

DISTRIBUTION OF IMPORTANT FOREST TREE SPECIES IN KERALA (CENTRAL CIRCLE)

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CONTENTS

	Page	File
Abstract	I	r.28.2
1 Introduction	1	r.28.3
2 Location and methodology	1	r.28.4
3 Discussion	2	r.28.5
4 List of species	5	r.28.6
5 Appendices	27	r.28.7

ABSTRACT

Occurrence and distribution of one hundred and eight well known and less known indigenous tree species from central circle are given based on field observation and herbarium studies. Due to excessive human actions large stretches of forests of this circle have changed into dispersed groups of 'islands' wherein many species are threatened with extinction. Among the principal vegetation types, the moist deciduous forests are still luxuriant at many places. The evergreens which look luxuriant from a distance are getting gradually depleted into boulder filled hillocks and secondary forests. The semievergreens, considered as a transitional zone between the two forest types show variations at different places in species composition. Some species including a few endemics, show good natural regeneration even in adverse conditions. Such species can be employed for afforestation programmes, enrichment planting and catchment protection.

INTRODUCTION

The forests of Kerala on the western side of the Western Ghats contain a myriad of tropical plants, especially the commercially important timber trees. Other than the works of Wight, Beddome, Hooker, Bourdillon, Gamble and few others, our knowledge on forest trees is limited to some scattered silvicultural publications and stray botanical notes. During the last few decades much environmental changes have taken place and most of our once impenetrable forests are lost, to plantations and human settlements.

At present, the available patches of forests in Kerala are more or less like dispersed groups of 'islands' wherein every other biotype is threatened with extinction having few possibilities of escape. To get a better understanding on these lines and thereby to evaluate the status of our native trees, it was decided to take up a study on the distribution pattern of important tree species of our forests. The Central Circle of the Kerala Forest Department, was selected to initiate the study. One hundred and eight indigenous species, well known or less known, are considered here as the first step.

LOCATION AND METHODOLOGY

The Central Circle is situated between 9⁰-45' and 10⁰-45' north latitudes, and 76⁰6' and 76⁰-57' east longitudes. The principal types of forest vegetation are the Evergreen Semievergreen and Moist deciduous.

The trees selected here are primarily adopted from the published working plans of the Forest Divisions in Central Circle. To collect first hand information on these trees, exploration trips were conducted in different forest areas of Central Circle, covering all the principal vegetation types.

Species were initially ranked common, fairly common, rare, etc. as per the general observation made during field trips. Similar observational data were compared with different forest areas visited and broad generalization made for every other species. Observations found peculiar, pertaining to vegetation were also noted along with the species concerned. Thus a general picture of occurrence is noted for every species treated in the text. Species which are rare and could be sighted at certain localities only, are mentioned specifically.

The number of species listed is in no way complete, the major reason for this being the difficulty in procuring voucher specimens from many large trees. A few species included without representative collections from the area treated are those which could be observed during field trips and identities confirmed from their fallen leaves, flowers, fruits, distinguishable bark and seedlings. These include species like *Palaquium ellipticum*, *Poeciloneuron indicum*, *Cullenia exarillata*, etc. Short notes on less known species of current interest are given wherever felt necessary. Some common but neglected trees like *Macarungapeltata*, *Trema orientalis*, *Sterculia* spp., etc. are also brought in to highlight their importance, particularly in revegetation programmes. Aliens, encroaching our forest lands through cash crop plantations and plantation forestry are not included.

Along with the species listed, the works of Beddome (The Flora Sylvatica for Southern India), Bourdillon (Forest trees of Travancore) and Gamble (Flora of the presidency of Madras) are cited for cross reference.

DISCUSSION

The proportion of good forests in central circle is unfortunately very less. The Sholayar forests at one time were covered with impenetrable evergreens, but the tea plantations at high hills and the dams at Sholayar and Poringal have totally changed the vegetation. Occasional giants of *Bombax*, *Calophyllum* and a few tall *Poeciloneuron*, *Cullenia* and *Mesua* are the sad remains of a grand old time.

The survival of large patches of moist deciduous forests, even in a depleted condition, is due to the non-availability of easily accessible perennial water sources, preventing humans and their cattles to colonise.

Ecologically (socially too) unplanned forestry practices coupled with erratic settlement systems have already played havoc in all forest types. The establishment of a plantation by itself becomes the origin of a new settlement. This no doubt allows many people to settle down and flourish through a new living at a new place but at a later stage will be too detrimental to the plantations themselves. Cultivation practices of tribals too pave way for much destruction. For example, the upper portion of Pooyankutty (where, still one can find abundant numbers of *Dipterocarpus* in steep slopes) suffered maximum ill-treatment from the hill trib Muthavas, who practised nothing other than shifting cultivation for generations. Towards the lower limits things are worse. The abandoned cultivated areas of Muthavas, which were getting regenerated themselves, brought in settlers and large patches of lemon grass with species of *Eulophia*, *Curcuma*, etc., are of common occurrence. The abrupt demarcation of grasslands with the poor jungles speaks many an untold stories of human ill treatment.

It brings in optimism to find that even in such adverse conditions some species do regenerate sufficiently. Most of the deciduous species are adapted to withstand periodical dry weather and the sprouting of many of their seeds starts with the onset of monsoon. It cannot be objected if teak is said as the most accommodative species to our climate. By far teak no doubt is the best tropical forestry species and it seems advisable to grow them in mixtures. The availability of seedlings of evergreen species is in no way less, but their further growth and development are totally influenced by biotic factors. Species like *Mesua nagassarium*, *Dipterocarpus indicus*, *Diospyros buxifolia*, *Vateria indica*, *Chukrasia tabularis*, *Dysoxylum malabaricum*, *Myristica attenuata*, etc. come up as seedlings but sub-adult members of such species are of rare occurrence. Moreover it is interesting to observe that *Atuna travaincorica* (*Parinarium travancoricum*), of which only few trees could be observed and that too only at Poringal Dam catchment, do regenerate and a good number of seedlings could be observed near the trees. Seeds collected from them germinated successfully. In this context it is to be mentioned that the reason for species extinction at present is totally biotic.

The Semievergreens are the best places to observe species establishment and survival. Species like *Vitex altissima*, *Lagerstroemia microcarpa*, *Mallotus philippensis*, *Olea dioica* are common, *Vitex* being predominant. It may be considered as one of the pioneer species within this particular ecosystem in association with *Phyllanthus emblica* and *Dalbergia sissooides* towards hill tops and *Dillenia penlagyna*, *Careya arborea*, *Lagerstroemia microcarpa* and *Terminalia paniculata* downwards.

There are many species found scattered in the disturbed areas especially near man-made grasslands, rocky places, roadsides and villages. These species should be the first ones to invite the attention of foresters and scientists. For years they have shown their capacity to survive many adverse conditions like fire, drought, soil erosion, etc. Their lesser use as fuel is the only criterion which saves them from the axe. These species have the potential to become pioneers in afforestation trials on degraded and barren areas. Denoting *Cochlospermum religiosum*, one of the most neglected species, Gamble (Manual of Indian Timbers p. 38) says, "There is no value for its wood, the tree is useful silviculturally as helping to reforest bare rocky denuded hills, and so pave way for more valuable species." Of similar importance, are *Sterculia guttata*, *Trona orientalis*, *Mallotus philippensis*, *Macaranga peltata*, *Erythrina stricta*, *Careya arborea*, *Emblica officinalis*, *Dillenia peniagyna* etc. But it is to be mentioned here that species like *Macaranga peltata* and *Trema orientalis* prefer moist sites.

It will be worthwhile to introduce fast growing species like *Melochia umbellata* *Pipturus volutinus*, *Macaranga tanarius* etc. in degraded areas to function as pioneer 'reafforesters'.

