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Status Report for the British Virgin Islands' Plant Species Red List

Benedict John Pollard and Colin Clubbe

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Status Report for the British Virgin Islands' Plant Species Red List

Benedict John Pollard¹ & Colin Clubbe¹

Key words:

British Virgin Islands; Conservation; Darwin Initiative; Endemism; IUCN; Monitoring; Puerto-Rican bank; Red Listing; Taxonomy.

Summary:

A report on the status of current knowledge of the threatened plant species of the British Virgin Islands is presented. Comments are made on the 1998-2002 Darwin Initiative Project; the 2002 Red Listing workshop in BVI; the 9 Red List taxa; interpretation of IUCN Red List guidelines; identification of 33 Red List candidates with preliminary assignation of categories of threat, with notes on the future direction towards a comprehensive BVI plant Red List. The appendices include (for the 9 taxa), the the IUCN Red List categories and criteria (Appendix 1), the official IUCN Red List assessments along with extra published information from the literature (Appendix 2).

Darwin Initiative:

The Darwin Initiative Project: “Integrating National Parks, Education and Community Development (British Virgin Islands (BVI))” ran from 1998 to 2002 and was a collaborative project between the British Virgin Islands National Parks Trust (BVINPT), Fauna & Flora International and the Royal Botanic Gardens, Kew. This project was conceived to directly support the planned BVI Biodiversity Action Plan and help meet the BVI’s implementation of the CBD.

One key area identified for the Darwin Project refers to Article 7 of the CBD: ‘identification of components of biodiversity important for conservation and sustainable use’. The first stage in identifying said components is to ascertain which organisms are of limited known distribution. By December 4th 2002, 9 vascular plant species had been identified as BVI endemics or near-endemics of limited distribution, and labelled ‘Red List Candidates’ (Table 1). This term is used to indicate a potential level of threat of extinction in global terms which may lead to their inclusion in a future IUCN Global Plant Red List. The level of threat to each species can then be assessed using the IUCN Red List Categories and criteria (2001).

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Family	Genus	Species
Apocynaceae: asclepiadoideae	<i>Metastelma</i>	<i>anegadense</i>
Boraginaceae	<i>Cordia</i>	<i>rupicola</i>
Cactaceae	<i>Leptocereus</i>	<i>quadricostatus</i>
Leguminosae: mimosoideae	<i>Acacia</i>	<i>anegadensis</i>
Malpighiaceae	<i>Malpighia</i>	<i>woodburyana</i>
Myrtaceae	<i>Calyptranthes</i>	<i>kiaerskovii</i>
Myrtaceae	<i>Calyptranthes</i>	<i>thomasiana</i>
Rubiaceae	<i>Machaonia</i>	<i>woodburyana</i>
Rutaceae	<i>Zanthoxylum</i>	<i>thomasianum</i>

Table 1: Plant taxa identified as Red List candidates prior to 2002 workshop.

Red Listing Workshop, Tortola.

A ‘Red-Listing’ workshop was held on December 4th 2002 at the J.R.O’Neal Botanic Garden, Tortola, BVI, as part of the ongoing collaboration between BVINPT and RBG, Kew (Table 2). The aim of this workshop was to assess the level of threat of extinction for the 9 known Red List taxa identified during the Darwin Project, following IUCN (2001). A category of threat could then be assigned to each taxon.

Name	Institution
Dr. Joseph Smith-Abbott	BVINPT
Nancy K. Woodfield	BVINPT
Raymond Walker	BVINPT
Dr. Colin Clubbe	RBG, Kew
Benedict Pollard	RBG, Kew

Table 2: Red Listing workshop participants.



Plate 1: Red Listing workshop participants (from left to right: Ben Pollard, Raymond Walker, Nancy Woodfield, Dr. Joseph Smith-Abbott, Dr. Colin Clubbe).

A large part of the day was taken up with lengthy discussions to decide how best to interpret the IUCN criteria, and establish Red Listing principles, particularly with respect to the biogeographic reality of working on small islands. Details of the consensus are presented in **Methodology**.

Acacia anegadensis, *Calpytranthes kiaerskovii*, *Cordia rupicola* and *Zanthoxylum thomsonianum* were assessed during the workshop. The remaining taxa have since been assessed at Kew by Clubbe (4 taxa) and Pollard (1 taxon), and categories have been assigned to all (Table 3). The full assessments are attached in Appendix 1.

Species	Category
<i>Acacia anegadensis</i>	Critically Endangered
<i>Calpytranthes kiaerskovii</i>	Critically Endangered
<i>Cordia rupicola</i>	Critically Endangered
<i>Leptocereus quadricostatus</i>	Critically Endangered
<i>Machaonia woodburyana</i>	Critically Endangered
<i>Metastelma anegadense</i>	Critically Endangered
<i>Calpytranthes thomsoniana</i>	Endangered
<i>Malpighia woodburyana</i>	Endangered
<i>Zanthoxylum thomsonianum</i> *	Endangered

Table 3: Categories assigned to Red List candidates.

Details of the full extent of our current knowledge of their taxonomy, distribution, typical habitat types and notes on conservation actions and recommendations follow in **The Red List** (p. 7).

N.B. * *Zanthoxylum thomsonianum* is no longer recognised at specific rank and has been reduced to a subspecies, based on the research of Carlos Reynel of the Facultad de Ciencias Forestales, Universidad Nacional Agraria La Molina, Lima, Peru, in preparation for his monograph of neotropical taxa in the genus (Reynel & Pollard, *in prep.*, due 2004). It should now be recognised as *Z. punctatum* Vahl subsp. *thomsonianum* Reynel. This taxonomic change does not affect the IUCN rating.

Methodology:

Red Listing – the criteria:

(see Appendix II).

The criteria most commonly used for the assessments are based on Table 4 (below).

Criterion description	Criteria
Extent of Occurrence	A & B
Area of Occupancy	A, B & D
Severely fragmented	B
Location	B & D
Population size	C

Table 4: Description of criteria used to assign IUCN categories.

Red Listing – interpreting terms:

(see Appendix II).

Location:

In our experience the best interpretation of the IUCN term: “location” for the Puerto Rican bank region (Puerto Rico, US Virgin Islands & British Virgin Islands) equates to a single island, excepting the Puerto Rican mainland, which can be subdivided further. All of the other islands in our area are geographically and sometimes also ecologically distinct areas, in which a single threatening event, such as a hurricane or volcanic eruption, can rapidly affect all individuals of the taxon present.

Severely fragmented:

The geographic range of most of these taxa is estimated to be severely fragmented as, according to IUCN (2001), the term “refers to the situation in which increased extinction risk to the taxon results from the fact that most of its individuals are found in small and relatively isolated subpopulations”. Of the 9 taxa, all but two are known only from small islands, and those from the Puerto Rican mainland are known to be highly restricted in distribution or even believed to be locally extirpated, e.g. *Cordia rupicola*.

Red List: an example of treatment of a Red List taxon

- ¹ Leguminosae: mimosoideae.
- ² *Acacia anegadensis*.
- ³ Britton.
- ⁴ Mem. New York Bot. Gard. 6: 572 (1916).
- ⁵ Holotype: *Britton & Fishlock 990*.
- ⁶ Synonym: *Fishlockia anegadensis* (Britton) Britton & Rose, N. Am. Fl. 23: 91 (1928). Type as above.
- ⁷ DISTRIBUTION: LEE-BV endemic.
- ⁸ LEE-BV: Anegada.
- ⁹ HABITAT: common on limestone and scarce on sand dunes.
- ¹⁰ IUCN: CR B1ab(iii,v)+2ab(iii,v).
- ¹¹ *EX-SITU* CONSERVATION: 22 seedlings in cultivation at the J.R. O'Neal Botanic Garden Nursery, and one introduced mature individual in the display collection of the Garden, Tortola, BVI.

