

FLORISTIC RELATIONSHIPS OF NEW CALEDONIAN RAINFOREST PHANEROGAMS

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(Accepted for publication 16.9.1983)

ABSTRACT

Morat, Ph.¹, Veillon, J.-M.¹ & MacKee, H. S.² (¹Centre ORSTOM, B.P. A5 Cedex, Nouméa, New Caledonia; ²B.P. 3369, Nouméa, New Caledonia) 1986. Floristic relationships of New Caledonian rainforest phanerogams. *Telopea* 2(6): 631–679 — A detailed analysis of the New Caledonian rainforest flora is given; 1499 species in 365 genera and 108 families are listed. Distribution of the species within New Caledonia is given in terms of specificity to rainforest (forest/non-forest and forest occurrence) and to substrate (only ultrabasic/absent from ultrabasic/present on ultrabasic and other substrates). Distribution of genera is presented according to occurrences in 12 phytogeographic units from endemic to pantropical. Sources of information are given. Comparisons with the whole New Caledonian phanerogamic flora are made; 46% of genera and species and 66% of families occur in the rainforest. For the flora the level of specific endemism is c. 75%. Floristic affinities are assessed by: comparison of numbers of genera shared with other regions (pantropical genera included/excluded); and numbers of genera shared exclusively by New Caledonia and 2, 3, 4, 5 or 6 other regions. In these comparisons Australia, New Guinea, Malesia, Fiji, the New Hebrides, the Solomon Islands and then New Zealand have the most genera in common with New Caledonia. A floristic affinity co-efficient for each territory was calculated from the proportion of the number of common genera to the number of territories in which they occur, for groups of two to six territories. From these data, the calculated floristic affinities are Australia — 27%, New Guinea — 20%, Malesia — 12%, Fiji — 10%, New Hebrides — 7.5%, Solomons — 7% and New Zealand — 3%. Origins of the New Caledonian flora are discussed in relation to the geological history; continental isolation since the Permian, proximity of north-eastern Australia and New Guinea until the lower Cretaceous, and early Tertiary formation of widespread peridotites are major factors in the development of this flora. Comparisons of edaphic preferences show that c. 30% of species occur only on ultrabasic substrates, c. 40% are restricted to other substrates, and c. 30% occur on both sets of substrates. Of the exclusively forest species, c. 500 are restricted to substrates other than ultrabasics, and c. 300 to ultrabasics. Groupings of families according to substrates are also given. The authors question the positive influence of the ultrabasic substrates on the floristic richness and on the conservation of archaic ancestral components of the flora.

INTRODUCTION

New Caledonia has long attracted phytogeographical analysis (Balansa 1873, Brongniart 1874, Fournier 1874, Brousmiche 1884, Bernard 1895, Guillaumin 1921, 1924, 1928, 1934, 1954, 1964a, Virot 1956, Baumann-Bodenheim 1956, Thorne 1965, 1969, van Balgooy 1960, 1971). Early botanists working on the flora were quick to recognize its originality. When it became better known, together with other Pacific floras, the high proportion of endemics was emphasized both at specific (76% for Guillaumin 1921; 90% for Baumann-Bodenheim 1956, Guillaumin 1964a) and at generic level (1% for Brongniart 1874, 13.5% for Thorne 1969, 16% for van Balgooy 1960). Floristic links were demonstrated, mainly with Australia and New Guinea (Thorne 1965, van Balgooy 1960, 1971). The presence of numerous archaic forms (gymnosperms and primitive angiosperms) led authors concerned with Pacific phytogeography to recognize the individuality of the island, defined as a 'Région canaque' (Guillaumin 1928, 1934), 'New Caledonian Region' (Good 1964, van Balgooy 1960, 1971), 'Sub-region' (Thorne 1963), 'Sub-kingdom' (Takhtajan 1969).

The time has come to reconsider the biogeographic relationships of the Territory. The most recent publications (Thorne 1965, van Balgooy 1971) are in fact based on distinctly earlier data (Guillaumin 1948, Baumann-Bodenheim 1956). Later botanical advances in New Caledonia and in the Pacific generally justify a new approach, which is the first aim of the present article. Attention is here focussed on the rainforest, a choice that greatly reduces uncertainties in distinguishing native species from those of relatively recent introduction. The rainforest has, for our purposes, the clear advantage that for obvious climatic and palaeoclimatic reasons, relict forms are better conserved in it than elsewhere. Unless seriously disturbed it resists invasion by outside elements, real floristic affinities being thus more evident. Such forests exist in New Caledonia on a wide range of substrates — limestone, basalt, schist, greywacke, clays and also the ultrabasic rocks (peridotites and serpentinites), which produce exceptional edaphic conditions affecting the whole mineral nutrition of plants (excess of Mg and the heavy metals Ni, Cr, Mn; deficiency of P and K). These special conditions are often invoked (Virost 1956, Thorne 1965, Jaffré 1980) to explain the abundance and persistence of primitive relict forms. The second aim of this study is to check this hypothesis by a quantitative analysis of the species according to their habitats.

METHODS

All available data have been reconsidered in listing as completely as possible all species recorded for the Territory. Doubtful taxa have been eliminated, as well as introduced plants, as we deal only with the native phanerogamic flora.

The rainforest

We deal with the rainforest as defined and mapped in the 'Atlas de la Nouvelle-Calédonie' (Morat et al. 1981), thus covering the following formations in their essentially intact state: dense evergreen forest of low and medium altitudes; dense mountain forest; the edaphic variant represented by evergreen forest on limestone. All other forest or similar formations are excluded — sclerophyll forest, swamp forest, mangrove, tall shrubland, gallery forest, etc. The rainforest covers 300000 ha on the main island plus 100000 ha in the Loyalties and the Isle of Pines, equivalent to 22% of the total surface of the Territory of New Caledonia (Fig.1).

Species of the rainforest

All plants are included whose occurrence in undisturbed rainforest is constant and unequivocal, regardless of their abundance, their bulk, their association with any particular stratum or biological type or their possible presence in other formations. The stipulation of undisturbed forest excludes all 'secondary' species which, colonizing forest edges or openings where a large tree has fallen, penetrate accidentally and temporarily into the forest, unless they exist, even rarely, within the intact formation. *Rubus moluccanus*, for example, a species very probably native, but known in forest only in disturbed and open situations, is omitted. A few heliophilic species are, however, included, e.g. *Duboisia myoporoides*, a shrub or small tree appearing abundantly whenever an opening (track or clearing) is made, but definitely known, though rare, in normal rainforest. Other species characteristic of adjacent stations, such as coastal scrub or gallery forest, occur exceptionally in rainforest. Their presence, due to an accidental introduction or to a transitory situation (edge of a rapidly advancing

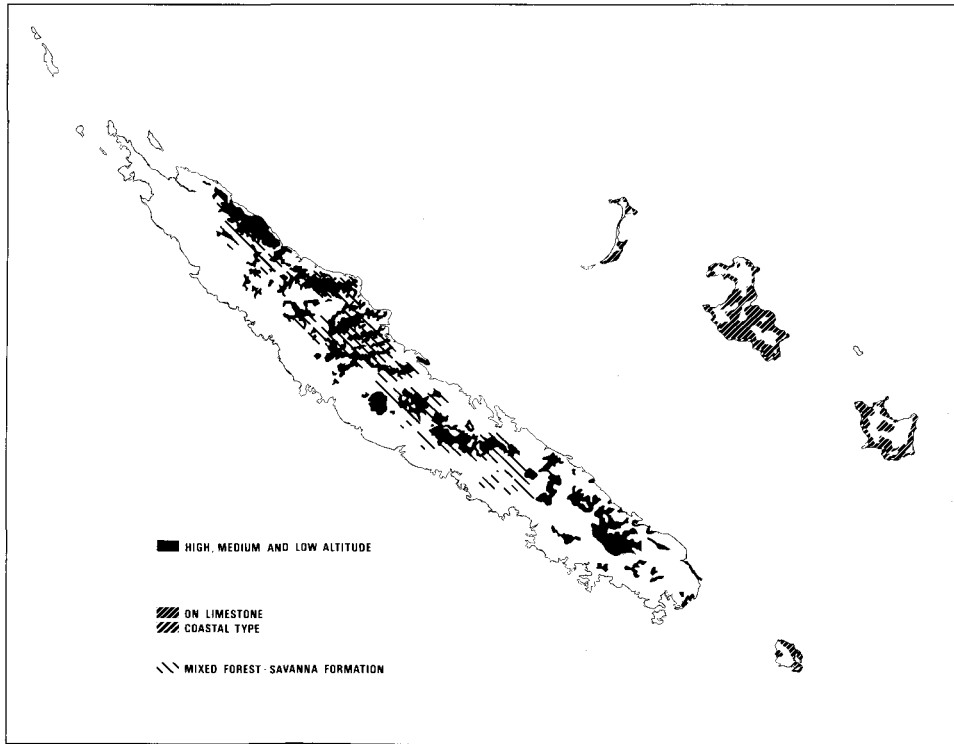


Figure 1. Rainforest in New Caledonia.

rainforest), is only sporadic. Such species are excluded, e.g. *Eriaxis rigida* (Orchidaceae), *Gahnia neocaledonica* (Cyperaceae), *Joinvillea* spp. (Flagellariaceae), *Allophylus cobbe* (Sapindaceae), *Malaisia tortuosa* (Moraceae), *Gouania leratii* (Rhamnaceae), *Lindenia vitiensis* (Rubiaceae), *Heliconia* sp. (Musaceae), etc.

Precise delimitation of the rainforest is often difficult, and where it passes progressively into tall shrubland, gallery forest or secondary forest, becomes essentially subjective. Each doubtful taxon has therefore been considered individually and those retained which best meet the chosen criteria in the light of existing literature, notes on herbarium sheets and, above all, our own observations and reflections.

Rainforest species are listed in Appendix 1. **Forest** species (F) are those found only in rainforest. Species found also in other formations are referred to as **mixed** (M). The following groups are defined to determine the effect of substrates on floristic diversity and on the level of endemism:

- species growing only on ultrabasic substrates (U)
- species absent from ultrabasic substrates (A)
- species growing on both types of substrate (I).

	U	A	I
F	FU	FA	FI
M	MU	MA	MI

Subspecies are not considered. If a species has subspecies of different edaphic status (U or A), the species as a whole is classed as I. The following categories thus exist among strictly forest species and those present also in one or more other formations.

The substrate has little if any influence on the distribution of epiphytes. Possible associations between epiphytes and their hosts are too little known to offer significant correlations with substrates. Parasitic Loranthaceae are, however, much more closely associated with their hosts, whose edaphic status they receive.

As with the data already considered, it is sometimes hard to assign a definite edaphic status to particular species. Some parts of the Territory still lack detailed geological maps, and even these cannot show all small-scale variations. Here also, published data and information on herbarium sheets, used critically and with caution, have been completed by our own observations. Doubtful species are left without edaphic status.

Genera and families of the rainforest

These are established using the lists of species occurring exclusively (F) or partially (M) in this formation. It may be noted that certain genera (*Acridocarpus*, *Erythroxylum*, *Grevillea*, *Isachne*, etc.) are excluded as having no forest species in New Caledonia although represented elsewhere in rainforest.

The genus is adopted as the working unit in phytogeographical analyses, for the reasons already cited by van Balgooy (1971) (more homogenous comparisons, relative numerical stability at different dates, definition generally sounder than that of species). In some cases, however, subgenera or sections are considered more significant than the genus itself in establishing floristic relationships: e.g. subgenus *Antholoma* rather than *Sloanea*; section *Scaevola* less its two pantropical species instead of the genus *Scaevola*. Certain genera whose limits seem ill-defined are considered together, e.g. *Caryophyllus* and *Jambosa* with *Syzygium*.

Rainforest genera are listed in Appendix 2. This list does not agree completely with the list of species (Appendix 1) because of nomenclatural complications arising when authors publish new genera or new synonymy without making, at specific level, all the new combinations that seem to be required: e.g. *Gymnostoma* (Casuarinaceae) for some species of *Casuarina* (Johnson 1980); *Eucarpha* and *Virotia* (Proteaceae) for some species of *Knightia* and *Macadamia* (Johnson & Briggs 1975); *Cassine* (Celastraceae) for *Elaeodendron* (Ding Hou 1962); *Anthocarapa* for *Amoora* (Pennington & Styles 1975); *Pisonia* (Nyctaginaceae) for *Calpidia* (Stemmerik 1964); *Lethedon* (Thymeleaceae) for *Microsemma* (Kostermans 1963), etc. Elsewhere, generic changes are only proposed by the specialists concerned, e.g. transfer to *Medicosma* of *Melicope* p.p. (Rutaceae) (T. G. Hartley pers. comm.) or revival of *Tristaniopsis*, a genus long reduced to synonymy under *Tristania* (Myrtaceae) (J. W. Dawson pers. comm.). In neither case is it for us to make the combinations instead of the authors proposing new generic limits. Such taxa appear, therefore, under their current binomials in the specific list and under the new generic name in the lists of geographical distribution. The quantitative results are not affected, being derived separately from each list.

SOURCES OF INFORMATION

These are too numerous to be cited completely; the most important have already been mentioned or appear in the references. For the nomenclatural status of taxa and for their distribution within New Caledonia in relation to edaphic factors, the sources are of three types: the existing literature; the herbarium of Centre ORSTOM (Nouméa); and naturally, personal observations.

The literature is considerable and scattered through many journals, floras, lists and compendia. We have first considered the most recent floras and revisions, in particular the *Flore de la Nouvelle-Calédonie et Dépendances* in which 16 families (four gymnosperm families, Sapotaceae, Proteaceae, Lauraceae, Epacridaceae, Orchidaceae, Solanaceae, Acanthaceae, Bignoniaceae, Symplocaceae, Flacourtiaceae, Icacinaceae and Corynocarpaceae) concerned in this work have appeared. There may be added seven families (Elaeocarpaceae, Apocynaceae, Trimeniaceae, Monimiaceae, Atherospermataceae, Chloranthaceae and Amborellaceae) in course of publication, the manuscripts or relevant information having been communicated to us. Numerous families represented in the rainforest have also been studied recently in whole or in part. These are Anacardiaceae (*Euroschinus*), Araliaceae (*Arthrophyllum*), Balanopaceae, Celastraceae (*Salaciopsis*), Chrysobalanaceae, Cunoniaceae (*Acsmithia*), Cyperaceae (*Baumea*, *Costularia*, *Gahnia*), Euphorbiaceae (*Austrobuxus*, *Baloghia*, *Bocquillonina*), Fagaceae, Loganiaceae (*Geniostoma*), Meliaceae, Mimosaceae (*Albizia*, *Pithecellobium*, *Serianthes*), Moraceae, Myrtaceae (Leptospermoideae), Oncothecaceae, Palmae, Pandanaceae, Pittosporaceae, Rutaceae, Rubiaceae (*Tarenna*) and Winteraceae. Recent reliable revisions cover about 65% of the flora here studied. For the rest we have used the results, modified where necessary, of the Mission Franco-Suisse (Guillaumin 1957, 1962, 1964b, 1967, 1974). Earlier sources include numerous and varied publications by Schlechter, E. G. Baker, S. Moore, Rendle, Aubréville, Virot, Thorne and others (see references). Obvious errors such as the superfluous generic name *Merismostigma* S. Moore, based on a species of *Coelospermum* Bl., have been corrected.

The local flora is well represented in the herbarium (40000 specimens) of Centre ORSTOM (Nouméa), another significant source of information, used critically, on the edaphic status of species. It is also distinctly useful in questions of nomenclature, thanks to many determinations by specialists of families not yet treated in *Flore de la Nouvelle-Calédonie*.

Geographical distributions outside New Caledonia are taken exclusively from the literature. The starting point was the remarkable work of van Balgooy (1971), modified and brought up to date in view of new data in later publications already cited and in recent volumes of *Flora Malesiana*, in *Pacific Plant Areas* and in the first volume of *Flora Vitiensis Nova*. Finally, the eighth edition of *A Dictionary of Flowering Plants and Ferns* (Willis 1973) and the *Dictionary of Australian Plant Genera* (Burbidge 1963) served to settle a few outstanding questions.

GEOGRAPHICAL DIVISIONS

The phytogeographical units of van Balgooy (1971) are modified as we are concerned with New Caledonia rather than the whole Pacific.

Africa — includes the whole continent, plus Madagascar, the Mascarene Islands and the Seychelles; the islands are distinguished by a number* if a New Caledonian genus is, in this subdivision, limited to one or more of them.

Asia — includes the whole continent (except the Malay peninsula), plus Japan.

Malesia — covers the geographical area of *Flora Malesiana* (including the Philippines), except New Guinea, the Bismarck Archipelago and the Aru islands.

*See Appendix 2

New Guinea — plus the Bismarck Archipelago and the Aru islands.

Australia — (including Tasmania).

Pacific

Solomon Islands, including Bougainville, which geographically belongs here.

New Hebrides, in the geographical sense, i.e. including the present Vanuatu and the Santa Cruz group.

Lord Howe Island.

Norfolk Island.

New Zealand and associated islands (Chathams, Kermadecs, Stewart).

Fiji.

North Pacific, an arbitrary unit grouping the following islands – Bonins, Carolines, Mariannes, Marshalls, Tuvalu, Phoenix, Tokelau, Hawaii.

Polynesia, includes French Polynesia plus the Cook Islands.

Samoa and Tonga, plus Niue, Wallis and Futuna.

America — the whole continent. North and South America are considered together as being little involved, apart from pantropical genera.

The Phoenix, Tokelau and Tuvalu Islands are associated with the North Pacific, on account of their geographical position and because all the relevant New Caledonian genera* that occur there are found also in the Carolines or the Mariannes.

DISTRIBUTIONS

The categories defined by van Balgooy (1971) and their content are also somewhat modified in the light of recent taxonomic studies and particularly because of the more limited scope of the present work.

Endemic genera (E), limited to New Caledonia, the Loyalties and the Isle of Pines.

New Caledonian (subendemic) genera (B), for which New Caledonia is a primary centre of diversification, having the great majority of the species (usually more than 3/4 of the total; e.g. *Meryta* 19/25, *Hedycarya* 9/12, *Coronanthera* 9/11, *Dizygotheca* 17/17, one species being also in the New Hebrides). For such genera New Caledonia usually has a central position (*Balanops*, *Baloghia*, *Meryta*), but is sometimes eccentric (*Coronanthera*, *Acianthus*) or even at the limit of their area (*Artia*, *Delarbrea*). Other genera for which New Caledonia is a secondary centre of distribution with many species are not, however, considered 'New Caledonian', either because their areas are too wide and scattered for it to be their centre of dispersion (*Araucaria* 13/19, *Soulamea* 7/14 (with one species in the Seychelles, one in Malesia and one in Polynesia), *Euroschinus* 4/6, *Agathis* 5/20, *Campynema* 1/2, *Arthrophyllum* 10/31, and also *Dianella*, *Geniostoma*, *Phyllanthus*, *Pittosporum*, etc.) or because their origin may well be elsewhere (*Argophyllum*, *Austrobuxus*, *Geissois*, etc.).

**Allophylus*, *Calophyllum*, *Calpidia*, *Epipremnum*, *Guettarda*, *Hemigraphis*, *Hernandia*, *Intsia*, *Macaranga*, *Morinda*, *Ochrosia*, *Pandanus*, *Planchonella*.

Pacific genera (L), found in one or more island groups in the Pacific but absent or rare in America, Asia, Australia, Malesia and New Guinea (e.g. *Cyphosperma*, *Earina*). This type of distribution is extended to the following genera: *Ascarina* with one species in Australia and Malesia and another (Jérémié 1980) in Madagascar; *Dracophyllum* (50 species, two of which occur in Tasmania and one in continental Australia); *Storckiella* (five species, one (B. P. Hyland pers. comm.) being Australian); *Astelia* (a few scattered species in Australia, New Guinea and South America); *Tapeinosperma* (39 species in New Caledonia, 11 in Fiji, two to three others in Australia, Malesia and New Guinea); *Scaevola* section *Scaevola* (less the two littoral species), extra-Australian but with two species in Malesia and New Guinea. More complex distributions are represented by *Serianthes* (four species in New Caledonia, five in other Pacific islands (Solomons, New Hebrides, Fiji, Polynesia), four others in New Guinea or Malesia), and *Austromyrtus* (nine Australian species and 28 others in the Pacific, including 12 in New Caledonia). Their inclusion in this group is justified by the weight of the Pacific species. Similarly, *Campynema* (one species endemic in New Caledonia, another endemic in Tasmania) is better placed here than among the Australian genera.

Subantarctic Pacific genera (J) with disjunct distributions in New Caledonia and in the mountains of Australia, New Zealand and South America. Few occur in New Caledonia, owing to its geographical position and the absence of high mountains. The best examples are *Araucaria* and *Nothofagus*, also *Decusocarpus*, *Dacrydium* and *Libocedrus* (three species in New Caledonia, two in New Guinea, two in New Zealand and one in the Andes).

Subantarctic genera (K) with distributions extending from the Pacific to the south of the Indian Ocean, such as *Cordyline*, *Dianella*, *Podocarpus*, the last being included here in spite of its vast distribution. *Soulamea* (one species in the Seychelles, one in Malesia and one in Polynesia, the other seven being New Caledonian) is placed in this group as is *Cunonia* whose extraordinary distribution includes 20 New Caledonian endemics and a single other species, *C. capensis*, in South Africa. They probably belong to an ancient Gondwanian element.

