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**N.S.W.**

**RAINFOREST TREES**

**PART VI**

**Families:**

**Podocarpaceae**

**Araucariaceae**

**Cupressaceae**

**Fagaceae**

**Ulmaceae**

**Moraceae**

**Urticaceae**

**AUTHOR:**

**A.G. Floyd**



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**PART VI**

**FAMILIES:**

**PODOCARPACEAE**

**ARAUCARIACEAE**

**CUPRESSACEAE**

**FAGACEAE**

**ULMACEAE**

**MORACEAE**

**URTICACEAE**

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## INTRODUCTION

This is the sixth in a series of research notes describing the rainforest trees of N.S.W.

Previous publications are:

- Research Note No. 3 (1960)—N.S.W. Rainforest Trees. Part I  
Family *Lauraceae*.  
A. G. Floyd and H. C. Hayes.
- Research Note No. 7 (1961)—N.S.W. Rainforest Trees.  
Part II, Families *Capparidaceae*,  
*Escalloniaceae*, *Pittosporaceae*,  
*Cunoniaceae*, *Davidsoniaceae*.  
A. G. Floyd and H. C. Hayes.
- Research Note No. 28 (1973)—N.S.W. Rainforest Trees:  
Part III, Family *Myrtaceae*.
- Research Note No. 29 (1976)—N.S.W. Rainforest Trees.  
Part IV, Family *Rutaceae*.  
A. G. Floyd.
- Research Note No. 32 (1977)—N.S.W. Rainforest Trees.  
Part V, Families *Sapindaceae*,  
*Akaniaceae*.  
A. G. Floyd.

In this part, a further 20 species of rainforest trees in the families *Podocarpaceae*, *Araucariaceae*, *Cupressaceae*, *Fagaceae*, *Ulmaceae*, *Moraceae* and *Urticaceae* have been described and illustrated with the emphasis on field characteristics. This and future research notes in the series will deal with the families of rainforest trees in the order adopted by the National Herbarium of New South Wales. Diagnostic features are shown in italics. Standard Trade Names used are those in Australian Standard AS02-1970 "Nomenclature of Australian Timbers".

The locations in N.S.W. for each species are shown in latitudinal order of the major river systems; and where on State Forests (S.F.), Flora Reserves (F.R.), National Parks (N.P.) and Nature Reserves (N.R.), their location from the nearest large town is listed in the appendix.



# SUBDIVISION *GYMNOSPERMAE*

## CHARACTERISTICS OF THE SUBDIVISION IN N.S.W.

Three species of native conifers occur in the rainforests of N.S.W., each in a separate family, viz.: *Araucaria cunninghamii* (Family Araucariaceae), *Callitris macleayana* (Family Cupressaceae), and *Podocarpus elatus* (Family Podocarpaceae).

Medium to tall trees up to 50 m (*Araucaria*).

**Trunk**—Cylindrical (*Araucaria* and *Callitris*) or vertically to spirally channeled (*Podocarpus*).

**Outer Bark**—Rough with narrow horizontal scales (*Araucaria*), or stringy in vertical strips (*Callitris* and *Podocarpus*).

**Inner Bark**—Blaze white (*Callitris*) or pink to brown (*Araucaria* and *Podocarpus*). Exuding a white resin (*Araucaria*) or clear resin (*Callitris*).

**Leaves**—Scale-like or needle-like in the juvenile state (*Araucaria* and *Callitris*) or narrow oblong (*Podocarpus*). In groups of three or more (*Callitris*), spirally arranged (*Araucaria*) or alternate (*Podocarpus*).

**Flowers**—Male and female flowers on separate trees (*Podocarpus*), separate parts of the same tree with the female flowers near the top (*Araucaria*) or on different parts of the same branch (*Callitris*). Male flowers in catkins, female flowers round of numerous scales.

