

The Ecology and Forest Types of the Peat Swamp Forests
of Sarawak and Brunei in relation to their Silviculture

by

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Appendices

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Appendix 1

A catalogue of the flora of the peat swamp forests
of Sarawak and Brunei including all recorded species of
flowering plants, ferns and fern allies.

A catalogue of the flora of the peat-swamp forests of Sarawak and Brunei including all recorded species of flowering plants, ferns and fern allies

Abbreviations used in the text: Div.: Administration Division of Sarawak; F.R.: Forest Reserve; g.: girth at 4'6" from ground; h.: total height; I.: Iban; Kpg.: Kampong (village); L.D.F.: lowland dipterocarp forest; M.: Malay; Mil.: Milanau; P.F.: Protected Forest; Sg.: Sungai (river); Tj.: Tanjong (bend in a river).

ANGIOSPERMAE

I. DICOTYLEDONS

DILLENIAEAE

Dillenia L.

- 1. Dillenia pulchella (Jack) Gilg. simpoh (M.), beringin (I.), jengin perempuan (Mil.).

II Div.: Triso 3154; III Div.: Igan 1590, Pulau Bruit 804, 2664, 2663, Loba Kabang P.F. 523, 411, Lepah P.F. 8079; V Div.: Kayangeran F.R. 1566.

Large tree, 96 - 108 ins.g., occasional in P.C.1 and rather more common in coastal swamps; throughout Sarawak and Brunei.

- 2. Dillenia pulchella (Jack) Gilg. var. simpoh (M.), beringin (I.), jengin laki (Mil.).

II Div.: Saribas F.R. 8551; III Div.: Pulau Bruit 7906, 9284, Singat 9747, Lassa 12430; V Div.: Kayangeran F.R. 1781; Brunei: Anduki 2142.

Small tree, frequently little more than a shrub, 10 to 20 ft. in height, but may reach 18 - 24 ins. g.; occasional, locally frequent, in P.C.s 1 and 2 throughout Sarawak and Brunei. This is very similar to 1. above but whereas the latter is a large tree the variant is a small tree of the understorey growing in association with 1, and flowering and fruiting more frequently.

Tetracera L.

- 1. Tetracera arborescens Jack.

II Div.: Triso 12873; III Div.: Lassa P.F. 12414.

Small straggling shrub or climber, rare in understorey of P.C. 1, more abundant in secondary swamp forest. Recorded from Maludam Peninsular and Bejang Delta.

MAGNOLIACEAE

Aromadendrum Bl.1. Aromadendrum nutans Dandy.

merabungai (I.), medang limo
(Mil. Oya), medang ikan (Mil.).

II Div.: Simanggang 4806; III Div.: Loba Kabang P.F. 516, 1577,
867, Naman F.R. A 95, Daro F.R. 5233.

Medium-sized tree, 48 - 60 ins. g., occasional in P.C.s 1 - 2,
locally abundant in P.C. 3 in the Sg. Tissak, II Div. Probably
occurs throughout Sarawak and Brunei, but not yet recorded from
Brunei and V Div. Easily identified in the forest by its thick
fibrous bark which gives off a pungent fragrance when initially
cut.

Specimen in Kew: 3660 (Beccari), Type - A.

ANONACEAE

Artabotrys R. Br.1. Artabotrys suaveolens (Bl.) Bl.

V Div.: Kuala Lawas 9114.

Climber to height of 60 ft. in P.C. 2 near coast, and recorded
from only the one locality.

Cyathocalyx Champion.1. Cyathocalyx biovulatus Boerl.

eis (Mil. Matu),
selemo (M.),
mandap (Kedayan),
ein pendok (I.).

II Div.: Saribas F.R. 8545, 8561, Triso 3152, Lingga 4819;

III Div.: Loba Kabang F.R. 2764, 9709, 693, 79322 (W.-S.), 514,
Sg. Kelepa'an A 77, Naman F.R. A 71, Pulau Bruit P.F. 8028, 9264,
9210, 8029, Daro F.R. 5240; Brunei: Badas, 2836.

Small tree, 12 - 24 ins. g., occasionally larger, frequent in
lower storey of P.C. 1 throughout Sarawak and Brunei. A
characteristic tree of peat swamp forests which flowers and
fruits all the year round.

Specimens in Kew: 653 (Beccari), 1869, derc (Haviland) - C.

Disepalum Hk. f.1. Disepalum anomalum Hk. f.

I Div.: Simunjan 11732; IV Div.: Miri, Sg. Dua 3288; V. Div.:
Kayangeran F.R. 2024; Brunei: Badas 5690.

Shrub or small tree of understorey, 6 - 9 ins. g. and 15 - 20 ft.
high; rare in P.C.s 1 and 2; through Sarawak and Brunei; also
known to occur in heath forest.

Fissistigma Griffith.

1. Fissistigma paniculatum (Ridley) Merr.

III Div.: Loba Kabang 436.

Medium-sized climber, rare in P.C. 1, and recorded from only the Rejang Delta.

Goniothalmus Hook. f. et Thoms.

1. Goniothalmus malayanus Hook. f. et Th.

serbah (M.),
puhin (Mil.),
lim panas paya.

I Div.: Setapok F.R. 4787; II Div.: Simanggang 9431, Saribas F.R. 8514, 8512, Ng. Skrang 9829; III Div.: Pulau Buit 8391, 9211, Lepah P.F. 5202, 8063, Loba Kabang P.F. 550, 541, 79324 (W.-S.), Lassa 12431; V Div.: Kayangeran F.R. 4911, 1561; Brunei: Anduki F.R. 2232.

Small tree, 12 - 24 ins. g., frequent and widely distributed in P.C.s 1 and 2 throughout Sarawak and Brunei; also occurs in heath forest.

Specimens in Kew: borc, dxfc (Haviland) - C.

2. Goniothalmus tapis Miq.

selukai (I.),
puhin (Mil.),
serbah semangun (M.).

III Div.: Naman F.R. 5062, Daro F.R. 5236, Batang Igan 689, Sg. Pasir A 125; Brunei: Badas 2851.

Medium-sized tree, 36 - 48 ins. g., occasional in P.C.s 1 and 2 throughout Sarawak and Brunei. The bark is used as a repellent against mosquitoes.

Mezzettia Beccari.

1. Mezzettia leptopoda (Hk. f. et Th.) Oliver.
(Mezzettia havilandii (Boerl.) Ridley.)

buah munau (Mil.),
kepayang babi.

II Div.: Tj. Keranji 12890; III Div.: Loba Kabang P.F. 2660, 868, 2719, Matu Daro P.F. 12264, Pulau Buit P.F. A 173; IV Div.: Sg. Dua 3254.

Large tree, 72 - 84 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei.

In Kew the specimens collected closely match both the Type, 2335 (Haviland), of M. havilandii, which is considered to be a synonym of M. leptopoda, and also 102 (Herb. Maingay) the Type of M. leptopoda.

2. Mezzettia umbellata Becc.

karai, selemo.

III Div.: Loba Kabang P.F. 478, 1578; IV Div.: Miri, Sg. Dua 3256; Brunei: Anduki 2244.

Small tree, 12 - 24 ins. g., rather rare in P.C.s 1 and 2 throughout Sarawak and Brunei; also recorded in heath forest. Specimens in Kew: 1421 (Beccari) Type - A, and 2104 (Haviland).

Mitrella Miq.

1. Mitrella dielsii J. Sinclair. semulun (Mil.).

II Div.: Saribas F.R. 8562; III Div.: Surong Irit 9708, Lassa 12428, Matu Daro P.F. 12319.
Medium-sized climber with distinctive foliage, rare in P.C. 1.
Recorded from Saribas F.R., Batang Lupar, Rejang Delta and Baram.

Polyalthia Bl.

1. Polyalthia glauca (Hassk.) Boerl. dilleh (I. Lassa),
mechang (I. Igan),
selaut telur (M.).

II Div.: Tj. Keranji 12401, Triso P.F. 2342; III Div.: Loba Kabang P.F. A 79; Brunei: Badas 2226.
Medium-sized tree, 36 - 48 ins. g., which may be easily identified by its smooth yellow bark and large leaves with glaucous undersurface; occasional in P.C.s 1 and 2. Occurs throughout Sarawak and Brunei, and has also been noted in heath forest (Badas).

2. Polyalthia hypoleuca Hk. f. et Th. selaut (I.), Kayu semut,
tatal (M. Brunei), udap
(Mil.).

III Div.: Loba Kabang P.F. 2681, 690, 2693; Brunei: Badas 2837.
Small to medium-sized tree, 15 - 36 ins. g., occasional in P.C.s 1 and 2, locally frequent in P.C. 3 (Badas, Brunei); distribution general throughout Sarawak and Brunei.
Specimen in Kew: Herb. Maingay 1516, Type - A.

3. Polyalthia sclerophylla Hk. f. et Th. karai

II Div.: Triso 12869, 12851, 14566; Brunei: Tutong, Kg. Lubok Pulau 5615.
Medium-sized tree, 36 - 48 ins. g., locally frequent in P.C. 1, but recorded from only the Maludam Peninsula and Sg. Tutong; probably occurs elsewhere in coastal swamps.

4. Polyalthia sp. nov. (9059).

II Div.: Saribas F.R. 8513; III Div.: Pulau Bruit P.F. 9059, 8031, 7942, Batang Igan 687, Naman F.R. 677, Matu Daro P.F. 12274.
Small tree of the understorey, 6 - 9 ins. g. and 12 - 18 ft. high; rare and local. Recorded only in the Rejang Delta, Saribas F.R. and Maludam Peninsula. An undescribed species; one matching specimen (3919) was collected by Beccari in Sarawak.

Pyremidanthe Miq.

1. Pyremidanthe prismatica (Hk. f. et Th.) J. Sinclair.

sebulan (Mil. Daro),
handan malam (I.).

III Div.: Naman F.R. 674, Pulau Bruit P.F. 9289, Daro F.R. 9730.
Large climber reaching 100 ft. or more in height; occasional in
P.C. 1. Recorded only from the Rejang Delta and Maludam
Peninsular, but probably occurs in other swamp forests.

Uvaria L.

1. Uvaria sp. (9749).

III Div.: Singat 9749.

Medium-sized climber, rare in P.C. 1 and recorded only from the
Rejang Delta.

Xylopia L.

1. Xylopia coriifolia Ridley.

akau, bangoh (Brunei M.),
sengkajang paya (I.).

III Div.: Matu Daro P.F. 12304, Pulau Bruit P.F. A 124, 9201,
2657, Loba Kabang P.F. 655, 2684, Naman F.R. A 13, Lepah P.F.
8100; V Div.: Kayangeran F.R. 1565; Brunei: Badas 2828.

Medium-sized tree, 48 - 60 ins. g., with numerous stilt roots;
occasional in P.C.s 1 and 2, and also in P.C. 4 in Brunei;
occurs throughout Sarawak and Brunei.

Specimen in Kew: 3335 (Beccari), Type - A, also 333 (Beccari),
and 1906 (Haviland).

2. Xylopia fusca Maingay ex Hk. f. et Th.

akau.

III Div.: Lepah P.F. 8093, Pulau Bruit 5121.

Small to medium sized tree, 12-24 ins. g., rare and local in P.C. 1,
preferring coastal margins of swamps. Recorded only from Triso
P.F. and the Rejang Delta, but probably occurs throughout Sarawak
and Brunei in localised habitats near the coast.

MENISPERMACEAE

Fibraurea Lour.

1. Fibraurea chloroleuca Miers.

akar badi.

II Div.: Saribas F.R. 8568; III Div.: Pulau Bruit 7923, Matu
Daro P.F. 12271.

Medium-sized to large climber, attaining a height of 100 ft.;
frequent in P.C. 1 throughout Sarawak and Brunei. One of the
most common climbers in swamp forest. The stem is used by the
Malays and Milanaus in the preparation of a stomach medicine.

Pycnarrhena Miers.1. Pycnarrhena borneensis Diels.

III Div.: Daro F.R. 9731, 9066, 5205, Pulau Bruit 12230, Matu Daro P.F. 12272.

Small climbing epiphyte, rare in understorey of P.C. 1. Recorded from the Daro and Naman forest reserves in III Div.

POLYGALACEAE

Trigoniastrum Miq.1. Trigoniastrum hypoleucum Miq.

III Div.: Loba Kabang P.F. 410, 434, Pulau Bruit 2679.

Small tree, 12 - 18 ins. g., rare in P.C.s 2 and 3 in the Rejang Delta.

Xanthophyllum Roxb.1. Xanthophyllum amoenum Chod.nyalin.

III Div.: Pulau Bruit 2634; IV Div.: Sg. Dua 4110.

Small to medium-sized tree, 12 - 30 ins. g., frequent in P.C.s 1 and 2. Poles and saplings are abundant in the understorey.

Occurs throughout Sarawak and Brunei, also in heath forest.

Specimen in Kew: 2112 (Haviland), Type - A.

2. Xanthophyllum aff. citrifolium Chod.nyalin tikus
mera batu (I.).

III Div.: Lassa 12413, Pulau Bruit 2636, 8002, 9027, 5111, Loba Kabang P.F. 525, 2750, Daro F.R. 5206; IV Div.: Sg. Dua 4176, 4190.

Small tree, 9 - 18 ins. g., occasional, locally frequent, in P.C. 1 from Batang Lupar to Baram. Recorded in L.D.F. in Brunei.

3. Xanthophyllum sp. (2614).

II Div.: Sg. Tissak 3183; III Div.: Pulau Bruit 12894, Loba Kabang P.F. 2614, 500, 2734, 1589; Brunei: Badas 2830.
 Small tree, 12 - 30 ins. g., locally frequent in P.C. 4 throughout Sarawak and Brunei, but has not been recorded from V Div. It also occurs in heath forest.
 Specimens of this distinctive tree are quite unmatched in Kew, Bogor and Singapore, and the species is probably undescribed.

HYPERICACEAE

Cratoxylon Blume.

1. Cratoxylon arborescens (Vahl) Blume. geronggang, entimau (I.),
geronggang,
serungan.

I Div.: Setapok F.R. 4765; II Div.: Triso P.F. 3155; III Div.: Loba Kabang P.F. 536.

Large tree, 72 - 84 ins. g., occasional in P.C. 1, abundant in secondary swamp forest; throughout Sarawak and Brunei.

Specimen in Kew: 3720 (Beccari), bnpd (Haviland) - B.

2. Cratoxylon glaucum Korth. geronggang puteh,
geronggang padang.

III Div.: Sungei Assan A 105, Loba Kabang P.F. 2721; V Div.: Kayangeran 1776.

Tree, 60 - 72 ins. g., occasional, locally frequent, in P.C. 4 throughout Sarawak and Brunei.

Specimens also closely match Cratoxylon microphyllum Bl., which is commonly found in heath forest as a small tree or shrub.

Specimens in Kew: 3176, 3170, 1133, 597 (Beccari) - B.

FLACOURTIACEAE

Casearia Jacq.

1. Casearia elliptifolia V. Steen.

II Div.: Triso 10023; IV Div.: Lawas 9198.

Small tree or shrub, rarely more than 15 ft. h., rare in P.C. 3; recorded from the Rejang Delta, Batang Lupar and Lawas.

Ryparosa Bl.

1. Ryparosa acuminata Merr.

III Div.: Loba Kabang P.F. 888.

Small tree, 12 - 18 ins. g., rare in P.C. 1. Recorded from only the Rejang Delta.

Specimen in Kew: 501 (Hose), Type - B.

GUTTIFERAE

Calophyllum L.

1. Calophyllum canum Hook. f. bintangor.
 III Div.: Pulau Bruit A 137, Loba Kabang P.F. 1597.
 Tree, 72 - 84 ins. g., rare in P.C. 1, and recorded from only the Rejang Delta. It also closely resembles Calophyllum palustre Ridley (3343, Haviland).
2. Calophyllum fragrans Ridley. bintangor.
 III Div.: Loba Kabang P.F. 2698, 480, 2739, 2761.
 Medium-sized tree, 36 - 48 ins. g., rare and local in P.C.s 1 and 2. Recorded from only the Rejang Delta. One of the two species of Calophyllum which have stilt roots.
 Specimen in Kew: 1812 (Haviland), Type - A.
3. Calophyllum obliquinervum Merr. bintangor kuning.
 (Calophyllum benjamina Ridley.)
 III Div.: Loba Kabang P.F. 659.
 Medium-sized tree, 36 - 48 ins. g., locally abundant in P.C. 4 in the centre of certain swamps, also occurs in heath forest; throughout Sarawak and Brunei. Easily identified by its conspicuous bright yellow bark.
 Specimen in Kew: 505 (Haviland), Type (C. benjamina) - A.
4. Calophyllum retusum Wall. bintangor paya.
 (Calophyllum borneense Vesq.)
 I Div.: Setapok F.R. 4817; III Div.: Loba Kabang P.F. 755, 2740, 79329 (W.-S.), Daro F.R. A 126, A 171, Pulau Bruit 8039.
 Tree, 72 - 84 ins. g., occasional in P.C. 1 and more rarely in P.C. 2; throughout Sarawak and Brunei.
 The specimens closely match the Type (2101, Beccari) of C. borneense, which is considered to be a synonym of C. retusum.
5. Calophyllum rhizophorum Boerl. et Koord. bintangor kapas
 (M. Lawas),
bintangor dudok.
 III Div.: Loba Kabang P.F. 654, 756, 79328 (W.-S.), 1598;
 V Div.: Kayangeran F.R. 2843.
 Tree, 60 - 72 ins. g., occasional in P.C.s 2 and 3. Recorded from the Rejang Delta, Baram, Brunei and Lawas, but not yet known to occur south west of the Rejang Delta.

6. Calophyllum sclerophyllum Vesq. bintangor jangkar.

III Div.: Daro F.R. A 136.

Medium-sized tree, 36 - 48 ins. g., rare or very rare in P.C. 1. Probably occurs throughout Sarawak and Brunei but only recorded from the Rejang, Baram, and Brunei. This species is easily identified by its spreading stilt roots and large coriaceous leaves.

Garcinia L.

1. Garcinia schizophoroides Elm. var. bicolor. kandis.

Brunei: Anduki F.R. 2249, Badas 2831; V Div.: Kayangeran F.R. 2028, 2016, 4910.

Small tree, 12 - 18 ins. g., locally frequent in P.C. 1 in Brunei and V Div., but not yet recorded elsewhere.

2. Garcinia havilandii Stapf. kandis jangkar.

III Div.: Loba Kabang P.F. 669.

Distinctive medium-sized tree, 36 - 48 ins. g., with numerous spreading stilt roots. Occasional in P.C. 1 in the Rejang Delta and Batang Lupar.

3. Garcinia microcarpa Pierre.

III Div.: Baram 3284; Brunei: Badas 2824; V Div.: Kayangeran F.R. 1558.

Small tree, 12 - 18 ins. g., occasional in P.C.s 2 - 4 in the Rejang Delta, Baram, Lawas and Brunei.

4. Garcinia aff. rostrata (Hassk.) Hook.

II Div.: Triso P.F. 3169; III Div.: Loba Kabang P.F. 2611; Brunei: Badas 2817.

Small tree, 12 - 15 ins. g., frequent, locally abundant, in P.C. 4 in Batang Lupar, Rejang Delta, Baram and Brunei, and abundant in P.C. 6; also occurs in heath forest. All collections sterile.

5. Garcinia tetranda Pierre. manggis hutan (M.), kunong (Mil. Oya), buah'babal (Mil. Rejang), sakubangan (I.).

II Div.: Saribas F.R. 8559, Triso P.F. 3168; III Div.: Matu Daro P.F. 12270, 12316, Pulau Bruit 9208, 2645, 806, 4965, Loba Kabang P.F. 5053, 669.

Very distinctive small to medium-sized tree, 15 - 30 ins. g., with leaves and fruit which closely resemble the cultivated mangosteen; occasional in P.C.s 1 and 2 throughout Sarawak and Brunei.

6. Garcinia vidua Ridley.

III Div.: Pulau Bruit 8046, Loba Kabang P.F. 407, 894, 462, 2765; Brunei: Badas 2839.
Medium-sized tree, 36 - 48 ins. g., occasional in P.C. 1 in the Rejang Delta, also recorded in Brunei.

7. Garcinia sp. (9745).

II Div.: Saribas F.R. 8519; III Div.: Loba Kabang P.F. 865, 2755, Daro F.R. 9745.
Small tree, 12 - 18 ins. g., occasional in P.C.s 1 and 2 in Batang Lupar and the Rejang Delta.

8. Garcinia eugeniaefolia Wall.

III Div.: Loba Kabang P.F. 2752, 2758; IV Div.: Sg. Dua 3277, 3259.
Small tree, 12 - 18 ins. g., rare in P.C. 2 in the Rejang Delta and Baram.

Kayea Wall.1. Kayea sp. (9736).

lupeh (Mil. Oya), beragasing (I.).

III Div.: Daro F.R. 5214, 9736, Loba Kabang P.F. 855, 509.
Small tree, 12 - 24 ins. g., rare and local in P.C. 1 in the Rejang Delta and Maludam Peninsular.

TERNSTROEMIACEAE

Ploiarium Korthals.1. Ploiarium alternifolium (Vahl.) Melchior.

somah.

III Div.: Loba Kabang P.F. 661; V Div.: Kayangeran F.R. 2847.
Small tree, 12 - 24 ins. g., rare in P.C. 4, but abundant in heath forest and on degraded soils throughout Sarawak and Brunei. In peat swamps it develops numerous stilt roots.

Ternstroemia Mutis ex L. f.1. Ternstroemia hosei Ridley.

II Div.: Triso 8941, Saribas F.R. 8574; III Div.: Loba Kabang P.F. 439, 2609; IV Div.: Sg. Dua 2885, Lobok Pasir 9874; Brunei: 2819.
Small tree, 15 - 24 ins. g., frequent, locally abundant, in P.C.s 4 and 5 throughout Sarawak and Brunei; also occurs in heath forest. Specimens in Kew: 235 (Hose) Type, 1966, 3102 (Haviland), 2943 (Beccari).
Specimens also closely match T. citrina which may be a synonym.

2. Ternstroemia magnifica Stapf. ex Ridley.

III Div.: Sg. ^NNangar 12277, Loba Kabang P.F. 416; V Div.:
Kayangeran F.R. 4908.

Small tree, 18 - ~~30~~ ins. g., rather rare and localised; has been
recorded in P.C.s 1 - 4. Occurs throughout Sarawak and Brunei,
also recorded in L.D.F. in Brunei.

Specimen in Kew: unno. (Haviland) Type - C.

3. Ternstroemia aff. penangiana Choisy.

III Div.: Loba Kabang P.F. 899.

Small tree, 12 - 24 ins. g., very rare in P.C. 1 and recorded
from only the Rejang Delta.

Unmatched in Kew, determined Singapore.

DIPTEROCARPACEAE

Anisoptera Korth.1. Anisoptera marginata Korth.

mersawa paya, pelpak.

(Anisoptera grandiflora Brandis.)

II Div.: Saribas F.R. 8401, Nanga Skrang 9827; III Div.: Pulau
Bruit P.F. 9278, 9290, 8038, 8207, Loba Kabang P.F. 2718, 463, 698.
Medium-sized to large tree, 48 - 60 ins. g., though trees of over
96 ins. g. have been recorded; rather rare in P.C. 1. Recorded
from only the Rejang Delta, Saribas and Maludam Peninsula, but
probably also occurs in northern Sarawak and Brunei.

Cotylelobium Pierre.1. Cotylelobium flavum Pierre.

resak durian.

III Div.: Loba Kabang P.F. 405, A 185, A 147.

Tree, 24 - 36 ins. g., rare and local in P.C.s 2 - 4. Occurs
throughout Brunei and Sarawak and is common in some heath forests,
but has only been recorded in peat swamps in the Rejang Delta and
Brunei.

Dipterocarpus Gaertn. f.1. Dipterocarpus coriaceus V. Sl.

keruing paya.

II Div.: Nanga Skrang 9820; III Div. Sg. Sekai F.R. 555, 556.
Medium-sized to large tree, 72 - 84 ins. g., localised and tending
to be gregarious in P.C. 1 near up-river limits of peat swamps.
Occurs only in I and II Divs., and the Sg. Sekai F.R. in the III
Div.

Dryobalanops Gaertn. f.1. Dryobalanops rappa Becc.kapur paya.

III Div.: Loba Kabang P.F. 753; IV Div.: Simalajan 263.
Large tree, 96 - 108 ins. g., occasional, locally frequent,
in P.C.s 1 and 2. Occurs throughout Sarawak and Brunei in
swamp and heath forests.

Hopea Roxb.1. Hopea pentanervia Sym.changal paya, mang.

III Div.: Loba Kabang P.F. 2729, A 121; V Div.: Kayangeran
F.R. 1780.
Medium-sized tree, 24 - 36 ins. g., occasional in P.C.s 1 and 2.
Occurs throughout Sarawak and Brunei and is one of the most
sought after swamp species for its heavy durable timber; also
a characteristic species of heath forest.

Shorea Roxb.1. Shorea albida Sym.

alan, meraka alan (I, III Divs.),
empenit (II Div.), sengawan
(IV Div.), seringawan (Brunei).

III Div.: Loba Kabang P.F. 651, 2852, 2805, 2552, Daro F.R.
12250; IV Div.: Miri, Sg. Dua 2862, 2900.
Very large tree, 132 - 144 ins. g., over-mature trees may exceed
180 ins., very abundant and gregarious; the sole dominant over
vast areas in P.C.s 2, 3 and 4. Extensive forests dominated by
this species extend from the Sadong river in Sarawak to the Badas
swamps in Brunei. One relatively small detached forest occurs
in heath forest in the Sedilu F.R., and a few trees have been
noted in the Tutong. A common species in certain heath forests.

2. Shorea inaequilateralis Sym.semayor.

III Div.: Loba Kabang P.F. A 30, A 144, 79319 (W.-S.).
Large tree, 96 - 108 ins. g., occasionally larger; has a rather
limited distribution, being confined to a zone overlapping P.C.s
1 and 2, but is generally absent from P.C. 3 and from the coastal
type of P.C. 1. Occurs from the Sadong in Sarawak to the Belait
swamps in Brunei.

3. Shorea longiflora (Brandis) Sym.lun paya, barun paya (Baram).

III Div.: Loba Kabang P.F. 2749, Loba Kabang P.F. 9194.
Medium-sized tree, 48 - 60 ins. g., rare and local in peat-swamp
forest; recorded in P.C. 1 from the Rejang Delta and Baram, but
is known to occur elsewhere in L.D.F. and in heath forest.

4. Shorea macrantha (Brandis) Sym. engkabang bungkus,
perawan lompong kijang
(I. Naman).
- III Div.: Naman F.R. A 14, A 99, 9781.
Medium-sized to large tree, 50 - 72 ins. g., occasional and very local in peat-swamp forest. Confined to the inland margins of swamps in P.C. 1 and only recorded from Naman F.R., Setapak F.R. and Lingga. More frequently found as a riparian species and in certain types of heath forest. The fruit is a commercial illipe nut.
5. Shorea pachyphylla Ridley ex Sym. kerukup, urat mata.
- Brunei: Badas 1593.
Large tree up to 144 ins. g., occasional, locally frequent, in P.C. 1 but confined to inland margins of swamps; more common on podsolized soils of heath forests. Occurs in most coastal districts of Sarawak and Brunei, but is absent from the II and III Divs.
6. Shorea platycarpa Heim. meranti paya.
- II Div.: Triso 12853; III Div.: Naman F.R. A 32, Pulau Bruit 452.
Large tree, 108 - 120 ins. g., occasional in P.C. 1, especially on shallow peat near coast. Seedlings and saplings are liable to be confused with those of Shorea rugosa var. uliginosa; throughout Sarawak and Brunei, also occurs in heath forest.
7. Shorea rugosa Heim. var. uliginosa (Foxw.) Sym. meranti buaya.
- III Div.: Loba Kabang P.F. A 145, 2858, Pulau Bruit 7908.
Very large tree, girths of over 144 ins. have been recorded, occasional, locally frequent, in P.C. 1. Easily identified by its incurved drooping leaves; throughout western and central Sarawak, but not yet recorded east of the Baram.
8. Shorea scabrida Sym. meranti lop.
- II Div.: Tj. K^eranji 12409; III Div.: Loba Kabang P.F. 752, Naman F.R. A 19.
Large tree, 96 - 120 ins. g.; occasional but rather local in P.C. 1 throughout Sarawak and Brunei. Occurs more frequently in heath forest and also on ridges in L.D.F.
9. Shorea teysmanniana Dyer ex Brandis. meranti lilin.
- III Div.: Pulau Bruit 7907, Lepah P.F. 8077, Lassa 12419;
IV Div.: Baram 3280.
Large tree, 108 - 132 ins. g., frequent in P.C. 1 in the Rejang Delta and Batang Lupar but rare in swamp forests of Brunei and Lawas; occurs also in heath forest.

Vatica L.

1. Vatica mangachapoi Blanco. resak paya.

II Div.: Tj. Keranji 12878, Triso P.F. 3159; III Div.: Loba Kabang P.F. 511, Daro F.R. A 42, Narub F.R. 26; Brunei: Badas 2820.

Medium-sized tree, 48 - 60 ins. g., rather rare and usually confined to P.C. 1 but also recorded in P.C. 4 (Brunei); throughout Sarawak and Brunei in heath and peat-swamp forests.

MALVACEAE

Durio Adans.

1. Durio carinatus Mast. durian burong, rian (Mil.).

I Div.: Bako 1387; III Div.: Pulau Bruit 7920, Loba Kabang P.F. 425.

Large tree, 72 - 84 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei.

Neesia Blume.

1. Neesia malayana Bakh. durian durian (M. Lawas).

I Div.: Setapok F.R. 9853; V Div.: Kuala Lawas 9111.

Medium-sized to large tree, 48 - 60 ins. g., occasionally larger up to 9 ft. g., rare, locally frequent (Kuala Lawas), in P.C. 1. Recorded from only the two mentioned localities.

STERCULIACEAE

Scaphium Endl.

1. Scaphium macropodum ^(Miq.) Beumée. kembang semangkok.

III Div.: Loba Kabang P.F. 2689.

Medium-sized tree, 48 - 60 ins. g., rare and localised in P.C. 1 near riparian fringe, but a common species in heath forest and L.D.F.

Sterculia L.

1. Sterculia macrophylla Vent.

II Div.: Sabu F.R. 3207; III Div.: Loba Kabang P.F. 490.

Small tree, 18 - 30 ins. g., very rare in P.C. 2. Recorded from only the two mentioned localities.

2. Sterculia rhoidifolia Stapf. ex Ridley. biris.
 II Div.: Sg. Tissak 3182; III Div.: Loba Kabang P.F. 879, 406;
 IV Div.: Sg. Dua 4118.
 Small tree, 12 - 24 ins. g., occasional, locally frequent, in
 P.C. 4 throughout Sarawak and Brunei. Also occurs in heath
 forest.
3. Sterculia rhoidifolia Stapf. ex Ridley var.
 III Div.: Lepah P.F. 8069, 8078.
 Medium-sized tree, 36 - 48 ins. g., rare and local in P.C. 1
 throughout Sarawak and Brunei.
 The status of this species (or variant) is not known. Fertile
 specimens have not yet been collected. On sterile characters
 it closely resembles S. rhoidifolia.

TILIACEAE

Elaeocarpus Burm. ex L.

1. Elaeocarpus beccarii A. DC. beliban (Mil. Oya).
 I Div.: Setapok F.R. 4703; II Div.: Triso 3160, Sg. Tissak
3199; III Div.: Pulau Bruit 5120, 9265, 9022, Singat 9064,
9751, Lepah P.F. 8064; Brunei: Anduki F.R. 2241.
 Small tree, 6 - 12 ins. g., occasional in P.C. 1 throughout
 Sarawak and Brunei.
2. Elaeocarpus griffithii (Wight) A. ^{Mast.}Hook f. Gray.
 II Div.: Triso 4789, 12858, Saribas F.R. 8501, 9578; III Div.:
 Pulau Bruit 9250, 9009, 7905.
 Small tree, 6 - 10 ins. g., occasional and localised in P.C. 1
 on shallow peat near the coast especially in transitional zones
 from mangrove. Recorded from only the mentioned localities,
 but probably occurs throughout Sarawak and Brunei.
3. Elaeocarpus mastersii King.
 IV Div.: Sg. Dua 4111, 3065.
 Small tree, 9 - 15 ins. g., occasional in P.C.s 1 - 3, frequent
 in secondary forest following logging; throughout Sarawak and
 Brunei.
4. Elaeocarpus obtusifolius Merr. empedu, bangas (Mil. Matu).
 II Div.: Sg. Tissak 3192; III Div.: Pulau Bruit 9292, Loba
 Kabang P.F. 433, 492, 2733, 460, 2616; IV Div.: Sg. Dua 3058,
2889, 4175; V Div.: Kayangeran F.R. 2849, 1557, 2026; Brunei:
 Anduki F.R. 2143.
 Small to medium-sized tree, 18 - 36 ins. g., occasional, locally
 frequent, in P.C.s 1 - 4 throughout Sarawak and Brunei. Also
 occurs in heath forest.

LINACEAE

Ctenolophon Oliv.

