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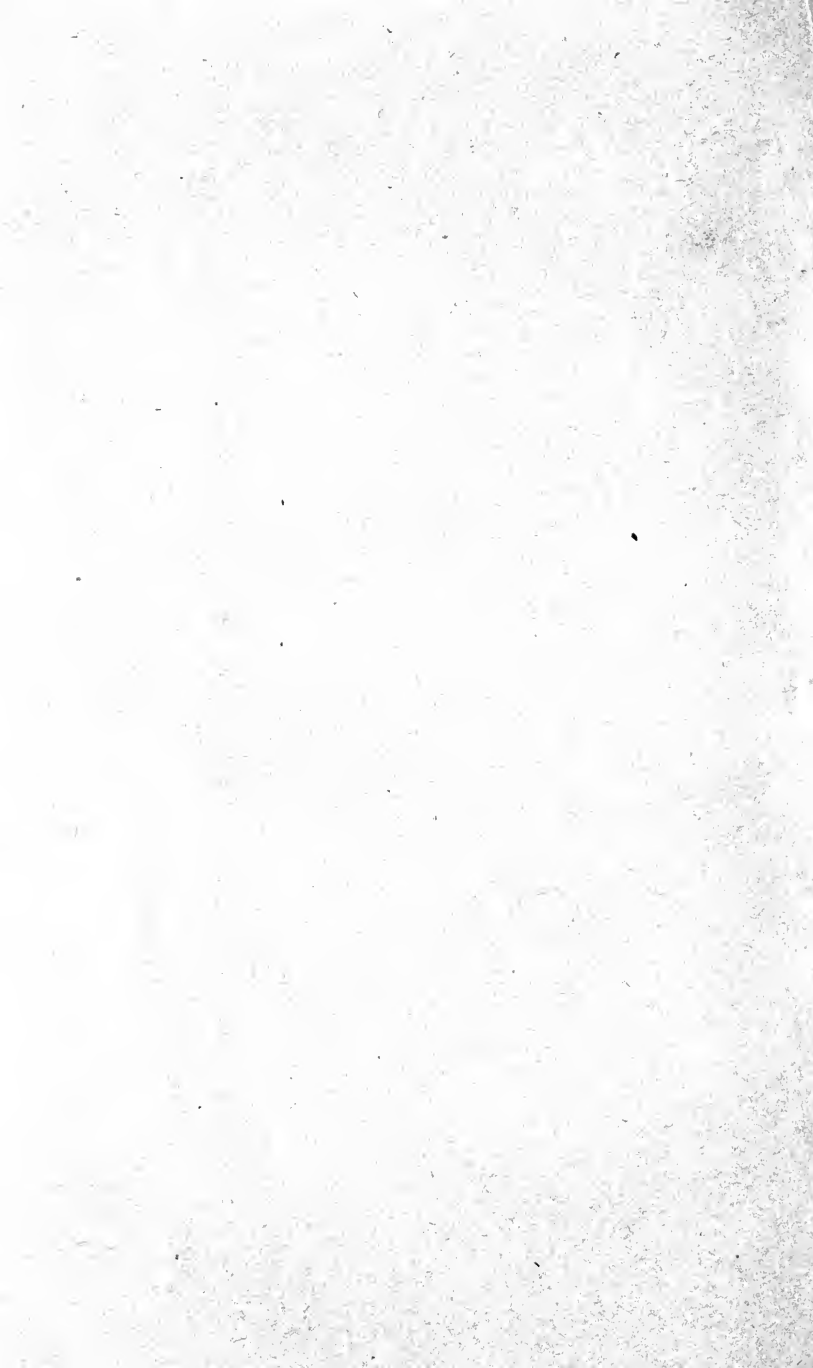


**BOTANY OF THE BERMUDAS**

by H. B. SMALL



PUBLISHED BY  
S. NELMES - - - THE TOWER  
HAMILTON, BERMUDA





# BOTANY OF THE BERMUDAS



*Henry B. Small*  
BY  
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PRODUCTS AND MANUFACTURES, MINES AND MINERALS,  
FORESTS OF CANADA, CANADIAN ORNITHOLOGY, &c.



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## PREFACE.

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A continual and increasing demand from tourists, especially ladies, who are generally most enthusiastic on Botanical research when visiting this island, has induced the publishers to place this handbook prepared by a well known Botanist, on the market. Apart from a small Botany written by the author and a small pamphlet years ago, written by Mr. Reade, (both now out of print) there is no work on the subject available; apart from Verrills' Bermuda, an expensive volume, and out of the reach of a student's purse. Our object in placing this Botany before the public, is that a Botanist, or a would-be Botanist, may have a reliable handbook. The Mss. has been submitted to more than one expert, who pronounced it as perfectly reliable, and all thoroughly recommend it, so long as the price should place it within everybodys reach.



## KEY TO CLASSIFICATION.

### CLASS I.—Dicotyledones.

#### DIVISION I.—Polypetalae.

“ II.—Monopetalae.

“ III.—Apetalae.

#### NATURAL ORDER, RANUNCULACEAE.

*Ranunculus Parveflorus*. Linn. (buttercup.) This plant with its yellow flowers needs no description. Common everywhere in dry ground. Annual. Spring months.

*Ranunculus Repens*. Linn. (creeping buttercup.) Long runners; otherwise similar to above. Common on roadsides. Perennial. July to September.

*Ranunculus Muricatus*. Linn. More abundant in damp, moist ground than the preceding. Its stem is erect; leaves are smoother, glossy and shining and of a light-green colour. Annual. February to June.

The flowers are yellow.

#### Natural Order, Magnoliaceae.

*Magnolia Grandiflora*. Linn. A handsome tree with showy flowers, white and pink; leaves leathery, dark-green shining. A large tree at Mr. Peniston's; two fine young trees in the Hon. Sir. T. J. Wadson's garden on Cedar Avenue; also a fine specimen at the home of Mr. F. K. Outerbridge, at the foot of Causeway Hill, Hamilton Parish; one at "The Willows," the home of Mr. Ephraim Moyter, Pembroke, and one at "Summerside," Somerset, the home of Mr. Leicester Curtis. There are other specimens to be found in different parts of the colony. Summer months.

*Liliodendron Tulipifera*. Linn. (tulip tree, or white wood.) A tall showy tree with flowers pinkish-white, resembling somewhat a small tulip. A tree at Par la Ville, Hamilton; also one at Pembroke Hall. Early spring months.

#### Natural Order, Anonaceae.

The only trees or shrubs in Bermuda representing this order are West Indian fruit trees. Formerly they were cultivated to a certain extent, and they have taken well to the island, but of late years they have been neglected. They are:—

*Anona Muricata*. Linn. (soursop); *A. squamosa*. Linn. (sugar apple or sweetsop); *a. cheramoia*, Mills. (cherimoyer); *a. reticulata*, Linn. (custard apple.)

To Europeans, the taste of the West Indian fruit, like the taste for olives, is acquired.

### Natural Order, Papaveraceae.

*Argemone Mexicana*. Linn. (Stinging thistle; prickly poppy). Very abundant on waste ground and also in unused cultivated soil. Its prickly leaves, spotted<sup>d</sup> with white, half clasp the stem, and its bright yellow flowers make it most conspicuous. Annual. February to July.

*Papaver Dubium*. Linn. (red poppy.) Erect hairy stem from six to twelve inches high, with bright scarlet single flowers. Grows in fields and waste ground. Very showy; flowers are two inches in diameter. Annual. February to March.

*Papaver Somniferum*. Linn. (opium poppy.) A weed in waste ground, but is cultivated for its medicinal properties. Flowers large, double, of various colours—pale, purple, pink or white predominating. It is a showy flower for background in gardens, growing three feet high. Annual. Summer months.

*Fumaria Agraria* or *Officinalis*. Linn. (fumitory.) A slender, much-branched, brittle, delicately foliaged plant, with pink flowers tipped with purple; stems intertwined or tangled, two feet or more in length inclined to climb. Flowers a quarter of an inch long. Is very abundant and a troublesome weed. Annual. Nearly all the year.

*Fumaria Densiflora*. (fumitory) similar to the above, but with more lace-like foliage. Flowers pale purple, dark at tips. Common along exposed fences and old walls with a warm aspect, as well as on the roadsides. Annual. November to March.

### Natural Order, Cruciferae.

*Nasturtium Officinale*. R. Br. (water-cress) said by Lefroy to be abundant in Pembroke Marsh, but, if so formerly, it must have died out, as I failed to find it or to learn of any traces of it. It is doubtful if it would thrive in brackish water. Perennial. It has been grown in tanks at Government House; also in some old tanks adjoining the Rectory (formerly the Government House) St. George's where it still grows.

*Sisymbrium Officinale*. Scop. (wild or hedge mustard.) A common weed, known also as *Sinapis nigra*, growing to two feet high, with yellow flowers on a long stalk. It is a troublesome weed, with small blossom but densely flowering. Annual. May.

*Brassica Sinapistrum* or *Sinapis Arvensis*. Boiss. (charlock) Very similar to the above: flowers but somewhat larger, and so densely grown as to give a field a yellow appearance: seed pods one and a half-inch to two inches long, on spreading stalks. A terrible weed for farmers and planters. Annual. March to June.

*Senebiera Didyma*. Pers. (star of the earth; wart cress; swine grass.) The first name is taken from the star-like leaves close to the ground, covering in the second year large patches. Flowers very small, white. Common on waste ground. Biennial. May.

*Lepidium Virginicum*. Linn. (pepper grass.) Common everywhere on waysides and on cultivated land. Leaves lance-shaped, slightly toothed. Very minute white flowers. Slightly hairy stem one to two feet high. Annual. October to June.

*Capsella Bursa-Pastoris*. Moh. (Shepherd's purse; locally styled "The Poor man's weather glass.") Leaves near root, spreading on the ground; flowers small, white, followed by triangular seed pods, purse, or pouch-like. A weed in garden, becoming yearly more abundant. Stem from six to twelve inches, high. Annual. November.

*Iberis Violacea*. Ait. (candy-tuft.) Originally a flower, it has spread profusely in some localities especially in old disused quarries. An old quarry on the northern outskirts of Hamilton is full of it. Seldom reaches one foot high. Annual. Spring and early summer.

*Cakile Maritima*. Scop. or *aequalis*. (scurvy grass) Grows on seaside rocks and in sandy bays. It is mentioned by the early discoverers. A smooth, fleshy plant, one to two feet high, with lilac flowers half an inch wide. Leaves two to three inches long, divided, oval, and upper ones lanced-shaped.

Reade expresses a doubt about this being real scurvy grass (*cochlearia officinalis*.) It is sometimes called "See rocket." Annual. October to June, and often later.

*Alyssum Maritimum*. Linn. (*Alyssum*) Somewhat resembling candy-tuft; grows from one to two feet high; leaves hoary, narrow, acute, one to two inches long, one-sixth of an inch wide. Found on sandy roadsides near the sea. Flowers small, white, slightly odorous. Annual. (Omitted by Lefroy.)

*Raphanus Raphanistrum*. Linn. (wild radish.) One to two feet high: very similar to garden radish only the flowers are a pale yellow. Annual. October to April.

*Raphanus Satirus*. Linn. Flowers pale purple followed by pods from one to two inches long; is abundant on the waysides and on waste ground. Annual. Early spring. (Omitted by Lefroy.)

*Malthiola Picana*. R. Br. (wild stock.) Shrubby with hoary leaves and handsome purple flowers in branches. Stems one to two feet high. Seed-pod three inches long. Grows along seashore, chiefly in Warwick parish. It is doubtless the origin of the garden varieties. Annual. May.

#### Natural Order Capparideae.

*Cleome Viscosa*, Wild. (cleome.) An erect plant twelve to eighteen inches high, densely covered with sticky glandular hairs. Leaves divided to the base into three or five segments. Flowers yellow, half an inch wide. Seed capsule remarkable for its length, which is some three inches. Common in fields. Annual. September.

#### Natural Order, Violariedae.

*Viola Odorata*. Linn. (sweet violet.) This lovely plant has taken strong hold of the island since its introduction, and although not wild in the true sense of the word yet it has spread outside gardens, and flowers most profusely everywhere in the spring. Perennial.



### Natural Order, Pittosporae.

*Pittosporum Coriaceum*. Ait. A densely foliaged tree fifteen to twenty feet high; twiggy; leaves oval, two inches long, thick, dark olive colour. Flowers, in small clusters at end of branches, yellowish white. May. A large tree is growing at the south-west corner of Bishop's lodge, corner of Cedar Avenue and Church Street, Hamilton; one at Mount Langton, and one or two others in private grounds.

### Natural Order, Caryophyllaceae.

*Arenaria Serpyllifolia*. Linn. (sandwort) Stem covered with soft hairs six inches high; flowers white and very minute; leaves quarter of an inch long, oval not stalked. Common. Annual. Winter months.

*Silene Gallica*. Linn. (silene.) Hairy, one or two feet high. Leaves oblong, spoon-shaped; flowers white, in leafy one-sided racemes. Annual. March to May.

*Stellaria Media*. Sm. (chickweed.) A procumbent plant, densely leaved, with small white flowers. Stems, six to twelve inches long, branched leaves one-third to half an inch long. A common weed in cultivated ground. Cage birds are fond of picking at it. Annual. Winter months.

*Stellaria Nemorum*. Linn. (stick-weed.) A variety of the above, slightly larger; star-shaped; flowers creeping in tangled masses and growing over the rocks, It is abundant near the Church Cave. Annual. Winter.

*Cerastium Viscosum*. Linn. (mouse ear.) A small, hairy plant, stem four to six inches high. Flowers small, white; leaves larger than those of chickweed which it resembles. A common weed. Annual. Spring.

*Sagina Apetala*. (pearl wort.) Grows in grass-like tufts. Stems wiry, thread-like, numerous. Leaves very narrow. Flowers greenish-white. A minute wayside weed. Annual. Winter months.

*Montia Fontana*. Linn. (water chickweed.) Is common in ditches and the edge of ponds; much like its land namesake. Annual. Spring months.

### Natural Order, Portulacaceae.

*Portulaca Oleracea*. Linn. (Common. Purslane or turtle grass.) A common prostrate plant with spreading, brittle, fleshy stems, pink or coloured. Leaves fleshy, opposite, broadly rounded, tapering at the base. Flowers minute, yellow, solitary at the leaf-angle, and clustering at end of stem. A very troublesome weed, each root covering a large space and growing rapidly. Grows everywhere. Annual. All the year.

*Sesuvium Portulacastrum*. Linn. (seaside purslane.) A prostrate plant similar to the above, but stems branched and rooting, often covering large patches. Leaves succulent, blunt pointed. Lefroy points out its distinguishing feature in the "absence of petals, stamens of deep rose colour, and delicate pink lining to the sepals which are externally a bright green." Flowers half an inch long, pink. Common on moist sea shores, and marsh edges. Leaves of both species sometimes used in salads. Perennial. Stems or stalks creeping flat, deep red, merging into blood colour sometimes, eighteen inches long, and covering very large spaces.

### Natural Order Tamariscineae.

*Tamarix Gallica*. Linn. (Tamarisk.) An ever-green shrub fifteen to twenty feet high, feathery foliage; flowers catkin-like spikes, pink very minute. Introduced from the Mediterranean. It is being used more and more for sea-shore fences, as its foliage stands the sea spray without ill effects. It is a very graceful shrub and when clipped forms a good windbrake for plantations. Should be planted as soon as the young shoots begin to appear about the end of March.

### Natural Order, Hypericineae.

*Hypericum Perforatum*. Linn. (St. John's wort.) A small plant, erect stem two-edged; leaves oblong, blunt; free-flowering, yellow blossoms one inch across. Rare, and only in waste ground. Perennial. July.

*Ascyrum Hypericoides*. Linn. *Crux Andreae of Linneus*, (St. Andrew's Cross.) A small, branching shrub two to four feet high; stems brittle and scaly; leaves one-third of an inch

to half an inch long, and one-twelfth of an inch wide. Reversely lance-shaped. Flowers terminal yellow. Frequent in marshes and occasionally in damp, moist localities. The shape of the flower probably gave rise to the name it bears. Perennial. Autumn months.

#### Natural Order, Guttiferae.

*Calophyllum Calaba.* Jago. (Galba tree.) Grows from twenty to thirty feet or more in height, branching profusely from the ground upwards. Its leaves are oblong, blunt, leathery, and of a dark green colour, shining, three inches long and half that width. Flowers white, fragrant, followed by a small edible fruit. When trimmed or clipped young it forms a good thick hedge or windbrake in fields. Early Summer months.

#### Natural Order Malvaceae.

*Sida Carpinifolia.* Linn. (Wire weed.) A shrubby herb with long wiry roots, troublesome to get rid of. Stem branched, one to two feet high. Flowers half-inch wide, yellow. Leaves lance-shaped, slightly downy. Lefroy says it is alluded to in some old laws of 1669. Perennial. All seasons.

*Althea Officinalis.* (Marsh mallow.) A stout soft, downy plant, two to three feet high. Its rose-coloured flowers are large and showy. Leaves on short stalks broadly ovate, three to five-lobed, toothed. It is found in Pembroke and Devonshire marshes. Perennial. August.

*Malva Caroliniana* (common mallow.) A creeping plant, with stem branching and rooting at joints. Leaves five-lobed, one inch across, lobes toothed. Found sparsely on waste ground. Flowers dark red. One inch stalks. Annual. Winter months.

*Malva Sylvestris.* (large mallow.) A herbaceous plant, with erect stems two or three feet high, it is properly a garden flower, but has escaped and is fairly naturalized. Leaves sharply angular, with five to seven lobes, serrated. Flowers one and a half inches across, purple. Perennial. May to July.

*Malva Rotundifolia.* (Rose mallow). A prostrate plant,

with hairy stems one and a half feet long. Leaves two to two and a half inches across, roundish, bluntly five-lobed, serrated, on long stalks. Occasional on roadsides. Flowers pale rose-colour, quarter to half inch in diameter. Perennial. Spring months.

*Hibiscus Mutabilis*. Linn. (changeable rose). A shrub or small tree ten to twenty feet high. Flower stalks long with large, red showy blossoms, changing sometimes to white. Leaves heart-shaped, toothed; flower stalks as long as the leaves. Foliage bright green, dense owing to the large size of the leaves. Found on the edge of plantations, in hedges and on old cultivated land. The blossoms are four inches in diameter. All seasons.

*Bombax Ceiba* Linn. (silk cotton-tree). Four or five very large trees of this species, sixty or seventy feet high, are to be seen in the Mount Langton grounds, on the south base of the hill. They were planted by Governor Reid in 1845. Lefroy calls them West Indian trees, but I learned from an African working in the garden that the *bombax ceiba* is an African tree and that these trees were not old enough to flower. This, however, they must have done, as the same man told me that in some years the trees shed cotton-down. *Bombax ceiba* must not be confused with the cotton tree of the Western prairie river bottom which is a species of poplar, similarly shedding down.

*Gossypium Herbaceum*. Linn. (cotton plant). This is the common cotton cultivated abundantly in the Southern United States of America. Ordinarily a bush with mallow-like leaves, and a yellow showy flower, it attains, if left, to itself the size of a small tree. Lefroy says cotton was grown and spun in Bermuda by the old settlers, by hand-power as it is still spun in India. In Bermuda cotton now has no economic value, its price not warranting the care that it needs. It may be occasionally seen in the Walsingham tract and in a few old gardens.

### Natural Order, Tiliaceae.

*Triumfetta Althaeoides*. Linn. (burr-bush). A shrubby plant, three or four feet high, covered with down. Stems branched,

erect, and very tough; leaves velvety, roundish, three-lobed, two to three inches long and half that across, all irregularly toothed; flowers yellow, crowded, a quarter of an inch wide; the four-seeded globose pods are covered with hairy hooked spines.

*Triumfetta Semitriloba*. Linn. (boor-bush of Lefroy.) This plant is not mentioned in Reade's Botany. With the exception of being styled by the former "a largish bush" and common in the Walsingham tract, it is probably a sub-species of the real Burr-bush.

#### Natural Order, Lineae.

*Linum Usitatissimum*. Linn. (wild flax.) Stem eighteen inches high; leaves narrow; flowers purple or blue. Grows on the waysides, a remnant probably of former cultivation. Annual. Not common.

Lefroy erroneously calls this "Flag," and gives marshes as its locality.

#### Natural Order, Geraniaceae.

*Geranium Carolinianum*. (wild geranium or crane's-bill.) A spreading plant, rather hairy, main stem becoming prostrate when mature. Leaves five-lobed almost to the base; flowers pale-lilac, veined. Common on waste ground. Its peculiarly shaped seed vessel has given its name.