**Fruit**—A round naked seed on a swollen fleshy base (*Podocarpus*), a dry cone of six thick permanently attached scales (*Callitris*) or of numerous scales detaching when mature (*Araucaria*). Seeds globular without wings (*Podocarpus*), oval with a single wing (*Callitris*) or wedge-shaped with a wing on either side (*Araucaria*).

**Habitat**—Restricted to the rainforest-wet sclerophyll forest ecotone on podsolic soils (*Callitris*), various rainforests on poorer soils or only as a pioneer on subtropical rainforest (*Araucaria*) and in littoral, riverine and subtropical rainforest (*Podocarpus*).

**Distribution**—*Podocarpus* is widespread throughout the southern hemisphere from the tropics to the cooler latitudes of South America and New Zealand. It extends north to China and Japan. *Araucaria* ranges from South America, Australia, Norfolk Island, New Caledonia, New Hebrides to New Guinea. *Callitris* is restricted to Australia and New Caledonia.

## PODOCARPUS ELATUS R. Br. ex Endl.

**Reference**—Syn. Conif., p. 213, 1847.

**Derivation**—Podocarpus from Greek “Podos” a foot and “karpos” fruit, alluding to the fleshy foot-stalk of the fruit; elatus from Latin “elatus” tall, referring to the height of the tree.

**Common Name**—Brown Pine, She Pine, Yellow Pine, Plum Pine.

**Standard Trade Name**—Brown Pine.

A fairly large tree attaining 40 m in height and a stem diameter of over 90 cm.

**Trunk**—Often *irregularly channeled*, spirally fluted or flanged.

**Outer Bark**—*Brown to dark brown often fissured* and scaly on old trees with narrow vertical scales up to 12 mm wide.

**Inner Bark**—Blaze on a tree 80 cm diameter *pink towards the outer margin* passing through salmon and brownish shades to the pure white thin inner margin which turns brown after a few minutes exposure. Somewhat astringent, no smell. More than half the bark thickness is comprised of dead bark. 10 mm thick.

**Branchlets**—Brown, green towards the ends, smooth.

**Leaves**—Alternate, simple, entire, *oblong-linear* or linear lanceolate, variable in length and width, 4–18 cm long, with a *short sharp point* at the tip, upper surface *shining*, smooth, dark green upper surface, paler beneath. Leaf stalk from indistinct up to 3 mm long.

**Venation**—Midrib alone distinct, often more prominent on the upper surface.

**Flowers**—Male flowers in spike-like catkins, arranged in clusters of two to ten in the axils of the leaves or above the scars of fallen leaves, 12 mm long. Female flowers on separate trees, solitary on stalks in the axils of the lower leaves or springing from the branchlets above the scars of fallen leaves. Flowering period October and November.

**Fruit**—*Fleshy and plum-like, bluish black*, oblong, stalk up to 2.5 cm diameter and bearing at its top a slightly fleshy, resinous, globular seed, 8–12 mm diameter. The edible stalk has a mucilaginous texture and a resinous taste. Fruit ripe March to July.

**Habitat**—Littoral, riverine and subtropical rainforest.

**Distribution**—Illawarra, N.S.W. to Cairns, North Queensland. Generally a scattered species. Small stands occur on Cox's Road, Toonumbar S.F. Recorded in N.S.W. from Cambewarra, Shoalhaven River, Kiama, Dapto, Gosford, Ash Island, Seal Rocks, Forster, Wherrol Flat, Port Macquarie, Comboyne, Macleay Flats, Trial Bay, Grassy Head, Nambucca Heads, Urunga, Pine Creek S.F., Moonpar S.F., Glenugie Peak, Susan Island, Iluka, Victoria Park N.R., Toonumbar S.F., Moore Park, Roseberry S.F., Lynch's Creek, Nimbin, Brunswick Heads N.R., Mooball, Murwillumbah and Stott's Island N.R.

**Timber and Uses**—Pale brown to brown in colour, a little harder and heavier than Hoop Pine. Tough with an interlocked fine silky grain. Not readily attacked by termites or marine borers. A valuable softwood for furniture, joinery, boat planking, lining and piles in salt water. Owing to its scarcity it is seldom seen on the market. Weight about 580 kg per cubic metre.