1. Ctenolophon parvifolius Oliv. temana'a (Mil. Oya),
litoh, kriang (I. Lassa).

II Div.: Tj. Keranji 12889, Saribas F.R. 8567, 8527; III Div.: Pulau Bruit 12897, 2649, 9245, 4969, 9040, Daro F.R. 9718, Loba Kabang P.F. 897, A 62, 496, 465, Matu Daro P.F. 12260; V Div.: Kayangeran F.R. 4904.

Medium-sized tree, 36 - 48 ins. g., frequent in P.C. 1 throughout Sarawak and Brunei. In the forest this species is frequently confused with ngilas paya (Parastemon urophyllum). Specimen in Kew: Herb. Maingay 382, Type - A.

Sarcotheca Bl.

1. Sarcotheca glauca (Hook. f.) Hallier f.

II Div.: Triso 9798; III Div.: Pulau Bruit 2654, Lassa 12436;
IV Div.: Baram 4115; Brunei: Berakas 2160.

Small tree, 12 - 15 ft. h., rare in P.C.s 1 and 2 throughout Sarawak and Brunei, also occurs in heath forest and on degraded soils.

RUTACEAE

Tetractomia Hook. f.

1. Tetractomia holttumii Ridley. rawang.

II Div.: Lingga 9825, 4812, Triso P.F. 3158; III Div.: Pulau Bruit 2630, Daro F.R. 5210; IV Div.: Sg. Dua 3258, 3272;
Brunei: Badas 2832.

Medium-sized tree, 24 - 36 ins. g., locally abundant in P.C. 3 in the Baram and frequent elsewhere; throughout Sarawak and Brunei; occurs in heath forest.

2. Tetractomia parviflora Ridley. rawang.

I Div.: Setapok F.R. 358; II Div.: Triso 9792, Saribas F.R. 8504, 9579, Sg. Tissak 3189; III Div.: Loba Kabang P.F. 2667.
Medium-sized tree, 48 - 60 ins. g., occasional in P.C. 1 and confined to this forest type. Not yet recorded further east than the Rejang Delta.

Both species of Tetractomia are readily identified by their smooth yellowish bark and fragrant slash.

Luvunga Buch.-Ham.1. Luvunga motleyi Oliv.III Div.: Daro F.R. 9063.

Small tree or erect shrub, 10 - 15 ft. h., rare in P.C. 1.
Recorded from the Daro F.R., Loba Kabang P.F. and Setapok F.R.
In Ridley's "Flora of Malaya" this species is stated to be a
liane.

SIMARUBACEAE

Samadera Gaertn.1. Samadera indica Gaertn.kelapahit (M. and Mil.).

II Div.: Triso 12214; III Div.: Lepah P.F. 8090, Naman F.R.
9185, Loba Kabang P.F. 700.

Small tree, rarely exceeding 12 ins. g., and frequently little
more than an erect shrub, rare in P.C. 1. Recorded from Batang
Lupar, Rejang Delta and Bintulu but probably occurs throughout
Sarawak and Brunei.

The timber is sought after for use as handles for parangs and
knives.

OCHNACEAE

Euthemis Jack.1. Euthemis obtusifolia Hook. f.rumput bintangpr.

III Div.: Loba Kabang P.F. 1592, 79332 (W.-S.); IV Div.:
Baram 2882.

Prostrate shrublet with creeping habit, frequent, locally
abundant (Rejang Delta), in P.C. 4 throughout Sarawak and Brunei.
Specimen in Kew: Herb. Hook. unno., coll. 1867, Type - A.

2. Euthemis leucocarpa Jack.mata tewop (I.).

II Div.: Triso 10016, Saribas F.R. 8569, 9014; III Div.:
Pulau Bruit 9014, Lassa 11713.

Small erect shrublet, 4 - 8 ft. h., rare in P.C.s 1, 2 and 3.
Recorded in peat swamps from only II Div. and the Rejang Delta.
Fruit used in preparation of an eye medicine.

Gomphia Schreb.1. Gomphia hookeri Planch.

I Div.: Lundu 9148; II Div.: Saribas F.R. 8515; IV Div.: Baram 3054.
 Small tree, 9 - 18 ins. g., rare in P.C. 1 from Lundu to Baram. Not yet recorded from Brunei or V Div., but probably occurs throughout the two territories.

Tetramerista Miq.1. Tetramerista glabra Miq. entayut, kayu hujan.

I Div.: Satapok F.R. 4780; III Div.: Pulau Bruit 802, 9038, 9035, 9282, 9233, Sg. Nangar 12301.
 Large tree, 96 - 108 ins. g., rare, locally occasional in P.C. 1 throughout Sarawak and Brunei. Also occurs in heath forest and on degraded soils.
 Specimens in Kew: 872, 1836 (Haviland), Flora of Sarawak 380.

BURSERACEAE

Dacryodes Vahl.1. Dacryodes incurvata (Engl.) H.J. Lam.

III Div.: Sg. Kelapa'an A 78, Pulau Bruit 2650.
 Small to medium-sized tree, 24 - 36 ins. g., rather rare and localised in P.C. 1. Recorded only from the Batang Lupar and Rejang Delta.

2. Dacryodes macrocarpa (King) H.J. Lam var. macrocarpa.
kayu tunjang (I. Lupar).

II Div.: Triso 3105, 3111, 3108, 14501; III Div.: Lepah P.F. 8091, Sg. Nangar 12327.
 Small tree, 12 - 24 ins. g., occasional and localised in P.C. 1 on shallow peat near coastal and riparian margins of swamps. Recorded from the Batang Lupar and Rejang Delta.

Santiria Blume.1. Santiria laevigata Blume forma laevigata. kemayan (I.).
seladah (Mil.).

III Div.: Loba Kabang P.F. 494; Pulau Bruit 2625, 9223, Sg. Nangar 12305; V Div.: Kayangeran 1564.
 Small to medium-sized tree, 24 - 36 ins. g., occasional in P.C. 2 throughout Sarawak and Brunei; also occurs in heath forests.

2. Santiria rubiginosa Bl. var. rubiginosa. seladah (Mil.).
 II Div.: Triso 3102; III Div.: Loba Kabang P.F. 898, 450, 475, 2703, Pulau Bruit 9204, Naman F.R. 676.
 Small to medium-sized tree, 24 - 36 ins. g., occasional, locally frequent, in P.C. 2 throughout Sarawak and Brunei.
3. Santiria rubiginosa Bl. var.
 II Div.: Triso P.F. 14513; III Div.: Loba Kabang 869, 2754;
 IV Div.: Baram 4177, 3255, 3256; Brunei: Badas 2040.
 Small tree, 12 - 24 ins. g., occasional in P.C.s 1 - 3 throughout Sarawak and Brunei.
 This species was previously determined as S. griffithii Eng.
4. Santiria tomentosa Bl. seladah, soya bulu.
 I Div.: Sedilu F.R. 9566, Lundu 9776; II Div.: Triso 3202;
 III Div.: Pulau Bruit 9216, Lepad 8076; IV Div.: Sg. Dua 3270.
 Small tree, 12 - 24 ins. g., occasional in P.C. 2, especially near coast; throughout Sarawak and Brunei. Also recorded in L.D.F.

MELIACEAE

Amoora Roxb.

1. Amoora rubiginosa Hiern. jelungan sasak,
 (Aglaia ignea Valetton ex K. Heyne). bersangai (Mil.),
chenaga dayong (I.).
 II Div.: Triso 9807; III Div.: Daro F.R. A 101, A 20, Pulau Bruit 9807, 9018, 9243, 9734, Naman F.R. 9177, 9169, Matu Daro P.F. 12257, 12308; IV Div.: Sg. Dua 4185; V Div.: 4916.
 Very distinctive tree, 48 - 60 ins. g., occasional in P.C. 1 and rare in P.C. 2 throughout Sarawak and Brunei. This species is easily recognised in the field by its cream coloured pock-marked bark and crown with large compound pinnate leaves. The specimens are an identical match with the type of Aglaia ignea, which is presumed to be a synonym.

Chisocheton Bl.

1. Chisocheton brachyanthus Merr. bua 'pesa kanan (Mil.).
 III Div.: Matu Daro P.F. 12258, Pulau Bruit 9260, 9269, 9003, Lepad P.F. 8087, Loba Kabang P.F. 670; IV Div.: Lubok Pasir 4161.
 Small tree of understorey, 6 - 12 ins. g., occasional in P.C. 1 from Batang Lupar to Baram, but not yet recorded from Brunei or V Div.

Sandoricum Cav.

1. Sandoricum emarginatum Hiern. kelampu, apau (Mil. Rejang).

III Div.: Matu Daro P.F. 12263, 12303, Lassa 12418, Daro F.R. 5234, 9711, A 107, Lepah P.F. 8075, Loba Kabang P.F. 2665, 2756.
Large tree, 108 - 120 ins. g., rare, locally occasional, in P.C. 1 throughout Sarawak and Brunei.
The fruit is edible, though rather tasteless.

OLACACEAE

Anacolosa Blume.

1. Anacolosa frutescens Bl.
(Anacolosa arborescens K. and V.)

III Div.: Lepah P.F. 8065, Loba Kabang P.F. 2675, Daro F.R. 5237, 5215, Naman F.R. 11718, 14585.
Small tree, 18 - 24 ins. g., rare in P.C. 1. Recorded in peat swamp forests from only the Rejang Delta, but occurs in L.D.F. in Brunei.
Specimens are an identical match with unnamed specimen 2950 (Haviland).

Gomphandra Wall.

1. Gomphandra aff. comosa King.

II Div.: Triso P.F. 3116, 14502, Saribas F.R. 8517; III Div.: Pulau Bruit 7914; IV Div.: Sg. Dua 4189.
Small tree, 12 - 20 ins. g., rare in P.C. 1 from Batang Lupar to Baram.

Platea Bl.

1. Platea excelsa Bl.

II Div.: Saribas F.R. 8404, Triso 9796; III Div.: Loba Kabang P.F. 2688; IV Div.: Baram 2894; V Div.: Kayangeran F.R. 1774.
Small tree, 12 - 24 ins. g., occasionally larger, rare in P.C. 1 throughout Sarawak and Brunei. Distinctive features are the fragrant slash and numerous spreading stilt roots.

Stemonurus Bl.

1. Stemonurus scorpioides Becc. jerumit (Mil.),
semburok (M.),
entaburok (I.).

III Div.: Pulau Bruit 9020, 7932, Loba Kabang P.F. 699, 79321 (W.-S.), 2770.

Medium-sized tree, 48 - 60 ins. g., occasional, locally frequent in P.C.s 1 and 2 in the Rejang Delta, but absent in peat swamps elsewhere in Sarawak, though recorded on terraces in Brunei.

2. Stemonurus umbellatus Becc. semburok (M.), jerumit (Mil.); entaburok (I.).

II Div.: Lingga 4810; III Div.: Saribas F.R. 8543, 9006, 9259, 9247, Daro F.R. 9712, Loba Kabang P.F. 2785, 2786, 518, 539;
IV Div.: Sg. Dua 2868; Brunei: Badas 2829.
Small tree, 12 - 24 ins. g., frequent in P.C.s 1 and 2 throughout Sarawak and Brunei; also of frequent occurrence in heath forest.

ILICINACEAE

Ilex (Tourn.) L.

1. Ilex hypoglauca (Miq.) Loes. mungkulat, kerdam.

II Div.: Triso 3153, 3161, Saribas F.R. 8536; III Div.: Daro F.R. 9760, Naman F.R. 9178; IV Div.: Baram, Sg. Dua 3271;
V Div.: Kayangeran F.R. 2848; Brunei: Badas 2825.
Small tree, 12 - 20 ins. g., locally frequent in P.C.s 1 - 3; throughout Sarawak and Brunei, also occurs in heath forest.

2. Ilex sclerophylloides Loes. mungkulat, kerdam.

II Div.: Saribas F.R. 8405, Triso P.F. 14538; III Div.: Loba Kabang P.F. 2857, Pulau Brait P.F. 7919, 9011; IV Div.: Baram, Sg. Dua 2865, 2896, Lubok Pasir 8400; Brunei: Badas 2857.
Small tree, 9 - 15 ins. g.; occasional, locally frequent, in P.C.s 4 and 5; throughout Sarawak and Brunei. These two species may be confused in the field. The larger leaves with glaucous undersurface serve to distinguish I. hypoglauca.

CELASTRACEAE

Bhesa Arn.

1. Bhesa paniculata Arn. tekam keladi.
(Kurrimia minor Ridl.)

II Div.: Triso 8942, Saribas F.R. 8558; III Div.: Lassa P.F. A 45, Loba Kabang P.F. 417, Pulau Brait 9041, 9230.
Medium-sized tree, 24 - 36 ins. g., rather rare but widespread in P.C. 1 throughout Sarawak and Brunei; also found in heath forests.

Kokoona Thw.

1. Kokoona ovato-lanceolata Ridl. bajan tulang (I. Assam),
badang (M.), bajan (Mil.),
masabong (I. Lassa),
dian (I. Marudi).

III Div.: Pulau Bruit 9291, 7910, Igan A 58, Loba Kabang P.F. 2699; IV Div.: Baram 3285, Marudi F.R. 1485; V Div.:
Kayangeran F.R. 4902.

Medium-sized tree, 48 - 60 ins. g., rare in P.C.s 1 and 2
throughout Sarawak and Brunei; also in heath forest.

Lophopetalum Wight ex Arn.

1. Lophopetalum multinervium Ridley. perupok,
dual (M. Lawas).

II Div.: Simanggang 9435; III Div.: Pulau Bruit 803, 12233,
451; IV Div.: Baram 1264, 934; V Div.: Lawas 1512.

Large tree, 84 - 96 ins. g., occasional and local; generally
confined to coastal perimeter of P.C. 1; throughout Sarawak
and Brunei.

2. Lophopetalum rigidum Ridley. bajan keupok (I. Naman),
perupok.

III Div.: Loba Kabang P.F. 2608, 663.

Medium-sized tree, 36 - 48 ins. g., very localised; recorded
only in the Rejang Delta where it is abundant in P.C.s 2 and 3
and frequent in P.C. 4.

Specimen in Kew: 2236 (Haviland) - A.

RHAMNACEAE

Zizyphus Tourn. ex L.

1. Zizyphus suluensis Merr.

III Div.: Lepah P.F. 8095.

Climbing shrub, occasionally with upright habit, rare in primary
P.C. 1 but becoming abundant in open secondary swamp forest.
Occurs throughout Sarawak and Brunei.

AMPELIDACEAE (VITACEAE)

Ampelocissus Planch.

1. Ampelocissus thyrsiflora (Miq.) Planch.

II Div.: Saribas 8509.

Small climber with attractive mauve foliage, rare but widely distributed in understorey of P.C. 1; through Sarawak and Brunei. Also occurs in heath forest.

Cissus L.

1. Cissus sp. (10013).

II Div.: Maludam Peninsular 10013.

Distinctive small climber, rare in understorey of P.C. 1; throughout Sarawak and Brunei. Only sterile collections have been made.

Tetrastigma Planch.

1. Tetrastigma sp. (12420).

III Div.: Lassa P.F. 12420, Pulau Bruit 9241, 12899, Surong Irit 5225; IV Div.: Baram 3257; V Div.: Lawas 5225.
Climber to height of 60 ft., occasional and widely distributed in P.C. 1; throughout Sarawak and Brunei.

SAPINDACEAE

Nephelium L.

1. Nephelium melanomiscum Radlk. serait, buah serait.

II Div.: Triso 12857; III Div.: Surong Irit 5203, 9710, Loba Kabang P.F. 2737, 489, 852, Pulau Bruit 2637; V Div.: Kayangeran F.R. 1563.

Medium-sized tree, 36 - 48 ins. g., frequent in P.C. 1 throughout Sarawak and Brunei. Also recorded from heath forests.

Pometia Forst.

1. Pometia pinnata Forst. kasai (M.), repangah (Mil. Daro).

I Div.: Setapok F.R. 2469; III Div.: Igan 686, Loba Kabang P.F. 2621, 2672, Singat 9732.

Tree, 24 - 36 ins. g., frequent and localised on shallow peat in P.C. 1 near coastal margins of swamps. A smaller form, 6 - 10 ins. g., is found near inland margins of peat swamps where it flowers and fruits as a small tree, 6 - 10 ins. g., in the understorey.

Xerospermum Blume.

1. Xerospermum muricatum (Griff.) Radlk. tundum bisk (Mil.).
buah laup
II Div.: Triso P.F. 9801, 3113, Saribas F.R. 8556, 8521;
III Div.: Sg. Nangar 12255, 12311, Loba Kabang P.F. 2700,
Pulau Bruit 9240, 2646, 9007, Lassa P.F. 12435; IV Div.: Sg.
Dua 4116, 4152; V Div.: Kayangeran F.R. 1554; Brunei: Badas
2140.
Small tree, 12 - 24 ins. g., frequently smaller, occasional in
P.C. 1 throughout Sarawak and Brunei, also recorded in L.D.F.
in Brunei.
Fruit edible, rather similar in taste to cultivated rambutan.

ANACARDIACEAE

Androtium Stapf.

1. Androtium astylum Stapf. merambang (Iban).
III Div.: Loba Kabang P.F. 2613, 2735, 443, 2720.
Small tree, 12 - 24 ins. g.; occasional in P.C. 4 in Rejang
Delta and Baram.
The only closely matching specimen seen is 7939 (Kostermans)
from Borneo.

Buchanania Spreng.

1. Buchanania arborescens Bl. var. florida.
III Div.: Loba Kabang P.F. 859; IV Div.: Sungei Dua 4155.
Small tree, 18 - 24 ins. g., rare and confined to P.C. 1.
As yet only recorded from the Rejang Delta and Baram, but occurs
as a riparian tree in Brunei. Only sterile collections have
been made.

Camposperma Thw.

1. Camposperma coriaceax (Jack) Hallier f. ex v. Steenis. terentang.
III Div.: Loba Kabang P.F. 861, Pulau Bruit P.F. 8011, 9209;
IV Div.: Miri 1413.
Conspicuous large tree, 72 - 84 ins. g.; occasional in P.C. 1,
locally abundant near coastal margin of peat swamps, also occurs
locally in P.C. 4; throughout Sarawak and Brunei.
2. Camposperma squamatum Ridley (Camposperma minus Corn). terentang.
III Div.: Loba Kabang P.F. 2686, 667, 691, 2790, 537, 2686;
IV Div.: Sg. Dua 2897.
Small tree, 12 - 24 ins. g., occasional and local in P.C.s 1 - 3
in the Rejang Delta and Baram.
Specimen in Kew: 3196 (Haviland), Type - A.

Mangifera L.

1. Mangifera havilandi Ridley. buah raba (M.).

III Div.: Loba Kabang P.F. 2713, 513, 464.
 Small tree, 12 - 24 ins. g., rare and local in P.C. 1.
 Recorded in peat swamp forest in only the Loba Kabang P.F., but
 also noted in heath forest in Setapok F.R. (I Div.) and Brunei.
 The exceptionally long petioles are distinctive.
 Specimen in Kew: 3368 (Haviland), Type - A.

Melanorrhoea Wall.

1. Melanorrhoea beccarii Engl. rengas paya.

III Div.: Loba Kabang P.F. 418, 481, 666, 2789, 495, 499, 885,
 Sungei Retus A 57, Lassa 12434.
 Large tree, 120 - 132 ins. g., frequent in all forest types,
 except P.C.s 5 and 6, near inland margin of peat swamps, but
 absent or very rare in coastal swamps; throughout Sarawak and
 Brunei, also occurs in heath forest.
 Specimen in Kew: 1484 (Beccari), Type - A.

2. Melanorrhoea tricolor Ridley. rengas paya.

II Div.: Lingga 5314; III Div.: Daro F.R. 9758, Loba Kabang
 P.F. 754, 2788, 668, 422, Lassa 12433, Naman 9758.
 Large tree, 120 - 132 ins. g., occasional in all forest types
 near inland margin of peat swamps, except P.C.s 5 and 6, but
 absent or very rare in coastal swamps except in Tatau P.F.
 Distribution is confined to II and III Divs., and Bintulu
 District of IV Div.
 This species is often confused with Melanorrhoea beccarii.
 On field characters they are almost identical, but the slightly
 larger and more coriaceous leaves with more pronounced venation,
 especially in immature leaves, distinguishes this species.
 Specimen in Kew: 2231 (Haviland), Type - A.

3. Melanorrhoea speciosa Ridley. rengas bulu.

II Div.: Tj. Keranji 12883; III Div.: Loba Kabang P.F. 2710,
2787.
 Medium-sized tree, 60 - 72 ins. g.; rare in P.C.s 1 and 2.
 Recorded in peat swamps from the Rejang Delta and Saribas
 and in heath forest in Brunei.
 Specimen in Kew: 3247 (Haviland), Type - B.

Parishia Hook. f.

1. Parishia sericea Ridley. upi paya, rengas susu.

III Div.: Loba Kabang P.F. 471, 2751, A 76; IV Div.: Bintulu
262; V Div.: 1772.

Very large tree, 120 - 132 ins. g., with large ascending buttresses to a height of 12 ft. or more. Occasional, locally frequent, in P.C. 1; throughout Sarawak and Brunei.

2. Parishia sp. (9802). upi paya.

II Div.: Triso 9802, 12862, 3117, Tj. Keranji, 12249, 12885, Lingga 5315.

Large tree, up to 96 ins. g., similar in habit and habitat to P. sericea but recorded only from the Maludam Peninsula in II Div. It may be easily distinguished by the longer leaflets with more pronounced midrib and venation. The status of this species is uncertain.

3. Parishia sp. nov. (2697). kayu pahit.

III Div.: Loba Kabang P.F. 2697, 413, 891.

Medium-sized tree, 48 - 60 ins. g., with very distinctive foliage; occasional and local in P.C.s 1 and 2; recorded only from Loba Kabang P.F. and Daro F.R.

Identically matching specimens, 29.120 and 29.122 (Buwalda), from an unnamed species collected in Sumatra were examined in Bogor. Only sterile specimens have been seen and it remains doubtful whether it is a Parishia.

Swintonia Griff.

1. Swintonia glauca Engl. petoh, selan petoh.
tilong, sikat (Mil.).

III Div.: Loba Kabang P.F. 886, 2607, 665, 421, 660, Oya Mukah P.F. A 184, Lassa 12429.

Medium-sized tree, 60 - 72 ins. g., with characteristic very smooth pinkish brown bark. Frequent and local in P.C.s 1 and 2 towards the inland margin of swamps. Recorded only from the Rejang Delta and Mukah District in peat swamps, though known to occur elsewhere in heath forests.

Specimens in Kew: 366, Type, 1085 (Beccari) - A.

This species may be a synonym of Swintonia spicifera, which is frequent in L.D.F. near the coast.

CONNARACEAE

Connarus L.

1. Connarus semidecandrus Jack.

III Div.: Pulau Bruit 7944, 7922; IV Div.: Sg. Dua 4193. Twining climber or scandent shrub frequent in understorey of P.C. 1 throughout Sarawak and Brunei.

Ellipanthus Hook. f.

1. Ellipanthus tomentosus Kurz. ssp. tomentosus. kelin (Mil. Matu).

III Div.: Daro F.R. 5238, 9721, Pulau Bruit 9275, 9294.

Small tree, 4 - 12 ins. g., rare and local in P.C. 1. Recorded from only the Rejang Delta.

Rourea Aubl.

1. Rourea mimosoides (Vahl) Planch. forma mimosoides Leenhout.

II Div.: Triso 10022.

Distinctive medium-sized climber, occasionally attaining crowns of dominants, occasional in P.C. 1 throughout Sarawak and Brunei. No fertile specimens have yet been collected.

LEGUMINOSAE

(Sub-family Caesalpiniaeeae)

Copaifera

1. Copaifera palustris (Sym.) De Wit. sepetir paya, petir paya, tepih (Mil.).

II Div.: Sg. Tissak 3193, Saribas F.R. 8565; III Div.: Pulau Bruit 453, 2624, 501, 454, A 27, Loba Kabang P.F. 2779, Daro F.R. 5219; IV Div.: Miri 1210.

Large tree, 84 - 96 ins. g., occasional, locally frequent, in P.C.s 1 and 2 throughout Sarawak and Brunei.

Dialium L.

1. Dialium laurinum Baker. keranji paya (M. and I.), cham (Mil. Oya).

II Div.: Triso P.F. 3104; III Div.: Lepah P.F. 8073, Daro F.R. 9743, Loba Kabang P.F. 757, 2725, A 80, 491.

Medium-sized tree, 48 - 60 ins. g., rather rare in P.C. 1; throughout Sarawak and Brunei.

Koompassia Maing.

1. Koompassia malaccensis Benth. menggris.

II Div.: Triso P.F. 9804.

Very large tree, 108 - 144 ins. g., one of the giants of peat-swamp forest, occasional and usually rather localised near coastal perimer of P.C. 1, throughout Sarawak and Brunei. Also occurs in heath forest and on ridges and terraces.

Phanera Lour.

1. Phanera moultonii (Merr.) De Wit var. moultonii.

II Div.: Simanggang 14573.

Medium-sized climber, occasionally reaching upper canopy, rare in P.C.s 1 and 2, throughout Sarawak and Brunei. Occurs more frequently in heath forests.

Sindora Miq.

1. Sindora leiocarpa Backer ex Heyne. tapar hantu.

III Div.: Sg. Empawah A 111, Loba Kabang P.F. 529, 424, Pulau Buit A 4, 7911.

Tree, 24 - 36 ins. g., but individuals up to 50 ins. g. have been recorded, occasional in P.C. 1 throughout Sarawak and Brunei. Also recorded in heath forest.

LEGUMINOSAE

(Sub-family Mimosaceae)

Abarema Kostermans

1. Abarema borneensis Kostermans. petai, saga.

III Div.: Loba Kabang P.F. 900; V Div.: Kayangeran F.R. 4909.
Tree, 20 - 30 ins. g., rare in P.C. 1 throughout Sarawak and Brunei.

Parkia R. Br.

1. Parkia singularis Miq.

III Div.: Loba Kabang P.F. 3889 (Brooke), 2705, Pulau Buit 8051.
Medium-sized tree, 48 - 60 ins. g., rare and localised in P.C. 1. Recorded from the Rejang Delta and Batang Lupar in peat swamps but also occurs in heath forest.

Pithecellobium Mart.

1. Pithecellobium oppositum Miq. jiring paya, petai belalang.

III Div.: Lepah P.F. 8097, Pulau Buit 9008, 9253, Loba Kabang P.F. 414; IV Div.: Sg. Dua 4163, 2864; Brunei: Badas 2838.
Small tree of the understorey, 9 - 15 ins. g., occasional, locally frequent, in P.C.s 1 - 3 throughout Sarawak and Brunei; also occurs in heath forest.

ROSACEAE

Parastemon A. DC.

1. Parastemon urophyllum A. DC. ngilas, mendailas (Brunei)

II Div.: Triso 9803; III Div.: Sg. Nangar 12306, Loba Kabang P.F. 423.

Large tree, 72 - 84 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei.

2. Parastemon veesteeghii Merr. & Perry. ngilas padang.

II Div.: Sg. Tissak 3190, 3151; III Div.: Pulau Bruit 9056, Loba Kabang P.F. 440, 658; IV Div.: Lobok Pasir 9885, 8497; Sg. Dua 3276, 4169, 2898; Brunei: Badas 2833, 2816; V Div.: Lawas 1511.

Small to medium-sized tree, 24 - 36 ins. g., occasionally larger, abundant in P.C.s 4 - 6 throughout Sarawak and Brunei; also one of the commonest small trees of heath forests.

Specimens of this species are frequently confused with P. urophyllum.

Pygeum Gaertn.

1. Pygeum parviflorum Teijsm and Binn. enteli (I.),
akil (Mil. Rejang).

II Div.: Saribas 12402, 12879; III Div.: Daro F.R. 12437, Loba Kabang P.F. 2602, 2731, 2778, 426; IV Div.: Baram 4173.

Small tree, 12 - 18 ins. g., frequent in P.C.s 3 and 4 in the Rejang Delta and rare in Baram; throughout Sarawak and Brunei.

RHIZOPHORACEAE

Carallia Roxb.

1. Carallia brachiata Lour. (Merr.). rabong (Mil.).

III Div.: Sg. Nangar 12256, Pulau Bruit 9050, 9286, 2640, 8021, Lepah P.F. 8085; V Div.: Lawas 9116.

Small tree, 12 - 24 ins. g., occasional in P.C. 1, and generally confined to coastal margin; throughout Sarawak and Brunei. Also occurs in heath forest.

Combretocarpus Hook. f. keruntum, perepat paya.

1. Combretocarpus rotundatus Dans.

II Div.: Sabu F.R. 3206; III Div.: Pasai A 126, Lassa P.F. A 9, Loba Kabang P.F. 9067.

Medium-sized to large tree, 72 - 84 ins. g., frequent, locally abundant, in P.C.s 2 - 6. It is the dominant species of P.C. 6, where it occurs as a small stunted tree, 12 - 30 ins. g., and 20 to 40 ft. h. Occurs throughout Sarawak and Brunei, and is also a characteristic species of many heath forests. Specimen in Kew: Unno. Herb. Hook. Type - A.

MYRTACEAE

Barringtonia Forst.1. Barringtonia gitingensis Elm.putat paya.III Div.: Surong Irit 5201, Naman F.R. 9184.

Small tree, 6 - 12 ins. g., rare in understorey of P.C. 1.

Recorded in peat swamps from only the Rejang Delta, but occurs in L.D.F. in Brunei.

Eugenia Mich. ex L.1. Eugenia cerina Hend.III Div.: Loba Kabang P.F. 2612, 2766; IV Div.: Bakong 3265, 4154; Brunei: Badas 2856.

Small tree, 18 - 36 ins. g., with distinctive coriaceous glossy foliage, occasional in P.C. 4 in the Rejang Delta, Baram and Brunei.

2. Eugenia chrismannii Merr. & Perry.III Div.: Naman F.R. 675, Surong Irit 9703, Loba Kabang P.F. 856, 2708, 532, 876, Pulau Bruit 2623, 9276; Brunei: Badas 2855.
Medium-sized tree, 36 - 48 ins. g., occasional in P.C. 1 and 2; throughout Sarawak and Brunei.3. Eugenia aff. havilandii Merr.II Div.: Triso P.F. 3166, 3103, 12866, 3204, Saribas F.R. 8555;
III Div.: Pulau Bruit 4966, 3258, 9251, 7902, 4968, 9023, 2659,
9207, 2658, 9274, 5153, Loba Kabang P.F. 467, 2741, Matu Daro
P.F. 12318, 12253.

Small to medium-sized tree, occasional in P.C. 1 in Batang Lupar and the Rejang Delta. Recorded in heath forest in Brunei.

4. Eugenia incarnata Elm.II Div.: Triso P.F. 3203, Sg. Tissak 3191, Loba Kabang P.F. 2763, 438, 864, Pulau Bruit 7913; IV Div.: Sg. Dua 3278, 3170, 2890; V Div.: Lawas 2017.

Medium-sized tree, 36 - 48 ins. g., occasional, locally frequent, in P.C.s 1 and 2; throughout Sarawak and Brunei.

5. Eugenia lineata Duthie.
 I Div.: Setapok F.R. 9577; III Div.: Singat 9746, Pulau Bruit 4972.
 Small to medium-sized tree, 24 - 36 ins. g., rare in P.C. 1; recorded from Setapok F.R. and Rejang Delta.
6. Eugenia aff. luzonensis Merr.
 II Div.: Saribas F.R. 8502; III Div.: Pulau Bruit 9004, 8020, 9270.
 Small tree, 12 - 18 ins. g., occasional in P.C. 1 close to coastal perimeter of swamps, on shallow peat transitional from mangrove. Recorded from the Rejang Delta and Saribas.
7. Eugenia nemestima M.R. Hend. ubah jankar.
 II Div.: Triso P.F. 12860, 3186; III Div.: Loba Kabang P.F. 2717, 461, Naman F.R. 682, Surong Irit 9705; IV Div.: Sg. Dua 4157.
 Medium-sized tree, 48 - 60 ins. g., occasional in P.C.s 1 and 2; throughout Sarawak and Brunei. A distinctive species with conspicuous stilt roots.
8. Eugenia spicata Lamk.
 (Eugenia zeylanica (L.) Wight)
 II Div.: Ng. Skrang, 9821; III Div.: Loba Kabang P.F. 409, 2727, 1594, Pulau Bruit 9263; IV Div.: Bintulu 9891; V Div.: Kuala Lawas 9115.
 Small to medium-sized tree, 36 - 48 ins. g., occasional in P.C. 1 especially near the coast, where it flowers and fruits as a small tree 10 - 15 ft. h. Occurs throughout Sarawak and Brunei.
9. Eugenia verticillegera Rid.
 II Div.: Triso 9791; III Div.: Loba Kabang P.F. 2715, 2711.
 Medium-sized tree, 48 - 60 ins. g., occasional in P.C. 1 in the Rejang Delta.
 Unmatched specimens of Eugenia: 5152, 9757, 2726, 2758.
10. Eugenia sp. (2615). ubah padang.
 III Div.: Loba Kabang P.F. 2615, 1595.
 Small tree, 12 - 24 ins. g., with distinctive foliage, occasional in P.C. 4 in the Rejang Delta and Baram. Occurs in heath forest in Brunei.
11. Eugenia sp. (479).
 III Div.: Loba Kabang P.F. 479, 2738, 2732, 883; V Div.: Kayangeran F.R. 2850.
 Small tree, 18 - 36 ins. g., rare in P.C. 1 and recorded from only the two mentioned localities.