The urgent need of the time is to improve our over-exploited degraded forests through afforestation programmes and enrichment planting. The depleted evergreen and semievergreen forests near Poringal and Sholayar dams could be used for these which indirectly will improve the catchment and function as a conservation area, and help to undertake species trials with promising less known

CONCLUSION

The evergreens of this Circle which look very luxuriant from a distance are in general getting gradually depleted into boulder filled hillocks and secondary forests, The moist deciduous, still luxuriant at some places is the dominant vegetation type being extensive, containing a good number of commercial timber trees. The over-exploited much weathered but still surviving evergreens with a host of neo-colonisers, conveniently termed semievergreens are common at many places. Though included in a broad and suitable envelope (the term semievergreen), this present day vegetation type show variation at different places in species composition, and can only be considered a transitional zone between the evergreens and moist deciduous.

To call a few species endangered the present day environmental condition seems to be suicidal. In essence all our species other than those brought into cultivation and plantation forestry are endangered. It may here be concluded that it is not the species which are disappearing but the forests with large blocks of different species together. Enrichment planting and reforestation programme with indigenous species, giving due preference to endemics, is a viable solution which can provide long term ecological and economic gains.

REFERENCES CITED

- Bedd : refers to Beddome's *Flora Sylvatica*, wherein the Arabic numerals denote the Icon number, and Roman numerals, the pages of the manual for species not illustrated in the *Flora*.
- Bourd: refers to Bourdillon's *Forest Trees of Travancore* and the numbers given are the species number as given by the author.
- Garnb: refers to Gamble's *Flora of the Presidency of Madras* and the numbers denote the pages in the revised edition by Botanical Survey of India, 1957.

LIST OF SPECIES

- Actinodaphne malabarica* Balakr. (LAURACEAE)
A. hirsuta Hook. f.
Bourd 449; Gamb. 865
Medium sized tree; leaves tapering to both ends, glabrous above, rusty tomentose below; flowers yellow; fruits small.
Occ : Not uncommon in evergreen forests at higher altitudes.
Distr : Western Ghats.
- Ailanthus triphysa* (Dennst.) Alston (SIMAROUBACEAE)
A. malabarica DC.
Bedd. 122; Bourd. 116; Garnb. 116
Large deciduous tree with long pinnate leaves; flowers yellow in long panicles; fruits flat, brown with membranous wings.
occ : Though commonly found growing in domestication, this species was not located in the central circle in natural condition.
Distr : Western Ghats, Ceylon, Burma and Malesia.
Note : A fast growing tree much popularised for match splints.
- Albizia lebbek* (L) Benth. (MIMOSACEAE)
Bedd. 53, Bourd. 234; Garnb. 306
Large deciduous tree; flowers white with long greenish stamens; fruits about a foot long, flattened.
Occ : Not uncommon in moist deciduous forests.
Distr : India (Incl Andarnans), Sri Lanka, Burma, Malesia, Australia and Africa.
- Albizia odoratissima* (L.f.) Benth (MIMOSACEAE)
Bedd. 54; Bourd. 235; Gamb. 306
Medium sized partially deciduous tree with fragrant flowers and brown pods.
Occ : Very common in moist deciduous and occasional in open areas in semievergreen forests.
Distr : India (Excl. Andamans), Sri Lanka, Burma, Malesia
- Albizia procera* (Roxb.) Benth. (MIMOSACEAE)
Bedd. xcvi; Bourd. 233; Gamb. 306
Large deciduous tree with white bark and spreading branches; flowers greenish white; fruit a flattened brown pod.
Occ : Fairly common in the moist deciduous forests.
Distr : India (Incl. Andamans), Burma and Malesia.
- Alstonia scholaris* (L.) R. Br. (APOCYNACEAE).
Bedd. 242; Bourd. 401; Gamb. 565
Buttressed, large deciduous tree with leaves in whorls and aromatic flowers; fruits pendulous, slender, cylindrical.
Occ : Fairly common in moist deciduous and some evergreens, occasional in disturbed evergreens.
Distr India (Excl. Andamans), Sri Lanka, Burma, Malesia and Australia.
Note : The regeneration of the species is good .

Aphanamixis polystachya (Wall.) Parker (MELIACEAE)
Amoora rohituka (Roxb) Wt. & Arn.
Bedd. 132; Bourd. 135; Gamb. 130
Medium sized evergreen tree with long imparipinnate leaves; flowers in spikes; fruits globose, red.
Occ : Fairly common in evergreens and semievergreens.
Distr : India (Incl. Andamans), Sri Lanka, Burma, Malesia.
Note : The wood is reported to be good, but little used.

Aporusa lindleyana (Wt.) Bail. (EUPHORBIACEAE)
Bedd.. 286; Bourd. 474; Gamb. 916
Small much branched evergreen tree with ovate leaves, dull yellow flowers and pulpy globose fruits.
Occ : Fairly common in evergreen and semievergreen forests.
Distr : Western Ghats and Sri Lanka.
Note : This species seems worth for afforestation trials in barren places and grasslands.

Artocarpus gomezianus Wall. ex Trecul ssp. *zeylanicus* Jarret (MORACEAE)
A. lakoocha (non Roxb.)
Bedd. ccxix; Bourd 551; Gamb. 958
Large deciduous tree with oblong-ovate leaves; flowers yellow in globose heads; fruits to the size of a tennis ball, yellow.
Occ : Occasional in evergreens, semievergreens and moist deciduous forests.
Distr : South India and Sri Lanka.

Artocarpus heterophyllus Lam. (MORACEAE)
A. integrifolia (non L. f.)
Bedd. ccxix; Bourd. 550; Gamb. 957
Large evergreen trees with dark green oblong-obovate leaves; flowers yellowish green; fruit a large fleshy tubercled syncarp born on stem and branches.
Occ : Occasional in evergreen forests.
Distr : S W. India (considered endemic to W. Ghats), cultivated widely.

Artocarpus hirsutus Lam. (MORACEAE)
Bedd 308; Bourd 549; Gamb 597
Large tree, leaves broadly ovate (lobed when young); flowers greenish yellow in heads; fruits yellow globose, spinuous.
Occ : Not uncommon in evergreen and semievergreen, occasional in moist deciduous forests.
Distr : Western Ghats.

Atuna trarancorica (Bedd) Kosterm. (ROSACEAE)
Parinarium travancoricum Bedd. (CHRYSOBALANACEAE)
Bedd. ccxxxviii; Bourd 241; Gamb. 310
Medium sized evergreen tree with drooping leaves; flowers in terminal racemes, pinkish white; fruit aoid with woody rugose seed.

Occ : Located only at Poringalkuthu

Distr : Western Ghats

Notes, A good timber tree, the seeds contain oil. Eventhough very rare in the distrbued ecosystem at Poringal, the regeneration is good. Growth at seedling stage is slow and it seems to be shade loving.

***Barringtonia acutangula* (L.) Gaertn.** (LECYTHIDACEAE)

Bedd. 204; Bourd. 287; Gamb. 344

Small to medium sized tree with serrate leaves, tapering to the base; flowers pink In , pendulous racemes; fruits globose to imperfectly angular.

Occ : Common near stream banks.

Distr: India (Excl. Andamans), Sri. Lanka, Burma, Malesia.

***Bischofia javanica* Bi.** (EUPHORBIACEAE)

Bedd. 259; Bourd 467; Gamb. 918

Large deciduous tree; leaves trifoliate with crenate leaflets; flowers small, yellowish; fruits fleshy, depressed globose.

Occ : Not uncommon in semievergreens and evergreens.

Distr : India (Incl. Andamans), Burma, Malesia and Pacific Islands.

***Blepharisteinma membranifolia* (Miq.) Ding Hou.** (RHIZOPHORACEAE)

***B. corymbosum* Wall.**

Bedd. ci; Bourd. 254; Gamb. 326

Medium sized deciduous tree; leaves pale green papery; flowers yellowish white; frultr small, greenish black

Occ : Not uncommon in the moist deciduous and occasional in semievergreens.