*Geranium Dissectum*. Linn. (crane's-bill). Very similar to above but with flower paler and almost white. Is said by Lefroy to be confined to St David's Island. Reade does not mention it. Annual.

These wild geraniums in Europe are the origin of the *Pelargonium* (*pelargonium zonale*), our garden geranium, the number and variety of which is constantly increasing through hybridization.

I have found in old quarries, field corners and waste ground, the scarlet geranium flowering as profusely as in a garden, al-

though far moved from a dwelling house. Slips or branches of geranium thrown away or dropped by chance, root readily anywhere under favourable conditions, and the flower may be cited as another evidence of how quickly plants revert to their original state.

*Tropaeolum Majus*. (common nasturtium.) Reade mentions this as closely allied to the geranium. Its three-lobed berry is used as a substitute for capers. Like the geranium, although properly a garden flower, it is common on the island. A small mound on the South shore, not far West of Hungry Bay, and distant from any dwelling, used to be clothed with nasturtium, the mound probably having been garden refuse there dumped from a cart going to the bay for seaweed.

#### Natural Order Rutaceae.

*Zanthoxylum Clava-Hercules*. Linn. (yellow wood.) Lefroy mentions only a single tree, some ten inches in diameter, east of Paynter Vale. He believes it to be the last survivor of the native yellow wood mentioned in the earliest accounts of the Islands. Professor Oliver, Kew, gave it as his opinion that the early descriptions apply closely to this tree, Lefroy says it never flowers; young plants, whether suckers or seedlings are not known, failed to grow on removal, owing to their tap-roots always breaking off in the rock crevices. Professor Oliver also says that the leaves submitted to him agree fairly with a *flowerless* Dominican specimen. The tree at Paynter Vale was planted by a Mr. Paynter over one hundred years ago.

*Citrus Limonum*. Risso, (common lemon). A small tree with rough branches, often interlocked and armed with strong thorns some two inches long; leaves three and one-half inches long, alternate, of a bright green; flowers white, followed by a rough yellow oblong fruit, with thick rind. This fruit, which was formerly cultivated, has, by neglect, through insect ravages, and blight, been allowed to revert to a wild state and is to be found on the outskirts of cultivation. Lefroy cites three varieties; but un-named.

*Citrus Vulgaris*. Risso. (seville orange). Grows from

twenty to thirty feet high, with leaves and flowers resembling the lemon, the flowers very sweet-scented and leaves a shade darker green. Formerly large quantities of marmalade were made on the island for family and domestic use, but with the failure of the trees the manufacture has now ceased. The pulp of the round fruit is bitter with a thin rind.

*Citrus Bigaradia*. Loist. (bitter orange of Lefroy). Very similar to the above, but fruit larger and blossom highly perfumed.

*Citrus Aurantium*. Linn. (sweet orange.) Much the same in appearance as *Citrus bigaradia* but fruit larger and of sweet, excellent flavour. Bermuda sweet oranges used to be eagerly sought after.

Closely allied to the above are *C. nobilis*, Lour. (mandarin); *C. minon* [tangerine.]; *C. decumana*, Linn. [shaddock]; *C. racemosa*, Ris et Poit; [grape fruit]; *C. limetta* [lime.]; *C. medicus* [citron].

Young trees of these varieties are being grown and experimented with in the Public Garden, and it has been found that with spraying and careful cultivation of the trees, there is no reason why the fruit trade of Bermuda should not revive. Early records show that in 1621 the Governor of Bermuda of that day was able to refresh a shipwrecked party with citrus fruits, and from 1634, subsequently, certain rents were paid in oranges and lemons.

#### Natural Order, Simarubriace.

*Ailanthus Glandulosa*. Desf. (tree of heaven.) A handsome tree twenty to thirty feet high; smooth stem; deep-cut green leaves about one foot long, with ten to twelve alternate lanceolate pointed leaflets, graceful, very similar to the Pride of India, except that the leaves of the latter are drooping, whilst those of the *ailanthus* are less so. Introduced by Governor Elliott. A fine tree, almost facing the Post Office in Hamilton, stands in the public grounds; otherwise *ailanthus* is confined to very few gardens. The flowers are white, in graceful, lengthy cluster, the aroma of which is said to be

poisonous. Some years ago the medical authorities of New York caused all ailanthus trees gracing the residential streets of the city to be cut down, attributing numerous cases of illness to the proximity of the blossoms to bedroom windows. May and June.

### Natural Order, Meliaceae.

*Melia Azedarach*, Linn. (Pride of India.) A large tree, valuable for shade and the beauty of its flowers in summer. It grows thirty feet or more high, with dense green foliage, leaves twice pinnate leaflets, three to six pairs, lance shaped and a terminal one, long pointed. Flowers lilac, followed by yellow berries which hang till the following Spring. It is one of the few deciduous trees here. Originally introduced as an ornamental street tree, it has become fairly naturalized, being common around country houses.

*Swietenia Mahagoni*. Linn. (mahogany). Comparatively few of these solid looking, massive-trunked trees, some twenty feet or more in height, are on the island. One fine specimen may be seen at "Palmetto Grove," the Flatts. Lefroy says a few young trees were to be met with when he was Governor of Bermuda. The tree at Palmetto Grove used formerly to be pointed out to visitors as one of the sights of Bermuda; other specimens may now be seen at "Seamount," in Victoria Park, Hamilton, and in the garden of the Hunter property, on Queen Street, St. George's.

There is also at Mount Langton, a satinwood tree (*S. chloroxylon*), and one Banyan tree is to be found in the Tringham grounds at Inglewood, but neither of the two can be considered as taking to Bermuda.

### Natural Order, Illicineae.

*Ilex Cassine*. Linn. A shrub with small shining oval leaves, introduced from Virginia. It has established itself and has become fairly naturalized, especially near the Flatts, and back of Prospect. Flowers small, white, followed by a berry used in Bermuda for Christmas decorations, which has led to its being given the false name of "Christmas Holly," although it bears no resemblance. *I. cassine*, however, is properly a holly.



### Natural Order, Leguminosae.

*Dolichos Sphaerospermus*. (black-eye Pea) although cultivated for the table, is frequently met with in fields, where its turning stems matted and interwoven, cover a considerable space. Leaflets stalked, three; flowers variable, yellow or white, blotched with purple, followed by pods long, round, slender. May or June.

*Cassia Bicapsularis*. Linn. (christmas bush.) An ever-green shrub three to four feet high, with long, weak, trailing branches, leaflets smooth, three to four pairs. Flowers one inch, yellow, ten or twelve on a stalk in succession, followed by a seed-pod four to six inches long. Not very common. Grows along old walls and hedges. November to March.

*Cassia Bacillaris*. Linn. (cassia). Resembles the former, but is distinguished by having only two pairs of leaflets. Rare. Pod cylindrical.

*Cassia Glauca*. Lam. (West Indian ash) with four to six pairs of leaflets. Found at "Somerville."

*Cassia Ligustrina*. Linn. ("privet") Common in gardens and now used as hedges here and there. Lefroy describes it as distinguishable "by the very pointed leading leaflets like true privet, whence its name."

*Cassia Occidentalis*. Linn. Described by Lefroy as an annual weed in gardens, especially at St. George's. Has five pairs of ovate lance-shaped leaflets.

*Cassia Alata* (omitted by Lefroy) is given by Reade. No description except pod four-angled.

*Cassia Florida*, mentioned only by Reade as being in the Hamilton Public Grounds. Has flat, narrow, leathery pods about six inches long.

*Desmanthus Virgatus*. Willd. (desmanthus) A slender shrub, four feet high, with smooth twiggy stems. Leaflets twelve. Flowers white, followed by a pod two inches long, one-sixth of an inch wide, flat and compressed. Rare. Found at Hungry Bay and at Somerset.

*Leucaena Glauca*. Benth. (wild acacia, styled by Lefroy, mimosa.) A common shrub along waysides, with pretty pinnate leaves, branches dotted with small powdery scales. Flowers in dense globular white heads, followed by a seed-pod from four to seven inches long, flat compressed; the seeds flat, shining, not unlike those of the water melon. April to November.

*Acacia Lebbeckii*. Willd. (black ebony) mentioned only by Lefroy who says several trees are at Mr. Peniston's, Smiths Parish, the largest 66 inches round, and that it is not uncommon elsewhere.

*Erythrina Speciosa*, or, *Coraliodendron Speciosum* Andr. (sword plant or coral tree). A species of locust or acacia; a large massive tree twenty to thirty feet high, with spreading crowded branches. The flowers bright scarlet, or like coral, appear before the leaves, presenting a very bright and striking appearance. They are shaped like a sword which has led to the name "sword" plant, although it would more properly be called sword-tree. Its seed-pod is constricted and contains scarlet seed. The massive appearance of the tree somewhat resembles that of the mahogany. The wood is yellow and Lefroy says "it might be supposed to be the "yellow wood of 1694 but for the fact that it is known to have been planted over fifty years ago." A fine tree in the Public Garden at St. George's and is a picture when in full blossom.

*Erythrium Velutina*. Willd. (locust, Spanish.) Lefroy mentions several old and large trees in Devonshire and Smiths parishes, in the latter parish one tree being twelve feet in circumference at six feet from the ground, the huge roots allowing no nearer measurement. From the wood being yellow, although the tree does not correspond, with the early description of "yellow wood" yet it was probably known under that name after the real tree became extinct, and in a map of Ireland Island in the British Museum, dated 1694, a "yellow tree" is inserted as a landmark. This species is very similar to the preceding, flowers orange-red, appearing before the leaves.

*Robina Pseudacacia*. Linn. (common acacia.) Is to be seen in the Public Grounds, Hamilton, and is conspicuous in May with its pendulous hanging flower clusters, white and sweet-scented, foliage similar to the locust, and followed by pods four or five inches long.

*Poinciana Regia*. Bojer. (*Poinciana*). A handsome tree, twenty to thirty feet high, with massive, clean, wide-spreading branches, often reaching nearly to the ground and with a smooth grey bark closely resembling an elephant's trunk. Its leaves are feather-shaped, one foot long, bearing twelve to eighteen pairs of small entire leaflets. Flowers yellow, striped with crimson, followed by a pod twelve to eighteen inches long and two inches wide, flat. One of the most handsome trees, and it is only to be seen either on the streets or in private grounds where the branches often cover an area of fifty feet in diameter. Deciduous. September.

*Poinciana Pulcherrima*. Linn., the *coesalpinia* of Reade. (Barbados pride, flower fence.) Is an evergreen shrub, its branches armed with prickles. When clipped and pruned it forms a good fence for a garden. It flowers profusely, flowers orange-red, with a peculiarly long stamen. It flowers most of the year.

*Tamarindus Indica*. Linn. (Tamarind tree.) A tree attaining thirty to forty feet in height with dense foliage and very handsome leaves, pale green, feathery and hanging in masses or groups. A number of these trees may be seen in different parts of the islands but the fruit is not made use of, which Lefroy calls "a neglect of the minor industries." The leaves are composed of twelve to sixteen pairs of leaflets; flowers pale yellow veined with red. The pod is long and contains from one to four seeds, or, "stones." April to May.

*Gladitschia Monosperma*. (swamp locust.) A few trees grow at Spanish Point, acacia or locust-like in all respects, but armed with formidable spines one to two inches long. Seed-pods only one-seeded. Spring.

Under this Order Lefroy gives a yellow acacia, *acacia arabica*, Willd (gum arabic, babool gum); *Myrospernum percieae*, Royle, (balsam of Peru); *Ceratonia Siligua*, Linn. (St. John's

bread); and *Wistaria frutescens*, D. C. (wisteria.) These, however, are only in private grounds and are exceptional.

This order, Leguminosae, is one of the largest and most useful, and is easily distinguished by its pea-like flower and seed-pods.

### Natural Order, Rosaceae.

*Geum Radiatum*. Mich. (*geum*.) A plant four to six inches high, not at all unlike goat-weed, with which it is apt to be confounded, the main distinction being that the flowers of the latter are white, whereas those of the *geum* are yellow. As the white petals of goat weed fall off leaving a yellow centre, they often present the appearance of a yellow blossom. Not common. Flower half to three-quarter inch long. Annual. April and May.

*Prunus Domestica*. Linn. (common plum) does not thrive, neither does *Prunus armeniaca* (apricot).

*Amygdalus persica*. Linn. (peach-tree) and *A. nectariana*, W. (nectarine) were formerly plentiful here, the fruit attaining great size and being of a superior flavour. Their cultivation, however, like that of other fruits, has been greatly neglected, the cultivation of the onion and potato requiring less care and attention. The trees, through the ravages of an insect, are comparatively useless. Spraying would to a great extent obviate this, and the use of the knife amongst diseased branches would stay these ravages. Every Spring the peach-trees here may be seen struggling with blossoms and fruit setting, which subsequently falls pierced by the parasitic insect that infests the trees. Moreover, peach culture seems not to be understood in Bermuda as it is on the American Continent where seven or eight years is considered the fruit-bearing life of the tree, and a succession of rows is kept ready to supply the orchard growth. In this way the trees are strong, vigorous and healthy, and better able to resist insect ravages. Old-peach-trees around an American peach orchard are looked upon as a sign of carelessness and slovenly oversight.

*Pyrus Malus*. Linn. (the apple,) *P. communis*, Linn (pear-tree,) and *Cydonia vulgaris*, Pers, (quince) grow well

for a few years and then die out; probably as deciduous trees by nature, they require the winter rest of their more northern climate. *Eriobotrya saponica*, Linn. (loquat or Japan medlar) thrives well and fruits most abundantly. This tree, fifteen to twenty feet high, is a handsome tree, from its thick, dark-green foliage, white flowers in spikes, resembling the English horse-chestnut, followed by a yellow plum-like fruit which is most palatable.

#### Natural Order, Rhizophoreae.

*Rhizophora Mangle*. Linn. (mangrove.) An evergreen spreading tree, continually throwing out rootlets from its branches, which penetrate the mud or swamp soil, forming new stems, creating thereby dense thickets in salt or brackish marshes, which water it prefers to fresh. Leaves ovate or oblong, smooth, leathery, four inches long. Flowers small, yellow. Summer and Autumn.

The most striking thing in the case of *Rhizophora* is that the caulicle projects from the fruit a long distance before the latter falls from the tree.

*Avicennia Nitida*. Jacq. (False mangrove) is generally found amongst the true Mangroves but is distinguishable from it by its dusty white appearance the underside of its leaves being covered with a white pubescence. Lefroy places it under the order *Verbenaceae*. Flowers, white in spring.

#### Natural Order, Combretaceae.

*Conocarpus Procumbens*. Linn. or *Racemosus*. Or (butterwood). A prostrate, contorted shrub with knotted and densely interwoven branches, leaves leatherly, downy when young, two inches long. Flowers yellowish-white, followed by a cone-like head of brown one-seeded nuts densely overlapping a woody axis. Common along seaside rocks. Flowers in autumn.

*Conocarpus Erectus* Jacq. (button wood, sea mulberry.) Is common along marshes and swamps, where it becomes an erect shrub. Reade says it is scarcely distinct as a species from the former.

*Terminalia Catappa*. Linn. (demerara almond). With large, shining, leathery leaves is only found in a few shrubberies. It grows from ten to thirty feet high.

### Natural Order, Myrtaceae.

*Myrtus Communis* (common myrtle.) An evergreen shrub ten or twelve feet high, with simple, smooth, oval, leathery leaves two to three inches long by one and a half broad. Flowers minute, feathery, forming a raceme, or pointed bunch. Although properly a garden shrub, it may be found on the outskirts and mixing with the following shrubs.

*Eugenia Ugni*, or *Uniflora*. Linn. (surinam cherry), is very similar to the myrtle, and might easily be mistaken for it, only for the fruit succeeding its white myrtle-like blossoms. This fruit is about the size of a cherry, obtusely five-angled, of a delicate waxy-red colour, and pleasant sub-acid taste. Both flower in February.

*Eugenia Axillaris*. Poir. (brazilian cherry) Is a much rarer shrub, scarcely distinguishable from the previous ones, except in having a larger berry, and flowering in September.

*Eugenia Jambos*. Linn. or *vulgaris* (rose apple). Is only in a few gardens and not much known. May and June.

*Pimenta Vulgaris*. W. A. and P. *acris* W. A. (Pimento and allspice.) The former having four and the latter having five lobes to the calyx, are mainly confined to shrubberies, with an occasional rare escape. Leaves aromatic. May.

*Podium Guagava Pomiferum*. Linn. (Guava) is considered by Lefroy as a native, and grows wild although rare, and is a poor fruiter.

*Punica Granatum*. Linn. [Pomegranate] One of the most delicious fruits. Is a bright green foliated shrub, ten or fifteen feet high. Its leaves are narrow, lance-shaped. Flowers large crimson, followed by a fruit with a dense leathery rind, its pulp consisting of irregular cells and seeds of a sub-acid and sweet taste. Lefroy says it was grown here as early as 1621, and probably was found here by early navigators. Captain John Smith in his history [about 1608] includes this fruit

and speaks of its fertility. It is occasionally used as a fence, but its cultivation is entirely neglected. A double flowering species is not uncommon, and is of great beauty. May and June.

*Eucalyptus Globulus*. Labil. Resinifera, Smith and Coriacea [blue, red, and common gum trees of Australia.] Have been experimentally planted but since Lefroy says they require support against the winds, all hope has been precluded of their establishment here. If they could succeed, they would probably be of benefit on the margin of the marshes.

#### Natural Order, Lythararieae.

*Lagerstoemia Indica*. Linn. (queen of the shrubs.) A shrub four to ten feet high, covered with rosy pink flowers from May to September. It is properly a garden plant, introduced from India, but may be seen on some road sides outside of the garden.

#### Natural Order, Onagrarieae.

*Oenothera Longiflora*. Jacq. (evening primrose.) An erect plant covered with dense soft hairs. Leaves narrow, oblong, blunt at base, acute-pointed, irregularly toothed. Flowers yellow, three inches wide, sweet scented, only open at night and closed in the morning sun. Originally a garden plant, it has so plentifully escaped and seeded itself as to be abundant on waste land. Biennial. May to August.

*Oenothera Humifusa*. Nutt. A half shrubby plant. Stems stout, hairy. Leaves silvery. Flowers orange yellow, one inch across. Found at Tuckerstown and St. Davids. Perennial. May.

[With the exception of the above wild plant all the families comprised in this Order are cultivated. The many varieties of the rose-tree thrive most luxuriantly and blossom in profusion, especially from November until June. Lefroy says the Moss Rose does not succeed here].

*Oenothera Simiata*. Linn. Somewhat similar to the above, said to exist only on the shore near Shelly Bay. Flowers yellow, three quarter of an inch across. Biennial. May to July.

*Oenothera Rosea*. Ait. (Pink evening primrose) A smooth, half-shrubby plant, upright stems, almost woody. Leaves one and a half inch long; calyx one inch long. Capsule four-angled and eight-ribbed. Flowers rosy-coloured, three-quarters of an inch across. Perennial. March to May.

*Oenothera Speciosa*. Nutt. Upright, very slightly hairy. Leaves oblong, toothed, pointed. Grows about nine inches high. Flowers pinkish-white, fragrant, one and a half inches broad; petals, four. Very rare, and not described before by any Bermuda botanist. North Shore, near Langton House, where I found only one small patch of five or six plants, each in blossom. Apparently, annual. Stigma long with four slender arms. May.

Query.—Is this a new species in Bermuda?

*Isnardia Repens*, D. C. (ditch-weed.) An aquatic plant with brittle stems, rooting at the joints. Leaves one inch long, oval. The plant occasionally spreads on to dry land adjoining marsh or ditches. Flowers small, greenish-yellow. Perennial. Early Summer.

### Natural Order, Passifloreae.

*Carica Papaya*. Linn. (papaw.) A peculiar, unbranched tree, ten to twenty-five feet high, stem naked up to summit where leaves, one to two feet in diameter, with five to seven lobes, on long stalks, present an appearance imitating the palm. The trees are male and female, the latter with solitary, axillary blossoms, petals five or six overlapping. The male tree has long-stalked, many-flowered axillary flowers, corolla tube long, narrow. Occasionally a hermaphrodite tree is found bearing a fruit more pear-shaped than that which a simple female tree produces. Flowers greenish-yellow near the summit of the smooth trunk, followed by a round orange-looking fruit, one fruit ranged above the other along the stem just below the leaves, looking as though oranges ripe and green had been fastened there. The ripe fruit is eaten, having somewhat the flavour of an over-ripe, soft melon. When green and unripe the fruit is valued in cooking for its property of softening animal fibres, thus rendering the toughest meat tender.