12. Eugenia sp. (2822). kelat jambu (M. Brunei).

V Div.: Kayangeran F.R. 4903; Brunei: Badas 2822.
Small tree, 12 - 24 ins. g., rare in sempilor forests of Lawas District and abundant in P.C. 4 at Badas, Brunei. Recorded from only northern Sarawak and Brunei, where it also occurs in heath forest.

Tristania R. Br.

1. Tristania grandifolia Ridley. tekoyong-tekoyong (M. Lawas),
Jinggau (I.).

II Div.: Triso P.F. 14572; III Div.: Loba Kabang P.F. 2695;
V Div.: Kayangeran F.R. 1555, 1797.
Medium-sized tree, 24 - 36 ins. g., occasional in P.C.s 1 and 2, and abundant in Lawas swamps. Occurs throughout Sarawak and Brunei.
Specimen in Kew: 2489 (Beccari), Type - A.

2. Tristania maingayi Duthie. selunsor.

II Div.: Triso P.F. 3171, 14561; IV Div.: 9880, 4164.
Medium-sized tree, 24 - 36 ins. g., frequent, locally abundant in P.C.s 4 and 5. Recorded in swamps only from Batang Lupar and Baram; absent from extensive pole forests in the Rejang Delta. A common species in heath forests.

3. Tristania obovata R. Br. selunsor.

II Div.: Triso P.F. 3172; III Div.: Loba Kabang P.F. 656, 446.
Medium-sized tree, 48 - 60 ins. g., frequent, locally abundant, in P.C.s 4 and 5 throughout Sarawak and Brunei; also occurs in heath forest and degraded soils.
Specimen in Kew: 1955 (Haviland) - B.

MELASTOMACEAE

Dactylocladus Oliv.

1. Dactylocladus stenostachys Oliv. jongkong, medang jongkong,
merebong (Bintulu),
medang tabak (Brunei).

II Div.: Saribas F.R. 8541; III Div.: Lepah P.F. 8074, Sg. Retus A 18, Loba Kabang P.F. 1596, Naman F.R. 673, A 6, 9174, Pulau Brait 9261, 9017, Matu Daro P.F. 12269; IV Div.: Sg. Dua 2879, 4191; V Div.: Kayangeran F.R. 2031.
Very large tree, girths exceeding 168 ins. have been recorded. One of the most characteristic species of swamp forest. The only species that is represented in all communities; throughout Sarawak and Brunei.
Specimen in Kew: 3272 (Beccari) Type, 2916 (Haviland) - A.

Kibessia DC.1. Kibessia coriacea Cogn.III Div.: Loba Kabang P.F. 2606, 2806.

Small tree, 12 - 24 ins. g., rare and local in P.C. 2.

Recorded from the Loba Kabang P.F. and Naman F.R. in the Rejang Delta.

Specimens in Kew: 3324 (Beccari) Type, dmrc, 972, 1753 (Haviland) - A.Medinilla Gaud.1. Medinilla hasseltii Bl.III Div.: Loba Kabang P.F. 2814.

Creeper, locally abundant in P.C. 4 in the Rejang Delta and Baram.

Specimens in Kew: 4167, cllq (Haviland) - B.2. Medinilla laxiflora Ridley.II Div.: Sg. Tissak 3195, Saribas F.R. 8535; III Div.: Naman F.R. 8951, Pulau Bruit 8025, Lepah P.F. 8098.

Epiphyte on small trees or poles, between heights of 3 and 15 ft. from ground, frequent in P.C. 1; throughout Sarawak and Brunei.

3. Medinilla scandens King.III Div.: Loba Kabang P.F. 2810, 79331 (W.-S.).

Small creeper, frequent on pneumatophores, buttresses and protruding roots in P.C. 1. Recorded from the Rejang Delta and Batang Lupar.

4. Medinilla sp. (2029).III Div.: Rantau Panjang 9867, Naman F.R. 12442; V Div.: Kayangeran F.R. 2029.

Epiphytic shrub, rare in P.C. 1. Recorded from the Rejang Delta, Brunei and Lawas.

5. Medinilla sp. (9025).III Div.: Pulau Bruit 9025, Daro F.R. 9724; IV Div.: Sg. Dua 4122.

Epiphyte or epiphytic shrub in understorey of P.C. 1. Recorded from the Rejang Delta and Baram.

Marumia Bl.1. Marumia nemerosa (Jack) Bl.III Div.: Naman F.R. 9765.

Climber in understorey of P.C. 1. Recorded from only the one locality.

Pognanthera Bl.1. Pognanthera pulverulenta Bl.

II Div.: Simanggang 9430, Triso P.F. 12220; III Div.: Daro F.R. 9723, Pulau Bruit 7916.

Epiphytic shrub at heights of from 3 to 15 ft. in understory of P.C. 1. Occurs throughout Sarawak and Brunei.

CUCURBITACEAE

Bryonopsis Arn.1. Bryonopsis laciniosa (L.) Naud.

III Div.: Daro F.R. 5241.

Low climber, very rare in primary peat-swamp forest, but occasional in secondary forest, especially in open areas near rail lines following logging. Occurs throughout Sarawak and Brunei.

ARALIACEAE

Arthrophyllum Blume.1. Arthrophyllum diversifolium Bl.

III Div.: Loba Kabang P.F. 2666; V Div.: Kayangeran F.R. 2032. Small tree of the understory, 6 - 8 ins. g., rare. Recorded only from the Rejang Delta and Lawas District; also occurs in heath forest.

2. Arthrophyllum rubiginosum Ridley.

III Div.: Loba Kabang P.F. 662, 2622; IV Div.: Miri, Sungei Dua 4174.

Small tree, 12 - 18 ins. g., with conspicuous rufous shoots and young leaves; rare in P.C.s 4 and 5 in Rejang Delta and Baram; also recorded from Saribas F.R.

Specimen in Kew: 591 (Hose), Type - A.

Schefflera Forst.1. Schefflera ridleii (King) Vignier.

III Div.: Pulau Bruit 9046; V Div.: Kuala Lawas 9113.

Distinctive sun epiphyte in crowns of large trees, rare and confined to P.C. 1; throughout Sarawak and Brunei.

2. Schefflera subulata Vignier.

I Div.: Lundu 9144; II Div.: Sg. Tissak 2143; III Div.:
 Surong Irit 5211; IV Div.: Sg. Dua 9/1956 (Jara).
 Shrub, or climbing shrub to height of 15 ft., in P.C.s 1 - 3.
 Recorded from I to IV Divs.

CORNACEAE

Alangium Lam.

1. Alangium havilandii Bloemb. midong (I.), jadam (M.),
dadam (Mil.).

II Div.: Saribas F.R. 8531; III Div.: Loba Kabang P.F. 695,
 459, 530, Pulau Bruit P.F. 12868, 9218, 5114, 2629, 8067, Daro
 F.R. 9702, 5224, Sg. Nangar 12302.

Small to medium-sized tree, 36 - 48 ins. g., with conspicuous
 spreading stilt roots; occasional in P.C. 1, throughout Sarawak
 and Brunei.

Specimen in Kew: 3285, 3019 (Haviland), Type - A.

RUBIACEAE

Argostemma Wall.

1. Argostemma psychotrioides Ridl.

III Div.: Naman F.R. 8954, Loba Kabang P.F. 2801.
 Small herb, occasional, locally frequent (Naman F.R.), on
 pneumatophores and roots above surface of swamp in P.C.s 1 and 2.
 Recorded from the Batang Lupar and the Rejang Delta, but probably
 occurs throughout two territories.

2. Argostemma psychotrioides Ridl. var.

III Div.: Singat 9070, Sg. Kalaparan 8502 (Brooke).
 Small herb, rare and localised in P.C. 1 in the Rejang Delta.
 The status of this species or variant is uncertain. It is
 distinguished from 1 primarily by its minute size.

Canthium Lam.

1. Canthium didymum Gaertn. janang.

III Div.: Loba Kabang P.F. 880, 485; V Div.: Kayangeran F.R.
 1560, 2025.

Small tree, 18 - 24 ins. g., occasional in P.C.s 1 and 2 through-
 out Sarawak and Brunei; also occurs in heath forest.

2. Canthium umbellatum Wight. tulang ular.

II Div.: Sg. Tissak 2384; III Div.: Naman F.R. 9761, Pulau Buit 9231, 2643, 9016, Lassa P.F. 12424.
Small tree of the understorey, 6 - 12 ins. g., rare in P.C. 1 and recorded from only the Batang Lupar and the Rejang Delta.

Gaertnera Lam.1. Gaertnera borneensis Val. ex Winkler.

III Div.: Loba Kabang P.F. 2794, 435; Brunei: Badas 5659.
Small tree, 10 - 15 ft. h., frequently little more than an erect shrub, occasional in P.C.s 1 and 2 throughout Sarawak and Brunei; also of frequent occurrence in heath forests.

Gardenia Linn.1. Gardenia pterocalyx Val.

benah (Mil.), malau,
sulong (M. Lawas).

II Div.: Triso 9793; III Div.: Pulau Buit 9026, 9228, 8034, 4976, Sg. Nangar 12265; IV Div.: Sg. Dua 2886; V Div.: Kayangeran F.R. 1562.

Small to medium-sized tree, 24 - 30 ins. g., occasional, locally frequent (Sg. Dua, Baram) in P.C. 3, rare in P.C.s 1 and 2; throughout Sarawak and Brunei. Also occurs in heath forest and L.D.F. (Brunei). The sticky excrecence on the buds is used to cement parang handles.

Hedyotis Linn.1. Hedyotis tenelliflora Bl.

III Div.: Loba Kabang P.F. 2795, 2796.
Slender woody creeper on litter layer and on base of lower boles of trees, occasional in P.C. 4. Recorded from the Batang Lupar and Rejang Delta.

Hydnophytum Jack.1. Hydnophytum formicarium Jack.

II Div.: Triso P.F. 10024.
Myrmecophilous epiphyte on small trees in understorey of P.C.s 3 and 6.

Ixora Linn.1. Ixora pyranthe Brem.

II Div.: Saribas F.R. 8570; III Div.: Sg. Nangar 12254, Lassa P.F. 8846, Pulau Buit 9205, 9220, 8035; IV Div.: Sg. Dua 4179, 3273; Brunei: Anduki F.R. 4942, Badas 5666.
Erect shrub, 5 - 10 ft. h., occasional in P.C. 1, frequent in P.C.s 2 and 3. Occurs throughout Sarawak and Brunei.

Jackia Wall.1. Jackia ornata Wall.selumar.

III Div.: Pulau Bruit 9236, 8001, A 41, Loba Kabang P.F. 2792.
 Small tree, 18 - 36 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei.

Lecananthus Jack.1. Lecananthus erubescens Jack.

II Div.: Saribas F.R. 8523; III Div.: Pulau Bruit 8016;
 IV Div.: Sg. Dua 2869.
 Small root climber on buttresses, roots and at base of trees, may attain a height of 10 - 15 ft., frequent in P.C. 1 throughout Sarawak and Brunei.

Lucinaea DC.1. Lucinaea morinda DC.ngulut (Mil.).

II Div.: Triso 9799; III Div.: Pulau Bruit 5109; IV Div.:
 Sg. Dua 2878.
 Small to medium-sized climber, occasionally attaining 100 ft., occasional in P.C. 1 throughout Sarawak and Brunei.

Mussaendopsis Baill.1. Mussaendopsis beccariana Gaertn.

III Div.: Loba Kabang P.F. 522, 685, 517.
 Medium-sized tree, 36 - 48 ins. g., with very localised distribution towards inland margin of swamps; occasional in P.C. 1 in the Loba Kabang P.F. and the Naman F.R., and the species has also been recorded at Ng. Skrang in the II Div. Recorded in L.D.F. from Brunei.

Myrmecodia Jack.1. Myrmecodia tuberosa Jack.

IV Div.: Lobok Pasir 9873.
 Myrmecophilous epiphyte, frequent in crowns of Combretocarpus rotundatus in P.C. 6; in peat swamps is known to occur only in the Baram, but is a characteristic epiphyte of certain open heath forests.

Nauclea Linn.

1. Nauclea parva (Havil.) Merr. jengkai (M. Pusa).

II Div.: Saribas F.R. 8508, Triso P.F. 3167; III Div.: Lepah F.R. 8061, Pulau Bruit 7941, 9266, Loba Kabang P.F. 8051; IV Div.: Sg. Dua 3253, 3167.

Small tree, 9 - 18 ins. g., rather rare but widely distributed throughout P.C. 1, in Sarawak from Batang Lupar to the Baram. Occurs in Brunei in secondary forest on degraded soils.

Psychotria Linn.

1. Psychotria sarmentosa Bl.

II Div.: Triso 10007; III Div.: Naman F.R. 9296, Pulau Bruit 9031, Loba Kabang P.F. 2809; IV Div.: Sg. Dua 9441.

Small creeper on roots and buttresses, occasionally climbing to height of 10 ft., occasional in P.C. 1 throughout Sarawak and Brunei.

2. Psychotria sp. (5213).

II Div.: Triso 12213; III Div.: Surong Irit 5213.

Small straggling climber in understorey, rare and local in P.C. 1; recorded from Maludam Peninsular and Rejang Delta.

Randia Linn.

1. Randia auriculata (Wall.) K. Schorn^{un}.

II Div.: Tj Keranji 12410; III Div.: Pulau Bruit 9203, Surong Irit 5216.

Climber to middle-storey, rare in P.C. 1, and recorded from the Rejang Delta and Maludam Peninsular.

2. Randia dilleniacea Burk.

II Div.: Tj Keranji 12405; III Div.: Singat 9738.

Slender-stemmed climber to height of 120 ft., rare in P.C. 1; recorded from Saribas and Rejang Delta.

3. Randia sp. (7904).

III Div.: Pulau Bruit 12952, 9288, 7904, 5113, Sg. Nangar 12259.

Small tree or erect shrub, 5 - 18 ft. h. and 3 - 6 ins. g., recorded only from Pulau Bruit where it is occasional in the understorey of P.C. 1.

Tarennia Gaertn.

1. Tarennia fragrans (Bl.) Koord. and Val.

II Div.: Tj Keranji 12882, Saribas F.R. 8530; III Div.: Pulau
Bruit 9033, 8009, 9257, 8047; IV Div.: Sg. Dua 4167, 4198;
V Div.: Kayangeran F.R. 2023, 4912, 2845, 2021.
Erect shrub, 5 - 10 ft. h., frequent in P.C. 1 throughout
Sarawak and Brunei; also occurs in heath forest.

Timonius DC.

1. Timonius peduncularis Wall. rentap.

II Div.: Triso 9790; III Div.: Loba Kabang P.F. 430, Pulau
Bruit 9238, 9029, 9285; IV Div.: Sg. Dua 2892, 2870; V Div.:
Kayangeran F.R. 2019.
Small tree, 9 - 18 ins. g., occasional in P.C. 1 and abundant in
P.C. 4 throughout Sarawak and Brunei; also one of the commonest
species in heath forest.

Uncaria Schreb.

1. Uncaria ovalifolia Roxb.

II Div.: Saribas F.R. 8522; III Div.: Pulau Bruit 7938, 9053,
9045, 9202, Loba Kabang P.F. 8810; IV Div.: Sg. Dua 3063.
One of the largest climbers in swamp forest and probably the
most common; abundant in P.C. 1 and occasional in P.C. 2;
particularly common in secondary growth following exploitation.
Occurs throughout Sarawak and Brunei.

ERICACEAE

Vaccinium L.

1. Vaccinium borneense W.W.Sm.

III Div.: Loba Kabang P.F. 79331 (W.-S.).
Straggling shrub 3 ft. h. in P.C. 4. In peat swamps only
recorded from Rejang Delta, but occurs throughout Sarawak and
Brunei in heath forests.

MYRSINACEAE

Ardisia Sw.

1. Ardisia copelandii Merr. merajumah

II Div.: Triso 14503, 12864; IV Div.: Sg. Dua 4113.

Small tree, 9 - 12 ins. g., rare and local in P.C.s 2 and 3.
Recorded from II and IV Divs. and Brunei.

2. Ardisia polyactis Mez.

II Div.: Sebuyau F.R. 2462; III Div.: Pulau Bruit 12951,
9273, 8003, Lepah P.F. 8071, 8092, Naman F.R. 9167, Daro F.R. 9062.
Small tree, 8 - 15 ft. h. and 4 - 8 ins. g., occasional in
understorey of P.C. 1 in the Rejang Delta, but with the exception
of one record in the Sebuyau F.R. it has not been noted elsewhere.

3. Ardisia sp. (9826).

II Div.: Lingga 9826, Sg. Tissak 3194; III Div.: Loba Kabang
P.F. 79333 (W.-S.), 2791.
Straggling shrub, 5 - 10 ft. h., occasional, locally frequent,
in P.C. 4 in Batang Lupar and the Rejang Delta.

Embelia Burm.

1. Embelia coriacea Wall.

III Div.: Sg. Nangar 12326.
Large climber in P.C. 1, recorded from Rejang Delta and Maludam
Peninsular.

2. Embelia perganiacea A. DC.

II Div.: Triso 10002, 12407.
Large climber, rare in P.C. 1. Recorded only from Maludam
Peninsular.

Grenacheria Mez.

1. Grenacheria beccariana Mez.

II Div.: Saribas F.R. 8505, 8553; III Div.: Pulau Bruit 7918,
9258, 9239; IV Div.: Sg. Dua 3289, 3055.
Slender climber to height of 100 ft. or more, rarely a straggling
shrub, occasional in P.C.s 1 - 3 from Batang Lupar to Baram.
Not yet recorded from Brunei or V Div.

Labisia Lindl.

1. Labisia pumila (Bl.) Benth. and Hook. f. var. genuina Mez.

III Div.: Loba Kabang P.F. 1571.
Small procumbent shrub, frequent, locally abundant, on litter
layer in P.C. 4 from Batang Lupar to Baram.

2. Labisia pothoina Lindl.

II Div.: Triso 3173; III Div.: Pulau Bruit 8057.
Short undershrub, stem less than 12 ins., rare, locally occasional, in P.C. 1 in Batang Lupar, Saribas, and the Rejang Delta.

Rapanea Aubl.1. Rapanea avenis (Bl.) Mez.

II Div.: Triso P.F. 14522, Sg. Tissak 2346; III Div.: Loba Kabang P.F. 2610.
Small tree, 12 - 24 ins. g., rare in P.C. 4 in the Rejang Delta and Batang Lupar.

2. Rapanea philippensis Mez.

IV Div.: Sg. Dua 3081, 3073, 2881, 9883.
Shrub, 5 - 10 ft. h., occasional in P.C. 4 in the Baram.
No fertile material has yet been collected.

3. Rapanea umbellulata (Wall.) Mez.

Brunei: Sg. Ayom Ayom 2181; V Div.: Kayangeran F.R. 2020.
Small tree, 9 - 12 ins. g., occasional in P.C. 1 near coastal margin, and in transitional zone from mangrove swamps.
Recorded from only Brunei and Lawas.

SAPOTACEAE

Ganua Pierre ex Dubbard.1. Ganua coriacea Pierre ex Dubbard.

nyatoh ketiau (M),
nyatoh chabi (Mil).

III Div.: Surong Irit 5232, Loba Kabang P.F. 2692, 512, 875, 526, 545, 2714, 875, 893.
Medium-sized tree, 24 - 48 ins. g., frequent, locally abundant (Rejang Delta) in P.C. 1. Occurs throughout Sarawak and Brunei, but is rare east of the Rejang Delta.

2. Ganua curtisii (K. and G.) H. J. Lam.

Brunei: Badas 2815.
Tree, 18 - 24 ins. g., abundant in understorey of P.C. 3 in the Badas area of Brunei, but not recorded elsewhere in swamps.
Occurs in heath forest.

3. Ganua motleyana (de Vriessse) Pierre ex Dubbard. ketiau (M.),
skiew (Mil. Rejang, Matu, Daro).

II Div.: Saribas F.R. 8402; III Div.: Singat 9737, Pulau Buit, 9037, 9222, Mubong 671, Sg. Nangar 12317, Lassa 12900.

Medium-sized tree, 36 - 72 ins. g., locally frequent in P.C. 1 on shallow peat near the coast. Occurs throughout Sarawak and Brunei.

Fruit produces an edible oil and is collected for local use and export.

4. Ganua pierrei v.d. Assem.

III Div.: Loba Kabang P.F. 469, 2683, 534, 2690, 684, 521, 528, 534, Singat 9737.

Small to medium-sized tree, 24 - 36 ins. g., occasional in understorey of P.C. 1 in the Rejang Delta; also recorded from Batang Lupar and Bintulu. Occurs in heath forest in Brunei.

Palaquium Blanco.

1. Palaquium cochlearifolium van Royen. nyatoh jelutong,
nyatoh temiang
(M. Lingga).

II Div.: Lingga 4808; III Div.: Loba Kabang P.F. A 64, 5647, 653, 657, 1531, 432, Sg. Pak A 109; IV Div.: Sg. Dua 2867.

Medium-sized tree, 36 - 48 ins. g., occasional in P.C. 3, frequent in P.C.s 4 and 5, throughout Sarawak and Brunei; also occurs in heath forest.

2. Palaquium leiocarpum Boerl. nyatoh rian, jankar.

III Div.: Igan A 102; IV Div.: Baram 1289.

Small to medium-sized tree, 24 - 48 ins. g., occasional and localised in P.C. 1, preferring the coastal and riparian margins of peat-swamp forest; throughout Sarawak and Brunei; of more frequent occurrence in heath forests.

One of the species that produces the commercial gatah rian.

3. Palaquium pseudocuneatum H. J. Lam. nyatoh babi.

II Div.: Saribas F.R. 8542; III Div.: Pulau Buit 7917, 4962, 9058, 9246, 9256, 4954, Singat 9733, Daro F.R. 2627, A 402,
Loba Kabang P.F. 497, 1526, 2680, 2685, 2759, 854; IV Div.:

Sg. Dua 3279.
Tree, 36 - 48 ins. g., occasional, locally frequent, in P.C. 1 throughout Sarawak and Brunei.

4. Palaequium pseudorostratum H. J. Lam. nyatoh babi.
 I Div.: Setapok 9084; II Div.: Triso 9433, 3112, 3165, Saribas 12336, Simmanggang 9433; III Div.: Naman F.R. A 98, A 106, Loba Kabang P.F. 2678; V Div.: Meregang 1542.
 Medium-sized to large tree, 72 - 84 ins. g., occasional and widely distributed in P.C. 1 throughout Sarawak and Brunei. The largest of the nyatohs.
 There is frequently confusion in differentiating between this and the previous species in the field or from sterile specimens. The length of the petiole and shape of base of the lamina are diagnostic features.
5. Palaequium ridleyi King et Gamble. nyatoh terong, jerabukor
 II Div.: Tissak 2345; III Div.: Pulau Bruit 801, 9024, 9013, 7921, 8040, Loba Kabang P.F. 2619, 1520, 441, 680, 874, 546, 2619, 2605; IV Div.: Sg. Dua 4192, 4172, 4156, Lobok Pasir 9895; V Div.: Lawas 1513, Sg. Panchanak 9117.
 Medium-sized tree, 36 - 48 ins. g., occasional in P.C. 1, especially towards inland margins, and in P.C.s 2 and 3; widely distributed throughout Sarawak and Brunei, also occurring in heath forest. This species, especially when immature, is liable to be confused with Palaequium cochlearifolium.
6. Palaequium walsurifolium Pierre. nyatoh jangkar.
 I Div.: Setapok F.R. 4773, 4776, Lundu 9775; II Div.: Sedilu F.R. 4782; III Div.: Loba Kabang P.F. 872, 877, 696, 508, 882, Sg. Kelapa'an 751, Pulau Bruit 9735, A 100, Oya 5302, Singat 5002, 5218.
 Medium-sized tree, 36 - 48 ins. g., occasional, locally frequent near inland margins of swamps, in P.C. 1; throughout Sarawak and Brunei.
 A distinctive species with numerous spreading stilt roots.

Payena A. DC.

1. Payena obscura Burck. nyatoh padang.
 III Div.: Loba Kabang P.F. 2722, 2768, 2618.
 Small tree, 18 - 30 ins. g., occasional and localised in P.C. 4 in the Rejang Delta.

Planchonella Van Tiegh.

1. Planchonella maingayi (Clarke) van Royen.
 II Div.: Triso 3205; III Div.: Pulau ^B Bruit A 25, 8049.
 Medium-sized to large tree, 60 - 84 ins. g., rare in P.C. 1 near the coast. Recorded from the Batang Lupar and the Rejang Delta.

EBENACEAE

Diospyros L.

1. Diospyros elliptifolia Merr. balih (Mil.).
 II Div.: Saribas F.R. 8537; III Div.: Pulau Bruit 8048, 7930, 542, Loba Kabang P.F. 697, 895.
 Small tree, 12 - 24 ins. g., occasional in P.C.s 1 and 2, and recorded from Batang Lupar, Saribas, Rejang Delta, and Bintulu.
2. Diospyros evenis Bakh. merpinang.
 II Div.: Tj Keranji 12887, Triso 14504, 3164, 12871; III Div.: Pulau Bruit 4971, 4962, 9244, 9010, 7903, 4952, Daro F.R. 9716, 5004, Loba Kabang P.F. 483, A 12, Sg. Nangar 12315; Brunei: Anduki F.R. 5552, Badas 2848.
 Small to medium-sized tree, 24 - 36 ins. g., frequent and widely distributed, occurring in all forest types except P.C. 6, also in heath forest; throughout Sarawak and Brunei.
3. Diospyros maingayi Hk. f. merpinang.
 II Div.: Saribas 8403, Tj. Keranji 12888, Sg. Tissak 2159, 3196, 3197; III Div.: Loba Kabang P.F. 5052, 79320 (W.-S.), 890.
 Small to medium-sized tree, 24 - 36 ins. g., occasional, but very localised, in P.C. 1 in the Rejang Delta and Batang Lupar; also occurs in heath forest.
4. Diospyros pseudomalabarica Bakh. kayu malam.
 II Div.: Triso 3176; III Div.: Sg. Nangar 12307, Pulau Bruit 4973, 9214, 9034, 4955, Daro 5001, Loba Kabang P.F. 5051, 507, Naman F.R. A 17.
 Medium-sized tree, 48 - 60 ins. g., frequent in P.C.s 1 and 2, throughout Sarawak and Brunei, also recorded in L.D.F. in Andulau F.R. (Brunei).

OLEACEAE

Linociera Swartz.

1. Linociera insignis Clarke.
 IV Div.: Sg. Dua 2887; V Div.: 4914.
 Small tree, 12 - 24 ins. g., rare in P.C. 1. Recorded from only the Baram and Lawas, but occurs in heath forest in Brunei.
2. Linociera racemosa Merr.
 III Div.: Pulau Bruit 9042.
 Medium-sized tree, 24 - 36 ins. g., rare in P.C. 1, and recorded from only Pulau Bruit.

3. Linociera sp. (3282).IV Div.: Sg. Dua 1775, 1777, 3282; Brunei: Anduki 2041;V Div.: Kayangeran F.R. 4906.

Small tree, 12 - 24 ins. g.; occasional in P.C.s 2 and 3 and in Sempilor forest of V Div.; also occurs in heath forest in Brunei.

Myxopyrum Blume.1. Myxopyrum ellipticum A.W. Hill.III Div.: Naman F.R. 14586; IV Div.: Sg. Dua 4171, Lobok Pasir 9878.

Small to medium-sized climber, occasional in P.C.s 2 and 3. Recorded from III and IV Divs.

APOCYNACEAE

Alstonia Br.1. Alstonia spathulata Blume.pelai, pulai (M. Brunei).
tembilak purak (Dusun?).III Div.: Mukah 551, 552, Pulau Bruit P.F. A 62, 12441.

Forest giant, girths may exceed 156 ins. above buttresses. A very conspicuous and frequent tree of swamp forest on the coastal margins, but rare or absent elsewhere; throughout Sarawak and Brunei.

Dyera Hook. f.1. Dyera lowii Hook. f.jelutong paya.III Div.: Daro F.R. 9750.

Large tree, 108 - 120 ins. g., with prominent pneumatophores; frequent, locally abundant, in P.C. 1, but also occurs, less commonly, in P.C.s 2 - 4; throughout Sarawak and Brunei.

This species is the most important local source of the commercial chicle used in the manufacture of chewing gum.

Urceola Roxb.lukut (Mil.).1. Urceola sp. (7909).II Div.: Saribas F.R. 8557; III Div.: Pulau Bruit P.F. 7909, 9225.

Medium to large-sized climber which reaches the upper storey; occasional in P.C. 1. So far recorded from only II and III Divs., but distribution is probably more widespread.

Kibatalia G. Don.1. Kibatalia sp. (9300).

III Div.: Loba Kabang P.F. 79323 (W.-S.), Naman F.R. 9300, 7945, 9181.

Shrub, 6 - 12 ft. h., occasional, locally frequent, but confined to P.C.s 2 and 3. Recorded only from the two localities from which specimens have been collected.

Willughbeia Roxb.1. Willughbeia coriacea Wall.

III Div.: Sg. Semup 5124.

Medium-sized climber in P.C. 1, and recorded from only the one locality.

2. Willughbeia glaucina K. Schum.

III Div.: Naman F.R. 9764.

Medium-sized to large climber in P.C. 1. This species is only definitely recorded in the Rejang Delta, but its distinctive leaves have also been noted on the swamp surface in the Batang Lupar.

ASCLEPIADACEAE

Dischidia R. Br.1. Dischidia hirsuta (Bl.) Dene.

II Div.: Triso 12856; III Div.: Pulau Bruit 5110.

Small climbing epiphyte in crowns of dominants and middle storey trees in P.C. 1. Probably occurs throughout Sarawak and Brunei but only recorded from II and III Divs.

2. Dischidia nummularia R. Br.

IV Div.: Lobok Pasir 9871, 4184.

Small climbing epiphyte, rare in crowns of dominants in P.C. 1, abundant at a low level on boles and crowns of trees and shrubs in P.C. 6; throughout Sarawak and Brunei.

3. Dischidia rafflesiana Wall.

IV Div.: Lobok Pasir 9872.

Small climbing epiphyte, frequent in crowns and on stems of Combretocarpus rotundatus in P.C. 6.

Note: Two further Dischidia spp. have been collected. Both occur as small climbing epiphytes in crowns of dominants in P.C. 1; their distribution and occurrence is at present incompletely known.

Hoya R. Br.1. Hoya coronaria Bl.Brunei: Tutong 4140.

Small climbing epiphyte in understorey of P.C. 6. Large fruits are used by native people in the preparation of a stomach medicine.

2. Hoya mitrata Kerr.II Div.: Saribas F.R. 8534, Triso P.F. 10015; IV Div.: Sg. Dua 3062.

Small twining climber in understorey of P.C. 3, occasional and rather localised. Not yet recorded from the Rejang Delta. The leaves tend to be in pseudo-whorls, which are inhabited by ants.

3. Hoya sp. (9877).IV Div.: Lobok Pasir 9877, 4178.

Climbing epiphyte in understorey of P.C. 6 in Baram.

LOGANIACEAE

Fagraea Thunb.1. Fagraea racemosa Jack.III Div.: Naman F.R. 9170, 9179, 9756, Rantau Panjang 9869, Pulau Bruit 9267, 9237, Lepad P.F. 8082.

Small upright shrub, 6 - 10 ft. h., rare locally, occasional, in P.C. 1 on shallow peat at margins of swamps. Recorded from only the Rejang Delta.

2. Fagraea litoralis Bl.II Div.: Saribas F.R. 8511; III Div.: Pulau Bruit 8026, 7943. Small epiphytic shrub, rare in P.C. 1. Recorded only from the Rejang Delta and Saribas.

CONVOLVULACEAE

Erycibe Roxb.1. Erycibe c.f. impressa Hoogl.meruyan batu.II Div.: Triso P.F. 10017, Saribas F.R. 8560; III Div.: Pulau Bruit 9280.

Liane, reaching crowns of dominants, occasional in P.C. 1, rare in P.C.s 2 and 3 throughout Sarawak, but not yet recorded from Brunei.

2. Erycibe sp. (4117).IV Div.: Sg. Dua 4117.

Liane on P.C. 2. Recorded from only the one locality.

GESNERIACEAE

Aeschynanthus Jack.1. Aeschynanthus hians C.B. Clarke. handan haka (I.).II Div.: Saribas F.R. 8510; III Div.: Loba Kabang P.F. 2803,
Naman F.R. 9755, 9183.Small creeper or low climber, on litter layer and lower stems
and buttresses of large trees, but rarely ascending to a height
of more than 6 ft.; occasional in P.C. 1 throughout Sarawak
and Brunei.

VERBENACEAE

Clerodendron L.1. Clerodendron fistulosum Becc.III Div.: Naman F.R. 9171, 7946, 9298; IV Div.: Sg. Dua 2876,
4188.Small myrmecophilous herb, rare, locally occasional, in P.C.s 1
and 2; throughout Sarawak and Brunei. Also recorded in heath
forest (Bako National Park).Premna Linn.1. Premna sp. (9725).III Div.: Singat 9725, Sg. Nangar 12328.Medium-sized to large climber, rare in P.C. 1; recorded from
only the Rejang Delta.Vitex Tourn. ex L.1. Vitex secundiflora H. Hallier.III Div.: Pulau Bruit 2644.Medium-sized tree, 24 - 36 ins. g., very rare in P.C. 1 and
recorded from only the mentioned locality.

