

Native or introduced plant species ?

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The recent publication of the dicotyledon volume of Friedmann's *Flore des Seychelles* (1994) clarifies a number of taxonomic problems. The distribution data and taxonomic discussions identify a large number of species as indigenous or endemic components of the flora. However, in addition to these species several others have been suggested to be indigenous, although regarded by Friedmann (1994) as introductions. These are discussed below:

Casuarinaceae

Casuarina equisetifolia J.R. & G. Forster

This species has been widely dispersed from its centre of distribution in south-east Asia. Although most populations are introduced those of the Seychelles islands are often considered to be indigenous (Sauer 1967). The first record is from 1768 (Dufresne 1768) and it is one of the species sometimes suggested to have been introduced by Melanesians at an unspecified date (Procter 1984b), as such it should be regarded as indigenous, or 'substantially native' (Gerlach 1994).

Malvaceae

Hibiscus surattensis L.

A widespread species from Madagascar, east Africa and the Comoros to south-east Asia. First recorded in 1874 (Baker 1877) and considered to be indigenous by Robertson (1989). It appears to have originated from India and may have been introduced as a weed, although its introduced status is not certain.

Rosaceae

Rubus rosifolius Smith

Considered indigenous by Summerhayes (1931) and Robertson (1989). Abundant in Seychelles since before 1866 (Summerhayes 1931), widely dispersed by birds and mammals, possibly a native Asiatic component.

R. fraxinifolius Poirét, 1804

This may have a similar status to *R. rosifolius* although it has only recently been recognised in Seychelles. Deliberate introduction of this species is unlikely, given the poor taste of the fruit.

NOTES

Mimosaceae

Adenanthera pavonina L.

An Asiatic species also present in the Mascarenes and Seychelles. It has been suggested to have been introduced before the exploration of the islands (Procter 1984b). There is a clear description of this species in Seychelles from 1768 (Dufresne 1768) and it should be considered to be indigenous or 'substantially native'. Previously suggested to be a native species by Baker (1877) and Robertson (1989).

Papilionaceae

Teramnus labialis (L.) Spreng.

Regarded as indigenous by Summerhayes (1931) and Robertson (1989). A pantropical species recorded since 1874 (Summerhayes 1931). Probably indigenous.

Melastomataceae

Melastoma malabathricum L.

This widespread Asiatic species was regarded as indigenous by Summerhayes (1931) and Robertson (1989). It has been recorded since 1841 (Summerhayes 1931) and is probably a native Asiatic component dispersed by migrating birds (as with *Rubus* spp.).

Combretaceae

Terminalia catappa L.

A widespread trees species generally considered to be indigenous (Robertson 1989; Sauer 1967; Summerhayes 1931). Doubt as to its status was expressed by Friemann (1994) who considered it to be probably indigenous. East African populations have been classed as introduced in contrast to the classification of Madagascan ones as indigenous. Procter (1984b) suggested that natural colonisation was possible but unlikely and that introduction by Melanesians several centuries ago accounted for its presence. The earliest record of the species in Seychelles is from 1768 (Dufresne 1768), accordingly it should be considered indigenous.

Loganiaceae

Strychnos spinosa Lam.

Indigenous according to Summerhayes (1931) and Robertson (1989), recorded since 1874 (Summerhayes 1931). An African species with a long history in the Mascarenes. Probably indigenous, although there is little evidence for or against the possibility of it being an introduction.

NOTES

Convolvulaceae

Merremia peltata (L.) Merr.

Indigenous (Summerhayes 1931; Robertson 1989) or possibly indigenous (Procter 1984a); recorded since 1840 (Summerhayes 1931). Early accounts of its distribution give Madagascar-Mascarenes-Seychelles, a distribution pattern typical of native species. It is probably indigenous.

Verbenaceae

Phyla nodiflora (L.) E. Greene

A littoral species, widespread in the western Indian Ocean. Classified as indigenous by Summerhayes (1931), Sauer (1967) and Robertson (1989). It has been recorded since 1841 (Summerhayes 1931) and is probably indigenous.

Vitex trifolia L.

Considered indigenous by Sauer (1967). This species is frequently cultivated and its distribution indicates that it is almost certainly introduced.

Oleaceae

Ximinea americana L.

Considered indigenous by Summerhayes (1931), Sauer (1967) and Robertson (1989). The only records are from the strand line and the species may have been a natural colonist. It is not known to survive in Seychelles at present.