This quality is due to the pepsin it contains, a fact which has recently attracted the attention of the medical profession. The following extract from a pharmaceutical publication explains the property of the papaw.

“Pepsin derived from this fruit is the foundation of most medicines for curing digestive derangements. It is easily prepared, the unripe fruit being daily scarred or lined a quarter of an inch deep with a sharp knife, and the juice caught and dried on sheets of glass, when it becomes a marketable commodity.”

Another paper says--

“The juice (of the papaw) is pressed out of the fruit, clarified by filtration through a twill bag, and the ferment precipitated by alcohol. It is then dried.”

The tree is of quick growth, and needs practically no cultivation. It is common in waste places, seeming to prefer poor soil. It is of very rapid growth, and from its peculiar appearance at once attracts attention. Lefroy says the leaves possess curative effects applied externally in cases of rheumatism. Flowers March to November.

*Passiflora Minima* (wild passion flower.) A climbing vine, with wiry stem. Leaves one to two inches, glossy, oval, some entire, some three-lobed, the leaf-stalk having two small stalked glands above the middle. Flowers greenish-yellow in pairs, axillary, followed by a purplish insipid berry, one and a half inch long. Common along old walls and waysides. Perennial. April to September.

*Passiflora Libiata*. Ait (wild passion flower.) Probably a sub-species (*minima*) much like the preceding, with the exception of glands at the top of the stalk. Commonest around Paynter Vale. Summer.

*Passiflora Coerulea*. Linn. (wild passion flower.) Similar to the two preceding, except that the leaves are five-lobed, glands more distant from the leaf, appears to flower more rarely. Summer.

*Passiflora Laurifolia*, *Maliformis*, or *Quadrangularis*. Linn. (the two former known as water lemon, the latter as grenadilla). These are cultivated in gardens, are not abundant, and I am not aware of any escapes as yet.

The flowers of all are greenish-yellow, half an inch in diameter. All perennial, the roots matting thickly. March to early Autumn.

#### Natural Order, Cucurbitaceae.

Cucumbers, pumpkins and melons chiefly constitute this order in Bermuda, and are all cultivated; they do not come within the limits of this work. The only wild plant of the order is given by Lefroy, but is omitted by Reade, namely:—

*Sicyos Angulata*. Linn. (wild bryone) Called by Lefroy "an American species of chance introduction" found about the Church Cave, Paynter Vale. It is a plant with long running, slender stalks; leaves like those of the cucumber but smoother and of a paler green. Flowers, greenish. Annual. It is used by the natives as a medicine for fevers and colds. It flowers in Spring and early Summer. I have seen a few rare specimens around Hamilton in a lane leading from Mr. Bluck's estate West of the grounds formerly known as the Exhibition Grounds.

#### Natural Order, Cacteeae.

*Melocactus communis*, D. C. ('Turk's cap). This cactus may be seen on stone gateways, and in high dry situations. Stem, which constitutes the whole plant is globose, about one foot high, with from twelve to twenty vertical ridges, spiny, and top wooly, concealing a number of small crimson flowers. In appearance it is not unlike a dark-green, thorny melon. Flowers in Summer.

*Cereus Grandiflorus*. Mill. (night blooming cereus), with long, rope-like stems ascending trees and walls, or more often hanging over the latter, affords after sunset one of the most magnificent flowers in the whole vegetable kingdom, the flower closing and fading at day-break. The silky appearance of its rose-pink blossom, eight inches in diameter, wax-like and fragrant, is beautiful in the extreme.

*Cereus Triangularis*. Haw, or *Macdonaldiae*, (a night blooming species) with thick, massive triangular stems, although a night flower cannot compare with the preceding. It sends long rope-like stems from its thicker leaves, up high tree-trunks, several plants on the edge of Victoria Park, Hamilton, affording a splendid illustration of the height attained. When the plant has attained the summit of the tree it again throws out its massive leaves. Flowers, pinkish-white.

*Opuntia Vulgaris*. Mill, (prickly pear.) This is one of the plants mentioned by the early discoverers in 1610. It may be styled a prostrate, spreading, or creeping, shrub, with jointed branches; leaves ovated, compressed, very thick and fleshy, three to four inches long nearly as wide, with dense tufts of slender barbed thorns or bristles, and in open situations with several long awl-shaped spines. Flowers are on the edge of the joints, petals leathery-yellow followed by a crimson edible fruit, two inches in diameter not unlike a fig, which, however, before eating must be divested of its spiny and thorny coat. It is common wherever sand prevails, but is not nearly so plentiful as formerly. Flowers in the Summer months. Perennial.

*Opuntia Tuna*. Mill. (prickly pear.) Is given by Lefroy, but appears to have been confounded with *vulgaris*, unless it is a smaller species.

*Opuntia Candelabra*. (candle-stick plant or candelabra.) Not to be confounded with the *Euphorbia* which bears the same local name, the arms of the latter growing upwards, whereas the arms of the plant being described grow laterally. It is omitted by both Lefroy and Reade, probably having been introduced since their time. It is strictly a garden cactus, its peculiar right-angled stems form an upright, jointed stalk giving the idea of the name it bears.

#### Natural Order, *Crassulaceae*.

*Bryophyllum Calycinum*. Salish. (life plant or air plant; floppers.) A succulent, brittle plant two feet or more high, according to locality. Stems purplish, and green spotted. Leaves opposite, fleshy, serrate, or deeply toothed. Flowers, pendulous, bell-shaped, one and a half inch long, green and

purple, transparent, in terminal bunches. From the peculiar report made by the flowers when cracked or compressed by the fingers has arisen the local name "flopers."

This plant was first introduced in 1813, and has now spread in profusion all over the islands; not an old wall, crevice, shady glen or stony glade where it is not abundant. A peculiarity it possesses is that the leaves placed in damp cloth, or even pinned up in a damp place, produce rootlets and young plants at the crenatures or marginal creases, the same thing will happen if a leaf is suspended from a piece of thread or string in the air. Seeds seldom mature, owing probably to the easy method of leaf propagation. So abundant is the plant everywhere that it is bound to attract attention. Perennial. Flowers from January to June with an occasional flower all through the year.

*Sedum* Linn. (stonecrop.) Although called by Lefroy a garden plant, yet it is now spreading freely and may be found sparingly on the wall-faces of road-cuttings around Hamilton, and in Warwick. It is frequently placed on graves, whence it has probably spread. A free growth of it faces the Cathedral growing among the sandstone brought for that building from Nova Scotia and may have been introduced in that spot with the stone. It is a procumbent, fleshy-leaved plant, one or two inches high, leaves bright green, overlapping slightly. Flowers bright, of a star-like shape; yellow. It is not unlike some of the northern mosses in growth. Perennial. June to July.

[Another plant, not defined but a species or variety of stonecrop, somewhat similar to the preceding, but with trailing short stems some two or three inches long and withered half their length is to be found on the North shore rocks back of Mount Legton and at Spanish Point. It seems to me if not a separate species to be a variety. Leaves clearer than ordinary stonecrop. Perennial.]

#### Natural Order, Umbelliferae.

*Hydrocotyle Umbellata*. Linn. (penny wort). A plant with stem creeping and rooting in soft marsh earth, with clusters of roundish leaves, one to two inches in diameter. Flowers

in umbels on long stalks, greenish-white. Common in marshes. Perennial. Summer months.

*Hydrocotyle Repanda*. Pers. (species of penny wort.) Differs from above in having clusters of heart-shaped leaves, blunt; flower-stalks short. In all other respects same as preceding.

*Hydrocotyle Asiatica*. Linn. (thick-leaved) pennywort, is mentioned only by Lefroy.

*Caucalis Nodosa*. Clarke, (burr parsley) called by Lefroy *Torilis*. A small plant six to eighteen inches high, rough all over with short, granulated hairs, leaves dense with leaflets much resembling the carrot. Stem erect, branched, slightly furrowed. Flowers white or tinged with pink, in globose heads, opposite to the leaves on short stalks. Abundant in waste places. Annual. February to June.

*Smyrniium Olustratum*. Linn. (Alexanders). A stout erect herb, two to three feet high, with a shining angular, furrowed hollow stem, not unlike celery. Leaves tri-foliolate, lobed, toothed. Flowers yellow in compound heads or umbels; seeds black, when ripe, like coriander. It is grown in gardens. The medicinal properties of the root macerated in rum are considered remedial in rheumatism, used both externally and internally. Perennial. February to June.

*Coriandrum Sativum*. Linn. (coriander.) Much resembles in all respects the preceding, both species being apt to be confounded. It is not uncommon, and is said to have been first brought in by Portuguese from Madria. It emits an offensive smell, Perennial.

*Anthriscus Vulgaris*. (iron weed or rough chevril.) Lefroy cites this as only a common weed.

*Anethum Graveolens*. Linn. (May weed). Not unlike the wild carrot. Lefroy says it has become naturalised on St. George's Island, but it is now abundant everywhere and is a very troublesome weed as well as a prolific seeder.

*Foeniculum Vulgare*. Gaert. (wild fennel.) Called by Lefroy, *Ferula communis*, who says it is mentioned as sent out from

England in seeds in 1616. A stout erect herb, three to four feet high. Leaves feathery, being divided into many fine capillary, or hairlike segments. Flowers yellow with large heads or umbels. Common on rocky roadsides. The leaves of this plant form the constituent of the French liqueur known as absinthe. Summer months. Perennial.

*Apium Septophyllum* F. M. or *helosciadium* (fool's parsley.) An erect plant, stem twelve to eighteen inches high, distinctly branched. Leaves few, distant, divided into many slender segments. Umbels, as in burr parsley, opposite to the leaves. Flowers white, very small but forming a globose head, tinged with pink. Spring months. Annual.

*Petroselinum Sativum*. Linn. (wild parsley.) A smooth plant, erect stem. Leaves with leaflets, lower ones crowded, three cleft. Flowers in a compound umbel or head, small, white. Not common. Biennial. Summer months. Very similar to the cultivated parsley, if not a degenerate escape.

*Daucus Carota* (wild carrot) is either the garden species degenerate and reverted to its wild condition, or it is the prototype of the garden carrot. Biennial. Summer months.

### Natural Order, Araliaceae.

*Hedera Helix*. Linn. (common ivy). Although this was originally a garden plant, it has become naturalised and is occasionally found outside of cultivation, covering old walls and tree trunks. Too well known to need description.

#### Division II: Monopetalae.

### Natural Order, Caprifoliaceae.

*Viburnum Tinus*. Linn. (*Laurestinus*.) A compact evergreen shrub, with shining, entire, dark-green leaves, one to two inches long, bushy, with dusters of small white flowers forming a level topped head. Not abundant. A growth of these shrubs may be seen on the left hand side of the lane, near the foot of the hill, leading to Hungry Bay. Winter months.

*Sambucus Nigra*. Linn. (common elder.) A very brittle wooded shrub, with deeply palmate leaves and large heads of white flowers. Is occasionally found outside of cultivation. Reade says it does not usually produce berries, perhaps from want of bee-fertilization or from sparrows picking them off, birds in other countries being especially fond of these berries. May and June.

*Caprifolium Sempivirens*. Mich. and *Lonicera japonica*. Linn. (honey suckle.) May be found in the vicinity of gardens, creeping or running over old walls, especially along the south-shore road in Devonshire. Flowers very fragrant. In the first of these species the upper pairs of leaves are united at the base, giving the stem the appearance of growing through them. In the other species the leaves are all distinct. Perennial. Summer months.

#### Natural Order, Rubriaceae.

*Coffea Arabica*. Linn. (coffee.) A medium sized tree, with oblong, shining, dark-green leaves, and axillary clusters of white flowers, i. e. growing between the leaf and the stem. It has been planted out around Walsingham where it has largely spread, especially near the caves. But little use is made of the berries. From a tree in the Trimmingham grounds, at "Montrose," alongside of the Public Gardens, coffee was made on the occasion of a lawn party from berries grown and roasted there, and was pronounced excellent, equal if not superior to the ordinary coffee of commerce. The wild trees seem to thrive well and there is no reason why the coffee-berry should not be added to Bermuda's products.

*Randia Aculeata*. Linn. (box briar.) Only mentioned by Lefroy, who says it is an interesting example of local naturalization. Originally from the West Indies, it has outspread the hills in Warwick and part of Paget, but is unknown eastwards. Flowers in September. There is a stump in the Hamilton Gardens, shooting up again under the name of briar-wood, from which kind of wood are made in Jamaica ornaments for the watch-chain, known as "briars."

*Chiocea Racemosa*. Linn. (snowberry.) A shrub bearing clusters of snow-white berries. Is probably a garden shrub, but has escaped, and may be sparingly found at Walsingham.

*Palecourea Pavetta*; S. W., *Psychotria pavetta*. One specimen exists in the garden at Bishop's Lodge, Hamilton.

*Psychotria Undata*. Jacq. A shrub with glossy, dark, wavy, green leaves, tapering at the base. Is said by Lefroy to be found at Walsingham. Flowers inconspicuous in April and May.

*Rachicallis Rupestris*, D. C., or *muralis*. A low spiny shrub, two to three feet high, branches rusty, erect, in opposite pairs. Spines slender, longer than leaves, the latter one-third of an inch in diameter, roundish, pointed. Flowers yellow. Barren hills on the south shore. Rare. September.

*Spermiacoe Tremior*. Linn. (button-wood.) A plant with slender stem, erect, sparingly branched; six to eight inches high. Leaves lanceolate, pointed, entire, hairy, upper ones narrow. Flowers in clusters, pale pink. Reade calls it a "very common wayside weed," while Lefroy confines it to Walsingham. It is not unlike one of the American *Epilobiums*. All seasons. Annual.

*Spermiacoe* or *Borreria Loevis*. Griseb. (*borera*.) Stem erect, three to six inches. Leaves ovate, lanceolate, pointed, shining. Flowers many-clustered, pink. Wayside weed. Corresponds in other respects with preceding.

*Galium Uniflorum*. Mich. (bedstraw.) A trailing plant, stem half to one foot. Leaves one-third of an inch long, four in a whorl, narrow, oblong, pointed. Flowers on slender-jointed stalks, yellow. Found on barren hills and dry roadsides. June to August. Annual.

*Galium Palustre*. Linn. (healsoon.) Similar in every respect to forgoing, except that flowers are white, and it is found only in marshes and marshy ground.

*Galium Arvensis*. (field madder.) A prostrate plant, stems one foot long; leaves half-an-inch long, four to six in a whorl, oblong, pointed. Flowers pink, small. Annual. Found only at Salt Kettle. Properly a garden plant. May.



*Centranthus Airosiphon*, Bots., or rubber, (sugar plum.) A smooth erect plant two feet high, with fleshy sub-entire leaves two to three inches long. Flowers dense, terminal, level-topped, red. Originally a garden plant it has spread and is in some parts common, especially at Somerset. Annual. Summer months.

*Valerianella Olitoria* or *Fedia*, Vahl. (lamb's lettuce.) A small plant with forked branches, in the axils of which dense, flat clusters of small lilac flowers are collected. Leaves one to two inches long, and said to be excellent in salads. Both Lefroy and Reade assign it to St. David's Island. Annual.

#### Natural Order, Compositae.

*Eupatorium Foeniculaceum*. Willd. (dog fennel.) A tall plant with fennel-like leaves. Stem four to six feet high, much branched, leaves alternate, divided into numerous slender segments. Flower-heads very numerous, small, in a sort of compound pyramid. Flowers dirty white, one-tenth of an inch in diameter. Annual. Autumn months.

*Bidens Leucantha*. Willd. (shepherd's needle.) An erect plant, stems four-angled, branching, smooth. Leaves and leaflets serrate. Flowers yellowish with white rays, heads three-quarters of an inch in diameter. Annual. A common weed, noticeable for its barbed aums sticking to the clothes. Summer months.

*Chichorium Intybus*. Linn. (wild cherry.) An almost shrubby plant with erect, tough, angular stem with bare spreading branches, two to three feet high. Lower leaves deeply and sharply toothed backwards; upper ones narrow, heart-shaped, clasping the stem. Flower-heads in pairs with hairy fringe. Florets along the stalk numerous. Flowers one to one-and-a-half-inch across, bright blue. Very common everywhere. Although a good substitute for coffee, and used in adulterating the latter, yet the fleshy roots are not used here. Perennial. Summer months.

*Taraxicum Dens-Leonis*. Defs. (dandelion.) A plant whose leaves, deeply toothed backwards, lie mostly flat on the ground. All spring from the root. Flower-stalks hollow,

erect, two to four inches high, sometimes scarcely perceptible, silky, at the top, rising higher after flowering, and bearing a globular head of white, downy fluff, which is carried everywhere by the wind. Very common everywhere, stunted on rocks. Flowers bright yellow, one to two inches across. Its roots are medicinal as a tonic, and sometimes, when roasted, are used for coffee. Biennial. Almost all seasons. Leaves when blanched are excellent for salads; also when young are boiled and used as a vegetable.

*Sonchus Oleraceus*. Linn. (sow thistle.) An erect plant, leaves resembling those of the dandelion. Stem, angular, hollow, with a milky juice, one to three feet high. A very common weed. Flowers half inch across, pale yellow. March to August.

*Sonchus Asper*. Vill. (milk thistle.) A distinct species of the preceding plant, which it closely resembles, but having a stouter and more angular stem; generally larger in every respect as a species. Leaves armed with slightly sharp, prickly teeth, upper ones clasping the stem. Flowers pale yellow. Spring and Summer. Annual.

*Crepis Lyrata*. Froel. (knotweed.) An erect plant with slender stems, one to two feet high, much branched above. Leaves mostly at root, toothed, the end lobe the largest, tapering. Flower stalks thread-like; heads small; florets numerous. Flower-heads quarter of an inch broad; bright yellow. Common on roadsides. Annual. March to June.

*Eclipta Erecta*. Linn. A many branched, tall plant, smooth stem and swollen joints. Common along watercourse in Pembroke Marsh. Mentioned only by Lefroy. I have failed to find it, although I have carefully searched for it.

*Chrysanthemum Leucanthemum*. (ox-eye;) erroneous "daisy" is getting abundant, evidently at first introduced. Stem eight to ten inches high, slightly leaved, the base being deeply pinnated and rough. Flowers white with yellow cushion, numerous rays encompassing the same. Biennial. June and July.

*Barrichia Arborescens*, D. C. (seaside marigold.) An erect, brittle, succulent maritime shrub, three to four feet high. Leaves fleshy, three to four inches long, entire, tapering and embracing the stem with their united base—some smooth and shining green, some hoary and grey, both being on the same plant. Flower-heads a bright yellow, one and a half inch across, not unlike the garden Dutch marigold. Common on seaside rocks. May to September.

*Baccharis Heterophylla*. H. B. K. (dogbush.) An erect bushy shrub, four to six feet high, with smooth angular branches. Leaves leathery, two to three inches long, smooth and shining. Flower-heads on terminal branchlets, with a whitish covering over flowers which are a brownish-white, one-third inch in diameter. Very common in and around marshes. It is used as one of the decorations for houses and churches at Christmas, as it has the property of keeping green and ornamental for weeks. November to March.

*Solidago Sempervirens*. Linn. (golden rod.) An erect plant with smooth purplish stem two to four feet high; leaves lance-shaped, acute at both ends, one to two inches wide, smooth, entire, rather fleshy, and bushy below flower-head. The root leaves on long stalks; flower-heads one-sided, compact, nodding. Flowers, golden yellow in long tassel. Common, mostly in damp or shady spots. Perennial. Summer months.

*Solidago Mexicano*. H. B. (golden rod.) Very closely resembling the preceding, but is more stunted in growth, and sturdy. It frequents high and dry ground, old quarries and rocky bluffs. Perennial. Autumn.

*Erigeron Canadensis*. Linn. (fleabane.) An erect plant with wiry stem, one to three feet high; much branched above; rough, hairy and furrowed. Leaves two to three inches long, quarter of an inch wide, lanceolate. Flower-heads small, in bunches with insignificant florets. Flowers white, one sixth of an inch across. A troublesome weed, and common in cultivated ground and on waysides. May to August. Annual.

*Erigeron Pusillus*. (fleabane.) This seems to be only a

dwarf phase of the above, when growing on barren rocky ground, resembling in every respect the preceding. Stem not more than six inches high. Annual.