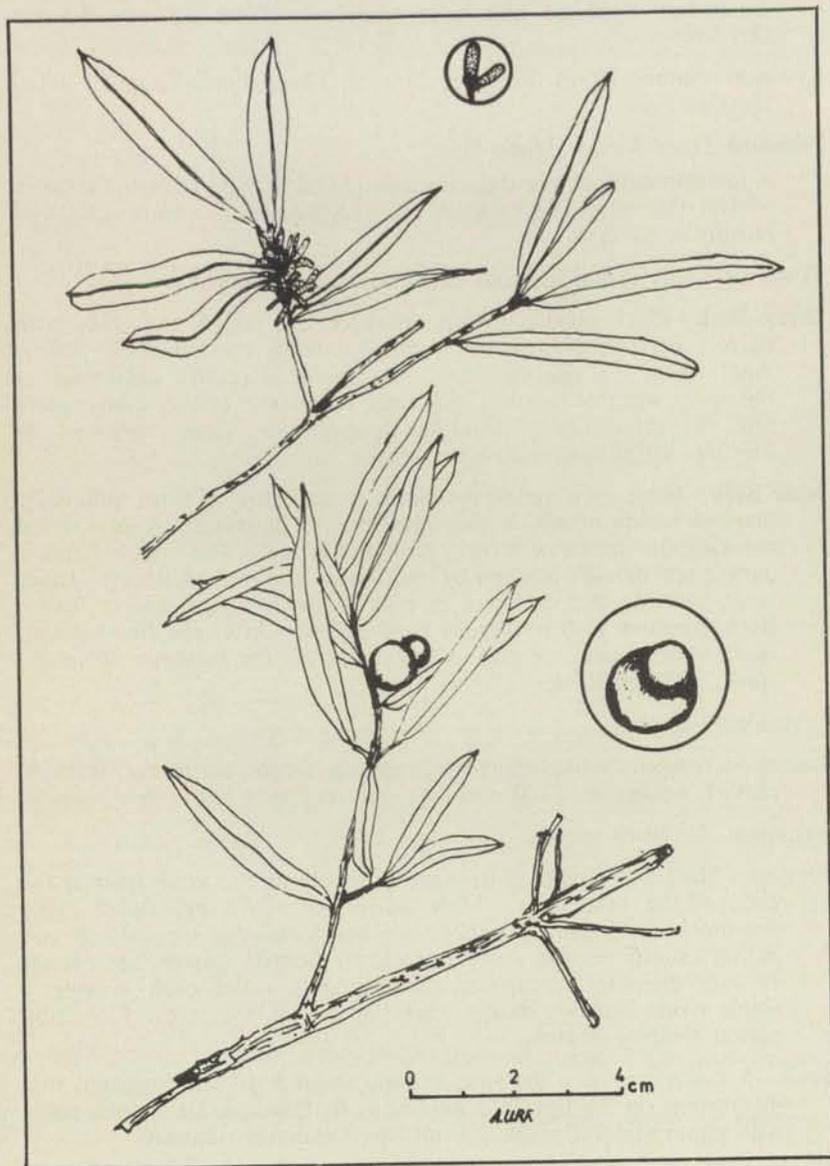


Plate No. 1

*Podocarpus elatus* R.Br. ex Endl.

## ARAUCARIA CUNNINGHAMII Ait. ex D. Don

**Reference**—Lambert Desc. Gen. Pin. edn. 2, 1837.

**Derivation**—Araucaria from "Auracanos" the name of the Chilian tribe in whose territory the Monkey Puzzle Pine, *Araucaria araucana* was first discovered; *Cunninghamii* after Allan Cunningham, the Australian Explorer and Superintendent of the Sydney Botanic Gardens.