NEPENTHACEAE

Nepenthes L.

1. Nepenthes albo-marginata Lobb. ex Lindl.

III Div.: Loba Kabang P.F. 1586.
Slender straggling shrub, rare to very rare in P.C. 4 in the Rejang Delta.

2. Nepenthes ampullaria Jack. tuyud.

III Div.: Pulau Bruit 8059; IV Div.: Sg. Dua 3061; V Div.: Kayangeran F.R. 2769.
Climber, which may attain a height of 60 - 80 ft., rarely procumbent, occasional in P.C.s 1 and 2 throughout Sarawak and Brunei; also occurs in heath forest.

3. Nepenthes bicalcarata Hook. f. tuyud.

II Div.: Saribas F.R. 8533; III Div.: Loba Kabang P.F. 2820;
IV Div.: Sg. Dua 3064, 3077.
Large shrubby pitcher plant, occasionally a low climber to a height of 15 - 20 ft., frequent, locally abundant in P.C.s 2 and 3 throughout Sarawak and Brunei. The largest pitcher plant and a characteristic associate of Shorea albida. Pitchers stated to be used occasionally by Ibans as a vessel for boiling rice.

4. Nepenthes gracilis Korth.

II Div.: Saribas F.R. 8575; III Div.: Loba Kabang P.F. 1585;
IV Div.: Sg. Dua 3053, 4199, 3068, 3274, 3267, 4196, 3075, 4180.
Slender straggling shrub, or low climber to height of 15 - 20 ft.; frequent, locally abundant, in P.C.s 4 - 6; also occurs more rarely in all other forest types; throughout Sarawak and Brunei. The pitchers vary very considerably in shape and especially in size. Plants with smallest pitchers being found in infertile central zone of P.C. 6. Abundant in heath forests.

5. Nepenthes rafflesiana Jack.

IV Div.: Lubok Pasir 3080, 3056, 2860, Sg. Dua 3078, 3076.
Low shrub or slender climber to 10 ft., rare in P.C.s 3 and 4, but frequent in P.C. 6; throughout Sarawak and Brunei. Also found in open heath forest.

PIPERACEAE

Piper Linn.

1. Piper arborescens Roxb. sireh hutan.

III Div.: Pulau Bruit 8019, 5115; IV Div.: Sg. Dua 4112.
Slender climber, occasionally forming a dense mass on lower stems of trees to a height of 30 to 40 ft., occasional in P.C. 1. Recorded from the Batang Lupar to the Baram; probably also occurs in Brunei and the V Div.

2. Piper muricatum Bl.

II Div.: Ng. Skrang 9823.
Herb, locally abundant in P.C. 1 towards inland margin of peat swamps. Recorded from the Batang Lupar and Lawas.

3. Piper sp. (2811).

II Div.: Triso P.F. 10019; III Div.: Loba Kabang P.F. 2811.
Small slender climber on buttresses, pneumatophores and at the base of stems of trees; occasional in P.C. 1 throughout Sarawak and Brunei.
Only sterile specimens have been collected.

4. Piper sp. (9234).

III Div.: Pulau Bruit 9234, 5116.
Climber, attaining a height of 100 ft. or more, rare in P.C. 1 and recorded from only the Rejang Delta.

MYRISTICACEAE

Gymnacantha Warb.

1. Gymnacantha eugeniifolia
(A. DC.) var. griffithii (Warb.) Sinclair.

I Div.: Sedilu 9567; II Div.: Triso P.F. 9584; III Div.: Loba Kabang P.F. 1583, 2723, 540; IV Div.: Sg. Dua 3251.
Small tree, 12 - 24 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei.
Specimen in Kew: Gymnacantha farguariana, Herb. E.I. Coy. 4355, Type - A.

Horsfieldia Willd.

1. Horsfieldia crassifolia
(Hk. f. et Th.) Warb.

kumpang ensuliue (I. Assan),
kumpang sadara (Mil. Rejang),
terada'a (Mil. Oya), ta'dara
(Mil.).

II Div.: Sg. Tissak 3188; III Div.: Singat 9738, Loba Kabang P.F. 2716, 524, Naman F.R. 672, 688, Pulau Bruit 9226, 9279, 9028, Daro F.R. A 127, 9739, 5204, Sg. Nangar 12325; Brunei: Badas 2826.

Medium-sized tree, 36 - 48 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei. Also occurs in L.D.F. Specimens in Kew: 865, 1941 (Haviland), Herb. E.I. Coy. 4350 - A.

2. Horsfieldia carnosa Warb.

III Div.: Sg. Retus A 61.

Small tree, 8 - 12 ins. g., very rare and localised in P.C. 1; probably confined to swamps near banks of freshwater rivers. Recorded from only the Rejang Delta.

Knema Laur.

1. Knema intermedia (Bl.) Warb.

II Div.: Sg. Tissak 3184, 3185; III Div.: Loba Kabang P.F. 412, Pulau Bruit 7931, 9055, 9039.

Small tree, 9 - 18 ins. g., rare in P.C. 1; recorded from the II and III Divs., also recorded in L.D.F. from Brunei. Specimens in Kew: ecgc, 1967 (Haviland).

2. Knema kunstleri (King) Warb.

kumpang pinggu (I. Assan).

I Div.: Sarawak Mangrove Reserve 7746; II Div.: Triso 3178, Saribas F.R. 8518; III Div.: Sg. Nangar 12252, Pulau Bruit 2638, 9249, 9019, 8030; Brunei: Badas 2853, Anduki F.R. 5551; V Div.: Kayangeran F.R. 2027, 2842.

Small tree, 9 - 18 ins. g., frequent in understorey of P.C.s 1 and 2 throughout Sarawak and Brunei; also occurs in heath forest. Specimens in Kew: 1761, Plants of Sarawak 164.

3. Knema uliginosa Sinclair (msc.).

III Div.: Loba Kabang P.F. 447, 9893.

Small tree, 9 - 12 ins. g., rare and localised in P.C.s 1 and 2. Known from only the one locality. A species new to science that has also recently been found in swamp forest in Malaya.



Myristica L.

1. Myristica lowiana Warb. kumpang kiong (I. Assan),
kumpang pendarahan (M.),
kumpang darah (I.).

III Div.: Lassa P.F. A 16, Pulau Bruit A 128, 9227.
Distinctive medium-sized tree, 36 - 48 ins. g., occasional in
P.C. 1 throughout Sarawak and Brunei; also occurs in heath
forest. Easily identified by its brittle black bark and
numerous spreading stilt roots.
Specimen in Kew: Herb. Calcutta 7258, Type - A.

LAURACEAE

Actinodaphne Nees.

1. Actinodaphne aff. myriantha Merr.

II Div.: Loba Kabang P.F. 448, 1583.
Small tree of the understorey, 9 - 12 ins. g. and 20 - 30 ft. h.,
occasional in P.C. 2 in the Loba Kabang P.F. but recorded from
only this locality in peat swamps; occurs in heath forest in
Brunei.
Specimens in Kew: 1756 (Haviland), Plants of Borneo 21238, 21809.

Alseodaphne Nees.

1. Alseodaphne insignis Gamble.

III Div.: Loba Kabang P.F. 2762, 476, 2694, 889, 404; IV Div.:
Marudi F.R. 8446.
Medium-sized tree, 36 - 48 ins. g., occasional in P.C.s 1 and 2
throughout Sarawak and Brunei.
Specimen in Kew: 251 (Hose).

2. Alseodaphne rigida Kostermans.

medang lui, medang
lendir (M. Bintulu).

III Div.: Loba Kabang P.F. 2691, 2687, Pulau Bruit 2632, 2635,
Mukah 5101; V Div.: Kayangeran F.R. 4905.
Medium-sized tree, 36 - 48 ins. g., occasional, locally frequent,
in P.C. 1 throughout Sarawak and Brunei. The slash has a
characteristic greasy feel when freshly cut.
Specimens in Kew: Flora of B.N.B. 6727, 6219.

Beilschmiedia Nees.

1. Beilschmiedia aff. maingayi Hook. f.

II Div.: Triso P.F. 3101.
Small tree, 12 - 18 ins. g., rare and recorded from only the
Maludam Peninsular in II Div.

Cinnamomum (Tourn.) L.1. Cinnamomum javanicum Bl.

V Div.: Bukit Bubong Rumah 10028.

Shrub or small tree, 15 ft. h., in peat-swamp forest, recorded only from V Div. at an altitude of 2,000 ft., but occurs more frequently in heath forest and along river banks (Brunei).

2. Cinnamomum sp. (4751).medang tiga.

I Div.: Setapok F.R. 4751.

Shrub or small tree, 10-15 ft. h., confined to inland margin of peat-swamp forests and more frequently found in heath forest. In swamp forest recorded from only I Div.

Cryptocarya R. Br.1. Cryptocarya griffithiana Wight.

II Div.: Tj. Keranji 12880, Triso P.F. 3114; III Div.: Pulau Bruit 9282, 9005, Lepah P.F. 8062.

Small tree of the understorey, 12 - 18 ft. h. and 6 - 9 ins. g., occasional in P.C.s 1 and 2 from Rejang Delta to Batang Lupar.

Dehaasia Blume.1. Dehaasia sp. (9252).

I Div.: Setapok F.R. 357; II Div.: Saribas F.R. 4770; III Div.: Pulau Bruit 9252, 9262, 9268, 9030, 8006, Daro F.R. 9748, Sg. Nangar 12321.

Small tree of the understorey, 15 - 20 ft. h. and 6 - 12 ins. g., occasional and rather localised in P.C. 1 from I to III Divs.

Endiandra R. Br.1. Endiandra sp. (3252).bejubai (Mil.).

III Div.: Loba Kabang P.F. 2701, Pulau Bruit 2633, 9221;

IV Div.: Baram 3252, 1554.

Medium-sized tree, 24 - 36 ins. g., rare in P.C. 1 in Baram and Rejang Delta. Probably an undescribed species.

Unnamed specimen in Kew: 2199 (Haviland).Litsea Lour.1. Litsea cylindrocarpa Gamble.medang pasir.

III Div.: Loba Kabang P.F. 858, 1580, 1581, 549, 2844, Pulau Bruit P.F. 2641, 7915, 4970; V Div.: Kayangeran F.R. 2030.

Medium-sized tree, 24 - 36 ins. g., frequent in P.C.s 1 and 2 and abundant in secondary swamp-forest; throughout Sarawak and Brunei. Occurs in heath forest.

Specimens in Kew: 3143 (Beccari), Flora of North Borneo 2385.

2. Litsea gracilipes Hook. f. medang keli.
 II Div.: Triso P.F. 3109; III Div.: Loba Kabang P.F. 2626, 2704, Daro F.R. 5003, Lepah P.F. 8088, Pulau Bruit 4967, 9287, 5101, Matu Daro P.F. 12262.
 Medium-sized tree, 24 - 36 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei.
 Specimens in Kew: 3326, 3327, 3329, 3330 (Haviland) - A.
3. Litsea grandis Hook. f. medang bulu.
 II Div.: Saribas F.R. 8532, Triso P.F. 14520; III Div.: Loba Kabang P.F. 531, 2760.
 Medium-sized tree, 36 - 48 ins. g., rather rare in P.C. 1 from Rejang Delta to Batang Lupar, probably also occurs in northern Sarawak and Brunei. Recorded in heath forest in Brunei. Easily identified in the field by its large leaves with dense pubescence on the lower surface.
 Specimen in Kew: 2537 (Beccari) - A.
4. Litsea nidularis Gamble.
 I Div.: Setapok F.R. 7726; II Div.: Triso P.F. 14543, 3107; III Div.: Lepah P.F. 8070, Pulau Bruit 5122, Sg. Nangar 12310.
 Medium-sized tree, 24 - 36 ins. g., rare in P.C. 1, locally frequent in coastal swamps, from Kuching to the Rejang Delta.
5. Litsea palustris Kostermans (msc.). medang padang (Rejang Delta), medang lada (Baram), medang kuning (Brunei).
 II Div.: Lingga 4811, 9819; III Div.: Pulau Bruit 8053, 8041, 7912, Sungei Retus A 22, Loba Kabang P.F. 427, 664, 79335 (W.-S.); IV Div.: Sg. Dua 1579, 2880, 2893, Lubok Pasir 4151, 8050, 9894, 9875; V Div.: Kayangeran F.R. 9197.
 Medium-sized to large tree, 60 - 72 ins. g., occasionally larger, abundant to very abundant in P.C.s 4, 5 and 6, also occurring less frequently in P.C.s 2 and 3, but largely absent from P.C. 1. In the centre of swamps in the Rejang Delta it is gregarious forming an almost pure forest (in the upper canopy), known as the padang medang. Occurs throughout Sarawak and Brunei and is also found in heath forest.
 Despite a thorough search in various herbaria no matching specimens have been found. The species is to be described by Dr A. J. G. H. Kostermans who has provisionally named it L. palustris.

6. Litsea resinosa Bl. medang engkala (M.),
medang tebulus (Mil.)
Rejang).

I Div.: Setapok F.R. 9438, 4760; II Div.: Sebuyau F.R. 4815;
III Div.: Loba Kabang P.F. 474, 2891, 2895, Pulau Buit 9036,
4977, Daro F.R. 9701, 9060, 9752, Sg. Nangar 12324; Brunei:
Badas 2835; V Div.: Kayangeran F.R. 4123.
Distinctive small tree, 12 - 18 ins. g., frequent in P.C.s 1 and
2 throughout Sarawak and Brunei; also occurs in heath forest.

7. Litsea sp. (8520). medang sekelat.

II Div.: Lingga 9812, Saribas F.R. 8520, Sg. Tissak 2343.
Small tree, 12 - 18 ins. g., occasional in P.C.s 1 and 2 from
the west bank of the Batang Lupar to east bank of the Saribas,
but not yet recorded in peat swamps elsewhere in Sarawak or
Brunei. Occurs in fresh-water swamp, subject to periodic
inundation, in Brunei. A very distinctive little tree with
beautiful foliage.

8. Litsea sp. (4121).

IV Div.: Sg. Dua 4121.
Small tree, 12 - 15 ins. g., rare in P.C. 3 in the Baram.

Phoebe Nees.

1. Phoebe sp. (4959).

II Div.: Saribas F.R. 8538; III Div.: Pulau Buit 4959, 2628.
Small tree, 12 - 24 ins. g., locally frequent in P.C. 1 from the
Rejang Delta to Batang Lupar. Prefers shallow peat on coastal
margins, also recorded from heath forest in Brunei.

THYMELIACEAE

Gonystylus Teys. et Binn.

1. Gonystylus bancamus (Miq.) Kurz. ramin, ramin telur,
lunak (Mil.).

I Div.: Lundu 9622; II Div.: Triso P.F. 10001, Lingga 5317;
III Div.: Pulau Buit A 21, 8005, 8044, Naman F.R. A 5, 9173,
Daro F.R. 5220.
Large tree, 108 - 132 ins. g., frequent, in P.C. 1 where it is
the most important dominant; occurs also as a smaller tree in
P.C.s 2 - 4; throughout Sarawak and Brunei. The most important
economic timber species in peat swamps.

2. Gonystylus forbesii Gilg. ramin batu paya.

II Div.: Sg. Tissak 2349; III Div.: Pulau Brait A 36, 8054, Daro F.R. 401, Lepah P.F. 8084, Lassa P.F. A 179, Loba Kabang P.F. 862, 431, 2724; V Div.: Kayangeran F.R. 4901, 4913.
Medium-sized tree, 36 - 48 ins. g., rare and localised in P.C.s 1 and 2; throughout Sarawak and Brunei. Clearly differentiated in the field from the previous species by fluted bole and darker sooty coloured bark.

3. Gonystylus macrophyllus (Miq.)^x Airy Shaw. ramin batu.

III Div.: Sungei Mukah 553.
Large tree, 72 - 84 ins. g., with a very localised distribution. Occurs in riverain peat-swamp forest where peaty streams flow through the swamps and are liable to overflow and flood the adjacent forest. Not yet recorded from northern Sarawak or Brunei, but probably occurs there in similar habitats.

Linostoma Wall.1. Linostoma longiflorum Hall. f.

II Div.: Triso 12874; III Div.: Pulau Brait 9047.
Small climber, rare and localised in P.C. 1. Recorded from the Rejang Delta and Maludam Peninsular.

LORANTHACEAE

Dendrophthoe Mart.1. Dendrophthoe falcata Bl.

III Div.: Surong Irit 5217.
Parasite in crowns of Gonystylus bancanus in P.C. 1. Recorded from only the one locality.

Lepidaria Van Tiegh.1. Lepidaria oviceps Dans. chempaka kujangan (Mil.).

III Div.: Daro F.R. 9729, 9714, Naman F.R. 9175.
Very distinctive parasitic shrub of crowns of dominants in P.C. 1. Recorded from the Rejang Delta, Batang Lupar and Lawas and probably occurs throughout Sarawak and Brunei.

Macrosolen Blume.1. Macrosolen beccarii Becc.

III Div.: Naman F.R. 9763, 11717.
Parasitic shrub of small trees in understorey of P.C. 1. Recorded from the Rejang Delta, where it is locally frequent.

SANTALACEAE

Henslowia Blume.1. Henslowia varians Bl.IV Div.: Lobok Pasir 4158.

Rare parasite on small trees in understorey of P.C. 1 in the Baram.

2. Henslowia sp. (9884).IV Div.: Lobok Pasir 9884, 4159.

Small straggling parasitic shrub, frequent in P.C. 6, and recorded from only IV Div. Also occurs in certain open heath forests (Bako National Park).

EUPHORBIACEAE

Antidesma Burm. ex L.1. Antidesma coriaceum Tul.III Div.: Naman F.R. 9762, Loba Kabang P.F. 449, 1773, Lassa 12416, Pulau Bruit 5112; IV Div.: Sg. Dua 2873, 4162, 3059, 4194, 3281.

Small tree, 15 - 30 ft. h. and 12 - 18 ins. g., locally abundant in P.C.s 1 - 3. Recorded from the Batang Lupar, Rejang Delta and Baram, but probably occurs throughout Sarawak and Brunei.

2. Antidesma phanerophlebium Merr.I Div.: Lundu 9145; II Div.: Triso P.F. 4768, 3119, Simanggang 9432, Saribas F.R. 8503; III Div.: Loba Kabang P.F. 2668, Lepah P.F. 8081, Naman F.R. 9176, Daro F.R. 5207, Lassa 8832 (Brooke).

Shrub or small tree, 10 - 20 ft. h., occasional in understorey of P.C. 1. Recorded from I, II and III Divs.

Baccaurea Lour.1. Baccaurea bracteata Muell.-Arg.tampoi paye,
perak burong (I. Brunei)I Div.: Lundu 6552; II Div.: Lingga 9815; III Div.: Naman F.R. 9782, Loba Kabang P.F. 419; IV Div.: Sg. Dua 2388, 2883; V Div.: Kayangeran F.R. 1553, 1771.

Small tree, 12 - 18 ins. g., frequent in P.C.s 1 - 3 throughout Sarawak and Brunei.

Specimens in Kew: 3185, 3227 (Beccari), brfs (Haviland) - B.

2. Baccaurea javanica Muell.-Arg.I Div.: Lundu 6553, 6555.

Small tree or shrub, 10 - 20 ft. h., frequent but very localised in P.C. 1 and recorded from only the one locality.

Blumeodendron Muell.-Arg.1. Blumeodendron subcaudatum Merr.lemak manok (M.),
mertawa (I.).III Div.: Naman F.R. 681, Daro F.R. 5228.

Tree, 24 - 36 ins. g., frequent in P.C. 1 of Rejang Delta, but absent elsewhere. Recorded in heath forests from the Setapok F.R. (I Div.).

Specimens in Kew: 1648 (Haviland), 3849 (Beccari) - B.2. Blumeodendron tokbrai (Blume) Sym.merahbulan (M.), teku (Mil.),
umpungan (M. Kuching and
II Div.).I Div.: Setapok F.R. 4779; II Div.: Triso 12863, Saribas F.R. 8515; III Div.: Pulau Bruit 9235, 9248, 9043, 2655, Naman F.R. 682, Daro F.R. 9717.

Tree, 24 - 36 ins. g., occasional in P.C. 1 throughout Sarawak and Brunei. Easily identified by its spreading stilt roots and silvery white bark, though the latter appearance is caused by lichen growth, the true bark being a dull greyish colour.

Specimen in Kew: 3670 (Haviland) - B.Bridelia Willd.1. Bridelia ovata Decune.IV Div.: Sg. Dua 3060.

Scandent shrub, locally frequent in P.C. 2 in the Baram.

Cephalomappa Baill.1. Cephalomappa beccariana Baill.ahrau.III Div.: Loba Kabang P.F. 2859, 870, 484.

Tree, 12 - 24 ins. g., occasional in P.C.s 2 and 3 in Rejang Delta, but not recorded from elsewhere.

2. Cephalomappa aff. malloticarpa J.J.S.ahrau (M.), kayu pelah
(Mil. Oya), melasau
(I. Lassa), bantas arau
(I. Assan).II Div.: Tj. Keranji 12896, Sebuyau P.F. 4767, Triso P.F. 2347, Saribas F.R. 8540; III Div.: Naman F.R. 8953, 679, 5123, Daro F.R. 9713, 5235, Loba Kabang P.F. 1599, 2677, 1600, 2771, 2772.

Tree, 12 - 24 ins. g., locally abundant in P.C.s 2 and 3 in Rejang Delta and Batang Lupar, but absent from northern Sarawak and Brunei. In the field the two species of Cephalomappa are difficult to differentiate. The young twigs, inflorescence, and petioles and midribs of the leaves of C. beccariana are covered in a stellate tomentum, whereas this species is almost glabrous.

Mr H.K. Airy Shaw considers this to be an undescribed species.

Croton L.

1. Croton laevifolius Bl.

III Div.: Loba Kabang P.F. 2673, Daro F.R. 9744.

Small tree, 6 - 12 ins. g. and 20 - 30 ft. h., rare in P.C. 1. Recorded from only the Rejang Delta.

Endospermum Benth.

1. Endospermum malaccense Benth. ex Muell.-Arg. terbulan.

IV Div.: Sg. Dua 3283.

Tree, 36 - 48 ins. g., rare in P.C. 1 near coast, but frequent in secondary forest (not peat swamp) at a low level. Occurs throughout Sarawak and Brunei.

Glochidion Forst.

1. Glochidion lucidum Bl.

III Div.: Pulau Bruit 2651, Loba Kabang P.F. 445, 2773, 2774, 2775; V Div.: Kayangeran F.R. 4907, 4915, 1556.

Tree, 12 - 18 ins. g., occasional, locally frequent, in understory of P.C. 1 throughout Sarawak and Brunei.

2. Glochidion obscurum (Willd.) Bl.

III Div.: Pulau Bruit 9002, Loba Kabang P.F. 2761, Lepah P.F. 8068.

Small tree, 15 - 30 ft. h. and 6 - 9 ins. g., rare in understory of P.C. 1. Recorded from only the Rejang Delta, but probably occurs elsewhere in heath forest.

Longetia Baill.

1. Longetia malayana (Benth.) Pax. et K. Hoffm. ubah banir.

II Div.: Saribas F.R. 8571, 8573, Tj. Keranji 12889; III Div.: Lassa 12422, Loba Kabang P.F. 520, 2720, 871, 2736, Pulau Bruit 2631, 4974, 12897, 9215, 7928, 9049, 9295; IV Div.: Sg. Dua 4153; Brunei 2840.

Medium-sized tree, 36 - 48 ins. g., occasional in P.C.s 1 and 4 throughout Sarawak and Brunei. It appears possible that there are two variants of this species; the trees in P.C. 1 are markedly different in field characters from those found in P.C. 4.

Macaranga Thon.

1. Macaranga caladifolia Becc. benuah hutan (M.),
tutup (Mil. Rejang).

III Div.: Pulau Bruit 2639, Loba Kabang P.F. 9285 (Brooke),
Naman F.R. 9168, Lassa 12415.
Medium-sized tree, 24 - 36 ins. g., occasional in P.C.s 1 - 3.
Recorded from Batang Lupar, Saribas and Rejang Delta; also
occurs in heath forest.
Specimen in Kew: 464 (Haviland) Type - A.

2. Macaranga puncticulata Gage. benuah.

IV Div.: Sungei Dua 2899, 3257.
Tree, 12 - 24 ins. g., abundant in open secondary swamp forest
after felling, but very rare in primary swamp forest. Probably
occurs throughout Sarawak and Brunei, but only recorded from the
Rejang Delta and Baram.

Neoscortechinia Pax.

1. Neoscortechinia kingii (Hook. f.) Pax et Hoffm. bantas (M.),
maras (M. Btg. Lupar),
bantas ketapong (I.).

II Div.: Saribas F.R. 8528, Triso P.F. 3179, 3157; III Div.:
Pulau Bruit 8043, 9254, 2642, 2647, 9213, Loba Kabang P.F. 692,
892, 510.
Small tree, 12 - 24 ins. g., abundant in P.C. 1 throughout
Sarawak and Brunei.
Specimen in Kew: 1164 (Beccari) Type - A.

2. Neoscortechinia kingii (Hook. f.) Pax et Hoffm. forma glandulosa.

V Div.: Kuala Lawas 9112.
Distinctive variant which has been recorded in peat swamps from
V Div., where it is locally frequent in P.C. 1 near the coast.

URTICACEAE

Poikilospermum Zipp. ex Miq.

1. Poikilospermum suaveolens (Bl.) Merr.

II Div.: Saribas F.R. 8566.
Distinctive epiphyte, rare in understorey of P.C. 1. Probably
occurs throughout Sarawak but recorded in peat swamp from only
the mentioned locality and the Rejang Delta.

2. Poikilospermum subtrinervium (Miq.) Chew. Akar labat (Mil.).

II Div.: Kpg. Budu 12333, Saribas F.R. 8552; III Div.: Pulau
 Brunit 9272, 8010, Lepah P.F. 8083, Naman F.R. 9182.
 Epiphyte, facultative climber, occasional in understorey of
 P.C. 1; throughout Sarawak and Brunei.

MORACEAE

Artocarpus Forest.

1. Artocarpus glaucus Bl.

III Div.: Serupai 27;
 Large tree, 96 - 108 ins. g., locally abundant in P.C. 1 near
 large streams flowing through the swamps; throughout Sarawak
 and Brunei.

2. Artocarpus rigidus Bl. pudau.

III Div.: Sg. Assan 502, Lepah P.F. 10190, Bukit Lima F.R. 12902
 Large tree, 72 - 84 ins. g., rare and rather localised in P.C.s
 1 and 2; throughout Sarawak and Brunei.

Ficus Tourn. ex L.

1. Ficus acamptophylla Miq. ara (generic name for
 all climbing figs).

II Div.: Triso 3118; III Div.: Daro F.R. 9722.
 Ground rooting epiphyte in crowns of dominants in P.C.1;
 throughout Sarawak and Brunei.

2. Ficus annulata Bl.

II Div.: Triso 12872
 Small tree, 15 - 20 ft. high, in secondary peat swamp forest
 near coast. Recorded from Rejang Delta, Maludam Peninsula
 and Bintulu.

3. Ficus apiocarpa Miq.

II Div.: Triso 12854
 Climbing fig, rather rare and confined to wetter localities
 where streams drain through P.C. 1. Recorded from Rejang
 Delta and Maludam Peninsula.

4. Ficus callicarpides Corner (msc.).
 II Div.: Triso P.F. 9805, Saribas F.R. 8539; IV Div.: Sg. Dua 4120, 9890.
 Root climber, usually at low level but occasionally reaching crowns of dominants, very abundant on buttresses and lower stems of Shorea albida in P.C. 3, also occasional and localised in P.C. 1. Recorded from Batang Lupar, Rejang Delta and Baram.
5. Ficus consociata Bl.
 II Div.: Triso 12210, 12222.
 Large ground rooting epiphyte, locally frequent in P.C. 1 throughout Sarawak and Brunei. Also occurs in heath forest.
6. Ficus crassiramea Miq.
 II Div.: Triso 10/1959 (J.A.R.A.).
 Enormous strangling fig, abundant on shallow peat at coastal margins of P.C. 1, and transitional zone from mangrove; throughout Sarawak and Brunei.
7. Ficus deltoidea Jack var. borneensis Corn.
 II Div.: Sg. Tissak 4807; III Div.: Singat 9754.
 Epiphytic fig at low levels, occasionally terrestrial, rare in P.C. 4; more frequently found in heath forest. Occurs throughout Sarawak and Brunei.
8. Ficus deltoidea Jack var. deltoidea.
 II Div.: Triso P.F. 141514, 12201, 12204; III Div.: Pulau Bruit 9048, Sg. Nangar 12312; IV Div.: Sg. Dua 2871.
 Epiphytic fig in crowns of dominants and middle storey trees, locally abundant in P.C.s 1 and 2; throughout Sarawak and Brunei. Also occurs in heath forest and is terrestrial on rocky headlands.
9. Ficus deltoidea Jack var. motleyana (miq.) Corner.
 II Div.: Triso 14515; III Div.: Lassa P.F. 12901, Loba Kabang P.F. 97330 (W.-S.), 2784; IV Div.: Bakong 2872, Sg. Dua 2884.
 Straggling shrub, rarely more than 4 ft. h., locally frequent in P.C. 4 throughout Sarawak and Brunei; also a characteristic species of heath forest.
10. Ficus disticha Bl.
 II Div.: TJ. Keranji 12892.
 Root climber to canopy in P.C. 1; rare and recorded in peat swamps from only the one locality. More usually a montane species.

11. Ficus globosa Bl.
 III Div.: Pulau Bruit 12898.
 Medium-sized climber in P.C. 1. Recorded only from the one locality.
12. Ficus heteropleura Bl. var. hirta Corner.
 I Div.: Lundu 9147.
 Climbing fig to height of 100 ft. in P.C. 1; a single record.
13. Ficus pellucido-punctata Griff.
 III Div.: Surong Irit 9706.
 Strangling fig of dominants in P.C. 1. Recorded from only the Rejang Delta.
14. Ficus p⁵iocarpa Bl.
 III Div.: Pulau Bruit 5117, Oya 5301.
 Epiphytic fig in crowns of dominants in P.C. 1; rare and recorded from only the Rejang Delta.
15. Ficus recurva Bl.
 II Div.: Triso 12867.
 Small climbing fig in understorey of P.C.1.
16. Ficus spathulifolia Corner.
 II Div.: Triso 12203; III Div.: 7933, 8008, 9044, 9232.
 Ground rooting epiphyte, rarely strangling, locally frequent in P.C. 1. Recorded from II and III Divs.
17. Ficus sumatrana Miq.
 Brunei: Badas 2841.
 Strangling fig in P.C.s 1 and 2, rare. Recorded from Rejang Delta and Brunei.
18. Ficus sundaica Bl.
 II Div.: Triso 3163, Saribas 4771, Sg. Tissak 4808; III Div.: Pulau Bruit 9229, 8052, 7934, 8014, 9012.
 Large ground rooting epiphyte, occasionally strangling, frequent in P.C. 1 throughout Sarawak and Brunei.
19. Ficus sundaica Bl. var. beccariana (Kurz.)
 II Div.: Triso 12202, III Div.: Sg. Nangar 12313, Pulau Bruit 9051.
 Large ground rooting epiphyte, occasionally strangling, rare in P.C. 1. Recorded from Rejang Delta, Saribas and Batang Lupar.

20. Ficus supperforata Corner
 III Div.: Daro P.F. 9061.
 Climbing (?) fig in P.C. 1. Single record.
21. Ficus tristaniifolia Corner
 III Div.: Pulau Bruit 12232, 12231.
 Ground rooting epiphyte, locally frequent in P.C. 1. Recorded from Pulau Bruit and Maludam Peninsula.
22. Ficus uniglandulosa Wall. var. parvifolia Miq.
 II Div.: Triso 12215.
 Epiphytic fig at height of 80 ft. in P.C. 1; single record.
23. Ficus villosa Bl.
 II Div.: Kpg. Budu 12334, Simanggang 12226, Triso 14546.
 Root climber, occasional in understorey of P.C. 1; throughout Sarawak and Brunei. This species shows remarkable dimorphism in foliage.
24. Ficus zylophylla Wall.
 III Div.: Pulau Bruit 12228, 5118, 12896, 12895.
 Large ground rooting epiphyte, occasionally strangling, locally frequent (Pulau Bruit) in P.C. 1. Recorded from Rejang Delta and Maludam Peninsula.

Parartocarpus Baill.

1. Parartocarpus venenosus (Zoll. and Mor.) Becc. minggi, katih (I.
ssp. forbesii (King) Jarrett Kelidam (Murut)).
 III Div.: Daro F.R. 9715, A 7, Loba Kabang P.F. 2746, Namam
 F.R. A 122, Lassa 12432, Sg. Nangar 12309.
 Medium-sized to large tree, 60 - 72 ins. g., occasional in
 P.C. 1 throughout Sarawak and Brunei.