Treatment

-
- ¹ Family name: with subfamily (if necessary).
- ² Generic name with specific epithet.
- ³ Author of name.
- ⁴ Place of publication (= the protologue).
- ⁵ The type = specimen on which name was based (here known as the holotype) with the name of collectors and their collection number.
- ⁶ Further nomenclatural information may include synonyms = other names under which this species has been known.
- ⁷ Worldwide distribution.
- ⁸ LEE-BV distribution.
- ⁹ Typical habitat.
- ¹⁰ IUCN Red List Assessment.
- ¹¹ Any current *ex-situ* conservation measures.

Explanation

For the Red List taxa, we follow Brummitt (2001) as a standard world geographic scheme for recording plant distributions, the abbreviations follow the Taxonomic Databases Working Group (TDWG) (see Appendix 3). Those used here are:

BAH-OO	Bahamas;
LEE-AB	Antigua-Barbuda;
LEE-AG	Anguilla;
LEE-BV	British Virgin Islands;
LEE-GU	Guadeloupe (incl. La Désirade, Marie-Galante);
LEE-MO	Montserrat;
LEE-NL	Netherlands Leeward Islands (Saba, St. Eustatius);
LEE-SK	St. Kitts-Nevis;
LEE-SM	St. Martin-St. Barthélémy;
LEE-VI	US Virgin Islands;
PUE-OO	Puerto Rico;
TCI-OO	Turks & Caicos;
WIN-LU	St. Lucia;
WIN-MA	Martinique;
WIN-SV	St. Vincent;
WIN-GR	Grenada (and the Grenadines).

Nomenclatural terms:

Within the Red List details resides a series of well-defined nomenclatural terms that deserve some explanation here. These are usually latinised statements relating to the process of naming a species. Of course plant species can have been known under one or more names during the unravelling of our botanical knowledge over time. There are also many abbreviations of the place of publication, as well as standard forms for authors of plant names, which follow Brummitt & Powell (1992). e.g. L., is the standard form for Linnaeus, the Swedish naturalist whose seminal work, *Species Plantarum* (1753) was the founding point of modern binomial nomenclature.

<i>emend.</i>	corrected.
<i>et auctt.</i>	and other authors.
<i>ex</i>	from, out of.
<i>holotype</i>	the single specimen stated to be that which a name is based on.
<i>in prep.</i>	work in preparation.
<i>ined.</i>	(name) not yet published.
<i>isotype</i>	a duplicate collected under the same number as the holotype
<i>nec</i>	neither
<i>nomen nudum</i> , or <i>nom. nud.</i>	a name that has been published without a validating description, hence a 'naked name'.
<i>non</i> Kiaersk.	not as circumscribed by Kiaerskou.
<i>pro parte</i>	in part, or partly
<i>sensu</i> Britton	in the sense of Britton.
<i>s.n.</i>	<i>sino numero</i> = collection with no number specified.
<i>sphalmate sub.</i>	by mistake under.
<i>subsp.</i> / <i>var.</i>	subspecies / variety.
<i>syntype</i>	one of several specimens mentioned at the time of publication of a name, none of which is designated as being the holotype.

The Red List:

Images of each taxon follow after these accounts.

Apocynaceae: asclepiadoideae

Metastelma anegadense Britton, Sci. Surv. Porto Rico & Virgin Islands **6**: 97 (1925).

Synonyms: *Cynanchum anegadense* (Britton) Alain., Bull. Torrey Bot. Club **90**: 191 (1963). *Astephanus* sensu Britton (1916: 568 & 577). Holotype: *Britton & Fishlock 962*.

DISTRIBUTION: LEE-BV.

LEE-BV: Anegada endemic.

HABITAT: sandy dunes.

IUCN: CR B1ab(ii,iii,v) + 2ab(ii,iii,v).

Boraginaceae

Cordia rupicola Urb., Symb. Ant. **1**: 392 (1899). Syntypes: *Sintenis 3731, 4879*.

Synonym: *Varronia rupicola* (Urban) Britton, Sci. Surv. Porto Rico & Virgin Islands **6**: 128 (1925). Type as above.

DISTRIBUTION: PUE-OO (thought to have been extirpated), LEE-BV.

LEE-BV: Anegada.

HABITAT: hillside thickets at low elevations; dry forest; limestone scrubland and vegetation at edge of dunes.

IUCN: CR B1ab(ii,iii,v) + 2ab(ii,iii,v).

EX-SITU CONSERVATION: cuttings made in July 2003 and held at J.R.O'Neal Botanic Garden.

Cactaceae

Leptocereus quadricostatus (Bello) Britton & Rose, Contr. U. S. Nat. Herb. **16**: 242 (1913).

Synonym: *Cereus quadricostatus* Bello, Anal. Soc. Esp. Hist. Nat. **10**: 276 (1881).

Holotype: *Britton et al 13060*.

DISTRIBUTION: PUE-OO, LEE-BV.

LEE-BV: Anegada.

HABITAT: limestone scrubland; dry forest.

IUCN: CR D.

Leguminosae: mimosoideae

Acacia anegadensis Britton, Mem. New York Bot. Gard. **6**: 572 (1916).

Holotype: *Britton & Fishlock 990*. Synonym: *Fishlockia anegadensis* (Britton) Britton & Rose, N. Am. Fl. **23**: 91 (1928). Type as above.

DISTRIBUTION: LEE-BV endemic.

LEE-BV: Anegada endemic.

HABITAT: common on limestone and scarce on sand dunes.

IUCN: CR B1ab(iii,v) + 2 ab(iii,v).

EX-SITU CONSERVATION: 22 seedlings in cultivation at the J.R. O'Neal Botanic Garden Nursery, and one introduced individual in the display collection of the same Botanic Garden, Tortola, LEE-BV.

Malpighiaceae

Malpighia woodburyana Vivaldi, in Acev.-Rodr., Brittonia **45**: 130 (1993).

Holotype: *Vivaldi 514*.

Synonyms: *Malpighia woodburyana* Vivaldi, in Woodbury & Weaver, Veget. St. John & Hassel Is. **39** (1987) *nom. nud.* *Malpighia woodburyana* Vivaldi, in Liogier, Descript. Fl. Puerto Rico & Adj. Is. Vol. **2**: 326 (1988) *nom. nud.*

DISTRIBUTION: PUE-OO (incl. Magueyes, Culebra & Vieques), LEE-VI, LEE-BV. LEE-VI: Big & Little Hans Lollik, Greater St. James, St. Croix, Buck Island, St. John, St. Thomas, Water Island.

LEE-BV: Anegada.

HABITAT: coastal scrub and dry deciduous forests.

IUCN: EN B1ab(ii)(iii)(v) + 2ab(ii)(iii)(v); D.

Myrtaceae

Calyptranthes kiaerskovii Krug & Urb., Symb. Ant. **1**: 43 (1898). Holotype: *Eggers 3217*.

Synonym: *Calyptranthes obovata* Krug & Urb., non Kiaersk.

DISTRIBUTION: LEE-BV.

LEE-BV: Tortola, Virgin Gorda.

HABITAT: dry forest.

IUCN: CR D.

Calyptranthes thomasiana O.Berg, Linnaea **27**: 26 (1855). Holotype: *Eggers s.n.*

Synonym: *Chytraculia thomasiana* Kuntze, Revis. Gen. Pl. **1**: 238 (1891).

DISTRIBUTION: PUE-OO (Vieques), LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas.

LEE-BV: Virgin Gorda.

HABITAT: moist forest.

IUCN: EN B1ab(iii,iv,v) + 2ab(iii,iv,v); C2a(i).