Australian genera (H) include those occurring mainly in Australia (e.g. *Hibbertia*, *Styphelia*) and even *Duboisia* and *Niemeyera*, each with two species in Australia and one in New Caledonia.

Australian-Papuan genera (I) are centred in Australia and New Guinea, such as *Agathis*, *Corynocarpus*, *Euroschinus*, *Flindersia* and *Sphenostemon*. *Cupaniopsis* is placed here; 26 of its 60 described species are New Caledonian but there are also many in New Guinea and some in Australia.

Malesian-Papuan genera (G) have their centre of diversification in Malesia or New Guinea (with the Solomons and Fiji), or covering both these areas, and are poorly represented in Asia, Australia and Polynesia. Typical examples are *Bureavella* and *Neuburgia*.

Indo-Malesian genera (F), mainly Asian and Malesian, are little represented in Australia and the Pacific, their distributions often ending in New Caledonia or Fiji. This group, which oddly contains 12 orchid genera, is exemplified by *Dacrycarpus*, *Procris*, *Acanthephippium*, *Appendicula* and *Coelogyne*.

Indo-Australian genera (D) occur in continental Asia, Malesia, Australia and the Pacific, but are absent or almost so in Africa, such as *Agapetes* (sensu Sleumer 1966), *Desmos*, *Neisosperma* and *Pachygone*.

Palaeotropical genera (G) are absent only from America.

Pantropical genera (A).

RESULTS

The New Caledonian rainforest, as defined above, has 1499 described species of phanerogams, distributed in 365 genera and 108 families (Appendix 1). A comparison with the whole native phanerogamic flora is given in Table 1, showing that the rainforest has 46% of the genera and species and 66.7% of the families represented in the whole flora. It is, with almost half the species, the richest formation in the Territory.

The level of specific endemism for the whole native phanerogamic flora is about 76%, well below the earlier estimates of Baumann-Bodenheim (1956) and Guillaumin (1964a), whose excessive figure of 90% has often been repeated. Endemism, as might be expected, is at all systematic ranks highest in the rainforest where all five endemic families occur.

TABLE 1. COMPARISON OF THE RAINFOREST FLORA WITH THE WHOLE NATIVE FLORA

	Species			Genera			Families	
	Total	Endemic	Endemic %	Total	Endemic	Endemic %	Total	Endemic
Native flora	3256	2476	76.0	787	108	13.7	182	5
Rainforest flora	1499	1345	89.7	365	82	22.4	108	5
Rainforest flora as a percentage of total flora	46.0			46.4			59.3	

Floristic affinities

The distribution spectrum is shown in Table 2. Genera of wide distribution (A, C, D) represent 45.4% of the rainforest flora, and Malesian genera 9.6%. The Australian element (H) is small (3%*), but reaches the more significant level of 10.4% when Australian-Papuan genera (I) are included. The complete absence of American genera may be noted. This element, though not abundant, does occur in New Caledonia (*Lindenia*, Rubiaceae), but is absent from the rainforest. Southern genera (Subantarctic Pacific and Subantarctic) are mainly gymnosperms — *Araucaria*, *Dacrydium*, *Decussocarpus*, *Libocedrus*, *Podocarpus* and *Prumnopitys*. This old Gondwanian relict element preserved in the rainforest indicates very ancient relationships between the territories where it still exists. Pacific genera (L) are few (4.1%). The most striking feature of Table 2 is, however, the large number of endemic genera (82, more than 22% of the total). Adding the 15 New Caledonian subendemic genera gives 97 genera (26.5%) confined to or centred in New Caledonia and belonging to the most primitive families — Amborellaceae, Monimiceae, Myricaceae, Oncothecaceae, Palmae, Paracryphiaceae, Proteaceae, Winteraceae, etc.

*This figure, as will be seen later, does not reflect the floristic links between the two territories.

TABLE 2. DISTRIBUTION OF RAINFOREST GENERA

Type	Code	Number of Genera	Percentage of Total
Pantropical	A	69	18.9
Palaeotropical	C	51	13.9
Indo-Australian	D	46	12.6
Indo-Malesian	F	17	4.7
Malesian-Papuan	G	18	4.9
Australian	H	11	3.0
Australian-Papuan	I	27	7.4
Subantarctic Pacific	J	6	1.7
Subantarctic	K	8	2.2
Pacific	L	15	4.1
Endemic	E	82	22.4
New Caledonian (subendemic)	B	15	4.1
TOTAL		365	100

Some endemic genera (*Basselinia*, *Myodocarpus*, *Zygogynum*) have a wide range of species, suggesting that their evolution has continued during a long period of isolation. Most, however, are oligotypic, many even monotypic, and appear as relicts at the end of an evolutionary line.

Floristic affinities may be evaluated in several ways. The number of genera shared between New Caledonia and various other territories is considered first (Table 3). The number of genera in common is high for New Guinea (246), Malesia (235) and Australia (233), and somewhat less for Fiji (192), continental Asia (188) and the New Hebrides (175).

These high figures are inflated by the 69 pantropical genera that mask the true affinities and whose presence, due to efficient dispersal, in various areas does not necessarily reflect floristic relationships. The comparison may thus be improved by eliminating all the pantropical genera. Tables 3 and 4 show a general reduction in shared genera when pantropical genera are not considered. This reduction is not, however, uniform (Fig. 2), being:

- 18% for America, which drops from 12th to 15th place
- 10–12% for Africa, Asia and the North Pacific
- 7–8% for Malesia, New Guinea, Australia, the Solomons, the New Hebrides, Fiji and Tonga–Samoa, the first six of these, after some changes in relative position, now taking the lead
- 5% for Lord Howe, Norfolk and Polynesia
- 1% for New Zealand. (Fig. 3.)

The last figures are easily explained, as pantropical genera are few in these essentially extratropical areas. Table 4 thus shows enhanced floristic affinities primarily with New Guinea (60%), Australia (57%), Malesia (56%), and then with Fiji (45%), the Solomons (42%) and the New Hebrides (40%). New Zealand (14.5%) is well behind.

One could eliminate similarly other widespread elements such as, for example, the palaeotropical genera, but this approach is limited as the absence of a genus from the whole American continent is in itself biogeographically significant.

TABLE 3. NEW CALEDONIAN RAINFOREST GENERA PRESENT IN OTHER AREAS

Total genera: 365	Africa	Asia	Malesia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe	Norfolk	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America
Genera present	131	188	235	246	233	184	175	58	37	56	192	145	92	148	81
Percentage	35.9	51.5	64.3	67.4	63.8	50.4	47.9	15.9	10.1	15.3	52.6	39.7	25.2	40.5	22.2

TABLE 4. NEW CALEDONIAN RAINFOREST GENERA (LESS THE PANTROPICAL ELEMENT) PRESENT IN OTHER AREAS

Total genera: 296	Africa	Asia	Malesia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe	Norfolk	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America
Genera present	69	121	166	178	168	124	119	31	22	43	134	93	62	99	12
Percentage	23.3	40.9	56.1	60.1	56.7	41.9	40.2	10.4	7.4	14.5	45.2	31.4	20.9	33.4	4.0

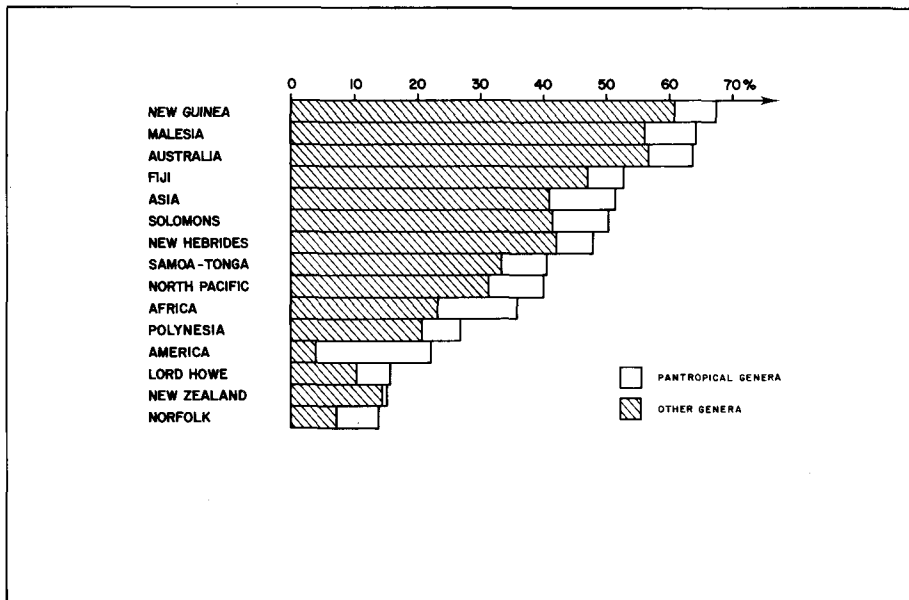


Figure 2. Graphic representation of Tables 3 and 4.

It is clear that the fewer the territories containing a taxon, the greater is its importance in showing their floristic affinity. A genus found only in two territories implies closer floristic links between them than does one common to both but occurring also in other regions, particularly if these are extensive and geographically distant. The problem may thus be approached in another way by analysing the genera shared by New Caledonia and one only of the other

TABLE 6. GENERA LIMITED TO NEW CALEDONIA AND TWO OTHER TERRITORIES

		Africa	Asia	Malasia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe Is.	Norfolk Is.	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America	Distrib. type	New Caledonia
ANAC.	<i>Euroschinus</i>				1	1											I	2
MELI.	<i>Anthocarapa</i>				1	1											I	
PHIL.	<i>Eustrephus</i>				1	1											I	
RUTA.	<i>Geijera</i>				1	1											I	
SPHE.	<i>Sphenostemon</i>				1	1											I	
ELAE.	<i>Dubouzetia</i>			1	1												G	
PODO.	<i>Falcatifolium</i>				1												G	
ANON.	<i>Richella</i>			1													G	
MYRT.	<i>Ptilocalyx</i>							1									B	2
CESA.	<i>Storckiella</i>					1											L	
GESN.	<i>Coronanthera</i>					1	1										B	2
THYM.	<i>Lethedon</i>					1		1									B	2
ORCH.	<i>Drymoanthus</i>					1					1						L	
EUPH.	<i>Baloghia</i>					1				1							B	2

TABLE 7. GENERA LIMITED TO NEW CALEDONIA AND THREE OTHER TERRITORIES

		Africa	Asia	Malasia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe Is.	Norfolk Is.	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America	Distrib. type	New Caledonia
BIGN.	<i>Deplanchea</i>				1	1	1										I	
FLIN.	<i>Flindersia</i>				1	1	1										I	
PROT.	<i>Stenocarpus</i>				1	1	1										I	2
SAPO.	<i>Beccariella</i>				1	1	1										D	
LORA.	<i>Amylothea</i>					1	1								1		I	
BALO.	<i>Balanops</i>						1										B	2
MYRT.	<i>Austromyrtus</i>						1	1				1					L	
WINT.	<i>Bubbia</i>					1	1		1								I	
EPAC.	<i>Dracophyllum</i>						1		1								L	
CUPR.	<i>Libocedrus</i>				1						2					1	J	
ORCH.	<i>Chamaeanthus</i>		1	1				1			1						G	

Tables 6, 7, 8, 9 and 10 show the genera shared exclusively by New Caledonia with two, three, four, five or six other territories. To go further would be unprofitable as we come back to the very widespread genera whose distributions are less and less significant. In each of these tables, Australia, followed fairly closely by New Guinea, has most genera in common with New Caledonia. An attempt may be made to quantify these affinities by assigning to the different territories a correlation coefficient proportional to the number of common genera and inversely proportional to the number of territories in which they occur. The five genera *Anthocarapa*, *Euroschinus*, *Eustrephus*, *Geijera* and *Sphenostemon* occur, for example, apart from New Caledonia, only in the two territories Australia and New Guinea, each of which is assigned the coefficient $5/2 = 2.5$.

TABLE 8. GENERA LIMITED TO NEW CALEDONIA AND FOUR OTHER TERRITORIES

		Africa	Asia	Malesia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe Is.	Norfolk Is.	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America	Distrib. type	New Caledonia
CUNO.	<i>Acsmithia</i>			1	1	1						1					I	2
EUPH.	<i>Austrobuxus</i>			1	1	1						1					H	2
ANON.	<i>Desmos</i>			1	1	1						1					D	
RUBL.	<i>Coelospermum</i>			1	1	1											D	
ORCH.	<i>Cleisostoma</i>		1	1	1	1											G	
CUNO.	<i>Geissois</i>					1	1	1				1					H	2
MYRT.	<i>Xanthostemon</i>			1	1	1	1	1									I	2
SAPO.	<i>Bureavella</i>			1	1	1	1	1									G	
ORCH.	<i>Trachoma</i>		1	1	1	1		1									D	
CORY.	<i>Corynocarpus</i>				1	1	1	1				1					I	
APOC.	<i>Pagiantha</i>		1	1			1					1					F	
ORCH.	<i>Acianthus</i>				1	1	1										H	2
LILI.	<i>Arthropodium</i>	3			1	1					1	1					H	
FAGA.	<i>Nothofagus</i>				1	1					1						J	
ARAU.	<i>Araucaria</i>				1	1				1						1	J	2
ORCH.	<i>Rhynchopreatia</i>			1	1	1							1				G	
CYPE.	<i>Costularia</i>	1		1	1	1											C	
ICAC.	<i>Apodytes</i>	1	1	1		1											K	

TABLE 9. GENERA LIMITED TO NEW CALEDONIA AND FIVE OTHER TERRITORIES

		Africa	Asia	Malesia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe Is.	Norfolk Is.	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America	Distrib. type	New Caledonia
ARAL.	<i>Delarbrea</i>				1	1	1	1									B	2
MYRT.	<i>Rhodomyrtus</i> (<i>Archirhodomyrtus</i>)			1	1	1	1	1									I	
SAXI.	<i>Polyosma</i>		1	1	1	1	1										D	
ORCH.	<i>Pterostylis</i>			1	1	1			1			1					H	
SAXI.	<i>Quintinia</i>			1	1	1		1				1					D	
PODO.	<i>Prumnopitys</i>			1	1	1						1				1	J	
MONI.	<i>Hedycarya</i>				1	1		1				1	1		1		B	2
MYRT.	<i>Tristaniopsis</i>		1	1	1	1						1					D	
DILL.	<i>Hibbertia</i>	1		1	1	1						1					H	
OLEA.	<i>Olea</i>	2	1	1	1	1			1								C	
BIGN.	<i>Pandorea</i>			1	1	1	1		1								I	
PODO.	<i>Decussocarpus</i>			1	1		1					1				1	J	
RHIZ.	<i>Crossostylis</i>						1	1				1		1	1		L	
ORCH.	<i>Earina</i>							1			1	1		1	1		L	
ORCH.	<i>Acanthephippium</i>		1	1	1							1			1		F	

TABLE 10. GENERA LIMITED TO NEW CALEDONIA AND SIX OTHER TERRITORIES

		Africa	Asia	Malesia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe Is.	Norfolk Is.	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America	Distrib. type	New Caledonia	
EUPH.	<i>Codiaeum</i>			1	1	1	1	1				1						I	
CASU.	<i>Gymnostoma (Casuarina)</i>			1	1	1	1	1				1						G	2
*GOOD.	<i>Scaevola (Sect. Scaevola)</i>			1	1		1					1	1	1				L	
MYRS.	<i>Tapeinosperma</i>			1	1	1	1	1				1						L	
ARAU.	<i>Agathis</i>			1	1	1		1			1	1						I	2
ORCH.	<i>Chrysoglossum</i>	1	1	1			1	1				1						F	

Adding all the coefficients* obtained for the territories appearing in Tables 5 to 10 gives the totals† shown in Table 11 (converted to percentages in the second column). This confirms the positions of Australia (27%) and New Guinea (20%) as the territories with the closest floristic affinities, followed at some distance by Malesia (12%) and then Fiji (10%), the New Hebrides (8%) and the Solomons (7%). New Zealand has only 4%. It is no surprise to see thus confirmed and amplified the conclusions reached for the whole New Caledonian flora (Thorne 1965) (Table 11).

The distribution area of the great majority of genera, apart from the southern Gondwanian element (Subantarctic and Subantarctic Pacific), is to the west of New Caledonia. Two genera only, *Crossostylis* and *Earina*, are centred to the east and suggest a Pacific island origin.

TABLE 11. FLORISTIC AFFINITIES AS SHOWN BY THEIR CORRELATION COEFFICIENTS

Ranking	Geographical Division	Correlation Coefficient	Correlation Coefficient (%)
1	Australia	21.19	27.2
2	New Guinea	15.77	20.2
3	Malesia	9.13	11.7
4	Fiji	7.63	9.8
5	New Hebrides	5.90	7.6
6	Solomons	5.27	6.8
7	New Zealand	3.22	4.3
8	Asia	2.49	3.2
9	Africa	2.15	2.8
10	Lord Howe	1.26	1.6
11	America	1.23	1.6
12	Samoa-Tonga	1.13	1.4
13	Norfolk	0.75	1.0
14	Polynesia	0.40	0.5
15	North Pacific	0.25	0.3
	TOTAL	77.87	100.0

*These decrease from Table 6 to Table 10 as the denominator increases with the number of territories. The coefficients are negligible for more than six other territories.

†It might theoretically be objected that these coefficients depend on the delimitation of the territories chosen. Thus the exclusive presence of a genus outside New Caledonia in two units A and B of very different size (e.g. Australia and Norfolk) gives each the coefficient $1/2 = 0.5$. The large unit A could be divided into A_1, A_2, A_3 (e.g. Queensland, Tasmania, the rest of Australia). If the genus occurs in all three, they have each the coefficient $1/4 = 0.25$, as also now has B, as against a total of 0.75 for A when the coefficients for the three sub-units are added. The system chosen thus seems to favour small territories at the expense of larger areas. This does not, in fact, reflect the true situation. A genus restricted to a few phytogeographical regions is most unlikely to occur throughout a vast territory such as Africa, America, Australia or New Guinea. If the divisions are accepted it will probably occur only in A_1, A_2, A_3 , which gives the same results as in the first case.

Summing up, the results confirm that the rainforest genera come overwhelmingly from the north-west, particular floristic links existing with Australia and New Guinea and at a lower level with Malesia, Fiji, the New Hebrides and the Solomons, New Zealand taking only seventh place.

Origin of the New Caledonian flora

The geological history of New Caledonia must now be evoked in order to relate these results to the origin of its flora. This history, long obscure and controversial, now seems clearer thanks to recent synthetic accounts, particularly that of Paris (1981).

The main lines are as follows — during the Permian (corresponding to the oldest dated rocks of New Caledonia) and the whole secondary era, the present Norfolk Ridge represented a discontinuous insular arc (a series of islands rather than land connections) joining New Guinea to New Zealand. Palaeomagnetic data show that this arc was situated off the Queensland coast, almost parallel to the present Great Barrier Reef, thus further north and much closer to Australia than today. It suffered intense tectonic movements in the lower Cretaceous with the Rangitata Orogeny and the opening of the Tasman Sea. Dislocations followed by various foldings and metamorphic changes produced first the framework of the *Chaîne Centrale* and then the rest of New Caledonia in its present form. The Tertiary saw a series of submersions, especially in the Palaeocene and the middle Eocene (the date of the first reef formation which marks a warmer period), alternating with general emergences. Land areas of varying size that may be supposed to have existed near New Caledonia even during periods of general submergence would provide refuges and stepping-stones for the vegetation.

A major event of the upper Eocene was the outpouring of peridotites that covered almost all of New Caledonia to a thickness of about 2000 m. This very slow phenomenon, begun under water and continued in the atmosphere, occurred about 38 million years ago and had very important effects on plant and animal life. Several points may be emphasized:

1. The complete absence, since at least the Permian, of land connections between New Caledonia and other continental land masses explains the absence of native land mammals except bats and the great poverty in some other zoological groups — freshwater fish, amphibians, reptiles and some terrestrial invertebrates (Stevens 1977).

2. Australia (particularly the north-eastern part) and the mountains of New Guinea were close to New Caledonia throughout the Permian and for most of the secondary era (up to the lower Cretaceous). The whole Gondwanian element (the ancestors of our gymnosperms and most of our primitive angiosperms*) could thus pass readily as far as New Zealand† by short-distance dispersal mechanisms along this island arc without long water gaps. This explains the 'continental' features of a large part of the New Caledonian flora‡.

*The primitive dicotyledon *Homoxylon neocaledonicum* found (Boureau 1952) in the Carnian of western New Caledonia appears to bring the origin of the dicotyledons back to the Triassic.

†Or in the other direction from New Zealand towards New Guinea, as at this time New Zealand must have been close to Antarctica and South America (cf. the hypothesis of southern migrations (Cranwell 1964, Raven & Axelrod 1974)). The dominant floristic affinities with Australia, New Guinea and Malesia suggest, however, a preponderant migration from the north.

‡Fournier (1874) based a similar hypothesis on the floristic affinities of New Caledonian ferns.

3. Migration routes, whether north-south or inversely according to the climatic conditions at different epochs, were cut during the long isolation following the dislocations and orogenic movements. This led to a high level of endemism and in certain genera (*Agathis*, *Araucaria*, *Argophyllum*, *Geissois*, *Nothofagus*, *Phyllanthus*, *Pittosporum*, *Psychotria*, *Stenocarpus*, *Xanthostemon*, etc.) a speciation surprisingly active in view of the small surface of the island. This prolonged isolation also explains why many typically Australian taxa (phyllodineous *Acacia*, *Banksia*, *Eucalyptus*, *Macrozamia* and 10 or so forest genera of Proteaceae in the east and particularly the north-east of the continent) are absent or very poorly represented here, as are families common to Australia and New Guinea (Eupomatiaceae, Himantandraceae) or present in both though also represented further afield (Cochlospermaceae, Hamamelidaceae, Myristicaceae, Ochnaceae, Theaceae, etc.).

