CONTRIBUTIONS TO A FLORA OF ANGUILLA AND ADJACENT ISLETS

RICHARD A. HOWARD AND ELIZABETH A. KELLOGG¹

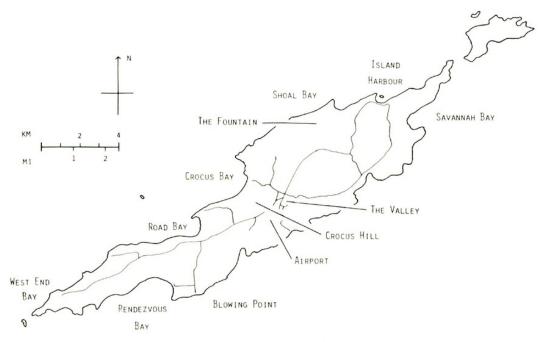
The small island of Anguilla is north of St. Martin and with it comprises the westernmost of the "limestone Caribbees," separated from the British Virgin Island group of Anegada, Tortola, Jost Van Dyke, and Virgin Gorda by the Anegada passage (166 km wide and 604 m deep). A brief checklist of the vegetation of Anguilla was published by Boldingh (1909), listing 150 species as his collections, sight records, or literature references; subsequent additions are few. Père Le Gallo visited Anguilla in 1955 and 1956 and prepared a new flora of the island, which was available for our study but has never been published. Our visit in 1985 produced 125 collections with additional sight records for a total flora of 443 species. Previously three taxa had been considered endemic to Anguilla, but all are now known from other islands. *Rondeletia anguillensis* is described as new and is considered endemic to Anguilla. Comparisons are made with the Virgin Islands to the west of Anguilla.

The small island of Anguilla² lies about 10 km (6 mi) north of St. Martin; together the two islands form the western extension of the Leeward Island complex, known as the "limestone Caribbees" (Harris, 1965). Anguilla is separated from the British Virgin Island group of Anegada, Tortola, Jost Van Dyke, and Virgin Gorda by the Anegada passage, 166 km (100 mi) wide and over 604 m (2000 ft) deep. Shoals extend north to Sombrero. Close to Anguilla are Anguillita, Dog Island, Prickly Pear Cays, Seal Island, Scrub Island, and Little Scrub Island. Road Bay offers the only large and partially protected harbor for fishing boats and visiting yachts.

Anguilla is at latitude 18°13′12″N and longitude 65°4′22″W. It is approximately 28 km (16 mi) long and 8 km (4 mi) wide at its broadest point, with an area of 90 sq. km (35 sq. mi) (see Map 1). The highest point is Crocus Hill, with an elevation of 59 m (192 ft). The center of the island is mildly depressed to form a basin, in which the principal town of The Valley is located. The island's population is about 7000. According to Southey (1827), the island of Anguilla, then called Snake Island, was colonized by the British about 1650 and remained a part of the British Commonwealth. In 1967 Anguilla separated from the independent state of St. Kitts–Nevis and Barbuda.

¹Arnold Arboretum, Harvard University, 22 Divinity Avenue, Cambridge, Massachusetts 02138. ²This island should not be confused with the Anguilla Cays of the southern Bahama Islands. The Anguilla Cays are the southeastern exposure of the Cay Sal Bank between Florida and Cuba. Percy Wilson, for example, visited the Anguilla Cays but not Anguilla, and his collections have been cited incorrectly in *Flora Neotropica* monographs.

[©] President and Fellows of Harvard College, 1987. Journal of the Arnold Arboretum 68: 105–131. January, 1987.



MAP 1. Island of Anguilla.

The geology of the island was most recently studied by Christman (1953). From the sea, the island appears almost flat (see Figure 1)—a raised platform of coralline limestone. The beds of limestone and marl are underlain with andesite tuffs equivalent to and contemporaneous with the Pointe-Blanche Formation on St. Martin. Vaughan (1926) has described it as the lowest Miocene type in the Caribbean. Scattered old volcanic boulders are found near Crocus Bay, near Old Road Bay, and on Dog Island (Le Gallo, unpubl. ms.). Weathered limestone pavement is evident in many places, devoid of soil cover and pitted by broad, shallow solution hollows or penetrated by tubular channels where most plants are rooted. The existing soil on the limestone is terra rossa, an alkaline, reddish brown clay of low fertility. Elsewhere, a blackish, highly alkaline clay called rendzina has accumulated in poorly drained depressions. The limestone forms sea cliffs on the north coast estimated to approach 30 m (100 ft). Several karstic sinkholes, the most famous being "The Fountain," are present near Shoal Bay. Uplifted coastal limestone benches are few and relatively low; they were seen only on the south coast. Coastal embayments have been cut off by sand bars (see Figure 2) and exist as salt ponds (see Figure 3) that are only occasionally activated. Inland lakes are shallow and brackish. Drinking water is obtained from roof catchments, although a public water supply from several shallow wells produces mildly brackish water. Average annual rainfall is 1026 mm, with the peak months being May and August through November. The figures for average monthly rainfall in mm for the years 1931–1981 (with data for 1982 in parentheses) are as follows:

January	62	(35)	April	64	(29)
February	39	(173)	May	102	(121)
March	37	(32)	June	65	(105)



FIGURE 1. View looking west from Shoal Bay hotel development. Note plant of Scaevola plumieri established on sandy beach (left).

July	79 (89)		October	130	(184)	
August	102	(39)	November	130	(39)	
September	130	(55)	December	83	(108)	

VEGETATION

Harris (1965) has termed the vegetation of Anguilla an evergreen woodland. By Beard's (1955) classification, it would be called an evergreen bushland, more popularly known in the area as thorn scrub. Although Beard believed that the Anguillan thorn scrub is the natural vegetation of the island, Harris suggested that it represents a subclimax created by biotic processes of impoverishment and selection of xerophytic, sclerophyllous species. Harris (1965, p. 137) admitted, however, that in "Anguilla, the communities of native plants are more complex, and aliens much less abundant." He emphasized (p. 137) a "moderately large population dependent mainly on shifting cultivation, together with considerable development of plantations which resulted in the complete or partial clearance of the whole island." Our observations led to a somewhat different conclusion. It appeared to us that agriculture is at best tenuous on the shallow soils; the extensive exposed limestone pavement, with plants rooting in solution holes, indicates that the thorn-scrub vegetation has always been dominant.

On a special trip to aid West Indian agriculture, Morris (1891) recommended that the thorn-scrub areas be cleared as a work-relief project and that such fiber



FIGURE 2. Aerial view of west end of the island near Rendezvous Bay.

sources as *Agave* and *Furcraea* be planted, but this was never developed. A government-sponsored planting of *Aloë vera* has long been abandoned. Historical records show that the cultivation of sugar cane and cotton and the planting of mahogany were unsuccessful in the low-rainfall climate. Subsistence agriculture today consists of small home gardens and an occasional larger plot of cassava, pigeon peas, sweet potatoes, okra, and pumpkins.

Boldingh (1909a), in the only existing list of plants of Anguilla, reported (p. 2) "a vegetation that consisted chiefly of prickly plants resembling in superficial appearance the *Croton* vegetation of the Dutch Antilles. I did not see any tropical wood." In 1985 a low shrub vegetation dominated most of the uncultivated areas and no active charcoal pits were observed, suggesting a paucity of appropriate charcoal wood or the complete acceptance of kerosene and electricity for cooking. Cattle were certainly fewer than in the past, and goats and sheep were mostly tethered in appropriate feeding locations and had little effect on most of the thorn scrub.

The neem, Azadirachta indica, has been introduced relatively recently and is perhaps the most common shade tree. Large specimens of Mangifera indica, Meliococcus bijugatus, Swietenia mahagoni, Tamarindus indica, and Zizyphus mauritiana exist around habitations. Occasional trees of Ficus citrifolia, Guapira fragrans, Pisonia subcordata, and Tabebuia pallida are the largest native species.

In coastal areas and around salt ponds, the dominant woody plants are Argusia gnaphalodes, Avicennia germinans, Coccoloba uvifera, Conocarpus erecta, Erithalis fruticosa, Hippomane mancinella, Laguncularia racemosa,



FIGURE 3. Road Bay harbor looking north, with salt pond development to right. Canella, Capparis, and Exostema species growing on distant point.

Scaevola plumieri, and Suriana maritima. Very few individuals of Casuarina equisetifolia, Chrysobalanus icaco, or Thespesia populnea were encountered. Although Harris (1965) indicated "mangrove swamps" at Little Harbour and Sea Feathers Bay, we found Rhizophora mangle only in Road Bay pond, where there were a few isolated individuals.

Locally dominant shrubs included Antirhea acutata, Bourreria succulenta, Byrsonima lucida, Canella winterana, Castela erecta, Coccoloba krugii, Comocladia dodonaea, Croton flavens, Eugenia axillaris, E. foetida, Exostema caribaeum, Gyminda latifolia, Jacquinia arborea, J. berterii, Malpighia emarginata, Phyllanthus epiphyllanthus, Pithecellobium unguis-cati, Plumeria alba, Randia aculeata, and Reynosia uncinata. These may be in mixed populations, and occasionally a single large specimen may dominate an area. Coccoloba krugii and C. uvifera are known to hybridize on other islands (Howard, 1957). On Puerto Rico, St. Thomas, St. Croix, and Virgin Gorda the hybrids resembled C. uvifera. Three distinct plants on Anguilla were called to our attention by Andrew Parker and shown to us by Oliver Hodge. They were isolated individuals with leaves more like those of a very large C. krugii. One plant had been coppiced; its leaves were intermediate in shape but with the texture of C. krugii and the abundant pubescence of C. uvifera. One plant had fruits comparable to those of C. krugii, while the other two had sterile fruits resembling those of C. uvifera.