Distr : Western Ghats.

Note : The wood needs investigation.

***Bombax ceiba* L.** (BOMBACACEAE)

***B. malabaricum* DC**

Bedd. 82; Bourd. 69; Gamb. 71

Large buttressed tree with digiate leaves, dark red (Occasionally cream coloured) showy flowers and cylindrically ellipsoid fruits; seeds packed in white cotton.

occ : Fairly common tree in evergreens, semievergreens and moist deciduous forests.

Very large buttressed giants are occasionally found in evergreens.

Distr : India (Excl. Andamans), Sri Lanka, Burma, Malesia.

Note : One of the most adaptable trees In all forest types, with very efficient dispersal capacity.

***Bombax insigne* Wall.** (BOMBACACEAE)

Bourd 70; Gamb 71

Medium sized tree with digitate leaves wherein the leaflets are sessile; flowers large, pinkish red (occasionally yellowish) with very numerous stamens; fruits an elongated capsule, seeds embedded in white cotton.

Occ : Not uncommon at lower elevations In rocky places, especially moist deciduour forests.

Distr : Southern and Eastern India (Incl. Andarnans), Burma, Malesia.

Bridelia squamosa (Lam.) Gehrm.

(EUPHORBIACEAE)

B. retusu Spreng

Bedd 260; Bourd. 468; Gamb. 896

Small to medium sized tree (thorny when young) with bright green ovate leaves and fleshy blackish globose fruits.

Occ : Common in the moist deciduous and occasional in semievergreen forests.

Distr : India (Incl. Andamans), Sri Lanka, and Burma.

Note : Fairly fast growing, this species is worth for afforestation trials.

Calophyllum elatum Bedd.

(CLUSIACEAE)

Bedd. 2; Gamb 54

C. tomentosum (non Wt.)

Bourd. 48

Very large tree, the bark with long wavy vertical fissures; leaves glossy; flowers cream coloured; fruits obliquely ovoid, pointed.

Occ : Fairly common in the evergreen forests.

Distr : Western Ghats.

Canarium strictum Roxb.

(BURSERACEAE)

Bedd. 128; Bourd 122; Gamb. 123

Large trees with cylindrical resinous stem; leaves long, pinnate with serrate leaflets; flowers yellow in panicles; fruits bluish, ovoid ellipsoid.

Occ : Not uncommon in the evergreen and semi-evergreen forests.

Distr : Western Ghats.

Carallia brachiata (Lour.) Merr.

(RHIZOPHORACEAE)

C. integerrima DC.

Bedd. 193; Gamb. 325

C. lucida DC.

Bourd. 252.

Medium sized to large evergreen trees with glossy dark green leaves and small, white flowers in cymes; fruits globose.

Occ . Fairly common but sporadic in evergreens and occasional in semievergreens.

Distr : India (Incl Andamans), Sri Lanka, Burma, Malesia

Careya arborea Roxb.

(LECYTHIDACEAE)

Bedd. 205; Bourd. 193; Gamb. 345

Medium sized deciduous tree; leaves large, obovate, serrate; flowers cream coloured; fruit globular, green.

Occ . Fairly common in the deciduous forests and edges of semievergreens in exposed sites.

Distr: India (Excl. Andamans), Sri Lanka, Burma.

Cassia fistula L.

(CAESALPINIACEAE)

Bedd. xci; Bourd. 208; Gamb. 283

Medium sized deciduous tree with glabrous bright green leaves and beautiful yellow flowers in pendulous racemes, fruit long cylindrical.

Occ : Fairly common in Moist deciduous forests and occasional in dry patches in semievergreens.

Distr : India, Sri Lanka, China, Burma, Malesia.

Chukrasia tabularis A. Juss (MELIACEAE)

Bedd. 9; Bourd, 142; Gamb. 133.

Large, beautiful evergreen tree; leaves pinnate with subsessile leaflets; flowers yellowish in terminal panicles; fruit a woody capsule with winged seeds.

Occ : Not uncommon in evergreens and semievergreens.

Distr : South and Eastern India, Andamans, Sri Lanka, Burma. Malesia.

Note : Very good regeneration is observed in the semievergreen patches in hills near Vazhachal. The seed germinate well and the growth rate is moderate. The species is worth to be cultivated.

Cleistanthus collinus Benth (EUPHORBIACEAE)

Gamb 897

Small deciduous tree; leaves glossy green; flowers greenish yellow; fruits globose.

Occ : Fairly common in moist deciduous forests.

Distr : India (Excl. Andamans), Sri Lanka.

Note : Easily reproduceable in coppice, this species is worth given attention in afforestation programmes.

Cochlospermum religiosum (L.) Alston (COCHLOSPERMACEAE)

C. gossypium DC.

Bedd 14; Bourd. 28; Gamb. 36

Small deciduous tree with glossy digitately lobed leaves and large bright yellow flowers

Occ : Not uncommon in rocky places in moist deciduous forests and much disturbed semievergreens.

Distr: India (Excl. Andamans). Sri Lanka and Java (probably in cultivation).

Note : This is a good species to afforest bare rocky hills and as an ornamental.

Cullenia exarillata Robyns (BOMBACACEAE)

C. excelsa Wt.

Bedd. xxx; Bourd. 72; Gamb. 73

Large evergreen tree with glossy lanceolate leaves and dull white flowers which are frequently cauliflorous; fruits globose covered with long spines.

Occ : Not uncommon in evergreens at higher altitudes; good patches are occasionally found at Sholayar.

Distr: Western Ghats.

Cynometra travancorica Bedd. (CAESALPINIACEAE)

Bedd. 316; Bourd. 214

Large buttressed tree, leaves with 2 leaflets; flowers white turning rose; pod flat, curved.

Occ : Evidently rare in Evergreen; collected from Pattikkad hills near Trichur.

Distr: Western Ghats.

Note : The regeneration is good and the species deserves attention.

Dalbergia latifolia Roxb. (FABACEAE)

Bourd 199; Gamb, 270

Large deciduous tree with spreading crown; leaves dark green, rounded towards base
flowers in axillary panicles; tip of pods rounded.

Occ : Occasional in moist deciduous, semievergreen and dry patches in evergreen forests.

Distr : India (Excl. Andamans).

Dalbergia sissooides Grah ex Wt. & Arn. (FABACEAE)

Bedd. 24; Bourd. 200; Gamb 270

Large deciduous tree with pale green glossy leaves; flowers in terminal panicles; pods
tapering to both ends.

Occ : Common in moist deciduous and occasional in semievergreen especially in open;
sunny places

Distr : Western Ghats.

Dillenia pemagyna Roxb. (DILLENACEAE)

Bedd. 104; Bourd. 1; Gamb 4

Medium sized deciduous tree; leaves large, serrate; flowers cream coloured, fragrant;
fruits globose.

Occ : Fairly common in moist deciduous forests, rather abundant but scattered in open
rocky places.

Distr : India (Incl Andamans), Malesia.

Note : It appears to resist forest fires and the growth rate is fast. Worth given attention
in afforesting rocky, barren areas.

Diospyros bourdillonii Brandis (EBENACEAE)

Bourd. 382; Gamb. 547

Large tree with black stem and dark green leaves; flowers white in rusty tomentose
cymes, axillary or from old wood; fruit globose. woody.

Occ : Not uncommon in evergreens.

Distr : Western Ghats.

Diospyros buxifolia (Bl.) Hiern. (EBENACEAE)

D. microphylla Bedd.

Bedd. 133; Bourd. 370; Gamb. 546

Large pretty tree with almost horizontal branches, small leaves and minute white
flowers, fruits small ovoid.

Occ : Fairly common in Evergreens and semievergreens.

Distr : Western Ghats and Malesia.