CASUARINACEAE

Gymnostoma (Casuarina)

1. Gymnostoma (Casuarina) nobile Johnson (msc.). rhu ronang,
sempilau (Lawas).
 V Div.: Kayangeran F.R. 1569.
 Tree, 60 - 84 ins. g., abundant in association with Dacrydium
elatum. Distribution in peat-swamp forest confined to north
 Sarawak and localised areas of Brunei: throughout Sarawak and
 Brunei it is a characteristic species of heath forests.

FAGACEAE

Castanopsis Spach.

1. Castanopsis foxworthyi Schottky ex Winkler. berangan paya.

III Div.: Daro F.R. 9753, Loba Kabang P.F. 442, 477, 881.
Small tree, 12 - 20 ins. g., rare and localised in P.C.s 1 and 2.
Recorded from only the Rejang Delta.

Quercus (Tourn.) L.

1. Quercus dasystachya (Miq.) Rehd. var gracilis Hatusima (msc.)

III Div.: Loba Kabang P.F. 515, 2767, 2783, 444.
Small to medium-sized trees, 24 - 30 ins. g., occasional in
P.C. 2. Recorded from only the Rejang Delta and Maludam Peninsula
in peat swamps, but also occurs in heath forest in Brunei.

2. Quercus jaheri Hatusima (msc.).

II Div.: Nanga Skrang, 9824, Lingga 9813; III Div.: Loba
Kabang P.F. 878, 428, 519, 2780.
Small tree, 9 - 18 ins. g., rare in P.C.s 1 and 2 towards the inland margins
of swamp forest in Rejang Delta and Batang Lupar.

3. Quercus sundaicus (Bl.) Rehd. empenit padang.

II Div.: Lingga 9814, Triso 3201; III Div.: Naman F.R. 678, Loba Kabang P.F.
2767, 2730, 492; Brunei: Anduki F.R. 2043, Badas 5646.
Small tree, 12 - 18 ins. g., abundant to very abundant in understorey of
P.C.s 2, 3 and 4. A dominant species in the regrowth following logging.
Occurs throughout Sarawak and Brunei.

4. Quercus wenzigianus (King) A. Camus. empenit jangkar,
penyibong (Mil. Rejang),
kayu kikai (Mil. Oya, Mukah).

II Div.: Sabu F.R. 3209, III Div.: Daro F.R. 9720, Sg. Kelapa'an 5054,
Pulau Bruit 8013, Surong Irit 5227, 5229, Mukah 5102, Loba Kabang P.F.
2709, 538, 2648, 2682. Medium-sized tree, 48 - 60 ins. g., frequent in P.C. 1
throughout Sarawak and Brunei. The largest oak in swamp forest and readily
identified in the field by the presence of numerous spreading stilt roots.

II. MONOCOTYLEDONS

ORCHIDACEAE

Adenoncos Blume.

1. Adenoncos sumatrana J. J. S.

III Div.: Pulau Bruit 7936.

Small epiphytic orchid, occasional in crowns of trees, especially on Gonystylus bancanus, in P.C. 1.

Appendicula Blume.

1. Appendicula pendula Bl.

II Div.: Triso 9808.

Small epiphytic orchid, on base of small trees, surface roots and pneumatophores in P.C. 1; frequent and localised. Recorded only from the Rejang Delta and Batang Lupar.

Bulbophyllum Thou.

1. Bulbophyllum beccarii Rchb. f.

III Div.: Loba Kabang P.F. 9192.

Distinctive epiphytic orchid which spirals round upper boles of large trees, especially Shorea albida; occasional in P.C.s 1 and 2 and frequent in P.C. 3; throughout Sarawak and Brunei.

2. Bulbophyllum aff. concinnum Hook. f.

II Div.: Triso 9806.

Small epiphytic orchid at heights of between 3 ft. and 10 ft. in P.C. 1; rare and recorded from only the mentioned locality.

3. Bulbophyllum vaginatum (Lindl.) Rchb. f.

III Div.: Pulau Bruit 9217, Sg. Nangar 12267.

Epiphytic orchid in crowns of trees in P.C. 1, occasional; throughout Sarawak and Brunei.

Cystorchis Blume.

1. Cystorchis variegata Bl. var. purpurea Ridl.

III Div.: Pulau Bruit 8033; IV Div.: Sg. Dua 4181.

Small terrestrial orchid growing in dense shade and preferring damper localities in P.C.s 1 and 2. Occurs throughout Sarawak, but not recorded from Brunei.

Dendrobium Sw.1. Dendrobium cumulatum Ridl.

III Div.: Lepah P.F. 7901, Matu - Daro P.F. 12275.
Epiphytic orchid on small trees at heights from 5 to 12 ft.
above swamp surface, rare in P.C. 1. Recorded from only the
Rejang Delta.

2. Dendrobium aff. merrillii Amir.

III Div.: Pulau Bruit 7935, 7937, 10618 (Brooke).
Distinctive epiphytic orchid in crowns of trees in P.C. 1;
recorded from the Batang Lupar and Rejang Delta.

Dipodium R. Br.1. Dipodium pictum Rehb. f.

I Div.: Telok Sabang 10198; II Div.: Saribas F.R. 8572;
III Div.: Rantau Panjang 9868.
Epiphytic orchid at heights from 3 to 10 ft. above swamp surface,
rare in P.C. 1.

Eria Lindl.1. Eria aff. obliqua Lindl.

II Div.: Triso 12207, 10008, Loba Kabang P.F. 9068, Surong Irit
5223.
Small epiphytic orchid in crowns of dominant trees, especially
Gonystylus bancamus, occasional in P.C. 1; throughout Sarawak
and Brunei.

2. Eria pannea Lindl.

II Div.: Saribas F.R. 8526; III Div.: Daro F.R. 5223.
Epiphytic orchid, frequent in crowns of dominants in P.C. 1.
Recorded from the Batang Lupar and Rejang Delta.

3. Eria aff. pulchella Lindl.

II Div.: Saribas F.R. 8525; III Div.: Naman F.R. 8952, Daro
F.R. 9065.
Epiphytic orchid, frequent in crowns of dominants, especially
Gonystylus bancamus, in P.C. 1; throughout Sarawak and Brunei.

Eulophia Br.1. Eulophia squalida Lindl.

II Div.: Triso 12219; Brunei: Badas 5648.
Terrestrial or low epiphytic orchid, rare to very rare in P.C.s
1 and 2; throughout Sarawak and Brunei.

Bromheadia Lindl.

1. Bromheadia finlaysoniana (Lindl.) Rehb. f.

IV Div.: Lobok Pasir 3074.

Terrestrial orchid, frequent in P.C. 6. In peat-swamp forest it is confined to this forest type, though a characteristic species in open secondary heath forest and on degraded soils.

Grammatophyllum Bl.

1. Grammatophyllum speciosum Bl.

^c
Bukut gergasi (Mil.
Rejang).

III Div.: Matu - Daro P.F. 12276.

Large epiphytic orchid in crowns of upper and middle storey trees, rare in P.C. 1; throughout Sarawak and Brunei.

Liparis Rich.

1. Liparis lacerata Ridl.

III Div.: Pulau Bruit 9255, 9212, 8024, Naman F.R. 11720, 8955, Rantau Panjang 9443.

Epiphytic orchid on small trees at heights from 5 to 20 ft. above swamp surface, rare but widely distributed in P.C. 1; throughout Sarawak and Brunei.

Zeuxine Lindl.

1. Zeuxine violascens (Bl.) Ridl.

IV Div.: Sg. Dua 4187.

Small terrestrial orchid in dense shade in P.C.s 1 and 2, rare and localised. Recorded from I, III and IV Divs.

ZINGIBERACEAE

Alpinia L.

1. Alpinia sp. (8096).

III Div.: Lepah P.F. 8096.

Unidentified species, which is found as a low epiphyte in P.C. 1, rare and localised. Recorded from only the Rejang Delta.

Globba L.

1. Globba panicoides Miq.

II Div.: Triso 14548, 3175; III Div.: 8830 (Brooke).

Herb, rare, locally occasional, in P.C. 1, preferring shallow peat near riparian or coastal margins of forest; throughout Sarawak and Brunei.

DIOSCOREACEAE

Dioscorea Blume.1. Dioscorea sp. (9001).

III Div.: Pulau Bruit 9001.

Unidentified low climber in P.C. 1, rare and only recorded from Pulau Bruit.

LILIACEAE

Dracaena Vand.1. Dracaena cantleyi Baker.

III Div.: Pulau Bruit 8393; IV Div.: Sungei Dua 3275.

Straight stemmed shrub, 9 - 12 ft. h., rare in P.C.s 1 - 3; throughout Sarawak and Brunei.

FLAGELLARIACEAE

Flagellaria L.1. Flagellaria indica L.rotan tikus.

I Div.: Setapok F.R. 4754; III Div.: Loba Kabang P.F. 1573;

IV Div.: Sg. Dua 3071, 9882.

Small to medium-sized climber, very rare in P.C.s 1 - 3, occasional in P.C.s 4 and 5 and frequent in P.C. 6. Occurs throughout Sarawak and Brunei.

Hanguana Blume.bakong.1. Hanguana malayana (Jack) Merr.

III Div.: Pulau Bruit 8060, Loba Kabang P.F. 2816, 2570.

Large herb, occasional and localised in P.C.s 1 - 3, preferring damper localities where the water table is exposed. A much shorter form is frequently found in a slightly drier habitat. Occurs throughout Sarawak and Brunei.

PALMAE

Calamus Linn.1. Calamus sp. 4788.

I Div.: Setapok F.R. 4788.

Rattan palm, occasional in P.C. 1 throughout Sarawak and Brunei.

Cyrtostachys Blume.

1. Cyrtostachys lacca Becc. pinang raja, pinang laka.

III Div.: Lepah P.F. 8099.

Conspicuous slender palm, attaining a height of 20 ft., abundant on shallow peat in transitional zone from mangrove, also occasional and localised in P.C. 1, and more rarely in P.C.s 2 and 3; throughout Sarawak and Brunei.

Daemonorops Blume.

1. Daemonorops longipes Mart.

III Div.: Loba Kabang P.F. 2823.

Short stemmed palm, occasional in P.C. 1 but rather localised and preferring wetter localities; throughout Sarawak and Brunei.

Iguanura Bl.

1. Iguanura sp. (12246).

I Div.: Telok Sabong 12246.

Slender palm, 3 - 10 ft. h., locally frequent in P.C. 1, preferring shallow peat near coast, though also found inland on peat near streams subject to periodic inundation. Recorded from I, II and III Divs., and probably occurs throughout Sarawak and Brunei.

Korthalsia Blume.

1. Korthalsia rigida Bl.

II Div.: Triso P.F. 10027.

Rottan palm, frequent in P.C.s 2 and 3 and occasional in P.C. 1; throughout Sarawak and Brunei.

Pinanga Bl.

1. Pinanga sp. (12332).

II Div.: Tanjong Keranji 12332, 12402.

Small slender palm, 2 - 6 ft. h., locally occasional in P.C. 1. Recorded from only the Maludam Peninsular.

Plectocomiopsis Becc.

1. Plectocomiopsis wrayi Becc.

III Div.: Loba Kabang P.F. 5119.

Rottan palm, occasional in P.C. 1; recorded from only the Rejang Delta.

Zalacca Rumph.

1. Zalacca conferta Griff. asam daya.

Stemless spiny palm which forms dense thickets on shallow peat near the coast, occasional elsewhere in P.C. 1 especially in wetter localities; throughout Sarawak and Brunei.

PANDANACEAE

Pandanus Rumph.

1. Pandanus pentodon Ridley. pandan, surong nriit.

III Div.: Loba Kabang P.F. 2815, 1588; V Div.: Lawas no number (Anderson).

Large stemless pandan which frequently forms dense thickets in P.C.s 2 and 3, and occurs more rarely in P.C.s 1 and 4; throughout Sarawak and Brunei.

2. Pandanus ridleyi Martelli.

II Div.: Triso 9817; III Div.: Loba Kabang P.F. 9069;

IV Div.: Sg. Dua 4119.

Short stemmed pandan occasionally attaining heights of 6 - 8 ft., rare in P.C.s 3 and 4, becoming abundant in P.C.s 5 and 6.

3. Pandanus sp. (10199).

I Div.: Telok Sabong 10199; II Div.: Triso 12209; III Div.: Pulau Bruit 8055.

Small stemless pandan, locally abundant in damper areas of P.C. 1. Not yet recorded east of the Rejang Delta.

4. Pandanus sp. (14545).

II Div.: Triso 14545.

Small climbing pandan, occasional in understory of P.C. 1 throughout Sarawak and Brunei. No fertile material has yet been seen.

ARACEAE

Aglaonema Schott.

1. Aglaonema simplex Bl.

II Div.: Saribas F.R. 8506; III Div.: Pulau Bruit 8023, 8056, Loba Kabang P.F. 2812.

Herb, 9 - 18 ins. h., occasional in P.C. 1. Recorded only from II and III Divs.

Alocasia Neck.

1. Alocasia longiloba Miq. birah hutan (Mil.)

II Div.: Triso 12218, Saribas F.R. 8507; III Div.: Pulau Buit 9219, 8018; IV Div.: Sg. Dua 4195.

Distinctive herb, rare in P.C. 1, occasional and localised in P.C. 2; throughout Sarawak and Brunei.

Cryptocoryne Fisch.

1. Cryptocoryne pallidinervia Engl.

II Div.: Triso 12212; III Div.: Pulau Buit 8022.

Aquatic herb, occasional, locally frequent, in wetter localities of P.C. 1; throughout Sarawak and Brunei.

Cyrtosperma Griff.

1. Cyrtosperma lasioides Griff.

III Div.: Pulau Buit 9021, Lepah P.F. 8066.

Large herb, rare in P.C. 1, more frequent in areas where there has been an opening in the canopy and on shallow peat; throughout Sarawak and Brunei.

Epipremnopsis Engl.

1. Epipremnopsis media Engl. teririp (Mil.)

III Div.: Daro F.R. 9707.

Climber to height of 15 - 20 ft., rare in P.C. 1. Recorded in peat swamps from only the Rejang Delta and V Div.

Homalomena Schott.

1. Homalomena rostrata Griff.

II Div.: Triso 10020; III Div.: Pulau Buit 8012, Loba Kabang P.F. 2813.

Herb, occasional and localised in P.C. 1 in wetter localities where the water table is exposed. Occurs throughout Sarawak, but not recorded from Brunei.

Podolasia N.E. Br.

1. Podolasia stipitata N.E. Br.

III Div.: Loba Kabang P.F. 2818.

Spiny aroid, rare in P.C.s 1 and 2, and recorded from only the Rejang Delta and Maludam Peninsular.

Raphidophora Schott.1. Raphidophora lobbi Schott.

II Div.: Triso 14547, 12216; III Div.: Pulau Bruit 8007, 8032.
 Small climbing aroid, not exceeding 10 ft. in height, occasional
 in P.C. 1. Recorded from Maludam Peninsular and Rejang Delta,
 but probably occurs throughout two territories.

Schismatoglottis Zoll. et Mor.1. Schismatoglottis sp. (8364).

II Div.: Triso 3174, Saribas F.R. 8364; III Div.: Naman F.R.
9299.
 Small herb, occasional in P.C.s 1 and 2. Recorded from only
 II and III Divs.

CYPERACEAE

Tetraria Beauv.1. Tetraria borneensis Kern.

IV Div.: Lobok Pasir 9876.
 Tall sedge which is only found in peat-swamp forest in the centre
 of P.C. 6 where it is abundant but localised. Also occurs in
 open heath forest (Bako National Park).

Thorachostachyum Kurz.1. Thorachostachyum bancanum (Miq.) Kurz.

II Div.: Triso 3177; III Div.: Loba Kabang P.F. 2802, 1574;
 IV Div.: Sg. Dua 3072.
 Sedge, very abundant in P.C.s 1 and 6 but rare in P.C.s 2 - 5;
 occurs throughout Sarawak and Brunei.

III. GYMNOSPERMAE

CONIFERAE

Dacrydium Soland.

1. Dacrydium beccarii Parl. var. subelatum.

V Div.: Kayangeran F.R. 1795, 1568.

Tree, 72 - 84 ins. g., forming dense almost pure stands in the Lawas District, the only locality that it occurs in swamp forest, though it is a common component of heath forests.

Podocarpus (L'Herit.) Pers.

1. Podocarpus blumei Endl.

III Div.: Naman F.R. 11716.

Small tree, 12 - 24 ins. g., frequent but very localised in P.C. 1 near inland margins of peat swamps. Recorded from only the Rejang Delta but distribution probably more widespread in localised areas. Occurs more commonly in heath forests.

GNETACEAE

Gnetum L.

1. Gnetum neglectum Bl.

II Div.: Ng. Skrang 9829; III Div.: Naman F.R. 9180, Surong Irit 5239.

Small twining climber in understorey of P.C. 1. Rare, recorded from only the Rejang Delta and Batang Lupar.

IV. PTERIDOPHYTA

LYCOPODIACEAE

Lycopodium L.

1. Lycopodium cernuum Sw.

IV Div.: Lobok Pasir 4165.

Terrestrial club moss, abundant in P.C. 6 of the Baram. In swamp forest it occurs only in this one forest type but it is abundant elsewhere in open heath forest and on degraded soils.

2. Lycopodium phlegmaria L. var. divaricatum Bl.

II Div.: Triso 9900, 10005; III Div.: Pulau Bruit 9015.

Epiphytic club moss, rare in P.C. 1 on stems of small trees 4 - 10 ft. above swamp surface. Recorded from only the Rejang Delta and Batang Lupar.

3. Lycopodium pinifolium Bl.

II Div.: Triso 14521.

Small epiphytic club moss usually found on rotting stumps and fallen trees, rather rare and recorded from only the Batang Lupar.

OPHIOGLOSSACEAE

Ophioglossum L.

1. Ophioglossum intermedium Hook.

III Div.: Pulau Bruit 9034.

Small terrestrial fern on litter layer of P.C. 1, very rare and localised. Recorded from only the one locality.

SCHIZAEACEAE

Schizaea Smith.

1. Schizaea malaccana Baker.

IV Div.: Lobok Pasir 3082.

Small terrestrial fern, rare and confined to P.C. 6, where it is found associated with spaghnum moss (Spaghnum cuspidatulum).

junghuhnianum

CYATHEACEAE

Cyathea Smith.1. Cyathea glabra (Bl.) Copel.IV Div.: Sg. Dua 4160.

Stemless tree fern, occasional, locally abundant, in P.C.s 2 and 3 throughout Sarawak and Brunei.

POLYPODIACEAE

Crypsinus Presl.1. Crypsinus albidopaleatus (Bl.) Copel.II Div.: Triso 14517; III Div.: Naman F.R. 9297.

Small epiphytic fern near ground level in P.C.s 1 and 2, rare and localised. Recorded from the Rejang Delta and Batang Lupar.

Drynaria J. Sm.1. Drynaria involuta v. A. v. R.II Div.: Saribas F.R. 8529; III Div.: Pulau Brait 7927, Naman F.R. 9187, 9188.

Nest fern, occasional in understorey of P.C. 1, more rarely in crowns of middle and upper storey trees; throughout Sarawak and Brunei.

Lecanopteris Bl.1. Lecanopteris sinuosa (Wall.) Copel.III Div.: 9085; IV Div.: Lobok Pasir 9879; V Div.: Lawas 9200.

Small epiphytic myrmecophilous fern, rare in crowns of large trees in P.C. 1, also found near ground level in P.C. 6; throughout Sarawak and Brunei.

Paragramma Copel.1. Paragramma longifolia (Bl.) Moore.II Div.: Triso 14518; III Div.: Pulau Brait 8042, 9052, Naman F.R. 9787.

Epiphytic fern on boles of trees in middle and understoreys, rare in P.C. 1 in the Rejang Delta and Batang Lupar.

Photinopteris Presl.

1. Photinopteris speciosa (Bl.) Presl.

III Div.: Pulau Bruit 12205.

Crown epiphyte; rare in P.C. 1 and recorded from only the Rejang Delta.

Phymatodes Presl.

1. Phymatodes crustacea (Copel.) Holttum.

II Div.: Saribas F.R. 8544; V Div.: Lawas 9199.

Epiphytic myrmecophilous fern in crowns of dominant trees in P.C. 1, rare; recorded from the Rejang Delta and Batang Lupar, and Lawas.

Platycterium Desvaux.

1. Platycterium coronarium* (Koenig) Desv.

Large crown epiphyte; rather rare in peat swamps and confined to P.C. 1.

Polypodium L.

1. Polypodium verrucosum (Hook.) Wall.

II Div.: Triso P.F. 10006, 12217.

Large epiphytic fern in middle and understoreys of P.C. 1, rather rare and usually associated with Asplenium nidus. Occurs throughout Sarawak and Brunei.

Pyrrosia Mirbel.

1. Pyrrosia longifolia (Burm.) Morton.

III Div.: Pulau Bruit 9057, 9054.

Epiphytic fern on boles of trees in the middle storey, rarely at a lower level, occasional in P.C. 1 throughout Sarawak and Brunei.

Selliguea Bory.

1. Selliguea heterocarpa Bl.

II Div.: Triso 14516; III Div.: Pulau Bruit 7926, 8037, 8036;

V Div.: Kayangeran F.R. 9199.

Epiphytic fern which occupies a similar habitat to Pyrrosia longifolia, rare in P.C. 1; throughout Sarawak and Brunei.

Stenochlaena J. Smith.1. Stenochlaena palustris (Burm.) Bedd.

II Div.: Triso No number (Anderson).

Climbing fern, very abundant on trees in P.C. 1 near coast, less abundant inland and in P.C.s 2 and 3, very rare or absent in P.C.s 4 - 6; throughout Sarawak and Brunei.

DENNSTAEDIACEAE

(LINDSAYOIDEAE)

Lindsaya Dryand.1. Lindsaya scandens Hk. var. terrestris Holttum.

III Div.: Pulau Bruit 8795 (Brooke); IV Div.: Sg. Dua 3085,
Lobok Pasir 9442.

Terrestrial fern, rather rare in P.C. 1, occasional in P.C.s 2 and 3, throughout Sarawak and Brunei.

Schizoloma Gaudich.1. Schizoloma coriaceum v. A. v. R.

III Div.: Pulau Bruit 8015, 9293, Loba Kabang P.F. 2804;
V Div.: Sg. Dua 4186.

Terrestrial fern, abundant on pneumatophores and roots at surface level in P.C. 1; throughout Sarawak and Brunei.

(DAVALLIOIDEAE)

Humata Cav.1. Humata angustata (Wall.) J. Sm.

II Div.: Triso 9809, 10014; III Div.: Naman F.R. 8599.

Small epiphytic fern, rather rare in crowns of middle-storey trees in P.C.s 1 - 3, becoming frequent in P.C. 4 as an epiphyte at ground level; throughout Sarawak and Brunei.

2. Humata parvula (Wall.) Mett.

II Div.: Triso 10012, 9811.

Minute epiphytic fern which occupies a similar habitat to H. angustata, but is much rarer. Probably occurs throughout Sarawak and Brunei, but recorded from only the Rejang Delta and Batang Lupar.

(OLEANDROIDEAE)

Nephrolepis Schott.1. Nephrolepis biserrata (Sw.) Schott.

III Div.: Lepah P.F. 8089.

Terrestrial fern, very rare in primary P.C. 1 but more frequent in transitional zone from mangrove, and very abundant in secondary swamp vegetation following extensive openings of the canopy.

(ASPLENIOIDEAE)

Asplenium L.1. Asplenium glaucophyllum v. A. v. R.

III Div.: Pulau Bruit 7940; IV Div.: Sg. Dua 3263.

Epiphytic fern at low level in understory of P.C. 1, rather rare and localised. Occurs throughout Sarawak but not recorded from Brunei.

2. Asplenium longissimum Bl.

II Div.: Triso 10004; IV Div.: Sg. Dua 3269, 3286.

Terrestrial fern, or epiphytic on rotten stumps and roots, occasional in P.C. 1, becoming abundant after the opening of the canopy; throughout Sarawak and Brunei.

3. Asplenium nidus L.

III Div.: Pulau Bruit 7929.

Bird's nest fern, frequent in crowns of trees in under and middle storeys and occasional in crowns of upper storey trees in P.C. 1, becoming less frequent in P.C.s 2 and 3 and rare in P.C.s 4 - 6.

4. Asplenium phyllitidis Don.

III Div.: Pulau Bruit 7939.

Bird's nest fern, similar in habitat to A. nidus but much rarer and more restricted in its distribution; recorded in swamps from only the Rejang Delta.

5. Asplenium tenerum Forst.

II Div.: Triso 10018, 9810.

Small epiphytic fern at base of small trees and on roots and pneumatophores in P.C. 1, occasional and localised. Occurs throughout Sarawak and Brunei.

(LOMARIOPSIDOIDEAE)

Teratophyllum Mett.

1. Teratophyllum ludens (Fee) Holttum.

IV Div.: Sg. Dua 3262, 3086.

Small climbing fern, occasional in P.C. 1 and rare in P.C. 2; throughout Sarawak and Brunei.

ADIANTACEAE

Syngamma J. Smith.

1. Syngamma lobbiana J. J. S.

III Div.: Pulau Bruit 8448, Loba Kabang P.F. 2807.

Terrestrial fern, frequent on pneumatophores and surface roots in P.C. 1; throughout Sarawak and Brunei.

Vittaria Smith.

1. Vittaria elongata Sm.

II Div.: Saribas F.R. 8563; III Div.: Pulau Bruit 8017, Loba Kabang P.F. 2808; IV Div.: Sg. Dua 3264.

Small terrestrial fern, abundant on pneumatophores and surface roots in P.C. 1; throughout Sarawak and Brunei.

2. Vittaria ensiformis Sm.

III Div.: Pulau Bruit 7925.

Small epiphytic fern on boles of trees in understorey of P.C. 1, rare and only recorded from the Rejang Delta and Maludam Peninsula.

3. Vittaria hirta Fee.

II Div.: Triso 10011.

Minute epiphytic fern, occasional in crowns of trees in middle storey in P.C.s 1 and 2. Recorded from only the Rejang Delta and Batang Lupar but distribution probably more widespread.

Appendix 2

Sample Plot Data

Records of all trees, in three inch girth classes,
enumerated in sample plots.

Sample Plot 2. Loba Kabang P.F., Rejang Delta. 1954.
Number of individuals in three inch girth classes.

Species													72	Totals over									
	12	15	18	21	24	27	30	33	36	39	42	45	48		51	54	57	60	63	66	69		
1 Adenanthera pavonina				1																			1
2 Alseodaphne insignis						1			1	1													3
3 Alangium havilandii			1					1															2
4 Amoora rubiginosa							1																1
5 Anisoptera marginata						1																	1
6 Aromadendron nutans	1							1	3														5
7 Blumeodendron subcaudatum				1	1																		2
8 Cratoxylon arborescens												1											1
9 Ctenolophon parvifolius		1								1													2
10 Diospyros pseudo-malabarica	1		1																				2
11 Diospyros ferrea var. buxifolia				1																			1
12 Dryobalanops rappa			1				1																2
13 Dyera lowii		3		1	1																		5
14 Elaeocarpus obtusifolius		1																					1
15 Eugenia aff. havilandii				1	1	1																	3
16 Eugenia nemestina	1	1																					2
17 Ganea coriacea		1	1	1		1			1	1													6
18 Ganea pierrei		1	1			1																	3
19 Garcinia tetcanda								1	1														2
20 Garcinia sp. (4910)				1																			1
21 Garcinia vidua	1																						1
22 Goniothalamus malayanus		1	1																				2
23 Gonystylus bancanus		1								1						1	1		2(75,99)				6

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
24 <i>Gynacantha</i> <i>eugeniifolia</i> var. <i>griffithii</i>									1													1	
25 <i>Litsea</i> <i>cylindro-</i> <i>carpa</i>												1											1
26 <i>Litsea grandis</i>							1																1
27 <i>Mangifera</i> <i>havilandii</i>				1	3	1																	5
28 <i>Mezattia</i> <i>leptopoda</i>												2											2
29 <i>Mussaendopsia</i> <i>beccariana</i>				1	2	1	1																5
30 <i>Neoscortech-</i> <i>inia kingii</i>				1	4	5	1																11
31 <i>Palaquium</i> <i>ridleyi</i>						1																	1
32 <i>Palaquium</i> <i>walsuri-</i> <i>folium</i>					2		1																3
33 <i>Parastemon</i> <i>urophyllum</i>																	1						1
34 <i>Parishea</i> <i>sericea</i>				1		1																	2
35 <i>Polyalthia</i> <i>hypoleuca</i>						1																	1
36 <i>Pometia</i> <i>pinnata</i>																							4
37 <i>Pseudosindora</i> <i>palustris</i>																	1						3
38 <i>Quercus ja-</i> <i>heri</i>				1		1																	2
39 <i>Quercus</i> <i>wenzigianus</i>				1		1	1																3
40 <i>Samadera</i> <i>indica</i>				1	2																		3
41 <i>Santiria</i> <i>rubiginosa</i> var. <i>rubiginosa</i>						1																1	2
42 <i>Shorea inae-</i> <i>quilateralis</i>				1	3	2																1(110)	7
43 <i>Shorea</i> <i>scabrida</i>							1															1 (99)	3

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals		
44 Shorea teysmanniana			1							1												1(78)	3	
45 Shorea rugosa var. uliginosa																							1(102)	1
46 Sindora leiocarpa			1											1										2
47 Stemonurus scorpioides		2	4	1			1	1				2												11
48 Stemonurus umbellatus		3	2	1																				6
49 Ternstroetia penangiana					1																			1
	23	29	24	10	6	6	7	4	3	8	3	3	2	1	2	2	1	1				7	140	

BULLSTON

EXTORA STRONG

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
43 Shorea inaequila- teralis		1	4	1	2																		8
44 Shorea scabrida				1																			1
45 Shorea teysmanniana		1			1									1									3
46 Sindora leiocarpa		1			1																		2
47 Sterculia rhoidifolia		1	1																				2
48 Stemonurus umbellatus		4	2	1																			7
49 Swintonia glauca		2																					2
50 Vatica mangachapoi				2																			2
51 Xylopia coriifolia						1																	1
	44	29	18	9	7	9	5	1	3	3	1	1		5	1	3	1	1	1	1	7	149	

BULSTION

EXTRA STRONG

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals		
44 Shorea albida																						5(81, 87,100, 125, 128)	5	
45 Shorea inaequila- teralis			1		1								2										1(72)	5
46 Shorea scabrida									2															2
47 Stemonurus umbellatus									6															6
48 Sterculia macrophylla																							1	1
49 Vatica mangachapoi									1															1
	46	20	13	11	8	5	5	10	3	1		1	2	1									6	132

BULSTON

ESTER STRONG

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
22 <i>Litsea palustris</i>	1								1							1						3	
23 <i>Longetia malayana</i>						3				1	1											5	
24 <i>Lophopetalum rigidum</i>	12	6	3	3	1	2																27	
25 <i>Melanorrhoea beccarii</i>	2	1	2	2	1				1	1				1	1							12	
26 <i>Melanorrhoea tricolor</i>				1	1		1															3	
27 <i>Mezzettia umbellata</i>	1		1																			2	
28 <i>Palaguium pseudo-rostratum</i>	3	1							1													5	
29 <i>Palaguium ridleyi</i>				1	1																	2	
30 <i>Parishea sp. nov. (2697)</i>				1																		1	
31 <i>Polyalthia glauca</i>				1	1																	2	
32 <i>Pithecellobium oppositum</i>	1																					1	
33 <i>Pseudosindora palustris</i>	2	1				1																4	
34 <i>Parastemon veesteeghii</i>			1	1	1																	3	
35 <i>Quercus jaheri</i>	2																					2	
36 <i>Shorea albida</i>				1		1	1	1		1		1										9(84, 96, 99-2, 108, 110, 130, 134, 93)	15
37 <i>Shorea inaequalateralis</i>			1	1																		2	
38 <i>Sindora leiocarpa</i>	1																					1	
39 <i>Swintonia glauca</i>						1					1											2	
40 <i>Sterculia rheidifolia</i>					2																	2	
41 <i>Stemonurus umbellatus</i>	1	2																				3	
42 <i>Trigoniastrum hypoleuca</i>	2																					2	
43 <i>Vatica mangachapoi</i>						1																1	
	36	23	15	14	12	11	2	2	3	5	4	4		1		1	2	1		1	9	146	

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
23 Melanorrhoea beccarii	2	3	4		1	1				1									1			13
24 Melanorrhoea tricolor	1			1			1															3
25 Myristica lowiana						1																1
26 Mezzettia umbellata	1																					1
27 Neoscor-techinia kingii	1																					1
28 Palaquium cochleari-folium				1																		1
29 Palaquium pseudo-rostratum	1																					1
30 Palaquium ridleyi		1							1													2
31 Parastemon veesteeghii				1																		1
32 Parishea sp. nov. (2697)							1															1
33 Polyalthia glauca			1																			1
34 Pseudosindora palustris	1		1	1		1							1		1							4
35 Shorea albida						1							1		1							7(96, 117,121, 124,128, 143,150)
36 Shorea inae- quilateralis	1												1									2
37 Stemonurus umbellatus	5		2	1																		8
38 Swintonia glauca			1	3									1	1								6
39 Sindora leiocarpa	1																					1
40 Ternstroemia magnifica						1																1
41 Trigonias-trum hypoleucum		1		1																		2
	33	24	16	9	9	7	3	1	3	2	1	2	2	2	1	2	2	3	1	7		130