*Erigeron Bonariensis*. Linn. (fleabane.) An erect leafy plant, hairy, stem one to three feet high, branched above. Leaves lanceolate, one-third to half-inch wide, the lower ones toothed. Flower-heads small; flowers white, one-third of an inch broad. Common everywhere. May to August. Annual.

*Erigeron Annuus*. Linn. An erect, stout stem, three to four feet high, leafy from the base, branched, hairy. Leaves four to six inches long, one and a half-inch wide, slightly hairy, ovate, coarsely toothed in the middle. Flower-heads large and scattered. Flowers half inch in diameter, white, tinged with purple. April to July. Annual.

*Erigeron Jamaicensis*. Linn. It is yet an open question whether this species is an *Erigeron* or an *Aster*. I am inclined to the latter belief. It is a plant with slender stem, six to eighteen inches high, according to locality, nodding before the flowers expand. The root-leaves roseate, blunt; stem leaves few, distant, clasping the stem, one to one and a half inch long. Heads few; flowers half inch in diameter, with numerous purple rays and yellow disk. April and May. Annual.

In addition to the foregoing, Lefroy enumerates *E. liniflorus*, *E. philadelphicus*, and *E. quercifolius*, but without any description.

*Artemisia Termifolia*. Willd. (french fennel.) A tall plant, four to six feet high. Leaves divided into numerous slender filaments. Heads small and numerous; flowers whitish yellow. August and September. The white plant has a fetid smell. Annual.

*Senecia Vulgaris*. Linn. (groundsel.) An erect weed with fleshy stem, up to a foot high. Leaves divided half way from margin to midrib, toothed. Flower-heads few, drooping. Waste places, but not as abundant as its feathery seeds would indicate as likely. Flowers one-third of an inch in diameter, Yellow. April to July. Annual.

*Pluchea Adorata*. Cass. (pluchea.) A shrub four to six feet high, branched from base, the branchlets clothed with rusty, woolly down. Leaves oblong, pointed, woolly beneath. Flower-heads branched, compact, numerous. Flowers pinkish, one-third inch. Found in old quarries and at foot of dry walls. February to May.

*Pluchea Camphorata*. D. C. (marsh fleabane.) A fleshy plant with erect stem, one to one and a half feet high, branched and clothed with short viscid hairs. Leaves two to three inches long, scarcely stalked, the lower ones sharply toothed, the upper ones entire. Flowers purple, crowded with small red hairs or bristles. Not common. Marshes. Annual. This is evidently Lefroy's *P. purpurascens*. Annual.

*Parthenium Hysterophorus*. L i n n. (parthenium.) An erect plant, one to two feet high. Stem rather hoary, grooved. Leaves divided half-way, one to one and half inch long. Flower bracts numerous, on branchlets. Flowers quarter of an inch across, white with a transparent look. Common on dry walls and waysides. Summer months. Annual.

*Tanacetum Vulgare*. (common tansey.) A ragged foliaged plant two feet high, with yellow blossoms. Mostly found around country cottages from which there are escapes in the vicinity. Greatly used as a tonic. Perennial. Summer.

*Pyrethrum Parthenium*. (fever few.) A low-growing plant with grey leaves, deeply cut. Flowers yellowish-white. Used as a tonic. It is an escape like the above.

*Ambrosia Artemisiaefolia*. (hog weed.) A plant with a stout, erect stem, one to three feet high, branched. Leaf stalks fringed with slender hairs. Leaves twice-divided or pinnatifid, two and a half inches long. Flower stalks slender, terminal. Found on waste as well as cultivated grounds. Flowers very small, greenish, with yellow stamens. May to September. Annual. Often mistaken for "wormseed." Lefroy mentions another, probably sub-species. *A. heterophylla*.

*Xanthium Echinatum*. Murr. (cockle burr.) A common noxious weed on roadsides and waste land, thus described by Sir Joseph Hooker; "A rank weed-like plant remarkable for

the curious structure of its flowers and the prickly involucre (or whorl of bracts surrounding the flowers) which surround the fertile ones, enlarging and becoming part of the fruit. (or seed.") April and May. Annual.

#### Natural Order, Goodeniaceae.

*Scaevola Plumierei*. Blume. A straggling shrub with stout twiggy stems branching from the base. Leaves fleshy, broadly ovate, three inches long, entire, smooth, shining. Flowers white, one inch long, followed by a black fruit the size of a cherry, fleshy, two-celled, two-seeded, not edible. It frequents sandy shores and rocks; is abundant near the Natural Arch, and on South shore dunes generally. June to November.

#### Natural Order, Campanulaceae.

*Lobelia Cardinalis*. Linn. (cardinal flower.) A plant of herbaceous nature with dark green crenate leaves, somewhat heavy below, one and a half inch long. Flowers a brilliant red raceme slightly drooping. Its brilliant colour cannot fail to attract attention. Not uncommon in a shady place. Is probably a garden escape. May to September. Perennial.

#### Natural Order, Plumbagineae.

*Statice Caroliniana*. Walt. (Plumbagin.) (sea lavender.) This plant is omitted in Reade's Botany, but is given in Lefroy's as found by the margin of pools in Walsingham, throwing up tall spikes of small blue flowers in September, whence its local name.

#### Natural Order, Primulaceae.

*Anagallis Arvensis*. Linn. Pimpernal. A low lying attractive little plant, with square stem, six to twelve inches long, procumbent. Leaves small, opposite, ovate, clear and bright. Flower-stalks longer than leaves, bearing numerous flowers one-third of an inch long, scarlet, closing on approach of rain: whence a common name for it—"Shepherd's weather glass." Annual. Common by waysides and on cultivated ground. January to July and later.

### Natural Order, Oleaceae.

*Olea Europaea*. Linn. (Olive.) An evergreen tree ten to twenty feet high, with angular branches opposite. Leaves oblong, numerous, pointed, hoary beneath, giving in the wind a silvery appearance, or what is known as olive-green. Flowers small, whitish and slightly fragrant. No notice has apparently ever been taken of its fruit, and the tree has reverted to its wild condition. February to May. The olive being mentioned as far back as 1612, would lead to the idea that it was a native tree, except for the further remark on its existence, "but no great store." It is mentioned again in 1624 and in 1661. The Bermuda or Virginia Company ordered olives to be planted on every shore. Lefroy inclines to the idea that the olive had "become naturalized probably from seeds sown by the crews of Spanish vessels visiting the islands or wrecked on them in the sixteenth century." As olives are successfully grown in California, it would seem they ought to be successful here, with care and attention. The cultivated olive of Europe has a much broader leaf than the wild Bermuda species.

*Forestiera Porulosa*. Poir. This tree is stated by Lefroy as confined to Walsingham, and rare. Its flowers are minute on short branches in December.

*Jasminum Gracile*. Andr. (Wild jasmine.) A climbing or creeping smooth shrub, with leaves ovate, pointed and opposite, shining or glossy, narrow. Flowers, yellowish-white, fragrant. Summer months. Lefroy cites this plant as a remarkable example of rapid naturalisation. Introduced at Paynters Vale in 1840 by Archdeacon Spencer, it has now overrun the Walsingham tract so as to make the rocks in many places nearly impassable. It is also getting abundant everywhere.

*Jasminum Fruticans*. Linn. (yellow jasmine.) A bushy shrub much branched. Leaves alternate, ovate, entire with three to five leaflets. Flowers bright yellow, one inch in diameter. Summer and autumn. Not uncommon, more frequently outside gardens and shrubberies.

*Jasminum Officinale*. Linn. (white jasmine.) A smooth climbing shrub with leaves opposite, pinnate and three to seven leaflets, lanceolate. Flowers white and very fragrant. Summer months.

*Jasminum Sambac*. Ait. (Arabian Jasmine.) A low bushy shrub with rusty stems, heart shaped, entire and downy leaves. Flowers white, one inch in diameter. This and the previous one are called by Lefroy "all naturalized," but I have never yet seen them outside of cultivation. Summer months.

### Natural Order, Apocynaceae.

*Nerium Oleander*. Linn. (Oleander.) An evergreen shrub bushy, branching densely from base, six to twenty feet high, attaining in places along South shore the dimensions of a tree, and free from undergrowth. Leaves lance-shaped, six inches long, one and a quarter to one and a half inch wide, glossy and rather fleshy. Flowers are followed by seed-pods six to ten inches long, not abundant. The blossoms range in colour from delicate white to various shades of deep red scarlet, with here and there a double-flowing plant to be seen, and on the cross-roads from Walsingham to the North shore a fine hedge of double-flowering oleanders exists. When in full bloom the scent is overpowering, and is said to exercise on certain constitutions poisonous effects. Introduced, it is said, as a rare exotic, about 1790, it has now spread all over the islands, and is a nuisance to farming interests. The more it is cut down, unless the roots are extracted, the thicker it grows again. Its seeds, like thistledown, are carried everywhere by the wind, when the seed-pod opens. It makes excellent hedges or wind-breaks, but along the shores is badly affected by the sea spray. The flowers are in perfection from May to the end of July, though a stray blossom may not unfrequently be found all through the year.

*Plumieria Rubra*. Linn. (Frangipani; sometimes called red jasmine.) A small tree or shrub, to be found common in gardens, its thick cylindrical, blunt branches terminating in clusters of large, alternate, oblong leaves, and large red flowers. It is one of the few deciduous or leaf-shedding shrubs in winter here, flowering before the new leaf puts forth in May. It is



considered ornamental, and is striking from the stag-horn appearance its blunt branches present. There is a beautiful specimen at Llanstwyth, Hamilton.

*Vinea Rosea*. (Poor Man's Rose; Red Periwinkle.) Although a garden plant may here and there be found outside of cultivation, there are white and red varieties of it. It grows about nine inches high, the flowers being in center of leaves grouped around them and being mathematically star-shaped. Leaves ovate, pointed, two to three inches across and four inches long, dead green, cool-looking. Biennial. May to September. Blossom not unlike a phlox.

*Thevetia Peruviana*. Juss, or *Cerbera Thevetia* (yellow Trumpet-flower.) Closely resembles the oleander except that its bright, glossy leaves are much narrower, drooping and alternate. Its yellow blossoms are followed by a two-seeded drupe or fruit on a stalk two inches long, spiny, not unlike that of the horse chestnut, but very poisonous. Summer months. I have found it in several localities, although Reade confines it to cultivation.

#### Natural Order, Asclepiadeae.

*Asclepias Curassavica*. Linn. (Butterfly-weed; wild ipecacuanah). A plant two to four feet high, half shrubby: stems cylindrical, downy. Leaves four inches long, one inch wide, lanceolate, opposite, entire. Flowers showy, scarlet, and orange, followed by pods the seeds of which are embedded in glossy silky hairs or fibres. Not common. In America it is known as silkweed. Perennial. July to November.

#### Natural Order, Gentianeae.

*Erythraea Centaurium*. Pers. (Centaur; wild rice.) A small, inconspicuous plant, seldom more than six inches high, oftenest less. Stem branched, leaves in pairs, entire, oblong, half-inch long and quarter of an inch wide. Flowers rose-colour, long, slender with a white appearance of corolla tube, like a grain of rice. Common on hills and dry waysides. Annual. February to July.

### Natural Order, Boragineae.

*Heliotropium Curassavicum*. Linn. (sea turnsole; wild heliotrope. A procumbent plant, found along salt marshes. Stems branched, radiating, one to two feet long. Leaves pale milky-green, rather fleshy, one to two inches long, quarter of an inch wide; narrow, lanceolate, entire, not stalked. Flowers minute, one-sixth of an inch, white with yellow throat, changing to purple. Twin spikes of flowers elongating in fruit three to four inches curve over in opposite directions dotted full length after, with small seed pods. May to October. Common. Annual.

*Tournefortia Gnaphaloides*. R. Br. (sea lavender.) A seaside shrub among rocks, three to four feet high, with gnarled, twisted and contorted trunk. Branches naked, leaves of a sage-green crowded at end of branches, two to three inches long, one-third of an inch wide, with a white silky down, giving heavy appearance, blunt, very fleshy. Branches scarred where previous leaves have fallen. Flowers half an inch across, crowded, whitish-pink. Common along South shore. April to August.

*Lithospermum Distichum*. Arteg. (gromwell.) Quoted by Lefroy as a "native seaside plant," but no description. Omitted by Reade.

*Cordia Sebestana*, or *Sebestiana*. Linn. (scarlet cordia.) may be seen only as a large garden tree, known by its tubular scarlet flowers and bright green fleshy ovate leaves. It is limited in numbers, there not being many in the island shrubberies. Sparingly flowering all the year round.

### Natural Order, Hydrophyllaceae.

*Nama Jamaicensis*. Linn. (nama.) A plant with prostrate stem, eight to ten inches long, radiating from the root. Leaves reversely ovate, one to two inches long. Flowers with short stalks, solitary or in pairs, tubular, bluish-white. Rare, although Reade says a frequent garden weed. Summer months. Annual.

### Natural Order, Convolvulaceae.

*Ipomoea Pres-Caproc.* Roth. Seaside convolvulus. A creeping plant with smooth reddish stems, branching from the root, and spreading over sand and rocks for long distances, rooting at the nodes. Leaves leathery, round, emarginate, three to four inches in diameter. Flower stalks long, and generally bearing three blossoms, with a short tube. Flowers two to three inches across, purple. Perennial. July to October.

*Ipomoea Nil.* Pers. *Convolvulus nil* (purple morning glory.) A plant with turning stem, slender, leafy, intertwining and running over old walls and waste corners. Leaves heart-shaped, entire, or three-lobed slightly hairy. Its foliage rapidly covers what would be otherwise an unsightly waste. Flower stalks short, one to three flowers, one inch long. It grows universally, and its purple-blue flowers succeed each other all the year round. It is asserted that its seeds never germinate, and that its reproduction is by means of rootlets from its joints. This I am unable to verify, although after continuous search I have failed to find perfect seeds. Perennial. Most of the year.

*Ipomoea Purpurea.* Linn locally known as cave convolvulus resembles closely the above, and is the ornament of the Convolvulus Cave. Although differing very little from the above it has been assigned a separate place by Lefroy. Flowers of a redder hue than the preceding.

*Ipomoea Sidifolia.* Schrad. (tree convolvulus). Stem woody, twisted thick branched, and ascending trees to a great height. Leaves heartshaped, pointed, entire, velvety underneath. Rare. Flowers numerous, one inch in diameter. White with purple base, slightly fragrant. Some fine specimens on road south-east of Prospect, and at Clarence Cove where it runs from tree to tree. October and November. Perennial.

*Ipomoea Sagittaeifolia.* Hook. Similar except not attaining any height. Found only in a marsh near Shelly Bay, where it is abundant. Lefroy styles it "naturalized from America."

*Ipomoea Dissecta.* (Poir.) A creeper or vine. A beautiful species, creeping over bushwood. Leaves divided into five to

seven finger-like segments, the latter lobed and toothed, much resembling those of the scented geranium. When bruised they emit a prussic acid smell, like the leaves of the sweet bay. Flowers white with a purple base, much flatter than in other species, one and a half inch across. Not common. Abundant in lane west of Rosebank, Hamilton. Perennial. May and June.

*Dichondra Repens*. Forst. *Dichondra*. A small plant with stems appressed to the ground, slender, wiry, rooting and interlacing, several feet in diameter. Leaves heart-shaped, entire, half to one inch. Flower on stalks, seldom an inch high, very insignificant, greenish-white, quarter of an inch wide. Very common mixed with grass on hillsides. March to June. Perennial.

#### Natural Order, Solanaceae.

*Solanum Aculeatissimum*. Jacq. (common night shade; cockroach berry). A prickly, shrubby plant, two to three feet high, with stout spreading branches, thickly spined. Leaves three to four inches long with oblong lobes; midrib and veins prickly, wavy margin, both surfaces clothed with minute brownish down, and long hairs. Flower-stalks slender, flowers drooping, half inch in diameter, white, followed by an orange scarlet berry, three quarters of an inch in diameter, very poisonous. It is the representative of the British *Belladonna* (deadly nightshade.) Found by waysides. Perennial. Summer months.

*Solanum Nigrum*. Linn. (black nightshade). An erect plant, some two feet high, much branched. Leaves two to four inches long, smooth, coarsely toothed. Flower-heads rise from the stem below the leaves, pendulous. Flowers white, one third of an inch, with yellow centre, followed by a small round black berry. A nauseating smell pervades this plant, especially if the leaves are bruised or rubbed. Common in waste places, and shady corners. Summer months. Annual.

*Datura Stramonium*. Linn. (thorn apple or stinking weed.) A branching plant, two to three feet high, stem green smooth, Leaves six to nine inches long, and four to six wide, ovate

coarsely toothed. Flowers solitary in the forks of the stem, white with tube three inches long followed by an erect oval seedhead, one to two inches long, covered with stout prickly spines or thorns. It is of a poisonous nature and its extinction was urged in a proclamation of 1679. Waste places and cultivated ground. Its leaves are smoked for lung affections. Annual. Summer months.

*Datura Tatula*. Linn. (*datura*.) A tall species of the above genus attaining to ten feet high, closely resembling the above except that its stem is purple, and flowers bluish-white with purple veins, six inches long. These hang like bells, or inverted trumpets, in great profusion. Perennial. Summer and Autumn.

*Datura Metel*. Linn. (*prickly burr*.) A stout, erect, shrubby plant, three to six feet high. Branches succulent, cylindrical. Leaves distant, six to eight inches long, four to six inches wide, ovate, velvety, slightly-shaped, hanging downwards, six inches long, white, followed by seed head, pendulous, covered with spiny prickles. Biennial (?) May to September, occasionally earlier, occasionally later. One of these shrubs with its white bell-shaped blossoms contrasting with its foliage, is a remarkable sight. Originally a garden plant, it has spread on waste ground abundantly.

*Datura Suaveolens*. H. B., or *Brugmansia*. (*moon plant*.) Both single and double flowering is not unlike the above, except in not attaining such growth, and its bell shaped flowers with less covered lip are cream or yellowish in colour, often erect instead of pendulous. This is for the most part a garden plant, though occasionally found outside of cultivation. Perennial. May and June.

*Nicotiana Tabacum*. Linn. (*tobacco*.) A plant four to six feet high, with large, slightly downy, lanceolate leaves, entire. Flowers pink, two inches long, erect. Its locality is around ruins and occasionally dry waysides, by their walls. A remnant of what was at one time cultivated here. Annual. July to September. The early records of the islands show that at one time a large trade was done here in the shipment of tobacco to England. From the luxurious growth of the stray plants

growing spontaneously here and there, a good yield might be anticipated under cultivation.

*Nicotiana Glauca*. Graham. (blue tobacco). Yellow tubular flower and blue-green leaves. Common on waste stony ground and old walls. Formerly a garden plant.

*Physalis Edulis*. Sims; or *P. peruviana*, Linn. (cape gooseberry) A plant clothed with velvety soft hairs, weak branches, spreading. Leaves heart-shaped, long, pointed, irregularly toothed. Flowers, solitary in angle of leaf and stem, yellow with purple spots at base, three quarters of an inch in diameter, fruiting abundantly with a cherry-sized berry enclosed in a scaly envelope or calyx. Summer months. Perennial Evidently escaped from gardens.

*Physalis Linkiana*, or *lanceolata*. Mich. (cow cherry.) Similar to above but much less hairy; stem, purple-spotted, two to three inches long. Leaves sharply toothed. Flowers drooping, yellow with purple spots, and berry similar to that in above. Fields and waste places. Annual. September.

*Physalis Angulata*. Linn. (balloon berry.) Very similar to above but rarer. Its yellow flowers are *not* spotted. Found near Causeway.

*Physalis Pubescens*. Linn., or *hirsuta* (horse cherry) is omitted by Reade but is mentioned by Lefroy who says it is distinguishable from the former by the more oval form and bluish tint of the fruit, with its flowers in clusters.

*Capsicum Annum*. Linn. (Chili pepper.) A shrub from three to six feet high, woody, frequent stems or branches. Leaves ovate, pointed, one inch long. Flower stalks half to one inch long. Flowers white, drooping, single, quarter of an inch or more long, bright, shining green, turning red when ripe. These are used in either the green or the ripe state for culinary purposes, and for making the hot Chili vinegar which is extensively used. This plant may now and then be found outside of plantations. It is almost universally grown. Flowers with five white petals. May to August.

*Nicandra Physaloides*. Gaert. (*Nicandra*.) A plant some three feet high, with branched, Angular, smooth stems. Leaves three to four inches long, half as wide, ovate, oblong. Flowers solitary at leaf stalks, very showy, one inch across, blue with white tube. Although Lefroy quotes it as only found on Ireland Island. Reade calls it a frequent weed in cultivated ground. It is not, however, common. Annual. June to September.