EX-SITU CONSERVATION: three seedlings are being grown at the J.R.O'Neal Botanic Garden on Tortola.

Rubiaceae

Machaonia woodburyana Acev.-Rodr., Brittonia **45**: 136 (1993). Holotype: *Açavedo-Rodriguez 2838*.

DISTRIBUTION: LEE-VI, LEE-BV.

LEE-VI: St. John.

LEE-BV: Virgin Gorda.

HABITAT: dry forest and coastal thickets.

IUCN: CR C2a(i).

Rutaceae

Zanthoxylum punctatum Vahl subsp. ***thomasianum*** Reynel *ined.*, in Reynel & Pollard, *in prep.*

Synonyms: *Fagara thomasiana* Krug & Urb. in Engler, Bot. Jahrb. Syst. **21**: 583 (1896). Holotype: *Eggers 293*. *Zanthoxylum thomasianum* (Krug & Urb.) Krug & Urb. *ex P. Wilson*, N. Am. Fl. **25**: 182 (1911). Type as above.

DISTRIBUTION: PUE-OO (Salinas), LEE-VI, LEE-BV.

USVI: St. John, St. Thomas.

BVI: Virgin Gorda.

HABITAT: dry forests and scrub.

IUCN: EN B1ab(i,ii,iii,iv,v) + 2ab(i,ii,iii,iv,v); C2a(i).



Plate 2: *Malpighia woodburyana*



Plate 3: *Metastelma anegadense*



Plate 4: *Cordia rupicola*



Plate 5: *Calyptranthes thomasiana*



Plate 6: *Calyptranthes kiaerskovii*



Plate 7: *Leptocereus quadricostatus*



Plate 8: *Machaonia woodburyana*

Red List Candidates:

(please refer to Appendix 1 for details on EOO and AOO).

In September 2003, exhaustive literature searches at Kew (e.g. in Azevedo-Rodriguez, Oldfield etc.) and thorough investigation and careful interpretation of the IUCN guidelines, resulted in the identification of 35 additional Candidate Red List taxa, bringing the total to 44 putative threatened taxa. Of these candidates, 3 are assessed here as Critically Endangered (CR), 10 as Endangered (EN) and 22 as Vulnerable (VU). Many of these are Puerto Rican bank (PRB) endemics whose Extent of Occurrence (EOO) cannot be more than 20,000 km² as the maximum EOO for this biogeographic unit (calculated using GIS) is c. 9,570 km². The maximum EOO for Virgin Island endemics is 810 km². A summary of *selected* PRB island areas follows (Table 5).

Island	Territory	Area (km ²)
Anegada	BVI	41.44
Beef Island	BVI	4.64
Cooper Island	BVI	1.97
Ginger Island	BVI	1.31
Great Camanoe	BVI	4.54
Great Thatch	BVI	1.71
Great Tobago	BVI	1.19
Guana Island	BVI	3.93
Jost Van Dyke	BVI	9.44
Little Jost Van Dyke	BVI	1.04
Norman Island	BVI	3.57
Peter Island	BVI	5.80
Salt Island	BVI	1.26
Scrub Island	BVI	1.42
Tortola	BVI	61.06
Virgin Gorda	BVI	25.79
Culebra	PR	29.32

Puerto Rico	PR	8760.07
Vieques	PR	139.61
Hans Lollick Island	USVI	2.35
St Croix	USVI	221.63
St. John	USVI	55.90
St. Thomas	USVI	76.78

Table 5: A summary of PRB island areas.

This allows us to preliminarily state that we can assign the Vulnerable category (VU) to all of the Candidates based on:

- *Criterion B* (extent of occurrence);
- *subcriterion 1* (EOO < 20,000 km²);
- *sub-subcriterion a* (severely fragmented or known to exist at no more than 10 locations);
- *sub-subcriterion b* (continuing decline, observed, inferred or projected);
- *in sub-sub-subcriterion (iii)* (area, extent and/or quality of habitat).

giving an initial assessment of VU B1ab(iii). The IUCN assessments that follow are preliminary and detail only the category. If the taxon does not occur on PUE-OO, such as *Croton fishlockii* Britton (Euphorbiaceae), it could qualify as Endangered (EN), with an EOO < 5,000 km².

Investigation of the literature and herbarium collections at Kew appear to confirm that these taxa are not likely to be widespread as they are poorly represented by specimens and are usually described from only one or two locations. Criterion B1b(iii): a decline in area, extent and/or quality of habitat is observed, inferred and projected for all areas of the Puerto Rican bank outside of managed protected areas.

Our current knowledge of these taxa is presented below. It is recommended that further fieldwork is conducted to enhance our knowledge of the distributions and population sizes of these taxa, to enable us to develop conservation action plans and propose management recommendations. Further studies are likely to narrow the focus of our Red List assessments allowing a more fully informed judgement as to which level of threat to apply to each taxon.

The short descriptors and much of the distributional information are derived from, or follow Azevedo-Rodriguez (1996) and Howard (1988 & 1989). Many of the candidate taxa are well illustrated in Azevedo-Rodriguez (1996), which also provides a thorough glossary to the botanical terms used here in the descriptors.

Family names follow the older names, so Areaceae are here known as Palmae, and Fabaceae are Leguminosae.

The types are not given here for all the names in this preliminary account, mainly due to time constraints.

A summary of candidate taxa is presented below in Table 6.

Family	Genus	Species	Notes
Agavaceae	<i>Agave</i>	<i>missionum</i>	Well known sp.
Araceae	<i>Anthurium</i>	<i>x selloum</i>	Sage Mt.
Bromeliaceae	<i>Pitcairnia</i>	<i>jereckiae</i>	not published yet
Cactaceae	<i>Hylocereus</i>	<i>trigonus</i>	✓
Cactaceae	<i>Mammillaria</i>	<i>nivosa</i>	poor specm. at K
Cactaceae	<i>Opuntia</i>	<i>dillenii</i>	additional species
Cactaceae	<i>Opuntia</i>	<i>repens</i>	✓
Cactaceae	<i>Opuntia</i>	<i>rubescens</i>	✓
Celastraceae	<i>Maytenus</i>	<i>cymosa</i>	✓
Convolvulaceae	<i>Ipomoea</i>	<i>eggersii</i>	No material at K
Convolvulaceae	<i>Ipomoea</i>	<i>repanda</i>	✓
Euphorbiaceae	<i>Argythamnia</i>	<i>stahlii</i>	✓
Euphorbiaceae	<i>Croton</i>	<i>fishlockii</i>	No material at K
Euphorbiaceae	<i>Croton</i>	<i>flavens</i> var. <i>rigidus</i>	No image avail.
Leguminosae: caesalpinioideae	<i>Senna</i>	<i>nitida</i>	✓
Leguminosae: caesalpinioideae	<i>Senna</i>	<i>polyphylla</i> var. <i>neglecta</i>	✓
Leguminosae: papilionoideae	<i>Galactia</i>	<i>dubia</i>	✓
Leguminosae: papilionoideae	<i>Galactia</i>	<i>eggersii</i>	✓
Leguminosae: papilionoideae	<i>Pictetia</i>	<i>aculeata</i>	✓
Leguminosae: papilionoideae	<i>Poitea</i>	<i>florida</i>	✓
Malpighiaceae	<i>Stigmaphyllon</i>	<i>floribundum</i>	✓
Malvaceae	<i>Bastardiopsis</i>	<i>eggersii</i>	✓
Myrtaceae	<i>Eugenia</i>	<i>sessiliflora</i>	✓
Myrtaceae	<i>Psidium</i>	<i>amplexicaule</i>	✓
Nyctaginaceae	<i>Neea</i>	<i>buxifolia</i>	✓
Ochnaceae	<i>Ouratea</i>	<i>littoralis</i>	✓
Oleaceae	<i>Forestiera</i>	<i>eggersiana</i>	✓
Palmae	<i>Coccothrinax</i>	<i>alta</i>	No material at K
Palmae	<i>Sabal</i>	<i>causiarum</i>	Well known sp.
Rhamnaceae	<i>Reynosia</i>	<i>guama</i>	✓
Rubiaceae	<i>Rondeletia</i>	<i>pilosa</i>	✓
Rubiaceae	<i>Scolosanthos</i>	<i>versicolor</i>	✓
Sapindaceae	<i>Paullinia</i>	<i>plumieri</i>	No material at K
Solanaceae	<i>Solanum</i>	<i>conocarpum</i>	No material at K
Urticaceae	<i>Pilea</i>	<i>sancti-crucis</i>	✓
Zygophyllaceae	<i>Guaiacum</i>	<i>officinale</i>	✓

Table 6: A summary of Red List candidate taxa.