**Common Name**—Hoop Pine, Richmond River Pine, Colonial Pine, Dorrigo Pine.

**Standard Trade Name**—Hoop Pine.

A tall symmetrical tree attaining a height of 50 m and a stem diameter of 150–180 cm. The *branches are whorled with the leaves clustered in tufts at the ends.*

**Trunk**—Usually cylindrical and not buttressed or flanged.

**Outer Bark**—Dark greyish brown, more or less rough and scaly with narrow *horizontal loose scales which encircle the trunk like hoops.* Apart from the resinous knots, this outer hoop-like dead bark is the most durable part of the tree, remaining sound many years after the last vestige of wood has disappeared. *Outer margin of the live bark purplish with a coppery sheen.*

**Inner Bark**—Blaze on a tree 60 cm diameter consisting of three differently marked bands in which the outer one is patterned by horizontal markings in shades of brown, pink and white. The middle band is darker and densely marked by red, brown and pinkish flecks. Inner layer towards the sapwood is pinkish, with a few darker flecks. Bark granular with numerous hard grains. After the blaze is cut, *small white globules of gum* soon exude from the surface. Resinous smell. 25 mm thick.

**Branchlets**—Green.

**Leaves**—Crowded on the branchlets in spirals, simple, entire, very narrow, curved, *triangular, 5–20 mm long, tapering to a sharp rigid point.*

**Venation**—No veins visible.

**Flowers**—Male and female flowers are generally on the same trees at the ends of the branchlets. Male flowers are in a cylindrical spike 5–8 cm long of densely packed amenta containing the anthers and pollen usually on the lower branches. Female flowers are round, 12 mm diameter, composed of numerous scales each bearing a single ovule and are borne near the top of the tree. Flowering period January–March.

**Fruit**—A cone, brown when ripe, round, about 8–10 cm diameter, disintegrating on the tree into numerous flattened wedge-shaped seeds with papery lateral wings. Fruit ripe December–January.

**Habitat**—Dry riverine and littoral rainforests and particularly warm temperate rainforest on the poorer type soils in association with Coachwood. In subtropical rainforest only as a pioneer.

**Distribution**—From the Macleay River, N.S.W. to North Queensland and New Guinea. Recorded from almost every coastal rainforest area in N.S.W. from Five Day Creek, New England N.P., to the Queensland border at altitudes from sea level to 1000 m.

**Timber and Uses**—Has been used the most extensively of all the native pines. Particularly suitable for plywood veneer, butter boxes, all indoor work, flooring, lining and all joinery. Few good stands now remain. Weight 550 kg per cubic metre.