#### Natural Order, Scrophularineae.

*Verbascum Thapsus*. Linn. (mullein.) An erect plant, very sturdy with stout stem, seldom branched, half to one foot or more high. Leaves near ground, six to ten inches long, oblong, blanket-like or densely woolly, their base clasping the stem. Flower spike one or more feet long, and thick, the blossoms along and close to the stalk. Flowers from three-quarters of an inch to one inch across, golden yellow. Sometimes called Devil's Tobacco, the leaves being smoked for asthma. Waste land; not common. Perennial. June to October.

*Buddleia Neema*. Roxb., or *B. americana* (snuff Plant) A drooping shrub, six or more to ten feet high, much branched with downy foliage, under surface white or hoary. Leaves three to four inches long, oblong, acute, flower-stalks pendulous, many flowered. Flowers yellow with a bluish-red tinge, each one-sixth of an inch long. Found by waysides, and field corners. A remarkable growth of the shrub to be seen on the South bank of the Paget road near Point Finger. Its drooping growth recalls that of the weeping willow. June to August.

*Capraria Biflora*. Linn. (goatweed.) A smooth, shrubby plant, two to three feet high, with erect, tough branches. Leaves oblong, coarsely serrated, one and a half inch long and half an inch wide, the serrate teeth sharp and spreading, fringed with small hairs. Flowers in pairs, stalked, white, quarter of an inch wide according to locality. Common everywhere. Spring and Summer.

*Herpestis Monniera*. H. B. (*herpestis*.) A creeping plant, with round fleshy stem, rooting at the joints. Leaves half an inch long, fleshy, wedge shaped, smooth, entire. Flower-stalks

one inch long; flowers white with purple throat, one-third of an inch in diameter. Frequents damp ground, edges of marshes and wet fields. Perennial. August to September.

*Veronica Agrestis*. Linn. (veronica.) A plant with prostrate, slender stems, branching, slightly hairy. Leaves half an inch long, roundish, coarsely serrate. Flower stalks same length, one-flowered. The whole plant is insignificant. Flowers pale blue, veined, quarter of an inch. Grows in waste ground and in gardens. Annual. March to June.

*Veronica Arvensis*. Linn. (speedwell.) This species has erect stems four to eight inches long. Leaves ovate, slightly serrate. Flowers on a long, leafy stalk, blossoming sparingly, one or two at a time. Flowers one-eighth of an inch broad, blue. Common on waysides. Annual. Spring months.

*Veronica Peregrina*. Linn. (speedwell.) A plant with erect, smooth stem several inches high. Leaves crinkly, oblong, blunt, scarcely serrate, slightly fleshy. Flowers solitary from leaf joints, white, one-eighth of an inch across. Cultivated ground. Annual. Spring months.

*Maurandia Sempervirens*. Jacq. (roving sailor) An evergreen, delicate climber, with long, slender stem, often festooning to great length. Leaves triangular, smooth, clean. Climbs along rocks and over brushwood, and is seen to perfection, clothing the steep cutting at Mount Langton entrance. Flowers, an inch long, pale purple. Perennial. Summer months.

*Maurandia Barclayana*. Bot. Reg. Similar in all respects to the former, but with leaves somewhat larger and flowers double the size. Flourishes at Mount St. Agnes, and in the lane east of Rosebank, Pitts Bay Road.

*Linaria Vulgaris*. Mills. (toadflux; butter and eggs.) An upright plant, one to two feet high, with slender smooth and leafy stem. Leaves one to two inches long, one-eighth of an inch wide, alternate or in whorls of three, numerous all the way up the stem. Flower-heads terminal, crowded. Flowers, with a peculiar spur as long as the tube, yellow with a deep orange



palate, very showy. Probably a garden escape. Roadsides and waste ground. Not very common. Perennial. Summer months.

*Linaria Elatine*. Desf. A hairy creeping plant, with very slender numerous branches one foot long. Leaves halberd-shaped, half to three-quarters of an inch long. Flower-stalks long and thread-like, at right angles from leaf-joints. Rare. Near Causeway. Flowers, yellow with small purple upper lip. One quarter of an inch across. Annual. Spring months.

*Russelia Duncea*. Zuccar. (heath.) English name a misnomer, plant having nothing akin to real heaths. An almost leafless plant with long, rushlike, jointed branches, abundant along old walls. Flowers long, scarlet, tubular, very similar to a piece of red coral. Perennial. All the year round.

#### Natural Order, *Bignoniaceae*.

*Crescentia Cujete*. Linn. (calabash tree.) Although not a wild tree a number are scattered through the islands, being grown for the sake of the hard shell encompassing the fruit, which is carved ornamentally as well as used by country residents. At Walsingham is the celebrated calabash tree associated with the name of the Irish poet Tom Moore. It is a large straggling tree, leaves entire, wedge-shaped, growing in rosette-like clusters along the spreading branches, presenting an appearance of its own. The solitary flower stalks rise direct from the branches. Flowers, whitish, followed by a fruit the size of a cocoonut suspended by a long stalk, presenting the appearance of a solid dark-green pumpkin, but hard.

*Tecoma Pentaphylla*. Juss. (*Tecoma* or white cedar.) A tree twenty feet high, in appearance not unlike the galba, handsome, clean, bold growing and sturdy. Leaves or leaflets oblong, leathery, glossy, entire, four to six inches long and half as many across. Flowers a rosy white, with tube nearly one inch long. It is an ornamental tree in the public grounds in Hamilton. A fine specimen may be seen in front of Rose Cottage, on Parliament Street, Hamilton, and another at Wistow, the Flatts, on the side of the public road leading from

Flatts Bridge, North. It is not common. May and June. The name "cedar" is a misnomer, the tree having nothing in common with the cedar proper.

*Tecoma Stans*. Juss. (trumpet flower.) A shrub some ten feet high with pinnate leaves, serrate, the leaflets being large and with numerous bright yellow flowers. It is to be seen in many gardens and one shrub grows in the open near the Public or Experimental Gardens, in Paget East. Summer.

#### Natural Order, Acanthaceae.

*Justicia Alba*; Roxb., and *Justicia lucida*, (Nees.) Both shrubby plants, one with white flowers, the other with red flowers. They are the only wild species under this Order and are evidently garden escapes. They are not unlike the *Clerodendron*, except that the flowers instead of being in a head are at the terminal extremity of the shrub. Not common. Perennial. Summer months.

#### Natural Order, Verbenaceae.

*Verbena Chamaedrifolia* (common verbena.) This in different colours, especially the purple variety, is a garden escape, but has so spread over the islands that some fields are tinged with the colour of the flower. The flower-spike of the garden verbena is contracted so that the clusters appear level-topped. Perennial. Chiefly May and June.

*Verbena Bonariensis*. (purple verbena.) Has rough, pointed leaves clasping the stem margin, armed with small spiny teeth. Flower stalks lengthen out one to two feet high, above in threes, some two to three inches long. Flowers a deep purple. Not very common. Waysides and fields. Perennial.

*Verbena Urticaefolia*. R. P. (wild verbena.) A roughly grown plant with stem two feet high, long slender branches, wrinkled and nettle-like leaves, coarsely serrate. Flowers small, scattered along slender spreading curved branches of a compound spike. They are small, one-sixth of an inch, but being numerous although the lower ones shed before the middle and end ones open, present a pinkish-white appearance. Waysides and waste ground. Perennial. Summer months.

This plant is very apt to be, and often is, confounded with the following which it resembles except for the colouring of the flowers and flower bracts.

*Stachytarpheta Jamaicensis*. Vahl. (vervain.) An erect growing plant, one to two feet high, or more. Stem shrubby at base and tough, slightly hairy. Leaves two to three inches long, ovate, serrate, with purplish veins. Flower-stalks somewhat flattened, towering, naked, bearing deep blue flowers, one-third of an inch long, numerous along the spikes, common amidst stone heaps and by roadsides. Annual and Perennial. Summer months.

*Lippia Nodifolia*. Rich. (capweed.) This is one of the most widely distributed plants in Bermuda, being nearly universally so. It is a prostrate plant, stems many feet in length, rooting at the joints. Leaves clean and dense, lance-shaped, one inch long and half an inch wide. Flower-stalks rise erect two or three inches, bearing a dense round head of purplish-white flowers a half-inch in diameter. Neglected ground, moist preferred, but common everywhere. Perennial. Summer months.

I am told that the leaves of this plant were used by the early settlers as a substitute for tea.

*Lippia Reptans*. H. B. K. Cited by Lefroy as Godet's weed, a name given also to an *Artemesia*.

*Lantana Crocea*. Jacq. (prickly sagebush.) An erect bushy shrub, very branching, stems angular, with rough hairy branchlets. Leaves two to three inches long, ovate, pointed, serrate, aromatic. Flower-stalks two inches long, heads almost flat, flowers yellow, changing to orange-red, one inch or more in diameter. A favourite hot-house shrub North, being a perpetual flowerer as it is here. Found universally along stony ridges and walls. All the year round.

*Lantana Odorata*. Linn. (common sagebush.) A smaller species than the preceding, about four feet high. Leaves small, one to one and a half inch long, serrate, rough on both surfaces. Flower-stalks two inches long, flowers pale pink, throats yellow, one-half to three-quarters of an inch long.

Lefroy says that this shrub with the preceding was introduced with the idea that it would be good for fuel, but being only brushwood it has now overrun woods and pastures and is a pest to cultivation. The old residents assert that its leaves when used for cleaning cooking utensils by boiling a few branches would remove any taint or smell. In flower all the year round.

*Lantana Aculeata*. Linn. (red sagebush) or camara, originally called Madeira sage, although said by Lefroy to be abundant, is rare now, and probably seldom met with out of cultivation.

*Lantana Crocea*. Jacq. somewhat similar to the above, is rather rare out of cultivation.

*Citharexylon Quadrangulare*. Linn. (fiddlewood.) A solid-looking tree from twenty to thirty feet high, with stem and main branches cylindrical, smaller branches four-angled. Leaves five to seven inches long, smooth, clean, oblong, entire, tapering to a point; flower-stalks long, drooping, eight or ten inches hanging on the tree as a spikelet, long after the berries have fallen. The flowers are white, pendant on a bunch followed by a dark, small berry. It is a common tree. September and October. ("Bois fidele." Fr.)

*Duranta Plumieri*. Linn. (pigeon berry.) A drooping shrub, from six to ten feet high or more, with smooth stem, much branched, bright glossy leaves, oblong, entire. Flowers blue in long leafless clusters, which getting weighted with subsequent yellow wax-like berries the size of a pea become pendulous. It is a favourite ornament in shrubberies, but increases rapidly. The flowers are slightly poisonous. Very common in open woods and waysides. Summer months.

*Callicarpa Ferruginea*. Sw. (turkey berry.) A very ornamental shrub, three or four feet high, its branches and the under surface of its leaves having a rusty appearance from the down thereon. Leaves three and four inches long, lance-shaped, pointed, serrate. Its level-topped flower clusters are both at the end of the branch, as well as in the leaf angle. Flowers abundant, pale blue, quarter of an inch in diameter

followed by a small berry, red or magenta coloured. Found chiefly in the Walsingham tract. Not common. June and July.

*Clerodendron Aculeatum* Gr., or, *Volkameria aculeata* (prickly myrtle.) A bushy shrub some six feet high, branchy, rather gummy. Stems dark brown. Leaves large, three to four inches long, and as many across, slightly hairy, or with minute spines. Flowers in a close head, white with purple stamens, giving the flower-head a purplish ground. Not common. Found near the caves. How the name coffee (used by Reade) became applied to this plant is a mystery. Summer months.

*Clerodendron Capitatum*. Schum. Very similar to the above but stouter in growth and more bushy. Originally a garden shrub, but now spread here and there in patches. On the lane East of the Richmond grounds, and on the lower South shore road in Devonshire, on the Camden estate, path leading to Hungry Bay along the roadside wall are two large patches, the former sight affording the largest number of plants. Very showy. May to August.

*Avicennia Nitida*. Linn. (white or false mangrove.) Although belonging to this order, this tree has been alluded to in connection with the mangrove proper (Order *Rhizophora*) The term used, "black" according to Lefroy, is derived from the colour of the wood.

#### Natural Order, Labiatae.

*Mentha Viridis*. Linn. garden mint or spearmint. A plant with numerous purplish stems, one to two feet high; leaves oblong, lanceolate, rough, dark-green, one to two inches long, serrate. Flower-spikes cylindrical. Flowers one-sixth of an inch long, pale purple, common along ditches and marshes. It is a true garden mint but has spread universally. Perennial. Summer months.

*Mentha Rotundifolia*. Linn. (wild mint.) Hoary all over, and coarse-smelling, stems upright, one to two feet. Leaves rounded, one inch in diameter, wrinkled and woolly. Near marshes and on damp road-sides in large patches, the plants being densely crowded. Flowers minute; pale pink. Perennial. Summer months.

*Mentha Arvensis*. Linn. (peppermint.) A plant with smooth slender stem, one to two feet high. Leaves one to two inches long, broadly ovate, serrate, deeply veined, dark-green. Flowers small; pink. Frequents marsh edges. Not very common. Perennial. Summer months.

*Calamintha Nepeta*. Linn. *Nepeta Cataria* (catnip.) A downy herb, stems straggling, very strong smelling. Leaves half to one inch long, broadly ovate. Flowers pale lilac, spotted throat, one-third of an inch long. Waste ground especially. Common, and eagerly sought after by cats, which delight to roll, in its foliage. Perennial. Summer months.

*Salvia Coccinea*. Linn. (scarlet sage.) A plant six to twelve inches high, hoary. Leaves one to two inches long, oval, heart-shaped, sage-green. Flowers showy, scarlet, three-quarters of an inch long. Dry banks and hillsides. Common in localities only. Perennial. April to October.

*Salvia Serotina*. Linn. (white sage.) Very similar to preceding, except leaves pale green, velvety beneath. Flowers white, quarter of an inch long. Dry banks and waysides. Perennial. Summer months.

These two salvias are very apt to be confounded with the lobelia or cardinal flower.

*Lamium Amplexicante*. Linn. (dead nettle.) A small plant with weak, brittle stem, almost transparent; leaves roundish, crenate, upper ones broader than long. Flowers rosy, variegated with white, half an inch long. Waysides and fields. Common. Annual. Spring months.

*Lamium Purpuerum*. Linn. (purple dead nettle.) Stems branching from root with purple tinge. Similar to preceding, of which it may be called an offshoot, differing mainly in its flowers being purple.

*Stachys Arvensis*. Linn. (hedge nettle.) A plant with stems one half-foot to one foot long, slender. Leaves half an inch to one inch long, ovate, crenate, whorls of distant flower one-third of an inch long, purple, variegated with white. Common on waysides. Annual. Spring to Autumn.

*Leonuris Cardiaca*. Linn. (motherwort.) A herbaceous plant two or more feet high, square stems, downy, leafy all the way up. Leaves cut into many toothed lobes. Flower whorls distant, numerous; flowers rosy, half an inch long, with purple veins. Perennial. Summer months.

*Rosmarinus Officinalis*. Linn. (rosemary.) A fragrant leaved shrub, stem much branched, two or more feet high. Leaves narrow, quarter inch wide, two inches long; with deeply channelled midrib, hoary, especially beneath. Flowers whitish-blue, or blue-grey, in terminal clusters. Found abundantly on St. David's island, and sparingly elsewhere, mostly east, on rocky hills. Very aromatic. Perennial. Early Summer.

#### Natural Order, Plantagineae.

*Plantago major*. Linn. (English Plantain.) A plant with large, ovate, crinkled leaves, six to eight inches long and four to six inches broad. Flower stalks nearly a foot long, terminating in a slender whip-like spike of nearly equal length, encircled with greenish-white flowers, small. (designated by Lefroy "Wayside weeds.")

*Plantago Lanceolata*. Linn. (Ribwort.) A plant with leaves six to eight inches long, one inch wide, acute and tapering into a long channelled stalk, with three to five ribs. The flower-stalk one to one and a half feet high, terminating in a thick ovate spike one inch long, dark brown, with long thin stamens. Common everywhere. Perennial. All the year round. Locally called "ratstail."

#### Natural Order, Nyctagineae.

*Boerhavia Erecta*. Linn. (hogweed.) An erect plant two to three feet high. Stem smooth, leafy below divided into numerous slender branches devoid of leaves. Leaves of plant some two inches long, opposite, in unequal pairs, oval, pointed, wavy margin, underside whitish. Flower-stalks thread-like. Flowers minute, pale pink. Common weed. Annual. Summer.

*Mirabilis Jalapa*. Linn. (four o'clock marvel of Peru.) A smooth plant two to three feet high with large tuberous roots.

Stem stout, forking at brittle swollen joints. Leaves oval, long, pointed. Flowers in terminal clusters of six or eight, shortly stalked, whitish pink, variegated with yellow, followed by a five-ribbed seed the size of a pea, black, wrinkled, floury within. The brilliant flowers open at four o'clock p. m., closing on the following morning. Rare; and though found by waysides is evidently originally a garden flower.

*Mirabilis Dichotoma*. Linn. (synonymous with *M. Jalapa*) is cited by Lefroy but without description, and is probably alluded to by Reade, who says—"other varieties are by no means uncommon." It is not likely that the differently coloured flowers may have led to this division of species.

*Bougainvillea Spectabilis*. Willd. (*bougainvillea*.) One of the most beautiful creepers in the islands. Introduced from Gibraltar in 1874, it has established itself with great rapidity, and has thrived to such an extent that few garden walls are without it. Its beauty consists of the large scarlet leafy bracts, growing in triplets, from which the more delicate flowers of darker hue rise. It presents the appearance of a mass of sweet pea flowers thrown together. It has taken possession, here and there, of trees as an escape, notably near Fairylands, and will probably in time rival the oleander in its distribution. Early Spring and well on into Summer.

*B. Spectabilis* (syn. *B. speciosa*) is represented by four plants only—one at the Admiral's House two at the Botanic Station, and one at Bellevue, Paget, the residence of the late Wor. W. T. James.

### Natural Order, *Amarantaceae*.

*Amaranthus Retroflexus*, or *spinosisus*. Linn. (*amaranth*.) An erect plant, stem three to four feet high, reddish, grooved. Leaves three to four inches long, half as wide, oval, pointed, strongly veined below, margin wavy and tinged with red. Spikes green, densely flowered, crowded. Not uncommon in cultivated ground where it is a tall conspicuous weed. Flowers green, minute, rather mealy. Annual. July to October.



### Natural Order, Chenopodiaceae.

*Chenopodium Anthelminticum*. Linn. (worm-seed.) An erect coarse, leafy plant of a bright green colour, and unpleasant aromatic smell, two or three feet high, stem slightly branched, angular and grooved. Leaves oblong, two to three inches long, one inch wide, acutely toothed. Flower clusters in small whorls along numerous slender leafless spikes. Flowers minute, yellowish-green, followed by round, shining, dark-brown seeds. Common on waste ground and waysides. Perennial. July to October.

*Chenopodium Album*. Linn. (pigweed.) An erect plant, two to four feet high, stem grooved. Leaves one to three inches long, one to one and a half inch wide, toothed slightly, whitish and powdery, oblong. Flowers in roundish clusters collected in spikes, greenish, minute, mealy looking. Waysides and cultivated ground. Annual. Summer months.

*Chenopodium Murale* or *Ambrosioides*. Linn. A plant with branched, grooved stems, six to eighteen inches high. Leaves smooth, shining, green, oval, sharply toothed, except near base. Flower-spikes half an inch long, terminal and at leaf stalks. Flowers green, small, mealy. Annual. Autumn months.

*Blitum Maritimum* (= *Chenopodium rubrum*;) *Atriplex cristata*, H. B.; and, *Obione cristata*, Moquin. A plant with stem one to two feet high, branched. Leaves grayish, one to two inches long, juicy, lance-shaped and toothed. Flower spikes at leaf joints, short, flowers minute, grayish-green merging into a red tinge. Found near shores, especially at the Ducking Stool. Annual. Summer months.

*Salicornia Fruticosa*, *ambigua*, or *herbacea*. Linn. (samphire glasswort.) A plant with woody stem, prostrate or creeping, rooting in the sand, rocks, and salt marsh margins. Branches six or eight inches long, or more, fleshy, cylindrical, jointed, leafless, erect. Very succulent and used in pickles. Swamp. Flowers obscure, green. Common. Perennial. May and June.