This ancient flora, diversified by much local evolution, received new elements that from the lower Cretaceous onwards can only have come by long-distance transport.

4. In the early Tertiary the peridotites covering most of the island with a highly selective substrate eliminated much of the ancient flora, discouraged the installation of certain modern families (e.g. Compositae, Gramineae) well adapted by light wind-borne diaspores to long-distance dispersal, their place being taken by others apparently better adapted such as Cyperaceae, and finally set off a new phase of evolution.

Effect of substrate on richness in species, endemism and conservation of primitive forms

Floristic richness (Table 12). The 1499 known rainforest species include 77 epiphytes and 64 others on whose edaphic status information is lacking. Out of the 1358 species of known edaphic status 30.4% are limited to ultrabasic rocks (U), 41.3% to other types of rock (A) and 28.3% occur on both (I). The forest flora is poorer on ultrabasic rocks (U + I) than on other substrates (A + I). This position is enhanced on excluding all species of types MA, MU and MI, ecologically adaptable enough to occur also in other formations, so as to consider only the strictly forest species (FA, FU and FI), which gives 535 FA species against 291 of type FU. This relative floristic poverty of the forest on ultrabasic rocks may in part be imputed to the lower surface that they cover in New Caledonia*. This factor cannot, however, account for so great a difference (little more than half as many strictly forest species), especially as conditions of altitude, topography and rainfall are equally varied in the two cases. The flora of type A also appears more specialized as it shares only 26 species with other formations such as secondary forest, thickets, savannah, sclerophyll forest, coastal forest, etc. The flora of type U, on the other hand, is less distinctive with 122 species found also in other formations, mostly maquis (open formations). The floristic relationships between maquis and forest on ultrabasic rocks suggest that they are linked, maquis being derived from forest at high altitudes or by disturbance.

Originality and endemism (Table 13). The proportion of endemics (89.4%) for the whole rainforest flora (F + M) of type A is, though still very high, lower

*The area of forest on peridotite may for the main island be estimated as between 1/3 and 2/5 of the total. The Loyalty Islands may be neglected here as their impoverished flora contains mostly species in common with the main island.

than that for type U (98.3%); for exclusively forest species (F) the corresponding figures are 90.4% and 97.9%. In absolute number, endemic species of type A (487) are not far from twice as many as those of type U (285). Non-endemic forest species are also more numerous in type A (49) than in type U (six). (Fig. 4.)

TABLE 12. DISTRIBUTION OF RAINFOREST SPECIES ON DIFFERENT SUBSTRATES (percentages for 1358 species of known edaphic status)

Formation	Substrate*						Total U+A+I	Epiphytes (species)	Total U+A+I epiphytes
	U		A		I				
	Species	%	Species	%	Species	%			
Forest	291	21.4	535	39.4	273	20.1	1099	76	1175
Mixed	122	9.0	26	1.9	111	8.2	259	1	260
Total F+M	413	30.4	561	41.3	384	28.3	1358	77	1435
Non-epiphytes of uncertain edaphic status									64
TOTAL rainforest species									1499

*U — species growing only on ultrabasic substrates; A — species absent from ultrabasic substrates; I — species growing on both types of substrate.

TABLE 13. PROPORTION OF ENDEMIC SPECIES IN THE RAINFOREST (percentages based on totals shown in Table 12)

Formation	Substrate*						Total U+A+I	Epiphytes (species)	Total U+A+I epiphytes
	U		A		I				
	Species	%	Species	%	Species	%			
Forest	285	97.9	487	90.4	241	88.2	1013	46	1059
Mixed	121	99.1	16	61.5	94	84.6	231	0	231
Total F+M	406	98.3	503	89.4	335	87.2	1244	46	1290
Non-epiphytes of uncertain edaphic status									55
TOTAL endemic rainforest species									1345

*U — species growing only on ultrabasic substrates; A — species absent from ultrabasic substrates; I — species growing on both types of substrate.

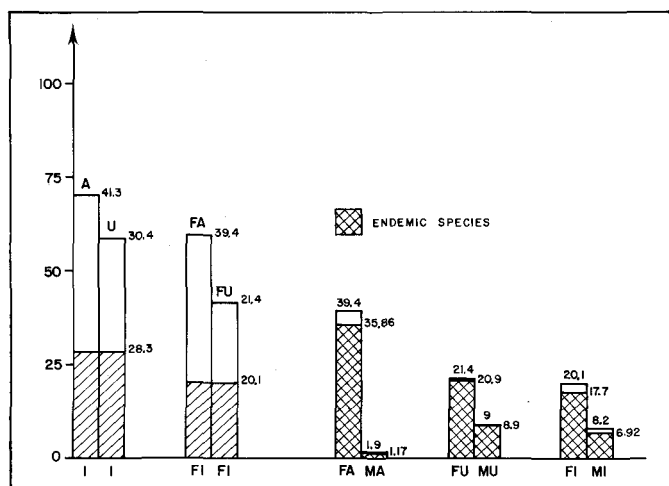


Figure 4. Relative importance of endemic species (based on Tables 12 and 13).

The 108 families represented in the rainforest may be divided into five groups by their reaction (A, U, I) to substrates.

1. The rainforest species of 30 families are all (*italics*) or mostly indifferent (I) to substrate:

Agavaceae, *Alangiaceae*, *Alseuosmiaceae*, *Amaryllidaceae*, Ampelidaceae, Anacardiaceae, *Aquifoliaceae*, *Atherospermataceae*, *Corynocarpaceae*, Dilleniaceae, *Flindersiaceae*, Guttiferae, *Hernandiaceae*, Icacinaceae, *Liliaceae*, Linaceae, Menispermaceae, Oleaceae, Orchidaceae, *Paracryphiaceae*, *Passifloraceae*, *Philesiaceae*, Podocarpaceae, Rhamnaceae, Rutaceae, Santalaceae, *Simaroubaceae*, Smilacaceae, Solanaceae, Violaceae.

2. The rainforest species of 48 families are all (*italics*) or mostly type A:

Acanthaceae, *Amborellaceae*, Apocynaceae, Araceae, Araliaceae, Asclepiadaceae, Bischofiaceae, Celastraceae, Caesalpiniaceae, Chrysobalanaceae, Commelinaceae, Cyperaceae, *Dioscoreaceae*, Ebenaceae, Elaeocarpaceae, *Ericaceae*, Euphorbiaceae, Flacourtiaceae, Gramineae, Hippocrateaceae, Lauraceae, Lecythidaceae, Loganiaceae, Meliaceae, Monimiaceae, Moraceae, Myrsinaceae, Myrtaceae, Nyctaginaceae, Palmae, Pandanaceae, Papilionaceae, Piperaceae, Pittosporaceae, Rhizophoraceae, Rubiaceae, Sapindaceae, Sapotaceae, Saxifragaceae, Sterculiaceae, Symplocaceae, *Taxaceae*, *Tiliaceae*, *Trimeniaceae*, *Ulmaceae*, Urticaceae, Verbenaceae, Winteraceae.

3. The rainforest species of 19 families are all (*italics*) or mostly type U:

Araucariaceae, Balanopaceae, Burseraceae, Casuarinaceae, Cunoniaceae, *Cupressaceae*, Epacridaceae, Escalloniaceae, Fagaceae, Flagellariaceae, Loranthaceae, Mimosaceae, *Myricaceae*, Nepenthaceae, *Oncothecaceae*, Phellinaceae, Phaeostemonaceae, *Strasburgeriaceae*, Thymeleaceae.

4. The two families Goodeniaceae and Triuridaceae have the same number of rainforest species in type A and type U.

5. Eight families (Annonaceae, Balanophoraceae, Bignoniaceae, Capparaeae, Connaraceae, Cucurbitaceae, Gesneriaceae and Proteaceae) are for various reasons hard to assign definitely to the types A, U and I.

Three endemic families (*Oncothecaceae*, *Phellinaceae*, *Strasburgeriaceae*) are in the third group but *Amborellaceae* is in the second and *Paracryphiaceae* in the first group. Similarly, 22 endemic genera belong completely (as to their rainforest species) to type U against 17 for type A and 12 for type I*.

Gymnosperms are fewer in type A (4 species: *Araucariaceae*, *Taxaceae*) than in type U (13 species: *Araucariaceae*, *Cupressaceae*, *Podocarpaceae*); they are, however, well represented in type I (11 species: *Araucariaceae*, *Podocarpaceae*). This lack among the species of type A is largely compensated for by

*Type A: *Amborella*, *Alloschmidia*, *Austrotaxus*, *Cyphophoenix*, *Depanthus*, *Exospermum*, *Gongrodiscus*, *Kentiopsis*, *Kibaropsis*, *Lavoixia*, *Leptostylis*, *Mackeeae*, *Moratia*, *Pichonia*, *Pyriluma*, *Rhopalobranchium*, *Veillonina*.

Type U: *Actinokentia*, *Apiopetalum*, *Arillastrum*, *Botryomyrta*, *Campecarpus*, *Canacomyrca*, *Cerberiopsis*, *Clinosperma*, *Cocconerion*, *Coilochilus*, *Daenikera*, *Dendrophyllanthus*, *Gastrolepis*, *Hachettea*, *Morierina*, *Neoguillauminia*, *Oncotheca*, *Pachyplectron*, *Pleurocalyptus*, *Pritchardiopsis*, *Sebertia*, *Strasburgeria*.

Type I: *Amphorogyne*, *Campynemanthe*, *Chambeyronia*, *Clematepistephium*, *Cyphokentia*, *Nemuaron*, *Paracryphia*, *Parasitaxus*, *Sarcomelicope*, *Sleumerodendron*, *Strobilopanax*, *Zieridium*.

the great abundance of primitive monocotyledons (Palmae, Pandanaceae) and particularly by the numerous members of archaic families the vessels of whose wood are absent or primitive (Amborellaceae, Annonaceae, Atherospermataceae, Chloranthaceae, Menispermaceae, Monimiaceae, Piperaceae, Trimeniaceae, Winteraceae). In these families, considered (Takhtajan 1969) as living fossils, type A has 29 rainforest species, against 18 in type U and 12 in type I.

Finally, if the peridotites, covering New Caledonia slowly and massively, induced a new wave of speciation (species of type U) and thus added to the originality and endemism of the flora, their contribution to its richness remains doubtful. Taking first the whole flora, it is not certain that the appearance of taxa associated with this new substrate compensated the inevitable loss of the part of the pre-Eocene flora unable to adapt to the new conditions. The evolutionary capacities of this ancient and already highly diversified flora are shown by the floristic wealth, the endemism and the abundance of unusual types present today in the forests on non-ultrabasic rocks in spite of the geological vicissitudes that they have suffered.

On a strictly comparative basis it is also clear from the floristic analyses that the peridotites, highly selective because of their peculiar chemical composition, provoke rather a relative impoverishment, not only for modern families (Boraginaceae, Compositae, Gramineae, Labiatae, Scrophulariaceae, etc.) but also for the total number of species, the endemics and the primitive forms. This casts doubt on the part often attributed to them (Virot 1956, Thorne 1965, Jaffré 1980) in conserving archaic ancestral forms. Such an effect, while it may well exist in maquis, seems, however, remarkably limited in rainforest. The persistence and the abundance of such relicts in all types of rainforest on whatever substrate stem rather from the extreme isolation of New Caledonia during its geological history.

ACKNOWLEDGMENTS

All data were analysed on a HP 9845 computer. Input and programming were carried out by M. Hoff, botanist of Centre ORSTOM, Nouméa, whom we thank for this essential collaboration. The following specialists have kindly supplied unpublished data for their respective groups: L. Allorge (P) — Apocynaceae; J. W. Dawson (WELTU) — Myrtaceae (Leptospermoideae); L. L. Forman (K) — Menispermaceae; J. Jérémie (P) — Amborellaceae, Atherospermataceae, Chloranthaceae, Monimiaceae, Trimeniaceae; T. G. Hartley (CANB) — Rutaceae; H. Hürliemann (Z) — *Salacia (Dicarpellum)*, *Salaciopsis*; I. Nielsen (AAU) — Mimosaceae; H. K. Airy Shaw (K) — *Austrobuxus*, *Baloghia*, *Bocquillonii*, *Cocconerion*; B. C. Stone (KLU) — Pandanaceae; C. Tirel (P) — Elaeocarpaceae.

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APPENDIX 1

List of rainforest species in New Caledonia

Symbols used			
Column 1: E – Endemic			
P – Native, non-endemic			
Column 2: e – Epiphyte			
Column 3: M – Forest species also in other formations			
F – Strictly forest species			
Column 4: U – Species limited to ultrabasic rocks			
A – Species limited to other rocks			
I – Species indifferent to substrate			
ACANTHACEAE			
Graptophyllum			
<i>G. balansae</i> Heine	E – FA		
<i>G. pictum</i> (L.) Griffith	P – FA		
Hemigraphis			
<i>H. reptans</i> (G. Forster)			
T. Anderson ex Hemsley	P – MA		
Justicia			
<i>J. pinensis</i> S. Moore	E – MA		
Pseuderanthemum			
<i>P. comptonii</i> S. Moore	E – MI		
<i>P. repandum</i>			
(G. Forster) Guillaumin	P – MI		
		AGAVACEAE	
		Cordyline	
		<i>C. fruticosa</i>	
		(L. ex Stickman) A. Chevalier	P – FI
		<i>C. neocaledonica</i> Linden	E – MU
		ALANGIACEAE	
		Alangium	
		<i>A. bussyanum</i> (Baillon) Harms	E – FI
		ALSEUOSMIACEAE	
		Periomphale	
		<i>P. balansae</i> Baillon	E – FI
		<i>P. gaultherioides</i>	
		(Gilg & Schlechter) Steenis	E – FI
		<i>P. neocaledonica</i>	
		(Gilg & Schlechter) Steenis	E – FI
		<i>P. pancheri</i> Baillon	E – FI
		AMARYLLIDACEAE	
		Campynema	
		<i>C. neocaledonicum</i> Rendle	E – FI
		Campynemanthe	
		<i>C. viridiflora</i> Baillon	E – FI
		AMBORELLACEAE	
		Amborella	
		<i>A. trichopoda</i> Baillon	E – FA
		AMPELIDACEAE	
		Cayratia	
		<i>C. carnosa</i> (Link) Gagnepain	P – FA
		<i>C. japonica</i>	
		(Thunberg) Gagnepain	P – FI

Cissus			<i>N. lifuana</i> (Guillaumin) Boiteau	E — FA
<i>C. glaucoramea</i> Planchon	P — MI		<i>N. miana</i>	
ANACARDIACEAE			(Baillon ex White) Boiteau	E — FU
Euroschinus			<i>N. seveneti</i> (Boiteau) Boiteau	E — MU
<i>E. elegans</i> Engler	E — FI		<i>N. thiollierei</i>	
<i>E. obtusifolius</i> Engler	E — FI		(Montrouzier) Boiteau	E — FU
<i>E. verrucosus</i> Engler	E — FI		Ochrosia	
<i>E. vieillardii</i> Engler	E — FI		<i>O. balansae</i>	
Semecarpus			(Guillaumin) Guillaumin	E — FU
<i>S. balansae</i> Engler	E — FU		<i>O. grandiflora</i> Boiteau	E — FA
<i>S. neocaledonica</i> Engler	E — FU		<i>O. silyatica</i> Daeniker	E — FU
ANNONACEAE			Pagiantha	
Desmos			<i>P. cerifera</i>	
<i>D. lecardii</i>			(Sebert & Pancher) Markgraf	E — MU
(Guillaumin) R. E. Fries	E — FU		Parsonsia	
<i>D. tiebaghiensis</i>			<i>P. affinis</i> Baillon	E — FA
(Daeniker) R. E. Fries	E — MU		<i>P. catalpaecarpa</i> Baillon	E — FA
Polyalthia			<i>P. crebriflora</i> Baillon	E — FU
<i>P. nitidissima</i> Bentham	E — FI		<i>P. edulis</i> Guillaumin	E — FA
Richella			<i>P. flexuosa</i> Baillon	E — MA
<i>R. obtusata</i> (Baillon) R. E. Fries	E — FA		<i>P. laxiflora</i> Guillaumin	E — MI
Uvaria			<i>P. linearis</i> Baillon	E — FA
<i>U. baillonii</i> Guillaumin	E — MU		<i>P. longiflora</i> Guillaumin	E — FI
Xylopia			<i>P. populifolia</i> Baillon	E — FA
<i>X. pancheri</i> Baillon	E — MU		<i>P. scabra</i>	
<i>X. vieillardii</i> Baillon	E — FA		(Labillardière) Guillaumin	E — FI
APOCYNACEAE			Rauvolfia	
Alstonia			<i>R. schumanniana</i>	
<i>A. balansae</i> Guillaumin	E — FA		(Schlechter) Boiteau	E — FI
<i>A. boulingdaensis</i> Boiteau	E — FU		<i>R. spatulata</i> Boiteau	E — FU
<i>A. coriacea</i> Pancher ex S. Moore	E — MU		AQUIFOLIACEAE	
<i>A. lenormandii</i>			Ilex	
Heurck & Mueller Argovie	E — MU		<i>I. sebertii</i> Pancher	E — MI
<i>A. quaternata</i>			ARACEAE	
Heurck & Mueller Argovie	E — FA		Epipremnum	
<i>A. sphaerocapitata</i> Boiteau	E — FI		<i>E. pinnatum</i> (L.) Engler	P — FA
<i>A. vieillardii</i>			ARALIACEAE	
Heurck & Mueller Argovie	E — MU		Apiopetalum	
Alyxia			<i>A. arboreum</i> E. G. Baker	E — FU
<i>A. baillonii</i> Guillaumin	E — FI		<i>A. glabratum</i> Baillon	E —
<i>A. brevipes</i> Schlechter	E — FI		<i>A. pennelii</i> Viguier	E — FU
<i>A. canalensis</i> Guillaumin	E — FA		<i>A. velutinum</i> Baillon	E — MU
<i>A. glaucophylla</i>			Arthrophyllum	
Heurck & Mueller Argovie	E — MU		<i>A. angustatum</i>	
<i>A. integricarpa</i> Boiteau	E — FA		(Baillon) Philipson	E — FU
<i>A. johnsoniae</i> S. Moore	E — FA		<i>A. balansae</i> (Baillon) Philipson	E — FA
<i>A. laurina</i> Baillon	E — FA		<i>A. glaberrimum</i> (Baumann-Bodenheim) Philipson	E — FA
<i>A. leucogyne</i>			<i>A. grandifolium</i>	
Heurck & Mueller Argovie	E — FI		(Guillaumin) Philipson	E — MU
<i>A. loeseneriana</i> Schlechter	E — FA		<i>A. hederoides</i> (Baumann-Bodenheim) Philipson	E — FU
<i>A. longicarpa</i> Boiteau	E — FA		<i>A. otopyrenum</i>	
<i>A. margaretae</i> Boiteau	E — FA		(Baillon) Philipson	E — FU
<i>A. myrtoides</i> Schlechter	E — MI		<i>A. schlechteri</i>	
<i>A. oubatchensis</i> (Schlechter)			(Harms) Philipson	E — FA
Guillaumin ex Boiteau	E — FA		<i>A. vieillardii</i>	
<i>A. stellata</i> J. R. & G. Forster	E — FA		(Baillon) Philipson	E — FA
<i>A. suavis</i> (Baillon) Schlechter	E — MU		Botryomeryta	
<i>A. vieillardii</i> Boiteau	E — MA		<i>B. lecardii</i> Viguier	E — FU
Artia			Delarbre	
<i>A. balansae</i> (Baillon) Pichon	E — MI		<i>D. collina</i> Vieillard	P — FI
<i>A. francii</i> (Guillaumin) Pichon	E — MI		<i>D. harmsi</i> Viguier	E — FA
Cerbera			<i>D. longicarpa</i> Viguier	E — FU
<i>C. manghas</i> L.	P — MI		<i>D. montana</i> Viguier	E — FA
Cerberiopsis			<i>D. paradoxa</i> Vieillard	E — FA
<i>C. candelabrum</i>			Dizygotheca	
Vieillard ex Pancher & Sebert	E — FU		<i>D. apioides</i> (Baillon) Viguier	E — FA
Melodinus			<i>D. bailloni</i> Viguier	E —
<i>M. aeneus</i> Baillon	E — FU		<i>D. coenosa</i> Viguier	E —
<i>M. balansae</i> Baillon	E — MU		<i>D. elegantissima</i> (Veitch) Viguier	E —
<i>M. polyadenus</i> Baillon	E — MI		& Guillaumin	E —
Neisosperma				
<i>N. brevityba</i> (Boiteau) Boiteau	E — FA			

