
VINE FORESTS AND THICKETS OF
WELL DRAINED SOILS

OF SOILS DEVELOPED FROM EROSIONAL SURFACES, INCLUDING
RANGES, UNDULATING HILLS AND RESIDUAL PLAINS

(b) volcanics

Types 68 to 72

Type 68 Semi-deciduous mesophyll/notophyll vine forest on structured red earth soils derived from basalt

Reference Sites

Cooktown, Hope Vale, Lakeland Downs.

Site 21, Site 22, Site 24, Site 25, Site 92, Webb and Tracey Sites 6, 503.

Floristics

(°denotes obligate deciduous species; #denotes listed rare and threatened species; *denotes exotic species)

Emergents

Alstonia scholaris.

Canopy

Alstonia scholaris, *Canarium vitiense*, *Cryptocarya rhodosperma*, *Dysoxylum pettigrewianum*, *Pisonia umbellifera*, *Myristica insipida*, *Calophyllum sil*, *Alangium villosum* subsp. *polyosmoides*, *Ptychosperma elegans*, °*Miliusa horsfieldii*.

Understorey

Cordyline cannifolia, *Ficus copiosa*, *Gomphandra australiana*, *Dimorphocalyx australiensis*, *Codiaeum variegatum* var. *moluccanum*, *Anthocarapa nitidula*.

Lianes and Epiphytes

Calamus australis, *Cissus oblonga*, *Epipremnum pinnatum*, *Piper caninum*, *Strychnos colubrina*, *Austrosteenisia blackii*, *Carronia protensa*, *Pisonia aculeata*.

Groundcover

Mostly seedlings of canopy and understorey trees.

Description

This type dominates the rare basalt occurrences on Cape York Peninsula that are entirely restricted to its extreme southeast, in an arc from Cooktown to Hope Vale to the Morgan and McIvor Rivers, and in the vicinity of Lakeland Downs. Its most extensive development is a patch of about 250 hectares in the Mt. Webb National Park, and adjacent. Most of the remainder is on Aboriginal Land and on unrestricted freehold land. Whilst forming an aesthetically pleasing forest, with canopy to 35 metres in height, and even taller emergents (mostly *Alstonia scholaris* and *Ficus albipila*), this is one of the most floristically impoverished rainforest communities in the study area. Site 22 is anomalous in structure with an absence of many of the canopy species of the other sites. It is assumed from its structure and floristic make-up that it is recovering from heavy disturbance, and that it has close affinities with other sites that have been used to define this type. Type 68 is possibly an equivalent of Tracey's Type 5b of the Wet Tropics area.

Type 69 Semi-deciduous notophyll/microphyll vine forest on structured red earth soils derived from basalt, in a shallow valley

Reference Sites

Mt. Webb National Park. Site 23.

Floristics

(°denotes obligate deciduous species; #denotes listed rare and threatened species; *denotes exotic species)

Emergents

°*Terminalia sericocarpa*, *Argyrodendron polyandrum*.

Canopy (in order of cover)

Argyrodendron polyandrum, °*Miliusa horsfieldii*, *Castanospermum australe*, *Pararchidendron pruinosum*, °*Cordia dichotoma*, *Beilschmiedia obtusifolia*, *Cryptocarya hypospodia*, *Chionanthus ramiflora*, °*Dendrocnide photinophylla*, *Acmenospermum claviflorum*.

Subcanopy

Aidia racemosa, *Diospyros maritima*, *Flacourtia* sp. (Shipton's Flat, L. W. Jessup + G.J.D. 3200).

Understorey

Eugenia reinwardtiana, *Murraya paniculata*, *Dimorphocalyx australiensis*, *Cleistanthus apodus*, *Glycosmis trifoliata*, *Atractocarpus sessilis*, *Diploglottis macrantha*, *Rapanea urceolata*, *Streblus brunonianus*, *Mallotus resinusus*.

Lianes and Epiphytes

Strychnos colubrina, *Austrosteenisia blackii*, *Hippocratea barbata*, *Flagellaria indica*, *Malaisia scandens*, *Melodorum leichhardtii*.

Groundcover

Seedlings of canopy and understorey trees only.

Description

This type appears to be confined to one location in the Mt. Webb National Park. It exists alongside Type 68 on an isolated occurrence of red earth soils on basalt. It is clearly separated from that type by aerial photographic signature, structure, and floristic makeup. It poses some problems of description, however, in that it is not obvious why it should be so significantly different from an adjacent site on the same soil.