**Division III: Apetalae.**  
**Natural Order, Polygonaceae.**

*Polygonum Acre*. H. B. (pondweed.) An aquatic plant with narrow, lanceolate leaves, sprinkled with brownish patches. Flowers erect, on spikes three inches long, with swelled terminal portion, minute. Rare. Found by Reade in Pembroke Marsh.

*Polygonum Convolvulus*. (black bindweed.) A twining plant with stems one to three feet long, slender. Leaves one to two inches long, halberd-shaped, pointed. Flowers in leafy racemes, greenish-white followed by a triangular nutty seed. Roadsides and waste places. Not common; probably introduced among seeds. Biennial. August.

*Polygonum Fagopyrum*. (buckwheat.) An erect smooth plant two to three feet high, stem reddish, juicy. Leaves arrow-shaped, one to one and a half inch long. Flowers pale rose-colour on short stems at leaf stalks, followed by a seed-grain similar to that of the above species, and largely used in America for food. It is evidently a remnant of cultivation, and is found on the flat land at North Village, Pembroke. Annual. July to September.

*Coccoloba Uvifera*. Linn. (seaside grape.) A largely distributed tree, especially along the sea shore ten to twenty feet high, with smooth spreading branches. Leaves smooth, shining, rounded, heart-shaped massive, three to six inches long, and in many of them broader. Flowers in slender, jointed stalks, forming dropping racemes, small, whitish, followed by berries of purplish colour, in bunches like to and of the size of grapes. They have an acrid and rough taste very different from true grapes, although bunches of either side by side are scarcely distinguishable. Early Summer.

*Rumex Acetosella*. Linn. (sour grape.) A small species of dock, similar in every respect to the following species except that the acrid taste of the leaves closely resembles sorrel, and leaves etc., are much smaller.

*Rumex Obtusifolius*. Linn. (common dock.) Has a stout stem, erect, angular, two to three feet high. Lower leaves es-

pecially prostrate, six to ten inches long, and half as wide, oblong, frequently red-veined, blunt wavy-edged. Flower stalks leafy, branched, with distant whorls, the petals veined. Flowers green, quarter of an inch long. Common everywhere. Perennial. January to March.

*Rumex Sanguineus*. Linn. Closely resembling in growth the former but always with blood-red veins in leaves. Perennial. Common.

*Rumex Crispus*. Linn. (curly dock.) Stem erect, furrowed, two to three feet high. Leaves oblong, six to ten inches long, two inches wide, very waved on margins presenting a crisp appearance. In other respects and in locality, the same as preceding species.

#### Natural Order, Ceratophylleae.

*Ceratophyllum Demersum*. Linn. (pond-weed, water hyacinth?) A plant of peculiar growth, stemless, but putting up numerous fleshy, dark-green, shining leaves two to three inches long, and nearly as wide supported on strong stalks two to three inches long, tumid and excessively swollen, composed of a pulpy, fibrous growth, roots floating or skirting the mud. Flowers, abundant on stalk three or four inches long, mauve-pink, very similar to the *Colichum*. Pembroke marsh. Perennial. August.

This plant was introduced from Florida. It has now so spread as to block the water channels in Pembroke marsh, necessitating an annual raking out and destruction of the plants.

#### Natural Order, Aristolochiaceae.

*Aristolochia Trilobata*. Linn. (Dutchman's pipe, birthwort.) A creeping plant, extending many feet with long slender runners, covering walls or fences. Leaves heart-shaped slightly fleshy, light-green, delicately veined underneath, pointed, three to four inches long, two inches wide, narrowing to a point. Flowers pendulous from leaf axil on a stalk two to three inches long; expanding and opening upwards from the stalk end; brown and white mottled. The form of the flower corresponds to that of a pipe. Seed-pod like an inverted parachute. Originally a garden plant, it is now comparatively abundant on old walls. Perennial. Summer.

### Natural Order, Laurineae.

*Persea Gratissima*. Gaert. (alligator or avocado pear.) A handsome, well-grown tree of considerable height and sturdy growth, originally brought from the West Indies. Leaves a shining green, dense foliage. Flowers whitish. April. It fruits well, but is uncertain in some seasons. The fruit comes in from August to October, and is a favourite among the residents. It is remarkable for the large, round kernal in its drupe. It is common in fields as well as in shrubberies.

*Laurus Nobilis*, Linn. (sweet bay tree.) Although properly a garden tree or shrub, yet it has in some places escaped and flourished. Its laurel-like leaves emit a pleasant prussic acid smell when pressed or rubbed.

### Natural Order, Euphorbiaceae.

*Poinsettia Pulcherrima*. Graham. (blazing star; burning bush.) A handsome shrub nine to twelve feet high, with almost leafless branches, not unlike the Sumach of the North, terminating in clusters of greenish-red and yellow flowers, surrounded by a whorl of large leaf-like bracts of the brightest scarlet, from six to ten inches in length. It flowers from November through the winter, and is one of the chief floral attractions of the islands, for when in full bloom it fairly dazzles the eye with its splendour. I have not met with it as yet as an escape although plentiful in gardens.

*Phyllanthus Niruri*. Linn. (phyllanthus.) A plant rather shrubby at base, about one foot high, stem smooth with leafy branchlets, bearing alternate flowers. Leaves oblong, blunt, entire, pale below, one third of an inch long. Flowers solitary or in pairs, green, hidden beneath the leaves, which close at sunset. Common. Annual. Autumn months.

*Jatropha Multifida*. Linn. (coral plant.) A shrub four to six feet with almost bare branches, terminating in upright clusters of handsome scarlet flowers, borne on coral-like stalks. The leaves are divided almost to the base into from seven to nine finger-like slender lance-shaped divisions or segments. A garden plant and not known as an escape. May to June.

*Jatropha Manihot*. Linn. *Manihot Utilissima*, Pohl. (cassava.) A smooth shrubby plant, cultivated, three to four feet high. Leaves cut like the preceding into five to seven acute segments. Propagated from cuttings. Its roots are not unlike those of the dahlia, but more massive. A Bermudian Christmas dinner is not considered complete without cassava pie, an adjunct which however palatable to some tastes is out of place as a substitute for the English plum pudding at that season. Flowers from the leaf-stalks. Tapioca is made from the roots by a process somewhat similar to that of arrowroot, but it is not carried on to any extent, the low price of the article not warranting the outlay. It is also known under the name of manioc.

*Jatropha Curcas*. Linn. (physic nut.) A shrubby plant six to eight feet high, with smooth, entire, heart-shaped leaves six to seven inches long and half as wide, three to five-lobed and six inches long; is found sparingly around Walsingham. It takes its local name from its purgative properties. Flowers green. May and June.

*Aleuritis Triloba*. Forst. (otaheite walnut.) A tree fifteen to twenty feet high; leaves, three-lobed, the middle one largest, and together with its leaflets covered with a mealy down. Flowers, greenish-white, followed by a round nut, called here "butternut," very rich in oil and not wholesome if eaten in any quantity. It is not common, a few trees being in the grounds of the Public Buildings, one or two in the Rosebank grounds, and here and there a tree in private shrubberies.

*Cicca Disticha*. Linn. (otaheite gooseberry.) A fairly sized tree or large shrub, shedding its leaves in Winter. Leaves oval; flowers green. Very rare.

*Ricinus Communis*. Linn. (castor oil plant.) This it is supposed, according to Lefroy, to be the plant mentioned in 1623 by Captain John Smith as the redweed, and was cultivated under the name of "olyseed" in 1632. This plant is here of very quick growth, assumes the size of a small tree, ten to fifteen feet high; stem branched, smooth, frequently of a purple colour. Leaves, seven to ten-lobed, acute, coarsely toothed, the teeth again serrate, one foot in diameter, attached near the

centre to the leaf stalk. Flowers on erect stalks six to ten inches long, green with purplish tinge, followed by a prickly casing. It delights in old disused quarries and stony ground, where it best attains its full height. Perennial, although an annual in the Northern United States and Canada. The seeds yield the well known castor oil, but do not seem here as yet to have been put to any particular use. Summer months.

*Croton Maritimus*. Walt. (croton.) A small shrub some three feet high, with slender branches, straggling, coated with a brownish-light wooly down. Leaves alternate, one to two inches long, one inch wide; oval, entire, pale-green above, silvery-white below. Flower stalks terminal or axillary, with numerous whitish, small flowers. Grows in woods at edge of sandy bays, and is the parent of the many ornamental varieties gracing gardens. Early summer.

*Acalypha Tricolour*. Hort. (acalyphia.) A shrub six to eight feet high, of colour varying from deep red to bronze, or copper colour. Originally a garden shrub, it has escaped and is establishing itself, a notable growth of it apart from a garden being on the east side of the Spanish Point Road, on the edge of the Pembroke water channel.

*Hura Crepitans*. Linn. (sandbox, or monkey puzzle.) Only a few specimens to be seen, namely, at the Public Garden, St. George's. Deciduous.

*Euphorbia Buxifolia*. Lam. and Sw. (sea side spurge.) A small milky-juiced plant, sometimes half shrubby, juice acrid. Stems spreading and branching, with purple tinge, leafy, one foot long. Leaves, half an inch long, same width, opposite, entire, oval, pointed, milky-green appearance. Flower heads greenish-white. Found especially on seashores and edges of marshes. Perennial. Autumn.

*Euphorbia Maculata*. Linn. (common spurge.) A prostrate plant, stems much branched, radiating, purplish, and often forming a large patch of growth, spreading flat on walks and flowerbeds. Leaves, one-third of an inch long, dark-green, otherwise resembling the previous species. Flowers, reddish-green. Annual. All the year round.

*Euphorbia Prostrata*. Ait. or *Euphorbia hypericifolia*. Linn. Similar to above; except that the latter has twiggy stem with alternate slender branches. Leaves one inch long, opposite, often red-blotched. Flowers both terminal and at leaf-stalks, minute, white. Common. Annual. Summer months.

*Euphorbia Heterophylla*. Linn. (Joseph's coat.) A smooth plant, one to two feet high, stem erect, branched, bright-green. Leaves, alternate, varying in shape, oval, lance or fiddle-shaped, entire or serrate, the upper leaves surrounding the terminal cluster of flowers having a deep red blotch at their base, giving the appearance, as in the "blazing star," of being a part of the flower itself. Flowers reddish-green. Frequents warm side of old walls. Annual. Summer.

*Euphorbia Peplus*. Linn. A small erect leafy plant, six inches high, stem dividing into three branches, repeatedly forked, forming a leafy flowerhead. Leaves alternate, half-inch long, blunt, roundish, oblong at summit. Waste places and neglected gardens. Flowers, small, green. Annual. September to November.

[Note: All the spurges proper are called by the coloured population indiscriminately, "Tettimelly."]

*Euphorbia Candelabrum*. Trem. (candlestick tree.) A plant attaining when old a height of twelve or fifteen feet (one at "Bishop's Lodge," Hamilton) not unlike and apt by a novice to be mistaken for a cactus which its stem and branches much resemble, the latter really acting as leaves. Its blossom is in clusters, dirty yellow, but only seen on full grown shrubs.

*Euphorbia Splendens*. Bojer. (Jerusalem thorn.) A low, very spiny shrub, stem and branches chocolate colour, covered with spines. Leaves few, pale green, oval. Flower-stalks one to one and a half inch, bearing a showy bright red flower, three quarters of an inch across. Prefers stone heaps and ruined walls. Rare and an escape. Perennial. Spring and Summer months.

*Xylophylla*. (centipede plant or snake plant.) Is of curious growth. The erect stem is cylindrical, with broad, flattened

and compressed, jointed branchlets, not unlike a small "Stag's Horn" Fern, bearing dense, alternate clusters of green-white flowers at the joints. Its stems, three or four semi-trailing feet cover ground enough to give the idea of being several plants, this appearance being caused by the dense stems. It is only in gardens except where, as in one case in Devonshire, thrown out with garden rubbish.

*Mercurialis Annuæ*. Linn. (mercury.) A plant with erect smooth stem, six inches to one foot high, sparingly branched. Leaves opposite, soft, two inches long, oval and lance-shaped, sharp, serrate. Flower-stalks slender at leaf joints. Stem terminating in an interrupted spike. Female plant has no spike, only leaf axil and flowers, green. Very common everywhere. Annual. June to December.

#### Natural Order, Urticaceæ.

*Urtica Dioica*. Linn. (common nettle.) A plant with erect stem two to three feet high, all parts bristling with stinging hairs, slightly branched, four angled. Leaves heart-shaped, coarsely serrate, with acute point, entire. Flower-stalks branched, springing from leaf angle. Flowers small, green. Perennial. Early Spring. An infallible remedy for the stings inflicted by this plant is to rub dock leaves on the affected parts.

*Urtica Urens*. Linn. (small stinging nettle.) A plant with erect stem, one to one and a half feet high. All parts armed with irritating stings. Leaves, broadly oval, rounded, sharply serrate. Flower-heads in dense clusters, shorter than the leaves, from the angles of which they spring. Flowers, minute green. Annual. December to March.

*Urtica Purpurascens*. Mitt. (notch-leaved nettle.) Almost a counterpart of the above, but distinguishable by the bold notches or saw teeth of the leaves. Annual. Spring and Summer.

*Boehmeria Cylindrica*. Willd. (false nettle.) Scarcely distinguishable from *Urtica dioica*, which it closely resembles in growth and flower, but is without stinging properties. It is



found on marsh land, but is not very common. Biennial. Summer.

*Parietaria Debilis* or *Floridana*. Forst. (red pellitory.) A woody plant at root, with erect stems six to twelve inches high, downy, reddish. Leaves oval, one and a half inches long, and five-eighths wide, pointed, of a glossy dark-green. Flowers greenish-white, tinged with red. Grows on damp walls and in rocky crevices. Annual. Winter months.

*Parietaria Alba* (white pellitory.) A plant with white translucent stems. Leaves same as above, but variable in size. Flowers greenish tinged with white. Not common. In all respects very similar to the preceding species.

*Morus Rubra*. Linn. (red mulberry.) An erect, thickly branched tree, twenty to twenty-five feet high. Leaves large, crinkled, five to eight inches long and three inches wide, heart-shaped, pointed, serrate. Flowers, a pinkish-white, followed by a juicy fruit, on some trees red, on others white. It forms a splendid shade tree from the denseness of its foliage. In 1593, Henry May, the earliest writer on these islands, speaks of "infinite store of mulberries," and Jourdan writing in 1609 mentions "mulberries both white and red." The Bermuda Company perhaps with a view to improving the native tree sent out mulberry seeds in 1616. The tree may frequently be seen, especially in Warwick, in the shape of hedges.

*Morus Alba*. Of this species there are two varieties (*M. multicaulis*, Perrot, and *M. macrophylla*, Hart) which were introduced in connection with an attempt made by the late Dr. S. A. Smith to establish the silk industry in this colony. These varieties are in appearance very similar to the preceding but not so massive or so lofty. For several years Dr. Smith devoted close attention to breeding silkworms. The cocoons, however seemed to fail to mature fully. Nevertheless Dr. Smith shipped, yearly, fairly large consignments of them to Italy and France. It is alleged that climatic conditions in Bermuda militate against the winding of the silk off the cocoons.

*Ficus Carica* (common fig.) This shrub, which at one time was abundant in a wild state, is scarce although in the cultiva-

ted state it is now again receiving attention. It is well known by its cleft, seven-lobed leaves of a dark-green hue, and wide spreading branches. The wild fig, although rare may be found here and there springing up out of or at the foot of old walls. Of late years the fig-tree has been subject to a peculiar fungoid growth on the underside of its leaves, as well as to a scale insect both of which have materially injured its cultivation, but formerly Bermuda was famed for the excellence and abundance of its figs.

*Ficus Elastica.* Roxb. (India rubber tree.) This tree is closely allied to the fig, but assumes such enormous and fantastic growth that it is an object of special admiration. It branches out from the roots into numerous sturdy boughs, clothed with long, thick, leathery leaves, four to six inches long, and half as broad, of a dark shining green. The young buds are of a reddish-brown tinge at the tip, especially in the Spring when the tree sheds a large portion of its leaves perhaps more noticeable from their size than other leaves, yet the new growth either forcing off the matured leaf or supplying its place before the latter is shed, fills up the gap. The small green flowers are produced on the leaf axil, and are followed by a small fruit very like in shape and taste to a fig. Children eat the fruit eagerly. Some very large specimens of this tree are in the grounds at Mount Langton; one very large one is in the Par la Ville Garden, on Queen Street, Hamilton; various other shrubberies possess large trees of the species.

*Maclura Xanthoxylon.* Endi. (tamarind plum.) A few specimens of this West Indian tree may be seen in several private grounds—but it is rare.

#### Natural Order, *Platanaceae.*

*Platanus Occidentalis.* Linn. (plane tree.) A few of these trees are scattered about the islands, several tall ones growing near Spanish Point. A large tree grows on the north side of St. Peter's Church, at St. George's near the vestry door. Leaves, five-angled and sharply toothed. Flowers are gathered into dense balls, followed by a round globose seed on a long stalk, remaining in position long after maturity.

### Natural Order, Myricaceae.

*Myrica Cerifera*. Linn. (bay berry, candle berry myrtle.) An erect bushy shrub, three to six feet high, with numerous leafy branches. Leaves present a dry or withered appearance, dotted brown underneath, oblong, wedge-shaped, entire, two to three inches long, and one-half to three-quarters of an inch wide. Flowers dirty-white, followed by dense clusters of berries size of a small pea, granular, and coated with white, fragrant wax from which candles can be made. Marshes. Summer.

### Natural Order, Salicineae.

*Salix Babylonica*. Linn. (weeping willow.) A few of these trees were introduced in 1830, and cuttings therefrom now developed into trees may be seen in private grounds, but by no means commonly. Damp soils are necessary for the full development of the tree.

### Class III: Gymnospermae.

### Natural Order, Coniferae or Pinaceae.

*Juniperus Bermudiana*. Linn. (Bermuda Cedar.) A large evergreen tree mentioned by the early discoverers as covering the islands. Leaves very small, scale-like, densely overlapping in four rows, channelled on the back. Flowers or catkins oblong, cylindrical, half an inch long, followed by a purple berry, the size of a pea. The male catkins in Spring scatter clouds of pollen over the female trees which then fructify and perfect the berry. Its abundance everywhere makes it almost wearisome in its sombre monotony. Lefroy accounts for its universality by "its success in the struggle for existence, due to its power of withstanding the gales of wind for which the Bermudas have always been famous," as well as the little resistance offered by its foliage, toughness of wood and root-power in the rock interstices. Formerly it attained a greater size than at present, as evidenced by the trunks dredged up in the Sound. In the Camber at the Dockyard, when dredging or excavating for the floating-dock, cedar wood was found forty-seven feet below low-water mark, and well preserved trunks have been found at three to five fathoms depth in Elys

Harbour and Hamilton Harbour, indicating a great subsidence of the original Bermuda. The timber is very durable and fragrant. The tree flowers in March.

A beautiful weeping-leaved pine from Central America, some fifteen to twenty feet high and very flourishing, is in the garden at "Bellevue," Paget East, where also are some thriving specimens of *Araucaria Excelsa*, Arcarian or Norfolk pine.

### Natural Order, Cycadaceae.

*Cycas Revoluta*. Thub. (sago palm.) This shrubby tree is not a true palm although resembling that family. It is almost in every garden, its rough naked trunk bearing at its summit a cluster of feather-like fern-shaped leaves, with slender, glossy and acute leaflets, very narrow, of a dark glossy green, and in innumerable pairs set close together. Its cones are hidden in a large, terminal, cushion-like head.

### Monocotyledons.

### Natural Order, Orchidiee.

*Spiranthes Tortolis*. Rich. (The only native orchid the Islands produce.) A plant with stem six inches to one foot high. Leaves narrow, six to eight inches long, procumbent. Flowers white, one third of an inch in diameter, peculiar from the spiral twist around the terminal spike, two to three inches long. Pembroke marsh and a few in Devonshire, but becoming rare. Root bulbous. April and May. It bids fair to soon become extinct.

### Natural Order, Cannaceae.

*Canna Indica*. Linn. or *Coccinea*. Mill. (Indian shot.) An erect, leafy, sturdy plant, three to five feet high. Leaves some ten inches long, four inches wide, with prominent veins, oval, oblong, slender pointed, smooth, massive, sheathing the stem. Flower-stalk terminal upright. Flowers two inches long, red, the lip variegated with yellow or orange. Seed-pod prickly, rough, three-celled; seeds round, black, shiny. Abundant in waste corners of fields, and corners of walls. Perennial. Summer months.