Note : This species regenerates very well and can tolerate disturbed open places. Worth
cultivating, even as an ornamental.

Diospyros paniculata Dalz (EBENACEAE)

Bedd. cxliv; Bourd. 369; Gamb. 544

Medium sized tree; leaves bright yellow when young, dark green at maturity, flowers
greenish white: fruits ovoid, tomentose.

Occ : Fairly common in evergreens and occasional in semievergreens.

Distr : Western Ghats.

Dipterocarpus indicus Bedd. (DIPTEROCARPACEAE)
Bedd. 94; Bourd. 57; Gamb. 58
Lofty evergreen tree with clean bole and distinctly nerved leaves; flowers white, fragrant; fruits subglobose enclosed by the two winged persistent calyx.
Occ : Fairly common in evergreens and rather uncommon in semievergreens.
Distr: Western Ghats.
Note: The evergreen forests of upper Pooyankutty are dominated by this species, and it is an interesting sight to see their short crowned pillar like stems on cliffs and slopes.

Dysoxylum malabaricum Bedd. ex Hiern (MELIACEAE)
Bedd. liv (D. sp.); Bourd. 127; Gamb. 128
Large evergreen tree with pale green glabrous leaves; flowers greenish yellow in axillary panicles; fruits pear shaped, yellowish.
Occ : Fairly common in evergreen and semievergreens.
Distr: Western Ghats.

Elaeocarpus serratus L. (ELAEOCARPACEAE)
Bedd. xxxviii; Bourd. 93; Gamb. 88
Small tree with crenate serrate leaves and white sub-pendulous beautiful white flowers and ovoid-ellipsoid fruits.
Occ : Fairly common in evergreens and semievergreens.
Distr: South West and Eastern India, Sri Lanka, Malesia.
Note: This species is worth given attention as an ornamental and for its edible fruits.

Elaeocarpus tuberculatus Roxb. (ELAEOCARPACEAE)
Bedd. 113; Bourd. 95; Gamb. 88
Large buttressed tree with obovate leaves, fragrant white to creamy flowers and ovoid fruits.
Occ : Common in evergreens and semievergreens.
Distr : Western Ghats, Burma, Malesia.

Emblica officinalis Gaertn (EUPHORBIACEAE)
Gamb. 906

Phyllanthus emilica L.
Bedd.

Small tree with closely placed overlapping small leaves and pale yellow flowers; fruits globose, fleshy.

Occ : Fairly common in deciduous forests and very common at rocky hill tops.
Distr : India (Excl. Andamans), Sri Lanka, China, Burma and Malesia

Erythrina stricta Roxb. (FABACEAE)
Bedd. 175; Bourd. 196; Gamb. 250
Small to medium sized deciduous tree with prickles; leaves trifoliolate; flowers bright red; pod lanceolate.

Occ : Fairly common in deciduous forests especially much disturbed rocky places.
Distr : S. W. and Eastern India and Burma.
Note : A species worth trying to revegetate rocky barren places.

Evodia lunu-unkenda (Gaertn) Merr.

(RUTACEAE)

Garnb. 105

E. roxburghiana Benth.

Bourd. 100.

E. triphylla Bedd.

Bedd xli

Small to medium sized trees with trifoliate leaves, greenish yellow flowers and small fruits splitting into valves.

Occ : Occasional in evergreens and semievergreens especially disturbed localities.

Distr: India (Excl. Andarnans), Sri Lanka, Burma, Malesia.

Note : This species seems to be fire-hardy, worth including in afforestation.

Fahrenheitia zeylanica (Thw) Airy Shaw

(EUPHORBIACEAE)

Ostodes zeylanicus (Thw) Muell.

Bedd 274; Bourd 505; Gamb. 934

Large tree with long petioled oblanceolate serrate leaves and pale yellow flowers; fruits subglobose, tomentose.

Occ : Not uncommon in evergreens and semievergreens.

Distr: Western Ghats, Sri Lanka.

Filicium decipiens Thw.

(SAPINDACEAE)

Bedd 129; Bourd. 123; Gamb. 178

Beautiful medium sized tree with fernlike leaves, the rachis winged; flowers in axillary panicles; fruit purplish.

Occ : Rare in evergreens.

Distr : Western Ghats and Ceylon.

Note : Moderately fast growing tree; worth given attention as an ornamental a d also for the wood.

Firmania colorata (Roxb.) R. Br.

(STERCULIACEAE)

Gamb. 76

Sterculia colorata Roxb.

Bedd. xxxii; Bourd. 79

Medium sized tree with palmately lobed leaves and scarlet flowers; fruits of membranous follicles.

Occ : Occasional in deciduous forests and much disturbed patches in evergreens and semievergreens.

Distr : India (Incl Andamans), Sri Lanka, Burma.

Note . A fast growing species, worth employed for revegetating baren rocky places.

Gmelina arborea Roxb.

(VERBENACEAE)

Bedd. 253; Bourd. 426; Gamb. 768

Medium sized deciduous tree with yellow flowers and aoid, pleasant smelling fleshy fruits.

Occ : Not uncommon in semievergreen and moist deciduous forests.

Distr : India (Incl. Andamans), Sri Lanka, Burma, Malesia.

- Grewia tiliifolia*** Vahl. (TILIACEAE)
 Bedd. 108; Bourd. 91; Gamb. 84
 Medium sized tree with dull green serrate leaves (reddish when young) and small yellow flowers; fruits small, white turning purplish red.
 Occ : One of the very common species in moist deciduous forests; not uncommon in semievergreens.
 Distr : South, Central and Eastern India, Sri Lanka, Burma and E. Africa.
 Note : Many different species of birds are observed devouring the fruits.
- Haldina cordifolia*** (Roxb.) Risdale (RUBIACEAE)
Adina cordifolia (Roxb.) Hook. f. ex Brand.
 Bourd. 314; Gamb. 412
Nauclea cordifolia Willd.
 Bedd. 33
 Large deciduous tree with long petioled orbicular leaves; flowers yellow in small globose heads; fruits small hairy
 Occ : Fairly common but scattered in semievergreen and moist deciduous forests.
 Distr : India (Excl. Andamans), Sri Lanka, Burma.
- Holoptelia integrifolia*** (Roxb.) Planch (ULMACEAE)
 Bourd. 524; Gamb. 943
Ulmus integrifolia Roxb.
 Bedd. 310
 Large deciduous tree with ovate-cordate leaves; flowers greenish purple; fruit orbicular, winged.
 Occ : Uncommon and occasional in semievergreens.
 Distr : India (Excl. Andamans), Sri Lanka, Burma
 Note : A fast growing tree deserving attention.
- Homalium zeylanicum*** (Gard.) Benth. (SAMYDACEAE)
 Bedd 210; Bourd. 300; Gamb. 369
 Medium to large sized tree with wate, crenate - serrate leaves and odorous flowers clustered in racemes.
 Occ : Fairly common in evergreen and semievergreens.
 Distr : Western Ghats, Sri Lanka
 Note : Frequently occurring in secondary forests, this species with fast growth is worth trying in afforestation programmes.
- Hopea purviflora*** Bedd. (DIPTEROCARPACEAE)
 Bedd. 7; Bourd. 59; Gamb. 59
 Large battressed tree with glossy, undulating leaves; flowers creamy, sweet scented; fruits aoid with two membraneous wings.
 Occ : Not uncommon in evergreens and semievergreens.
 Distr : Western Ghats
 Note . Though Initially a slow grower, it grows rapidly after 5-6 years.

Humboldtia bourdillonii Prain (CAESALPINIACEAE)
Bourd. 220 (H. sp.); Gamb. 291
Medium sized tree with flattened leaf rachis; flowers in fascicles from stem, petals pinkish white and sepals crimson; fruits thin scarlet, pubescent.
Occ : Rare in evergreen forests
Distr : Western Ghats
Note : Very rare endemic, this species should be given special attention.