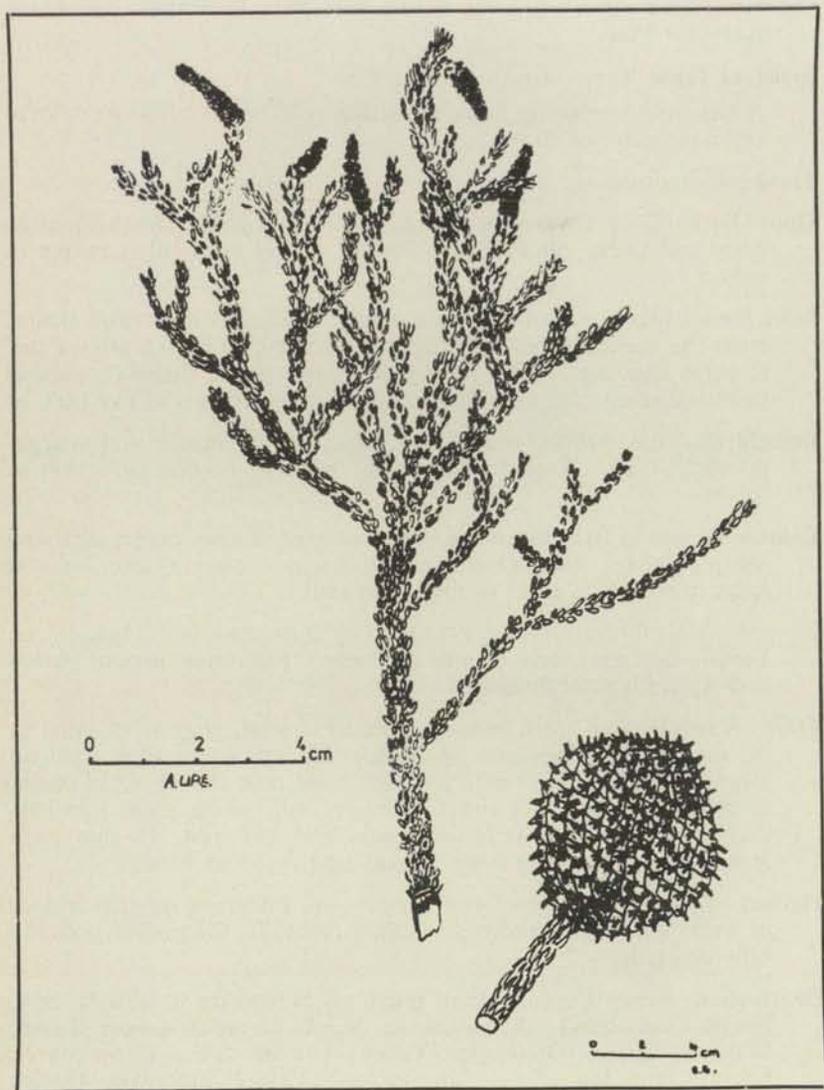


Plate No. 2

*Araucaria cunninghamii* Ait. ex D. Don

## CALLITRIS MACLEAYANA F. Muell.

**Reference**—Rep Burdekin Expedition, 17, 1860.

**Derivation**—Callitris altered from Greek "kallistos" most beautiful referring to the shapely form; macleayana in honour of Sir William Macleay of Sydney who collected its seed at Port Macquarie. The species was described from these seedlings.

**Common Name**—Brush Cypress, Stringybark Pine, Port Macquarie Pines, Kerosene Pine.

**Standard Trade Name**—Brush Cypress Pine.

A tree with spreading branches attaining a height of 30 m or over and a diameter of 90 cm.

**Trunk**—Cylindrical.

**Outer Bark**—Grey or greyish-brown, *stringy, vertically furrowed*, often scaly and thick, sub-fibrous. Surface of live bark often purple in colour.

**Inner Bark**—Blaze on a tree 30 cm diameter white. A *clear resin* exudes from the surface soon after cutting, changing to brown after a few minutes exposure. The freshly cut bark has a distinct resinous taste and smell. 25 mm thick of which only 2 mm is of live bark.

**Branchlets**—Fine, brown, rough with small protuberances and sharply pointed scales. Angled between the rows of needles or scale-like leaves.

**Leaves**—In young trees in *whorls of four or over*, simple, entire, rigid and sharp pointed. On *old trees reduced to scales* or acute teeth, 3–6 mm long, in whorls of three to form four ranks.

**Flowers**—Male flowers oblong, 4–8 mm long at the ends of the branchlets. Female flowers round, 6 mm diameter. Flowering period March and April for male flowers.

**Fruit**—A sessile cone, dark brown, ovoid to conical, angular, pointed at the tip, about 2.5 cm long, cone scales (valves) six or often eight on juvenile branches, each with a dorsal point near the tip. Columella at the base of the fruit short, often reddish brown, three lobed or three partite. Seeds reddish-brown, oval flattened, 14 mm long including the one long wing. Fruit ripe April to June.

**Habitat**—On ranges in open forest country and extending into the fringes of warm temperate rainforest, usually found on the poorer podsollic soils or earths.

**Distribution**—From Cooloolook north of Newcastle to Trinity Bay, North Queensland. Recorded in N.S.W. from Clarence Town, Williams River, Gloucester Valley, Craven S.F., Cooperook, Yarras, Port Macquarie, Ellenborough Falls, Comboyne, Doyles River S.F., Orara East S.F., Orara West S.F., Wild Cattle Creek S.F., Moonpar S.F., Mallanganee, Alstonville, Byron Bay and Whian Whian S.F.