The most abundant spiny plants on Anguilla were Acacia macracantha, Castela erecta, Clerodendrum aculeatum, Comocladia dodonaea, Pithecello-

Comparisons of island size, altitude, and recorded flora.

Island	Area (sq. mi)		Number of species		
		Maximum alt. (ft)	Indigenous	Introduced/ cultivated	Endemic/ restricted*
Anegada	14	15	198	33	0
Anguilla	35	192	321	122	1 [3]
Barbuda	62	47	229	32	[1]
Jost Van Dyke	4	1054	73†	12	0
St. Bartholomew	10	800-1000	336	53	[4]
St. Martin	38	1119, 1391	392	41	1
Tortola	24	1263, 1780	484‡	152	2
Virgin Gorda	8	1539	372	63	ĩ

^{*}Bracketed numbers represent species now in synonymy.

bium unguis-cati, Randia aculeata, Reynosia uncinata, Zanthoxylum flavum, Z. punctatum, and Z. spinifex. The scramblers Caesalpinia crista and C. divergens, with extremely spiny fruits, may be added to this list. Other scramblers forming local entanglements include Boerhavia scandens, Cissus verticillatus, Heteropteris purpureus, Merremia dissecta, Passiflora foetida, P. suberosa, Plumbago scandens, Rhynchosia minima, R. reticulata, Stigmaphyllon diversifolium, S. emarginatum, S. lingulatum, Tournefortia volubilis, and Urechites lutea. Parasitic plants were Cassytha filiformis, Cuscuta americana, Dendropemon caribaeus, and Phoradendron trinervium.

Existing floristic studies (Box, 1939; D'Arcy, 1967, 1975; Le Gallo, 1957; Little, 1969; Little *et al.*, 1976; Monachino, 1941) of the small northern islands are not comparable, and significant comparisons are difficult to make (see Table).

The following taxa were originally described as endemic.

Anegada: Cynanchum anegadensis (Britton) Alain. Type: Britton & Fishlock 962 (NY). Current status: endemic. Fishlockia anegadensis (Britton) Britton & Rose. Type: Britton & Fishlock 990 (NY). Current status: the basionym, Acacia anegadensis Britton, is preferred. Endemic.

Anguilla: Bouteloua vaneedeni Pilger. Type: Boldingh 3521B (β?). Current status: now known from St. Bartholomew and from Camaguey province, Cuba. Myrtus anguillensis Urban. Type: Boldingh 3509B (β?) (= Psidium longipes (Berg) McVaugh var. orbicularis (Berg) McVaugh). Current status: now known from the eastern Bahamas, the Turks and Caicos islands, Jamaica, St. Bartholomew, Barbuda, and Antigua. Rondeletia anguillensis R. Howard & E. Kellogg. Type: R. Howard & E. Kellogg 20105 (A). Current status: endemic. Thrinax morrisii Wendl. Type: H. A. A. Nicholls s.n., 1890 (κ). Current status: known from Florida, Cuba, Haiti, Puerto Rico, the Bahamas, and the Turks and Caicos islands.

BARBUDA: Coccothrinax boxii Bailey. Type: Box 669 (BH) (= Coccothrinax barbadensis (Lodd.) Bec). Current status: known from the Lesser Antilles, Trinidad and Tobago.

[†]Trees only.

[‡]Dicotyledons only.

St. Bartholomew: Peperomia barthelemyana Trel. Type: Questel 275 (not located) (= Peperomia myrtifolia (Vahl) Dietr.). Current status: known from St. Croix and the Lesser Antilles. Peperomia barthelemyana Trel. var. reducta Trel. Type: Questel 361 (not located) (= Peperomia myrtifolia (Vahl) Dietr.). Current status: known from St. Croix and the Lesser Antilles. Peperomia questeliana Trel. Lectotype: Questel 2518 (NY) (= Peperomia humilis Dietr.). Current status: known from Florida, Central America, and the Greater and Lesser Antilles. Peperomia myrtifolia (Vahl) Dietr. var. major Trel. Type: Questel 803 (NY) (= Peperomia myrtifolia (Vahl) Dietr.). Current status: known from St. Croix and the Lesser Antilles.

St. Martin: Calyptranthes boldinghii Urban. Type: published as Boldingh 2370B (B?) but 3270B on label. Current status: endemic and known only

from the type collection.

TORTOLA: Calyptranthes kiaerskovii Krug & Urban. Type: Eggers 3217 (B?). Current status: original material sterile and identification uncertain; now also reported from Virgin Gorda. Sida eggersii E. G. Baker. Type: Eggers 3183 (BM?, K?). Current status: known only from a single tree on Jost Van Dyke. D'Arcy (1967) reported the species from Tortola and Culebra but did not encounter it.

VIRGIN GORDA: Croton fishlockii Britton. Type: Fishlock 311 (NY). Current status: endemic.

It can be estimated that the floras of the "limestone Caribbees" and adjacent islands each consist of about 500 species. With the few exceptions of species whose distribution is limited to adjacent islands, the species that dominate the vegetation of any island can also be found on Puerto Rico and the drier areas of Hispaniola, occasionally Cuba, and to a lesser extent Guadeloupe. The islands with peaks of 1000 feet or more are likely to have a rain shadow that affects the island and niches where zonation of the vegetation can be established. The lower islands of Barbuda, Anguilla, and Anegada are more apt to receive fortuitous rain showers. Barbuda and Anegada have been more extensively cultivated or grazed in the past, and a larger percentage of the existing vegetation is adventive and secondary. Anguilla stands out in the amount of limestone pavement area having what we concluded to be a natural and less disturbed vegetational type.

BOTANISTS WHO HAVE VISITED ANGUILLA

- L.-C. RICHARD, 1786. Urban (1902) reported that Richard had collected on Anguilla during his voyage north from Cayenne in the spring of 1867. We have seen no collections or citations of such specimens. Box (1939) located citations for four type specimens from Antigua and for one specimen from Barbuda.
- D. Morris, 1890. Morris visited the Lesser Antilles as an agricultural consultant in 1890 and gathered 30 to 40 living plants of a dwarf palm, later named *Thrinax morrisii* by Wendland, during a visit to Anguilla on December 14 and 15.

- H. A. A. Nicholls, 1891. Nicholls, a medical doctor and specialist on yaws, was on Barbuda in August, 1891, and wrote on November 11, 1891 (in Wendland, 1892), "I went again to Anguilla." His collections, sent to Kew, are unnumbered. They have not been encountered except for fruiting specimens of Thrinax morrisii, one of which is now the lectotype, that he gathered to permit the description to be completed and published.
- W. R. Elliott, 1891. Elliott had been a gardener on Jamaica and later Grenada. The reason for his trip to Anguilla (1891) is not known, but his small collection of 34 numbers was identified by Box (1940).
- I. Boldingh, 1906. Boldingh was preparing a report of the vegetation of the Dutch Antilles (1909b, 1913) and visited Anguilla on September 6 and 7, 1906. His publication (1909a) remains the only paper on the flora of Anguilla and is based on his collections numbered between 3449 and 3599.
- G. G. Goodwin, 1926. Goodwin, accompanied by his wife, visited Anguilla between April 1 and 9, 1926, as part of the Ottley Puerto Rican expedition of the American Museum of Natural History, in search of recent and fossil mammals. A single specimen numbered 12 was found in the herbarium of the New York Botanical Garden. Botanical collections are not mentioned in the catalogs and journals of the expedition.
- P. WAGENAAR HUMMELINCK, 1949, 1973. Hummelinck visited Anguilla and Dog Island June 16-20, 1949, and June 30-July 3, 1973. He collected two species of Agave, as well as algal and faunal specimens. The algal collections are listed in Vorman (1968). Hummelinck (1981) also published observations on "land and fresh-water localities," with photographs of Anguilla.
- I. Velez, 1950. Prior to the publication of his Herbaceous Angiosperms of the Lesser Antilles in 1957, Velez spent fiscal year 1949-1950 collecting between the Virgin Islands and Grenada. He reported (p. 2) Anguilla to be among the islands that "were thoroughly studied." A single specimen, Velez 3749 (US) (Thrinax morrisii), collected in January, 1950, was reported in the literature encountered. Velez (1957, p. 2) reported that "a complete set was deposited in the Herbarium of the Inter American University of Puerto Rico. Duplicates of most of them were sent to the Herbarium of the Imperial College of Tropical Agriculture, Trinidad." Velez's citations of species distribution were taken from the literature, were sight records, or were supported by specimens. They have been troublesome to untangle. On a visit to the Inter American University, one of us (R. A. H.) discovered that his herbarium, through neglect, had been completely destroyed by insects. The set sent to Trinidad was later given to Kew, where we have seen specimens from other islands. Lists of determinations, preserved at Kew, are not complete but cite specimens numbered 3006 to 3158 from the Virgin Islands, 3159 to 3287 from Grenada and the Grenadines, 3290 to 3337 from St. Lucia, and 3338 to 3386 from St. Vincent. A few specimens have been found in GH, NY, and US, but nothing from Anguilla.
- C. Le Gallo, 1955, 1956. Le Gallo collected on Anguilla September 1-5, 1955, and on the adjacent islets of Scrub and Dog March 3, 1956. His unpublished

and undated manuscript must have been written sometime in 1959. His plant specimens as cited are numbered 2053 to 2071 and 2470 to 2521. Le Gallo is not listed in Barnhart (1965), so it is of interest to record here the biographical information we obtained first from Ms. Céline Arseneault, botanist-librarian of the Montreal Botanic Garden, and subsequently from the tribute to Le Gallo by Père Maurice Barbotin (1976), of Guadeloupe.³

- G. R. PROCTOR, 1958–1959. Proctor collected extensively in the Leeward Islands; between December 30, 1958, and January 18, 1959, he gathered 250 numbers, 18518 to 18704 and 18731 to 18816, on Anguilla. Complete sets of his specimens are at A and IJ.
- D. R. Harris, 1960. Harris spent part of August, 1960, on Anguilla prior to publication of his "Plants, Animals, and Man in the Outer Leeward Islands, West Indies" in 1965. His collections of about 50 species were given to the British Museum (Natural History). We have included all the species in our listing, but since we have not seen specimens, they are not cited.
- R. W. Read, 1974. Read, of the Smithsonian Institution, visited Anguilla on June 7, 1974, to find and collect *Thrinax morrisii*. He made no other collections there (pers. comm.).
- R. A. HOWARD AND E. A. KELLOGG, 1985. We collected on Anguilla February 5–9, 1985. Our specimens numbered 20043 to 20168 are deposited in the herbarium of the Arnold Arboretum (A).