Some clues may be provided by its occurrence in a unique topographic situation for these isolated basalt landscapes - a shallow valley bounded by a gentle footslope of exposed basalt floaters, evidence perhaps of the bounds of a different lava flow with different geochemistry - and evidence of past disturbance in a very uneven canopy containing disturbance indicator species such as *Chionanthus ramiflora*, *Dendrocnide photinophylla* and *Aidia racemosa*.

Of all basalt sites examined *Argyrodendron polyandrum* was common only on this site, where it dominated the canopy and provided emergents to 35 metres height. Structurally the canopy is unique in the preponderance of microphylls in a forest developed under such high quality site conditions (fertile deep soils and relatively high rainfall).

Type 70 Simple evergreen notophyll/microphyll vine forest on steep rocky basaltic hillslopes

Reference Sites

Lakeland Downs area. Site 51, Webb and Tracey Site 524.

Floristics

(°denotes obligate deciduous species; #denotes listed rare and threatened species; *denotes exotic species)

Emergents

Paraserianthes toona, *Pleiogynium timorense*.

Canopy (in order of cover)

Diospyros geminata, *Olea paniculata*, *Aidia racemosa*, *Cassine melanocarpa*, °# *Wrightia versicolor*, ° *Premna dallachyana*, *Mallotus philippinensis*, *Litsea glutinosa*, *Aphananthe philippinensis*, *Drypetes deplanchei*, *Canthium odoratum*, *Cupaniopsis anacardioides*, ° *Croton arnhemicus*. ° *Capparis arborea*.

Subcanopy

Austromyrtus sp. (Byerstown Range, G. P. Guymer, 2037), *Dendrocnide photinophylla*.

Understorey

Murraya ovatifoliolata, *Pouteria sericea*, *Dendrocnide moroides*, *Eugenia reinwardtiana*, *Mallotus* sp. (Altanmoui Range, DGF 3281), *Abutilon micropetalum*, *Turraea pubescens*, *Cassine melanocarpa*, *Pouteria myrsinifolia*, *Austromyrtus* sp. (Bakers Blue-Byerstown Range, G. P. Guymer, 2037), *Acronychia laevis*, *Allophylus cobbe*, *Antidesma parviflora*, *Psychotria dallachiana*, *Rapanea variabilis*.

Lianes and Epiphytes

Malaisia scandens, *Cissus* sp., *Dendrobium bigibbum*.

Groundcover

Oplismenus burmanii, *Ancistrachne uncinulata*, *Drynaria sparsisora*, *Plectranthus diversus*, *Plectranthus* sp. (DGF 3289), *Doryopteris concolor*, *Adiantum hispidulum*, *Setaria australiensis*.

Description

This is a restricted type found on a few basalt hills east and southeast of Lakeland Downs near the southern boundary of the study area. It occurs on steep slopes on outcropping basalt. The canopy surface is uneven and of low to medium height (eight to eighteen metres) with emergents to 25 metres. Thin wiry lianes are abundant as are succulent *Plectranthus* and the stinger *Dendrocnide moroides*. The epiphytic *Dendrobium bigibbum* may be common on lower trunks and rocks.

Type 71 Evergreen notophyll vine forest on acid volcanics (rhyolite)

Reference Sites

Site 111, Webb and Tracey Site 543.

Floristics

(°denotes obligate deciduous species; #denotes listed rare and threatened species; *denotes exotic species)

Canopy (in order of cover)

#*Macadamia claudiensis*, *Endiandra impressicosta*, *Cryptocarya vulgaris*, #*Pouteria sylvatica*, *Xanthophyllum octandrum*, *Cryptocarya cunninghamii*, *Chionanthus axillaris*, *Maranthes corymbosa*, °*Adenantha pavonina*, *Syzygium angophoroides*, *Litsea fawcettiana*, *Grevillea baileyana*, *Endiandra collinsii*, *Cleistanthus hylandii*.

Subcanopy

Ptychosperma elegans, *Endiandra collinsii*, *Jagera pseudorhus*, *Celtis paniculata*, *Podocarpus grayae*.