*Canna Lutea*. Ait. (yellow variety.) precisely the same as preceding, except in colour of flower.

*Maranta Arundinacea*. Linn. (arrowroot.) A herbaceous plant with tuberous root. Stems from two to three feet high. Leaves large, shining, more lanceolate than arrow-shaped. Flowers white in pairs. The plant is raised from portions of the root-like rhizome or tuber planted in April, which attains full size by the following February. The starch, known as arrowroot, is obtained from the tubers, which are first washed and peeled, then is rasped by a revolving grater, is passed through sieves to separate the fibre, and the pulp cleansed by repeated washings. The moisture is finally pressed out and the snow-white, flaky cake is broken up, dried and bleached in the sun. Bermuda arrowroot is unrivalled in quality, but of late years the trade had dwindled until recently taken up by the late W. T. James Esq., who manufactured it on a large scale, with the latest improved machinery, employing a large staff of workers at Bellevue.

*Maranta* or *Canna Edulis*. Linn. (tois les mois.) Is very similar in growth and manufacture, but the demand for it has died out. It is chiefly grown on St George's and St. David's islands.

*Zingiber Officinale*. Rose. (ginger.) This is grown occasionally in a few gardens but not sufficiently to be an article of commerce.

*Alpinia Nutans*. Rose. (shell plant, wild ginger.) A very pretty broad-leaved plant about four feet high. Leaves long narrow and not unlike the gladiolus. Flowers in elegant terminal nodding racemes, not unlike shells, of a whitish pink. Confined to gardens.

*Musa Paradisiaca*. Linn. (plantain.) A plant eight to ten feet high, with graceful, palm-like appearance. Leaves parallel-veined four to five feet long, and one foot wide, often shredded by heavy winds. The flower is dark brown, tulip-shaped, dropping over, at the base of which heavy clusters of bunches of fruit hang in whorls, containing fifty to one hundred plantains. The whole plant presents an appearance of a tropical growth.

*Musa Sapientum*. Linn. (West India Banana.) Very similar to the above but not attaining the same height, and its bunches only contain about one half the number of fruit the plantain produces. The flowers and the fruit ripen all the year round; a tree flowering in April will produce a bunch of fruit fit to cut in from ninety to one hundred days, whilst one flowering in November will require one hundred and fifty to one hundred and sixty days. There are several other kinds, namely; the red banana, (*M. rosacea*), the fig or thum banana (*M. picata*), and the dwarf (*M. Cavendishii*.) The collection of bananas at the Jamaica Experimental Station contains thirty-five species. The fruit bunches of the several kinds average from fifty to seventy-five pounds. In Bermuda sufficient attention is not given to the cultivation of the banana.

#### Natural Order, Bromeliaceae.

*Tillandsia Usneoides* (Spanish moss.) A peculiar parasite, hanging down from the branches on which it grows, like a tuft of long gray hair, somewhat, although in a much more profuse way, like certain lichens in European forests. In the cypress and cedar swamps of the Southern States of America it presents a weird, sombre and funereal appearance. It is only to be seen in a few gardens here, a fine specimen growing in front of a small cottage, east of Pembroke hall; at the Flatts, below Orange Grove, another fine specimen may be seen. When powdered and mixed with lard, it has curative powers for piles.

#### Natural Order, Haemodoraceae.

*Sansevieria Guineensis*, or *Zealandia*. Willd. (bowstring hemp.) A plant throwing out long, strap shaped leaves from eight to eighteen inches or more and some four or five inches wide. At times they lie prostrate, at other times they are erect, all strong, tough and sturdy, mottled, not unlike the back of a snake. Flower stem short, and flowers white. A garden curiosity, but it is found outside of plantations, although not common.

#### Natural Order, Irideae.

*Sisyrinchium Bermudiana*. Linn. (Bermuda "iris," or blue-eyed grass.) A plant with stem eight or nine inches high,

erect, bearing compressed leafy bracts. Leaves six to eight inches long, quarter of an inch wide, and sword-shaped. Flowers in clusters of three to six, on a slender stalk, purplish-blue with yellow eye, so abundant in places as to give a blue appearance to the surrounding grass. Abundant in waste places, barren hills, and among rocks. The seed-pod or capsule is remarkable for its size in proportion to the smallness of the plant. Bulbous root. April and May.

*Pancratium Ovatum*. Mill. (spider lily.) Stem erect, two feet high. Leaves strap-shaped, smooth, leathery, two feet long, three feet wide. Flower stem terminates in a head of long thin whitish flowers, conspicuous from their spider-like form, six or seven inches long. Summer months.

*Pancratium Maritimum*. (chrutyard lily.) Similar to the above but smaller. Leaves, strap-shaped, leathery, eighteen inches long, five-eighths of an inch wide. Flower-stem shorter than the leaves. Flowers terminal, abundant, four to six inches long, white, fragrant; petals slender. Summer.

*Crinum Cruentum*. Ker. (giant lily.) Has stem three to four feet long. Leaves same length, abundant, five to six inches wide. Flowers in terminal clusters, of a reddish hue, from which dark-red bracts hang in slender tresses. This plant presents a massive appearance and has become so naturalized that it is by no means rare.

*Zephyranthes Rosea*. Lindl. Has narrow grass-like leaves, some six inches long, and erect flower-stems, six to twelve inches high, bearing red, solitary flowers, one and a half inch long.

*Zephyranthes Tubispatha*. Herd. Very similar to the above, except that its flowers are of a greenish-white. Both are garden escapes.

*Zephyranthes Atamasco*. Herb. (atamasco lily.) Very similar, bearing a solitary, erect flower about three inches long, rising with the leaves from the bulb, some white, some pink. A rare escape.

Amongst garden lilies proper, of which I have not ascertained escapes as yet, although some planted out on the edge of private grounds lend that appearance, are:—

*Amaryllis Equestris*. Ait., with narrow, oblong leaves, and erect flower-stem bearing at its point two or three nodding, large vermilion or coloured flowers.

*Amaryllis*, or *Nerine*, *Sarmiensis*. Linn. Guernsey lily. Has strap-shaped leaves, and a slender flower-stem a foot high, crowned with eight or nine gold-bespinkled flowers with wavy lobes.

### Natural Order, Liliaceae.

*Allium Cepa*. Linn. (common onion.) One of the staple products of Bermuda. Grown everywhere. The seeds are sown in September, and when about the size of a pencil, are planted out by hand. The greater part of the seed is imported from Teneriffe, the native seed not maturing here to any extent. The onion is garnered April and May.

*Allium Sativum*. (onion lily or wild garlic.) Is very abundant in many places, springing up through the grass, the flower stalk five or six inches high, bearing a small cluster of greenish white flowers, before the leaves are scarcely apparent. It is a terrible weed and as each corm or bulb is surrounded with ten to fifteen small ones, the reproduction is enormous. April and May.

*Friesia Alba*. (friesia.) Introduced only ten or twelve years ago, this plant has become so abundant as to be fairly naturalized. Planted out in the approaches to private houses, it will soon spread universally and may even now be found on waysides. Leaves narrow three-quarters of an inch wide, and three or four inches long. Slender nodding flower with a raceme or bunch of white fragrant flowers or bells. Another species with purple stripes in the white flower is known as *Friesia refracta*.

*Antholyza Ethiopica*. (Cape lily.) Has a flower stalk rising above the leaves, strap-shaped, four to five inches long, one inch broad, crowned with several branchlets each bearing two



orange-coloured lily flowers. Is strictly a garden plant. June. It is classed by Reade as an Iris as he also calls the following.

Gladiolus. Herb. (Corn flag gladiolus.) Lefroy says this plant died out after importation; Reade only barely alludes to it. But now scarcely a garden can be found which is not gay with its many coloured brilliant flowers one above another, commencing halfway up the flower stalk eighteen inches to two feet high. The original gladiolus is a poor weak flower, dirty red, which has spread into cultivated fields and waste places, where it has become a weed.

A plant much resembling the gladiolus was imported by the late honourable Thomas S Reade, of Pembroke Hall. Its flower-head droops over; flowers a dingy red, not so large as the former. Its name is Menbretichus.

#### Natural Order, Amaryllideae.

Agave Americana. Linn. (agave or golden aloe.) Leaves three to six feet long, fleshy and leathery, smooth, lance-shaped with curved spines, and very sharp points. Flower-stem rises fifteen to twenty-five feet, with alternate branches, pyramidal in appearance, covered with numberless flower clusters. Waste places thickets, and planted in places close as a fence. Flowers two inches long, of a greenish-golden yellow. It is known in some places as the Century plant, from the erroneous idea that it only flowers once in a hundred years. It takes a number of years growth before it does flower, after which the plant gradually dies.

Narcissus Jonquilla. Linn. (jonquil.) About one foot high, with long narrow leaves at base of stem. Bears from one to three deep yellow, fragrant, flat flowers. Common around plantations. Spring.

Narcissus Tazetta. (narcissus.) Very similar to the above, except that it bears a cluster of white flowers with a yellow centre, smaller than the preceding, with a delicious fragrance.

Aloe Vulgaris, Lam. (aloe.) Stem of no height throws up suckers around its base. Leaves, two to three feet long or more, lance-shaped, acute, curved upward, very thick, glutin-

ous, and armed with spiny teeth. Flower-stalk branched, several feet high; flowers nodding, yellow. Sandy, waste places, and rocky hillsides.

*Yucca Serrulata*, Haw; or *Y. Glorifolia*. Linn. (Spanish bayonet; Adams needle.) A plant with rough, woody, cylindrical stem, five to six feet high, leaves one or more feet long, spear-shaped, thickly clustered at summit, one inch wide, with rough margin, and slender, needle-shaped points or springs, very nasty to handle. Flower-stalk erect, many flowered, nodding. Flowers two inches long, white with purple base, forming a very showy, dense cluster. It is quite common, but its dagger-like leaves make it very formidable. Edges of thickets, rocky barrens, and sandy soil are its favourite localities. June to August.

*Lilium Longiflorum*. (Easter lily.) Although extensively cultivated in fields it is not uncommon as an escape, and is quite naturalized. This is a dwarf growth of the following:—

*Lilium Harrissii*. (White Easter lily; Bermuda lily.) This was originally introduced from Japan, but its cultivation as a staple product only dates from 1878. Although a considerable number of buds are shipped North for Easter decorations, yet the main trade lies in the bulbs, thousands of which are annually exported. The bulbs of these lilies are composed of scales laid one upon the other, at the base of each of which is an embryo bud, representing a future plant. The erect stem is from two to four feet high, well leafed all its length with a bunch at the summit of from three to five white blossoms, several inches long, trumpet-shaped and often at a right angle with the stem. General Hastings and Mr. Harris (florist of Halifax, N. S.) may be styled the fathers of the introduction here of this valuable lily.

*Hemerocallis Fulva*. Linn. (day lily.) A plant with oval-pointed, very crinkled leaves of a pale green, six or seven inches long and nearly as wide, throwing up a flower stem or stems six or eight inches high, bearing a raceme of white, long tube-shaped flowers.

*Agapanthus Umbellatus*. (blue lily, locally called Star of Bethlehem.) Bears a naked stem about two feet high, with a

head of numerous deep blue flowers, before the leaves arise. This is not the true star of Bethlehem, which is a small flowering lily, stem six inches high; leaves narrow; flower white with dark centre.

*Lilium speciosum*. (Japanese or spice lily.) About ten inches high. Bears a red flower.

*Lilium Chaledonium*. (scarlet Martagon lily.) Like the above only in colours.

Other and new varieties of the lily family are being imported from time to time and may be seen in private gardens.

*Dracaena Terminalis*. Linn. (purple dracaena.) A shrub eight to ten feet high, branching up from the root with numerous stems or branches. Leaves dark purple, two to three inches long, deeply veined, oblong, bluntly pointed, somewhat crinkled below, the whole leaf turning upward from mid-rib. Flower in racemes, small, terminal on branches, of a rich purple or reddish claret color.

*Dracaena Australis*. Forst. (Green dracaena.) In all respects similar to the above, except that its foliage is green, and flowers are of a similar hue. Both species are prickly garden shrubs, and I am not aware of any existing as escapes.

### Natural Order, Commelinaceae.

*Commelina Agraria*, Kth. (day-flower.) A plant with prostrate smooth stem, rooting at the brittle joints, much interwoven with branchlets, the almost transparent stems attaining several feet in length. Leaves alternate, oblong, shining, one and a half to two inches or more long. The bracts bear three or four flowers on slender, branched stalks, bright blue, half to one inch in diameter. Ditch bottoms, marsh lands and cultivated ground. Perennial. Summer months.

*Commelina Elegans*. Rich. (Poultry, or chicken grass.) Very similar to the above, but not so sturdy. Stems ascending about one foot instead of prostrate. Same localities as preceding. Flowers borne the same way but smaller, half an inch wide at most, bright blue with yellow racemes closing early in the day. Common. Perennial. Summer months.

*Tradescantia Discolor*. Rafin. (wandering jew.) Thick, short, fleshy, trailing stems, leaves purple banded with yellowish-white, semi-oval, pointed. This is a garden plant but I found two specimens by the roadside at Point Finger, and a third specimen on the road to Spanish Point—evidently escapes.

#### Natural Order, Pontederiaceae.

*Pontederia Azurea*.—*Eichorina Crassipes*. (water hyacinth.) Abundant in Pembroke marsh channels, where it was introduced within the last few years, and has rapidly spread but at present is confined to that locality. The flower is in heads like a hyacinth, of a delicate lilac colour, and very beautiful. It grows with a peculiar bladder-shaped stem, which acts as a float to keep the plant above water, without its roots being attached to the bottom. The leaves are long, broad and lily-shaped with runners slanting from the crown of leaves just beneath the water. These intertwine and connect in long masses in the form of floating islands which have given such an obstruction in the navigable waters of Florida as to cause Congress to have an examination made to devise some means of putting a limit to its growth. It is said to be native of Venezuela and was introduced North as an ornamental plant grown in tubs. It spreads very rapidly. Its propagation without restriction threatens the navigation of the waters it has encroached upon.

#### Natural Order, Juncaceae.

*Juncus Tenuis*. Willd. (common rush) Stem slender, erect, wiry, pithy, eight to eighteen inches long, leafy, only at base. Leaves very narrow nearly as long as stem. Flowers single, distant, along one side borne on the branched divisions of the angle of the leaf, and upper part of the stem; greenish-brown, in tufts. Marsh lands and marshes. Perennial. Common.

#### Natural Order Aroideae.

*Scirpus Validus*. Vahl. or *S. Lacustris*. Linn. (bull rush, club rush.) Stem stout, erect, leafless, cylindrical, four to six

feet high, tapering upwards, and terminating in a short tooth above the flower; scales densely over-lapping each other. Common in wet marshes.

*Scirpus* or *Eleocharis Melanocarpis*. Gr. (spiked rush) Stem compressed, slender, six to twelve inches high, terminating in an oblong, spike one-third of an inch long. Florets greenish-brown supported by three or four purple bristles. Common in marshes. Summer months.

*Scirpus Palustris*. Probably *S. plantagineus* of Lefroy. Stem cylindrical, slightly compressed, one to two feet high, not jointed; spike cylindrical about one inch long, bearing numerous flowers. Scales, rusty-brown in colour. Marshes and ponds. Rather rare. November.

*Scirpus* or *E. Equisetoides* (jointed rush.) Stem cylindrical, erect, two to three feet high, with twenty to thirty joints; stem pithy. Spike scaly, the scales brown, overlapping, appearing like a continuation of the stem, one inch long. Common in marshes. July to October.

*Cladium Occidentale*. Scheld. (prickly sedge.) Stem canelike, six to eight feet high, triangular below, cylindrical above. Leaves two to three feet long, one-third of an inch wide, rough, serrate. Flowers numerous, protruding from all leaf angles on upper part of stem. Very common in all marshes. May and June.

*Rhynchospora Stellata*. Gr. (white sedge; white-headed rush.) Stem triangular, one to two feet high. Leaves very slender, six to eight inches long. Flower-heads white, hemispherical, supported by five or six slender leafy bracts, white at their base. Spikeless, one-sixth of an inch long. Marshes. Conspicuous by its white heads. Not very common. June and July.

#### Natural Order, Gramineae.

*Hambusa Vulgaris* or *Arundinaceae*. Wendl. (bamboo.) A very graceful tree especially when planted in clumps, its jointed stems rising thirty or forty feet, swaying about with every passing breeze.

Its slender branches are not hollow like the main reed-like stem, but are solid and bear narrow leaflets about six inches long. It is only to be seen in plantations, and is not very common. The lower joints of large bamboos attain the thickness of a man's leg. The cane or tree terminates in a large, tawny plume.

*Arundo Donax*. Linn. (cane.) Is closely allied to the above, but the stems from ten to fifteen feet, crowned with a plume. It is generally to be seen near country cottages. When young it is cut as fodder for cattle. Neither of these seem to have escaped.

*Saccharum Officinatum* Linn. (sugar cane.) This is planted occasionally, not for sugar manufacture but for sale in sticks. In growth it resembles Indian corn. Lefroy says in 1675 a law was passed to prevent the destruction of cedar for sugar boiling, but there are no records to show to what extent that industry was carried on. It is not common, and little attention is paid to its cultivation.

*Zea Mays*. Linn. (Indian corn, or maize.) This plant has been cultivated since the early settlement of the islands, being mentioned in the laws of 1622. It is only found in cultivation, and is either ploughed under as manure, cut green for fodder, the ears used in a green state as a vegetable, or, when ripe pulled for various household uses. It is not nearly as much cultivated as formerly.

*Gynerium Argenteum*. Nees. (pampas grass.) A large, coarse, shrubby grass three to four feet high, in clumps, grown only for ornament; adorns a few gardens or edges of shrubberies and lawns. It throws up a stem some four or five feet high, crowned with a dense feathery, fluffy head.

*Sorghum Saccharatum*. Moench. (Guinea corn.) This is not unlike sugar cane but is not so woody. It is only grown for cattle.

The ordinary grains of the adjoining continent are not grown here, their importation being cheaper than the land they would occupy for other produce is worth, and the absence of silica in the soil militates against straw growth when ripe.

The grasses of Bermuda are simply mentioned here, but the quality for grazing purposes is inferior, and hay is never cut here, bales of that pressed being imported for use.

The names of the various grasses are given with the local name whenever ascertainable:

*Stenotaphrum Americanum* or *Glabrum*. (crab grass.)  
*Chloris petrae* (bed grass;) *Cynodon Dactylon* (Bermuda, or devil, grass;) *Paspalum filiforme* (wire grass;) *P. distichum* (seaside grass;) *P. vaginatum*; *P. conjugatum*; *P. setaceum*; *P. setigerum*; *Spartina cynosuroides* (rush grass); *Eleusine indica* (cocks foot grass); *Polypogon, mouspeliens*; *Setaria viridis*; *S. verticillata*; *S. glauca*; *Cenchrus echinata* (burr grass); *C. tribuloides*, (millet-grass); *Oplisminus setarius*; *Panicum proliferum* (cave grass); *P. maximum* (guinea grass); *P. Colanum*; *P. virgatum* (twig-grass); *P. capillare* (quaking-grass); *P. lineare*; and the following, cited only by Lefroy and not by Reade; *Leptochloa mucronata* (slender-grass); *Digitaria Segitera*, probably *Paspalum setigerum* of Reade, (finger-grass); *Sclerochloa rigida* (hard grass.)

### Natural Order, Cyperaceae.

*Cyperus Rotundus*. Linn. (star grass.) Stem triangular, six to ten inches high. Leaves smooth, shining, as long as the stem, channelled, flat. Flower-heads unequal, flat, compressed, green centre with three to five bracts surrounding them, one inch long, rayed, extending outwards like a star, Marsh lands especially, and damp fields. Very common. Perennial. May and June.

*Cyperus Flexuosus*. Griseb. Very similar to the above, but stem two to three feet high. Spikelets slender. Flowers green, with six to ten long rayed white leaves supporting them. Marshlands. June.

*Cyperus Nuttallii*. Tor. (nut-grass.) Stem triangular, four to six inches high; spikelets many flowered, compressed. Flowers brown with three to five unequal long leaves surrounding them, followed by a triangular nut seed. A bad weed on cultivated ground. Perennial. Early Summer.

*Cyperus Ligularis*. Hemsl. Mentioned by Reade, as existing in Paget. I have failed to trace it.

*Kyllinga Monocephala*. Linn. (sedge, or bog rush.) This has a strong, creeping root, stem erect, eight to twelve inches high, with several flat, narrow leaves. Flower heads solitary, globose, quarter of an inch wide. Flowers pale green. Common in marshes. Perennial. July to October.