ACKNOWLEDGMENTS

We are grateful for the help of Oliver Hodge, of the Public Health Department on Anguilla, who accompanied us in the field and supplied local names and uses of the plants we encountered. Andrew Parker, of Powys, Great Britain, was recently stationed on Anguilla and called our attention to the hybrid pop-

³Père Casimir Le Gallo was born June 25, 1906, at Erdeven, diocèse of Vannes, France. He took his holy orders in the Congregation of St.-Esprit October 1, 1933. He was a professor at Collège St.-Alexandre, Touraine, Quebec, from August 30, 1934, to January, 1935. He served as Vicar Apostolic at St. Pierre and Miquelon from January 23, 1935, to April 29, 1946. He returned to Quebec in May, 1946, to serve as Vicar Apostolic at Lac-au-Saumon until he returned to France in August, 1950. Seeking a warmer clime, he went to the West Indies in 1951 as curate of St. Bartholomew, where he also taught natural science at the seminary-college of Blanchet. In 1958 he was made curate of Vieux Fort, although he continued weekly teaching at Blanchet. Eight years later the bishop entrusted him with several successive assignments in Sacré-Coeur, in Fatima, at the Moule, and finally in Baie-Mahault. He returned to France in 1969, but not ready to retire, he requested and was granted an assignment in St. Pierre and Miquelon. He was not to occupy this position, however, for an injury to his foot developed into gangrene and his leg was amputated. He spent long and painful months in the hospital before his residence in the religious community at Wolxheim. He yearned for his native Brittany and so was taken to Langonnet, where he died peacefully June 22, 1976.

His primary botanical interest was in mosses, but he collected algae and lichens as well as vascular plants. Twenty-one papers by Le Gallo appeared in *Le Naturaliste Canadien* between 1945 and 1965, with others in specialty journals. Many of his later papers were biographical reviews of the lives of priests who were botanists. Proctor collected with Le Gallo in Guadeloupe in 1959 and as a result of that trip named *Diplazium legalloi* in his honor.

ulations of *Coccoloba*; subsequently in correspondence he supplied additional information we have incorporated. His interest in the local vegetation may lead to an illustrated ethnobotanical publication. George R. Proctor, who has collaborated with us in the production of the *Flora of the Lesser Antilles*, supplied lists of his collections from Anguilla. Père Le Gallo gave Proctor his unpublished manuscript notes on Anguilla, which we have been privileged to use. Céline Arseneault, of the Montreal Botanical Garden, and Jacques Portecop, Université des Antilles, Guadeloupe, located biographical information on Le Gallo for us. Finally, our travel and work on this flora was made possible through the support of National Science Foundation grant BSR-8307701 and a grant from the Atkins Fund of Harvard University, for which we are appreciative.

LITERATURE CITED

- BARBOTIN, M. 1976. Le Père Casimir Le Gallo, 25 Juin 1906–22 Juin 1976. Leafl. Église Guad. 211: 8–11. Édit. Évêché Basse-Terre, Guadeloupe.
- BARNHART, J. H. 1965. Biographical notes upon botanists. Vols. 1–3. G. K. Hall & Co., Boston.
- BEARD, J. S. 1955. The classification of tropical American vegetation types. Ecology 36: 89-100.
- BOLDINGH, I. 1909a. A contribution to the knowledge of the flora of Anguilla. Recueil Trav. Bot. Néerl. 6: 1–34.
- ——. 1909b. The flora of the Dutch West Indian islands of St. Eustatius, Saba, and St. Martin. E. J. Brill, Leiden.
- ——. 1913. Flora voor de Nederlandsch West-Indische eilanden. J. H. De Bussy, Amsterdam.
- Box, H. E. 1939. Flora of Antigua and Barbuda. Unpublished manuscript (British Museum (Natural History)).
- ——. 1940. Report upon a collection of plants from Anguilla, B.W.I. J. Bot. 78: 14–16.
- Christman, R. A. 1953. Geology of Saint-Bartholomew, Saint-Martin and Anguilla, Lesser Antilles. Bull. Geol. Soc. Amer. 64: 65–93.
- D'ARCY, W. G. 1967. Annotated check-list of the dicotyledons of Tortola, Virgin Islands. Rhodora 69: 385–450.
- ——. 1975. Anegada Island: vegetation and flora. Atoll Res. Bull. 188: 1-40.
- ELLIOTT, W. R. 1891. Botanical enterprises in the West Indies. Kew Bull. 1891: 103–168.
- GOULD, F. W. 1979. Poaceae. Pp. 25–220 in R. A. Howard, Flora of the Lesser Antilles. Vol. 3. Arnold Arboretum, Jamaica Plain, Massachusetts.
- HARRIS, D. R. 1965. Plants, animals, and man in the outer Leeward Islands. West Indies. Univ. Calif. Publ. Geogr. 18: 1-164.
- Howard, R. A. 1957. Studies in the genus *Coccoloba*, IV. The species from Puerto Rico and the Virgin Islands and from the Bahama Islands. J. Arnold Arbor. 38: 211–242.
- HUMMELINCK, P. W. 1981. Studies on the fauna of Curação and other Caribbean islands. Publ. Found. Sci. Res. Surinam & Netherlands Antilles 63.
- Le Gallo, C. 1957. *Myrtus orbicularis* (Berg) Burret, endemique des Petites Antilles du nord. Bull. Soc. Bot. France **104**: 158–160.
- ——. Contribution à la florule d'Anguilla. Unpublished manuscript (Arnold Arboretum).
- LITTLE, E. L., JR. 1969. Trees of Jost Van Dyke (British Virgin Islands). U. S. Forest Serv. Res. Paper 1TF-9.

——, R. O. WOODBURY, & F. H. WADSWORTH. 1976. Flora of Virgin Gorda (British Virgin Islands). U. S. Forest Serv. Res. Paper 1TF-21.

Monachino, J. 1941. A check-list of the spermatophytes of St. Bartholomew. Caribbean Forest. 2: 25–47, 49–66.

Morris, D. 1891. Report of a botanical mission to the West Indies. Kew Bull. 1891: 109–162.

QUESTEL, A. 1941. The flora of the island of St. Bartholomew. Imprimerie Catholique, Guadeloupe.

Southey, T. 1827. Chronological history of the West Indies. Longman, Rees, Orme, Brown, & Green, London.

URBAN, I. 1902. Symbolae Antillanae. Vol. 3. Borntraeger, Leipzig.

VAUGHAN, T. W. 1926. Notes on the igneous rocks on the northeast West Indies and on the geology of the island Anguilla. J. Wash. Acad. Sci. 16: 345–358.

Velez, I. 1957. Herbaceous angiosperms of the Lesser Antilles. Inter American Univ., Puerto Rico.

VORMAN, M. 1968. The marine algal vegetation of St. Martin, St. Eustatius and Saba. Publ. Found. Sci. Res. Surinam & Netherlands Antilles 52.

WENDLAND, H. 1892. Thrinax morrisii Wendl. Gard. Chron. III. 11: 104.

APPENDIX. The known flora of Anguilla.

The collections cited below are referred to by the following abbreviations: B = Boldingh, E = Elliott, GG = Goodwin, H = Hummelinck, HK = Howard and Kellogg, LG = Le Gallo, P = Proctor. According to Le Gallo's manuscript, the Boldingh collections are at Utrecht and were at Berlin. They were also sought in NY, but very few of the cited numbers could be found. Le Gallo's (unpubl. ms.) collections were studied by Monachino (NY) and by Miss G. J. A. Amshoff. Again, a search at NY located very few of the numbered collections. Those seen, as well as those of Proctor and our own, are indicated by the herbarium acronym, most frequently A. Common names are included only when they were provided by local residents.

GYMNOSPERMAE

ARAUCARIACEAE

Araucaria heterophylla (Salisb.) Franco, Christmas plant. Cultivated. HK sight.

ANGIOSPERMAE

MONOCOTYLEDONEAE

AGAVACEAE

Agave beauleriana Jacobi. Cultivated. HK sight.

Agave karatto Miller. Cultivated. HK sight.

Agave scheuermaniana Trel. H 160, 161, 162.

Agave sisalina Perrine, fiber pole, pita, sisal plant. Cultivated. HK sight; H 111, 112.

Sansevieria hyacinthoides (L.) Druce. Naturalized. HK sight; P 18760 (A).

Sansevieria trifasciata Prain. Naturalized. HK sight.

Yucca guatemalensis Baker, Spanish needle. Cultivated. HK sight.

AMARYLLIDACEAE

Crinum sp. Cultivated. HK sight.

Hymenocallis caribaea (L.) Herbert, spider lily. P 18630 (A).

Zephyranthes candida (Lindley) Herbert, crocus, snowdrop. Parker sight.