- D. fagueti* (Baillon) Viguier E—FA
D. harmsii Viguier E—FA
D. lecardi Viguier E—FA
D. leptophylla Hemsley E—FA
D. ouveana Daeniker E—FA
D. parvifolia
(Pancher & Sebert) Viguier E—FA
D. plerandroides Viguier E—FA
D. tenuifolia (Pancher) Viguier E—FU
D. toto (Baillon) Viguier E—MA
D. vieillardi (Baillon) Viguier E—FU
- Meryta**
- M. balansae* Baillon E—FI
M. coriacea Baillon E—FU
M. denhamii Seemann P—FA
M. gracilis Guillaumin E—FA
M. microcarpa Baillon E—FI
M. oxylaena Baillon E—FI
M. pandanicarpa Guillaumin E—FI
M. schlechteri Harms E—FA
M. sonchifolia Linden & André E—FI
- Myodocarpus**
- M. brongniartii*
Dubard & Viguier E—FA
M. coronatus Dubard & Viguier E—FA
M. crassifolius
Dubard & Viguier E—MU
M. elegans Dubard & Viguier E—FU
M. pinnatus Brongniart & Gris E—MI
M. simplicifolius
Brongniart & Gris E—MI
M. vieillardii Brongniart & Gris E—FA
- Schefflera**
- S. affinis* Baillon E—FA
S. andreana Baillon E—FI
S. balansaeana Baillon E—FU
S. candelabrum Baillon E—FA
S. cambouienensis E. G. Baker E—MU
S. comptonii E. G. Baker E—FI
S. crassipes Baillon E—FU
S. cussoniae Baillon E—FU
S. elongata Baillon E—FU
S. emiliana Baillon E—FA
S. gabriellae Baillon E—FI
S. golip Baillon E—FA
S. lerati Viguier E—FU
S. marcellana Baillon E—FA
S. nono Baillon E—FU
S. pancheri Viguier E—FU
S. pseudocandelabrum Viguier E—FA
S. veillonorum Bernardi E—FA
S. vieillardii Baillon E—FI
- Strobilopanax**
- S. macrocarpus*
(Baillon) Viguier E—FI
S. macrocephalus
(Baillon) Viguier E—FI
- Tieghemopanax**
- T. austrocaledonicus* Viguier E—FI
T. balansae Viguier E—FA
T. bracteatus Viguier E—FI
T. lecardi Viguier E—FA
T. microbotrys Viguier E—FI
T. microcarpus Viguier E—FA
T. monticola Viguier E—FA
T. pulchellus Viguier E—FI
T. reflexus Viguier E—FI
T. sessiliflorus Viguier E—MI
T. suborbicularis Viguier E—MU
- ARAUCARIACEAE**
- Agathis**
- A. corbassonii* deLaubenfels E—FA
- A. lanceolata*
Lindley ex Warburg E—FU
A. montana deLaubenfels E—FA
A. moorei (Lindley) Masters E—FI
- Araucaria**
- A. bernieri* Buchholz E—FU
A. biramulata Buchholz E—FU
A. columnaris (J. R. & G. Forster)
J. D. Hooker E—FI
A. humboldtensis Buchholz E—FU
A. montana Brongniart & Gris E—FI
A. muelleri
(Carrière) Brongniart & Gris E—FU
A. schmidii deLaubenfels E—FA
A. subulata Vieillard E—FU
- ASCLEPIADACEAE**
- Hoya**
- H. limoniaca* S. Moore E—FA
H. neocaledonica Schlechter E—FI
- Marsdenia**
- M. brachycarpa*
(Baillon) Guillaumin E—FA
M. lyonsioides Schlechter E—FA
M. nigriflora Guillaumin E—MU
M. oubatchensis Schlechter E—MI
M. pseudoparsonsia Guillaumin E—MI
M. raoulii Guillaumin E—MI
M. speciosa Baillon E—FA
M. tylophoroides Schlechter E—FA
- Secamone**
- S. insularis* Schlechter E—MI
- Tylophora**
- T. anisotomoides* Schlechter E—FA
T. insulicola S. Moore E—FA
T. micrantha Guillaumin E—FA
T. tapeinogyne Schlechter E—FA
- ATHEROSPERMATAACEAE**
- Nemuaron**
- N. vieillardii* Baillon E—FI
- BALANOPHORACEAE**
- Balanophora**
- B. fungosa* J. R. & G. Forster P—MA
- Hachettea**
- H. austrocaledonica* Baillon E—FU
- BALANOPACEAE**
- Balanops**
- B. balansae* Baillon E—FU
B. microstachya Baillon E—FU
B. oliviformis Baillon E—FU
B. pachyphylla
Baillon ex Guillaumin E—FI
B. pancheri Baillon E—FU
B. sparsiflora
(Schlechter) Hjelmqvist E—FI
B. vieillardii Baillon E—FI
- BIGNONIACEAE**
- Deplanchea**
- D. sessilifolia*
Vieillard ex Steenis E—MU
D. speciosa Vieillard E—MI
- Pandorea**
- P. austrocaledonica*
(Bureau) Seemann E—FA
- BISCHOFIACEAE**
- Bischofia**
- B. javanica* Blume P—FA
- BURSERACEAE**
- Canarium**
- C. balansae* Engler E—FA
C. oleiferum Baillon E—FU
C. trifoliolatum Engler E—FI
C. whitei Guillaumin E—FU

CAPPARIDACEAE		
Capparis		
<i>C. sp.</i>	E — MU	
CASUARINACEAE		
Casuarina		
<i>C. glaucescens</i> Schlechter	E — FU	
<i>C. webbiana</i> Miquel	E — FU	
CELASTRACEAE		
Cassine		
<i>C. cunninghamii</i> (Montrouzier)		
Lobreau-Callen	E — FA	
Elaeodendron		
<i>E. clusiophyllum</i> Baillon	E — FU	
<i>E. curtispiculum</i> Endlicher	P — FA	
<i>E. pininsulare</i> Huerlimann	E — FU	
<i>E. tuk</i> Guillaumin	E — —	
Maytenus		
<i>M. fournieri</i>		
(Pancher & Sebert) Loesener	E — FI	
<i>M. hybanthifolia</i>		
(Guillaumin) Guillaumin	E — FA	
Menepetalum		
<i>M. cassinoides</i> Loesener	E — FU	
<i>M. pachystimoides</i> Loesener	E — FU	
<i>M. salicifolium</i> Loesener	E — FA	
<i>M. schlechteri</i> Loesener	E — MI	
Salaciopsis		
<i>S. glomerata</i> Huerlimann	E — FA	
<i>S. megaphylla</i> (Poisson ex		
Guillaumin) Loesener	E — FU	
<i>S. neocaledonica</i> E. G. Baker	E — FA	
<i>S. sparsiflora</i> Huerlimann	E — FI	
<i>S. tapeinospermophylla</i>		
Huerlimann	E — FA	
CAESALPINIACEAE		
Caesalpinia		
<i>C. crista</i> L.	P — MA	
<i>C. decapetala</i> (Roth) Alston	P — FU	
<i>C. rubiginosa</i> Guillaumin	E — FA	
<i>C. schlechteri</i> Harms	E — FA	
Intsia		
<i>I. bijuga</i> (Colebrooke) Kuntze	P — FA	
Mezoneurum		
<i>M. baudouinii</i> Guillaumin	E — FU	
<i>M. montrouzieri</i> Guillaumin	E — MU	
Storckia		
<i>S. comptonii</i> E. G. Baker	E — MI	
<i>S. pancheri</i> Baillon	E — MI	
CHLORANTHACEAE		
Ascarina		
<i>A. rubricaulis</i> Solms	E — FU	
<i>A. solmsiana</i> Schlechter	E — FI	
CHRYSOBALANACEAE		
Hunga		
<i>H. lifouana</i> (Daeniker) Prance	E — FA	
<i>H. rhamnoides</i>		
(Guillaumin) Prance	E — FI	
COMMELINACEAE		
Aneilema		
<i>A. biflorum</i> R. Brown	P — MA	
CONNARACEAE		
Santaloides		
<i>S. balanseanum</i>		
(Baillon) Schellenberg	E — MU	
<i>S. vieillardii</i> Schellenberg	E — FA	
CORYNOCARPACEAE		
Corynocarpus		
<i>C. dissimilis</i> Hemsley	E — FI	
CUCURBITACEAE		
Diplocyclos		
<i>D. palmatus</i> (L.) C. Jeffrey	P — —	
CUNONIACEAE		
Acsmithia		
<i>A. austrocaledonica</i>		
(Brongniart & Gris) Hoogland	E — FI	
<i>A. laxiflora</i> Hoogland	E — FA	
<i>A. pedunculata</i>		
(Schlechter) Hoogland	E — FU	
<i>A. pubescens</i>		
(Pampanini) Hoogland	E — MU	
<i>A. undulata</i>		
(Vieillard) Hoogland	E — FA	
Codia		
<i>C. albifrons</i>		
Vieillard ex Guillaumin	E — MU	
<i>C. arborea</i>		
Brongniart ex Guillaumin	E — FU	
<i>C. incrassata</i> Pampanini	E — FA	
<i>C. montana</i> J. R. & G. Forster	E — MI	
Cunonia		
<i>C. alticola</i> Guillaumin	E — FU	
<i>C. austrocaledonica</i>		
Brongniart ex Guillaumin	E — FI	
<i>C. balansae</i> Brongniart & Gris	E — FU	
<i>C. bernieri</i> Guillaumin	E — FU	
<i>C. bullata</i> Brongniart & Gris	E — FU	
<i>C. montana</i> Schlechter	E — FI	
<i>C. ouaiemensis</i>		
Guillaumin & Viot	E — MA	
<i>C. pterophylla</i> Schlechter	E — FU	
<i>C. pulchella</i> Brongniart & Gris	E — FI	
<i>C. vieillardii</i> Brongniart & Gris	E — FU	
Geissois		
<i>G. hippocastaneifolia</i>		
Guillaumin	E — FU	
<i>G. hirsuta</i> Brongniart & Gris	E — FU	
<i>G. intermedia</i> Vieillard	E — FI	
<i>G. montana</i> Vieillard	E — FA	
<i>G. polyphylla</i>		
Lecard ex Guillaumin	E — FA	
<i>G. racemosa</i> Labillardiere	E — FI	
<i>G. trifoliolata</i> Guillaumin	E — FA	
<i>G. velutina</i> Guillaumin	E — FU	
Pancheria		
<i>P. brunhesi</i> Pampanini	E — FA	
<i>P. calophylla</i> Guillaumin	E — MU	
<i>P. engleriana</i> Schlechter	E — FU	
<i>P. seberti</i> Guillaumin	E — FI	
Weinmannia		
<i>W. dichotoma</i>		
Brongniart & Gris	E — FU	
<i>W. monticola</i> Daeniker	E — FA	
<i>W. paitensis</i> Schlechter	E — FU	
<i>W. serrata</i> Brongniart & Gris	P — FU	
<i>W. thornei</i> Guillaumin	E — FU	
CUPRESSACEAE		
Libocedrus		
<i>L. austrocaledonicus</i>		
Brongniart & Gris	E — FU	
<i>L. yateensis</i> Guillaumin	E — MU	
CYPERACEAE		
Baumea		
<i>B. veillonis</i> Raynal	E — FU	
Carex		
<i>C. appressa</i> R. Brown	P — FI	
<i>C. brunnea</i> Thunberg	P — MI	
<i>C. dietrichiae</i> Boeckeler	P — FI	
<i>C. indica</i> L.	P — FA	
<i>C. inversonervosa</i> Nelmes	E — FA	
<i>C. neurochlamys</i> F. Mueller	P — FA	
Costularia		
<i>C. sylvestris</i> Raynal	E — FU	

Scleria				
<i>S. ovinux</i> Raynal	E — FA		<i>E. vaccinioides</i> F. Mueller	E — FU
<i>S. rheophila</i> Raynal	E — FA		<i>E. vieillardii</i>	
Uncinia			Brongniart & Gris	E — FA
<i>U. dawsonii</i> Hamlin	E — FI		<i>E. weibelliana</i> Tirel	E — FU
DILLENIACEAE			<i>E. yateensis</i> Guillaumin	E — FU
Hibbertia			Sloanea	
<i>H. baudouinii</i>			<i>S. billardieri</i>	
Brongniart & Gris	E — MU		(Vieillard) A. C. Smith	E — FA
<i>H. catargyrea</i> Guillaumin	E — FU		<i>S. haplopoda</i>	
<i>H. comptonii</i> E. G. Baker	E — FA		(Guillaumin) A. C. Smith	E — FU
<i>H. oubatchensis</i> Schlechter	E — FA		<i>S. koghiensis</i> Tirel	E — FA
<i>H. pancheri</i> Briquet	E — FI		<i>S. lepida</i> Tirel	E — FA
<i>H. podocarpifolia</i> Schlechter	E — FI		<i>S. magnifolia</i> Tirel	E — FU
<i>H. rubescens</i>			<i>S. montana</i>	
Vieillard ex Guillaumin	E — —		(Labillardière) A. C. Smith	E — FI
Tetracera			<i>S. ramiflora</i> Tirel	E — FA
<i>T. scandens</i> (L.) Merril	P — FI		<i>S. raynaliana</i> Tirel	E — FA
DIOSCOREACEAE			<i>S. suaveolens</i> Tirel	E — FA
Dioscorea			EPACRIDACEAE	
<i>D. bulbifera</i> L.	P — FA		Dracophyllum	
EBENACEAE			<i>D. ramosum</i>	
Diospyros			Pancher ex Brongniart & Gris	E — MU
<i>D. austrocaledonica</i> Hiern	E — FI		<i>D. verticillatum</i>	
<i>D. balansae</i> Guillaumin	E — FU		Labillardière	E — MI
<i>D. elliptica</i> (J. R. & G. Forster)			Styphelia	
P. S. Green	P — —		<i>S. balansae</i> Virost	E — MU
<i>D. fasciculosus</i>			<i>S. dammarifolia</i> (Brongniart &	
(F. Mueller) F. Mueller	P — FA		Gris) F. Mueller	E — MU
<i>D. lecardii</i> Guillaumin	E — FA		<i>S. macrocarpa</i>	
<i>D. leroi</i> Kostermans	E — FA		(Schlechter) Sleumer	E — MU
<i>D. macrocarpa</i> Hiern	E — FU		ERICACEAE	
<i>D. olen</i> Hiern	P — FA		Agapetes	
<i>D. oubatchensis</i> Kostermans	E — FA		<i>A. neocaledonica</i> Guillaumin	E — FA
<i>D. pancheri</i> Kostermans	E — —		ESCALLONIACEAE	
<i>D. parviflora</i>			Argophyllum	
(Schlechter) Bakhuizen	E — FI		<i>A. brevipetalum</i> Guillaumin	E — FU
<i>D. rufa</i> (Labillardière) Fosberg	P — MI		<i>A. ellipticum</i> Schlechter	E — FA
<i>D. xylopieifolia</i> Guillaumin	E — FA		<i>A. laxum</i> Schlechter	E — MU
ELAEOCARPACEAE			<i>A. nitidum</i> J. R. & G. Forster	E — FA
Dubouzetia			<i>A. vernicosum</i> Daeniker	E — FU
<i>D. elegans</i> Brongniart & Gris	E — FI		EUPHORBIACEAE	
Elaeocarpus			Antidesma	
<i>E. alaternoides</i>			<i>A. messianianum</i> Guillaumin	E — FA
Brongniart & Gris	E — MI		Austrobuscus	
<i>E. angustifolius</i> Blume	P — FI		<i>A. brevipes</i> A. Shaw	E — MU
<i>E. baudouinii</i>			<i>A. buxoides</i> (Baillon) A. Shaw	E — MU
Brongniart & Gris	E — FU		<i>A. carunculatus</i>	
<i>E. biflorus</i> Tirel	E — FA		(Baillon) A. Shaw	E — MU
<i>E. brachypodus</i> Guillaumin	E — FI		<i>A. cuneatus</i> (A. Shaw) A. Shaw	E — MU
<i>E. bullatus</i> Tirel	E — FA		<i>A. eugeniifolius</i>	
<i>E. castanaefolius</i> Guillaumin	E — FA		(Guillaumin) A. Shaw	E — MU
<i>E. colnettianus</i> Guillaumin	E — FA		<i>A. huerlimannii</i> A. Shaw	E — FU
<i>E. comptonii</i> Baker f.	E — FA		<i>A. lugubris</i> A. Shaw	E — FU
<i>E. dognyensis</i> Guillaumin	E — FA		<i>A. montisdo</i> A. Shaw	E — FU
<i>E. geminiflorus</i>			<i>A. ovalis</i> A. Shaw	E — FU
Brongniart & Gris	E — FA		<i>A. pauciflorus</i> A. Shaw	E — FU
<i>E. guillainii</i> Vieillard	E — FA		<i>A. rubiginosus</i>	
<i>E. gummatosus</i> Guillaumin	E — FU		(Guillaumin) A. Shaw	E — MU
<i>E. hortensis</i> Guillaumin	P — FI		<i>A. vieillardii</i>	
<i>E. leratii</i> Schlechter	E — FU		(Guillaumin) A. Shaw	E — FA
<i>E. moratii</i> Tirel	E — FA		Baloghia	
<i>E. nodosus</i> Baker f.	E — MU		<i>B. alternifolia</i> Baillon	E — MI
<i>E. ovigerus</i>			<i>B. anisomera</i> Guillaumin	E — FU
Brongniart & Gris	F — FA		<i>B. balansae</i> (Baillon) Pax	E — FA
<i>E. rotundifolius</i>			<i>B. bureavii</i> (Baillon) Schlechter	E — MU
Brongniart & Gris	E — MI		<i>B. lucida</i> Endlicher	P — FA
<i>E. seringii</i> Montrouzier	E — MI		<i>B. montana</i>	
<i>E. spathulatus</i>			(Mueller Argovie) Pax	E — FA
Brongniart & Gris	E — MI		<i>B. pininsularis</i> Guillaumin	E — MI
<i>E. speciosus</i>			<i>B. pulchella</i> Schlechter ex Pax	E — MU
Brongniart & Gris	E — FU		Bocquillonina	
<i>E. toninensis</i> Baker F.	E — FA		<i>B. arborea</i> A. Shaw	E — FA
			<i>B. brevipes</i> Mueller Argovie	E — FA

<i>B. codonostylis</i>			<i>P. casearoides</i> S. Moore	E — FA
(Baillon) A. Shaw	E — FA		<i>P. cataractarum</i>	
<i>B. grandidens</i> Baillon	E — FA		Mueller Argovie	E — FU
<i>B. lucidula</i> A. Shaw	E — FI		<i>P. caudatus</i> Mueller Argovie	E — MU
<i>B. nervosa</i> A. Shaw	E — FI		<i>P. chamaecerasus</i> Baillon	E — FA
<i>B. phenacostigma</i> A. Shaw	E — FA		<i>P. chrysanthus</i> Baillon	E — MA
<i>B. rhomboidea</i>			<i>P. gneissicus</i> S. Moore	E — FA
(Schlechter) A. Shaw	E — MU		<i>P. hurlimannii</i> Guillaumin	E — MU
<i>B. schistophila</i> A. Shaw	E — FA		<i>P. induratus</i> S. Moore	E — FU
<i>B. sessiliflora</i> Baillon	E — FU		<i>P. jaubertii</i>	
<i>B. spicata</i> Baillon	E — FU		Vieillard ex Guillaumin	E — FA
Claoxylon			<i>P. koghiensis</i> Guillaumin	E — FU
<i>C. insulanum</i> Mueller Argovie	E — FA		<i>P. lifuensis</i> Guillaumin	E — FA
Cleidion			<i>P. longeramosus</i> Guillaumin	E — FU
<i>C. claoxyloides</i> Mueller Argovie	E — FU		<i>P. loranthoides</i> Baillon	E — MI
<i>C. lasiophyllum</i>			<i>P. marensis</i> Guillaumin	E — FA
Pax & Hoffmann	E — FU		<i>P. maytenifolius</i> S. Moore	E — FI
<i>C. macarangoides</i> Guillaumin	E — FA		<i>P. ouveanus</i> Daeniker	E — FA
<i>C. spathulatum</i> Baillon	E — FI		<i>P. platycalyx</i>	
<i>C. verticillatum</i> Baillon	E — MI		Mueller Argovie	E — MI
<i>C. vieillardii</i> Baillon	E — MI		<i>P. rhodocladus</i> S. Moore	E — FA
Cleistanthus			<i>P. sarasinii</i> Guillaumin	E — FA
<i>C. stipitatus</i>			<i>P. stenophyllum</i> Guillaumin	E — FA
Mueller Argovie	E — FI		<i>P. sylvicola</i> S. Moore	E — FA
Cocconerion			<i>P. toninensis</i> S. Moore	E — FA
<i>C. balansae</i> Baillon	E — FU		<i>P. torrentium</i>	
<i>C. minus</i> Baillon	E — MU		Mueller Argovie	E — FU
Codiaeum			<i>P. trichopodus</i> Guillaumin	E — FA
<i>C. inophyllum</i> Mueller Argovie	P — FI		<i>P. umbraecolus</i> Guillaumin	E — FU
Croton			<i>P. vespertilio</i>	
<i>C. cordatulus</i> A. Shaw	E — FU		(Mueller Argovie) Baillon	E — MI
Dendrophyllanthus			<i>P. yahouensis</i> Schlechter	E — FA
<i>D. comptonii</i> S. Moore	E — FU		FAGACEAE	
Drypetes			Nothofagus	
<i>D. deplanchei</i>			<i>N. aequilaterialis</i> (Baumann—	
(Brongniart & Gris) Merrill	E — FA		Bodenheim) Steenis	E — FI
Glochidion			<i>N. balansae</i> (Baillon) Steenis	E — FU
<i>G. billardieri</i> Baillon	E — FA		<i>N. baumanniae</i> (Baumann—	
<i>G. caledonicum</i>			Bodenheim) Steenis	E — FU
Mueller Argovie	E — FA		<i>N. codonandra</i>	
<i>G. glaucum</i>			(Baillon) Steenis	E — FU
(Labillardière) Mueller Argovie	E — FA		<i>N. discoidea</i> (Baumann—	
<i>G. kanalense</i> Baillon	E — FA		Bodenheim) Steenis	E — FU
<i>G. macrophyllum</i>			FLACOURTIACEAE	
Mueller Argovie	E — —		Casearia	
<i>G. wagapense</i> Briquet	E — FI		<i>C. coriifolia</i> Lescot & Sleumer	E — FU
Homalanthus			<i>C. lifuana</i> Daeniker	E — FA
<i>H. nutans</i> (J. R. & G. Forster)			<i>C. puberula</i> Guillaumin	E — FU
Guillaumin	P — FI		<i>C. silvana</i> Schlechter	P — MI
<i>H. repandus</i> Schlechter	E — FI		Homalium	
<i>H. schlechteri</i>			<i>H. decurrens</i> (Vieillard) Briquet	E — MI
Pax & Hoffman	E — FI		<i>H. francii</i> Guillaumin	E — FI
Macaranga			<i>H. guillainii</i>	
<i>M. alchorneoides</i>			(Vieillard) Briquet	E — MI
Pax & Liegelshiem	E — FU		<i>H. intermedium</i>	
<i>M. coriacea</i> Mueller Argovie	E — MI		(Vieillard) Briquet	E — FA
<i>M. fulvescens</i> Schlechter	E — FI		<i>H. polystachyum</i>	
<i>M. insularis</i> Schlechter	E — FA		(Vieillard) Briquet	E — MI
<i>M. oreophila</i> Pax & Hoffmann	E — —		<i>H. rivulare</i> (Vieillard) Briquet	E — FA
<i>M. vedeliana</i> Mueller Argovie	E — FI		<i>H. sleumerianum</i> Lescot	E — FA
<i>M. vieillardii</i> Mueller Argovie	E — MU		Lasiochlamys	
Mallotus			<i>L. cordifolia</i> Sleumer	E — FA
<i>M. repandus</i> Mueller Argovie	P — FI		<i>L. coriacea</i> Sleumer	E — FA
Neoguillauminia			<i>L. fasciculata</i>	
<i>N. cleopatra</i>			(Guillaumin) Sleumer	E — FA
(Baillon) Croizat	E — FU		<i>L. hurlimannii</i>	
Phyllanthus			(Guillaumin) Sleumer	E — FU
<i>P. amieuensis</i> Guillaumin	E — FA		<i>L. koghiensis</i>	
<i>P. baladensis</i> Baillon	E — FA		(Guillaumin) Sleumer	E — MU
<i>P. balansaeanus</i> Guillaumin	E — FU		<i>L. mandjeliana</i> Sleumer	E — FA
<i>P. baumannii</i> Guillaumin	E — FU		<i>L. pseudocoriacea</i> Sleumer	E — FU
<i>P. bourgeoisii</i> Baillon	E — FA		<i>L. reticulata</i>	
<i>P. bupleuroides</i> Baillon	E — MI		(Schlechter) Pax & Hoffmann	E — FA