Mosses, Lichens, etc.

#### Natural Order, Equisetaceae.

*Equisetum Palustre*. Linn. (marsh weed or mare's tails.) It has an upright, almost leafless stem, one to one and a half feet high, jointed, with imbricate or scaly blunt spikes. Rare. Pembroke Marshes. (Lefroy.)

#### Natural Order, Psilotaceae.

*Psilotum Triquetrum*. Sw. A small, wiry, erect plant, with forked branches and minute scaly leaves; spores instead of seeds. Flowerless. Is rare and is confined to Paynter's Vale and the vicinity of the Causeway.

#### Natural Order, Spognaceae.

*Sphagnum Palustre*. (Heat Moss.) A fibrous growing moss, rough, almost hairy, tough. Is found only near mouth of water course. It is the main constituent of peat bogs in the North

#### Natural Order Agaricaceae.

Although Lefroy quotes *Agaricus campestris* (edible mushroom) as having been found near Pembroke churchyard, yet I have failed to hear of anyone finding such a growth on the islands. Mushrooms are grown under cover in a few gardens from imported spawn only, and there is no instance that I can trace of their natural growth.

#### Natural Order, Bryaceae.

*Tortula Muralis*. A small moss forming a green, velvet-like mantle on old walls, rocks and wayside banks. Is common. Its thread-like stems, minute, terminate in small caps containing its spores.



Lichens are not abundant, *Peltalii* being found on old walls, and two species of *Cenomyce* on decaying vegetables. As a matter of fact mosses and lichens are but little known or examined and the study of them might elucidate facts unknown here at present.

**Class IV: Cryptoyamia.**

**Natural Order Filices.**

The ferns and fern life of these islands are so fully and ably described in a bulletin of the Torrey Botanical Club, by Mr. B. D. Gilbert, that to give another description here would be only invidious. Consequently the names and habitat are simply given, with any special remarks called for. The principal fern localities are the marshes and the caves, and damp walls or rocks.

*Adiantum Capillus Veneris*—Walsingham district. Planted out by Governor Lefroy. It is not a native or indigenous, but may from its spread be now counted as a naturalized species.

*Adiantum bellum*—A common fern, growing everywhere on rock surfaces by the roadside and on garden walls.

*Adiantum bellum walsingense*—A variety of the above but much larger. Abundant near Walsingham.

*Pteris Longifolia*—Jam. Uncertain whether it is a native or naturalized. Crevices of walls and rocks round Hamilton.

*Pteris heterophylla*—Open caves and cliffs of Walsingham. It is known as the "parsley fern." Scarce.

*Pteris aquilina*, var. *caudata*—Devonshire marsh. Very luxuriant, growing from ten to twelve feet high.

*Woodwardia virginica*—Pembroke marsh, and north side of Devonshire marsh, plentiful in latter locality.

*Asplenium dentatum*—Frequent on rocks at Walsingham.

*Asplenium Trichomanes*—Common everywhere.

*Asplenium Myriophyllum*—Rare, and liable to extinction. Church Cave.

*Asplenium Laffaniaum*—An endemic species. A specimen sent to Kew proved entirely new. It is very rare. Walsingham and Church Cave.

*Dryopteris aculeata*—Described by Gilbert and stated by Hemsley of *the Challenger* as growing at the caves. Being in the Kew collection, it must stand a Bermuda species, at least of a former time.

*Dryopteris capensis*—In danger of extermination, being now very rare. Devonshire marsh. It is known as the "Ten Days Fern," it keeping green for ten days after cutting.

*Dryopteris ampla*—Rare. Paynters Vale. Lefroy cites it as "common by roadsides." Doubtful if ever common.

*Dryopteris patens*—Very abundant, especially in the marshes, where it attains a height of four feet, and one and a half in width.

*Dryopteris Thelypteris*—Grows sparingly in Pembroke marsh, and in a marsh on the north side of Hamilton.

*Dryopteris mollis*—Planted out by Lefroy, but not to be found now, though a few stragglers may exist.

*Dryopteris villosa*—Trott's Cave, Paynter's Vale, and a cave south of Church Cave. Plentiful in those localities only.

*Dryopteris bermudiana*—An endemic species. Locality unspecified, but specimen obtained by the *Challenger*.

*Nephrolepis Exaltata*—Common among rocks at Walsingham.

*Polypodium elasticum*—(Plumula)—Paynter's Vale and Walsingham tract, sparingly.

*Polypodium Pectinatum*—Hemsley the only authority for this species, giving Walsingham as its habitat.

*Acrosticum aureum*—Abundant in brackish marshes, the South Shore marshes yielding smaller specimens than those in Devonshire.

*Acrosticum vulgare*—Distinguished from previous species by its larger size, attaining sometimes a height of eight or nine feet. It grows in the Devonshire marsh out of the reach of tide water.

## Class III.

## Gymnospermae.

## Natural Order, Tremellaceae.

*Tremella Intumescens* (meteor jelly) a small jelly like substance which is not uncommon amongst grass in wet weather. In substance it more resembles the texture of the marine jelly-fish than a plant.

As cultivation increases with the use of repeated dressings of stable manure, fungi commonly called toadstools will probably spring up in course of time. Reade mentions two, but unnamed, one with a yellow, the other with a red cap, springing up after rain at the base of cedars.

## Introduced Plants.

The following species are to be found in a very few gardens or in private grounds, and have all been introduced. They are mentioned in Lefroy's list.

*Capparis Torulosa*. (black willow.) Lefroy says only seen at Par-la-Ville, Hamilton; recognized by its glossy leaves, rusty beneath, and branches covered with scales. Doubtful.

*Pittosporum undulatum* (laurel.) Rectory, Paget.

*Mammea Americana* (mammee.) Few old gardens only.

*Ilex Aquifolium*. (English Holly.) St. George's. Rare.

*Mangifera Indica*. (mango.) Mount Langton; Bellevue, Paget, the home of the late Worshipful W. T. James, J. P.; Mrs. M. A. Pilkington, Queen Street, St. George's.

*Erythrina Indica* (locust. Scarce;) a large tree at Mount Langton, but its name is doubtful, as the seeds of it are scarlet, whilst those of *E. indica* should be black. The flowers of this tree, too, are dark scarlet, whilst others are orange red.

*Erythrina Caffra*. (Caffra-brom.) One large tree, adjoining "Rosebank," Hamilton, which is said to be *true caffra*.

*Guilandina Bonducella*. (nicker tree.) No trace of this.

*Visnia guianensis*. (gamboge.) Very doubtful.

(Note: Gamboga is obtained from *Garunia morilla* Desr. Nat. Ord. Guttiferae.)

*Eugenia Jambos* (rose apple) and *Chrysophyllum Cainilo* (star apple) are to be found in a few gardens only.

*Achras sapota*, Linn. (sapodilla.) At Bellevue; the Trimmingham grounds; "Rosebank;" Mount Langton, and elsewhere.

*Sapindus Saponaria* (soap berry.) Few gardens only.

*Chrysobalanus icaco*, L. (cow plum.) Very few only.

*Ixora coccinea* (*Ixora*.) Few gardens, lately introduced.

*Quercus alba* (white oak.) At Rosebank.

*Inglans nigra*. (black walnut.) At Rosebank and in one or two other gardens.

*Cassia Florida*. (not given by Lefroy but mentioned by Reade, in the Public Gardens) has been put down as *Lignum Vitae*, and as *Ebony*. Now the former of these two has blue flowers, and the latter rosy pink flowers, whilst the tree in question much resembling the *Poinciana* has a flower not unlike that of the Star Apple. It is evidently the *Albizzia thibetia*, the tree in question being as far as known the only specimen in Bermuda.

For the following note, I am indebted to Mr. T. J. Harris late Superintendent of the Public Garden:

"I have seen *Lignum Vitae* (*Guaiacum officinale*, L., Nat. Order *Zygophylleae*) and *Ebony* (*Brya Ebenus*, D. C., Nat. Order *Leguminosae*) growing side by side in the West Indies; they of course are quite distinct—the former producing dense masses of pretty blue flowers, while the tree itself in outline is dense and heavy and in the distance resembles an umbrella with a very thick and heavy handle; there is also a white variety of it. The ebony tree in comparison bears a distinctly flippant and almost a spooky outline; putting out its few arm-like branches, some up, others out, and down, suggesting a dissipated semiphore. Its flowers are yellow, and resemble little sprigs of gorse.

“The best ebony and the largest supply comes from *Diospyros Ebenum*, Koenig, of Ceylon. (Nat. ord. Ebenaceae.) Black.”

### Plants of Medicinal Properties.

This information has been obtained chiefly from natives and older residents.

**Aloe** (*Aloe soccotrina*. Lam.) The pith of its fleshy leaves is used as a poultice for obstinate sores; the juice as a diuretic.

**Arrowroot**. (*Maranta arundinacea*. Linn.) Excellent as a food for invalids. A large factory for its manufacture has been established at Bellevue, Paget. The article is in great demand.

**Alexanders**. (*Smyrnum Olusatrum*. Linn.) A carminative. Its root macerated in rum is used externally and internally for rheumatism; also for sprains and swollen joints.

**Birthwort**. (*Aristolochia trilobata*. Linn.) Is supposed to possess a good deal of virtue in cases of parturition.

**Bryone**. (*Sycos angulatus*. Linn.) Infusion of this plant is used in cases of colds and fevers.

**Cassia**. (*Cassia Fistula*. Linn.) The bark of this plant is a strong astringent, while the leaves are purgative and are often used instead of Jalap.

**Catnip**. (*Nepeta Cataria*. Linn.) Useful in chills, colds, and fevers.

**Castor Oil Plant**. (*Ricinus communis*. Linn.) No attention seems to have been given to its cultivation. From its berries or fruit a good oil might be extracted. At St. George's I have heard of one case—that of a young Sergeant of Artillery, who afterwards became a War Office official—who used occasionally to eat the ripe berries instead of taking castor oil, and with like benefit.

**Cedar**. (*Juniperus Bermudiana*. Linn.) A conserve from its berries, locally known as “cedar berry syrup,” is a remedy for pulmonary complaints.

**Centuary**. (*Centaurea sativa*. Maris.) A carminative and largely resorted to by the natives as a tonic.

Red Clover. (*Trifolium pratense*. Linn.) A tea made from the flowers of this plant is diuretic; a vermifuge and good in urinary complaints.

Dandelion. (*Taraxacum Dens-leonis*. Desf.) It is a good tonic and the roots roasted and ground are a substitute for coffee.

Dock. (*Rumex obtusifolia*. Linn.) Its leaves assuage the irritation caused by insect stings.

Datura, or Thron Apple. (*Datura Stramonium*. Linn.) The leaves smoked are a remedy for asthma. The berry is poisonous.

Elderberry. (*Sambucus nigra*. Linn.) A lotion and cooling ointment is made from its flowers. If sufficient berries are spared from birds, an excellent wine can be made from them; such a wine is used by the poor in England.

Fever-few. (*Pyrethrum parthenicum*. Wild.) A tonic is made from the plant, which is used in fever.

Ginger. (*Zingiber officinale*. Rose.) A tea made from the root is used for colic, spasms, and wind.

Horse-radish Tree. (*Moringa Pterygosperma*, Gaert) Though not properly medicinal, yet its oil is in demand by watch-makers, and is known as Ben oil.

The other species. (*Moringa aptere*,) is the source of the Oil of Ben.

Horehound (*Marrubium vulgare*. Linn.) Infusion of leaves is good for coughs and colds.

Ipecacuanah. (*Asclepias curassaivica*. Linn.) Emetic.

Milk Weed. (*Asclepias*. Linn.) In urinary disease leaves and juice are used as a poultice on the loins

Ipomaea. All the family of this genus possess more or less the properties of jalap as purgative in their roots.

Jalap. (*Jatropha Curcas*. Linn.) A violent purgative

Mullein. (*Verbascum Thapsus*. Linn.) Leaves smoked with tobacco for asthma and neuralgia.

Marsh Mallow. (*Kosteletzkya virginica.*) Syrup for colds, coughs and sore throats.

Mercury. (*Mercurialis annua.* Linn.) Decoction good for liver complaint and constipation.

Nettle. (*Urtica urens.* Linn) The young shoots in spring are eaten as a vegetable and are a bloodpurifier.

Papaw. (*Carica Papaya.* Linn.) Sap and fruit produce pepsine, a digestive, and the leaves are popularly believed to have curative powers in rheumatism when externally applied.

Pride of India (*Melia Azedarach.* Linn) The bark is a powerful astringent and is useful in diarrhoea and dysentery.

Plantain. (*Plantago major.* Linn.) Leaves make a cooling laxative; bruised they are very healing on sores and bruises; they are also steeped in hot water as a drink. The plant is popularly called "Ribwort," is a most valuable herb and is highly prized.

Opium Poppy. (*Papaver somniferum.* Linn.) The seed-heads are used as a fomentation for neuralgia, and when placed in open-work bags induce sleep.

Prickly Poppy. (*Argemone mexicana.* Linn.) The juice is said to be good for inflamed or diseased eyes.

Prickly Pear. (*Opuntia coccinifolia.* Mill.) The leaves or stalks of this species peeled and soaked are diuretic and are much used by the old natives.

Pomegranite. (*Punica Granatum.* Linn.) The bark is a powerful tonic and astringent.

Pluchea. (*Pluchea odorata.* Cass.) Leaves are used as a tonic.

Palmetto. (*Sabal Palmetto.* Lodd.) An intoxicating beverage formerly made largely, but scarcely obtainable now, called "Bibey," was distilled from its berries. Leaves are used for manufacturing fancy articles.

Pink-root. (*Dianthus Caryophyllus.*) Decuction from root used as a vermifuge.

Pumpkin. (*Cucumis Pepo*. Linn.) Its seeds, scalded or boiled, are a powerful diuretic.

Quassia. (*Quassia amara*. Linn.) Bark a strong tonic. Cups made from its wood immediately impart a bitter flavour to the water.

Ribgrass. (*Plantago lanceolata*. Linn.) Leaves good for bruises, sores and ulcers.

Red Sage. (*Lantana Camara*. Linn.) A decoction of its leaves mixed with a bunch of Junipers asserted to be a sure cure for yellow fever, if the patient is covered up with blankets after drinking it, when profuse perspiration is induced. It was used here largely by the natives during the yellow fever epidemics and was found effective when taken in time.

Sarsaparilla. (*Ampelopsis quinquefolia*. Mich.) This is not the true sarsaparilla, which does not grow wild but *Tridentata* was imported in 1875, planted at Mount Langton and is reported doing well there.

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### Addendum.

A list of exotics said to have been introduced by different governors at Mount Langton, mentioned in Governor Lefroy's Catalogue republished in the United States Bulletin, No. 25, of the United States National Museum, Department of the Interior, 1884

Note. No sign indicates, *still existing*.

An asterisk means, *Disappeared*.

When a plant has not disappeared but is now found in some other ground, *the locality is given*.

What is known as "Lefroy's Garden" is a more shrubby wilderness than the modern garden of Government House. Since Governor Lefroy's day many of his tests have been lost sight of, and have probably been choked by the more sturdy growth which has sprung up around them.

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\**Flacourtia prunifolia*. (Governor's Plum.)



*Flacourtia Ramancho.* (Madagascar Plum.) also in grounds at "Bellevue," Paget, "Rosebank," and the Trimmingham grounds at "Montrose."

*Hibiscus Cooperi.* Doubtful.

\**Melianthus major.* (Honey-flower?)

\**Quassia amara.* (Quassia.)

*Citrus nobilis.* (Mandarin orange.)

\**Cookia punctata.* (Wampee.)

*Ampelopsis tridentata.* (Species of Virginia creeper.)

*Nephelium Litchi* (Leechee); also in the grounds at "Bellevue," "Rosebank" and in a few other grounds.

\**Rhus Ingrandifolia.* (Walnut-leaved Sumach.)

\**Desmodium gyrans.*

\**Brownea grandiceps.*

*Bauhinia Vahlii.* (Bauhinia.)

*Mimosa pudica.* (Sensitive plant.)

*Acacia macrapantha.*

*Echeveria gibbiflora.*

\**Passiflora edulis.* (White Passion flower.)

*Cornus stricta.* (Dogwood.)

\**Rondeletia odorata.*

*Gardenia Fortunii.* (Gardenia.)

\**Plumbago Cocinea.* (Species of Plumbago.)

\**Bigonia capreolata.*

*Tecoma capensis.* (Orange flowering climber.)

\**Artocarpus incisa.* (Bread Fruit.) In garden at "Bellevue."

*Hedychium speciosum.* (Species of Ginger.)

*Dieffenbachia Seguine.* (Dumb Cane.)

\**Gasteria obliqua.* (Hawthorn.)

\**Diospyros virginiana* (Persimmon.) In the garden at "Bellevue," "Rosebank," "Montrose," etc.

*Erythrina indica.* (species of Locust.)

*Clitoria teruatea.* (Blue pea.)

\**Pithecolobium Saman.* (Leguminous.)

\**Asclepias nivea.*

\**Cestrum Pargni.*



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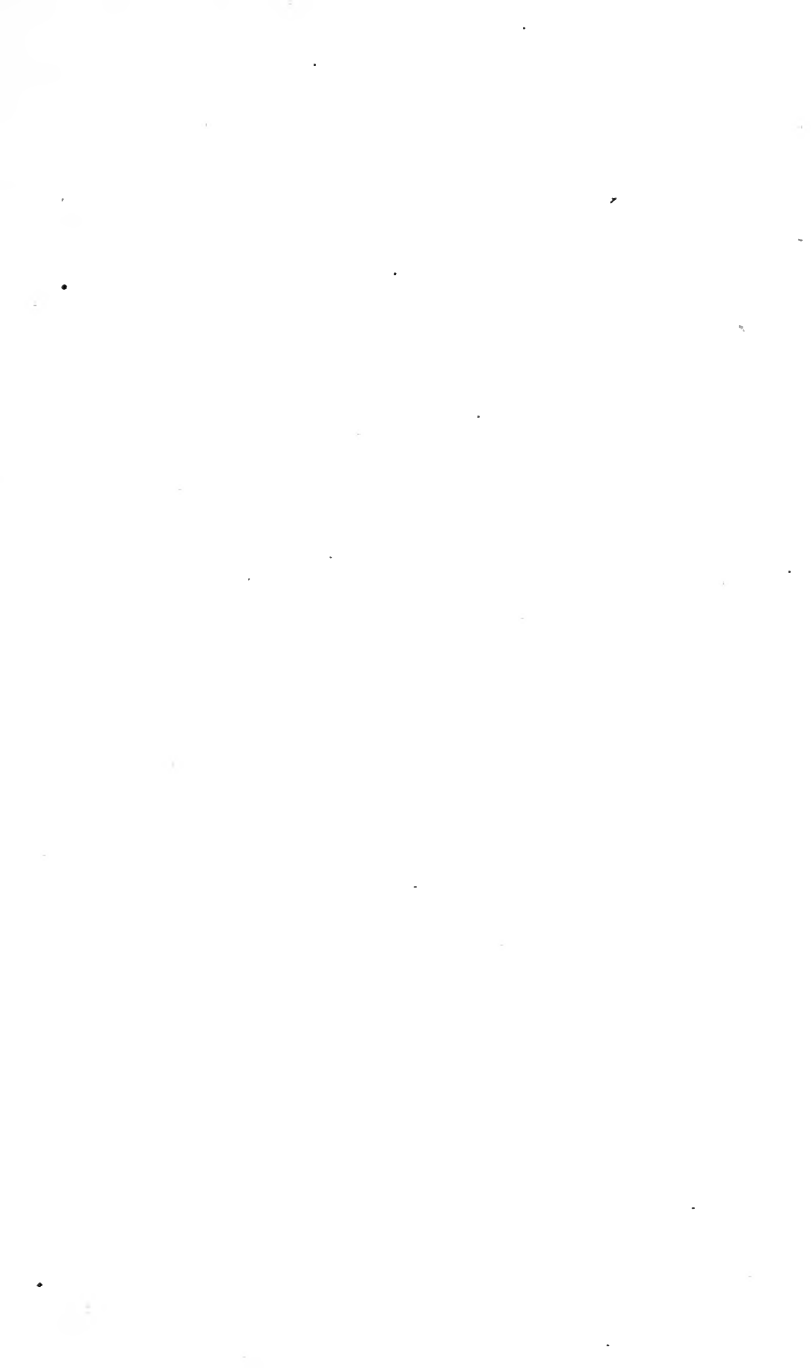














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