**Timber and Uses**—Wood pale brown, soft, close-grained, easily worked, durable, suitable for weatherboards, cabinet work, joinery, lining, indoor fittings, fronts for violins. Weight 580 kg per cubic metre.

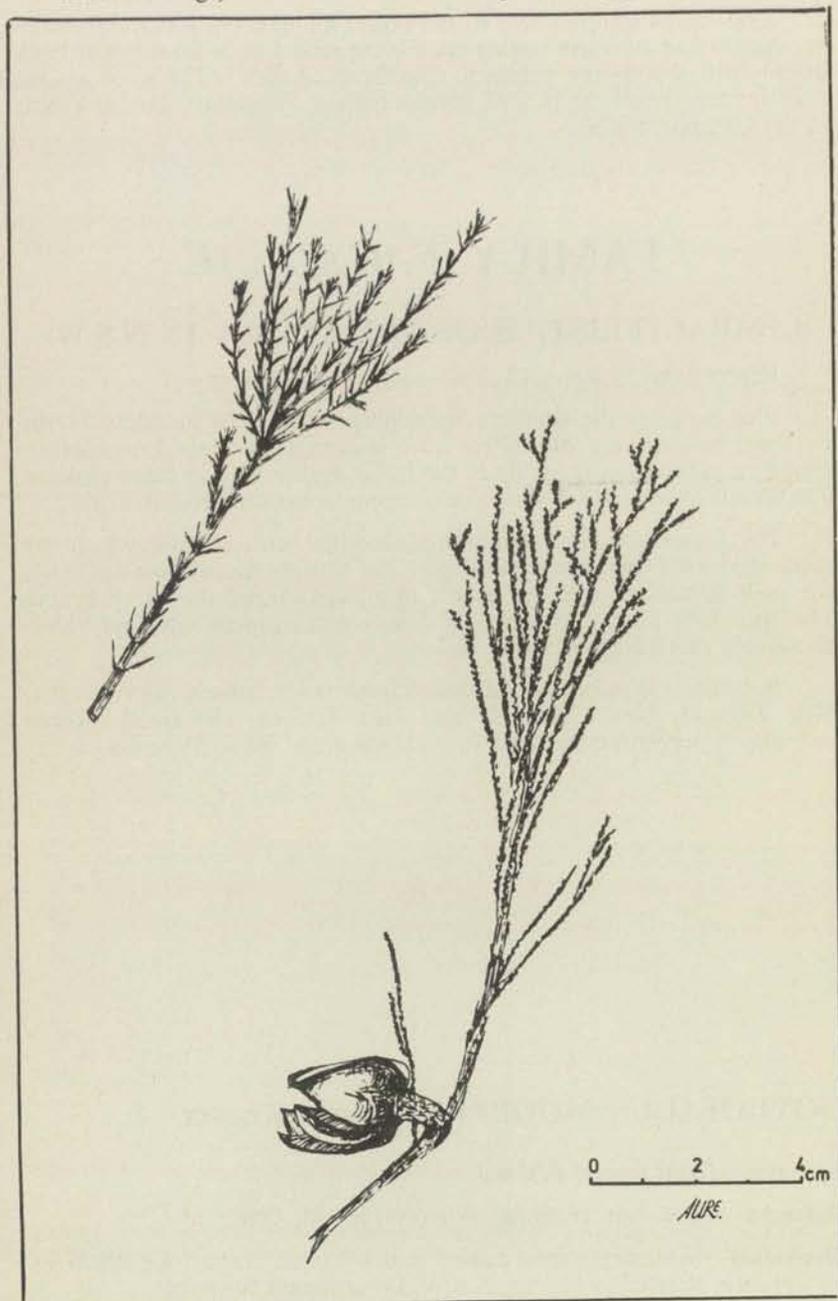


Plate No. 3  
*Callitris macleayana* F. Muell.