<i>L. rivularis</i> Sleumer	E — FU	<i>M. verticillata</i>	
<i>L. trichostemona</i>		Planchon & Triana	E — MU
(Guillaumin) Sleumer	E — FU	Ochrocarpus	
Xylosma		<i>O. neurophylla</i>	
<i>X. bernardianum</i> Sleumer	E — FA	(Schlechter) Steenis	E — FI
<i>X. confusum</i> Guillaumin	E — FU	HERNANDIACEAE	
<i>X. doihioense</i> Guillaumin	E — FU	Hernandia	
<i>X. gigantifolium</i> Sleumer	E — FA	<i>H. cordigera</i> Vieillard	E — FI
<i>X. inaequinervium</i> Sleumer	E — FU	HIPPOCRATEACEAE	
<i>X. lancifolium</i> Sleumer	E — FA	Salacia	
<i>X. lifuanum</i> Guillaumin	E — FA	<i>S. bailloniana</i> Loesener	E — FA
<i>X. pelatum</i> (Sleumer) Lescot	E — FU	<i>S. dognyensis</i> Guillaumin	E — FA
<i>X. tuberculatum</i> Sleumer	E — FU	<i>S. neocaledonica</i> Loesener	E — FU
<i>X. vincentii</i> Guillaumin	E — FI	<i>S. pancheri</i> Baillon	E — FI
FLAGELLARIACEAE		<i>S. poissoniana</i> Loesener	E — FA
Flagellaria		<i>S. pronyensis</i> Guillaumin	E — FU
<i>F. neocaledonica</i> Schlechter	E — MU	ICACINACEAE	
FLINDERSIACEAE		Apodytes	
Flindersia		<i>A. chusiaeifolium</i>	
<i>F. fourmieri</i> Pancher & Sebert	E — FI	(Baillon) Villiers	E — FI
GESNERIACEAE		Citronella	
Coronanthera		<i>C. macrocarpa</i> Huerlimann	E — FA
<i>C. barbata</i> C. B. Clarke	E — FU	<i>C. sarmentosa</i> (Baillon) Howard	E — FI
<i>C. clarkeana</i> Schlechter	E — FA	Gastrolepis	
<i>C. deltoideifolia</i>		<i>G. austrocaledonica</i>	
Vieillard ex C. B. Clarke	E — FA	(Baillon) Howard	E — FU
<i>C. pancheri</i> C. B. Clarke	E — FU	LAURACEAE	
<i>C. pedunculosa</i> C. B. Clarke	E — MU	Adenodaphne	
<i>C. pinguior</i> C. B. Clarke	E — FA	<i>A. macrophylla</i> Kostermans	E — MU
<i>C. pulchra</i> C. B. Clarke	E — FU	<i>A. spathulata</i> Kostermans	E — MI
<i>C. sericea</i> C. B. Clarke	E — FU	Beilschmiedia	
<i>C. squamata</i> Viro	E — MU	<i>B. neocaledonica</i> Kostermans	E — MI
Depanthus		<i>B. oreophila</i> Schlechter	E — MU
<i>D. glaber</i> (C. B. Clarke)		Cryptocarya	
S. Moore	E — FA	<i>C. aristata</i> Kostermans	E — FA
<i>D. pubescens</i> Guillaumin	E — FA	<i>C. charitacea</i> Kostermans	E — FA
GOODENIACEAE		<i>C. elliptica</i> Schlechter	E — FA
Scaevola		<i>C. gracilis</i> Schlechter	E — FI
<i>S. balansae</i> Guillaumin	E — FU	<i>C. guillauminii</i> Kostermans	E — FU
<i>S. indigofera</i> Schlechter	E — FA	<i>C. leptospermoides</i> Kostermans	E — MI
GRAMINEAE		<i>C. lifuensis</i> Guillaumin	E — FA
Centosteca		<i>C. mackeei</i> Kostermans	E — MU
<i>C. lappacea</i> (L.) Desvauz	P — MA	<i>C. macrocarpa</i> Guillaumin	E — FI
Leptaspis		<i>C. macrodesme</i> Schlechter	E — FA
<i>L. banksii</i> R. Brown	P — FA	<i>C. odorata</i> Guillaumin	E — MU
Oplismenus		<i>C. oubatchensis</i> Schlechter	E — FA
<i>O. compositus</i>		<i>C. phyllostemon</i> Kostermans	E — FU
(L.) Palissot de Beauvois	P — MI	<i>C. pluricostata</i> Kostermans	E — MI
<i>O. hirtellus</i>		<i>C. schmidii</i> Kostermans	E — FA
(L.) Palissot de Beauvois	P — MI	<i>C. transversa</i> Kostermans	E — FU
GUTTIFERAE		<i>C. velutinosa</i> Kostermans	E — FA
Calophyllum		Endiandra	
<i>C. caledonicum</i> Vieillard	E — FI	<i>E. baillonii</i> (Pancher & Sebert)	
Garcinia		Guillaumin	E — MU
<i>G. amplexicaulis</i> Vieillard	E — FI	<i>E. lecardii</i> Guillaumin	E — FA
<i>G. balansae</i> Pierre	E — MU	<i>E. neocaledonica</i> Kostermans	E — FI
<i>G. densiflora</i> Pierre	E — FA	<i>E. polyneura</i> Schlechter	E — FA
<i>G. laurina</i>		<i>E. poueboensis</i> Guillaumin	E — FA
Vieillard ex Guillaumin	E — FA	<i>E. sebertii</i> Guillaumin	E — FI
<i>G. lenormandii</i>		Litsea	
Vieillard ex Guillaumin	E — FA	<i>L. lecardii</i> Guillaumin	E — MI
<i>G. neglecta</i> Vieillard	E — FI	<i>L. neocaledonica</i> S. Moore	E — FI
<i>G. pancheri</i> Pierre	E — P	LECYTHIDACEAE	
<i>G. pedicellata</i> Seemann	E — FI	Barringtonia	
<i>G. puat</i> Guillaumin	E — FI	<i>B. integrifolia</i>	
<i>G. sessilis</i> Seemann	P —	(Montrouzier) Schlechter	E — FI
<i>G. vieillardii</i> Pierre	E — FA	<i>B. neocaledonica</i> Vieillard	E — FA
<i>G. virgata</i>		LILIACEAE	
Vieillard ex Guillaumin	E — FA	Arthropodium	
Montrouziera		<i>A. neocaledonicum</i> J. G. Baker	E — FI
<i>M. cauliflora</i>		<i>A. paniculatum</i> R. Brown	P — FI
Planchon & Triana	E — FI	Astelia	
<i>M. gabriellae</i> Baillon	E — FU	<i>A. neocaledonica</i> Schlechter	E e FI

Dianella			
<i>D. ensifolia</i> (L.) A. DC	P —		
<i>D. javanica</i> (Blume) Kunth	P — FI		
<i>D. pendula</i> Schlittler	E — MI		
LINACEAE			
Hugonia			
<i>H. latifolia</i>			
(Vieillard) Schlechter	E — MI		
<i>H. neocaledonica</i> Vieillard	P — FA		
<i>H. oreogena</i> Schlechter	E — FI		
<i>H. papillosa</i> Guillaumin	E — FI		
LOGANIACEAE			
Fagraea			
<i>F. berteriana</i> A. Gray	E — FI		
Geniostoma			
<i>G. balansaeum</i> Baillon	E — MU		
<i>G. celastrineum</i> Baillon	E — MI		
<i>G. denisflorum</i> Baillon	E — MU		
<i>G. erythrospermum</i> Baillon	E — FA		
<i>G. glaucescens</i> Schlechter	E — MA		
<i>G. mooreanum</i> Conn	E — FA		
<i>G. novaealedoniae</i>			
Vieillard ex Baillon	E — FI		
<i>G. rupestre</i> J. R. & G. Forster	E — MI		
<i>G. vestitum</i> Baillon	E — FA		
Neuburgia			
<i>N. neocaledonica</i>			
(Gilg & Benedict)	P — FI		
LORANTHACEAE			
Amyema			
<i>A. artensis</i>			
(Montrouzier) Danser	P — FU		
<i>A. scandens</i> (Tieghem) Danser	E — FU		
Amylotheca			
<i>A. dictyophleba</i>			
(F. Mueller) Tieghem	P — FA		
<i>A. pyramidata</i>			
(Tieghem) Danser	E — FU		
Korthalsella			
<i>K. amentacea</i> (Tieghem) Danser	P —		
<i>K. dichotoma</i> (Tieghem) Engler	E — FI		
<i>K. striata</i> Danser	E — FI		
MELIACEAE			
Aglaiia			
<i>A. elaeagnoidea</i>			
(Jussieu) Benthams	P — FI		
Amoora			
<i>A. balansaeana</i> A. DC.	E — FA		
<i>A. vieillardii</i> C. DC.	E — FA		
Dysoxylum			
<i>D. albicans</i> Vieillard ex C. DC.	E — MI		
<i>D. balansaeum</i> C. DC.	E — FU		
<i>D. comptonii</i> E. G. Baker	E — FA		
<i>D. francii</i> C. DC.	E — FA		
<i>D. gamosepalum</i> E. G. Baker	E — FA		
<i>D. glomeratum</i> Vieillard	E — FU		
<i>D. hurlimannii</i> Guillaumin	E — FI		
<i>D. kourienne</i> Virot	E — FA		
<i>D. rufescens</i> Vieillard	E — FI		
<i>D. vieillardii</i> C. DC.	E — FU		
MENISPERMACEAE			
Hypserpa			
<i>H. neocaledonica</i> Diels	P — FI		
<i>H. vieillardii</i> Diels	E — MU		
Pachygone			
<i>P. loyaltiensis</i> Diels	E — FI		
<i>P. tomentella</i> Diels	E — MI		
Stephania			
<i>S. forsteri</i> (A. DC.) A. Gray	P — FA		
MIMOSACEAE			
Adenanthera			
<i>A. pavonina</i> L.	P — FA		
Albizia			
<i>A. callistemon</i> (Montrouzier)			
Guillaumin & Beauvisage	E — FU		
<i>A. granulosa</i> Benthams	E — FI		
<i>A. streptocarpa</i> Fournier	E — FA		
Serianthes			
<i>S. melanesica</i> Fosberg	P — FA		
<i>S. sachetae</i> Fosberg	E — FU		
MONIMIACEAE			
Hedycarya			
<i>H. aragoensis</i> Jérémie	E — FA		
<i>H. baudouini</i> Baillon	E — FU		
<i>H. chrysophylla</i> Perkins	E — FA		
<i>H. cupulata</i> Baillon	E — FA		
<i>H. engleriana</i> S. Moore	E — FA		
<i>H. parvifolia</i>			
Perkins & Schlechter	E — FU		
<i>H. rivularis</i> Guillaumin	E — FA		
<i>H. symplocoides</i> S. Moore	E — FA		
Kibiaropsis			
<i>K. caledonica</i>			
(Guillaumin) Jérémie	E — FA		
MORACEAE			
Ficus			
<i>F. asperula</i> Bureau	E — FI		
<i>F. austrocaledonica</i> Bureau	E — FI		
<i>F. barraui</i> Guillaumin	E — FA		
<i>F. cataractarum</i>			
Vieillard ex Bureau	E — FA		
<i>F. dzumacensis</i> Guillaumin	E — FU		
<i>F. heteroselis</i> Bureau	E — FA		
<i>F. hurlimannii</i> Guillaumin	E — FA		
<i>F. leiocarpa</i> (Bureau) Warburg	E — FA		
<i>F. lifouensis</i> Corner	E — FA		
<i>F. maialis</i> Guillaumin	E — FU		
<i>F. mareensis</i> Warburg	E — FA		
<i>F. microcarpa</i> L.f.	P — MA		
<i>F. microtophora</i> Corner	E — FA		
<i>F. mutabilis</i> Bureau	E — MI		
<i>F. nitidifolia</i> Bureau	E — FU		
<i>F. otophora</i>			
Corner & Guillaumin	E — FA		
<i>F. otophoroides</i> Corner	E — FA		
<i>F. pancheriana</i> Bureau	E — FA		
<i>F. planchonellaefolia</i>			
Guillaumin	E — FU		
<i>F. proluxa</i> J. R. Forster	P — FA		
<i>F. pteroporum</i> Guillaumin	E — FA		
<i>F. racemigera</i> Bureau	E — FI		
<i>F. schlechteri</i> Warburg	E — MI		
<i>F. versicolor</i> Bureau	E — FA		
<i>F. vieillardiana</i> Bureau	E — FA		
<i>F. virgata</i> Reinwardt	P — MI		
<i>F. webbiana</i> (Miquel) Miquel	E — FI		
Pseudomorax			
<i>P. brunoniana</i> Bureau	E — FA		
Sparattosyce			
<i>S. hulimanniae</i>			
A. Richter ex Guillaumin	E — FA		
<i>S. dioica</i> Bureau	E — FU		
Streblus			
<i>S. sclerophyllus</i> Corner	E — FU		
MYRICACEAE			
Canacomyrca			
<i>C. monticola</i> Guillaumin	E — FU		
MYRSINACEAE			
Maesa			
<i>M. novocaledonica</i> Mez	E — FI		
Rapanea			
<i>R. asymmetrica</i> Mez	E — MU		
<i>R. citrifolia</i> Mez	E — MI		
<i>R. diminuta</i> Mez	E — FU		
<i>R. grandifolia</i> S. Moore	E — FU		

<i>R. lanceolata</i> Mez	E—FI	<i>Brongniart & Gris</i>	E—FA
<i>R. lecardii</i> Mez	E—FA	<i>C. balansae</i> Guillaumin	E—FI
<i>R. lifuensis</i> Mez	E—FA	<i>C. deplanchei</i> Guillaumin	E—FI
<i>R. macrophylla</i> Mez	E—FU	<i>C. elegans</i> Brongniart & Gris	E—FA
<i>R. modesta</i> Mez	P—MA	<i>C. ellipticus</i> Labillardière	E—MU
<i>R. stenophylla</i> Mez	E—FA	<i>C. garciniifolius</i> Guillaumin	E—FA
<i>R. vieillardii</i> Mez	E—FI	<i>C. propinquus</i> Guillaumin	E—FA
Tapeinosperma		<i>C. pterocarpus</i> Vieillard	E—
<i>T. acutangulum</i> Mez	E—FA	<i>C. undulatus</i> Guillaumin	E—MI
<i>T. amosense</i> Guillaumin	E—FA	<i>C. xanthostemifolius</i> Guillaumin	E—MU
<i>T. amplexicaule</i> Mez	E—FA	Cleistocalyx	
<i>T. aragoense</i> Guillaumin	E—FA	<i>C. brongniartii</i> (Brong. Gris) Merrill & Perry	E—FU
<i>T. campanula</i> Mez	E—FA	<i>C. pennelii</i> (Guillaumin) Merrill	E—FU
<i>T. clethroides</i> Mez	E—FA	Cupheanthus	
<i>T. colnettianum</i> Guillaumin	E—FA	<i>C. comptonii</i> (E. G. Baker) Guillaumin	E—FA
<i>T. deflexum</i> Mez	E—FU	<i>C. neocaledonicus</i> Seemann	E—FA
<i>T. ellipticum</i> Mez	E—FA	<i>C. paniensis</i> (E. G. Baker) Guillaumin	E—FA
<i>T. glandulosum</i> Guillaumin	E—	<i>C. serpentini</i> A. Shaw	E—FU
<i>T. gracile</i> Mez	E—FI	<i>C. toninensis</i> (E. G. Baker) Guillaumin	E—FA
<i>T. grandiflorum</i> Guillaumin	E—	Eugenia	
<i>T. koghiense</i> Guillaumin	E—FU	<i>E. bullata</i> Pancher	E—FI
<i>T. laeve</i> Mez	E—FA	<i>E. colnettiana</i> Guillaumin	E—FA
<i>T. laurifolium</i> Mez	E—	<i>E. crucigera</i> Daeniker	E—FU
<i>T. lecardii</i> Mez	E—FA	<i>E. daaouiensis</i> Guillaumin	E—FA
<i>T. lenormandii</i> J. D. Hooker	E—FU	<i>E. heckelii</i> Pancher & Sebert	E—MU
<i>T. minutum</i> Mez	E—FI	<i>E. ignambiensis</i> E. G. Baker	E—FA
<i>T. multipunctatum</i> Guillaumin	E—FA	<i>E. myrtopsidioides</i> Guillaumin	E—FU
<i>T. nectandroides</i> Mez	E—FA	<i>E. pronyensis</i> Guillaumin	E—FU
<i>T. nitidum</i> Mez	E—MI	<i>E. pterocarpa</i> Baillon	E—
<i>T. oblongifolium</i> Mez	E—FA	<i>E. sarasinii</i> Guillaumin	E—FA
<i>T. pancheri</i> Mez	E—FU	Jambosa	
<i>T. pauciflorum</i> Mez	E—FA	<i>J. acris</i> Pancher	E—FU
<i>T. pennelii</i> Guillaumin	E—FA	<i>J. canalensis</i> Vieillard	E—FI
<i>T. psaladense</i> Mez	E—FA	<i>J. longifolia</i> Brongniart & Gris	E—FA
<i>T. pulchellum</i> Mez	E—	<i>J. nervosa</i> Vieillard	E—FI
<i>T. robustum</i> Mez	E—FU	Mearnsia	
<i>T. rubidum</i> Mez	E—FA	<i>M. brevistylis</i> Dawson ined.	E—FI
<i>T. rubriscapum</i> Guillaumin	E—FA	Metrosideros	
<i>T. schlechteri</i> Mez	E—FI	<i>M. dolichandra</i> Schlechter ex Guillaumin	E—FU
<i>T. squarrosum</i> Mez	E—FA	<i>M. nitida</i> Brongniart & Gris	E—FI
<i>T. tenue</i> Mez	E—FA	<i>M. oreoculata</i> Labillardière	E—MI
<i>T. vestitum</i> Mez	E—FU	<i>M. oreomyrtus</i> Daeniker	E—FI
<i>T. vieillardii</i> J. D. Hooker	E—FI	<i>M. paniensis</i> Dawson ined.	E—FA
<i>T. wagapense</i> Mez	E—FA	<i>M. petiolata</i> Dawson ined.	E—MA
<i>T. whitei</i> Guillaumin	E—FU	<i>M. porphyrea</i> Schlechter ex Guillaumin	E—FI
MYRTACEAE		Piliocalyx	
Archirhodomyrtus		<i>P. baudouini</i> Brongniart & Gris	E—MI
<i>A. baladensis</i> (Brongniart & Gris) Burret	E—MU	<i>P. bullatus</i> Brongniart & Gris	E—FA
<i>A. paitensis</i> (Schlechter) Burret	E—MI	<i>P. francii</i> Guillaumin	E—FI
<i>A. vieillardii</i> (Brongniart & Gris) Burret	E—FU	<i>P. micranthus</i> Brongniart & Gris	E—FA
Arillastrum		<i>P. robustus</i> Brongniart & Gris	E—FA
<i>A. gummiferum</i> Pancher ex Baillon	E—FU	<i>P. wagapensis</i> Brongniart & Gris	E—FA
Austromyrtus		Pleurocalyptus	
<i>A. ploumensis</i> (Daeniker) Burret	E—FU	<i>P. austrocaledonicus</i> (Guillaumin) Dawson ined.	E—FU
<i>A. vieillardii</i> (Brongniart & Gris) Burret	E—FA	<i>P. pancheri</i> (Brongniart & Gris) Dawson ined.	E—FU
Carpolepis		Syzygium	
<i>C. elegans</i> (Montrouzier) Dawson ined.	E—MI	<i>S. auriculatum</i> Brongniart & Gris	E—MI
<i>C. laurifolia</i> (Brongniart & Gris) Dawson ined.	E—FU	<i>S. austrocaledonicum</i> (Seemann) Guillaumin	E—MI
<i>C. tardiflora</i> Dawson ined.	E—FI	<i>S. conceptionis</i> Guillaumin	E—FA
Caryophyllus			
<i>C. amieuensis</i> Guillaumin	E—FA		
<i>C. arboreus</i> (E. G. Baker) Guillaumin	E—FA		
<i>C. baladensis</i>			