ARACEAE

Alocasia plumbea C. Koch. Cultivated. HK sight.
Colocasia esculenta (L.) Schott. Cultivated. HK sight.
Dieffenbachia seguine (Jacq.) Schott. Cultivated. HK sight.
Monstera acuminata C. Koch. Cultivated. HK sight.
Rhaphidophora aurea (Linden & André) Birdsey. Cultivated. HK sight.
Xanthosoma sagittatifolium (L.) Schott. Cultivated. HK sight.

ASPARAGACEAE

Asparagus setaceus (Kunth) Jessop. Cultivated. HK sight. Asparagus sprengeri Regel. Cultivated. HK sight.

BROMELIACEAE

Tillandsia recurvata L., wild pine. B s.n.; P 18566 (A). Tillandsia usneoides L., jumbie beds. Parker sight. Tillandsia utriculata L., wild pine. P 18634 (A).

COMMELINACEAE

Aploleia monandra (Sw.) Moore. Cultivated. HK sight. Callisia fragrans (Lindley) Woodson. Cultivated. HK 20108 (A). Commelina elegans Kunth. P 18752 (A). Rhoeo spathacea (Sw.) Stearn. HK sight. Tradescantia pallida (Rose) Hunt. Cultivated. HK sight.

Суморосеасеае

Syringodium filiforme Kütz. P 18626 (A).

CYPERACEAE

Bulbostylis pauciflora (Liebm.) Clarke. LG 2485; P 18804 (A).

Cyperus calcicola Britton. LG 2501.

Cyperus laevigatus L. P 18770 (A).

Cyperus oxylepis Nees ex Steudel. P 18749 (A).

Cyperus rotundatus L. B s.n.; P 18772 (A).

Eleocharis geniculata (L.) Roemer & Schultes. P 18771 (A).

Eleocharis mutata (L.) Roemer & Schultes. P 18769 (A).

Fimbristylis cymosa R. Br. subsp. spathacea (Roth) T. Koyama. B 3527, as Fimbristylis spathacea Roth; HK 20151 (A); P 19659 (A).

Fimbristylis ferruginea (L.) Vahl, pond grass. B 3495.

Fimbristylis ovata (Burman f.) Kern. B 3514, 3573, both as Fimbristylis monostachya Hassk.; P 18666 (A).

Mariscus brunneus (Sw.) Clarke. LG 2484, as Cyperus planifolius Rich. var. brunneus (Sw.) Kük.; P 18690 (A), 18777 (A).

Mariscus capillaris (Sw.) Vahl. B s.n.

Mariscus fulgineus (Chapman) Clarke. LG 2512 (NY), as Cyperus fulgineus Chapman; P 18608 (A), 18635 (A).

Mariscus squarrosus (L.) Clarke. P 18810 (A).

Scleria lithosperma (L.) Sw. LG 2503; P 18803 (A).

GRAMINEAE

Aristida adscensionis L. LG 2488, 2489, 2509; P 18699 (A). Bothriochloa ischaemum (L.) Keng. P 18784 (A).

Bothriochloa pertusa (L.) A. Camus. P 18784 (A), 18791 (A), both as Andropogon pertusus (L.) Willd.

Bouteloua americana (L.) Scribner. B 3533; P 18757 (A).

Bouteloua vaneedeni Pilger. B 3512 (type collection); LG 2474.

Brachiaria adspersa (Trin.) Parodi. P 18643, as Panicum adspersum Trin.

Brachiaria fasciculata (Sw.) S. T. Blake. Reported by Gould (1979).

Brachiaria reptans (L.) Gardner & Hubb. B 3543, as Panicum reptans L.

Cenchrus echinatus L., burr grass. P 18762 (A).

Cenchrus incertus M. Curtis. HK 20155 (A); P 18693 (A), as Cenchrus gracillimus.

Cenchrus tribuloides L. B s.n.

Chloris gayana Kunth, Rhodes grass. Reported by Harris as cultivated.

Chloris inflata Link. P 18621 (A).

Cymbopogon citratus (DC. ex Nees) Stapf, lemon grass. Cultivated and naturalized. B 3454, as Andropogon schoenanthus.

Dactyloctenium aegyptium (L.) Beauv. P 18761 (A).

Digitaria bicornis (Lam.) Roemer & Schultes. P 18970 (A).

Digitaria decumbens Stent, pangola grass. Reported by Harris as cultivated.

Digitaria insularis (L.) Mez. LG sight (Dog Is.), as Trichane insularis (L.) Nees.

Digitaria sanguinalis (L.) Scop. B 3456; P 18790 (A).

Eleusine indica (L.) Gaertner. B s.n.; P 18619 (A).

Eragrostis ciliaris (L.) Link. HK 20119 (A); LG 2518; P 18746 (A).

Eragrostis tenella (L.) Beauv. ex Roemer & Schultes. HK sight.

Heteropogon contortus (L.) Beauv. LG 2521.

Oplismenus hirtellus (L.) Beauv. subsp. setarius (Lam.) Mez. B s.n., as Oplismenus setarius (Lam.) Roemer & Schultes.

Panicum diffusum Sw. B 3457, 3459, 3538; P 18684 (A).

Panicum geminatum Forsskål. B 3494.

Panicum maximum Jacq. P 18620 (A).

Panicum molle Sw. B 3453.

Panicum paniculatum L. B 3539, 3550.

Paspalidium geminatum (Forsskål) Stapf. B 3494, as Panicum geminatum Forsskål.

Paspalum fimbriatum Kunth. B 3455; P 18618 (A).

Paspalum laxum Lam. B 3550; LG 2516; P 18652 (A), 18767 (A).

Paspalum paniculatum L. B s.n., as Paspalum hemisphericum Poiret.

Rhynchelytrum repens (Willd.) C. E. Hubb., red-headed grass. LG sight, as Tricholaena rosea Nees; P 18789 (A).

Saccharum officinarum L. Cultivated. HK sight.

Sorghum halepense (L.) Pers. Cultivated. HK sight.

Sporobolus indicus (L.) R. Br. LG 2519, pro parte.

Sporobolus jacquemontii Kunth. LG 2519, pro parte.

Sporobolus pyramidatus (Lam.) A. Hitchc. HK 20126 (A); LG 2519, pro parte.

Sporobolus virginicus (L.) Kunth. B 3537, 3548, 3562.

Tragus berteronianus Schultes. B 3534; LG 2520.

Vetiveria zizanioides (L.) Nash. B 3549; HK sight.

Zea mays L., corn. Cultivated. HK sight.

Hydrocharitaceae

Thalassia testudinum Banks & Sol. ex König. P 18627 (A).

LILIACEAE

Aloë vera (L.) Burman, aloe, sempervive. Cultivated and naturalized. HK sight.

MUSACEAE

Musa sapientum L. Cultivated. HK sight.

ORCHIDACEAE

Epidendrum kraenzlinii Bello. HK 20149 (A); LG sight, as Epidendrum bifidum Aublet. Tetramicra canaliculata (Aublet) Urban. LG sight.

PALMAE

Coccothrinax barbadensis (Lodd. ex Martius) Becc. Cultivated. HK sight.

Cocos nucifera L. Cultivated. HK sight.

Phoenix dactylifera L. Cultivated. HK sight.

Thrinax morrisii Wendl., broom palm, thatch palm. HK 20150 (A); H. A. A. Nicholls s.n. (lectotype, κ); P 18667 (A).

PANDANACEAE

Pandanus utilis Bory. Cultivated. HK sight.

RUPPIACEAE

Ruppia maritima L. HK 20130 (A); LG sight (Scrub Is.); P 18773 (A).

DICOTYLEDONEAE

ACANTHACEAE

Asystasia gangetica (L.) T. Anderson. Cultivated. HK sight.

Blechum brownei L. P 18531 (A).

Oplonia spinosa (Jacq.) Raf. LG sight.

Pseuderanthemum carruthersii (Seemann) Guillaumin var. reticulatum (Bull) Fosb. Cultivated. HK sight.

Ruellia tuberosa L., snagdragon. P 18598 (A).

Thunbergia fragrans Roxb. P 18758 (A).

AIZOACEAE

Sesuvium microphyllum Willd. P 18656 (A).

Sesuvium portulacastrum L., pondweed. B 3526a.

AMARANTHACEAE

Achyranthes aspera L. B s.n., as Achyranthes obtusifolia Lam.; P 18794 (A).

Alternanthera brasiliana (L.) Kuntze. Cultivated and naturalized. HK sight.

Alternanthera caracasana Kunth, yard-pussley. B 3555 (NY), as Alternanthera repens Kuntze; P 18754 (A).

Amaranthus crassipes Schldl. P 18682 (A).

Celosia nitida Vahl. P 18732 (A).

Lithophila muscoides Sw. HK 20125 (A); LG sight (Dog Is.); P 18687 (A).

Anacardiaceae

Anacardium occidentale L., cashew. HK sight.

Comocladia dodonaea (L.) Urban, hollow-wood, wild mango. B 3556, as Comocladia ilicifolia Sw.; LG sight (Dog Is., Scrub Is.); P 18648 (A).

Mangifera indica L., mango. Cultivated. HK sight.

Spondias mombin L., golden apple, plum. Cultivated. Parker sight.

Spondias purpurea L., fig, hog plum. Cultivated. Parker sight.

Annonaceae

Annona muricata L., soursop. Cultivated. HK sight. Annona squamosa L., sugar apple. Cultivated. HK sight.

APOCYNACEAE

Catharanthus roseus (L.) G. Don, old maid. HK sight.

Nerium oleander L., oleander. Cultivated. HK sight.