Humboldtia Vahliana Wt. (CAESALPINIACEAE)
Eedd xciii; Bourd. 221; Garnb. 291
Medium sized to large tree; leaf rachis terete with opposite leaflets; flowers white streaked purplish brown in hairy racemes; fruits flat, pubescent pale brown.
Occ : Common on river banks towards the water line.
Distr : Western Ghats
Note : The irregularly buttressed and knobbed roots of this species collect debris carried by rivers and checks the undesirably rapid flow of rivers in rainy season. Worth given special attention as a stream bank protector.

Hydnocarpus alpina Wt. (FLACOURTIACEAE)
Bedd. 77; Bourd. 34; Gamb. 37
Small to medium sized evergreen tree with stems frequently fluted, leaves reddish when young, dark green glossy at maturity, flowers yellowish in axillary cymes, fruits ovoid-globose, brown tomentose.
Occ : Fairly common but sporadic in evergreens and occasional in semievergreens.
Distr : Western Ghats and Sri Lanka.

Hydnocarpus laurifolia (Dennst) Sleumer (FLACOURTIACEAE)
H. wightiana Bl.
Bedd 15, Bourd. 33; Gamb. 37
Medium sized evergreen tree, leaves more or less subserrate with arching nerves; flowers white; fruits globose woody.
Occ : Occasional in evergreen forests and stream banks in semievergreens. Pure patches are occasionally observed at lower altitudes
Distr : Western Ghats

Hymenodictyon excelsum (Roxb) Wall. (RUBIACEAE)
Bedd. cxxx; Bourd. 317; Gamb. 416
Medium sized deciduous tree with yellowish green leaves and pale green fragrant flowers; fruit an elongated dark brown capsule.
Occ : Fairly common in moist deciduous forests.
Distr : India (Excl Andamans), Burma, Malesia
Note : Moderately fast growing with rather good regeneration, this species deserves attention in afforestation programmes in rocky places and grasslands.

Knema attenuata (Hook f. & Thoms.) Warb. (MYRISTICACEAE)
Gamb. 851
Myristica attenuata Wall.ex Hook.f. & Thomas.
Bourd. 435

M. corticosa Bedd.

Bedd. 271

Medium sized tree; leaves dark green glabrous above, glaucous below; flowers triangular, tomentose; fruits ovoid.

Occ : Common in evergreens and occasional in semievergreens.

Distr : Western Ghats.

Lagerstroemia microcarpa Wt.

(LYTHRACEAE)

Bedd. 30

L. lanceolata Wall. ex Clarke

Bourd 294; Gamb. 362

Large deciduous tree with the bark peeling off in flakes, new branchlets arising from knobs in branches; flowers white; fruits ellipsoid.

Occ : Common in the moist deciduous forests and fairly common in semievergreens.

Distr : Western Ghats

Note : The illustration and the description given by Beddome (Bedd. 32 as *L. lanceolata*)s *L. parviflora* Roxb., which is not observed in central circle.

Lagerstroemia reginae Roxb.

(LYTHRACEAE)

Bedd. 29

L. flos-reginae Retz.

Bourd. 295; Gamb. 362

Large deciduous tree with ovate lanceolate leaves and attractive pink flowers in conical panicles; fruits subglobose, woody.

Occ : Occasional near stream banks.

Distr : India (Excl. Andamans), Sri Lanka, China, Burma, Malesia and New Guinea.

Lannea coromandelica (Houtt) Merr.

(ANACARDIACEAE)

Odina wodier Roxb.

Bedd. 123; Bourd. 193; Gamb. 187

Large deciduous tree; leaves pinnate, the leaflets turning reddish brown; flowers yellow in branched (male) and unbranched (female) racemes; fruits ovoid, compressed, shining red when matured.

Occ : Fairly common in moist deciduous and in secondary forests near evergreens and semi-evergreen

Distr: India (Incl. Andamans), Sri Lanka, Burma, Malesia.

Litsea bourdillonii Gamble

(LAURACEAE)

Gamb. 866

Medium sized tree with obovate leaves; flowers greenish yellow in clusters; .fruits oblong on cupular perianth.

Occ : Not uncommon in evergreens at higher altitudes.

Distr: Western Ghats.

Litsea floribunda (Bl.) Gamble

(LAURACEAE)

Gamb. 867

L. wightiana Hook. f.

Bourd

Tetranthera wightiana Bedd.

Bedd. 293

Medium sized tree with abruptly acuminate, brown hairy leaves; flowers white; fruits ovoid on enlarged perianth.

Occ : Occasional in evergreens at higher altitudes.

Distr: Western Ghats.

Lophopetalum wightianum Arn.

(CELASTRACEAE)

Bedd. 145; Bourd. 157; Gamb. 147

Lofty evergreen tree with glossy leaves; flowers yellowish red in cymes; fruit elongated, 3-angled.

Occ : Occasional in evergreens.

Distr : Western Ghats.

Macaranga peltata Muell-Arg.

(EUPHORBIACEAE)

Gamb. 928

M. roxburghii Wt.

Bourd. 522

M. tomentosa Wt.

Bedd. 287

Small to medium sized tree with long petioled orbicular leaves; flowers greenish yellow in panicles; fruits globose, densely glandular.

Occ : Common in secondary growth near evergreens and semievergreens.

Distr : Peninsular India, Sri Lanka.

Note : Very large trees can be observed in the secondary patches near Poringalkuthu reservoir and Sholayar, their crowns reaching upto the top canopy of large evergreen trees. A promising species for afforestation, but seems to prefer moist areas.

Mollotus philippensis (Lam.) Muell.

(EUPHORBIACEAE)

Bedd. 289; Bourd. 519; Gamb. 924

Small trees with strongly 3-nerved ovate lanceolate leaves; flowers in red spikes; fruit globose, 3-valved, covered with bright red powder.

Occ : Common in evergreens, semievergreens and secondary forests.

Distr : India (Incl. Andamans), Sri Lanka, China, Burma, Malesia and Australia.

Note : This species which reproduces well from seeds and coppice shoots is good as a fuelwood species in afforestation.

Mangifera indica L.

(ANACARDIACEAE)

Bedd. 162; Bourd. 179; Gamb. 185

Medium sized to large evergreen tree, leaves purplish yellow when young, glossy green when matured; flowers cream coloured in panicles; fruits fleshy.

Occ : Rare in evergreens.

Distr: India. Burma, Malesia.

Note : Though evidently rare, a few giant trees were observed near Chimony dam.

- Melia dubia*** Cav. (MELIACEAE)
 Bourd. 125
- M. composita*** Willd.
 Bedd. 12; Gamb. 126
 Large deciduous tree with deeply cracked bark; leaves 2-3 pinnate; flowers white in panicles; fruit ovoid, greenish yellow.
 Occ : Fairly common in deciduous forests.
 Distr: India (Excl. Andamans), Sri Lanka, Malesia, Africa, Australia.
 Note : This species with rapid growth seems worth for plantation trials.
- Meliosma simplicifolia*** (Roxb.) Walp. (SABIACEAE)
 Bedd. Ixxvii; Bourd. 177; Gamb. 182
 Small tree, leaves narrowed to base; flowers cream coloured; fruit globose, purplish brown.
 Occ : Fairly common in evergreen and semievergreen forests.
 Distr : Southern and Eastern India, Sri Lanka, Burma, Malesia.
- Mesua nagassarium*** (Burm.f.) Kosterm. (CLUSIACEAE)
M. ferrea L.
 Bourd. 51; Gamb. 55
M. coromandelina Wt.
 Bedd. 64
 Tall evergreen tree, frequently buttressed; leaves lanceolate, reddish when young, glossy green when matured with waxy lower surface, nerves faint; flowers white with yellow stamens; fruits ovoid with persistent sepals.
 Occ : Fairly common in evergreen forests at higher altitudes.
 Distr : South India.
- Milium tomentosum*** (Roxb.) Sinclair (ANNONACEAE)
Saccopetalum tomentosum Hook.f. & Thoms.
 Bedd. 39; Bourd. 18; Gamb. 16
 Small to medium sized deciduous tree with ovate leaves; flowers pale green, brown tinged, on long slender pedicels; fruits of stalked pubescent carpels.
 Occ : Fairly common in moist deciduous forests and occasional in semievergreens.
 Distr : Southern and Eastern India.
- Mimusops elengi*** L (SAPOTACEAE)
 Bedd 40; Bourd. 362; Gamb. 538
 Medium sized evergreen tree with dark green glossy leaves and white fragrant flowers; fruits ovoid, greenish yellow.
 Occ : Occasional in evergreen and semievergreen forests.
 Distr: Southern India and Andamans, Sri Lanka, Burma, Malesia.
- Mitragyna parvifolia*** (Roxb.) Korth (RUBIACEAE)
 Gamb. 413
Stephegyne parvifolia Korth.
 Bourd. 315