<i>S. densiflorum</i>			<i>A. grandiflorus</i> Schlechter	E—MU
Brongniart & Gris	E—FI		<i>A. heptadactylus</i> Kraenzlin	E—FI
<i>S. frutescens</i> Brongniart & Gris	E—FA		<i>A. oxyglossus</i> Schlechter	E—FU
<i>S. koghiense</i> Guillaumin	E—FI		<i>A. tenuilabris</i> Schlechter	E—MU
<i>S. lateriflorum</i>			<i>A. veillonis</i> Hallé	E—FU
Brongniart & Gris	E—FA		Agrostophyllum	
<i>S. lifuanum</i> Daeniker	E—FA		<i>A. sp.</i>	P e FA
<i>S. macranthum</i>			Anoectochilus	
Brongniart & Gris	E—FU		<i>A. imitans</i> Schlechter	E—FI
<i>S. micans</i> Brongniart & Gris	E—FA		Appendicula	
<i>S. microsemmifolium</i>			<i>A. reflexa</i> Blume	P e FI
Guillaumin	E—		Bulbophyllum	
<i>S. mouanum</i> Guillaumin	E—FU		<i>B. aphanopetalum</i> Schlechter	E e FI
<i>S. neglectum</i> Brongniart & Gris	E—FA		<i>B. atrorubens</i> Schlechter	E e FI
<i>S. pseudopinatum</i> Daeniker	E—FA		<i>B. baladeanum</i> J. J. Smith	E e FI
<i>S. quadrangulare</i> Guillaumin	E—FU		<i>B. bechei</i> F. Mueller	P e FI
<i>S. rivulare</i> Vieillard	E—FA		<i>B. comptonii</i> Rendle	E e FI
<i>S. schlechterianum</i>			<i>B. gracillimum</i> (Rolfé) Rolfé	E e FI
Hochreutiner	E—		<i>B. hexarhopalos</i> Schlechter	E e FI
<i>S. tenuiflorum</i>			<i>B. keekee</i> Hallé	E e FI
Brongniart & Gris	E—MI		<i>B. lingulatum</i> Rendle	E e FI
<i>S. tripetalum</i> Guillaumin	E—FI		<i>B. longiflorum</i>	
<i>S. verrucosum</i> Daeniker	E—FA		DuPetit Thouars	P e FI
<i>S. wagapense</i> Brongniart & Gris	E—FI		<i>B. lophoglottis</i>	
Tristaniopsis			(Guillaumin) Hallé	E e FI
<i>T. polyandra</i>			<i>B. neocaledonicum</i> Schlechter	E e FI
(Guillaumin) Dawson ined.	E—MU		<i>B. ngoyense</i> Schlechter	E e FI
Xanthostemon			<i>B. pachyanthum</i> Schlechter	P e FI
<i>X. flavum</i> (Brongniart & Gris)			<i>B. pallidiflorum</i> Schlechter	E e FI
Schlechter	E—MU		<i>B. polypodiioides</i> Schlechter	P e FI
<i>X. grisei</i> Guillaumin	E—FA		Calanthe	
<i>X. sebertii</i> Guillaumin	E—FU		<i>C. balansae</i> Finet	E—FI
<i>X. vieillardii</i>			<i>C. langei</i> F. Mueller	E—FI
(Brongniart & Gris) Niedenzu	E—FA		<i>C. neocaledonica</i> Rendle	E—FI
NEPENTHACEAE			<i>C. oreadum</i> Rendle	E—FI
Nepenthes			<i>C. triplicata</i> (Willemet) Ames	P—FI
<i>N. vieillardii</i> J. D. Hooker	P—MU		Ceratostylis	
NYCTAGINACEAE			<i>C. micrantha</i> Schlechter	P e FI
Calpidia			Chamaeanthus	
<i>C. gigantocarpa</i> Heimerl	E—FI		<i>C. aymardii</i> Hallé	E e FI
<i>C. pancheriana</i> Heimerl	E—FA		<i>C. begaudii</i> Hallé	E e FI
Pisonia			<i>C. neocaledonicus</i>	
<i>P. auculeata</i> L.	P—FA		(Rendle) Hallé	E e FI
OLEACEAE			Cheirostylis	
Jasminum			<i>C. montana</i> Blume	P—MI
<i>J. didymum</i> J. R. & G. Forster	P—FI		Chrysoglossum	
<i>J. elatum</i>			<i>C. neocaledonicum</i> Schlechter	E—FA
Pancher ex Guillaumin	E—FI		Cleisostoma	
<i>J. neocaledonicum</i> Schlechter	E—FI		<i>C. montanum</i>	
Linociera			(J. J. Smith) Garay	P e FI
<i>L. brachystachys</i>			Clematepistephium	
(Schlechter) P. S. Green	E—FI		<i>C. smilacifolium</i>	
Olea			(H. Reichenbach) Hallé	E—FI
<i>O. paniculata</i> R. Brown	P—FI		Coelogyne	
Osmanthus			<i>C. lycastoides</i>	
<i>O. austrocaledonicus</i>			F. Mueller & Kraenzlin	P e FA
(Vieillard) Knoblauch	E—MU		Coilochilus	
ONCOTHEACEAE			<i>C. neocaledonicus</i> Schlechter	E—MU
Oncotheca			Corybas	
<i>O. balansae</i> Baillon	E—FU		<i>C. neocaledonicus</i>	
<i>O. macrocarpa</i>			(Schlechter) Schlechter	E—FI
McPherson Morat & Veillon	E—FU		Cryptostylis	
ORCHIDACEAE			<i>C. arachnites</i> (Blume) Hasskarl	P—FI
Acanthephippium			Dendrobium	
<i>A. vitiense</i> L. O. Williams	P—FI		<i>D. arthrobulbum</i> Kraenzlin	E e FI
Acianthus			<i>D. austrocaledonicum</i>	
<i>A. atepalus</i> H. Reichenbach	E—FU		Schlechter	P e FI
<i>A. bracteatus</i> Rendle	E—FU		<i>D. camaridiorum</i>	
<i>A. confusus</i> Guillaumin	E—FU		H. Reichenbach	E e FI
<i>A. corniculatus</i> Rendle	E—FA		<i>D. camptocentrum</i> Schlechter	P e FI
<i>A. cymbalariifolius</i>			<i>D. cleistogamum</i> Schlechter	E e FI
F. Mueller & Kraenzlin	E—FI		<i>D. crassicaule</i> Schlechter	E e FI
<i>A. elegans</i> H. Reichenbach	E—FU		<i>D. crassifolium</i> Schlechter	E e FI

<i>D. deplanchei</i> H. Reichenbach	E—MU	<i>M. latissima</i>	
<i>D. finetianum</i> Schlechter	E e FI	(Schlechter) Schlechter	E—FU
<i>D. fractiflexum</i> Finet	E—FU	<i>M. montana</i>	
<i>D. gracilicaule</i> F. Mueller	P e FI	(Schlechter) Schlechter	E—FU
<i>D. linguiforme</i> Swartz	P e FI	Microtatorchis	
<i>D. macrophyllum</i> A. Richard	P e FI	<i>M. oreophila</i> Schlechter	E e FI
<i>D. munificum</i> (Finet) Hallé	E e FI	<i>M. schlechteri</i> Garay	E e FI
<i>D. muricatum</i> Finet	E e FI	Moerenhoutia	
<i>D. ngoyense</i> Schlechter	E e FU	<i>M. grandiflora</i>	
<i>D. oppositifolium</i>		(Schlechter) Schlechter	E—FI
(Kraenzlin) Hallé	E e FU	Nervilia	
<i>D. pectinatum</i> Finet	E e FI	<i>N. aragoana</i> Gaudichaud	P—FA
<i>D. poissonianum</i> Schlechter	E e FI	<i>N. platychila</i> Schlechter	P—FA
<i>D. sylvanum</i> H. Reichenbach	E e FI	Oberonia	
<i>D. virotii</i> Guillaumin	E e FU	<i>O. ensiformis</i>	
Didymoplexis		(J. E. Smith) Lindley	P e MI
<i>D. minor</i> J. J. Smith	P—FA	<i>O. equitans</i> (G. Forster) Mutel	P e FI
Diplocaulobium		<i>O. fissiglossa</i> Hallé	E e FI
<i>D. ou-hinnae</i>		<i>O. neocaledonica</i> Schlechter	E e FI
(Schlechter) Kraenzlin	P e F	Octarrhena	
Earina		<i>O. oberonioides</i>	
<i>E. deplanchei</i> H. Reichenbach	E—MU	(Schlechter) Schlechter	E e FI
<i>E. valida</i> H. Reichenbach	P e FI	<i>O. saccolabioides</i>	
Epipogium		(Schlechter) Schlechter	E e FI
<i>E. roseum</i> (D. Don) Lindley	P—FU	Pachyplectron	
Eria		<i>P. arifolium</i> Schlechter	E—FI
<i>E. aeridostachya</i>		<i>P. neocaledonicum</i>	
H. Reichenbach ex Lindley	P e FU	Schlechter	E—MU
<i>E. karicouyensis</i> Schlechter	E e FU	Peristylus	
<i>E. vieillardii</i> H. Reichenbach	P e FI	<i>P. minimiflorus</i>	
Erythrodes		(Kraenzlin) Hallé	E—FA
<i>E. oxyglossa</i> Schlechter	P—FU	<i>P. ngoyensis</i> (Schlechter) Hallé	E—FI
Eulophia		Phajus	
<i>E. moratii</i> Hallé	E—FA	<i>P. daenikeri</i> Kraenzlin	E—FU
<i>E. pulchra</i>		<i>P. neocaledonicus</i> Rendle	E—FA
(DuPetit Thouars) Lindley	P—FA	<i>P. robertsii</i> F. Mueller	E—FI
Glomera		Pholidota	
<i>G. macdonaldii</i>		<i>P. pallida</i> Lindley	P e FI
(Schlechter) J. J. Smith	P e FI	Phreatia	
Gonatostylis		<i>P. hypsorhynchos</i> Schlechter	E e FI
<i>G. bougainvillei</i> Hallé	E—FU	<i>P. neocaledonica</i> Schlechter	E e FI
<i>G. vieillardii</i>		<i>P. oubatchensis</i> Schlechter	E e FI
(H. Reichenbach) Schlechter	E—MI	<i>P. pachyphylla</i> Schlechter	P e FI
Goodyera		<i>P. paleata</i> H. Reichenbach	E e FI
<i>G. rubicunda</i> (Blume) Lindley	P—FA	<i>P. sublata</i> Hallé	E e FI
<i>G. scripta</i>		Pristiglottis	
(H. Reichenbach) Schlechter	E—FA	<i>P. montana</i> (Schlechter)	
<i>G. subregularis</i>		Cretziou & J. J. Smith	P—FI
(H. Reichenbach) Schlechter	E—FA	Pterostylis	
<i>G. viridiflora</i> (Blume) Blume	P—FA	<i>P. bureaviana</i> Schlechter	E—FU
Habenaria		<i>P. curta</i> R. Brown	P—FA
<i>H. insularis</i> Schlechter	E—FA	Rhynchophreatia	
Hetaeria		<i>R. micrantha</i>	
<i>H. discoidea</i>		(A. Richard) Hallé	P e FI
(H. Reichenbach) Schlechter	P—FA	Sarcochilus	
Liparis		<i>S. hillii</i>	
<i>L. caespitosa</i> Lindley	P e FI	(F. Mueller) F. Mueller	P e FI
<i>L. chalendei</i> Finet	E—MU	<i>S. koghiensis</i> Schlechter	E e FI
<i>L. condylobulbon</i>		Schoenorchis	
H. Reichenbach	P e FI	<i>S. micrantha</i>	
<i>L. elliptica</i> Wight	P e FI	Reinwardt ex Blume	P e FI
<i>L. gibbosa</i> Finet	P e FI	Spathoglottis	
<i>L. laxa</i> Schlechter	E—MI	<i>S. petri</i> H. Reichenbach	P—FA
<i>L. layardii</i> F. Mueller	P—FA	Spiranthes	
<i>L. phalocrocorax</i> Hallé	E—MI	<i>S. sinensis</i> (Persoon) Ames	P—MI
<i>L. sula</i> Hallé	E—FU	Taeniophyllum	
<i>L. zosterops</i> Hallé	E—FI	<i>T. graptolium</i> Hallé	E e FI
Malaxis		<i>T. trachypus</i> Schlechter	E e FI
<i>M. taurina</i> (H. Reichenbach)		Thrixspermum	
Kuntze	E—MI	<i>T. sp.</i>	P e FI
Megastylis		Trachoma	
<i>M. glandulosa</i>		<i>T. subluteum</i> (Rupp) Garay	P e FI
(Schlechter) Schlechter	E—FI		

Tropidia		<i>F. verrucosa</i> Warburg	E—FA
<i>T. viridifusca</i> Kraenzlin	E—FA	<i>F. vieillardii</i> Martelli	E—FA
Zeuxine		Pandanus	
<i>Z. francii</i> Schlechter	E—FA	<i>P. altissimus</i> Solms	E—FI
<i>Z. vieillardii</i>		<i>P. aragoensis</i> Solms	E—FA
(H. Reichenbach) Schlechter	E—FA	<i>P. balansae</i> Solms	E—FU
PALMAE		<i>P. bernardii</i> St. John	E—FI
Actinokentia		<i>P. clandestinus</i> B. C. Stone	E—FA
<i>A. divaricata</i> Dammer	E—FU	<i>P. lacuum</i> St. John	E—FU
<i>A. huerlimannii</i> H. E. Moore	E—FU	<i>P. mackeei</i> St. John	E—FU
Alloschmidia		<i>P. macrocarpus</i>	
<i>A. glabrata</i>		(Brongniart) Solms	E—FA
(Beccari) H. E. Moore	E—FA	<i>P. neocaledonicus</i> Martelli	E—FA
Basselinia		<i>P. oblongus</i> Brongniart & Solms	E—FI
<i>B. deplanchei</i> Vieillard	E—FA	<i>P. pancheri</i> (Brongniart) Solms	E—FU
<i>B. eriostachys</i> Beccari	E—FI	<i>P. spaerocephalus</i>	
<i>B. gracilis</i> Vieillard	E—FI	(Brongniart) Solms	E—FI
<i>B. pancheri</i> Vieillard	E—FU	<i>P. verecundus</i> B. C. Stone	E—FU
<i>B. surculosa</i> Beccari	E—FU	<i>P. vieillardii</i> Martelli	E—FA
<i>B. tomentosa</i> Beccari	E—FA	PAPILIONACEAE	
<i>B. velutina</i> Beccari	E—FI	Arthroclianthus	
Brongniartikentia		<i>A. andersonii</i>	
<i>B. lanuginosa</i> H. E. Moore	E—FA	(Seemann) Schindler	E—
<i>B. vaginata</i>		<i>A. angustifolius</i>	
(Brongniart) Beccari	E—FU	Hochreutiner	E—FA
Burretiokentia		<i>A. balansae</i> Schindler	E—MI
<i>B. hapala</i> H. E. Moore	E—FA	<i>A. caudatus</i> Schindler	E—
<i>B. vieillardii</i> H. E. Moore	E—FI	<i>A. comptonii</i> E. G. Baker	E—FA
Campercarpus		<i>A. cuneatus</i> Schindler	E—FU
<i>C. fulcitus</i> Wendland	E—FU	<i>A. grandifolius</i> E. G. Baker	E—FA
Chambeyronia		<i>A. ischnopodus</i> Guillaumin	E—FA
<i>C. lepidota</i> H. E. Moore	E—FI	<i>A. leratii</i> Schindler	E—
<i>C. macrocarpa</i> Vieillard	E—FI	<i>A. macrobotryosus</i>	
Clinosperma		Hochreutiner	E—FA
<i>C. bractealis</i> Beccari	E—FU	<i>A. macrophyllus</i> Schindler	E—
Cyphokentia		<i>A. maximus</i> Schindler	E—
<i>C. macrostachya</i> Brongniart	E—FI	<i>A. microbotrys</i>	
Cyphophoenix		Hochreutiner	E—FA
<i>C. elegans</i> Wendland	E—FA	<i>A. ovalifolius</i> Schindler	E—
<i>C. nucele</i> H. E. Moore	E—FA	<i>A. tenuifolius</i> Schindler	E—
Cyphosperma		<i>A. vieillardii</i> Schindler	E—
<i>C. balansae</i> Wendland ex		Mucuna	
Bentham & J. D. Hooker	E—FA	<i>M. gigantea</i> (Willdenow) A. DC.	P—
Kentiopsis		<i>M. neocaledonica</i> E. G. Baker	E—FA
<i>K. olivaeformis</i> Brongniart	E—FA	<i>M. urens</i> Medic.	P—FA
Lavoixia		PARACRYPHIACEAE	
<i>L. macrocarpa</i> H. E. Moore	E—FA	Paracryphia	
Mackeea		<i>P. alticola</i>	
<i>M. magnifica</i> H. E. Moore	E—FA	(Schlechter) Steenis	E—FI
Moratia		PASSIFLORACEAE	
<i>M. cerifera</i> H. E. Moore	E—FA	Passiflora	
Pritchardiopsis		<i>P. aurantia</i> J. R. Forster	P—MI
<i>P. jeanneneyi</i> Beccari	E—FU	PHELLINACEAE	
Veillonina		Phelline	
<i>V. alba</i> H. E. Moore	E—FA	<i>P. balansae</i> Baillon	E—
PANDANACEAE		<i>P. billardieri</i>	
Freycinetia		Pancher ex Loesener	E—FU
<i>F. brevifolia</i> Martelli	E—FA	<i>P. brachyphylla</i> Baillon	E—FA
<i>F. comptonii</i> Rendle	E—FA	<i>P. comosa</i> Labillardière	E—FI
<i>F. coriacea</i> Warburg	E—FA	<i>P. confertifolia</i> Baillon	E—FA
<i>F. cylindracea</i> Solms	E—FI	<i>P. dumbeensis</i> Guillaumin	E—FU
<i>F. erythrostigma</i>		<i>P. erubescens</i> Baillon	E—MI
Solms ex Martelli	E—FU	<i>P. floribunda</i> Baillon	E—
<i>F. graminifolia</i> Solms	E—FI	<i>P. indivisa</i>	
<i>F. hydra</i> B. C. Stone	E—FI	(Baillon) Harms & Loesener	E—
<i>F. longispica</i> Martelli	P—FA	<i>P. lucida</i> Vieillard ex Baillon	E—FU
<i>F. lorifolia</i> Martelli	E—FU	<i>P. macrophylla</i> Baillon	E—FI
<i>F. microdonta</i> Martelli	P—FA	<i>P. microcarpa</i> Baillon	E—FU
<i>F. monticola</i> Rendle	P—FA	<i>P. robusta</i> Baillon	E—FU
<i>F. novocaledonica</i> Warburg	E—FA	<i>P. wagapensis</i> Baillon	E—FA
<i>F. schlechteri</i> Warburg	P—FI	PHILESIACEAE	
<i>F. spectabilis</i> Solms	E—FI	Eustrephus	
<i>F. sulcata</i> Warburg	P—FI	<i>E. latifolius</i> R. Brown ex Sims	P—FI