Understorey

Pandanus zea, *Pouteria chartacea*, *Ternstroemia cherryi*, *Neolitsea dealbata*, *Lasianthus cyanocarpus*, *Tetrasyandra longipes*, *Kibara rigidifolia*, *Elattostachys microcarpa*, *Clausena brevistyla*, *Diploglottis macrantha*, *Mackinlaya confusa*, *Cordyline cannifolia*, *Streblus brunonianus*, #*Macrostelia grandiflora* subsp. *macilwraithensis*, *Drypetes deplanchei*, *Haplostichanthus* sp. (Rocky River Scrub, P. I. Forster PIF 10617), #*Rhyticaryum longifolium*, *Croton brachypus*, *Symplocos cochinchinensis* var. *pilosiuscula*, *Antidesma erostre*, *Tabernaemontana orientalis*, *Micromelum minutum*.

Lianes and Epiphytes

Dischidia ovata, *Calamus australis*, *Smilax australis*, *Eustrephus latifolius*, *Cansjera leptostachya*, *Tetracera daemeliana*, *Strychnos colubrina*, *Calamus caryotoides*, *Carronia protensa*, *Epipremnum pinnatum*, *Asplenium australiana*, *Pyrrosia longifolia*, *Platyterium bifurcatum*, *Piper* sp.

Groundcover

Schelhammera multiflora, *Doodia media* subsp. *media*, *Taenitis pinnata*.

Description

Acid volcanic rocks (dominantly rhyolite) are restricted to northern Cape York Peninsula, chiefly in the Janet and Tozer Ranges west of Iron Range, with minor occurrences just north of the Pascoe River and near Cape York itself. They weather to give nutrient poor shallow soils that mostly support sclerophyll shrub (heath) communities. On sheltered lower slopes where soil depth is greatest patches of vine forest of this type occur although their extent is limited, and this may be considered one of the rarer vegetation types of the peninsula. The canopy is commonly dominated by the rare and threatened species *Macadamia claudiensis* with *Pouteria sylvatica*, sometimes present. Because of its usual position within large areas of heath which burns infrequently but severely, the understorey in this type, particularly along its margins, may show the damaging effects of fire intrusion. Its survival depends on the fire exclusive nature of much of the rocky ground on which it grows.

Type 72 Semi-deciduous notophyll/sclerophyll vine thicket on steep acid volcanic hillslopes

Reference Sites

Mt. Bremer, tip of Cape York. Site 103.

Floristics

(°denotes obligate deciduous species; #denotes listed rare and threatened species; *denotes exotic species)

Canopy (in order of cover)

Welchiodendron longivalve, *Acacia polystachya*, °*Canarium australianum*, *Notelaea longifolia*, *Canthium reticulatum*, *Pouteria sericea*, *Cleistanthus peninsularis*, °*Sterculia quadrifida*.

Understorey

Actephila lindleyi, *Diplospora australis*, *Pandanus conicus*, #*Wrightia versicolor*, *Pleomele angustifolia*, *Callicarpa pedunculata*, *Cryptocarya exfoliata*, *Drypetes deplanchei*, *Diospyros compacta*, *Mischocarpus lachnocarpus*, *Acronychia* sp. (Batavia Downs, J. R. Clarkson + JRC 2511), *Zanthoxylum rhetsa*, *Terminalia muelleri*, *Tabernaemontana orientalis*, *Kibara rigidifolia*, *Cupaniopsis flagelliformis* var. *flagelliformis*, *Croton arnhemicus*, *Memecylon pauciflorum* var. *pauciflorum*, *Chionanthus ramiflora*, *Antidesma parviflora*.

Lianes and Epiphytes

Pandorea pandorana, *Jasminum aemulum*, *Stemona* sp. (DGF 3924), *Cissus adnata*, *Ipomoea mauritiana*, *Smilax glycyphylla*, *Abrus precatorius*, *Amyema congener* subsp. *congener*, #*Myrmecodia beccarii*.

Groundcover

Proiphys amboinensis, *Ruellia tuberosa*, *Curcuma australasica*, *Drynaria quercifolia*, *Tricoryne anceps*, *Pseuderanthemum variabile*, *Scleria mackaviensis*.

Description

This type, which is very restricted in total area of occurrence, and floristically impoverished, only marginally meets the criteria for inclusion in this study as a rainforest type. It gains its significance, however, from the fact that it is, with Type 71 one of only two rainforest types described from acid volcanic rocks. It is a thicket of few species with a significant sclerophyll component in the canopy that occurs as part of a complex with sclerophyll shrubland and low sclerophyll woodland on steep rock-strewn hillslopes. It is an uncommon community even when considered in relation to acid volcanic landscapes, with individual patches occupying only a fraction of a hectare.