S. parvifolia Roxb.

Bedd 34

Tall tree; leaves glabrous with prominent nerves; flowers yellowish in globose heads fruit small, vertically ribbed.

Occ : Occasional in moist deciduous and semievergreen forests.

Distr: India, Sri Lanka, Burma

Myristica dactyloides Gaertn.

(MYRISTICACEAE)

M. beddomei King

Bourd. 432; Garnb. 850

M. laurifolia Hook. f. & Thoms.

Bedd. 267

Large tree; leaves dark green above, glaucous below; flowers small, white; fruits bigger than a pigeon's egg; seeds with orange-red lacinated aril.

Occ : Fairly common in evergreen forests especially at higher altitudes.

Distr: Western Ghats and Ceylon

Note : This species very common at upper Pooyankutty is being largely exploited for its nutmeg like aril, even at the expense of felling the trees.

Olea dioica Roxb.

(OLEACEAE)

Bedd. cliii Bourd. 395; Gamb. 559

Medium sized tree with tapering leaves; flowers cream coloured; fruits ovoid, blue.

Occ : Fairly common in evergreen, semievergreen and occasional in moist deciduous forests.

Distr: South west and North eastern India.

Note: A tree accommodative to different forest types with good wood, deserves attention in afforestation programmes.

Ormosia travancorica Bedd.

(FABACEAE)

Bedd. 45; Bourd 205; Gamb. 275

Large tree with dense crown; leaves imparipinnate, the leaflets glossy above, greyish below; flowers cream coloured, stripped purple; pod reddish brown, hard, containing usually one bright red seed.

Occ : Not uncommon in evergreens.

Distr: Western Ghats

Note : Moderately fast growing, with good wood and fatty seeds, this endemic species requires special attention.

Palaquium ellipticum (Dalz.) Engl.

(SAPOTACEAE)

Bourd. 360; Gamb. 537

Bassia elliptica Dalz.

Very large tree with cylindrical stem and elliptical leaves; flowers white, fragrant; fruits ellipsoid green.

Occ : Not uncommon in the evergreen forests at higher altitudes.

Distr: Western Ghats

Persea macrantha (Nees) Kosterm.

(LAURACEAE)

Machilus macrantha Nees

Bedd. 264; Bourd. 441; Gamb. 859

Large trees; leaves elliptic-oblong glaucous at the lower surface; flowers cream coloured in terminal panicles; fruits globose black.

Occ : Fairly common in evergreen, semievergreen and occasional in moist deciduous forests.

Distr : Western Ghats, Sri Lanka.

Pittosporum nilghirens Wt. & Arn.

(PITTOSPORACEAE)

Bedd. 17; Bourd. 36; Gamb. 40

Small evergreen tree of higher altitude, bark lenticillate, strong smelling, somewhat like bruised bugs; leaves shining; fruits small.

Occ : Evidently very rare in evergreens.

Distr : Western Ghats

Note : The tribals near Sholayar call them 'Analivegum'; the extract of the bark used internally and the crushed bark externally on wounds, as an antidote for snake poison. The plant 'Analivegam' is usually considered as *Alstonia venenata* R. Br (Apocynaceae); but episodes as narrated by the tribals about the species of *Pittosporum*, is more convincing. This species requires special attention.

Poeciloneuron indicum Bedd.

(CLUSIACEAE)

Bedd. 3; Bourd. 52; Gamh 56

Large evergreen tree with supporting roots at base; leaves parallelly multinerved flowers cream coloured, fruits ovoid beaked.

Occ : Not uncommon in evergreens at less disturbed areas, especially at higher altitudes.

Distr : Western Ghats.

Polyalthia coffeoides Benth & Hook .

(ANNONACEAE)

Bedd. 73; Bourd. 7; Gamb. 11

Medium sized evergreen tree, flowers long, cream coloured, usually in clusters from stem and branches; fruit a long capsule.

Occ : Fairly common in evergreen forests, rather frequent near Vazhachal.

Distr : Western Ghats, Sri Lanka.

Polyalthia fragrans (Dalz.) Bedd.

(ANNONACEAE)

Bedd. 74; Bourd. 8; Gamb. L.f

Tall, handsome, straight stemmed evergreen tree, leaves membraneous; flowers fragrant in cymes from tubercles on branches; fruits of ovoid carpels.

Occ : Fairly common in evergreen forests and occasional in semievergreens.

Distr : Western Ghats.

Prunus ceylanica (Wt.) Miq.

(ROSACEAE)

Pygium wightianum Bl. ex C. Muell

Bourd. 242; Gamb. 311

P. ceylanicum Bedd.

Bedd. 59

Medium sized evergreen tree with dark green glossy leaves and white flowers; fruits dull green, oblong.

Occ : Evidently rare in Evergreens:

Distr : India, Sri Lanka

Pterocarpus marsupiumRoxb.

(FABACEAE)

Bedd. 21; Bourd. 203; Gamb. 271

Large deciduous tree with glabrous leaflets and sweet scented yellowish orange flowers; fruits suborbicular, flat.

Occ : Fairly common in moist deciduous and occasional in semievergreens.

Distr : Southern and Central India, Sri Lanka.

Note : An important timber species, it is frequently found grown in house compounds.

Pterospermum reticulatum Wt. & Arn

(STERCULIACEAE)

Bedd. xxxiv; Bourd. 85; Gamb. 77

Graceful tree; leaves ovoid cuneate, whitish at base, lobed when young; flowers white, fruit an ovoid tomentose brown capsule.

Occ : Occasional in evergreen, semievergreen and moist deciduous forests.

Distr : Western Ghats.

Radermachera xylocarpa (Roxb). K Schum.

(BIGNONIACEAE)

Gamb. 702

Bignoni xylocarpa Roxb.

Bedd. 70

Stereospermum xylocarpum Benth & Hook.f.

Bourd. 417

Medium sized deciduous tree; leaves large, bipinnate; flowers white, yellow tinged fragrant, in panicles; fruits a cylindric curved capsule, tuberculate.

Occ : Occasional in semievergreens and moist deaduous forests especially in rocky places.

Distr : Southern India.

Note : A very good patch (probably secondary) of this species in association with *Dalbergia sissoides*, *Wrightia tinctoria*, *Sterculiaguttata* etc. was observed near Sholayar. This tree deserves attention, especially in afforestation of barren lands.

Reinwardtiidendron anamalaiense(Bedd), Mabblerly

(MELIACEAE)

Lansium anamalla yanam Bedd.

Bedd. 131; Bourd. 134; Gamb. 130

Medium sized tree with dark green impripinnate leaves; flowers in spikate racemes fruits ovoid, seed arillate.

Occ : Fairly common in the evergreen forests rather abundant near Sholayar and upper Pooyankutty .