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
22 Pygeum parviflorum	2	2																				4	
23 Quercus dasystachyus	2		1																				3
24 Quercus aff. sondaicus						1																	1
25 Quercus jaheri	2	1	1																				4
26 Shorea albida				1				1									2					8(78, 83,91, 92,75, 102, 108, 109)	12
27 Swintonia glauca			1	1						1													3
28 Sterculia rhoidifolia	2																						2
29 Stemonurus umbellatus	5																						5
30 Ternstroemia magnifica					1																		1
31 Xanthophyllum sp. nov. (2614)	1																						1
	46	31	17	11	7	4	1	2	7	1	2	1	3	3	3		1	2			9	151	

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
22 <i>Ternstroemia</i> <i>magnifica</i>									2														2
23 <i>Tristania</i> <i>obovata</i>					4	4	1																9
24 <i>Xanthophyllum</i> <i>sp. nov.</i> (2614)									1														1
	36	14	10	20	15	16	8	6	4	5	3	4	1	3	4	4	2	3	1	1	2	162	

BULLSTON

EXTRA STRONG

Sample Plot 10. Loba Kabang P.F., Rejang Delta. 1954.
 Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 <i>Androtium astylum</i>							1															1
2 <i>Calophyllum retusum</i>				1		1	1															3
3 <i>Calophyllum obliquinervum</i>			1	1													1					3
4 <i>Cratoxylon glaucum</i>					1															1		2
5 <i>Combretocarpus rotundatus</i>				1	1			1							1							4
6 <i>Cephalomappa malloticarpa</i>	1																					1
7 <i>Dactylocladus stenostachys</i>	1	2						1	1		1	1										7
8 <i>Eugenia incarnata</i>						1	1															2
9 <i>Eugenia sp. (4715)</i>			1																			1
10 <i>Gonystylus bancanus</i>				1																		1
11 <i>Garcinia rostrata</i>			2																			2
12 <i>Litsea palustris</i>					1		1	1	1		1	1	2		1						1	10
13 <i>Lophopetalum rigidum</i>																						3
14 <i>Melanorrhoea beccarii</i>			2	2	1	2	1															8
15 <i>Melanorrhoea tricolor</i>					1						1											2
16 <i>Myrsine sp. (2346)</i>																						1
17 <i>Palaguium cochlearifolium</i>							1															1
18 <i>Parastemon veesteeghii</i>			5	6	2	1	2	4														20
19 <i>Ploiarium alternifolium</i>																				1		1
20 <i>Pseudosindora palustris</i>																				1		1

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
21 Shorea albida	1	2	4	1	3		3		3	3	2	2				1	1	2	1	3		32	
22 Swintonia glauca			2	1			1			1													5
23 Ternstroemia hosei	3	3																					6
24 Ternstroemia magnifica	2																						2
25 Tristania obovata	1		3	2	3	4	2	1		3	1												20
26 Xanthophyllum sp. nov. (2614)	1		2																				3
	23	13	21	9	15	12	7	5	5	6	7	4	2		3	1	3	1	3	2			142

Sample Plot 11. Loba Kabang P.F., Rejang Delta. 1954.
 Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 Calophyllum retusum		2		2			2	1	1													7
2 Calophyllum obliquinervum	1	2	1	1																		5
3 Combretocarpus rotundatus			1			1																2
4 Dactylocladus stenostachys						1	1		1													3
5 Elaeocarpus obtusifolius		1			1		1															3
6 Eugenia sp. (2715)		1																				1
7 Eugenia sp. (479)				1																		1
8 Garcinia rostrata		1																				1
9 Gonystylus bancanus		1		1	2		1	1	1	3												10
10 Litsea palustris		6	3	1	1	2		1	5	2	1		2		1							25
11 Lophopetalum rigidum		1																				1
12 Melanorrhoea beccarii	1	2		1	1				1	1												7
13 Melanorrhoea tricolor		1	1																			2
14 Palaquium cochlearifolium						1																1
15 Palaquium ridleii		1																				1
16 Parastemon veesteeghii	4	7	4	3	1																	19
17 Payena obscura	1																					1
18 Pseudosindora palustris		1																				1
19 Shorea albida	1	3	3	4	5	8	4	2	3	5	1	5	4	4	1		1	1		1		56
20 Swintonia glauca		1	1	2	3	1																8
21 Ternstroemia hosei	5	3	2	1																		11
22 Tristania obovata						1																1
	16	32	17	17	15	13	8	6	10	11	2	5	6	4	2		1	1		1		167

Sample Plot 12. Loba Kabang P.F., Rejang Delta. 1954.
Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
1 <i>Arthrophyllum</i> <i>rubiginosum</i>	1																					1	
2 <i>Calophyllum</i> <i>retusum</i>				2		1	2	1	1				1										8
3 <i>Calophyllum</i> <i>obliquinervum</i>								1															1
4 <i>Combretocarpus</i> <i>rotundatus</i>				1					1														2
5 <i>Cratoxylon</i> <i>glaucum</i>												1		1									2
6 <i>Dactylocladus</i> <i>stenostachys</i>				2		2	1	1															6
7 <i>Eugenia</i> sp. (2715)	2	1	1																				4
8 <i>Gonystylus</i> <i>bancanus</i>		2							1														3
9 <i>Litsea</i> <i>palustris</i>		4	2		6	3	2	1	1	1				3									23
10 <i>Lophopetalum</i> <i>rigidum</i>	1																						1
11 <i>Melanorrhoea</i> <i>beccarii</i>									1	1			2										4
12 <i>Palaquium</i> <i>cochleari-</i> <i>folium</i>	2	1																					3
13 <i>Parastemon</i> <i>veesteeghii</i>	9	3	7		3																		22
14 <i>Shorea</i> <i>albida</i>	1	8	3	3	7	6	6	10	5	2	7	3	4	2	5	3	1						76
15 <i>Sterculia</i> <i>rhoidifolia</i>	1																						1
16 <i>Swintonia</i> <i>glauca</i>			3	2	2	3		1															11
17 <i>Ternstroemia</i> <i>hosei</i>	6	2	1																				9
18 <i>Ternstroemia</i> <i>magnifica</i>	1	1																					2
19 <i>Tristania</i> <i>obovata</i>	1	1		1	1	2																	6
	25	23	19	9	21	16	12	16	8	4	7	9	5	2	5	3	1						185

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
41 Xerospermum muricatum									1														1
42 Xylopia coriifolia																				1			1
43 Cyrtostachys lacea	10	1																					11
	30	24	13	12	6	6	3	4	5	1	1	3	1	2	2	1	3	1	2	1	5	126	

BULLSTOWN

ESTER STRONG

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
21 <i>Horsfieldia</i> <i>crassifolia</i>	1																					1
22 <i>Knema</i> <i>kunstleri</i>	1	2																				3
23 <i>Litsea</i> <i>cylindrocarpa</i>	1																					1
24 <i>Macaranga</i> <i>caladifolia</i>	1																					1
25 <i>Myristica</i> <i>lowiana</i>						1																1
26 <i>Neoscor- techinia</i> <i>kingii</i>	5	4	4	1																		14
27 <i>Nephelium</i> <i>melanomiscum</i>	1																					1
28 <i>Palaquium</i> <i>pseudo- cuneatum</i>																	1					1
29 <i>Palaquium</i> <i>pseudo- rostratum</i>		1		1																		2
30 <i>Parastemon</i> <i>urophyllum</i>								2														2
31 <i>Pseudosindora</i> <i>palustris</i>									1													1
32 <i>Quercus</i> <i>wenzigianus</i>	1	2	1	2																		6
33 <i>Santiria</i> <i>laevigata</i>						1																1
34 <i>Sarcotheca</i> <i>glauca</i>				1																		1
35 <i>Shorea</i> <i>platycarpa</i>				1	1															1	1(75)	4
36 <i>Shorea</i> <i>teysmanniana</i>																					1(86)	1
37 <i>Shorea rugosa</i> var. <i>uliginosa</i>																					1(85)	1
38 <i>Stemonurus</i> <i>scorpiodes</i>	1							1														2
39 <i>Stemonurus</i> <i>umbellatus</i>						1																1
40 <i>Tetramerista</i> <i>crassifolia</i>	1	1				1										1	1					5
41 <i>Xanthophyllum</i> <i>amoenum</i>	1	1	1			1			1													5
42 <i>Xerospermum</i> <i>muricatum</i>			1																			1
43 <i>Cyrtostachys</i> <i>lacca</i>	10																					10
	33	19	10	5	12	8	6	3	5	2	3			1	1	1	2	3		1	8	123

Sample Plot 15. Loba Kabang P.F., Rejang Delta. 1954.
 Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
1 <i>Canthium didymum</i>		1																				1	
2 <i>Cephalomappa malloticarpa</i>	3	8	2	2	2																	64	
3 <i>Combretocarpus rotundatus</i>										3	1	1										5	
4 <i>Dactylocladus stenostachys</i>		1	1	2	1		1	2		1	1											10	
5 <i>Eugenia chrismannii</i>					1																	1	
6 <i>Eugenia nemestima</i>		1																				1	
7 <i>Lophopetalum rigidum</i>	2	1																				3	
8 <i>Melanorrhoea beccarii</i>										1												1	
9 <i>Palaquium cochlearifolium</i>	1					1																2	
10 <i>Shorea albida</i>							1				1	1			3	1	2	2	1		13	(72, 75, 78, 81, 84, 86, 87, 91, 92, 96, 99, 103, 106)	25
11 <i>Stemonurus umbellatus</i>		1																				1	
12 <i>Sterculia rhoidifolia</i>			1																			1	
13 <i>Swintonia glauca</i>					1	1	1	1		2												6	
44 24 4 4 3 2 3 3 7 2 1 1 1 3 1 2 2 1 13 121																							

Sample Plot 16. Loba Kabang P.F., Rejang Delta. 1954.
Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
1 <i>Androtium astylum</i>						1																1	
2 <i>Canthium didymum</i>		3	1																				4
3 <i>Cephalomappa malloticarpa</i>	28	9		1																			38
4 <i>Combretocarpus rotundatus</i>				1				1	1						1								4
5 <i>Dactylocladus stenostachys</i>						2	1	2	1	2										1			9
6 <i>Dyera lowii</i>			1																				1
7 <i>Eugenia chrismannii</i>				1																			1
8 <i>Ganua coriacea</i>			1																				1
9 <i>Palaquium cochleari- folium</i>		1	1																				2
10 <i>Palaquium ridleyi</i>			1																				1
11 <i>Shorea albida</i>							2	1	2	1	1			1			1	2	3	13	(75, 78-3, 85-2, 86, 87-2, 97,102, 104, 86)	26	
12 <i>Stemonurus umbellatus</i>		2	1																				3
13 <i>Swintonia glauca</i>				1	4	2	1																8
	35	13	2	3	4	5	1	3	3	3	2	2	1		2			1	2	4	13	99	

Sample Plot 17. Loba Kabang P.F., Rejang Delta. 1954.
Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 <i>Amoora rubiginosa</i>				1																		1
2 <i>Aromadendron nutans</i>								1														1
3 <i>Blumeodendron subcaudatum</i>				1		1	1															3
4 <i>Calophyllum retusum</i>			1																			1
5 <i>Camptosperma squamatum</i>				1																		1
6 <i>Canthium didymum</i>		1	1																			2
7 <i>Ctenolophon parvifolius</i>		1				1					1											3
8 <i>Cyathocalyx biovalatus</i>		1																				1
9 <i>Cephalomappa malloticarpa</i>	10	5	4	3	2	2	3	2														31
10 <i>Dactylocladus stenostachys</i>		1																		1	2(102, 118)	4
11 <i>Diospyros pseudo- malabrica</i>				1																	1 (77)	2
12 <i>Dryobalanops rappa</i>			1			1	1				1											4
13 <i>Dyera lowii</i>	1	1		1																		3
14 <i>Eugenia</i> sp. (2759)				1				1														2
15 <i>Eugenia chrismannii</i>				1																		1
16 <i>Eugenia</i> sp. (2822)		1																				1
17 <i>Garcinia tetcanda</i>	1		1																			2
18 <i>Garcinia havilandii</i>	1		1																			2
19 <i>Garcinia</i> sp. (9745)	1																					1
20 <i>Ganua coriacea</i>	3	3	1	1																		8
21 <i>Genystylus bancanus</i>										1	1	1			1							4

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
43 Shorea albida																		1			2(110, 147)	3	
44 Shorea inae- guilateralis	2				1													1	1				5
45 Shorea scabrida									1														1
46 Shorea teysmanniana																					1		1
47 Sandoricum emarginatum	1																						1
48 Sindora leiocarpa	1					1																	2
49 Stemonurus umbellatus	1	2		3																			6
50 Swintonia glauca			2																		1		3
51 Vatica mangachapoi														1									1
52 Xanthophyllum amoenum	1																						1
53 Xanthophyllum sp. nov. (2614)	1																						1
54 Xenospermum muricatum		1																					1
	38	30	12	11	7	7	7	1	3	2	4	4	1	2		1	2	3	1		5	140	

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
Planchonella																							
maingsayi									1														1
Shorea scabrida									1	2													3
Shorea rugosa																							
var. uliginosa					2	3	1															2(96, 97)	8
Shorea																							
teysmanniana					3	4	1				1												9
Stemonurus																							
umbellatus																							1
Tetractomia																							
holttumii					2	3	1	1															7
Vatica																							
mangachapoi																							1
Xanthophyllum																							
amoenum																							1
Unid.																							1
	26	36	24	19	5	3	3		3	2	1	1	2	1	1	1	1					4	133

ESPERA SIKONG

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals		
Nephelium melanomiscum				1																			1	
Palaquium pseudocuneatum																						1(79)	1	
Pseudosindora palustris	2					1	1			1													5	
Shorea scabrida				1									1										2	
Shorea teysmanniana	2	1	1	1								1	1										7	
Shorea albida																					1	1	4(84, 91, 110, 162)	6
Stemonurus umbellatus	2					1																	3	
Tetractomia holttumii	14	10	5	3	5				1														38	
Vatica mangachapoi	1																						1	
Xanthophyllum amoenum	2	2		1																			5	
Xanthophyllum sp. (2614)	1																						1	
Xylopia coriifolia				1																			1	
Unid.	2																						2	
	39	22	16	7	11	5	2	2	7	3	1	2	1	1	1	1	2				8	131		

Sample Plot 22. Triso, Batang Lupar. 1955.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
Canthium didymum			1																				1
Combretocarpus rotundatus	1	1		1		1			1														5
Cyathocalyx biovalatus	1																						1
Dactylocladus stenostachys									1														1
Durio carinatus	1																						1
Garcinia tetcanda	1																						1
Litsea palustris			1								1				1								3
Longetia malayana	1			1																			2
Palaquium cochlearifolium	1	2				1																	4
Parastemon veesteeghii	1	2		1		1																	5
Shorea albida				1				3	1	1	1		1	2	1	2	3	3	1	3	11(74, 75,78, 79, 90-2, 91,106, 109, 127,73)	34	
Tetractomia holttumii	26	7																					33
Xanthophyllum amoenum	2	2																					4
Xanthophyllum sp. (2614)	1			1																			2
	33	16	3	1	4	1	2	3	2	2	1	1	1	2	2	2	3	3	1	3	11	97	

Sample Plot 23. Triso, Batang Lupar. 1955.
 Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
Calophyllum retusum										1												1
Canthium didymum	1	1																				2
Combretocarpus rotundatus	1	1		2		3	3															10
Dactylocladus stenostachys	1				1		1		2	1		2	2	2					2			14
Elaeocarpus obtusifolius						1																1
Eugenia sp. (2615)		1	1		2																	4
Eugenia sp. (83)				1					1													2
Garcinia rostrata		2																				2
Ilex sclerophylloides	2	1																				3
Litsea palustris	1					3	2	1		3	1		1									12
Longetia malayana			1	1																		2
Palaquium cochlearifolium	1																					1
Parastemon veesteeghii	6	14	6	5	9	4	2		2	2	1											51
Pseudosindora palustris		1																				1
Shorea albida			2	1	1				1				1					1			1(85)	8
Tristania maingayi			5	2	4	3	6	3	4	2	2											31
Tristania obovata		4	1		2	1		1			3											12
Ternstroemia magnifica						1	1															2
Unid.	1																					1
	16	23	17	10	21	15	15	6	9	9	7	2	4	2				3			1	160

Sample Plot 24. Sg. Dua, Baram. 1955.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
<i>Aromadendron nutans</i>	1	1																				2	
<i>Baccaurea bracteata</i>	1																						1
<i>Combretocarpus rotundatus</i>													1										1
<i>Dyera lowii</i>					1																		1
<i>Eugenia sp.</i> (2822)				1																			1
<i>Gonystylus bancanus</i>						1																	1
<i>Ilex hypoglauca</i>	3	4	3																				10
<i>Litsea palustris</i>	4																						4
<i>Palaquium cochlearifolium</i>				1																			1
<i>Parastemon veesteeghii</i>		1																					1
<i>Quercus aff. sondaicus</i>	1	1																					2
<i>Shorea albida</i>										2	1	2	1				1	3	17	(73, 74-2, 75-2, 78,80, 81,77, 86,88, 89,90, 95,103, 118)		27	
<i>Ternstroemia hosei</i>		1																					1
<i>Tetractomia holttumii</i>						1																	1
<i>Tristania grandifolia</i>			1																				1
<i>Xanthophyllum amoenum</i>			1																				1
<i>Xanthophyllum sp.</i> (2614)	4	11	5	1	1																		22
	14	19	10	3	2	1	1						1	2	1	2	1	1	3	17			78

Sample Plot 25. Sg. Dua, Baram. 1955.
 Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
<i>Alseodaphne rigida</i>		1																				1
<i>Combretocarpus rotundatus</i>											1											1
<i>Dactylocladus stenostachys</i>											1											1
<i>Dyera lowii</i>														1								1
<i>Eugenia sp. (2822)</i>				1																		1
<i>Elaeocarpus obtusifolius</i>		1																				1
<i>Ilex hypoglauca</i>		4	2	1																		7
<i>Litsea palustris</i>	1	1			1																	3
<i>Litsea resinosa</i>	1																					1
<i>Palaquium cochlearifolium</i>	1																					1
<i>Parastemon veesteeghii</i>				1	1					1												3
<i>Quercus aff. sondaicus</i>	4	3		1																		8
<i>Shorea albida</i>									1	1		1	1				1	2	1	8	(72-2, 79,81, 93,119, 125, 127)	16
<i>Shorea inaequilateralis</i>									1													1
<i>Sterculia rheidifolia</i>		1																				1
<i>Ternstroemia hosei</i>				1																		1
<i>Timonius peduncularis</i>		1																				1
<i>Vatica mangachapoi</i>					1																	1
<i>Xanthophyllum amoenum</i>			2	1																		3
<i>Xanthophyllum sp. nov. (2614)</i>	4	1	2	3	2																	12
	14	12	7	7	4				2	1	1	3	1	1			1	2	1	8		65

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
23 Ilex hypoglauca							1															1
24 Litsea resinosa		1		1																		2
25 Macaranga caladifolia			1	1																		2
26 Mezzettia leptopoda		1																				1
27 Mezzettia umbellata						1																1
28 Nauclea parva				1																		1
29 Palaquium ridleyi			1	1																		2
30 Parastemon urophyllum				1																	1(125)	2
31 Polyalthia hypoleuca		1	1				1					1										4
32 Pseudosindora palustris							1															1
33 Santiria laevigata							1	1														2
34 Santiria rubiginosa var. rubiginosa									1													1
35 Santiria rubiginosa var.												1										1
36 Shorea albida																					4(110, 128, 146, 147)	4
37 Stemonurus umbellatus		2	2	1	1																	6
38 Tetractomia holttumii		1																				1
39 Tristania grandifolia											1											1
40 Xylopia coriifolia									1													1
	20	12	9	10	4	4	7	2	5	3	2	1	2	1		1					7	90

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and Totals over		
23 <i>Gymnacantha eugeniifolia</i>	2																					2	
24 <i>Ilex hypoglauca</i>				1																			1
25 <i>Kokoona ovato-lanceolata</i>					1																		1
26 <i>Koompassia malaccense</i>						1																	1
27 <i>Litsea cylindrocarpa</i>							1																1
28 <i>Litsea resinosa</i>		2	2			1																	5
29 <i>Linociera</i> sp. (3282)		1																					1
30 <i>Mezzettia leptopoda</i>		1	1																				2
31 <i>Mezzettia umbellata</i>									1														1
32 <i>Macaranga caladifolia</i>		2	1																				3
33 <i>Parastemon veesteeghii</i>		1												1									2
34 <i>Parastemon urophyllum</i>												1											1
35 <i>Palaquium pseudo-cuneatum</i>		1		1		1																	3
36 <i>Palaquium cochlearifolium</i>						1																	1
37 <i>Pseudosindora palustris</i>									1	1	1												3
38 <i>Polyalthia hypoleuca</i>	4		1			1																	6
39 <i>Platea excelsa</i>									1														1
40 <i>Shorea albida</i>																							5(114, 127,138, 195,215)
41 <i>Shorea teysmanniana</i>			1																				1
42 <i>Santiria laevigata</i>									1														1
43 <i>Stemonurus umbellatus</i>		2	1																				3
44 <i>Xanthophyllum amoenum</i>		2				1																	3
45 <i>Vatica mangachapoi</i>		1		1									1										3
	13	21	13	2	6	8	3	2	4	3	1	2	1				1					8	88

Sample Plot 28. Tanjong Jaya, Baram. 1955.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 <i>Combretocarpus rotundatus</i>							1	1		2	1	1			1	1	1					9
2 <i>Cyathocalyx biovalatus</i>	2	1																				3
3 <i>Diospyros ferrea</i> var. <i>buxifolia</i>					1		1															2
4 <i>Dyera lowii</i>	1		1	3	1		1	1	1													9
5 <i>Gonystylus bancanus</i>	2		2	3	2	4	1	1	2	2	2	3		2	1						1	28
6 <i>Ganua coriacea</i>	1																					1
7 <i>Ilex hypoglauca</i>	1																					1
8 <i>Litsea resinosa</i>	1		1																			2
9 <i>Palaquium cochlearifolium</i>				1		1	5		1	1												9
10 <i>Parastemon veesteeghii</i>	1	2	1	2	1		2	1	1													11
11 <i>Polyalthia hypoleuca</i>	2																					2
12 <i>Quercus aff. sondaicus</i>	2																					2
13 <i>Shorea albida</i>								2	1	4	2	3	2	5	3	2	3	5	3	2	7(72, 73,76, 79,82, 97-2)	44
14 <i>Sterculia rhoidifolia</i>																						1
	13	4	6	8	6	9	6	7	6	6	6	7	3	7	4	3	4	5	4	3	8	124

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
21 <i>Stemonurus</i> <i>umbellatus</i>		4	1	1																			6
22 <i>Ternstroemia</i> <i>hosei</i>		1																					1
23 <i>Tristania</i> <i>obovata</i>		1	2	1		1																	5
24 <i>Tetractomia</i> <i>holttumii</i>		1																					1
25 <i>Xanthophyllum</i> sp. (2614)		5	4	2	1	1																	13
26 <i>Xylopia</i> <i>coriifolia</i>			1			2	1		1														5
		40	18	18	7	13	5	13	3	4	4	4	3	4	2	1	4	3			4		150

BULLSTON

EXTRA STRONG

Sample Plot 31. Lubok Pasir, Baram. 1955.
Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 <i>Arthrophyllum</i> <i>rubiginosum</i>	1																					1
2 <i>Canthium</i> <i>didymum</i>	2																					2
3 <i>Combretocarpus</i> <i>rotundatus</i>							1		2	2	2	1								1		9
4 <i>Dactylocladus</i> <i>stenostachys</i>	6	3	1																			10
5 <i>Diospyros</i> <i>ferrea</i> var. <i>buxifolia</i>	4	3	3	2	1	2	1															16
6 <i>Elaeocarpus</i> <i>obtusifolius</i>	1																					1
7 <i>Eugenia</i> <i>incarnata</i>		1		1																		2
8 <i>Garcinia</i> <i>rostrata</i>	1																					1
9 <i>Litsea</i> <i>palustris</i>	5	8	5	3																		21
10 <i>Longetia</i> <i>malayana</i>	1	1	2		4	1	1		1													11
11 <i>Palaequium</i> <i>cochleari-</i> <i>folium</i>	7	12	16	7	4	4	1	1	1		1											54
12 <i>Parastemon</i> <i>veesteeghii</i>	18	8	2	3	2																	33
13 <i>Shorea albida</i>	1			2	1		1	2		1	1	1	2		1					1	1	15
14 <i>Sterculia</i> <i>rhoidifolia</i>	1	1																				2
15 <i>Ternstroemia</i> <i>hosei</i>				1																		1
16 <i>Tristania</i> <i>obovata</i>	27	9	7	2	3																	48
17 <i>Xanthophyllum</i> sp. (2614)				1																		1
18 <i>Xylopia</i> <i>coriifolia</i>	1		5	1	2		1															10
	76	46	43	21	17	7	5	4	2	3	4	3	3		1		1		1	1	1	238

Sample Plot 32. Lobok Pasir, Baram. 1955.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
1 Combretocarpus rotundatus	1	2	2	2	5	4	5	1	2		1	1											26
2 Dactylocladus stenostachys	6	13	6	2	2	1	1																31
3 Shorea albida			1																				1
	7	16	8	4	7	5	6	1	2		1	1											58

BULLSTON

EXTRA STRONG

Sample Plot 33. Badas, Brunei. 1954.
Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and Totals over	
1 Combretocarpus rotundatus														1	1				1			3
2 Cyathocalyx biovalatus	1	1		1																		3
3 Dactylocladus stenostachys						1	1	1						1								4
4 Diospyros ferrea var. buxifolia	4		1		1	1																7
5 Dyera lowii	1			1	1										1							4
6 Ficus sumatrana				1																		1
7 Genua curtisii	7	4	7	6	6	4	6	1	1	2	2	1								1		48
8 Garcinia vidua	2																					2
9 Garcinia sp. (No. 34)				1	1																	2
10 Gonystylus bancanus									1	1		1	2									5
11 Litsea resinosa	1																					1
12 Longetia malayana																				1		1
13 Mezzettia umbellata									1													1
14 Parastemon veesteeghii						1																1
15 Palaquium sp. (2834)	1																					1
16 Pithecellobium oppositum	1																					1
17 Polyalthia hypoleuca	5	1	4		2				1													13
18 Shorea albida																						10(87, 89,102, 114,120, 132,133, 137,146)
19 Sterculia rheidifolia				1																		1
20 Stemonurus umbellatus	2	1																				3
21 Xanthophyllum amoenum	1	1																				2
	25	8	15	9	12	6	7	2	3	2	3	2	1	4	1		1	2			10	114

Sample Plot 34. Badas, Brunei. 1954.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
1 Calophyllum obliquinervum									1											1		2	
2 Combretocarpus rotundatus											1	1	1	1									4
3 Dactylocladus stenostachys				1			1						1										3
4 Dyera lowii	2	1	1				1	1															6
5 Gamua curtisii	7	4	7	6	4	1	3		2				1										35
6 Gonystylus bancanus		1	3	1	1		1	3	2	2	2	1			1		1						19
7 Palaquium cochlearifolium										1													1
8 Parastemon veesteeghii	1						1		1	1													4
9 Shorea albida										1	1	1	1		1	1	2	1	3	5	10(72, 78, 80, 81, 84, 86, 88, 89, 113, 82)	27	
10 Stemonurus umbellatus	1																						1
11 Vatica mangachapoi				1																			1
12 Unid. (2832)					1																		1
	11	6	11	9	6	1	7	4	5	5	3	3	4		3	2	4	1	3	6	10	104	

Sample Plot 35. Badas, Brunei. 1954.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 Calophyllum obliquinervum																1		1	1		3(72, 81-2)	6
2 Combretocarpus rotundatus													1			1		1				3
3 Dactylocladus stenostachys						1																1
4 Diospyros ferrea var. buxifolia			1		1			1														3
5 Dyera lowii					1			1														2
6 Ganea curtisii	7	7	10	5	8	2	5	2	5	3	2											56
7 Gonystylus bancanus		2	2	6	3	2	2	4	1	3	1	1		1	1				1			30
8 Palaquium cochleari- folium						1																1
9 Sterculia rhoidifolia		1																				1
10 Shorea albida							2	2			1	1	3	1	2	2	3		2	11(72- 2,73, 77,79, 83,88, 89,97, 90,99)	30	
	7	10	13	11	12	7	9	9	7	6	3	2	2	4	2	4	2	6	1	2	14	133

Sample Plot 36. Badas, Brunei. 1954.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 <i>Camposperma macrophylla</i>				1																		1
2 <i>Calophyllum obliquinervum</i>										1									1			2
3 <i>Combretocarpus rotundatus</i>								2	1							2		2	1			8
4 <i>Dactylocladus stenostachys</i>			1					1														2
5 <i>Diospyros ferrea</i>				2						1												3
6 <i>Dyera lowii</i>					1	1																2
7 <i>Ganua curtisii</i>	2	4	4	4	3	2		1														20
8 <i>Gonystylus bancanus</i>	2	6	5	4	4	1	2		2	2	3				3							34
9 <i>Palaquium cochlearifolium</i>		1		1		5	1	1	1													10
10 <i>Parastemon veesteeghii</i>				1					1													2
11 <i>Sterculia rheidifolia</i>	1		1																			2
12 <i>Shorea albida</i>					2	3	1	7	4	7	10	6	3	4	1	3	4	3	1			59
13 <i>Xanthophyllum amoenum</i>	1	2																				3
	6	14	14	10	10	11	4	13	8	10	14	6	3	7	1	5	4	6	2			148

Sample Plot 37. Badas, Brunei. 1954.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 Combretocarpus rotundatus										2	2	2	2			2						10
2 Dactylocladus stenostachys			1	1	2																	4
3 Diospyros ferrea var. buxifolia			1																			1
4 Dyera lowii											1											1
5 Gonystylus bancanus				1		2	1															4
6 Palaquium cochlearifolium	6	5	3	6	3		2															25
7 Sterculia rheidifolia				1																		1
8 Shorea albida		2	4	5	10	15	5	3	6	4	9	9	4	5	6	2	3		3			95
9 Unid. (2851)	1																					1
	7	9	10	13	15	16	7	3	6	6	11	12	6	5	6	4	3		3			142

Sample Plot 38. Badas, Brunei. 1954.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 Combretocarpus rotundatus		1		2		2	2	1	2													10
2 Dactylocladus stenostachys		3	3	2																		8
3 Eugenia sp. (2822)		1																				1
4 Litsea palustris						1																1
5 Parastemon veesteeghii	1	4	1	2	3	1	3	1														16
6 Palaquium cochlearifolium		1	2	2																		5
7 Shorea albida	2	4	5	8	11	5	4	6	10	10	8	3	4	5	2	1	2	1	1			92
8 Tristania obovata		2	5																			7
	4	15	16	16	15	8	9	8	12	10	8	3	4	5	2	1	2	1	1			140

Sample Plot 41. Badas, Brunei. 1954.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 <i>Camposperma macrophylla</i>							1															1
2 <i>Combretocarpus rotundatus</i>	2		1	4	1			1		1												10
3 <i>Dactylocladus stenostachys</i>	6	5	4	6	2	1	1															25
4 <i>Eugenia</i> sp. (2822)		2																				2
5 <i>Garcinia rostrata</i>	2																					2
6 <i>Garcinia</i> sp.			1																			1
7 <i>Ilex sclero- phyloides</i>			1																			1
8 <i>Litsea palustris</i>								1		1	1	1										4
9 <i>Parastemon veesteeghii</i>	1	1	6	1	3	1	1	1	1	1	1	1										17
10 <i>Shorea albida</i>	1			1	2	1	4	4	1	6	2	1	3	4	2	4	1			1		38
11 <i>Tristania obovata</i>	1	4	1																			6
12 <i>Xanthophyllum sp. nov. (2614)</i>								1														1
13 <i>Xylopia coriifolia</i>	1		2																			3
	15	11	15	12	8	3	7	8	2	8	4	2	4	4	2	4	1			1		111

Sample Plot 42. Badas, Brunei. 1954.

