue to hold on to existence. These include the globular cactus *M. nivosa*, the Woolly Nipple, which was one of the largest specimens ever encountered by the IRF team (**Photo 9**), and the jumping cactus, *Opuntia triacantha* (identification tentative here), which is extremely rare in the Virgin Islands (**Photo 10**).



Photo 9.

Woolly Nipple Cactus (*M. nivosa*) on Little Camano.



Photo 10.

The jumping cactus, possibly *Opuntia triacantha*.

Also present are fairly large numbers and colonies of the stinging cherry, *M. woodburyana*, although few regenerations were observed and many of the trees were severely browsed by goats below 2 m. Many mature specimens have escaped the impact of goats (**Photo 11**).



Photo 11.

Stinging Cherry (*Malpighia woodburyana*) is quite common on Little Camanoe.

Another surprise was the delicate and small succulent (*Portulaca* sp.), a member of the genus Portulacaceae, which was observed growing in shallow dusty soils in the center of the island; it is so small that it is easily overlooked as just a discarded piece of twig.

(2) Little Camanoe: Fauna

Much of Little Camanoe's native fauna includes animals found on nearby Great Camanoe and Tortola, including dense populations of the Eyespot Dwarf Gecko (*Sphaerodactylus macrolepis*), Anolis lizards, invertebrates such as centipedes (**Photo 12**), roaches, and many other species. Many species of seabirds frequent the island, especially along the rocky ledges such as a colony of Brown Bobbies at the southern tip (**Photo 13**).

The team also found the remains of what appeared to be a large Hawksbill Turtle (*Eretmochelys imbricata*) on the southern headland of the island. It is believed to have been butchered, perhaps 5 to 10 years ago, since the bones and scutes were embedded in soil with roots growing through and entangled in the remains. One large scute was taken back to Tortola and presented to the National Parks Trust for confirmation.



Photo 12.

A small species of centipede (photo courtesy of Trish Baily).



Photo 13.

Brown Booby colony at the southern tip of the Little Camanoe (Pull and Be Damn Point).

In mid-afternoon, back on Great Camanoe, the team explored some of the woodlands on the southwestern end of the island. Many faunal species were recorded including birds, reptiles and invertebrates such as the giant native roach (**Photo 14**).



Photo 14.

Giant native roach on Great Camanoe.

At dusk, the team completed bat survey work along the Dwight Smith Memorial Trail to near Potato Bay. Researchers caught two additional bat species, both new records for the island: one Velvety Free-tailed Bat (*Molossus molossus*) and four Fishing Bats (*Noctilio leporinus*). A total of three species of bats were captured and first-time recorded for Great Camanoe.

During preparations to set up the nets to capture bats, the team also confirmed the presence of the Bridled Quail Dove (*Geotrygon mystacea*), a rare West Indian endemic bird. One bird was clearly observed walking in the undergrowth of woodlands near the residence of Claire Rowe.

The team also encountered three Puerto Rican Racer snakes at night, thereby confirming that the species is moving about during the dark. This may indicate that nocturnal hunting is widespread amongst Great Camanoe's population, something seemingly rare in this species. Why the Great Camanoe population is behaving this way is a mystery.

Monday October 27, 2014

The IRF survey team departed from Great Camanoe on this morning via boat transportation provided by Trish Baily, who had also afforded support and guidance every day of this reconnaissance survey.

During our visit to Great Camanoe's Privateer Estate, the IRF team discussed with Karen Robinson some of the environmental needs of the island. She expressed a desire to learn more about the wild plants of the island, as well as many of its fauna. This sentiment was also expressed by many members of the Indigo Plantation community, in addition to the need for identifying an effective method to deal with rodent and goat issues.

Table 1.
Some of the rare plant species and species of special concern
for Great Camanoe (GC) and Little Camanoe (LC) Islands.

Species	GC	LC
Century Plant (<i>Agave missionum</i>)	X	X
Thatch Palm (<i>Coccothrinax barbadensis</i>)	X	
Lignum Vitae (<i>Guaiacum officinale</i>)	X	
Night Blooming Cactus (<i>Hylocereus trigonus</i>)	X	
Turk's Cap (<i>Melocactus c.f. intortus</i>)	X	X
Woolly-Nipple Cactus (<i>Mammillaria nivosa</i>)	X	X
Prickly Pear Cactus (<i>Opuntia dillenii</i>)	X	X
Tree Prickly Pear (<i>Opuntia rubescens</i>)	X	
Pipe-organ Cactus (<i>Pilosocereus royenii</i>)	X	X
Island Silverback Fern (<i>Pityrogramma chrysophylla</i>)	X	
Stinging Bush (<i>Malpighia woodburyana</i>)	X	X
Jarecki's Pitcairnia (<i>Pitcairnia jareckii</i>)	X	
Amansa guapo (<i>Savia sessiliflora</i>)	X	
Spanish Stenocereus (<i>Stenocereus fimbriatus</i>)	X	

Table 2.
Bird list for Great Camanoe (GC) and Little Camanoe (LC) Islands.