Acanthaceae

Asystasia sp. B.

Considered introduced by Friedmann (1994) although not fully identified. Introductions of *Asystasia gangetica* were recorded in 1905 but specimens of sp. B. date from 1868 (Summerhayes 1931). Possibly native, depending on final identification.

Justicia gendarussa Burm.

Indigenous according to Summerhayes (1931) and Robertson (1989), recorded since 1841 (Summerhayes 1931). An Indo-Pacific plant of marshy ground, probably indigenous and spread through stranding and bird migration.

Rubiaceae

Morinda citrifolia.

Considered to be a possible introduction by Friedmann (1994). Deliberate or accidental introduction of this evil smelling fruit seems unlikely, stranding and local dispersal by fruit bats would seem a more likely origin. Considered indigenous by Sauer (1967).

NOTES

Monocotyledons

Similarly disputed origins have been proposed for a number of monocotyledons (the coconut *Cocos nucifera* L. being the most obvious example), in the absence of an authoritative taxonomic review of the species present it is not practical to consider the status of these taxa.

Other introduced dicotyledons

There is a further recent introduction omitted by Friedmann (1994). The 'Jamaican cherry', *Muntingia calabura* L. (Flacourtiaceae), was first observed in Seychelles in 1990 when it colonised the reclamation on the east coast of Mahé. A specimen from the Roche Caiman Bird Sanctuary was identified as this species in 1994 (Nature Protection Trust of Seychelles 1994). This South American species has been widely introduced around the tropics and probably colonised Seychelles on machinery imported in connection with the dredging and reclamation. It was an obvious component of the reclamation vegetation in 1990-4, since then *Casuarina equisetifolia* has overshadowed the species and it is now infrequent, being restricted to a few trees under a dense canopy of *C. equisetifolia*. This introduction will probably prove to be temporary. It is described below and shown in Fig. 1.:

Muntingia calabura L.

Small unarmed tree to 6m, trunk to 25cm diameter, smooth bark, branches pubescent. Leaves alternate, elliptical, pointed at tip, slightly assymetrical, rounded at base, 5-10cm x 2-4cm, with serrated margins, pubescent. Petiole 3-6mm long. Flowers axillary, solitary or paired, pedicel 2-4cm. Sepals 4-5, green-white, 4-5mm long. Petals 4-5, white, 7-10mm long, oboval to deltoid. Stamens numerous (10-100), 3-5mm long. Pistil 4mm long, stigma broad. Fruit a drupe 8-14mm diameter.

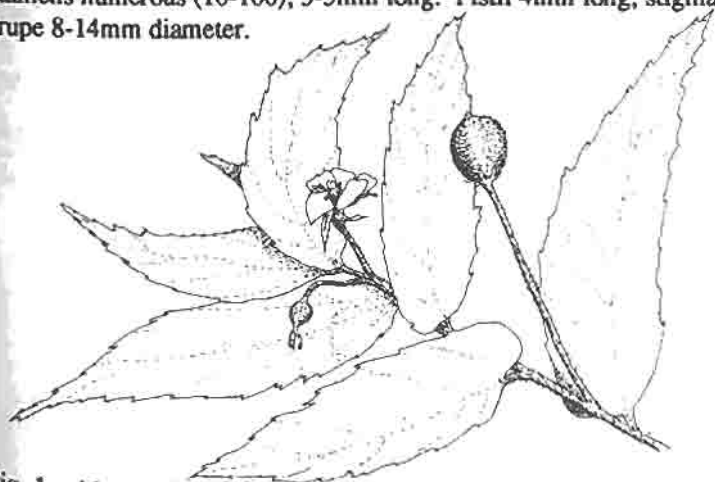


Fig. 1. *Muntingia calabura*.

NOTES

This can be added to the key to Flacourtiaceae in Friedmann (1994 p. 192):

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|----|--|-------------------|
| 1. | Leaf margins entire or weakly sinuous | <i>Ludia</i> |
| | Leaf margins toothed | 2. |
| 2. | Spiny | <i>Flacourtia</i> |
| | Not spiny | 3. |
| 3. | Branches flattened with longitudinal crest, smooth | <i>Aphloia</i> |
| | Branches cylindrical, no longitudinal crest, hairy | <i>Muntingia</i> |

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