Distr : Western Ghats

Note : From the reports the timber appears to be good; detailed studies required.

Schleichera oleosa (Lour.) Oken

(SAPINDACEAE)

S. trijuga Willd.

Bedd. 119; Bourd. 169; Gamb. 177

Medium sized deciduous tree with young leaves red and glossy green at maturity flowers yellowish in panicles; fruts globose; seed arillate.

Occ : Fairly common in moist deciduous and semievergreen forests.

Distr : India (Excl. Andamans), Sri Lanka Burma, Malesia.

Note : Promising for its timber; fruits, seeds and the lac it provides. It survives well in different climatic and edaphic conditions and is worth given attention in plantation forestry.

Spondias indica (Wt. & Arn) Airy Shaw & Forman (ANACARDIACEAE)

Solenocarpus indica Wt. & Arn.

Bedd. 233; Bourd. 192; Gamb 187

Tall tree, leaves pinnate with oblong bright green leaflets; flowers white in panicles; fruits ovoid:

Occ : Not uncommon in evergreens at higher altitudes.

Distr : Western Ghats

Spondias pinnata (L.f.) Kurz. (ANACARDIACEAE)

S. Mangifera Willd

Bedd. 169; Bourd. 194; Gamb. 186

Medium sized deciduous tree; leaves pinnate, crowded at branch tips; flowers white; fruits ovoid fleshy.

Occ : Evidently rare and scattered in semievergreen and moist deciduous forests.

Distr : India (Incl. Andamans), Sri Lanka, Burma, Malesia.

Sterculia gurtata Roxb. (STERCULIACEAE)

Bedd. 105; Bourd. 77; Gamb. 76

Medium sized tree with ovate leaves and pink dotted white flowers; fruits scarlet in follicles.

Occ : Fairly common in semievergreens and moist deciduous; seems to prefer sunny localities.

Distr : South India.

Sterculia villosa Roxb. (STERCULIACEAE)

Bedd. xxxii; Bourd. 76; Gamb. 76

Medium sized deciduous tree with fibrous bark; leaves serrate, lobed; flowers cream, coloured; fruits of scarlet villous follicles.

Occ : Not uncommon in moist deciduous forests; common in open and sunny places.

Distr : India (Incl. Andamans), Burma.

Stereospermum colais (Buch-Ham. ex Dillw) Mabb. (BIGNONIACEAE)

S. tetragonum A. DC

Gamt. 701

S. chelanoides (non DC)

Bedd 72; Bourd 415

Large tree with pinnate leaves; flowers yellow, red veined in panicles; fruits long curved.

Occ : Occasional in moist deciduous and semievergreens

Distr : India (Excl Andamans), Sri Lanka, Burma.

Note : A species showing fairly good regeneration, this valuable medicinal plant needs special attention.

- Strombosia ceylanica*** Gardn. (OLACACEAE)
 Bedd. 137; Bourd. 146; Gamb. 137
 Large evergreen tree with lanceolate leaves and greenish flowers; fruits obovoid, purplish.
 Occ : Not uncommon in evergreen forests.
 Distr: Western Ghats and Ceylon.
- Syzygium cumini*** (L.) Skeels (MYRTACEAE)
Eugenia jambolana Lam.
 Bedd. 197; Bourd. 270
- Syzygium jambolanum*** (Lam.) DC.
 Gamb. 340
 Large tree with tapering leaves and fragrant white flowers; fruits succulent, blackish.
 Occ : Fairly common in evergreens and semievergreens, especially sunny places.
 Distr : India (Incl. Andamans), Sri Lanka, Burma, Malesia.
- Tectona grandis*** L f. (VERBENACEAE)
 Bedd. 250; Bourd 424; Gamb. 765
 Large deciduous tree with obovate leaves and white flowers in terminal panicles; fruits spongy.
 occ : Fairly common in deciduous forests.
 Distr : India (Excl. Andamans), Burma, Malesia.
- Terminalia bellerica*** (Gaertn.) Roxb. (COMBRETACEAE)
 Bedd. 19; Bourd. 256; Gamb. 328
 Large deciduous tree, buttressed; leaves long petioled; flowers yellow, strong smelling; fruits ovoid.
 Occ : Fairly common in moist deciduous and occasional in semievergreen forests.
 Distr : India (Excl. Andamans), Sri Lanka, Burma, Malesia.
- Terminalia crenulata*** Heyne ex Roth (COMBRETACEAE)
 Gamb. 329
T. tomentosa Wt: & Arn. (var. *crenulata* Clarke)
 Bedd. 17; Bourd. 259
 Large deciduous tree with cracked blackish bark and thin leaves; flowers cream coloured; fruits ovoid with 5 brown wings.
 Occ : Very common in moist deciduous and occasional in semievergreens.
 Distr : Southern and Eastern India, Burma.
- Terminalia paniculata*** Roth. (COMBRETACEAE)
 Bedd. 20; Bourd. 261; Gamb. 329
 Large tree with dull green leaves and whitish flowers; fruits brownish with 3 wings.
 Occ : Very common in moist deciduous forests and occasional in semievergreens.
 Distr : Western Ghats.
- Tetrameles nudiflora*** R. Br. ex Benn. (DASTICACEAE)
 Bedd. 212; Bourd. 302; Gamb. 384
 Very large deciduous tree with buttresses; leaves ovate cordate; flowers in panicles (male) and short racemes (Female); fruit ovoid, ribbed.

Occ : Fairly common in moist deciduous and not uncommon in evergreens and semievergreens.

Distr : South Western and Eastern India and Andamans, Sri Lanka, Burma.

Note : This fast growing species is one of the largest trees observed in central circle. It is worth given proper attention.

Toona ciliata Roem (MELIACEAE)

Cedrela toona Roxb. ex Rottl.

Large partially deciduous tree; leaves pinnate with lanceolate leaflets; flowers white in drooping panicles; fruits ovoid with numerous brown thin winged seeds.

Occ : Not uncommon in evergreen and semievergreen forests.

Distr : India (Excl. Andamans), Burma, Malesia, Australia.

Trema orientalis (L) Bl. (ULMACEAE)

Bourd. 528; Gamb. 945

Sponia wightii Planch.

Bedd. 311

Small tree with hairy lanceolate leaves and greenish flowers; fruits small.

Occ : Common in secondary growth in openings and forest edges.

Distr : India, Sri Lanka, Burma, Malesia

Note : A very fast growing tree worth afforestation trials in degraded areas.

Trewia nudiflora L. (EUPHORBIACEAE)

Bedd. 281; Bourd. 521; Gamb. 922

Medium sized deciduous tree with ovate cordate leaves and greenish flowers in racemes; fruits small globose.

Occ : Fairly common in samievergreens and occasional in moist deciduous forests.

Distr : India (Excl. Andamans), Sri Lanka, Burma, Malesia.

Note : A fast growing species worth given attention.

Turpinia malabarica Gamble (STAPHYLEACEAE)

Gamb. 173

Large tree with yellow young leaves; flowers cream coloured; fruit globose, greyish brown.

Occ : Not uncommon in evergreens and semievergreens.

Distr : Western Ghats.

Vateria indica L. (DIPTEROCARPACEAE)

Bourd. 66; Gamb. 61

V. malabarica Bl.

Bedd. 84

Large evergreen tree with strong nerved leaves; flowers cream coloured, fragrant; fruits ovoid with enlarged sepals at base.

Occ : Fairly common in evergreens and occasional in semievergreens.

Distr : Western Ghats.

Vepris bilocularis (Wt. & Arn.) Engl. (RUTACEAE)

Gamb. 108

Toddalia bilocularis Wt. & Arn.

Bedd. xliii; Bourd. 102

Large evergreen tree with trifoliolate leaves, yellow when young; flowers greenish yellow; fruits small, globose.