The Candidate Red List:

AGAVACEAE

Agave missionum Trel., Mem. Natl. Acad. Sci. **11**: 37 (1913).

LOCAL NAME: century plant.

Synonym: *A. portoricensis* Trel., Mem. Natl. Acad. Sci. **11**: 38 (1913).

DESCRIPTOR: stemless succulent herb; leaves lanceolate, 90 – 275 × 13 – 23 cm; inflorescence an elongate panicle to 5 – 7 m; flowers yellow or greenish-yellow.

DISTRIBUTION: PUE-OO (incl. Culebra & Vieques), LEE-VI, LEE-BV.

LEE-VI: St. Thomas, St. John.

LEE-BV: Tortola, Virgin Gorda, Anegada.

HABITAT: sandy dunes.

IUCN: VU.

ARACEAE

Anthurium × *selloum* K. Koch, Index Sem. Hort. Berol. App. **8** (1855).

DESCRIPTOR: glabrous terrestrial or occasionally epiphytic herb, 0.5 – 1 m tall; leaves 30 – 70 × 13 – 26 cm; peduncle 60 – 103 cm long; spathe to 15 cm long; spadix 15 – 40 cm long, dark brown, cylindrical, sterile, not producing berries.

DISTRIBUTION: LEE-VI, LEE-BV.

LEE-VI: St. John.

LEE-BV: Tortola.

HABITAT: understory of shaded moist forests.

IUCN: EN.

BROMELIACEAE

Pitcairnia jereckiae Proctor *ined.*

DESCRIPTOR: an undescribed species.

DISTRIBUTION: LEE-BV.

LEE-BV: Guana Island.

HABITAT: rocky ground.

IUCN: CR.

CACTACEAE

Hylocereus trigonus (Haw.) Saff. Annual Rep. Board Regents Smithsonian Inst. 553 (1909).

Synonyms: *Cereus trigonus* Haw., Syn. Pl. Succ. 181 (1812). Type: St. Croix, Plum., Pl. Amer. t. 200, fig. 2 (1758). *Cereus napoleonis* Graham in Hook., Bot. Mag. **63**: pl. 3458 (1836). (Type: Loc cit. pl. 3458). *Hylocereus napoleonis* (Graham) Britton & Rose, Contr. U. S. Natl. Herb. **12**: 429 (1909). Type as above. *Hylocereus antiguensis* Britton & Rose, Cact. **2**: 193 (1920). Type: Antigua, Rose, Fitch & Russell 3297 (NY).

DESCRIPTOR: stem elongate, 2–4 cm across, thickly 3-angled, margins not horny; spines 2, 4, or 8, 4–7 mm, turning dark brown; flowers 14–25 cm; inner perianth segments white; fruits oblong-ovoid, 7–10 × 3–5 cm, red.

DISTRIBUTION: PUE-OO (Mona), LEE-VI, LEE-BV, Lesser Antilles.

LEE-VI: St. John, St. Thomas.

LEE-BV: Tortola, Virgin Gorda.

LESSER ANTILLES: LEE-SM, LEE-AB, LEE-NL (Saba, St. Eustatius), LEE-SK (Nevis), LEE-MO, LEE-GU (Guadeloupe, Marie-Galante), WIN-MA, WIN-SV, WIN-GR.

HABITAT: dry areas.

IUCN: VU.

Mammillaria nivosa Link ex Pfeiff., Besch. Synon. Cact. **12** (1837). Type:

Tortola, cultivated plant, no specimens known, neotype undesignated.

LOCAL NAME: nipple cactus.

Synonyms: *Mammillaria tortolensis* Pfeiff., Enum. Diagn. Cact. **11** (1837), *nom.*

illegit. *Coryphantha nivosa* (Link ex Pfeiff.) Britton & Rose, Ann. Missouri Bot. Gard. **2**: 45 (1915). *Neomammillaria nivosa* (Link ex Pfeiff.) Britton & Rose, Cact. **4**: 71 (1923).

DESCRIPTOR: plant globose, becoming cylindrical with age, to 20 × 15 cm, forming colonies, with white exudate; tubercles to 10 mm, with copious white 'wool' in axils; apical spines 7 or 8, with solitary central spine, to 1.5 cm; flowers 1.5 cm, bright cream or light yellow; fruits 12 mm, pink-red.

DISTRIBUTION: PUE-OO (Mona & Desecheo), LEE-VI, LEE-BV, TCI-OO, BAH-OO, LEE-AB, LEE-SM.

LEE-VI: St. John.

LEE-BV: Tortola.

HABITAT: dry areas.

IUCN: VU.

Opuntia repens Bello, Anales Soc. Esp. Hist. Nat. **10**: 277 (1881).

Synonym: *Opuntia curassavica* sensu Eggers, Fl. St. Croix: 58 (1879), non (L.) Mill., (1768).

DESCRIPTOR: erect or decumbent shrub to 50 cm, forming clumps a few metres wide; joints 5–15 cm; spines 6–8 per areole, 1.5–4.5 cm; flowers 4 cm across, bright yellow; receptacle spiny; fruit red 2–3 cm, pear-shaped.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. John, St. Thomas.

LEE-BV: Virgin Gorda, Tortola, Great Tobago.

HABITAT: dry coastal scrub.

IUCN: VU.

Opuntia rubescens Salm-Dyck ex DC., Prodr. **3**: 474 (1828), emend. Britton & Rose, Cact. **1**: 208 (1919).

Synonyms: *Consolea rubescens* (Salm-Dyck ex DC.) Lemaire, Rev. Hort. 174 (1862).

Opuntia spinosissima sensu Duss, et auctt., non Mill. (1768).

DESCRIPTOR: treelet to 6 m; trunk single, cylindrical, c. 20 cm across; branches flattened; joints 20–50 cm; areoles with 6–12 spines, 1–3 cm; flowers 2–3 cm, yellow, turning orange, erect; fruit green, to 6 cm, with persistent spines.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV, Lesser Antilles.

LEE-VI: St. Croix, St. Thomas, St. John.

LEE-BV: Tortola, Virgin Gorda.

LESSER ANTILLES: LEE-SM (St. Martin, St. Barthélemy), LEE-AB (Antigua, Barbuda), LEE-SK (St. Kitts), LEE-MO (Montserrat), LEE-GU (Guadeloupe, La Désirade).

HABITAT: dry coastal scrub.

IUCN: VU.

CELASTRACEAE

Maytenus cymosa Krug & Urb., in Urb., Symb. Ant. **5**: 61 (1904).

Synonyms: *Maytenus cymosa* Krug & Urb. *nom. nud.*, in Urb. Symb. Ant. **1** (1898: 43).

M. elaeodendroides Eggers, St. Croix (1876: 109) (sphalmate sub. *E. olacodendroides*) et Eggers (1879: 39) (excl. syn. Vahl), non Griseb.