Plumeria alba L., pigeonwood, snakewood. LG sight (Dog Is., Scrub Is.); P 18625 (A).

Plumeria rubra L., frangipani. Cultivated. HK sight.

Rauvolfia viridis Roemer & Schultes, Antigua balsam. P 18523 (A).

Tabernaemontana divaricata (L.) R. Br. Cultivated. HK sight.

Urechites lutea (L.) Britton, lice bush. B s.n., as Urechites suberecta Muell. Arg.; HK 20071 (A); LG 2056 (Scrub Is.), sight (Dog Is.); P 18611 (A).

ARALIACEAE

Polyscias fruticosa (L.) Harms. Cultivated. HK sight.

Polyscias guilfoylei (Cogn. & Marchal) L. H. Bailey. Cultivated. HK sight.

ASCLEPIADACEAE

Asclepias curassavica L. E 47.

Calotropis procera (Aiton) R. Br., French cotton, milky-milky bush. B s.n.; P 18623 (A). Cynanchum parviflorum Sw. P 18550 (A).

BATACEAE

Batis maritima L., pondweed. B 3545a; LG sight (Scrub Is.); P 18744 (A).

BIGNONIACEAE

Crescentia cujete L. Cultivated. HK sight.

Podranea ricasoliana (Tanf.) Sprague. Cultivated. HK sight.

Spathodea nilotica Seemann. Cultivated. HK sight.

Tabebuia heterophylla (DC.) Britton, bark, cedar, white cedar. B 3482, 3512, 3541, all as Tecoma leucoxylon Martius; GG 12 (NY); HK 20104 (A); P 18555 (A).

Tabebuia pallida (Lindley) Miers. Cultivated. Parker sight.

Tecoma stans (L.) Kunth, fever bush, torchwood. E 42; P 18587 (A).

Вомвасаселе

Ceiba pentandra (L.) Gaertner. Cultivated or naturalized. P 18792 (A).

BORAGINACEAE

Argusia gnaphalodes (L.) Heine, wild lavender. B s.n., as Tournefortia gnaphalodes R. Br.; E 52; LG sight (Scrub Is.); P 18615 (A).

Bourreria succulenta Jacq., chink bush. B 3518 (NY); LG sight (Dog Is.); HK 20067 (A); P 18579 (A).

Cordia collococca L., clamen cherry. P 18753 (A).

Cordia sebestena L. Cultivated. HK sight.

Heliotropium angiospermum Murray, eyebright. E 45; B s.n.; HK 20079 (A); P 18640 (A), as Heliotropium parviflorum L.

Heliotropium curassavicum L. LG sight (Dog Is.); P 18657 (A).

Heliotropium indicum L., eyebright. Parker sight.

Heliotropium microphyllum Sw. B 3517 (NY); HK 20137 (A); LG 2061, 2062 (both Scrub Is.); P 18688 (A), 18808 (A).

Rochefortia acanthophora (DC.) Griseb. LG sight (Scrub Is.).

Tournefortia volubilis L. B 3521, 3540; P 18780 (A).

BURSERACEAE

Bursera simaruba Sarg., turpentine tree. B s.n.; P 18532 (A).

CACTACEAE

Cephalocereus nobilis (Haw.) Britton & Rose, doodle doo. P 18743 (A).

Epiphyllum oxypetalum (DC.) Haw. Cultivated. HK sight.

Hylocereus undatus (Haw.) Britton & Rose. Cultivated. HK sight.

Mammillaria nivosa Link. LG sight (Scrub Is.), as Neomammillaria nivosa (L.) Britton & Rose.

Melocactus intortus (Miller) Urban, pope's head. HK sight; LG sight (Scrub Is.), as Cereus intortus Miller.

Opuntia cochenillifera (L.) Miller. Cultivated. HK sight.

Opuntia dillenii (Ker Gawler) Haw. LG sight (Scrub Is.); P 18783 (A).

Opuntia rubescens Salm-Dyck. LG sight (Scrub Is.).

Opuntia triacantha (Willd.) Sweet. LG sight (Scrub Is.).

CANELLACEAE

Canella winterana (L.) Gaertner, pepper cinnamint, pepper cinnamom. B 3479, as Canella alba Murray; LG sight (Scrub Is.); P 18558 (A).

CAPPARACEAE

Capparis cynophallophora L., black widdy, parrotbush, snake bush. B 3522; HK 20141 (A); LG sight (Dog Is.); P 18733 (A).

Capparis flexuosa L. LG sight (Dog Is.); P 18586 (A).

Capparis frondosa Jacq., whitescrub. B s.n. (NY), as Capparis baducca L.

Capparis hastata Jacq. HK 20142 (A).

Cleome gynandra L. B s.n.; E 59; HK 20110 (A).

CARICACEAE

Carica papaya L., pawpaw. Cultivated. HK sight.

CASUARINACEAE

Casuarina equisetifolia J. R. & G. Forster, lumber tree. Cultivated and naturalized. HK sight.

CELASTRACEAE

Crossopetalum rhacoma Crantz, maidenberry. B 3489, 3500, both as Rhacoma crossopetalum L.; E 56; HK 20045 (A), 20065 (A); LG sight (Scrub Is.); P 18559 (A).

Elaeodendron xylocarpum (Vent.) A. DC., cuttard. LG sight (Dog Is.); P 18534 (A), 18695 (A).

Gyminda latifolia (Sw.) Urban. B 3479; HK 20043 (A), 20156 (A), 20168 (A); P 18664 (A), 18806 (A).

Maytenus elliptica (Lam.) Krug & Urban. LG sight.

Schaefferia frutescens Jacq. P 18633 (A).

CHENOPODIACEAE

Atriplex pentandra (Jacq.) Standley. LG 2717 (Dog Is.).

Chenopodium murale L. HK 20131 (A).

Salicornia bigelovii Torrey. HK 20118 (A).

Salicornia herbacea L. B 3505a, 3571.

CHRYSOBALANACEAE

Chrysobalanus icaco L., coco plum. P 18778 (A).

COMBRETACEAE

Conocarpus erecta L., buttonwood, pond bush. B 3545; LG sight (Dog Is.); P 18568 (A). Laguncularia racemosa (L.) Gaertner. B 3547; P 18745 (A). Terminalia catappa L., almond. HK sight.

Compositae

Ambrosia hispida Pursh. Cultivated. HK sight.

Bidens cyanapiifolia Kunth. P 18679 (A).

Borrichia arborescens (L.) DC. E 50, 55; LG sight (Dog Is., Scrub Is.); P 18628 (A).

Cosmos sulphureus Cav. Cultivated. HK sight.

Dyssodia tenuifolia Cass. Naturalized. P 18578 (A).

Emilia fosbergii Nicolson. P 18742 (A).

Eupatorium odoratum L. P 18588 (A).

Flaveria bidentata (L.) Kuntze. HK sight.

Lactuca intybacea Jacq. HK 20114 (A); P 18787 (A).

Lagascea mollis Cav., catnip. B s.n.; P 18525 (A).

Parthenium hysterophorus L., mule weed, whitehead, whitetop. B s.n.; E 30; P 18765 (A).

Pectis humifusa Sw. B 3570; P 18660 (A).

Pectis linifolia L. P 18779 (A).

Pluchea symphytifolia (Miller) Gillis. B 3563, as Pluchea odorata (L.) Cass.; HK sight.

Pseudogynoxis confusus (Greenman) Cabrera. Cultivated. HK sight.

Solidago microglossa DC. Cultivated. P 18793 (A).

Sonchus oleraceus L., sowthistle. HK 20140 (A); P 18629 (A), 18788 (A).

Synedrella nodiflora (L.) Gaertner. P 18674 (A).

Tridax procumbens L. HK sight.

Vernonia albicaulis Pers. HK 20164 (A); P 18543 (A).

Vernonia cinerea (L.) Less. HK 20161 (A); P 18641 (A).

Wedelia calycina Rich., marigold. B s.n., as Wedelia buphthalmoides Griseb.; HK 20124 (A); P 18607 (A).

Wedelia trilobata (L.) Hitchc. Cultivated. HK sight.

Xanthium strumarium L. HK sight.

Zinnia multiflora L. Cultivated. HK sight.

CONVOLVULACEAE

Cuscuta americana L., dodder, love vine, yellow dod. B 3480; E 31; HK 20100 (A); P 18601 (A).

Evolvulus antillanus Powell. B 3565, LG 2475, 2476, 2478, 2504, 2505, all as Evolvulus argyreus Choisy.

Evolvulus convolvuloides (Willd.) Stearn. P 18686 (A).

Evolvulus glaber Sprengel. B 3564 (NY); P 18686 (A).

Evolvulus sericeus Sw. P 18647 (A).

Ipomoea batatas L., sweet potato. Cultivated. HK sight.

Ipomoea carnea Jacq. subsp. *fistulosa* (Martius) Austin, morning glory. Cultivated. HK sight.

Ipomoea eggersii (House) Austin, wild potato. *B 3471, 3515bis*, both as *Ipomoea arenaria* (Choisy) Steudel; *E 35*; *HK 20061* (A); *P 18542* (A).

Ipomoea nil (L.) Roth. HK sight.

Ipomoea pes-caprae (L.) R. Br. subsp. brasiliensis (L.) Ooststr., sea bean. B s.n.

Ipomoea triloba L. P 18520 (A).

Jacquemontia cayensis Britton. HK 20146 (A); P 18646 (A), 18802 (A).

Jacquemontia pentantha (Jacq.) G. Don, black wiss. B 3544.

Jacquemontia solanifolia (L.) Hallier f. HK 20098 (A); P 18546 (A).

Merremia dissecta (Jacq.) Hallier f., nio, noyeaux, sprain bush. B s.n.; P 18590 (A).