<i>A. bracteatus</i>			<i>P. baladensis</i>	
Schlechter & Krause	E—		(Baillon) Guillaumin	E—FA
<i>A. cucumicarpus</i> S. Moore	E—MU		<i>P. bourailensis</i> Guillaumin	E—
<i>A. heterophyllus</i>			<i>P. brachylaena</i>	
Guillaumin & Beauvisage	E—FI		(Baillon) Guillaumin	E—FA
<i>A. longistipitatus</i> Guillaumin	E—FA		<i>P. calliantha</i>	
<i>A. oblongus</i> S. Moore	E—MU		(Baillon) Guillaumin	E—FI
<i>A. platyxylo</i> (Vieillard ex			<i>P. calothyrsus</i>	
Pancher & Seb.) Guillaumin	E—FA		(Baillon) Guillaumin	E—FI
<i>A. sessilifolius</i> Guillaumin	E—FA		<i>P. canalensis</i>	
<i>A. simulans</i> Guillaumin	E—FU		(Baillon) Guillaumin	E—FA
Coelospermum			<i>P. collina</i> Labillardière	P—FI
<i>C. balansae</i> Baillon	E—FA		<i>P. colnettiana</i> Guillaumin	E—FA
<i>C. monticulum</i>			<i>P. damnatorium</i> Guillaumin	E—FA
Baillon ex Guillaumin	E—FA		<i>P. deplanchei</i>	
<i>C. nigrescens</i>			(Beauvisage) Guillaumin	E—FU
(Krause) Guillaumin	E—FA		<i>P. douarrei</i>	
Cyclophyllum			(Beauvisage) Daeniker	E—FU
<i>C. baladense</i> Guillaumin	E—FA		<i>P. faguettii</i>	
<i>C. calyculatum</i> Guillaumin	E—FA		(Baillon) Schlechter	E—FI
<i>C. cymosum</i> S. Moore	E—FA		<i>P. frondosa</i> S. Moore	E—FA
<i>C. henriettae</i>			<i>P. fuscopilosa</i> Schlechter	E—FU
(Baillon) Guillaumin	E—FA		<i>P. gabriellae</i>	
<i>C. sagittatum</i>			(Baillon) Guillaumin	E—MU
(Baillon) Guillaumin	E—MU		<i>P. gneissica</i> S. Moore	E—FA
<i>C. vieillardii</i>			<i>P. goniocarpa</i>	
(Baillon) Guillaumin	E—FA		(Baillon) Guillaumin	E—FI
Gardenia			<i>P. laxissima</i> S. Moore	E—FA
<i>G. mollis</i> Schlechter	E—FA		<i>P. lenormandi</i> Schlechter	E—FU
Guettarda			<i>P. lepidocalyx</i> S. Moore	E—FA
<i>G. balansaeana</i> Baillon	E—FU		<i>P. leratii</i> Guillaumin	E—FI
<i>G. eximia</i> Baillon	E—FU		<i>P. ligustrina</i>	
<i>G. heterosepala</i> Guillaumin	E—FU		(Baillon) Guillaumin	E—FA
<i>G. hypolasia</i> Baillon	E—FU		<i>P. lyciflora</i>	
<i>G. rhamnoides</i> Baillon	E—FI		(Baillon) Schlechter	E—FU
<i>G. splendens</i> Baillon	E—FU		<i>P. lycioides</i>	
<i>G. vieillardii</i> Guillaumin	E—FA		(Baillon) Guillaumin	E—FU
Ixora			<i>P. macroglossa</i>	
<i>I. cauliflora</i> Montrouzier	E—FA		(Baillon) Guillaumin	E—FI
<i>I. collina</i>			<i>P. microglossa</i>	
(Montrouzier) Beauvisage	P—FI		(Baillon) Guillaumin	E—FI
<i>I. comptonii</i> S. Moore	F—FA		<i>P. monanthos</i>	
<i>I. kuakuensis</i> S. Moore	E—FU		(Baillon) Schlechter	E—FU
<i>I. lecardii</i> Guillaumin	E—FA		<i>P. nathaliae</i>	
<i>I. longiloba</i> Guillaumin	E—FU		(Baillon) Guillaumin	E—MU
<i>I. montana</i> Schlechter	E—FI		<i>P. nekouana</i>	
<i>I. oligantha</i>			(Baillon) Guillaumin	E—
Schlechter & Krause	E—FI		<i>P. nummularioides</i> Guillaumin	E—FA
<i>I. vieillardii</i> Guillaumin	E—FA		<i>P. oleoides</i> (Baillon) Schlechter	E—MU
<i>I. yahouensis</i> Schlechter	E—FA		<i>P. oreophila</i> Guillaumin	E—FA
Morierina			<i>P. oubatchensis</i> Schlechter	E—FA
<i>M. montana</i> Vieillard	E—FU		<i>P. pancheri</i>	
<i>M. propinqua</i> Brongniart & Gris	E—MU		(Baillon) Schlechter	E—FA
Morinda			<i>P. papillosa</i> Guillaumin	E—FA
<i>M. ardensis</i> Montrouzier	E—MU		<i>P. paramaracarpa</i>	
<i>M. billardieri</i> Baillon	E—FI		(Baillon) Schlechter	E—MU
<i>M. chortophylla</i> Baillon	E—FI		<i>P. patula</i> S. Moore	E—FA
<i>M. decipiens</i> Schlechter	E—FA		<i>P. phyllanthoides</i>	
<i>M. elongata</i> Schlechter	E—FU		Schlechter ex Guillaumin	E—MU
<i>M. fallax</i> Schlechter	E—FA		<i>P. poissoniana</i>	
<i>M. forsteri</i> Seemann	P—FA		(Baillon) Guillaumin	E—FI
<i>M. kanalensis</i> Baillon	E—FU		<i>P. pseudomicrodaphne</i>	
<i>M. ligustrina</i> S. Moore	E—FA		(Baillon) Guillaumin	E—MU
<i>M. phylliraeoides</i> Labillardière	E—FA		<i>P. pubituba</i> S. Moore	E—FA
<i>M. velutina</i> Guillaumin	E—FI		<i>P. pulchrebracteata</i> Guillaumin	E—FA
<i>M. vieillardii</i> Guillaumin	E—FA		<i>P. rarifolia</i> S. Moore	E—FA
Mussaenda			<i>P. roseotincta</i> S. Moore	E—FA
<i>M. cylindrocarpa</i> Burck	P—FA		<i>P. rosmarinifolia</i>	
Psychotria			(Baillon) Schlechter	E—FA
<i>P. amieuensis</i> Guillaumin	E—FA		<i>P. rubefacta</i>	
<i>P. arbutifolia</i>			(S. Moore) Guillaumin	E—MU
(Baillon) Schlechter	E—FI		<i>P. rupicola</i>	
<i>P. baillonii</i> Schlechter	E—FA		(Baillon) Schlechter	E—MI

- P. sagittalis* (Baillon) Guillaumin E—FA
P. saltiensis (S. Moore) Guillaumin E—FU
P. schlechteriana Krause E—FA
P. schumanniana Schlechter E—FA
P. semperflorens (Baillon) Pancher ex Beauvisage E—FI
P. speciosa (Beauvisage) S. Moore E—MU
P. stenophylla Guillaumin E—
P. stricta (Baillon) Guillaumin E—FA
P. suaveolens S. Moore E—FA
P. subpallens S. Moore E—MU
P. subuniflora (Baillon) Schlechter E—FU
P. toninensis S. Moore E—FA
P. trichopodantha (Baillon) Guillaumin E—FA
P. trisulcata (Baillon) Guillaumin E—FA
P. unioensis Guillaumin E—FI
P. vieillardii (Baillon) Baillon E—FA
P. wagapensis Guillaumin E—FA
- Randia**
- R. artensis* (Montrouzier) Guillaumin E—FA
R. sezizat Guillaumin E—FA
R. vieillardii Baillon E—FA
- Rhopalobranchium**
- R. congestum* Schlechter & Krause E—FA
R. fragrans Schlechter & Krause E—FA
- Tarenna**
- T. ignambiensis* (Guillaumin) Jérémie E—FA
T. lifouana (Daeniker) Jérémie E—FA
T. truncatocalyx (Guillaumin) Bremekamp E—MI
T. unioensis (Guillaumin) Jérémie E—FA
- RUTACEAE**
- Dutaillaea**
- D. comptonii* E. G. Baker E—FA
D. oreophylla Guillaumin E—FI
D. sessilifoliola Guillaumin E—MI
D. trifoliolata Baillon E—FA
- Geijera**
- G. balansae* (Baillon) Schinz & Guillaumin E—FI
- Melicope**
- M. diversifolia* Guillaumin E—FA
M. glaberrima Guillaumin E—FI
M. lasioneura Baillon E—FU
M. leptophylla Guillaumin E—
M. leratii Guillaumin E—FU
M. montana E. G. Baker E—FA
M. platystemon E. G. Baker E—FA
M. triphylla Merrill E—FI
- Micromelum**
- M. minutum* (J. R. & G. Forster) Wight & Arnott P—FA
- Sarcamelicope**
- S. argyrophylla* Guillaumin E—FI
S. sarcococca Engler E—FI
- Zanthoxylum**
- Z. neocaledonicum* E. G. Baker E—FU
Z. pinnatum (J. R. & G. Forster) Oliver P—MI
Z. sarasinii Guillaumin E—MA
Z. schlechteri Guillaumin E—FI
- Zieridium**
- Z. melicopaefolium* Guillaumin E—FI
Z. pseudobtusifolium Guillaumin E—FI
- SANTALACEAE**
- Amphorogyne**
- A. celastroides* Stauffer & Huerlimann E—FI
A. spicata Stauffer & Huerlimann E—FI
- Daenikera**
- D. corallina* Huerlimann & Stauffer E—FU
- Exocarpos**
- E. phyllanthoides* Endlicher P—MU
E. pseudocasuarina Guillaumin E—MU
- Santalum**
- S. austrocaledonicum* Vieillard E—MI
- SAPINDACEAE**
- Alectryon**
- A. carinatum* Radlkofer E—FA
- Arytera**
- A. arcuata* Radlkofer E—MA
A. gracilipes Radlkofer E—MU
A. lepidota Radlkofer E—MU
- Cupaniopsis**
- C. apiocarpa* Radlkofer E—MI
C. azantha Radlkofer E—FA
C. chytradenia Radlkofer E—MU
C. dictyophora Radlkofer E—FA
C. ganophloea Radlkofer E—FA
C. godefroyi Guillaumin E—
C. guioides Guillaumin E—
C. hypodermatica Radlkofer E—
C. macrocarpa Radlkofer E—MI
C. mareensis Guillaumin E—FA
C. mouana Guillaumin E—FU
C. oedipoda Radlkofer E—FI
C. pennellii Guillaumin E—FA
C. petiolutata Radlkofer E—FA
C. psilocarpa Radlkofer E—FA
C. subcuneata Radlkofer E—MI
C. sylvatica Guillaumin E—FU
C. trigonocarpa Radlkofer E—MA
- Elatostachys**
- E. apetala* (Labillardière) Radlkofer E—FI
E. falcata (A. Gray) Radlkofer P—
E. incisa Radlkofer E—MA
- Gongrodiscus**
- G. sp.* E—FA
G. subferrugineus Radlkofer E—FI
- Guioa**
- G. crenata* Radlkofer E—MI
G. crenulata Radlkofer E—MI
G. fusca Radlkofer E—MU
G. glauca (Labillardière) Radlkofer E—MI
G. gracilis (Pancher & Sebert) Radlkofer E—MI
G. microsepala Radlkofer E—FI
G. pectinata Radlkofer E—MI
G. villosa Radlkofer E—MI
- Harpullia**
- H. austrocaledonica* Baillon E—FA
- Podonophelium**
- P. balansae* Guillaumin E—FA
P. concolor Radlkofer E—MU
P. homei (Seemann) Radlkofer E—FI
- Storthocalyx**
- S. chryseus* Radlkofer E—FI

<i>S. leioneurus</i> Radlkofer	E—FU	<i>P. pancheri</i> Baillon	E—FU
<i>S. sordidus</i> Radlkofer	E—MU	<i>P. podophylla</i> Schlechter	E—FA
SAPOTACEAE		<i>P. spicata</i> Baillon	E—FA
Beccariella		Quintinia	
<i>B. balanseana</i> (Pierre) Aubréville	E—MI	<i>Q. major</i> (Baillon) Schlechter	E—FI
<i>B. rubicunda</i> (Pierre ex Baillon) Pierre	E—FA	<i>Q. media</i> (Baillon) Guillaumin	E—MU
Bureavella		<i>Q. minor</i> (Baillon) Schlechter	E—MU
<i>B. endlicheri</i> (Montrouzier) Aubréville	E—FI	<i>Q. oreophila</i> (Schlechter) Schlechter	E—FU
<i>B. wakere</i> (Pancher & Sebert) Aubréville	E—FI	<i>Q. parviflora</i> (Schlechter) Schlechter	E—FA
Leptostylis		SIMAROUBACEAE	
<i>L. grandifolia</i> Vink	E—FU	Soulamea	
Manilkara		<i>S. fraxinifolia</i> Brongniart & Gris	E—FI
<i>M. dissecta</i> (L.) Dubard	E—FI	<i>S. muelleri</i> Brongniart & Gris	E—MU
Mimusops		SMILACACEAE	
<i>M. elengi</i> L.	P—FA	Smilax	
Niemeyera		<i>S. orbiculata</i> Labillardière	E—
<i>N. balansae</i> (Baillon) Aubréville	E—FI	<i>S. plurifurcata</i> A. DC.	E—MI
Ochrothallus		SOLANACEAE	
<i>O. gordoniaefolius</i> (S. Moore) Aubréville	E—MI	Duboisia	
<i>O. multipetalus</i> (Vink) Aubréville	E—FU	<i>D. myoporoides</i> R. Brown	P—MI
<i>O. sarlinii</i> Aubréville	E—FI	SPHENOSTEMONACEAE	
<i>O. schmidii</i> Aubréville	E—FU	Sphenostemon	
<i>O. sessilifolius</i> (Pancher & Sebert) Pierre ex Guillaumin	E—FU	<i>S. balansae</i> Baillon	E—MU
<i>O. wagapensis</i> (Guillaumin) Aubréville	E—FA	<i>S. comptonii</i> E. G. Baker	E—MI
Pichonia		<i>S. oppositifolius</i> Huerlimann	E—FU
<i>P. balansana</i> Pierre	E—FA	<i>S. pachycladum</i> Baillon	E—FI
Planchonella		STERCULIACEAE	
<i>P. amieuana</i> (Guillaumin) Aubréville	E—FA	Sterculia	
<i>P. kuebiniensis</i> Aubréville	E—FU	<i>S. austrocaledonica</i> J. D. Hooker	E—FI
<i>P. laetevirens</i> (Baillon) Pierre ex Dubard	E—FU	<i>S. bullata</i> Pancher & Sebert	P—MA
<i>P. lifuana</i> (Baillon) Pierre ex Dubard	E—FA	<i>S. comptonii</i> E. G. Baker	E—FI
<i>P. linggensis</i> (Burck) Pierre	P—FA	<i>S. dzumacensis</i> Guillaumin	E—FU
<i>P. microphylla</i> Pierre ex Dubard	E—MI	<i>S. fatsioides</i> (Schlechter) Guillaumin	E—FA
<i>P. pronyensis</i> Guillaumin	E—FU	<i>S. francii</i> Guillaumin	E—MU
<i>P. saligna</i> S. Moore	E—FA	<i>S. megaphylla</i> Bureau & Poisson ex Guillaumin	E—FA
<i>P. skottsbergii</i> Guillaumin	E—FU	<i>S. platanooides</i> Schlechter	E—MU
<i>P. thienis</i> Aubréville	E—FU	<i>S. sagemiiifolia</i> (Schlechter) Guillaumin	E—FA
Pycnandra		<i>S. scheffleraefolia</i> Guillaumin	E—FI
<i>P. benthamii</i> Baillon	E—FA	<i>S. schumanniana</i> (Schlechter) Guillaumin	E—FA
<i>P. comptonii</i> (S. Moore) Vink	E—FA	STRASBURGERIACEAE	
<i>P. controversa</i> (Guillaumin) Vink	E—FA	Strasburgeria	
<i>P. fastuosa</i> (Baillon) Vink	E—FI	<i>S. robusta</i> (Vieillard ex Pancher & Sebert) Guillaumin	E—FU
<i>P. griseosepala</i> Vink	E—FU	SYMPLOCACEAE	
<i>P. neocaledonica</i> (S. Moore) Vink	E—FA	Symplocos	
<i>P. paniensis</i> Aubréville	E—FA	<i>S. arborea</i> (Vieillard) Brongniart & Gris	E—FA
<i>P. vieillardii</i> (Baillon) Vink	E—FA	<i>S. baptica</i> Brongniart & Gris	E—FI
Pyriluma		<i>S. caeruleascens</i> Brongniart & Gris	E—FA
<i>P. sphaerocarpum</i> (Baillon) Aubréville	E—FA	<i>S. flavescens</i> Brand	E—FI
Sebertia		<i>S. gracilis</i> Brongniart & Gris	E—FA
<i>S. acuminata</i> Pierre ex Baillon	E—FU	<i>S. montana</i> Brongniart & Gris	E—MI
SAXIFRAGACEAE		<i>S. munda</i> S. Moore	E—MI
Polysma		<i>S. pseudonitida</i> Guillaumin	E—FA
<i>P. brachystachys</i> Schlechter	E—FA	<i>S. tortuosa</i> Vieillard	E—FI
<i>P. comptonii</i> E. G. Baker	E—MU	TAXACEAE	
<i>P. discolor</i> Baillon	E—FA	Austrotaxus	
<i>P. leratii</i> Guillaumin	E—FA	<i>A. spicata</i> Compton	E—FA
		THYMELEACEAE	
		Lethedon	
		<i>L. balansae</i> (Baillon) Kostermans	E—MI

- L. calleana*
 (Guillaumin) Kostermans E—FU
L. cernua (Baillon) Kostermans E—FU
L. ciliaris (Baillon) Kostermans E—FU
L. comptonii
 (E. G. Baker) Kostermans E—FA
L. cordaioretusa Aymonin E—MI
L. oblonga
 (Schlechter) Kostermans E—MU
L. ovata
 (Guillaumin) Kostermans E—MU
L. salicifolia
 (Labillardière) Aymonin E—MI
 Microsemma
M. calophylla
 Guillaumin & MacKee E—FU
M. rhizophoraefolia
 Guillaumin E—FA
 Wickstroemia
W. indica (L.) Mey P—MI
W. novaecaledonica Gandoger E—
- TILIACEAE**
 Trichospermum
T. sp. P—FA
- TRIMENIACEAE**
 Trimenia
T. novaecaledonica E. G. Baker E—FA
- TRIURIDACEAE**
 Sciaphila
S. dolichostyla Schlechter E—FA
S. novaecaledonica Schlechter E—FU
- ULMACEAE**
 Celtis
C. balansae Planchon E—FA
C. paniculata
 (Endlicher) Planchon P—FA
- URTICACEAE**
 Dendrocnide
D. latifolia (Gandoger) Chew P—FA
D. vitiensis (Seemann) Chew P—FA
 Procris
P. pedunculata
 (J. R. Forster) Weddell P—FI
- VERBENACEAE**
 Gmelina
G. lignum-vitreum Guillaumin E—FA
 Oxera
O. arborea Schlechter E—FA
O. baladica Vieillard E—FA
O. candelabrum Beauvisage E—FI
O. comptonii S. Moore E—FA
O. cordifolia Dubard E—
O. coriacea Dubard E—
O. crassiflora S. Moore E—FA
O. crassifolia Virot E—MU
O. floribunda Schlechter E—FA
O. longifolia Vieillard E—
O. merytaefolia Guillaumin E—FA
O. microcalyx Guillaumin E—FA
O. morierii Vieillard E—FA
O. nuda Virot E—MI
O. oblongifolia Vieillard E—
O. oreophila Guillaumin E—FU
O. ovata Vieillard E—
O. palmatinervia Dubard E—FU
O. pancheri Dubard E—
O. robusta Vieillard E—FI
O. rugosa Guillaumin E—FU
O. suaveolens Guillaumin E—MU
O. subverticillata Vieillard E—
O. sulfurea Dubard E—FA
- Vitex
V. novaecaledonica Gandoger E—
V. rapini Beauvisage E—FU
- VIOLACEAE**
 Agatea
A. lenormandi Melchior E—
A. schlechteri Melchior E—FI
 Hybanthus
H. austrocaledonicus
 Schinz & Guillaumin E—FU
H. caledonicus (Turcz.) Cretz P—MI
H. ilicifolius (Vieillard) Schinz
 & Guillaumin E—FI
H. micranthus Guillaumin E—FA
- WINTERACEAE**
 Belliolum
B. crassifolium
 (Baillon) Tieghem E—FA
B. rivulare Tieghem E—FA
B. vieillardii Tieghem E—FA
 Bubbia
B. auriculata Tieghem E—FA
B. balansae (Baillon) Tieghem E—FU
B. comptonii (Baker f.) Dandy E—FA
B. deplanchei Tieghem E—FA
B. heteroneura Tieghem E—FA
B. isoneura Tieghem E—FA
B. odorata (Baker f.) Dandy E—FA
B. pauciflora (Baker f.) Dandy E—FA
 Exospermum
E. stipitatum
 (Baillon) Tieghem E—FA
 Zygogynum
Z. acsmithii Vink E—FU
Z. baillonii Tieghem E—FU
Z. bicolor Tieghem E—FA
Z. mackeei Vink E—FA
Z. pomiferum Baillon E—FU
Z. vieillardii Baillon E—FU