DESCRIPTOR: tree to c. 3 or 4 m; leaves alternate, distichous, 3.5–5 × 2–3 cm, obovate to ovate, coriaceous; base obtuse to rotund, apex rotund; petioles 2–4 mm; inflorescences of short cymes; flowers brown, bisexual; petals 1.8–2 mm.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. Thomas.

LEE-BV: Virgin Gorda.

HABITAT: moist forest.

IUCN: EN D (already assessed and on Red List).

CONVOLVULACEAE

Ipomoea eggersii (House) D.F. Austin, Ann. Missouri Bot. Gard. **64**: 335 (1979).

Synonym: *Exogonium eggersii* House, Bull. Torrey Bot. Club **35**: 104 (1908). Type: *Eggers s. n.* (holotype NY; isotypes G, L). *Ipomoea arenaria* sensu Urb., Symb. Ant. **4**: 508 (1910) *pro parte*, non Roemer & Schultes (1819), nec (Choisy) Steudel (1841). *Ipomoea eggersiana* sensu D. Powell, J. Arnold Arbor. **60**: 252 (1979) non Peter (1891, *nom. nud.*).

DESCRIPTOR: subwoody slender trailing or twining vines to 5 m, glabrous; abundant white exudate produced when cut; leaves congested on short axillary branches; blades very variable, from simple and ovate, to 6-lobed, 6–15 × 4–13 mm, reniform or lyrate; petiole slender, 5–30 mm; calyx 5–6 mm; corolla funnel-shaped, tube light green, without, usually whitish within, 4 × 3–4 cm across; stamens and pistil white; capsule ellipsoide, 1.5 cm long, light brown; 4-valved; seeds 4, dark brown, c. 6 mm, with a long tuft of hairs apically.

DISTRIBUTION: LEE-VI, LEE-BV, Lesser Antilles.

LEE-VI: St. Croix, St. John, St. Thomas

LEE-BV: Tortola, Virgin Gorda.

LESSER ANTILLES: LEE-AG, LEE-SM (St. Martin).

HABITAT: disturbed open areas.

IUCN: VU.

Ipomoea repanda Jacq., Enum. Syst. Pl. **13** (1760).

Synonym: *Exogonium repandum* (Jacq.) Choisy, Convolv. Diss. Sec. **128** (1838).

DESCRIPTOR: twining vine to 8 m; abundant white exudate produced when cut; leaves 5–18 × 1.5–13 cm; petioles furrowed above, 1.5–6 cm; flowers in compound axillary dichasial cymes; calyx pink, cup-shaped, 8–10 mm; corolla salverform, bright pink to scarlet, 4–5.5 cm; limb with 5 reflexed elongate lobes; stamens and stigmas exerted, pink, or stigmas white; capsule light brown, 12–15 mm; seeds 4, black, 5–6 mm, with long hairs on two edges.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV, Lesser Antilles.

LEE-VI: St. John, St. Thomas

LEE-BV: Tortola.

LESSER ANTILLES: LEE-AB, LEE-MO, LEE-GU, WIN-DO, WIN-MA, WIN-SL, WIN-SV, WIN-GR.

HABITAT: moist areas.

IUCN: VU.

EUPHORBIACEAE

Argythamnia stahlia Urb., Symb. Ant. **1**: 336 (1899).

DESCRIPTOR: erect or decumbent subshrub to 30 cm; many-branched from a woody, tap-rooted base; young parts hairy; leaves alternate, 1–3.5 × 0.7–1.4 cm, ovate or elliptic, + 3–5 ascending veins; flowers small, green, 1–3 mm; fruit deeply 3-lobed.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. John.

LEE-BV: Anegada.

HABITAT: rocky ground, coastal open areas.

IUCN: VU.

Croton fishlockii Britton, Torreyia **20**: 84 (1920).

DESCRIPTOR: shrub to 1 m, densely covered with white, stellate hairs; leaves 1–1.8 × 0.7–1.7 cm; petioles 0.7–1.4 cm; inflorescences racemose, few-flowered, terminal; flowers pentamerous; ♂ flowers' calyx 1.5–2 mm, petals 1.5 mm; ♀ flowers' calyx to 7 mm, white, petals awl-shaped; fruit c. 6 mm.

DISTRIBUTION: LEE-VI, LEE-BV.

LEE-VI: St. John.

LEE-BV: Anegada, Great Camanoe, Tortola, Virgin Gorda. Introduced on Guana Island.

HABITAT: scrub.

IUCN: EN.

Croton flavens L. var. ***rigidus*** Mull. Arg. in A. DC., Prodr. **15(2)**: 613. (1866).

Synonym: *Croton rigidus* (Mull. Arg.) Britton in Britton & P. Wilson, Bot. Porto Rico **5**: 481 (1924).

DESCRIPTOR: shrub to 3 m, + orange watery exudate, fetid odour; densely covered with yellowish stellate hairs; petioles 1–5 cm, + pair apical stipitate glands; inflorescences racemose, terminal, 5–10 cm; flowers 5-merous; ♂ flowers distal, calyx and petals c. 1.5 mm, white; stamens 16–19, white; ♀ flowers proximal, calyx 2–2.5 mm; styles twice-bifid; fruit stellate-pubescent, ± globose, c. 5 mm.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. John, St. Thomas.

LEE-BV: Tortola, Virgin Gorda..

HABITAT: dry coastal scrub and disturbed areas.

IUCN: VU.

LEGUMINOSAE: CAESALPINIOIDEAE

Senna nitida (Rich.) H.S.Irwin & Barneby, in Mem. New York Bot. Gard., **35**: 159 (1982).

DESCRIPTOR: shrub or liana; young stems angular or ribbed; leaves 8–17 cm, + glands between both pairs of leaflets; exactly 2 leaflet pairs, ovate to elliptic, distal pair larger, 5–11.5 × 2.7–5.2(–5.5) cm, often reddish above; base strongly assymmetric; margins strongly revolute; inflorescences racemose, axillary or forming leafless terminal panicle, bracteate; sepals yellowish, to 4–7 mm; corolla to 12–25 mm; legume (10–)15–18 cm, dehiscent.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV, LEE-SK (St. Kitts), possibly Haiti.

LEE-VI: St. Thomas.

LEE-BV: Tortola.

HABITAT: thickets, forest margins and other disturbed areas.

IUCN: VU.

Senna polyphylla Jacq. var. ***neglecta*** H.S. Irwin & Barneby, in Mem. New York Bot. Gard., **35(2)**: 520 (1982). Type: Anegada, Rocky Plain near Settlement, 19 – 20 Feb. 1913 (fr.) *N.L. Britton & W.C. Fishlock 1034*. Holotype NY, isotypes F, K!, US.

DESCRIPTOR: tree to 4 m; much-branched; leaves compound; leaflets of primary leaves in 3–4 pairs, the distal pair 6–9 × 3–4.5 mm, glabrous on both faces; secondary fascicles of smaller leaves also present; gland between proximal leaflet pair; sepals greenish; petals yellow; fruit spreading or pendulous, (4.5–) 6–14 × 0.6–0.9(–1) cm.

DISTRIBUTION: LEE-BV (endemic).

LEE-BV: Anegada endemic.

HABITAT: stony ground.

IUCN: CR B1ab(iii,v) + B2ab(iii,v).

CONSERVATION NOTES: This taxon is known only from the type collection, and has not been seen since 1913. It was described as a tree to 4 m, and so ought to be conspicuous. Further surveys should be conducted around the Settlement.

LEGUMINOSAE: PAPILIONOIDEAE

Galactia dubia DC., Prodr. **2**: 238 (1825). Type: Guadeloupe, *Bertero*.