CRASSULACEAE

Bryophyllum pinnatum (Lam.) Kurz, Christmas plant. B s.n.; HK sight.

Kalanchoë blossfeldiana Poelln. Cultivated. HK sight.

Kalanchoë tubiflora (Harvey) Raym.-Hamet. Cultivated and naturalized. HK 20051 (A).

CRUCIFERAE

Brassica carinata A. Braun. HK 20112 (A).

Brassica oleracea L. var. botrytis L., cauliflower. HK sight.

Brassica oleracea L. var. capitata L., cabbage. HK sight.

Cakile lanceolata (Willd.) O. Schulz. HK 20122 (A); P 18623 (A).

Lepidium virginicum L. B s.n. (NY).

CUCURBITACEAE

Cucumis anguria L. HK 20075 (A).

Cucurbita moschata Duchesne ex Poiret, pumpkin. Cultivated. HK sight.

Momordica charantia L., maiden apple. HK sight.

EUPHORBIACEAE

Acalypha amentacea Roxb. subsp. wilkesiana (Muell. Arg.) Fosb. Cultivated. HK sight. Acalypha chamaedrifolia (Lam.) Muell. Arg. HK 20127 (A).

Acalypha poiretii Sprengel. B 3451; P 18797 (A).

Argythamnia candicans Sw., tea. B 3466; HK 20167 (A); LG sight (Scrub Is.); P 18565 (A).

Breynia disticha J. R. & G. Forster. Cultivated. HK sight.

Chamaesyce blodgettii (Engelm.) Small. HK 20058 (A); P 18651 (A), 18658 (A).

Chamaesyce hirta (L.) Millsp. HK 20080 (A); P 18576 (A).

Chamaesyce hypericifolia (L.) Millsp. P 18639 (A).

Chamaesyce mesembrianthifolia (Jacq.) Dugand. B 3561, 3567, both as Chamaesyce buxifolia (Lam.) Small; E 48; HK 20121 (A); LG sight (Dog Is.); P 18809 (A).

Chamaesyce multinodis (Urban) Millsp. P 18591 (A).

Chamaesyce pilulifera L. B s.n.

Chamaesyce prostrata Aiton. LG sight (Scrub Is.); P 18591 (A).

Codiaeum variegatum (L.) Blume. Cultivated. HK sight.

Croton betulinus Vahl, nanny bunch. B 3465, 3499; HK 20159 (A); LG sight (Scrub Is.); P 18553 (A).

Croton flavens L., balsam. B 3477, 3528, 3599; E 39; HK 20085 (A); LG sight (Dog Is., Scrub Is.); P 18522 (A), 18532 (A).

Croton lobatus L. B s.n.; HK 20147 (A); P 18636 (A).

Croton microcarpus Ham., sweet marjoram. B s.n., as Croton ovalifolius Vahl; HK 20109 (A); LG 2471, 2489, 2506, P 18665 (A), as Croton nummulariaefolius A. Rich.

Euphorbia cyathophora Murray. HK 20165 (A); P 18583 (A).

Euphorbia heterophylla L., Bethlehem star. P 18637 (A).

Euphorbia lactea Haw. Cultivated. HK sight.

Euphorbia leucocephala Lotsy. Cultivated. HK sight.

Euphorbia pulcherrima Willd., Christmas plant. Cultivated. HK sight.

Euphorbia tirucalli L. Cultivated and naturalized. HK sight.

Gymnanthes lucida Sw., scrub bush. P 18805 (A).

Hippomane mancinella L., manchineel. B s.n.; LG sight (Dog Is., Scrub Is.); P 18807 (A).

Jatropha curcas L., barricata bush. HK sight.

Jatropha gossypifolia L., physic nut. HK 20070 (A); LG sight (Dog Is.); P 18680 (A).

Jatropha integerrima Jacq. Cultivated. HK sight.

Jatropha multifida L. Cultivated. HK sight.

Manihot esculenta Crantz. Cultivated. HK sight.

Pedilanthus tithymaloides (L.) Poit., bleeding heart, candle flame bush. B 3572; P 18616 (A).

Phyllanthus amarus Schum. & Thonn., churchweed. HK 20115 (A), 20148 (A); P 18638 (A).

Phyllanthus epiphyllanthus L., bilbush. B 32566; E 33; LG sight (Scrub Is.); HK 20078 (A); P 18516 (A).

Ricinus communis L., castor nut. Naturalized. HK sight.

GOODENIACEAE

Scaevola plumieri (L.) Vahl, candlewood. B 3563; HK 20123 (A); P 18781 (A).

GUTTIFERAE

Clusia rosea L., autograph tree, pitch apple. HK 20154 (A); P 18631 (A).

LABIATAE

Leonotis nepetifolia (L.) Aiton, hollow stalk. P 18702 (A).

Ocimum micranthum Willd., French basil. HK 20072 (A).

Plectranthus amboinicus (Lour.) Launert, stingy time. Cultivated. B s.n.

Plectranthus blumei (Bentham) Launert. Cultivated. HK sight.

Salvia occidentalis L., cat mint. P 18575 (A).

Salvia serotina L., cat mint. B s.n.; HK 20144 (A); P 18662 (A).

LAURACEAE

Cassytha filiformis L. B 3523; P 18668 (A).

Persea americana Pers. Cultivated. B 3491a.

LEGUMINOSAE

Acacia farnesiana Willd., queen casha. LG sight (Dog Is.); P 18528 (A).

Acacia macracantha Humb. & Bonpl., kushar. HK 20087 (A); P 18774 (A).

Acacia nilotica (L.) Willd., casha, cassi, kushar. P 18596 (A).

Albizia lebbeck (L.) Bentham. Cultivated. HK sight.

Caesalpinia bonduc (L.) Roxb., nicker tree. P 18529 (A).

Caesalpinia coriaria (Jacq.) Willd. P 18671 (A).

Caesalpinia divergens Urban, red nicker. HK 20128 (A); LG sight (Dog Is., Scrub Is.), as Guilandina divergens Urban; P 18562 (A).

Caesalpinia pulcherrima Sw., pride of Barbados. Cultivated. P 18759 (A).

Cajanus cajan (L.) Huth, Angola pea, pigeon pea. Cultivated. HK sight.

Canavalia rosea (Sw.) DC. P 18782 (A).

Centrosema virginianum Bentham. HK 20158 (A); P 18547 (A).

Chamaecrista glandulosa (L.) Greene var. swartzii (Wikström) Irwin & Barneby, wild tamarind. B 3516; P 18563 (A).

Crotalaria incana L. P 18698 (A), 18734 (A).

Crotalaria retusa L., shack-shack. P 18736 (A).

Crotalaria verrucosa L. HK 20152 (A); P 18655 (A).

Delonix regia (Bojer) Raf., flamboyant. Cultivated. HK sight.

Desmanthus virgatus (L.) Willd. HK 20107 (A); P 18604 (A).

Desmodium frutescens Schindler var. angustifolium Schindler. LG 2515.

Erythrina variegata L. var. orientalis (L.) Merr. Cultivated. HK sight.

Galactia dubia DC. B 3503; HK 20069 (A); P 18548 (A).

Gliricidia sepium (Jacq.) Kunth, quick set. HK sight.

Indigofera suffruticosa Miller. P 18701 (A).

Indigofera tinctoria L. HK 20111 (A); P 18735 (A).

Lablab purpureus (L.) Sweet, bonavist. Cultivated. HK sight.

Leucaena leucocephala (Lam.) De Wit, mimosa, wild tamarind. B s.n.; P 18764 (A).

Neptunia pubescens Bentham. P 18750 (A).

Parkinsonia aculeata L. Cultivated and naturalized. HK sight.

Pithecellobium unguis-cati (L.) Martius, bread and cheese, crabwood, grooven-eye. B s.n.; E 57; LG sight (Dog Is., Scrub Is.); P 18540 (A).

Rhynchosia minima DC. B 3486; P 18574 (A).

Rhynchosia reticulata (Sw.) DC. HK 20153 (A); P 18549 (A).

Senna bicapsularis (L.) Roxb. E 58; P 18530 (A).

Senna italica Miller. B s.n., as Cassia obovata Colladon.

Senna obcordata (Wikström) Britton. LG 2473, as Cassia obcordata Sw.

Senna obtusifolia (L.) Irwin & Barneby. P 18672 (A).

Senna occidentalis (L.) Link, bush coffee, stinkweed. B s.n., as Cassia occidentalis L.; HK 20133 (A); P 18795 (A), 18816 (A).

Senna siamea (Lam.) Irwin & Barneby. Cultivated. HK sight.

Sesbania grandiflora (L.) Pers. Cultivated. HK sight.

Sophora tomentosa L. B 3490; LG 2481, 2494, 2496, 2497, 2498, 2502; P 18580 (A).

Stylosanthes hamata (L.) Taubert, sweetweed, wild Isaac. B 3536; HK 20083 (A); P 18763 (A).

Tamarindus indica L., tamarind. HK sight.

Tephrosia cinerea Pers. P 18700 (A).

LOGANIACEAE

Spigelia anthelmintha L. B 3474; HK 20163 (A).

LORANTHACEAE

Dendropemon caribaeus Krug & Urban. HK 20132 (A).

Phoradendron trinervium (Lam.) Griseb., mistletoe. B s.n.; HK 20049 (A), 20050 (A); P 18564 (A).

LYTHRACEAE

Lawsonia inermis L., mignonette. Cultivated. HK sight.

MALPIGHIACEAE

Byrsonima lucida Rich., gooseberry, goosie tree. B 3501, 3511; E 36; HK 20166 (A); P 18536 (A).

Galphimia gracilis Bartling. Cultivated. HK sight.