		Africa	Asia	Malasia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe Is.	Norfolk Is.	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America	Distrib. type	New Caledonia
ARAL.	<i>Polyscias (Tieghemopanax)</i>	1	1	1	1	1	1	1	1			1	1		1		C	
ARAL.	<i>Schefflera</i>	1	1	1	1	1	1	1			1	1	1		1	1	A	
ARAL.	<i>Strobilopanax</i>																E	
ARAU.	<i>Agathis</i>			1	1	1		1			1	1					I	2
ARAU.	<i>Araucaria</i>			1	1	1				1						1	J	2
ASCL.	<i>Hoya</i>		1	1	1	1	1	1			1	1			1		D	
ASCL.	<i>Marsdenia</i>	1	1	1	1	1	1		1				1			1	A	
ASCL.	<i>Secamone</i>	1	1	1	1	1		1									C	
ASCL.	<i>Tylophora</i>	1	1	1	1	1	1	1	1	1		1	1		1		C	
ATHE.	<i>Nemuaron</i>																C	
BALA.	<i>Balanophora</i>	1	1	1	1	1		1			1	1	1				C	
BALA.	<i>Hachettea</i>																E	
BALO.	<i>Balanops</i>					1		1			1						B	2
BIGN.	<i>Deplanchea</i>			1	1	1											I	
BIGN.	<i>Pandorea</i>			1	1	1	1		1								I	
BISC.	<i>Bischofia</i>		1	1	1	1	1	1				1		1	1		D	
* BURS.	<i>Canarium (Sect. Canariellum)</i>					1											H	2
CASU.	<i>Gymnostoma (Casuarina)</i>			1	1	1	1	1				1					G	2
CELA.	<i>Cassine (Elaeodendron)</i>	1	1	1	1	1		1	1	1		1				1	A	
CELA.	<i>Maytenus</i>	1	1	1	1	1					1	1	1	1	1	1	A	
CELA.	<i>Menepetalum</i>																E	
CELA.	<i>Salaciopsis</i>																E	
CESA.	<i>Caesalpinia</i>	1	1	1	1	1	1	1	1	1		1	1	1	1	1	A	
CESA.	<i>Intsia</i>	1	1	1	1	1	1	1				1	1		1		C	
CESA.	<i>Mezoneurum</i>	1	1	1	1	1	1						1				C	
CESA.	<i>Storckiella</i>					1						1					L	
CHLO.	<i>Ascarina</i>	4		1	1		1	1			1	1		1	1		L	
CHRY.	<i>Hunga</i>			1													B	2
COMM.	<i>Aneilema</i>	1	1	1	1	1	1					1		1	1	1	A	
CONN.	<i>Rourea (Santaloides)</i>		1	1	1	1	1	1				1			1		D	
CORY.	<i>Corynocarpus</i>				1	1	1	1				1					I	
CUCU.	<i>Diplocyclos</i>	1	1	1	1	1	1	1		1							C	
CUNO.	<i>Acsmithia</i>			1	1	1						1					I	2
CUNO.	<i>Codia</i>																E	
CUNO.	<i>Cunonia</i>	1															K	2
CUNO.	<i>Geissois</i>					1	1	1			1						H	
CUNO.	<i>Pancheria</i>																E	
CUNO.	<i>Weinmannia</i>	1		1	1		1	1			1	1		1	1	2	K	
CUPR.	<i>Libocedrus</i>			1							1					1	J	
CYPE.	<i>Baumea</i>	4	1	1	1	1								1			C	
CYPE.	<i>Carex</i>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	
CYPE.	<i>Costularia</i>	1	1	1	1	1											C	
CYPE.	<i>Scleria</i>	1	1	1	1	1	1	1				1	1		1	1	A	
CYPE.	<i>Uncinia</i>			1	1	1		1		1		1			1	1	K	
DILL.	<i>Hibbertia</i>	1		1	1	1						1					H	
DILL.	<i>Tetracera</i>	1	1	1	1	1										1	A	
DIOS.	<i>Dioscorea</i>	1	1	1	1	1		1			1	1	1	1	1	1	A	
EBEN.	<i>Diospyros</i>	1	1	1	1	1	1	1			1	1		1	1	1	C	
ELAE.	<i>Dubouzetia</i>			1	1												G	
ELAE.	<i>Elaeocarpus</i>	1	1	1	1	1	1	1	1	1	1	1	1	1	1		C	
* ELAE.	<i>Sloanea (s.g. Antholoma)</i>			1													G	
EPAC.	<i>Dracophyllum</i>					1		1		2							L	
EPAC.	<i>Styphelia</i>		1	1	1	2	1	1	1	1	1	1	1	1			H	
ERIC.	<i>Agapetes</i>	2	1	1	1	1						1					D	
ESCA.	<i>Argophyllum</i>					1											H	2
EUPH.	<i>Antidesma</i>	1	1	2	1	1	1	1				1	1		1		C	
EUPH.	<i>Austrobuxus</i>			1	1	1						1					H	2
EUPH.	<i>Baloghia</i>					1				1							B	2
EUPH.	<i>Bocquillonia</i>																E	
EUPH.	<i>Claoxylon</i>	1	1	1	1	1	1	1				1	1	1	1		C	
EUPH.	<i>Cleidion</i>	1	1	1	1	1	1	1				1				1	A	
EUPH.	<i>Cleistanthus</i>	1	1	2	1	1	1					1	1				C	
EUPH.	<i>Cocconerion</i>																E	
EUPH.	<i>Codiaeum</i>			1	1	1	1	1				1					I	
EUPH.	<i>Croton</i>	1	1	1	1	1	1	1				1	1		1	1	A	

	Africa	Asia	Malasia	New Guinea	Australia	Solomons	New Hebrides	Lord Howe Is.	Norfolk Is.	New Zealand	Fiji	North Pacific	Polynesia	Samoa-Tonga	America	Distrib. type	New Caledonia
MYRT. <i>Austromyrtus</i>					1		1				1					L	
MYRT. <i>Carpolepis</i>																E	
MYRT. <i>Cleistocalyx</i>		1	1	1	1			1			1					D	
MYRT. <i>Cupheanthus</i>																E	
MYRT. <i>Eugenia</i>	1		1	1	1	1	1			1	1	1		1	1	A	
MYRT. <i>Mearnsia</i>	1		1	1	1	1				1	1					G	
MYRT. <i>Metrosideros</i>						1		1		1	1	1	1	1		L	
MYRT. <i>Piliocalyx</i>							1				1					B	2
MYRT. <i>Pleurocalyptus</i>																E	
MYRT. <i>Rhodomyrtus</i> (<i>Archirhodomyrtus</i>)			1	1	1	1	1									I	
MYRT. <i>Syzygium</i> (<i>Caryophyllus</i> , <i>Jambosa</i>)			1	1	1	1										C	
MYRT. <i>Tristaniopsis</i>		1	1	1	1						1					D	
MYRT. <i>Xanthostemon</i>			1	1	1	1										I	2
NEPE. <i>Nepenthes</i>	3	1	2	1	1							1				C	
NYCT. <i>Pisonia</i> (<i>Calpidia</i>)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	
OLEA. <i>Jasminum</i>	1	1	1	1	1	1	1	1	1			1	1	1	1	A	
OLEA. <i>Linociera</i>	1	1	1	1	1	1	1	1	1			1	1	1	1	A	
OLEA. <i>Olea</i>	2	1	1		1			1				1	1			C	
*OLEA. <i>Osmanthus</i> (Sect. <i>Nothosmanthus</i>)																C	
ONCO. <i>Oncotheca</i>																E	
ORCH. <i>Acanthephippium</i>		1	1	1							1			1		F	
ORCH. <i>Acianthus</i>				1	1	1				1						H	2
ORCH. <i>Agrostophyllum</i>	5	1	1	1		1	1				1	1		1		F	
ORCH. <i>Anoectochilus</i>		1	1	1	1	1	1				1					F	
ORCH. <i>Appendicula</i>		1	1	1		1	1				1	1		1		F	
ORCH. <i>Bulbophyllum</i>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	
ORCH. <i>Calanthe</i>	1	1	2	1	1	1	1	1			1	1	1	1	1	A	
ORCH. <i>Ceratostylis</i>		1	1	1		1	1					1	1			F	
ORCH. <i>Chamaeanthus</i>		1	1			1										G	
ORCH. <i>Cheirostylis</i>	1	1	1	1	1						1	1		1		C	
ORCH. <i>Chrysoglossum</i>		1	1	1		1	1				1					F	
ORCH. <i>Cleisostoma</i>		1	1	1	1											G	
ORCH. <i>Clematepistephium</i>																E	
ORCH. <i>Coelogyne</i>		1	1	1		1	1				1	1		1		F	
ORCH. <i>Coilochilus</i>																E	
ORCH. <i>Corybas</i>		1	1	1	1	1	1			1	1	1	1			I	
ORCH. <i>Cryptostylis</i>		1	1	1	1	1					1			1		D	
ORCH. <i>Dendrobium</i>		1	1	1	1	1	1	1	1	1	1	1	1	1		D	
ORCH. <i>Didymoplexis</i>		1	2	1	1	1					1	1		1		D	
ORCH. <i>Diplocaulobium</i>			1	1	1	1					1	1		1		G	
ORCH. <i>Drymoanthus</i>					1						1					L	
ORCH. <i>Earina</i>							1			1	1		1	1		L	
ORCH. <i>Ephemerantha</i>		1	1	1	1	1						1	1	1		F	
ORCH. <i>Epipogium</i>	1	1	1	1	1	1	1									C	
ORCH. <i>Eria</i>		1	2	1	1	1	1				1		1	1		D	
ORCH. <i>Erythroides</i>		1	1	1		1	1				1			1	1	A	
ORCH. <i>Eulophia</i>	1	1	1	1	1						1	1				A	
ORCH. <i>Glomera</i>			1	2		1	1				1	1		1		G	
ORCH. <i>Gonatostylis</i>																E	
ORCH. <i>Goodyera</i>	1	1	1	1	1	1	1				1	1		1	1	A	
ORCH. <i>Habenaria</i>	1	1	1	1	1	1	1				1		1	1	1	A	
ORCH. <i>Hetaeria</i>	1	1	1	1	1	1	1				1	1	1	1		C	
ORCH. <i>Liparis</i>	1	1	1	1	1	1	1				1	1	1	1	1	A	
ORCH. <i>Malaxis</i>	1	1	1	1	1	1	1				1	1	1	1	1	A	
ORCH. <i>Megastylis</i>																E	
ORCH. <i>Microtatorchis</i>		1	1	1							1	1		1		G	
ORCH. <i>Moerenhoutia</i>		1	1	1	1		1				1	1	1	1		G	
ORCH. <i>Nervilia</i>	1	1	1	1	1		1				1	1	1	1		C	
ORCH. <i>Oberonia</i>	1	1	1	2	1		1		1		1	1	1	1		C	
ORCH. <i>Octarrhena</i>		1	1	1		1	1					1	1			G	
ORCH. <i>Pachyplectron</i>																E	
ORCH. <i>Peristylus</i>		1	1	1	1							1		1		F	

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ORCH. <i>Phajus</i>	1	1	1	1	1	1	1				1	1	1	1		C	F
ORCH. <i>Pholidota</i>		1	2	1	1	1	1				1	1	1	1		F	H
ORCH. <i>Phreatia</i>		1	1	1	1	1	1		1	1		1	1	1		F	H
ORCH. <i>Pristiglottis</i>		1	1	1	1	1	1				1			1		F	H
ORCH. <i>Pterostylis</i>			1	1	1	1	1	1		1						F	H
ORCH. <i>Rhynchophreatia</i>				1	1	1	1					1				F	H
ORCH. <i>Sarcochilus</i>		1	1	1	1	1	1			1	1		1			D	D
ORCH. <i>Schoenorchis</i>		1	1	1	1	1	1			1	1		1			D	D
ORCH. <i>Spathoglottis</i>		1	1	1	1	1	1	1		1	1	1	1	1		D	D
ORCH. <i>Spiranthes</i>	1	1	1	1	1	1	1	1		1				1	1	A	C
ORCH. <i>Taeniophyllum</i>	1	1	1	1	1	1	1	1		1	1	1	1	1		A	C
ORCH. <i>Thrixspermum</i>		1	1	1	1	1	1	1	1		1	1	1	1		D	D
ORCH. <i>Trachoma</i>		1	1		1	1	1	1			1	1		1		D	D
ORCH. <i>Tropidia</i>		1	1	1	1	1	1	1	1		1			1	1	A	C
ORCH. <i>Zeuxine</i>	1	1	1	1	1	1	1	1		1	1		1	1		A	C
PALM. <i>Actinokentia</i>																E	E
PALM. <i>Alloschmidia</i>																E	E
PALM. <i>Basselinia</i>																E	E
PALM. <i>Brongniartikentia</i>																E	E
PALM. <i>Burretiokentia</i>																E	E
PALM. <i>Campecarpus</i>																E	E
PALM. <i>Chambeyronia</i>																E	E
PALM. <i>Clinosperma</i>																E	E
PALM. <i>Cyphokentia</i>																E	E
PALM. <i>Cyphophoenix</i>																E	E
PALM. <i>Cyphosperma</i>											1					E	E
PALM. <i>Kentiopsis</i>																E	E
PALM. <i>Lavoixia</i>																E	E
PALM. <i>Mackeea</i>																E	E
PALM. <i>Moratia</i>																E	E
PALM. <i>Pritchardiopsis</i>																E	E
PALM. <i>Veillonia</i>																E	E
PAND. <i>Freycinetia</i>		1	1	1	1	1	1	1	1	1	1	1	1	1		D	C
PAND. <i>Pandanus</i>	1	1	1	1	1	1	1	1	1		1	1	1	1		C	E
PAPI. <i>Arthroclianthus</i>																A	E
PAPI. <i>Mucuna</i>	1	1	1	1	1	1	1	1	1		1	1	1	1	1	A	E
PARA. <i>Paracryphia</i>																A	E
PASS. <i>Passiflora</i>		1	1	1	1	1	1	1	1		1			1	2	A	E
PHEL. <i>Phelline</i>																E	I
PHIL. <i>Eustrephus</i>				1	1											I	I
PHIL. <i>Geitonoplesium</i>			1	1	1	1	1	1	1		1					I	I
PIPE. <i>Peperomia</i>	1	1	1	1	1	1	1	1	1	1	1			1	1	A	A
PIPE. <i>Piper</i>	1	1	1	1	1	1	1	1	1	1	1			1	1	A	C
PITT. <i>Pittosporum</i>	1	1	1	1	1	1	1	1	1	1	1	1		1		A	C
PODO. <i>Acmopyle</i>											1					L	F
PODO. <i>Dacrycarpus</i>		1	1	1		1	1			1	1					F	J
PODO. <i>Dacrydium</i>		1	1	1		1	1			1	1				1	J	J
PODO. <i>Decussocarpus</i>			1	1		1				1					1	J	G
PODO. <i>Falcatifolium</i>			1	1												G	E
PODO. <i>Parasitaxus</i>																K	J
PODO. <i>Podocarpus</i>	1		1	1	1		1			1	1			1	1	K	J
PODO. <i>Prumnopitys</i>			1	1	1					1					1	J	E
PROT. <i>Beauprea</i>																E	E
PROT. <i>Eucarpha</i>																E	E
PROT. <i>Kermadecia</i>																E	E
PROT. <i>Sleumerodendron</i>																E	E
PROT. <i>Stenocarpus</i>			1	1	1											I	B
PROT. <i>Virotia</i>					1											I	B
RHAM. <i>Alphitonia</i>		1	1	1	1	1	1				1	1	1	1		D	B
RHAM. <i>Ventilago</i>	1	1	1	1	1	1	1				1	1			1	A	L
RHIZ. <i>Crossostylis</i>						1	1				1		1	1		L	E
RUBI. <i>Atractocarpus</i>																A	L
RUBI. <i>Coelospermum</i>		1	1	1	1											D	B
RUBI. <i>Cyclophyllum</i>							1									B	C
RUBI. <i>Gardenia</i>	1	1	1	1	1	1	1			1	1	1	1			B	C

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RUBI.	<i>Guettarda</i>	1	1	1	1	1	1	1				1	1	1	1	1	A	
RUBI.	<i>Ixora</i>	1	1	1	1	1	1	1				1	1	1	1	1	A	
RUBI.	<i>Morierina</i>																E	
RUBI.	<i>Morinda</i>	1	1	1	1	1	1	1				1	1	1	1	1	A	
RUBI.	<i>Mussaenda</i>	1	1	1	1	1	1	1				1	1	1	1	1	F	
RUBI.	<i>Psychotria</i>	2	1	1	1	1	1	1	1			1	1	1	1	1	A	
RUBI.	<i>Randia</i>	2	1	1	1	1	1	1	1			1	1		1	1	A	
RUBI.	<i>Rhopalobrachium</i>																E	
RUBI.	<i>Tarenna</i>	1	1	1	1	1	1	1				1	1	1	1		C	
RUTA.	<i>Dutaillaea</i>																E	
RUTA.	<i>Geijera</i>				1	1											I	
RUTA.	<i>Medicosma</i>					1											I	
RUTA.	<i>Melicope</i>		1	1	1	1	1	1	1		1	1	1				D	
RUTA.	<i>Micromelum</i>		1	1	1	1	1	1				1	1		1		D	
RUTA.	<i>Sarcomelicope</i>																E	
RUTA.	<i>Zanthoxylum</i>	1	1	1	1	1	1		1	1		1	1	1	1	1	A	
RUTA.	<i>Zieridium</i>																E	
SANT.	<i>Amphorogyne</i>																E	
SANT.	<i>Daenikera</i>																E	
SANT.	<i>Exocarpos</i>		1	1	1	1			1		1	1	1	1			D	
*SANT.	<i>Santalum (Sect. Santalum)</i>			1	1	1		1				1	1		1		I	
SAPI.	<i>Alectryon</i>		1	1	1	1		1			1	1	1				D	
SAPI.	<i>Arytera</i>		1	1	1	1	1				1	1			1		D	
SAPI.	<i>Cupaniopsis</i>			1	1	1	1	1				1			1		I	
SAPI.	<i>Elattostachys</i>			1	1	1	1	1				1	1				I	
SAPI.	<i>Gongrodiscus</i>																E	
SAPI.	<i>Guioa</i>		1	1	1	1	1		1			1			1		D	
SAPI.	<i>Harpullia</i>		1	1	1	1	1	1				1			1		D	
SAPI.	<i>Podonephelium</i>																E	
SAPI.	<i>Storthocalyx</i>																E	
SAPO.	<i>Beccariella</i>				1	1	1										E	
SAPO.	<i>Bureavella</i>			1	1	1	1										D	
SAPO.	<i>Leptostylis</i>																E	
SAPO.	<i>Manilkara</i>	1	1	1	1	1		1				1	1		1	1	A	
SAPO.	<i>Mimusops</i>	1	1	1	1	1											C	
SAPO.	<i>Niemeyera</i>					1											H	
SAPO.	<i>Ochrothallus</i>																E	
SAPO.	<i>Pichonia</i>																E	
SAPO.	<i>Planchonella</i>		1	1	1	1	1	1	1	1	1	1	1	1	1		D	
SAPO.	<i>Pycnantra</i>																E	
SAPO.	<i>Pyriluma</i>																E	
SAPO.	<i>Sebertia</i>																E	
SAXI.	<i>Polyosma</i>		1	1	1	1	1										D	
SAXI.	<i>Quintinia</i>			1	1	1		1			1						D	
SIMA.	<i>Soulamea</i>	5		1	1	1	1	1				1	1				K	2
SMIL.	<i>Smilax</i>	1	1	1	1	1	1	1	1			1	1		1	1	A	
SOLA.	<i>Duboisia</i>					1											H	
SPHE.	<i>Sphenostemon</i>				1	1											I	
STER.	<i>Sterculia</i>	1	1	1	1	1	1	1				1	1		1	2	A	
STRA.	<i>Strasburgeria</i>																E	
SYMP.	<i>Symplocos</i>		1	1	1	1	1	1	1			1	1			1	A	
TAXA.	<i>Austrotaxus</i>																E	
THYM.	<i>Lethedon</i>					1		1									B	2
THYM.	<i>Wickstroemia</i>		1	1	1	1	1	1		1		1	1	1	1		D	
TILI.	<i>Trichospermum</i>		1	1	1	1	1					1	1		1	1	A	
TRIM.	<i>Trimenia</i>			1	1	1	1					1		1	1		G	
TRIU.	<i>Sciaphila</i>	1	1	1	2		1	1				1				1	A	
ULMA.	<i>Celtis</i>	1	1	1	1	1	1	1	1	1		1	1	1	1	1	A	
UTRI.	<i>Dendrocnide</i>		1	1	1	1	1	1				1	1	1	1		D	
URTI.	<i>Procris</i>	1	1	2	1		1	1				1	1	1	1		F	
VERB.	<i>Gmelina</i>	1	1	1	1	1	1					1	1				C	
VERB.	<i>Oxera</i>																E	
VERB.	<i>Vitex</i>	2	1	1	1	1	1	1		1	1	1	1	1	1	1	A	
VIOL.	<i>Agatea</i>				1	1						1					B	2
VIOL.	<i>Hybanthus</i>	1	1	1	1	1		1								1	A	

		Africa		
		Asia		
		Malasia		
		New Guinea		
		Australia	1	
		Solomons	1	
		New Hebrides		
		Lord Howe Is.	1	
		Norfolk Is.		
		New Zealand		
		Fiji		
		North Pacific		
		Polynesia		
		Samoa-Tonga		
		America		
WINT.	<i>Belliotum</i>			1
WINT.	<i>Bubbia</i>			1
WINT.	<i>Exospermum</i>			1
WINT.	<i>Zygogynum</i>			1
				Distrib. type
				New Caledonia

Note added in proof. A version of this paper with updated figures and other modifications was published in the symposium volume 'Biogeography of the Tropical Pacific' (F. J. Radovsky *et al.*, eds.; Bishop Museum Special Publication no. 72 (1984)).