Synonyms: *Galactia dubia* DC. var. *typica* Stehlé & Quentin, Fl. Guad. **2**: 110 (1948). *Galactia dubia* DC. var. *angustata* Urb., Symb. Ant. **2**: 318 (1900). Syntypes: Antigua, *Wullschlägel 130* pro parte; Guadeloupe, *Duchassaing s.n.*, *Duss 3023b*.

DESCRIPTOR: herbaceous to woody twining vine to 2 m, covered with appressed whitish hairs; stems slender, wiry; leaves trifoliolate; leaflets 1–4 × 0.8–2 cm, stipules to 2–3 mm; stipels absent; inflorescences 1–4 cm; corolla light pink to lavender; standard greenish at base within, 12–15 mm, reflexed; legume 3–6 × c. 0.5 cm, oblong-linear, flattened, ± curved.

DISTRIBUTION: PUE-OO (incl. Mona, Vieques, Culebra, Icacos), LEE-VI, LEE-BV, Lesser Antilles.

LEE-VI: St. John, St. Croix, St. Thomas.

LEE-BV: Anegada, Tortola.

LESSER ANTILLES: LEE-AG, LEE-SM (St. Martin, St. Barthélémy), LEE-AB (Antigua, Barbuda), LEE-NL (St. Eustatius), LEE-SK (St. Kitts), LEE-MO (Montserrat), LEE-GU (Guadeloupe, La Désirade, Marie Galante).

HABITAT: open disturbed areas, coastal scrub, or forests.

IUCN: VU.

Galactia eggersii Urb., Symb. Ant. **2**: 311 (1900).

Synonyms: *G. pendula* Knox Cat. (1857: 83), non Pers. *G. tenuiflora* Eggers (1879: 44) non Wight et Arn.

DESCRIPTOR: twining vine to 2 m, covered with appressed whitish hairs when young; stems slender, wiry; leaves trifoliolate; leaflets 1–3 × 0.7–2.1 cm; stipules to 2–3 mm; inflorescences 1–2.5 cm; corolla bright red; standard elliptic, reflexed, 14–18 mm; legume 5–6 × 0.5–0.6 cm, oblong-linear.

DISTRIBUTION: LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas.

LEE-BV: Guana Island, Tortola.

HABITAT: dry woodlands and open, disturbed areas.

IUCN: EN.

Pictetia aculeata (Vahl) Urb., Symb. Ant. **2**: 294 (1900).

LOCAL NAME: fustic.

Synonyms: *Robinia aculeata* Vahl in H. West, Bidr. Beskr. Ste. Croix: 300 (1793).

Aeschynomene aristata Jacq., Pl. Hort. Schoenbr. **2**: 59, pl. 237 (1797). *Pictetia aristata* (Jacq.) DC., Ann. Sci. Nat. (Paris) **4**: 94 (1825). *Robinia squamata* Vahl, Symb. Bot. **3**: 88, pl. 69 (1794). *Pictetia squamata* (Vahl) DC., Ann. Sci. Nat. (Paris) **4**: 94 (1825).

DESCRIPTOR: shrub or small tree to 12 m; branches ascending, peeling off in large flakes; leaves imparipinnate; leaflets 9–25, 1–2 cm long, apex notched, ending in a spiny tip; stipules rigid, spinelike, 5–10 mm; stipels absent; inflorescences axillary, racemose, shorter than subtending leaf; calyx 5–6 mm; corolla bright yellow; the standard to c. 2 cm; legume 2–5 × 0.5–0.6 cm, linear, flattened, constricted between the seeds.

DISTRIBUTION: LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas.

LEE-BV: Guana Island, Virgin Gorda, Tortola.

HABITAT: dry woodlands and open, disturbed areas.

IUCN: EN.

Poitea florida (Vahl) Lavin, Syst. Bot. Monogr. **37**: 61 (1993).

Synonyms: *Robinia florida* Vahl in H. West, Bidr. Beskr. Ste. Croix: 300 (1793).

Sabinea florida (Vahl) DC., Ann. Sci. Nat. (Paris) **4**: 92 (1825).

DESCRIPTOR: shrub or small tree to 6 m, usually leafless when flowering; trunk to c. 10 cm diameter; bark grey, slightly fissured; leaves imparipinnate, 5–9 cm; leaflets 5–15 pairs, 0.5–1.7 × 0.2–0.8 cm; margins revolute; rachis grooved along upper surface; stipules 4–6 mm; calyx 4–5 mm, minutely 5-toothed; corolla pink or lavender; the standard to 18 mm; legume 8–11 × 0.4–0.6 cm, dehiscent by twisting valves.

DISTRIBUTION: PUE-OO (incl. Culebra & Vieques), LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas.

LEE-BV: Virgin Gorda, Tortola.

HABITAT: dry woodlands and open, disturbed areas.

IUCN: VU.

MALPIGHIACEAE

Stigmaphyllon floribundum (DC.) C.E. Anderson, Syst. Bot. **11**: 128 (1986).

Synonyms: *Banisteria tomentosa* Desf. ex DC., Prodr. **1**: 589 (1824). *Stigmaphyllon*

tomentosum (DC.) Nied., Stigmatoph. **5**. (1899), non *Juss.*, (1824).

DESCRIPTOR: twining liana to 15 m; bark reddish-brown, rough; stems usually numerous from base, twining together, forming a ropelike structure; leaves 3.6–18 × (1–)2.5–15.5 cm, elliptic to oblong; petioles 1–2.5 cm, pubescent, + pair of discoid glands below the lamina; flowers long-pedicellate, 20–25 together; calyx + 8 fleshy, elongate green glands; petals bright yellow, 11–15 mm, long-clawed; fruit a samara, 1.8–3.2.

DISTRIBUTION: PUE-OO (incl. Mona island), LEE-VI & LEE-BV.

LEE-VI: St. John.

LEE-BV: Virgin Gorda.

HABITAT: moist to deciduous coastal forests.

IUCN: VU.

MALVACEAE

Bastardiopsis eggersii (Baker f.) Fuertes & Fryxell, in Acev.-Rodr., Flora of St. John, Mem. New York Bot. Gard. **78**: 310 (1996). Holotype: *Eggers 3183*.

Synonyms: *Sida eggersii* Baker f., J. Bot. **30**: 139 (1892). Type as above. non *Sida eggersii* Gand., Bull. Soc. Bot. France **71**: 630 (1924), Type: *Eggers 195*.

Abutilon virginianum Krapov., Bonplandia **3**: 44 (1969).

DESCRIPTOR: tree to 7 m; younger branches terete, minutely white-furfuraceous; leaves large, to c. 20 cm, ovate to obovate, cordate at base, acute at apex; margins serrate; petiole minutely pubescent; inflorescences in axillary panicles; sepals ovate, subacuminate; petals greenish-yellow; carpels 5–6, white-pubescent.

DISTRIBUTION: PUE-OO (Culebra), LEE-BV.

LEE-BV: Guana Island, Jost van Dyke, Tortola.

HABITAT: coastal areas.

IUCN: EN.

MYRTACEAE

Eugenia sessiliflora Vahl, Symb. Bot. **3**: 64 (1794).

Synonym: *Eugenia lateriflora* Willd., Revis. Sp. Pl. **2**: 961 (1799).

DESCRIPTOR: shrub or small tree, 1.5–3 m, with many gland dots; bark light grey, smooth; leaves 4.5–8 × 3.2–5 cm; midvein yellowish, impressed above; margins strongly revolute, thickened; flowers sessile, axillary or growing from the stem; hypanthium funnel-shaped, c. 4 mm; sepals & petals white, c. 3.5–5 mm; fruit a berry, ± globose, 1.5–2 cm across, smooth, orange-red to bright red.