Occ : Occasional in evergreens

Distr : Western Ghats

Note : This large tree requires attention.

Vernonia arborea Ham.

(ASTERACEAE)

Bourd. 341

V. monosis Clarke

Gamb. 473

Monosis wightiana DC.

Bedd. 226

Small to medium sized attractive tree with tomentose leaves and purplish white flowers in large panicles.

Occ : Fairly common in evergreen and semievergreens especially in disturbed areas at higher altitudes.

Distr : S. West & Eastern India, Sri Lanka, Burma, Malesia.

Note : This neglected species requires attention.

Vitex altissima L.f.

(VERBENACEAE)

Bedd. 252; Bourd. 420; Gamb. 772

Large deciduous tree with 3 (sometimes 5) foliolate leaves and small violet flowers in terminal panicles; fruits globose.

Occ : Occasional in evergreens, common in semievergreens and sporadic in moist deciduous forests.

Cistr : South India, Sri Lanka

Note : This is one of the dominant species of semievergreens and the growth is moderately fast.

Xylia xylocarpa (Roxb.) Taub.

(MIMOSACEAE)

Gamb. 295

X. dolabriformis Benth.

Bedd. 186; Bourd. 226

Medium sized tree with bipinnate leaves; flowers cream coloured in globose heads; fruits falcate, dark brown, woody.

Occ : Common in moist deciduous and occasional in open places in semievergreens.

Distr : India (Excl. Andamans), Burma, Malesia.

Zanthoxylum rhetsa (Roxb.) DC

(RUTACEAE)

Bedd. xli; Bourd. 101; Gamb 106

Large deciduous tree with conical prickles on the stem; leaves bipinnate; flowers pale yellow in panicles; fruits small aromatic.

Occ : Occasional in evergreen, semievergreen and moist deciduous forests.

Distr : Peninsular India, Burma, Malesia.

Note : A fast growing species with sufficient regeneration is worth given attention in plantation forestry.



Strombosia ceylanica



Cynometra travancorica



Aphanamixis polystachya



Actinodaphne malabarica





Humboldtia vahliana



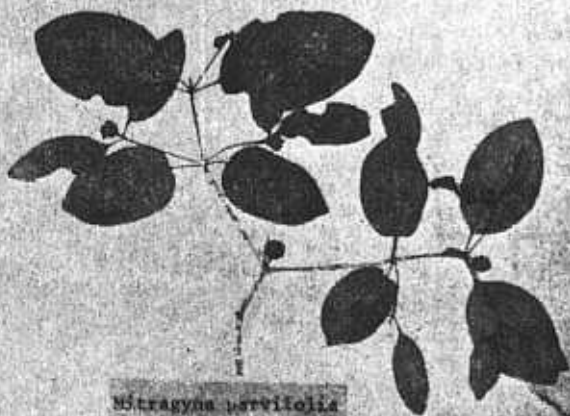
Prunus ceylonica



Turpinia malabarica



Spondias indica



Stragosa parvifolia



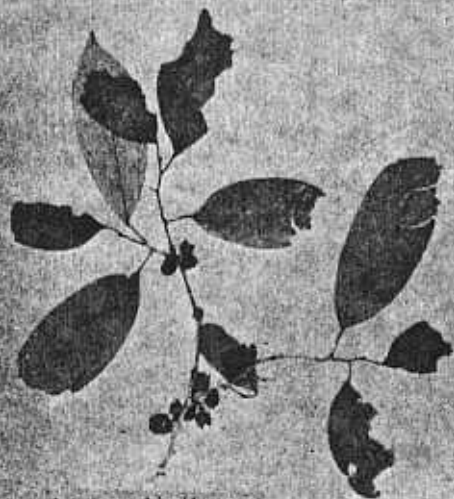
Vernonia arborea



Diospyros bourdillonii



Vepris bilocularis

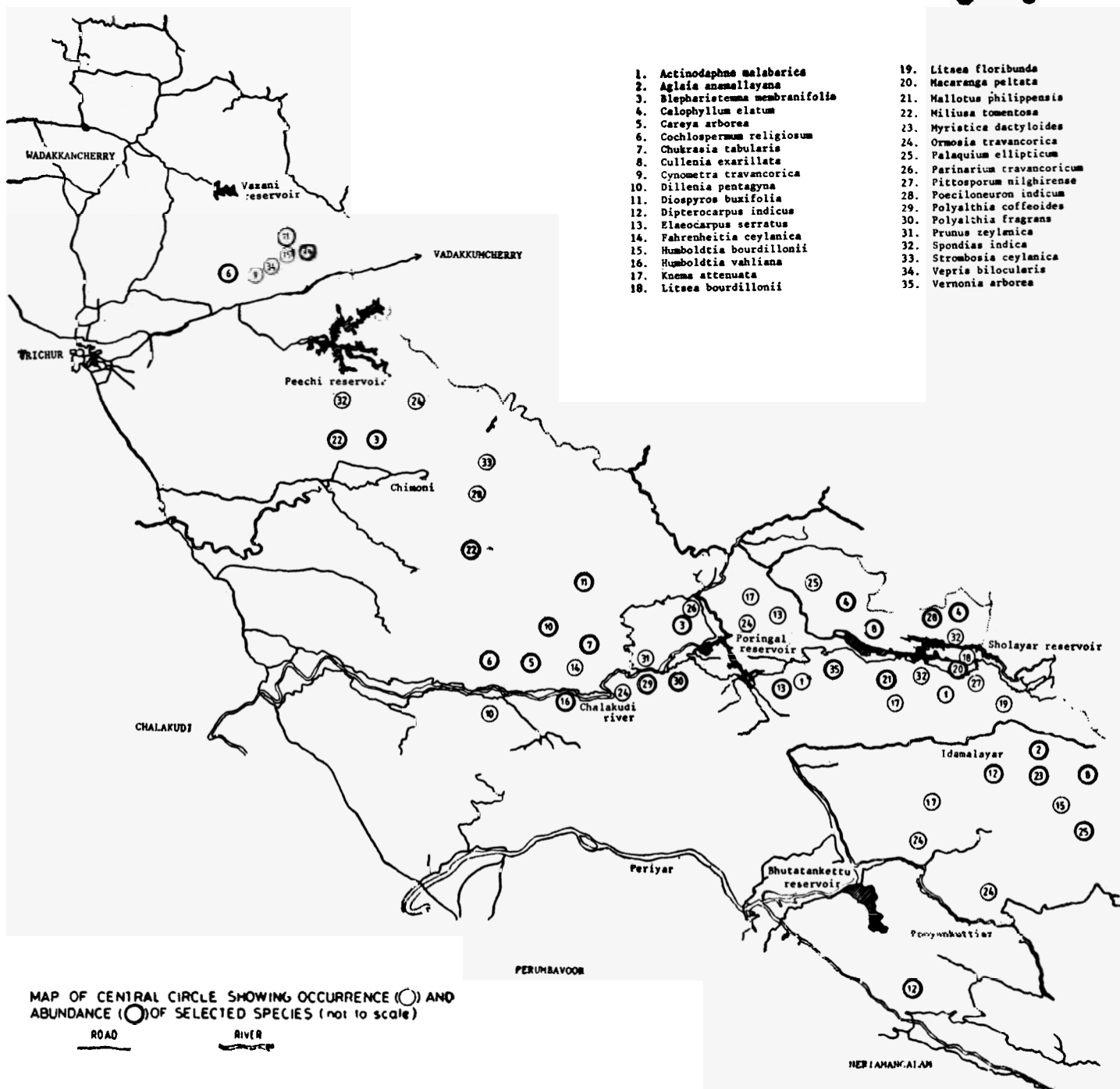


Aporosa lindleyana



Aglaia anomallayana

10cm





Persea macrantha



Litsea bourdillonii



Bischofia javanica



Dysonia malabarica

5 cm



Pternanthia reynoldsii