Species	GC	LC
Red-billed Tropicbird (<i>Phaethon aethereus</i>)	?	
Brown Booby (<i>Sula leucogaster</i>)	X	X
Brown Pelican (<i>Pelecanus occidentalis</i>)	X	X
Magnificent Frigatebird (<i>Fregata magnificens</i>)	X	X
Great Egret (<i>Ardea alba</i>)	X	X
Great Blue Heron (<i>Ardea herodias</i>)	X	X
Little Blue Heron (<i>Egretta caerulea</i>)	X	
Green Heron (<i>Butorides virescens</i>)	X	
Yellow-crowned Night Heron (<i>Nyctanassa violacea</i>)	X	
Solitary Sandpiper (<i>Tringa solitaria</i>)	X	
Osprey (<i>Pandion haliaetus</i>)	X	
Red-tailed Hawk (<i>Buteo jamaicensis</i>)	X	
Merlin (<i>Falco columbarius</i>)	X	
Peregrine Falcon (<i>Falco peregrinus</i>)	X	
American Kestrel (<i>Falco sparverius</i>)	X	X
American Oystercatcher (<i>Haematopus palliatus</i>)	X	
Laughing Gull (<i>Larus atricilla</i>)	X	X
Sandwich Tern (<i>Sterna sandvicensis</i>)	?	
Roseate Tern (<i>Sterna dougallii</i>)	?	
Common Moorhen (<i>Gallinula chloropus</i>)	X	

Species	GC	LC
Scaly-naped Pigeon (<i>Columba squamosa</i>)	x	x
Common Ground-Dove (<i>Columbina passerina</i>)	x	x
Bridled Quail Dove (<i>Geotrygon mystacea</i>)		x
White-winged Dove (<i>Zenaida asiatica</i>)	?	
Zenaida Dove (<i>Zenaida aurita</i>)	x	x
Mangrove Cuckoo (<i>Coccyzus minor</i>)	x	
Smooth-billed Ani (<i>Crotophaga ani</i>)	x	x
Green-throated Carib (<i>Eulampis holosericeus</i>)	x	
Antillean Crested (<i>Orthorhyncus cristatus</i>)	x	
Belted Kingfisher (<i>Ceryle alcyon</i>)	x	x
Caribbean Elaenia (<i>Elaenia martinica</i>)	x	
Gray Kingbird (<i>Tyrannus dominicensis</i>)	x	x
Barn Swallow (<i>Hirundo rustica</i>)		x
Pearly-eyed Thrasher (<i>Margarops fuscatus</i>)	x	x
Yellow Warbler (<i>Setophaga petechia</i>)	x	x
Bananaquit (<i>Coereba flaveola</i>)	x	x
Indigo Bunting (<i>Passerina cyanea</i>)	x	
Parula Warbler (<i>Setophaga americana</i>)	x	
Prairie Warble (<i>Setophaga discolor</i>)	x	
Black-faced Grassquit (<i>Tiaris bicolor</i>)	x	

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- Karen Robinson
- Sandra Grisham
- Marillyn Suzuki

A special thanks to Edward Childs of Smiths Gore Ltd. for providing background documentation.

The IRF team thoroughly enjoyed the dual-island visit, meeting with residents, and learning more about the biodiversity of the Camanoe Islands, as exemplified by **Photo 15**. Indeed the Camanoes were a delight to explore, and yet much remains to be discovered.



Photo 15.

Pair of American Kestrels, Great Camanoe Island (photo courtesy of Trish Baily).

The biodiversity of the Camanoe Islands as preliminarily discussed in this reconnaissance report will be included in a forthcoming publication by Island Resources Foundation to include 17 of the sister islands surrounding Tortola*. *The Natural History of Tortola's Sister Islands* will be released by IRF in April 2015 and will serve as a companion document to the *Tortola Environmental Profile*, to be released at the same time.

* Little Thatch, Great Thatch, Little Tobago, Great Tobago, Ginger Island, Carval Rock, Cooper Island, Salt Island, Dead Chest, Peter Island, Pelican Island, Norman Island, Guana Island, Little Camanoe Island, Great Camanoe Island, Scrub Island, and Marina Cay.