DISTRIBUTION: PUE-OO (incl. Vieques & Culebra), LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. John, St. Thomas.

LEE-BV: Virgin Gorda.

HABITAT: scrub, dry or moist forests.

IUCN: VU.

Psidium amplexicaule Pers., Syn. Pl. **2**: 27 (1806). Type: St. John, *Richard s.n.* (P-JU 13846; IDC 6206. 1020: III. 7, photo).

LOCAL NAME: mountain guava.

Synonym: *Psidium cordatum* Sims, Bot. Mag. **43**: t. 1779. (1816). Type: Cultivated, originally from Nevis, *Tobin ex herb.* Lambert.

DESCRIPTOR: shrub or small tree, 2–4 m; bark tan, smooth, thin, peeling off in irregular long flakes; leaves ovate, obscurely gland-dotted; margins revolute; flowers 1 or 2 in short, axillary racemes; hypanthium funnel-shaped, 4–5 mm; petals white; stamens numerous; berry ellipsoid to globose, 1.5–2 cm across, smooth, green.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV, LEE-SK (Nevis).

LEE-VI: St. John, St. Thomas.

LEE-BV: Virgin Gorda, Tortola.

HABITAT: scrub, dry or moist forests.

IUCN: VU.

NYCTAGINACEAE

Neea buxifolia (Hook.f.) Heimerl, Bot. Jahrb. Syst. **21**: 633 (1896).

Synonym: *Eggersia buxifolia* Hook.f., Icon. Pl. **15**: 1 (1883). Type as above.

DESCRIPTOR: shrub 1–3 m; branches arched; shoots ferruginous-tomentulose; leaves congested on short, lateral shoots, 0.5–2.5 × 0.3–0.9 cm, oblanceolate to

spathulate, puberulent, ± revolute; flowers sessile, 1 or 2 at end of short cymes, axes 5–6 mm, yellowish; anthocarp fleshy, ellipsoid-globose, c. 5 mm long, smooth, glabrescent, shiny red, crowned by perianth teeth.

DISTRIBUTION: PUE-OO (incl. Culebra), LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas.

LEE-BV: Guana Island, Virgin Gorda.

HABITAT: dry or moist forests.

IUCN: EN.

OCHNACEAE

Ouratea littoralis Urb., Symb. Ant. 1: 363 (1899).

DESCRIPTOR: shrub 2.5–7 m, few-branched from base; bark greyish, flakey; leaves 4–10.5 × 2.1–4.2 cm; midvein stout; flowers in axillary or terminal racemes or panicles, the axes angled, 5–10 cm; sepals green, –6 mm; petals bright yellow, obovate, 7–8 mm, shortly keeled; monocarp 5–8 mm, obovate, fleshy, maturing purple; receptacle bright red.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas.

LEE-BV: Virgin Gorda.

HABITAT: moist forests.

IUCN: VU.

OLEACEAE

Forestiera eggersiana Krug & Urb., Bot. Jahrb. Syst. 15: 339 (1893).

DESCRIPTOR: dioecious shrub or small tree, 1.5–5 m; bark grey to reddish-brown; leaves 1.7–4 × 0.8–1.7 cm; flowers in clusters of 5–9, in axillary racemes; calyx green, cupular, in 4–8 lobes with sharp apices; fruit drupaceous, 1-seeded, green, narrowly ellipsoid, 8–13 mm.

DISTRIBUTION: PUE-OO (incl. Vieques & Culebra), LEE-VI, LEE-BV, LEE-SM (St. Barthelemy).

LEE-VI: St. John, St. Thomas.

LEE-BV: Virgin Gorda.

HABITAT: coastal thickets and dry forests.

IUCN: VU.

PALMAE

Coccothrinax alta (O.F.Cook) Becc., Webbia 2: 331 (1907).

LOCAL NAME: silver thatch palm.

Synonym: *Thrincoma alta* O.F.Cook, Bull. Torrey Bot. Club 28: 540 (1901).

Thringis latifrons O.F.Cook, Bull. Torrey Bot. Club 28: 545 (1901).

Coccothrinax eggersiana Becc., Webbia 2: 321 (1907). *Coccothrinax sancti-thomae* Becc., Webbia 2: 303 (1907). *Thrinax argentea* Eggers, Fl. St. Croix: 100 (1879), non Lodd., (1830).

DESCRIPTOR: erect solitary palm, 2–6 m; trunk cylindrical, 8–12 cm diameter; leaves to 75 cm, fan-shaped, orbicular, silvery-white beneath; petioles as long as blades, with base expanded into a persistent fibrous sheath; inflorescences paniculate, solitary in leaf axils, ascending; primary branches pendulous; pedicels 1–3 mm; perianth 2.5–3 mm; fruit maturing purple.

DISTRIBUTION: PUE-OO (including Culebra & Vieques), LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. Thomas, St. John.

LEE-BV: Great Thatch, Little Thatch, Tortola, Virgin Gorda.

HABITAT: moist to dry forests.

IUCN: VU.

Sabal causerium (O.F.Cook) Becc., *Webbia* **2**: 71 (1908).

Synonym: *Inodes causerium* O.F.Cook, Bull. Torrey Bot. Club **28**: 531 (1901).

DESCRIPTOR: palm, 5–15 m; trunk 45–75 cm, columnar or ± tapering upwards; surface rimose (full of cracks) or nearly smooth, light grey or nearly white; leaf-bases splitting into rather brittle fibres; leaves c. 4 m; petiole 3.8 cm across, subequal in length to the blade; inflorescence considerably longer; fruit greyish, 9–10 mm across.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

PUE-OO: *Sintenis 4844*, fl. 16 July 1886.

LEE-BV: Guana Island, Anegada.

HABITAT: dry scrub on sandy plains.

IUCN: VU.

NOTES: 1000's of trees now in 3 sites on Puerto Rico; 12 – 15 individuals on St. Thomas; 116 individuals on Guana Island (106 in one population); 14 individuals on SW of Anegada. At least 7 locations.

RHAMNACEAE

Reynosia guama Urb., *Symb. Ant.* **1**: 356 (1899).

Synonym: *Reynosia latifolia* sensu Eggers, *Vidensk. Meddel. Dansk Naturhist. Foren. Kjøbenhavn* **9**: 173 (1878), non *Griseb.* (1866).

DESCRIPTOR: shrub or small tree, 3–7 m; bark light grey, smooth; twigs puberulent; leaves opposite to ± alternate; blades 3–10.2 × 2–4.5 cm, elliptic, oblong or seldom ovate, rigidly coriaceous, glabrous, apex deeply emarginate; margins strongly revolute; petioles 5–6 mm; stipule c. 1.8 mm; flowers greenish, fasciculate; petals wedge-shaped, c. 1.4 mm; fruit a 1-seeded, ellipsoid to globose drupe, c. 1.5 cm, purplish-black at maturity; seeds c. 1 cm.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas.

LEE-BV: Guana Island, Jost Van Dyke, Virgin Gorda.

HABITAT: coastal dry forests at middle-elevation and moist forests.

IUCN: VU.

RUBIACEAE

Rondeletia pilosa Sw., *Prodr.*: 41 (1788).

Synonym: *Rondeletia triflora* Vahl, *Symb. Bot.* **3**: 34 (1794).

DESCRIPTOR: shrub 2–4 m, many-branched basally; bark dark grey, smooth; leaves opposite; blades 4–8 × 1–2.5(–3.5) cm, narrowly elliptic, or rarely ovate, lower surface densely pilose, with prominent reticulation; margins strongly revolute; petioles 2–5 mm; stipules aristate, c. 5 mm; flowers 4-merous, heterostylous; calyx 9–10.2 mm, densely pilose; corolla pink, trumpet-shaped; capsule ellipsoid, c. 5 mm, woody, with persistent sepals.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. John, St. Thomas.