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals		
1 <i>Calophyllum obliquinervum</i>											1	1		1								1(74)	4	
2 <i>Camposperma macrophylla</i>	1		1	1			1	1																5
3 <i>Combretocarpus rotundatus</i>											1				1	1	1							4
4 <i>Dactylocladus stenostachys</i>	1	5	4	2			2	1																15
5 <i>Dyera lowii</i>			1	4			3																	8
6 <i>Eugenia chrismannii</i>	2																							2
7 <i>Garcinia bancana</i>		1																						1
8 <i>Gonystylus bancanus</i>	2	3	3		1		2	2	1	1	1			1		1	1	2		1				22
9 <i>Horsfieldia crassifolia</i>				1																				1
10 <i>Ilex hypoglauca</i>	2																							2
11 <i>Knema kunstleri</i>			1																					1
12 <i>Mezzettia umbellata</i>	1	2	1																					4
13 <i>Palaquium cochlearifolium</i>						1		1																2
14 <i>Palaquium ridleii</i>		1																						1
15 <i>Stemonurus umbellatus</i>	3																							3
16 <i>Shorea albida</i>										1	1	2	4	1			1	1	2	2	3(83- 2,97)			18
17 <i>Sterculia rheidifolia</i>	2	2																						4
18 <i>Xanthophyllum amoenum</i>	1																							1
	15	15	11	7	2	6	4	3	2	2	5	5	1	3	1	2	2	3	2	3	4			98

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
22 <i>Palaequium cochleari- folium</i>														1						1		2
23 <i>Palaequium pseudo- rostratum</i>									1	1												4
24 <i>Palaequium ridleyi</i>															1							1
25 <i>Parastemon urophyllum</i>																				1		1
26 <i>Parastemon veesteeghii</i>																					1	1
27 <i>Polyalthia glauca</i>																						21
28 <i>Polyalthia hypoleuca</i>																						7
29 <i>Pseudosindora palustris</i>																						6
30 <i>Santiria laevigata</i>																						1
31 <i>Shorea platycarpa</i>																						2
32 <i>Sterculia rheidifolia</i> var.																						1
33 <i>Stemonurus umbellatus</i>																						4
34 <i>Ternstroemia magnifica</i>																						1
35 <i>Tetramerista crassifolia</i>																						2
36 <i>Tristania grandifolia</i>																						3
37 <i>Xanthophyllum amoenum</i>																						4
	22	25	21	10	14	5	4	5	5	5	5	3	3	2	3	1	2	1	1	1	5	142

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
43 Shorea platycarpa				1	1					1												3	
44 Ternstroemia magnifica				1																		1	
45 Tristania grandifolia									1											1		2	
46 Xanthophyllum amoenum																						2	
	28	17	26	8	11	6	4	5	6	6	3	1	3	3	2	2	2	1	2	1	2	2	139

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Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
21 Nephelium melanomiscum	1		2			1																4
22 Palaquium leiocarpum	1														1							2
23 Palaquium pseudo- cuneatum																					1(99)	1
24 Palaquium pseudo- rostratum									1	1												2
25 Palaquium ridleyi	1																					1
26 Parishea sericea	1															1						2
27 Pseudosindora palustris	1					2				1												4
28 Santiria laevigata						1																1
29 Stemonurus umbellatus			1						1													2
30 Sterculia rheidifolia	1	1	1	1																		4
31 Tetractomia holttumii		1			1																	2
32 Tristania grandifolia									1													1
33 Xanthophyllum amoenum	2	1	1																			4
34 Xanthophyllum citrifolium										1												1
35 Polyalthia hypoleuca						1																1
	19	6	10	5	13	10	4	4	6	1	5	3	1	1	5	7	3				5	108

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
22 <i>Linociera</i> sp. (3282)	1																					1	
23 <i>Longetia</i> <i>malayana</i>															1								1
24 <i>Macaranga</i> <i>caladifolia</i>					1																		1
25 <i>Mezzettia</i> <i>leptopoda</i>																1							1
26 <i>Nephelium</i> <i>melanomiscum</i>	1		1	2	1																		5
27 <i>Neoscortechnia</i> <i>kingii</i>					1																		1
28 <i>Parastemon</i> <i>veesteeghii</i>	1																						1
29 <i>Parishea</i> <i>sericea</i>						1	1																2
30 <i>Palaequium</i> <i>pseudo-</i> <i>rostratum</i>																					1	2(78, 90)	3
31 <i>Palaequium</i> <i>leiocarpum</i>	1					1				1	1												4
32 <i>Pseudosindora</i> <i>palustris</i>				1																			1
33 <i>Polyalthia</i> <i>hypoleuca</i>						1																	1
34 <i>Sandoricum</i> <i>emarginatum</i>	1									1													2
35 <i>Sterculia</i> <i>rhoidifolia</i>	1					1																	2
36 <i>Shorea</i> <i>platycarpa</i>								1															1
37 <i>Shorea</i> <i>scabrida</i>						1																	1
38 <i>Stemomurus</i> <i>umbellatus</i>			1																				1
39 <i>Tetractomia</i> <i>holttumii</i>			1			1																	2
40 <i>Tristania</i> <i>grandifolia</i>						1				1					1								3
41 <i>Xanthophyllum</i> <i>amoenum</i>	2	1	2	2																			7
42 <i>Xanthophyllum</i> <i>citrifolium</i>																					1		1
	13	9	15	10	10	7	2	4	2	5	4	2	6	3	3	3	3	2	1	4	5		113

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
21 Parishea sericea		1																				1
22 Platea excelsa					1																	1
23 Pseudosindora palustris		1		2																		3
24 Santiria laevigata								1														1
25 Shorea scabrida						1																1
26 Sterculia rhoidifolia		1	1																			2
27 Stemonurus umbellatus		2	1	1	4																	8
28 Tetractomia holttumii		1																				1
29 Tristania grandifolia			1			1	1	1														4
30 Xanthophyllum amoenum		1	1			1																3
31 Xylopia coriifolia				1																		1
32 Unid. (1770)				1	1																	2
33 " (1776)			1																			1
34 " (1775)		2																				2

18 12 12 11 9 8 8 7 5 7 4 3 4 2 3 1 3 4 7 128

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
21 <i>Polyalthia</i> <i>hypoglaea leuca</i>				1										1		1							3
22 <i>Shorea</i> <i>platycarpa</i>										1													1
23 <i>Stemonurus</i> <i>umbellatus</i>					1																		1
24 <i>Tristania</i> <i>grandifolia</i>							1		1	1	1			1									6
25 <i>Xanthophyllum</i> <i>amoenum</i>		2	2				1																5
26 Unid. (1779)		1			1									1									3
	16	11	9	4	8	3	8	8	5	4	2	7	3		2	6	2	4	2	2	6		112

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Sample Plot 49. Kayangeran F.R., Lawas. 1956.
Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
1 <i>Canthium didymum</i>			1																			1	
2 <i>Casuarina sumatrana</i>										1	2	1	3							1	1	(79)	9
3 <i>Combretocarpus rotundatus</i>							1																1
4 <i>Dactylocladus stenostachys</i>	1						4				1		1										7
5 <i>Diospyros ferrea</i> var. <i>buxifolia</i>									1	1	1												3
6 <i>Dacrydium elatum</i>				1	3		3	3	2	4	2	4	5	3		2							32
7 <i>Gonystylus forbesii</i>	1			1																			2
8 <i>Hopea pentanervia</i>			2																				2
9 <i>Litsea cylindrocarpa</i>																							1
10 <i>Litsea palustris</i>	6	1																					7
11 <i>Palaquium cochleari- folium</i>						1			1	2			1										5
12 <i>Parastemon veesteeghi</i>	2			1																			3
13 <i>Shorea scabrida</i>	1																						1
14 <i>Stemonurus umbellatus</i>	4		1																				5
15 <i>Tristania grandifolia</i>																					1		1
16 <i>Xanthophyllum amoenum</i>	2																						2
17 <i>Xylopia coriifolia</i>	1																						1
	18	6	1	2	1	4	5	4	1	5	5	7	3	9	5	3	2		1	1			83

Sample Plot 50. Kayangeran F.R., Lawas. 1956.
Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals
1 <i>Baccaurea bracteata</i>	3																					3
2 <i>Canthium didymum</i>	1																					1
3 <i>Casuarina sumatrana</i>								1	1	2	1	5	4	3	6	3		1				27
4 <i>Dacrydium elatum</i>	1		1	2	3	2	3	3	5	2	4	6	4	7	4	4				1		52
5 <i>Dactylocladus stenostachys</i>		1	1			1	2	1		1	2										1(73)	10
6 <i>Dillenia pulchella</i>	2																					2
7 <i>Diospyros ferrea</i> var. <i>buxifolia</i>								1														1
8 <i>Dyera lowii</i>	1																					1
9 <i>Gonystylus forbesii</i>	1	1	1		1																	4
10 <i>Gonystylus bancanus</i>										1												1
11 <i>Gardenia pterocalyx</i>	1																					1
12 <i>Hopea pentanervia</i>	1																					1
13 <i>Kokoona ovato-lanceolata</i>	1																					1
14 <i>Longetia malayana</i>			1																			1
15 <i>Litsea palustris</i>	4	1																				5
16 <i>Palaquium cochlearifolium</i>						1			2	1	2	1					2					9
17 <i>Shorea scabrida</i>	1																					1
18 <i>Stemonurus umbellatus</i>	2	1																				3
19 <i>Tristania grandifolia</i>			1																			1
	19	5	4	2	5	3	6	5	8	6	20	12	8	10	10	7	2	1	1	1	1	135

Sample Plot 51. Kayangeran F.R., Lawas. 1958.
 Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals	
1 <i>Androtium astylum</i>	1																					1	
2 <i>Baccaurea bracteata</i>	1																					1	
3 <i>Camptosperma coriaceum</i> ^a	2	1	8	7	3	3	5	1	1			1										32	
4 <i>Combretocarpus rotundatus</i>			1	1			2			1							1			1		7	
5 <i>Dacrydium elatum</i>	6	11	18	9	10	7	11	12	9	8	2	4	3	1	1							2(73, 74)	114
6 <i>Dactylocladus stenostachys</i>		1	1							2		1	2							1		8	
7 <i>Diospyros ferrea</i> var. <i>buxifolia</i>	1		1	1	1	2	2		1													9	
8 <i>Dillenia pulchella</i> var.				1																		1	
9 <i>Dyera lowii</i>	1																					1	
10 <i>Eugenia</i> sp. (479)		1																				1	
11 <i>Eugenia</i> sp. (2822)	1	1																				2	
12 <i>Gonystylus bancanus</i>					1																	1	
13 <i>Litsea cylindrocarpa</i>				1																		1	
14 <i>Parastemon veesteeghii</i>							1															1	
15 <i>Palaquium cochlearifolium</i>		1	1		1	1			1			1					1				1(79)	8	
16 <i>Sterculia rheidifolia</i>	1	1	2																			4	
17 <i>Tetractomia holttumii</i>	1																					1	
18 Unid.	1																					1	
	16	17	34	18	16	13	21	13	12	10	3	5	5	3	1		2		1	1	3	194	

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66	69	72 and over	Totals		
45 Shorea platycarpa		2	1		1																		4	
46 Shorea teysmanniana				1		1	1	1						1										5
47 Shorea scabrida																						1(80)		1
48 Tetractomia holttumii				1		1																		2
49 Timonius flavescens										1														1
50 Xanthophyllum amoenum		2	1			2	1	1																7
51 Xerospermum muricatum		4	3	1	1																			9
52 Unid.						2		1																3
53 Vatica mangachapoi																								1
		46	31	24	10	13	9	9	6	4	2	3	3	1	3	1	1	1					1	168

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Sample Plot 53

Road to Nyabau Forest Reserve, Bintulu. 1961

Number of individuals in three inch girth classes.

Species	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60 and over	Totals
1 <i>Alangium havilandii</i>	1																	2
2 <i>Camposperma coriacea</i>	9	8	6	10	5	2	3	2										45
3 <i>Cratogeomys arborescens</i>			1	2			2		1			1	1	1	1			11
4 <i>Cyrtostachys lacca</i>	11	7	1															119
5 <i>Dillenia pulchella</i>		1																1
6 <i>Eugenia luzonensis</i>				1		3												4
7 <i>Eugenia spicata</i>	1	1																2
8 <i>Eugenia havilandii</i>	1		1															2
9 <i>Ficus spathulifolia</i>				1														1
10 <i>Garcinia tetrandra</i>	3	2	1															6
11 <i>Gonystylus</i> sp.				1														1
12 <i>Gynotroches axillaris</i>	1		2															3
13 <i>Horsfieldia crassifolia</i>	1			1														2
14 <i>Ilex</i> sp.	1			1														2
15 <i>Jackia ornata</i>		1																1
16 <i>Litsea gracilipes</i>	1			2	1													4
17 <i>Lophopetalum</i> <i>multinervium</i>				1														1
18 <i>Myristica iners</i>				1														1
19 <i>Nauclea</i> sp.	1	1																2
20 <i>Neesia malayana</i>				1	1													2
21 <i>Parastemon urophyllum</i>	3			1														4
22 <i>Platea excelsa</i>				1														1
23 <i>Sandoricum emarginatum</i>	3	2		3	3	1					1	1						13
24 <i>Shorea platycarpa</i>	1																	1
25 <i>Stemonurus scorpioides</i>	12	13	5	5	5	1	1	2	2			1					1	48
26 <i>Sterculia rhoidifolia</i> var.	1		1	3	1	2	1	2	3									14
27 <i>Tetramerista glabra</i>																	1	1
28 <i>Timonius peduncularis</i>	1				1													2
29 <i>Vitex</i> sp.	1																	1
Totals	153	37	22	31	17	9	7	6	6	1	1	2	1	1	1	1	2	297

Appendix 3

Distribution of principal peat swamp species in Sarawak and Brunei and their occurrence in the Phasic Communities.

Explanatory notes

(i) The figures 1 - 6 represent the phasic communities and the administrative divisions in Sarawak. B signifies Brunei. A straight line indicates the known distribution of a species, and a broken line the probable distribution, which requires confirmation.

(ii) This Appendix was prepared in 1959. As a result of further knowledge gained in the past two years, the distribution and occurrence of a few species requires to be emended.

(iii) Alterations to names of species, consequent of botanical work during the past two years, are included in Appendix 5.

Upper-storey. Phasic communities and geographical distribution.

Species	1	2	3	4	5	6(B)
<i>Camposperma coriaceum</i> ^a (Jack) Hallier f. ex v. Steenis	o (1a)			lo		
<i>Melanorrhoea beccarii</i> Erop.	lf	f		f		
<i>Melanorrhoea tricolor</i> Ridley	lf	o		o		
<i>Parishea sericea</i> Ridley	o (lf)					
<i>Parishea</i> sp. (9802)	lf					
<i>Mezzettia leptopoda</i> (Hk. f. et Jh.) Oliver	o					
<i>Alstonia spathulata</i> Blume	lf					
<i>Dyera lowii</i> Hook f.	o (lf)	o	r			
<i>Casuarina sumatrana</i> Jungh.						
<i>Lophopetalum multinervium</i> Ridley	lo					
<i>Dillenia pulchella</i> (Jack) Gilg.	o					
<i>Anisoptera marginata</i> Korth.	r					
<i>Dipterocarpaceae coriaceus</i> V. Sl.	la					
<i>Dryobalanops rappa</i> Becc.	o (lf)					
<i>Shorea albida</i> Sym.		a	va	va	f	vr

Species	1	2	3	4	5	6(B)
<i>Shorea inaequilateralis</i> Sym.	lo	lo				
<i>Shorea pachyphylla</i> Ridley ex Sym.	lf					
<i>Shorea platycarpa</i> Heim.	o					
<i>Shorea rugosa</i> var. <i>uliginosa</i> (Foxw.) Sym.	f					
<i>Shorea scabrida</i> Sym.	o					
<i>Shorea teysmanniana</i> Dyer ex Brandis.	f	o				
<i>Shorea macrantha</i> (Brandis) Sym.	lf					
<i>Calophyllum canum</i> Hook. f.	r					
<i>Calophyllum retusum</i> Wall.	o	r				
<i>Calophyllum rhizophorum</i> Boerl. et Koord.		o				
<i>Cratoxylon arborescens</i> (Vahl.) Blume	o					
<i>Cratoxylon glaucum</i> Korth.		o	o	o (lf)		
<i>Litsea palustris</i> Kostermans (msc.)	r	o	o	a (lva)	a	a
<i>Koompassia malaccensis</i> Benth.	lo					
<i>Pseudosindora palustris</i> Sym.	o	o	r	r		
<i>Dactylocladus stenostachys</i> Oliv.	f	f	o	f	f	a

Species	1	2	3	4	5	6 (B)
<i>Sandoricum emarginatum</i> Hiern.	r (lo)					
<i>Tetramerista glabra</i> Miq.	r (lo)					
<i>Combretocarpus</i> <i>retundatus</i> Dans.	o	o	o	f	f	va
<i>Parastemon urophyllum</i> A. DC.	o					
<i>Palaquium pseudorostratum</i> H.J. Larn	o					
<i>Planchonella maingayi</i> (Clarke) van Royen	r					
<i>Gonystylus bancanus</i> (Miq.) Kurz	f	f	o	o		
<i>Gonystylus macrophyllus</i> (Miq.) Airy Shaw	lf					
<i>Durio carinatus</i> Mest.	o	r				
<i>Neesia malayana</i> Bakh.	vr(lo)					
<i>Dacrydium elatum</i> (Roxb.) Wall.						
<i>Artocarpus rigidus</i> Bl.	r					
<i>Parartocarpus forbesii</i> (King) Jarrett	o					

Middle-storey. Phasic communities and geographical distribution.

Species	1	2	3	4	5	6 (B)
Melanorrhoea speciosa Ridley	r					
Parishea sp. nov. (2697)	lr	lo				
Swintonia glauca Engl.	lf	lf				
Polyalthia glauca (Hassk.) Boerl.	o	o				
Polyalthia hypoleuca Hk. f. et Th.	o	o	lf			
Polyalthia sclerophylla Hk. f. et Th.	lo					
Xylopia coriifolia Ridley	o	o		lo		
Goniothalmus tapis Miq.	o	o				
Dacryodes incurvata (Engl.) H.J. Lam	r					
Santirialaevigata Bl. forma laevigata	o					
Santiria rubiginosa Bl. var. rubiginosa	o (lf)	o				
Kokoona ovato-lanceolata Ridley	o	r				
Bhesa paniculata Arn. and Buch.	r	r				
Lophopetalum rigidum Ridley		la	lf			
Alangium havilandii Bloemb.	o					

Species	1	2	3	4	5	6 (B)
<i>Cotylecobium flavum</i> Pierre		r		r		
<i>Hopea pentanervia</i> Sym.	o	o				
<i>Shorea longiflora</i> (Brandis) Sym.	r					
<i>Vatica mangachapoi</i> Blanco	r			vr		
<i>Diospyros ferrea</i> (Willd.) Bakh. var. <i>buxifolia</i> (Roxb.) Bakh.	f	f	o	f	f	
<i>Diospyros maingayi</i> Hk. f.	lo	lo				
<i>Diospyros pseudo-</i> <i>malabarica</i> Bakh.	f	o				
<i>Blumeodendron subcaudatum</i> Merr.	f					
<i>Blumeodendron tokbrai</i> (Blume) Sym.	o					
<i>Longetia malayana</i> (Benth.) Pax. et K. Hoffm.	o	f		f		
<i>Macaranga caladifolia</i> Becc.	o	o				
<i>Macaranga puncticulata</i> Gage	r (la)					
<i>Quercus dasystachyus</i> (Miq.) Rehd var. <i>gracilis</i> Hatusima		o				
<i>Quercus wenzigianus</i> (King) A. Camus	f	o				

Species	1	2	3	4	5	6 (B)
<i>Calophyllum fragrans</i> Ridley	r	r				
<i>Calophyllum obliquinervum</i> Merr.				f (1a)	o	
<i>Calophyllum sclerophyllum</i> Vesq.	r	vr				
<i>Garcinia havilandii</i> Stapf.	r					
<i>Garcinia vidua</i> Ridley	o					
<i>Stemonurus scorpioides</i> Becc.	o (lf)					
<i>Alseodaphne insignis</i> Gamble	o	o				
<i>Alseodaphne rigida</i> Kostermans	o (lf)					
<i>Endiandra</i> sp. (2601)	r					
<i>Litsea cylindrocarpa</i> Gamble	f					
<i>Litsea gracilipes</i> Hook. f.	o					
<i>Litsea grandis</i> Hook. f.	r					
<i>Litsea nidularis</i> Gamble	r					
<i>Dialium laurinum</i> Baker	r					
<i>Sindora leiocarpa</i> Backer ex Heyne	o					
<i>Adenanthera</i> aff. <i>pavonia</i> L.	r					

Species	1	2	3	4	5	6 (B)
<i>Parkia singularis</i> Miq.	r					
<i>Ctenolophon parvifolius</i> Oliv.	f	o				
<i>Aromadendron nutans</i> Dandy	o	o	r (la)			
<i>Amoora rubiginosum</i> Hiern.	o	o				
<i>Horsfieldia crassifolia</i> (Hk. f. et Th.) Warb.	o	r				
<i>Myrstica lowiana</i> Warb.	o					
<i>Eugenia cerina</i> Hend.	o (lf)	o				
<i>Eugenia chrismanii</i> Merr. & Perry	o	o				
<i>Eugenia</i> aff. <i>havilandii</i>	o					
<i>Eugenia nemestima</i> M.R. Hend.	o	o				
<i>Eugenia</i> sp. (2659)	r	r				
<i>Eugenia</i> sp. (4972)	r					
<i>Eugenia</i> sp. (2715)	o					
<i>Tristania grandifolia</i> Ridley	o (la)	o				
<i>Tristania maingayi</i> Duthie				f (la)	a	a
<i>Tristania obovata</i> R. Br.				f (la)	f	o

Species	1	2	3	4	5	6 (B)
<i>Linociera</i> sp. (9042)	r					
<i>Parastemon veesteeghii</i> M. & P.			o	va	va	a
<i>Gardenia pterocalyx</i> Val.	r	o	o (lf)			
<i>Mussaendopsis beccariana</i> Gaertn.	lo					
<i>Tetractomia holttumii</i> Ridley		o	f (la)	o		
<i>Tetractomia parviflora</i> Ridley	o					
<i>Nephelium melanomiscum</i> Radlk.	f	o				
<i>Ganua coriacea</i> Pierre ex Dubbard	o (lf)					
<i>Ganua motleyana</i> (de Vriesse) Pierre ex Dubbard	lf					
<i>Ganua pierrei</i> V. d. Assem.	o					
<i>Palaquium cochlearifolium</i> van Royen		o	o	f	o	
<i>Palaquium leiocarpum</i> Burek-Boerl.	lo					
<i>Palaquium pseudocuneatum</i> H.J. Lam	o (lf)	o				
<i>Palaquium ridleyi</i> King et Gamble	o	o	r	r	vr	
<i>Palaquium walsurifolium</i> Pierre	o (lf)					

Species	1	2	3	4	5	6 (B)
<i>Scaphium macropodum</i> Beumee	lr		-----			
<i>Sterculia rholdifolia</i> Stapf. ex Ridley var.	r	-----				
<i>Gonystylus forbesii</i> Gilg.	r		-----			
<i>Elaeocarpus obtusifolius</i> Merr.	r	o	o	f	o	
<i>Vitex</i> sp. (2644)	lvr		-----			
<i>Nauclea parva</i> (Havil.) Merr.	o	-----				

BULLSTON

BETINA STRONG

Lower-storey. Phasic communities and geographical distribution.

Species	1	2	3	4	5	6 (B)
<i>Androtium astylum</i> Stapf.				o		
<i>Buchania arborescens</i> Bl. var. <i>florida</i>	r					
<i>Camposperma squamatum</i> Ridley	o	o				
<i>Mangifera havilandi</i> Ridley	r					
<i>Cyathocalyx biovalatus</i> Boerl.	f	o				
<i>Mezzettia umbellata</i> Becc.	r	r				
<i>Xylopia fusca</i> Maingay ex Hk. f. et Th.	lr					
<i>Goniothalmus malayanus</i> Hk. f. et Th.	f	f				
<i>Arthrophyllum rubiginosum</i> Ridley				r		
<i>Dacryodes macrocarpa</i> (King) H.J. Lam var. <i>macrocarpa</i>	lo					
<i>Santiria rubiginosa</i> Bl. var.	o	o				
<i>Santiria tomentosa</i> Bl.	o					
<i>Dillenia pulchella</i> (Jack) Gilg. var.	o	o				
<i>Diospyros elliptica</i> Merr.	o	o				
<i>Antidesma coriaceum</i> Tul.	f (la)	f (la)				

Species	1	2	3	4	5	6 (B)
<i>Baccaurea bracteata</i> Muell. Arg.	f	f				
<i>Cephalomappa beccariana</i> Boch.		o				
<i>Cephalomappa malloticarpa</i> J.J.S.	o	la	la			
<i>Glochidion lucidum</i> Bl.	o (lf)					
<i>Neoscortechinia kingii</i> (Hook. f.) Pax. et Hoffm.	a					
<i>Neoscortechinia kingii</i> (Hook. f.) Pax. et Hoffm. forma glandulosa	lo					
<i>Castanopsis foxworthyi</i> Schottky.	r	r				
<i>Quercus jaheri</i> Hatusima	r	r (lo)				
<i>Quercus</i> aff. <i>sundaiicus</i> (Bl.) Rehd.	r	f	a	va	f	
<i>Ryparosa</i> aff. <i>acuminata</i> Merr.	r					
<i>Garcinia bancana</i> Miq.	lf					
<i>Garcinia microcarpa</i> Pierre		o		o		
<i>Garcinia rostrata</i> B. & H.				f (la)		
<i>Garcinia tetrandia</i> Pierre	o	o				
<i>Garcinia</i> sp. (9745)	o					
<i>Kayea</i> sp. (9736)	r					

Species	1	2	3	4	5	6 (B)
Gomphandra aff. comosa King	r	-----				
Platea excelsa Bl.	r	-----				
Stemonurus umbellatus Becc.	f	o	-----			
Ilex hypoglauca (Miq.) Loes	r	r	o (lf)	r	-----	
Ilex sclerophylloides Loes		r	o (lf)	o (lf)	f	f (la)
Beilschmeidia aff. maingayi Hook. f.	r	-----				
Litsea resinosa Bl.	f	o	-----			
Litsea sp. (9812)	o	o	o	-----		
Litsea sp. (4121)			r	-----		
Phoebe sp. (4959)	r	-----				
Kibessia coriacea Cogn.		vr	-----			
Gymnacantha eugeniifolia (A. DC.) var. griffithii (Warb.) Sinclair	o	-----				
Knema intermedia (Bl.) Warb.	r	-----				
Myrsine sp. (2346)			r	-----		
Eugenia incarnata Ern. (Merr. & Perry)			o	-----		
Eugenia aff. luzonensis Merr.	o	-----				

Species	1	2	3	4	5	6 (B)
<i>Eugenia zeylanica</i> Wright	o					
<i>Eugenia</i> sp. (2615)				o		
<i>Eugenia</i> sp. (479)	r					
<i>Eugenia</i> sp. (2726)				r (1a)		
<i>Eugenia</i> sp. (2758)		r				
<i>Gomphia hookeri</i> Planch.	r					
<i>Anacalosa frutescens</i> Bl.	r					
<i>Linociera insignis</i> Swartz	r					
<i>Linociera</i> sp. (3282)		o	o			
<i>Trigoniastrum hypoleucum</i> Miq.		r				
<i>Xanthophyllum amoenum</i> Chod.	f	o				
<i>Xanthophyllum</i> aff. <i>citriifolium</i>	o (lf)					
<i>Xanthophyllum</i> sp. (2614)				o (lf)	o	
<i>Carallia brachiata</i> Lour. Merr.	lo					
<i>Pygeum parviflorum</i> Teijsm & Binn.				(lf)		

Species	1	2	3	4	5	6 (B)
<i>Canthium didymum</i> Gaertn.	o	o				
<i>Jackia ornata</i> Wall.	o					
<i>Nanolea parva</i> (Havil.) Merr.	*					
<i>Timonius peduncularis</i> Wall.	r (lo)	o	o	a	f	f
<i>Pometia pinnata</i> Forst.	lo					
<i>Xerospermum muricatum</i> (Griff.) Radlk.	o					
<i>Ganua curtisii</i> (K. & G.) H.J. Lam.	o	a	va	a		
<i>Payena obscura</i> Burck.					o	
<i>Sterculia macrophylla</i> Vent.		vr				
<i>Sterculia rhoidifolia</i> Stapf. ex Ridley		o		o (lf)		
<i>Ploiarium alternifolium</i> Vahl. (Melchior)				r		
<i>Ternstroemia hosei</i> Ridley				f (a)		
<i>Ternstroemia magnifica</i> Stapf. ex Ridley	r	r	r	o		
<i>Ternstroemia penangiana</i> Choisy	vr					

Under-storey. Phasic communities and geographical distribution.

Species	1	2	3	4	5	6 (B)
<i>Disepalum anomalum</i>		o	o			
Hk. f.				-----		-----
<i>Polyalthia</i> sp. nov. (9059)	r		-----			
<i>Kibatalia</i> sp. (9300)		lo				
<i>Arthrophyllum diversifolium</i> Bl.	r					-----
<i>Ellipanthus tomentosus</i> King ssp. tomentosus	r		-----			
<i>Antidesma phanerophlebium</i> Merr.	o	-----				
<i>Bridelia ovata</i> Decune		r	lo			
<i>Casearia elliptifolia</i> V. Steu.		r	r		-----	
<i>Croton laevifolius</i> Bl.	r					
<i>Endospermum malaccense</i> Muell. Arg.	lr					
<i>Glochidion obscurum</i> (Willd.) Bl.	r		-----			
<i>Actinodaphne</i> sp. (448)		lo				
<i>Cinnamomum javanicum</i> Bl.	lo					
<i>Cinnamomum</i> sp. (4751)	lo					-----
<i>Cryptocarya griffithiana</i> Wight	o	-----				

Species	1	2	3	4	5	6 (B)
Dehaasia sp. (4770)	o					
Barringtonia gitingensis Elm.	lr					
Pithecellobium oppositum Miq.	o	o	r	r		
Sarcotheca glauca (Hook. f.) Hallier f.	r	r				
Fagraea racemosa Jack.	r					
Fagraea cf. littoralis Bl.	r					
Chisocheton brachyanthus Merr.	o					
Horsfieldia carnosa Warb.	lvr					
Knema kunstleri (King) Warb.	f	f	o			
Knema uliginosa Sinclair (msc.)	lr					
Ardisia copelandii Merr.		lr	lr			
Ardisia sp. (9826)				o (lf)		
Ardisia sp. (9273)	o					
Rapanea aff. philippensis Mez.				o		
Rapanea sp. (2181)	lo					
Euthemis sp. (9014)	r	r				

Species	1	2	3	4	5	6 (B)
<i>Canthium umbellatum</i> Wight	r					
<i>Gaertnera borneensis</i> Vahl.	o	o				
<i>Ixora pyrantha</i> Brem.	r	f	a			
<i>Randia</i> sp. (7904)	lo					
<i>Tarenna fragrans</i> (Bl.) K. et V.	f					
<i>Luvunga motleyi</i> Oliv.	lr					
<i>Samadera indica</i> Gaertn.	r					
<i>Elaeocarpus beccarii</i> A. Dc.	o					
<i>Elaeocarpus griffithii</i> (Wright) A. Gray	lo					
<i>Elaeocarpus mastersii</i> King	o	o	o			
<i>Dracaena cantleyi</i> Baker	vr	r	r			
<i>Cyrtostachys lacca</i> Becc.	o (la)	r	r			

Ground flora. Phasic communities and geographical distribution.

Species	1	2	3	4	5	6 (B)
<i>Aeschynanthus hians</i> C.B. Clarke	o	-----				
<i>Medinilla haseltii</i> Bl.				la		
<i>Medinilla scandens</i> King	f	-----				
<i>Labisia humilis</i> pumila var. <i>genuina</i> Mez.				la		
<i>Labisia pothoina</i> Lindl.	r (lo)	-----				
<i>Nepenthes albo-marginata</i> Lobb. ex Lindl.				r		
<i>Nepenthes bicalcarata</i> Hook. f.		f	f (la)	o	o	o
<i>Nepenthes gracilis</i> Korth.			r	f (la)	f	a
<i>Nepenthes rafflesiana</i> Jack.			r	o	o	f
<i>Euthemis obtusifolius</i> Hook. f.			o	f (la)	o	r
<i>Piper muricatum</i> Bl.	(lo)	-----				
<i>Zizyphus suluensis</i> Merr.	r (lo)	-----				
<i>Argostemma psychotrioides</i> Ridl.	o (lf)	o	-----			
<i>Argostemma psychotrioides</i> Ridl. var.	lr	-----				
<i>Hedyotis tenneliflora</i> Bl.				o	-----	

Species	1	2	3	4	5	6 (B)
^{an} Lecanthus erubescens Jack.	f	o				
Psychotria sarmentosa Bl.	o					
Henslowia sp. (9884)					o	f
Clerodendron fistulosum Becc.	vr	o				
Agloanema simplex Bl.	o					
Schismatoglottis sp. (8364)	o	o				
Alocasia longiloba Miq.	r	lo	r			
Cryptocoryne sp. (8022)	o (lf)					
Cyrtosperma lasioides Griff.	r (lo)					
Homalomena rostrata Griff.	lo					
Podolasia stipitata N.E. Br.	r	r				
Tetraria borneensis Kern.						la
Thorachostachyum bancanum (Miq.) King	va	f	r	r	o	va
Hanguana malayana (Jack.) Merr.	o	o	r	r		
Paspalum conjugatum Berg.	la					
Appendicula pendula Bl.	lf					

Species	1	2	3	4	5	6 (B)
<i>Cystorchis variegata</i> Bl. var. <i>purpurea</i> Ridl.	r	r				
<i>Zeuxine violascens</i> (Bl.) Ridl.	r	r				
<i>Daemonorops longipes</i> Mart.	r (lo)					
<i>Zalacca conferta</i> Griff.	f (lva)	r				
<i>Pandanus pentodon</i> Ridley	r	f (la)	va	o	r	
<i>Pandanus ridleyi</i> Martelli			r	r	a	va
<i>Globba panicoides</i> Miq.	t (lo)					
<u>Ferns</u>						
<i>Vittaria elongata</i> Sw.	a	o				
<i>Gattea glabra</i> (Bl.) Copel.	r	o (lf)	o (lf)			
<i>Asplenium longissimum</i> Bl.	o	r				
<i>Asplenium tenerum</i> Forst.	lo					
<i>Lindsaya scandens</i> Hk. var. <i>terrestris</i> Holtb ^{am}	vr	o	o			
<i>Schizoloma coriaceum</i> v. A. v. R.	a	o				
<i>Nephrolepis biserrata</i> (Sw.) Schott.	r (lo)					
<i>Syngamma lobbiana</i> J.J. Sym.	f	o				

Species	1	2	3	4	5	6 (B)
<i>Ophioglossum intermedium</i> Hook.	lvr					
<i>Crypsinus albido-</i> <i>paleatus</i> (Bl.) Copel.	r	r				
<i>Schizea malaccana</i> Baker						r
<i>Lycopodium cernuum</i> Sw.						a
<i>Ficus motleyana</i> Miq.				a		
<i>Schismatoglettis</i> sp. (8364)	f	o				

BULSTON

ESTRE STRONG

Lianes and Climbers.