Heteropteris purpureus (L.) Kunth. E 41.

Malpighia emarginata Sessé & Mociño ex DC., sherry. B s.n., as Malpighia punicifolia L.; P 18777 (A).

Malpighia linearis Jacq. LG sight (Scrub Is.).

Stigmaphyllon diversifolium (Kunth) A. Juss. B 3513; HK 20120 (A); LG 2486, 2499; P 18581 (A).

Stigmaphyllon emarginatum (Cav.) Juss. HK 20093 (A), 20097 (A).

Stigmaphyllon lingulatum (Poiret) Small. B 3452, as Stigmaphyllon periplocifolium A. Juss.; P 18519 (A).

MALVACEAE

Abelmoschus esculentus (L.) Moench, okra. Cultivated. HK sight.

Abutilon indicum (L.) Sweet. B s.n.

Abutilon umbellatum (L.) Sweet. P 18766 (A).

Bastardia viscosa (L.) Kunth. P 18678 (A).

Gossypium barbadense L. Cultivated. HK sight.

Herissantia crispa (L.) Briz. HK 20160 (A); P 18694 (A).

Hibiscus rosa-sinensis L. Cultivated. HK sight.

Hibiscus sabdariffa L., sorrel. Cultivated. HK sight.

Malvastrum corchorifolium (Desr.) Britton. E 46; P 18585 (A).

Malvastrum coromandelianum (L.) Garcke. B 3449, as Malvastrum tricuspidatum A. Gray.

Sida abutilifolia Miller. HK 20116 (A); P 18681 (A).

Sida acuta Burman f., jingle weed. P 18756 (A).

Sida ciliaris L. B 3493, 3535; HK 20073 (A); P 18649 (A).

Sida glutinosa Cav. P 18594 (A).

Sida procumbens Sw. P 18681 (A).

Sida spinosa L., wild Isaac. B 3461a; HK 20062 (A); P 18673 (A).

Thespesia populnea (L.) Sol. ex Correa. HK sight.

MELIACEAE

Azadirachta indica A. Juss., neem. Cultivated. HK 20113 (A).

Melia azedarach L. Cultivated. HK sight.

Swietenia mahagoni Jacq. HK sight; LG sight.

MORACEAE

Artocarpus altilis (Parkinson) Fosb., breadfruit. Cultivated. HK sight.

Ficus citrifolia Miller. LG sight (Scrub Is.); P 18644 (A).

Ficus elastica Roxb., rubber tree. Cultivated. HK sight.

MORINGACEAE

Moringa oleifera Lam. Cultivated or escaped. HK sight.

MYRTACEAE*

Eugenia axillaris (Sw.) Willd., sneeze berry. HK 20056 (A); LG sight (Scrub Is.); P 18815 (A).

^{*}An unknown member of this family was collected by Le Gallo as nos. 2480 and 2493 (May 9, 1955) near the Catholic church. Since this time a new church was built, but the old building remains and is surrounded by dense scrub vegetation. Our intensive search failed to locate a comparable plant.

Eugenia foetida Pers., white wattling. HK 20094 (A), 20143 (A); P 18518 (A), 18552 (A), 18689 (A), 18748 (A).

Eugenia monticola (Sw.) DC., cuttard. B 3461, 3477a, 3520.

Pimenta racemosa (Miller) J. Moore, bay leaf. P 18622 (A).

Psidium guajava L. B s.n.; HK sight.

Psidium longipes (Berg) McVaugh var. orbicularis (Berg) McVaugh. B 3509 (NY), as Myrtus anguillensis Urban; LG 2067, 2492, 2508, 2517; P 18801 (A).

NYCTAGINACEAE

Boerhavia coccinea Miller. HK 20117 (A); P 18579 (A).

Boerhavia scandens L., piecrust. B 3451; HK 20091 (A); LG sight (Dog Is.); P 18602 (A).

Bougainvillea glabra Choisy. Cultivated. HK sight.

Guapira fragrans Dum.-Cours. P 18814 (A).

Mirabilis jalapa L. Cultivated. HK sight.

Pisonia subcordata Sw., loblolly. B s.n.; P 18785a (A), 18785b (A).

OLEACEAE

Forestiera eggersiana Krug & Urban. HK 20139 (A); P 18544 (A), 18798 (A). Jasminum fluminense Vell. Cultivated. P 18768 (A).

PAPAVERACEAE

Argemone mexicana L., thistle. B s.n.; E 80; LG sight (Dog Is.); P 18741 (A).

PASSIFLORACEAE

Passiflora edulis Sims, passionfruit. Cultivated. HK sight.

Passiflora foetida L., pops. HK 20096 (A).

Passiflora suberosa L., pops. B 3498; LG 2510; P 18538 (A).

PERIPLOCACEAE

Cryptostegia grandiflora R. Br. Cultivated and naturalized. HK sight.

PHYTOLACCACEAE

Rivina humilis L. P 18813 (A).

PLUMBAGINACEAE

Plumbago auriculata Lam. Cultivated. HK sight.

Plumbago scandens L., doctor John. HK 20081 (A); P 18600 (A).

POLYGONACEAE

Antigonon leptopus Hooker & Arn. Naturalized. HK sight.

Coccoloba krugii Lindau, wild grape. B 3472; HK 20052 (A), 20068 (A); LG 2058, 2069; P 18521 (A).

Coccoloba krugii Lindau × Coccoloba uvifera (L.) L., wild grape. HK 20135 (A), 20136 (A) (each of these collections represents a slightly different phase of the hybrid).

Coccoloba microstachya Willd. B 3458, 3483 (NY), both as Coccoloba diversifolia Jacq. Coccoloba uvifera (L.) L., sea grape. P 18612 (A).

PORTULACACEAE

Portulaca halimoides L., pussley. B 3552; E 69; HK 20084 (A); P 18572 (A). Portulaca oleracea L. B 3553; P 18683 (A).

PUNICACEAE

Punica granatum L. Cultivated and naturalized. HK 20055 (A).

RHAMNACEAE

Colubrina arborescens (Miller) Sarg., mawby bark. E 34; HK 20066 (A); LG 2051, 2068 (both Dog Is.), both as Colubrina ferruginosa Brongn.; P 18645 (A).

Krugiodendron ferreum (Vahl) Urban, ebony berry. HK 20162 (A); P 18751 (A).

Reynosia uncinata Urban, sloe. B 3470; HK 20092 (A); P 18533 (A).

Zizyphus mauritiana Lam., doms, pommeserrette. HK 20054 (A); P 18654 (A).

Zizyphus rignonii Delponte, thorn. B 3452a (NY), 3488 (not located), 3506a (NY), all as Zizyphus havanensis; HK 20102 (A); LG 2053, 2066, sight (Scrub Is.), all as Sarcomphalus domingensis (Sprengel) Krug & Urban; P 18535 (A).

RHIZOPHORACEAE

Rhizophora mangle L., whistle. HK sight; LG sight.

ROSACEAE

Rosa indica L., rose. Cultivated. HK sight.

RUBIACEAE

Antirhea acutata (DC.) Urban, mutton polly. B 3475a; HK 20099 (A), 20101 (A); LG 2071; P 18605 (A).

Erithalis fruticosa L., candlebush. B 3486; E 40; HK 20044 (A); P 18650 (A).

Ernodea littoralis Sw., cough bush, stinging whip. B 3487, 3510; E 32; HK 20047 (A); P 18545 (A).

Exostema caribaeum Roemer & Schultes, fustic. B 3476, 3502; E 37; HK 20060 (A); P 18557 (A).

Guettarda scabra Lam., chink, wild guava. B 3464, 3506; HK 20095 (A); P 18556 (A). Ixora casei Hance. Cultivated. HK sight.

Ixora coccinea L. Cultivated. HK sight.

Randia aculeata L., five-finger tree. B 3450a; HK 20053 (A); P 18560 (A).

Rondeletia anguillensis R. Howard & E. Kellogg, sp. nov. Figures 4, 5.

Frutex cruciatus, foliis minutissimis, minoribus quam 4 mm longis, floribus distylis. Stiff shrub up to 1 m tall; branches divaricate, spine tipped; bark smooth, grayish; young growth densely appressed-white-puberulent, glabrescent, stems reddish; leaves and flowers clustered on short shoots. Stipules interpetiolar, fused to form truncate or obtuse collar with ciliate margin. Leaves with petiole 0.2-0.5 mm long, white-puberulent; blade suborbicular when young, becoming ovate to elliptic, 1.5-3.8 × 1.2-2.7 mm, the apex rounded, the base rounded, the margin thickened-revolute, the adaxial surface shiny, dark green, glabrous, the abaxial surface white-velutinous, the midvein white abaxially. Flowers stiffly erect to horizontal, 4-merous, subtended by crateriform fused bracts 0.6-0.8 mm long and with acute to acuminate lobes, distylous; calyx campanulate, 1.5-2.8 mm long, green, appressed-puberulent, the lobes linear, 0.7-1.1 mm long; corolla salverform, pale pink, appressed-white-puberulent externally, the tube 4-5.7 mm long in short-styled plants and 3.2-3.7 mm long in long-styled ones, glabrous within, the lobes 0.8–1.6 mm long, puberulent above, with annulus of small, raised tubercles at throat; stamens inserted on corolla tube, the filament < 0.2 mm long, filiform, the anther dorsifixed, oblong to slightly cuneate, 1.4-1.6 mm long in both forms, the pollen 3-colpate in short-styled plants, 3- and 4-colpate in long-styled ones; style linear, 2-2.2 mm long and sparsely retrorse-pubescent in short-styled plants, 4-4.7 mm long and nearly glabrous in long-styled ones, the stigmas 2, 0.8 mm long