LEE-BV: Virgin Gorda, Tortola.

HABITAT: scrub and dry forests.

IUCN: VU.

Scolosanthes versicolor Vahl, *Eclog. Amer.* **1**: 11 (1796) [1797].

Synonym: *Chomelia versicolor* (Vahl) Soreng., *Syst. Veg.* **1**: 410 (1824). Type as above.

DESCRIPTOR: erect or decumbent shrub, 1–3 m, twigs armed with paired axillary spines; leaves opposite, appearing congested; blades 4–7 × 4–5 mm, rigidly coriaceous; margins revolute; petioles c. 0.5 mm; stipules 0.5–0.7 mm; flowers 4-merous; hypanthium c. 2 mm; sepals c. 1.5 mm, reddish-brown; corolla reddish-brown, base and lobes yellow; tube 8–10 mm; drupe ellipsoid, 7 mm, fleshy, white, with 1 pyrene.

DISTRIBUTION: PUE-OO (incl. Vieques), LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. John, St. Thomas.

LEE-BV: Guana Island, Virgin Gorda.

HABITAT: coastal scrub.

IUCN: VU.

SAPINDACEAE

Paullinia plumieri Triana & Planch. in *Ann. Sc. Nat. Ser. 4.* **18**: 360 (1862).

Syntypes: Plum., *Pl. Amer.* 101, *t. 111, fig. 1.* 1757; Guadeloupe, *L. Herminier s.n.* (P?).

DESCRIPTOR: climbing vine; tendrils axillary; leaves biternate; petioles 2–5 cm, wingless; leaflets ovate, 3–7 × 2.5–4 cm; base long-decurrent in apical leaflet, shortly so in laterals; margins dentate; inflorescences racemose, 6–7 cm, densely many-flowered; peduncles 1–2 cm; flowers c. 2 mm; capsules suborbicular, 1.5 cm across, 3-winged; puberulent.

DISTRIBUTION: LEE-BV & Lesser Antilles.

LEE-BV: Tortola.

LESSER ANTILLES: LEE-AB (Antigua), LEE-GU (Guadeloupe), WIN-GR, WIN-MA (?).

HABITAT: moist forest.

IUCN: EN.

SOLANACEAE

Solanum conocarpum Dunal in Poir., *Encycl. Suppl.* **3**: 748 (1813).

DESCRIPTOR: unarmed shrub to 3 m; bark ash-coloured; stems ± cylindrical; leaves 3.5–7 × 1.6–3 cm, oblong-elliptic or oblanceolate; margins revolute; petioles 2–4 mm, yellowish; flowers usually paired; calyx campanulate, greenish, c. 3 mm; corolla light violet, centrally greenish, c. 2 cm across; berry fleshy, ovoid-conical, 2–3 cm, maturing from green to yellow; seeds few, reddish-brown, lenticular, 4–4.5 mm.

DISTRIBUTION: LEE-VI, LEE-BV.

LEE-VI: St. John, St. Thomas (according to Krebs, 1847).

LEE-BV: Virgin Gorda (sterile specimen, *Little* 23836 (US) may belong to this species).

HABITAT: dry, deciduous forest.

IUCN: CR D.

NOTES: only a few individuals known to survive on St. John, populations on St. Thomas and Virgin Gorda likely to be extirpated.

URTICACEAE

Pilea sanctae-crucis Liebm., Kongel. Danske Vidensk.-Selsk. Skr. **5(2)**: 301 (1851).

DESCRIPTOR: erect or decumbent herb to 20–35 cm; stems fleshy, reddish, pilose; leaves 5–10 × 2.7–5 cm, ovate, oblong or elliptic, pilose, 3–5-veined from base; lower surface with numerous cystoliths; margins twice-serrate; petioles slender, pilose, 1–4 cm; stipules c. 6 mm; flowers beige or reddish-tinged; ♂ and ♀ on separate inflorescences; ♂ perianth, c. 1.5–2 mm; ♀ perianth c. 0.5 mm; achenes c. 0.5 mm, yellowish-brown.

DISTRIBUTION: PUE-OO, LEE-VI, LEE-BV.

LEE-VI: St. Croix, St. John, St. Thomas.

LEE-BV: Tortola.

HABITAT: moist forest understorey.

IUCN: EN.

ZYGOPHYLLACEAE

Guaiacum officinale L., Sp. Pl. 381 (1753).

LOCAL NAME: lignum vitae.

DESCRIPTOR: tree 5–10 m; bark dark-brown, peeling off in thickened plates; leaves pinnately compound; leaflets opposite, (1–)2–3 pairs, the distal leaflets larger than the basal ones, 1.5–4.2 × 1–2.6 cm, obovate to oblanceolate; petioles 0.7–2 cm; sepals purplish, c. 3.5–4 mm; petals 8–9 mm, pale violet or bluish, spreading; ovary reddish-purple, compressed, stipitate; style whitish; capsule cordate; valves opening to expose hanging seeds; seeds 1 per locule, with a bright red fleshy aril.

DISTRIBUTION: LEE-AG, LEE-AB (Antigua & Barbuda), BAH-OO, WIN-BA, CLM-OO, CUB-OO, DOM-OO, WIN-DO, WIN-GR, LEE-GU (Guadeloupe), LEE-SM (St. Martin-St. Barthélémy), HAI-HA, JAM, WIN-MA, LEE-BV, LEE-MO, LEE-VI, NLA-OO, PUE-OO, WIN-SV, WIN-GR, THA-OO [int], TCI-OO, VEN-OO.

LEE-VI: St. Croix, St. John, St. Thomas.

LEE-BV: Anegada, Beef Island, Virgin Gorda.

HABITAT: a slow-growing species of lowland dry forest, woodland and thicket, frequently growing in coastland areas.

IUCN: EN C2a (already assessed and on Red List).

CONSERVATION: the timber and medicinal resin have been traded for several centuries as lignum-vitae and overexploitation has taken place throughout the species' range.

NOTES: populations are now severely reduced in the Lesser Antilles, Puerto Rico, Barbados, Virgin Islands and Colombia and extinct or almost extinct in Antigua, Anguilla and Barbuda. Regeneration is good but growth is very slow. The species is listed in Appendix II of CITES.

Recommendations:

(For all taxa listed in this status report.)

- **bank seeds** in Territory and at Millenium Seed Bank, Wakehurst Place, Kew;
- introduce all taxa into **cultivation** in-Territory and possibly at Kew;
- recognise the importance of monitoring and locating **new sites**;
- implement **monitoring** programme of Red List Candidate species;
- assess level of **protection** for each taxon;
- begin to accumulate information towards production of a **field guide** to threatened plants of BVI;
- encourage **interpretation** around National Parks, including displaying conservation posters;
- continue **training** of BVINPT staff in collecting and plant identification;
- identify **mini-hotspots** of PRB endemics, based on ecological preferences;
- **raise** public awareness of value of unique local flora and its conservation;
- continue to **promote** interdisciplinary conservation collaboration.

Acronyms:

AOO	Area of Occupancy.
BVI	British Virgin Islands.
BVINPT	British Virgin Islands National Parks Trust.
CBD	Convention on Biological Diversity.
CITES	Certificate on International Trade in Endangered Species.
CR	Critically Endangered.
EN	Endangered.
EOO	Extent of Occurrence.
G	Geneva, Switzerland.
GIS	Geographic Information System; Geographical Information Science.
IUCN	The World Conservation Union.
L	Leiden, The Netherlands.
NY	New York.
PR	Puerto Rico.
PRB	Puerto Rican bank.
USVI	US Virgin Islands.
VU	Vulnerable.

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