Phasic communities and geographical distribution.

Species	1	2	3	4	5	6 (B)
<i>Fissistigma paniculatum</i> (Ridley) Merr.	r		—————			
<i>Pyremidanthe prismatica</i> (Hk. f. et Th.) J. Sinclair	o	—————				
<i>Artabotrys suaveolens</i> Bl.	Æ				—————	
<i>Uvaria</i> sp. (9749)	r		—————			
<i>Urceola</i> sp. (7909)	o	—————				
<i>Willughbeia glaucina</i> K. Schum.	r	—————				
<i>Willughbeia coriacea</i> Wall.	r		—————			
<i>Connarus semidecandrus</i> Jack.	f					—————
<i>Rourea</i> aff. <i>mimosoides</i> (Vahl.) Planch.	o					—————
<i>Erycibe</i> cf. <i>impressa</i> Hoogl.	o	r				—————
<i>Erycibe</i> sp. (4117)			vr			—————
<i>Myxopyrum ellipticum</i> A.W. Hed.			lo			—————
<i>Marumia nemerosa</i> (Jack.) Bl.	lr		—————			
<i>Fibraurea chloroleuca</i> Miers.	f					—————

Species	1	2	3	4	5	6 (B)
Grenacharia beccariana Miq.	o	o				
Mitrella dielsii J. Sinclair	r					
Nepenthes ampullaria Jack.	o	o				
Piper arborescens Roxb.	o					
Piper sp. (2811)	o					
Piper sp. (9234)	r					
Lucinea morinda DC.	r (lo)	r				
Uncaria ovalifolia Roxb.	a	a				
Epipremnopsis media Engl.	r					
Dioscorea sp. (9001)	vr					
Flagellaria indica L.	vr			o	o	f
Korthalsia rigida Bl.	o	f	f			
Plectocomiopsis wrayi Becc.	o					
Teratophyllum ludens Fed.	o	r				
Ficus acamptophylla Miq.	r					
Ficus callicarpides sp. nov. Corner (msc.)	r	f	a			

Species	1	2	3	4	5	6 (B)
<i>Ficus gelderi</i> Miq.	✕		—————			
<i>Ficus korthalsi</i> Miq.	o					—————
<i>Ficus sumatrana</i> Miq.			VR			—————
<i>Ficus sundaica</i> Bl.	o					—————
<i>Ficus spathulifolia</i>	lo					
sp. prov. Cornut (msc.)			—————			
<i>Ficus supperforata</i>	VR					
sp. nov. Cornut (msc.)			—————			
<i>Ficus heteropleura</i> Bl.	✕					
var. <i>hirta</i> Corn.		—————				
var. prov.						
<i>Ficus pisocarpa</i> Bl.	✕			—————		
<i>Gnetum neglectum</i> Bl.	r			—————		
<i>Ampelocissus thyrsiflora</i>	r					
(Miq.) Planch.				—————		
<i>Linostoma longiflorum</i>	r					
Hall. f.			—————			
<i>Tetrastigma</i> sp. (9241)	o	f				—————
<i>Cissus</i> sp. (10013)	r					—————

Epiphytes. Phasic communities and geographical distribution.

Species	1	2	3	4	5	6 (B)
<i>Dischidia nummularia</i> R. Br.	r			f	f	a
<i>Hoya mitrata</i> Kerr		r	o			
<i>Lepidaria oviceps</i> Daws. ⁿ	o					
<i>Macrosolen beccarii</i> Becc.	lf					
<i>Medinilla laxiflora</i> Ridley	f					
<i>Medinilla</i> sp. (9867)	r					
<i>Medinilla</i> sp. (9025)	r					
<i>Pogonanthera pulverulenta</i> Bl.	r					
<i>Pyenarrhena borneensis</i> Diels.	r (lo)					
<i>Dendrophthoe falcata</i> (L.f.) Eltingsh.	vr					
<i>Myrmecodia tuberosa</i> Jack.						f
<i>Hydnophytum formicarium</i> Kurz.			r			
<i>Adenoncos sumatrana</i> J.J. Sym	o					
<i>Bulbophyllum</i> aff. conicum Hook.	r					
<i>Bulbophyllum vaginatum</i> (Lindl.) Rahb. f.	lf					

Species	1	2	3	4	5	6 (B)
<i>Bulbophyllum beccarii</i> Rehb. f.	o	o	o			
<i>Dendrobium cumulatum</i> Ridl.	r					
<i>Dendrobium aff. merrillii</i> Amir.	f					
<i>Dipodium pictum</i> Reichb. f.	o					
<i>Eria aff. obliqua</i>	f					
<i>Eria pannea</i> Lindl.	f	o				
<i>Eria aff. pulchella</i> Lindl.	f	o				
<i>Liparis lacerata</i> Ridl.	r					
<i>Alpinia</i> sp. (8096)	vr					
<u>Ferns</u>						
<i>Vittaria ensiformis</i> Sw.	r					
<i>Vittaria hirta</i> Fee	o					
<i>Asplenium glaucophyllum</i> v. A. v. R.	r					
<i>Asplenium nidus</i> L.	f	o	o	r		
<i>Asplenium phyllitidis</i> Don.	o	r				
<i>Humata angustata</i> (Wall.) J. Sm.	r	r	r	f	o	o
<i>Humata parvula</i> (Wall.) Merr.	vr	vr	r	o		

Species	1	2	3	4	5	6 (B)
<i>Drynaria involuta</i> v. A. v. R.	o	r				
<i>Lecanopteris sinuosa</i> Wall. (Copd.)	r	r				o
<i>Paragramma longifolia</i> (Bl.) Moore	r					
<i>Phymatodes crustacea</i> (Copd.) Holtt.	r					
<i>Polypodium verrucosum</i> (Hook.) Wall.	r					
<i>Pyrrosia longifolia</i> (Burn.) Morton	o					
<i>Selliguea heterocarpa</i> Bl.	r	VF				
<i>Lycopodium phlegmaria</i> L. var. <i>divaricatum</i> Bl.	r					
<i>Lycopodium pinifolium</i> Bl.	r					
<i>Asplenium tenerum</i> Forst.	o					
<i>Crypsinus albido-</i> <i>paleatus</i> (Bl.) Copd.	r					
<i>Ficus deltoidea</i> Jack. var. <i>borneensis</i> Corn. (msc.)	r	r	r			
<i>Ficus deltoidea</i> Jack. var. <i>deltoidea</i>	r	r	r	o		
<i>Dischidia rafflesiana</i> Wall.						f

APPENDIX 4

List of trees killed and damaged by lightning

Lightning damage patch 1. Location: Saribas F.R.

Phasic community: 3 (Shorea albida Consociation).

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
Shorea albida	84	A 1	2A	Crown moderately damaged, one branch killed.
do.	96	A 2	5C	Crown slightly damaged.
do.	126	A 3	6A	Killed.
do.	62	A 4	6A	Killed. Crown fallen.
do.	59	A 5	7A	Killed.
do.	100	A 6	7A-B	Crown heavily damaged. Half of crown killed.
do.	72	A 7	7D	Killed.
do.	127	A 8	8A	Crown heavily damaged. Two large branches killed.
do.	136	A 9	8A	Crown moderately damaged.
do.	24	A10	10D	do.
do.	94	A11	10B	Killed.
do.	80	A12	11B	Killed.
do.	57	A13	11B	Killed. Crown fallen.
do.	118	A14	12A	Crown slightly damaged.
Dactylocladus stenostachys	69	B 1	6D	Killed.

Lightning damage patch 2. Location: Triso Protected Forest.

Phasic community: 3 (Shorea albida Consociation).

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
Shorea albida	54	A 1	2A	Crown slightly damaged.
do.	83	A 2	2C	Crown very slightly damaged.
do.	65	A 3	2D	do.
do.	70	A 4a	5A	Crown slightly damaged.
do.	115	A 4	3D	Killed. Tree forked at 70 ft.
do.	89	A 5	7A	Crown very slightly damaged.
do.	86	A 6	7B	Crown moderately damaged.
do.	68	A 7	7D	Killed.
do.	113	A 8	7D	do.
do.	66	A 9	8A	do.
do.	58	A10	8A	Crown moderately damaged. Tree leaning south-westwards, away from focal point of damage.
do.	57	A11	8B	Crown heavily damaged. One side of crown killed.
do.	84	A12	8B	Killed.
do.	63	A13	8C	Crown moderately damaged. Tree leaning in southerly direction.
do.	115	A14	8C	Killed.
do.	58	A15	9A	Crown heavily damaged. Two large branches killed.
do.	135	A16	9C	Crown heavily damaged. Stem forked at 60 ft. and one fork killed.
do.	54	A17	9C	Crown slightly damaged.
do.	60	A18	9D	do.
do.	130	A19	12A	Crown very heavily damaged. Stem forked and larger fork killed.
do.	82	A20	12B	Killed
do.	39	A21	12D	do.
do.	50	A22	12C	do.
do.	161	A23	12C	do.
do.	50	A24	12D	do.
do.	87	A25	13A	do.
do.	65	A26	13C	do.
do.	100	A27	13D	do.
do.	99	A28	13D	do.

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
<i>Shorea albida</i>	36	A29	13D	Killed.
do.	58	A30	13D	do.
do.	85	A31	14A	do.
do.	38	A32	14B	do.
do.	73	A33	14B	do.
do.	73	A34	14C	Crown very heavily damaged. One branch living.
do.	51	A35	14C	Crown moderately damaged.
do.	83	A36	14D	Killed.
do.	42	A37	15A	do.
do.	128	A38	16A	Crown very slightly damaged.
do.	83	A39	17A	Crown moderately damaged.
do.	86	A40	17D	Killed.
do.	80	A41	17D	Crown heavily damaged.
do.	40	A42	17D	Killed.
do.	37	A43	17D	do.
do.	60	A44	18A	do.
do.	90	A45	18A	do.
do.	77	A46	18B	do.
do.	54	A47	18B	Crown slightly damaged.
do.	80	A48	18D	Crown very heavily damaged.
do.	81	A49	18D	Killed.
do.	80	A50	19A	Crown very heavily damaged.
do.	58	A51	19A	Killed.
do.	62	A52	19B	Crown slightly damaged.
do.	96	A53	19C	do.
do.	80	A54	20A	do.
do.	119	A55	20B	do.
do.	70	A56	20B	Crown very slightly damaged.
do.	123	A57	22A	do.
do.	75	A58	22D	do.
do.	76	A59	23A	do.
do.	86	A60	23B	Crown heavily damaged. Half of crown killed.
do.	163	A61	23C	Crown very heavily damaged.
do.	88	A62	23D	Crown slightly damaged.
do.	94	A63	24B	do.
<i>Tetractomia holttumii</i>	14	B 1	7A	Killed.
do.	14	B 2	7B	Crown slightly damaged.
do.	15	B 3	7B	Killed.
do.	15	B 4	7B	Crown heavily damaged.
do.	17	B 5	7B	Killed.
do.	15	B 6	7C	Crown moderately damaged. Leader killed.

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
<i>Tetractomia</i>				
<i>holttumii</i>	15	B 7	7C	Killed.
do.	14	B 8	7C	Crown heavily damaged. Leader killed.
do.	13	B 9	7C	Crown very heavily damaged.
do.	14	B10	7C	Killed.
do.	13	B11	7D	Crown heavily damaged. Leader killed.
do.	17	B12	8B	Crown slightly damaged.
do.	18	B13	14A	Crown moderately damaged. Leading shoot killed.
do.	18	B14	14A	Crown heavily damaged.
do.	21	B15	14B	Crown slightly damaged.
do.	13	B16	14B	do.
do.	14	B17	14C	Killed.
do.	17	B18	14C	do.
do.	15	B19	14C	do.
do.	14	B20	14C	Crown moderately damaged.
do.	17	B21	14C	Crown slightly damaged.
do.	22	B22	17D	Crown moderately damaged.
do.	15	B23	17D	Crown slightly damaged.
do.	14	B24	18A	do.
<i>Dillenia</i>				
<i>pulchella</i>				
var.	13	C 1	7C	Crown moderately damaged. Leader killed.
<i>Garcinia</i>				
<i>tetrandra</i>	15	D 1	7C	Killed.
do.	23	D 2	13D	do.
do.	26	D 3	14A	do.
<i>Canthium</i>				
<i>didymum</i>	14	E 1	7C	do.
<i>Ilex sclero-</i>				
<i>phylloides</i>	15	F 1	6A	do.
<i>Diospyros</i>				
<i>ferrea</i> var.				
<i>buxifolia</i>	17	G 1	8B	do.
<i>Palaquium</i>				
<i>pseudo-</i>				
<i>rostratum</i>	38	H 1	12A	Crown heavily damaged.
do.	34	H 2	13C	Crown heavily damaged. Leader killed.
do.	25	H 3	13D	Killed.
do.	47	H 4	14C	do.
<i>Dactylocladus</i>				
<i>stenostachys</i>	45	I 1	12B	Crown very heavily damaged.

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
Cyathocalyx biovalatus	13	J 1	13C	Killed.
Xanthophyllum sp. nov. (2614)	14	K 1	14A	do.
Gonystylus bancanus	20	L 1	14A	do.
Palaquium cochlearifolium	29	M 1	14A	do.

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Lightning damage patch 3. Location: Triso Protected Forest.

Phasic community: 4 (Shorea albida-Litsea-Parastemon Association).

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
Litsea palustris	39	C 1	1A	One branch slightly damaged.
Tristania maingayi	41	H 1	1B	One branch slightly damaged. Tree leaning towards centre of damage.
do.	26	H 2	1B	Two branches killed.
Longetia malayana	26	D 1	1B	One branch slightly damaged.
Shorea albida	99	A 1	1B	One branch slightly damaged.
Tristania maingayi	17	H 3	1C	Killed.
Parastemon veesteeghii	16	F 1	1C	Crown slightly damaged.
Dactylocladus stenostachys	52	B 1	1C	Killed.
Tristania obovata	38	G 1	1D	do.
Shorea albida	19	A 2	1D	One branch damaged.
Litsea palustris	40	C 2	1D	Very slightly damaged.
Tristania maingayi	30	H 4	1D	One side of crown damaged.
Tristania obovata	23	G 2	1D	Crown slightly damaged.
do.	25	G 3	1D	Killed.
Litsea palustris	39	C 3	2A	do.
Tristania maingayi	29	H 4	2A	Crown moderately damaged.
Parastemon veesteeghii	15	F 2	2A	do.
Palaquium cochlearifolium	16	K 1	2B	Crown very heavily damaged.
Xanthophyllum sp. nov.	20	E 1	2B	do.
Dactylocladus stenostachys	45	B 2	2B	Killed.
do.	40	B 3	2B	do.

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
<i>Shorea albida</i>	65	A 3	2B	Killed.
do.	27	A 4	2B	do.
<i>Xanthophyllum</i> sp. nov.	13	E 2	2B	Crown slightly damaged.
<i>Litsea</i> palustris	38	C 4	2B	Killed.
<i>Shorea albida</i>	36	A 5	2C	do.
<i>Longetia</i> malayana	24	D 2	2C	do.
<i>Litsea</i> palustris	32	C 5	2C	do.
<i>Tristania</i> obovata	23	G 4	2C	do.
<i>Litsea</i> palustris	57	C 6	2D	Crown slightly damaged.
<i>Shorea albida</i>	32	A 6	3B	Two branches damaged.
<i>Litsea</i> palustris	34	C 6	3B	Crown moderately damaged.
<i>Shorea albida</i>	72	A 7	3B	Crown heavily damaged, half of crown killed.
do.	69	A 8	3C	Crown slightly damaged.
do.	84	A 9	4B	do.
<i>Litsea</i> palustris	45	C 7	4C	do.
do.	45	C 8	4C	do.
<i>Dactylocladus</i> stenostachys	48	B 3	4D	Crown moderately damaged.
do.	21	B 4	4D	Killed.
<i>Shorea albida</i>	44	A 10	4D	do.
<i>Tristania</i> obovata	21	G 5	4D	Killed. Stem leaning towards centre of damage.
<i>Parastemon</i> veesteeghii	22	F 3	4D	Crown slightly damaged.
<i>Dactylocladus</i> stenostachys	27	B 5	5A	Killed.
<i>Shorea albida</i>	70	A 11	5A	do.
<i>Dactylocladus</i> stenostachys	51	B 6	5A	do.
do.	23	B 7	5A	do.
do.	39	B 8	5A	do.
<i>Xanthophyllum</i> sp. nov.	18	E 3	5A	Crown moderately damaged.
<i>Pseudosindora</i> palustris	13	N 1	5A	Killed.
<i>Shorea albida</i>	43	A 12	5A	do.

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
Parastemon veesteeghii	21	F 4	5A	Killed.
Tristania maingayi	33	H 5	5B	Crown heavily damaged.
Longetia malayana	21	D 3	5B	Killed.
Myrsine sp.	15	I 1	5B	do.
Dactylocladus stenostachys	37	B 9	5B	do.
Litsea palustris	58	C 9	5C	Crown very heavily damaged.
Longetia malayana	19	D 4	5C	do.
Shorea albida	56	A13	5C	Crown slightly damaged.
do.	82	A14	5C	Crown heavily damaged.
Xanthophyllum sp. nov.	16	E 4	5C	Killed.
Tristania obovata	26	G 6	5C	do.
Shorea albida	40	A15	5C	Crown very heavily damaged.
Palaquium cochleari- folium	15	K 2	5C	Crown slightly damaged.
Longetia malayana	22	D 5	5D	Killed.
Shorea albida	27	A16	5D	Crown heavily damaged.
do.	88	A17	5D	Killed.
Tristania obovata	22	G 7	5D	do.
Parastemon veesteeghii	20	F 5	6A	Crown very slightly damaged.
Dactylocladus stenostachys	46	B10	6A	Killed.
Eugenia sp.	15	J 1	6A	do.
Shorea albida	47	A18	6B	Crown slightly damaged.
do.	35	A19	6B	Crown very slightly damaged.
do.	88	A20	6B	do.
do.	102	A21	6C	Crown slightly damaged.
do.	62	A22	6D	do.

Lightning damage patch 4. Location: Triso Protected Forest.

Phasic community: 1 (Gonystylus-Dactylocladus-Neoscortechinia Association).

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
Dillenia				
pulchella	27	A 1	1B	Killed.
Knema kunstleri	32	B 1	1B	do.
Diospyros				
ferrea var.				
buxifolia	32	C 1	1C	Crown slightly damaged.
Gonystylus				
bancanus	96	D 1	2A	do.
Jackia ornata	69	E 1	2A	do.
Xerospermum				
muricatum	19	F 1	2A	Killed.
Santiria				
laevigata	24	G 1	2C	Crown slightly damaged.
Gonystylus				
bancanus	47	D 2	2D	Killed.
Ganua				
motleyana	75	H 1	2D	do.
Eugenia sp.	25	I 1	2D	Crown moderately damaged.
do.	29	I 2	2D	Killed.
Xanthophyllum				
amoenum	12	J 1	2D	Crown slightly damaged.
Alangium				
havilandii	15	K 1	2D	do.
Gonystylus				
bancanus	35	D 3	2D	Killed.
Litsea resinosa	20	L 1	4A	do.
Dillenia				
pulchella	55	A 2	4A	Crown heavily damaged.
Ganua				
motleyana	60	H 2	4A	Killed.
Blumeodendron				
tokbrai	22	M 1	4B	do.
Shorea				
uliginosa	112	N 1	4B	do.
Ardisia sp.	15	O 1	4B	Crown slightly damaged.
Dillenia				
pulchella	19	A 3	4B	Crown moderately damaged.
Shorea rugosa	127	N 2	4C	Killed. Stem leaning in south-easterly direction over gap.
var.				
uliginosa				

Species	Girth (ins.)	Number on diagram	Location on diagram	Description of Damage
Neoscortechinia kingii	18	P 1	5A	Crown slightly damaged.
Litsea sp.	13	T 1	5A	Crown heavily damaged.
Polyalthia hypoleuca	14	Q 1	5A	Killed.
Gonystylus bancanus	83	D 4	5A	do.
Eugenia sp.	40	I 3	5A	do.
Gonystylus bancanus	56	D 5	5B	do.
Shorea platycarpa	26	R 1	5B	do.
Diospyros pseudo- malabarica	66	S 1	5B	do.
Ganua motleyana	82	C 2	7A	Crown heavily damaged.

BULSTON

ANITA STRONG

Addenda and Corrigenda

Parts of this study have been prepared and typed over the past two years. In the interval some errors in names have come to light, and more precise identifications have been received for certain species. The following list includes the principal additions and corrections. In chapters that have been typed since the corrections and additions were received the corrected names have been included.

Anacardiaceae.

Parishia sp. (9802) has been identified by Dr. C.X. Furtado as Parishia insignis Hook f. The first record of this species from Borneo.

Camnosperma coriacea (Jack) Hall. f. ex van Steenis. The trivial name has been incorrectly included as coriaceum (Cf. Flora Melesiana Bulletin, Vol. 1 p. 74).

Camnosperma macrophylla (Bl.) H. f. is a synonym.

Camnosperma squamatum Ridley. There appears to be some doubt about the status of this species. It may be a synonym of Camnosperma montana Lauterbach.

Rosaceae.

Parastemon veesteeghii Merr. and Perry. The trivial name should be spelt versteeghii. However it appears that the peat swamp species is unlikely to be this species, which, as far as is known, is endemic to New Guinea. It is probable that it is Parastemon spicatum Ridley, described from a Haviland specimen from Sarawak. An isotype is in the herbarium at Kuching.

Leguminosae.

Pseudosindora palustris Sym. De Wit has reduced this monospecific genus to Copaifera (ref. Spicilegium Malaianum 11), so the name is now Copaifera palustris (Sym.) De Wit. There appears, however, to be some doubt about the validity of the reduction. Dr. J. Léonard (private communication) considers the two genera to be distinct, a view that is corroborated on the basis of the wood structure by Brazier (Reference Report on Forest Products Research Board for 1957, p. 5).

Myrsinaceae.

Dr. C.X. Furtado considers that the specimens of Labisia, L. pumila (Bl.) Benth. and Hk. f. var. genuina Mez. and L. pothina Lindl., are forms of Labisia punctata (Reinw.) Airy Shaw. The correct names are therefore Labisia punctata (Reinw.) Airy Shaw f. pumila (Bl.) Airy Shaw, and Labisia punctata (Reinw.) Airy Shaw f. punctata.

Tiliaceae (sub-family Brownlowieae).

Jarandersonia paludosa Kostermans a new genus and species described by Dr. A.J.G.H. Kostermans. Reference 'Reinwardtia', Vol. 5, Part 3, p.p. 319-321.

Euphorbiaceae

Cephalomappa. aff. malloticarpa J.J.S. This has proved to be a new species and has been named Cephalomappa paludicola Airy Shaw. Reference Kew Bulletin, Vol. 14, Number 3.

114° 00'

114° 30'

PEAT SWAMP FORESTS OF THE BARAM, SARAWAK AND THE BELAIT, BRUNEI

ECOLOGICAL TRANSECTS & SAMPLE PLOTS

LEVEL SURVEYS

LEVEL SURVEYS B.S.P. CO.



S E A

C H I N A

Kuala Baram

Kuala Belai

Seria

Tutong

Danau

4° 30'

Lutong

Miri

4° 00'

Beluru

Long Tuyut

4° 00'

Long Terawan

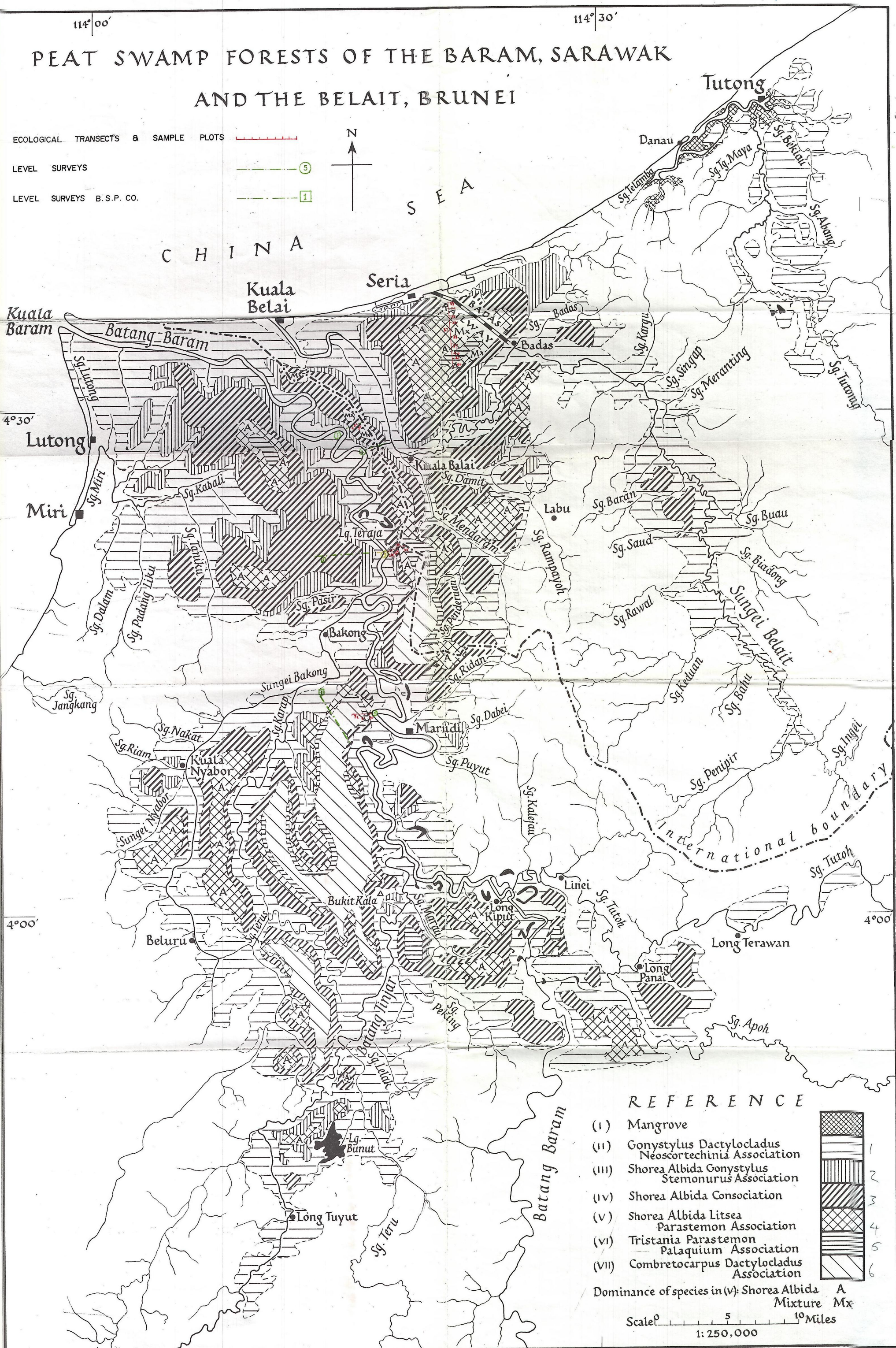
REFERENCE

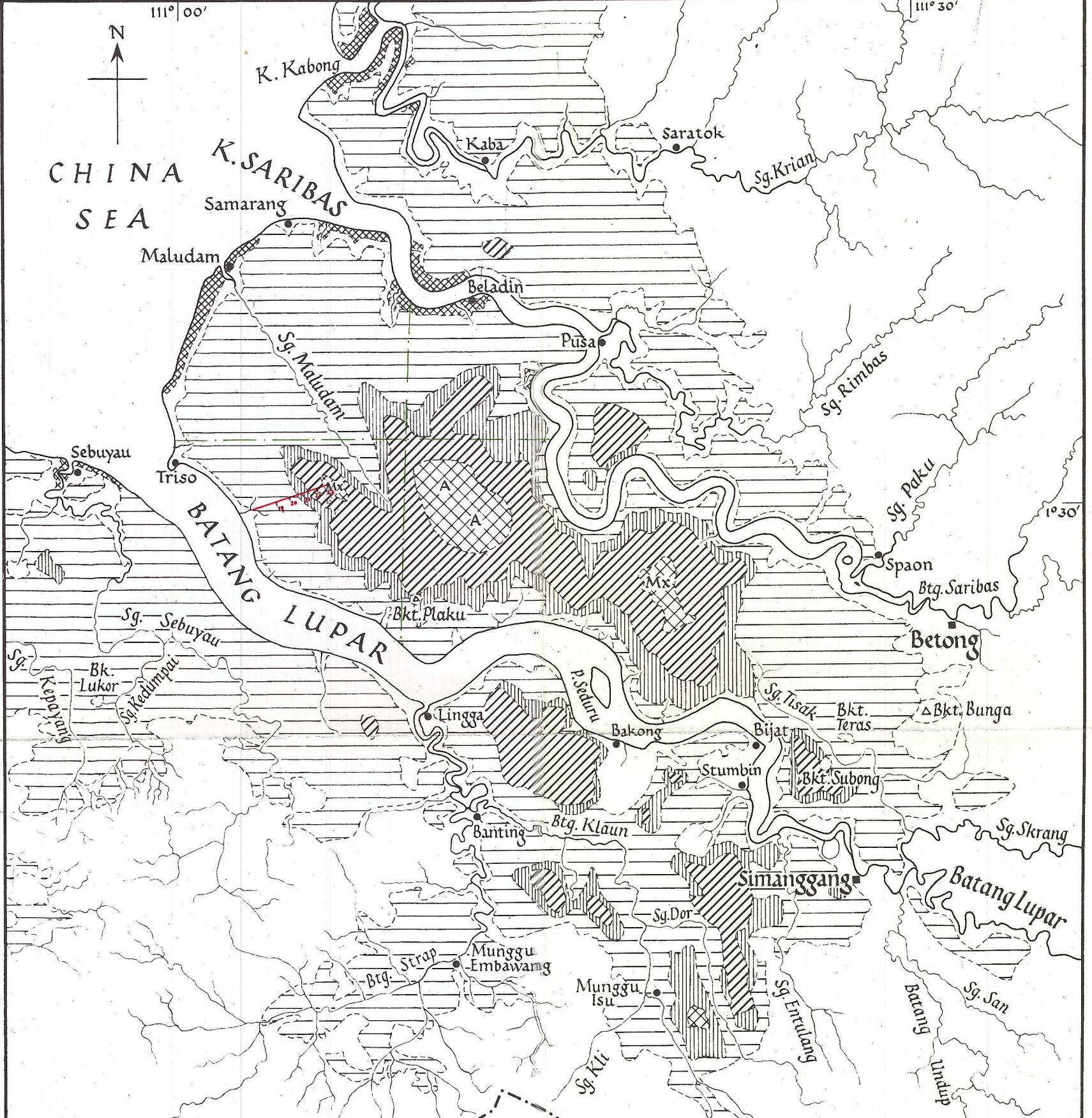
- (I) Mangrove
- (II) *Gonystylus Dactylocladus* Neoscortechinia Association
- (III) *Shorea Albida Gonystylus* Stemonurus Association
- (IV) *Shorea Albida* Consociation
- (V) *Shorea Albida Litsea* Parastemon Association
- (VI) *Tristania Parastemon* Palaquium Association
- (VII) *Combretocarpus Dactylocladus* Association



Dominance of species in (V): *Shorea Albida* A
Mixture Mx

Scale 0 5 10 Miles
1: 250,000



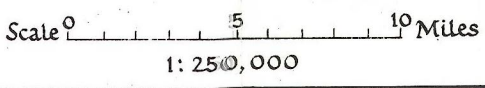
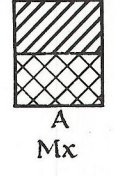
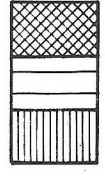


**PEAT SWAMP FORESTS OF
BATANG LUPAR AND SARIBAS**

REFERENCE:

- (i) Mangrove
- (ii) *Gonystylus Dactylocladus Neoscortechinia* Association
- (iii) *Shorea Albida Gonystylus Stemonurus* Association

- (iv) *Shorea Albida* Consociation
 - (v) *Shorea Albida Litsea Parastemon* Association
- Dominance of species in (v): *Shorea Albida* Mixture



Ecological transects & sample plots
 Level surveys of Irrigation Engineers