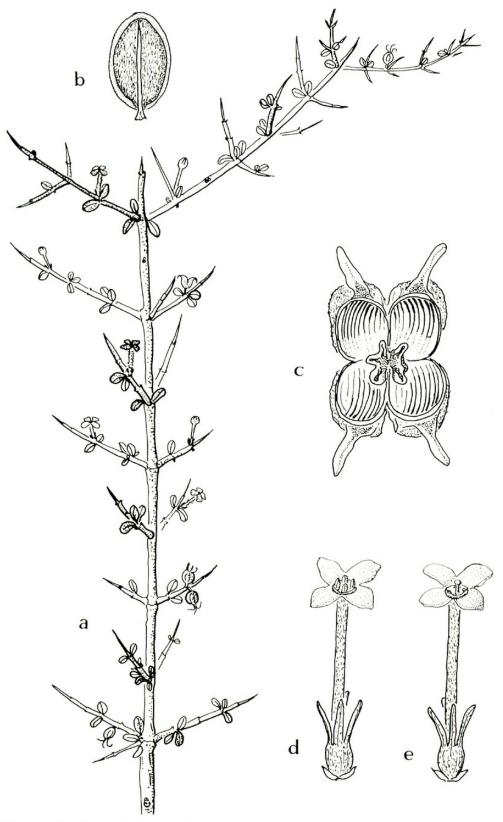


FIGURE 4. Rondeletia anguillensis: a, habit (Proctor 18571, A), \times 0.75; b, lower surface of leaf (Proctor 18571), \times 7; c, dehisced fruit (Proctor 18571), \times 11; d, shortstyled flower (Howard & Kellogg 20105, A), \times 7; e, long-styled flower (Howard & Kellogg 20103, A), \times 10. (a drawn by M. Dykens, b-e by I. Al-Shehbaz.)

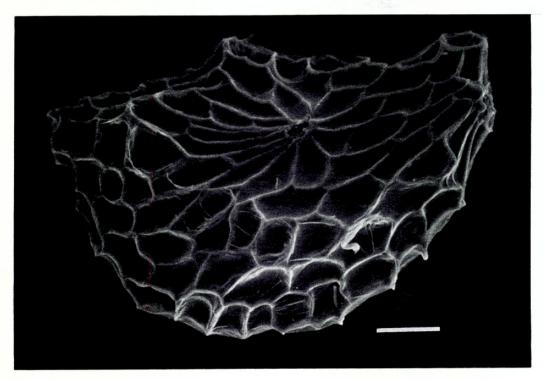


FIGURE 5. Rondeletia anguillensis (Howard & Kellogg 20103, A), seed. Scale = $100 \mu m$.

in short-styled plants and 0.3 mm in long-styled ones; the ovary 2-locular, obconical, 1.2 mm long, stiffly erect-pubescent. Fruit capsular, globose, 1.8–2.9 mm in diameter, initially loculicidal, subsequently septicidal; calyx lobes persisting and becoming 0.8–1.7 mm long; placenta peltate, reniform in longitudinal section, becoming massive, hemispheric; seeds numerous, 0.72–0.75 mm long, imbricate upward, irregular in outline, finely reticulate.

Type. Anguilla, east end of island, 6 Feb. 1985, R. Howard & E. Kellogg 20105 (holotype, A).

Specimens seen. Anguilla: E end of island, R. Howard & E. Kellogg 20103 (A); vic. of Little Bay, near Flat Cap Point, Proctor 18571 (A).

Spermacoce confusa Rendle, chicken weed. B 3542; HK 20064 (A); P 18642 (A). Strumpfia maritima Jacq. B 3551; E 49; LG sight (Dog Is., Scrub Is.); P 18617.

RUTACEAE

Amyris elemifera L., ironwood. B 3481; HK 20076 (A); LG 2056 (Scrub Is.); P 18517 (A).

Citrus aurantifolia (Christm.), swingle lime. Cultivated. HK sight.

Citrus aurantium L., sour orange. Cultivated. HK sight.

Citrus paradisi Macfad., grapefruit. Cultivated. HK sight.

Citrus sinensis (L.) Osbeck, sweet orange. Cultivated. HK sight.

Murraya paniculata (L.) Jack. Cultivated. HK sight.

Zanthoxylum flavum Vahl, alexander. B 3525; HK 20063 (A); LG sight (Scrub Is.); P 18541 (A), 18670 (A).

Zanthoxylum punctatum Vahl, ironwood. B 3469, 3526, 3532, all as Fagara trifoliata Sw.; HK 20077 (A).

Zanthoxylum spinifex (Jacq.) DC., ramgoat. B 3529, as Fagara spinifex Jacq.; HK 20090 (A); P 18584 (A), 18799 (A).

SAPINDACEAE

Cardiospermum corindum L. P 18554 (A).

Hypelate trifoliata Sw., ironwood. B 3508; LG 2410, 2477, 2479, 2514; P 18573 (A). Meliococcus bijugatus L., genip. Cultivated. HK sight.

SAPOTACEAE

Bumelia obovata (Lam.) DC., thorn tree. HK 20048 (A); LG sight (Dog Is.); P 18589 (A). Bumelia salicifolia (L.) Sw., mass wood. B 3542; HK 20138 (A); P 18642 (A).

SCROPHULARIACEAE

Capraria biflora L., tasane. LG sight (Dog Is.); P 18697 (A). Lindernia diffusa (L.) Wettst. HK 20074 (A).

SIMAROUBACEAE

Castela erecta Turpin, cockspur. HK 20089 (A); LG 2054, 2065 (both Scrub Is.), 2470 (Dog Is.), 2500; P 18592 (A), 18606 (A).

Suriana maritima L. B 3560; E 51; LG sight (Scrub Is.); P 18614 (A).

SOLANACEAE

Capsicum frutescens L., pepper. Cultivated. HK sight.

Datura stramonium L. P 18738 (A).

Lycium americanum Jacq. B 3546; HK 20134; LG sight (Dog Is., Scrub Is.); P 18747 (A).

Lycopersicon lycopersicum (L.) Karsten, tomato. Cultivated. HK sight.

Physalis angulata L. P 18796 (A).

Solandra guttata D. Don. Cultivated. HK sight.

Solanum melongena L., bolonge, eggplant. Cultivated. HK sight.

Solanum racemosum Jacq., canker berry, cob berry, conka berry. B s.n.; E 53; HK 20088 (A); LG sight (Dog Is., Scrub Is.); P 18527 (A).

STERCULIACEAE

Melochia pyramidata L. P 18524 (A).

Melochia tomentosa L. B 3478; E 60; HK 20082 (A); LG sight (Scrub Is.); P 18593 (A). Waltheria glabra Poiret. P 18569 (A).

Waltheria indica L., marshmallow. B 3496, as Waltheria americana L.; E 43; P 18603 (A).

TAMARICACEAE

Tamarix chinensis Lour. Cultivated. HK sight.

THEOPHRASTACEAE

Jacquinia arborea Vahl, scrub bush. HK 20046 (A); LG sight (Scrub Is.); P 18567 (A). Jacquinia berterii Sprengel. B 3558; E 61; HK 20059 (A); LG 2060, 2063 (both Scrub Is.); P 18537 (A), 18632 (A).

TILIACEAE

Corchorus hirsutus L., marshmallow. B 3473, 3519; LG sight (Scrub Is.); P 18570 (A), 18582 (A).

Corchorus siliquosus L., calaloo. B 3463; P 18561 (A).

TURNERACEAE

Turnera ulmifolia L. P 18731 (A).

ULMACEAE

Celtis iguanaea (Jacq.) Sarg. B s.n.

Umbelliferae

Anethum graveolens L. P 18676 (A).

URTICACEAE

Pilea serpyllifolia (Poiret) Wedd. Cultivated. HK sight.

VERBENACEAE

Citharexylum fruticosum L. P 18624 (A).

Clerodendrum aculeatum (L.) Schldl. B s.n.; LG sight (Dog Is.); P 18740 (A).

Duranta erecta L. B s.n., as Duranta repens Kunth.

Lantana camara L., sage cop. P 18786 (A).

Lantana involucrata L., sage, sage cop. B 3476, 3504 (NY); E 44; HK 20106 (A); P 18526 (A), 18661 (A).

Lippia reptans Kunth. B 3475; LG sight (Dog Is.).

Lippia strigulosa Martens & Gal. P 18677 (A).

Priva lappulacea (L.) Pers. P 18599 (A).

Stachytarpheta jamaicensis (L.) Vahl, worry wine. B 3497; HK 20157 (A); P 18775 (A).

VIOLACEAE

Hybanthus portoricensis Urban. LG sight (Scrub Is.).

VITACEAE

Cissus verticillatus (L.) Nicolson & Jarvis. B s.n., as Cissus sicyoides L.

ZYGOPHYLLACEAE

Guaiacum officinale L., lignum vitae. Cultivated. P 18800 (A). Kallstroemeria maxima (L.) Torrey & A. Gray. P 18685 (A).



Howard, Richard A. and Kellogg, Elizabeth Anne. 1987. "Contributions to a Flora of Anguilla and Adjacent Islets." *Journal of the Arnold Arboretum* 68(1), 105–131. https://doi.org/10.5962/p.185942.

View This Item Online: https://www.biodiversitylibrary.org/item/33631

DOI: https://doi.org/10.5962/p.185942

Permalink: https://www.biodiversitylibrary.org/partpdf/185942

Holding Institution

Missouri Botanical Garden, Peter H. Raven Library

Sponsored by

Missouri Botanical Garden

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Arnold Arboretum of Harvard University

License: http://creativecommons.org/licenses/by-nc-sa/3.0/

Rights: https://biodiversitylibrary.org/permissions

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.