## SUBDIVISION *ANGIOSPERMAE*

This subdivision includes all the flowering plants in which the ovules are enclosed in an ovary (rather than being naked as in *Gymnospermae*), usually with a style and stigma to transfer the pollen. The wood always contains true vessels in N.S.W. species (except *Tasmannia*) but are absent in the *Gymnospermae*.

### FAMILY *FAGACEAE*

#### CHARACTERISTICS OF THE FAMILY IN N.S.W.

Represented by a single species only, *Nothofagus moorei*.

This genus is the southern hemisphere equivalent of *Fagus* of the northern hemisphere; but differs from it in that the male flowers occur singly or in threes in the axils of the leaves rather than in small clusters. The female flowers are in threes in *Nothofagus* but only two in *Fagus*.

The leaves are alternate, simple, toothed with stipules which are soon shed after the leaves develop. The flowers are of one sex only, the male in catkins and the female in an egg-shaped cluster of bracts. The fruit is a prickly envelope of bracts which opens into four valves containing three angular nuts.

*Nothofagus* is presently distributed from South America to Australia, New Zealand, New Caledonia and New Guinea, but fossil records indicate its previous occurrence in Antarctica and West Australia.

#### **NOTHOFAGUS MOOREI** (F. Muell.) Krasser

**Synonym**—*Fagus moorei* F. Muell.

**Reference**—Ann. Nat. Hofmus., Wien XI, p. 161, 1896.

**Derivation**—*Nothofagus* from Latin “nothus” false, “fagus” a beech tree; *moorei* after Chas Moore, N.S.W. Government Botanist.

**Common Name**—Antarctic Beech, Negrohead Beech.

**Standard Trade Name**—Negrohead Beech.

A large tree attaining a height of over 30 m and a diameter of 100 cm. Usually found at higher altitudes on mountain ranges. This tree is the host (almost exclusive) of the beautiful native epiphytic orchid, *Dendrobium falcorostrum*. The compact dark crown is rarely without red or orange coloured dying leaves, whilst the new spring growth is deep red.

**Trunk**—Often crooked and leaning, rarely straight. Several trees are often joined together, suggesting a coppice origin.

**Outer Bark**—Dark brown, scaly, shedding in large irregular patches. Under bark chocolate-brown with thin cream layers. Outer surface of live bark dark red.

**Inner Bark**—On a tree 100 cm diameter red, becoming paler towards the sapwood, fibrous, fading slightly on exposure, slightly astringent with a sappy smell. 8–20 mm thick.

**Branchlets**—Slender, red-brown, young shoots clothed in brown hairs, transverse grey lenticels.

**Leaves**—Alternate, simple, margins *finely toothed* except the basal portion which is entire, ovate to ovate-lanceolate 4–6 cm long, tapering to a sharp point at the tip and usually slightly oblique at the base; *rigid and brittle in texture*, smooth and dark green both surfaces. Leaf stalks 3–5 mm long, hairy, with *narrow stipules* at the base of the leaf (soon fall off).

**Veination**—Distinct on both surfaces, lateral veins regular, at approximately 45 degrees to the midrib.

**Flowers**—Male and female organs in separate flowers, (flowers unisexual). Male flowers in round or flattened *catkins*, about 10 mm diameter in the forks of the leaves on stalks 3–6 mm long. The lower part of the catkins consist of a cup-shaped involucre, eight to twelve-lobed at the rim, enclosing numerous stamens (over 15), 3–4 mm long. The female catkins also in the forks of the leaves is borne on stalks about 3 mm long and consists of numerous small bracts united to form an egg-shaped body about 5 mm long, containing three female flowers. Flowering period August–October.

**Fruit**—Fruit or mature female catkin 8 mm long, opening as *four prickly valves* exposing the *three enclosed angular winged nuts*. Fruit ripe December–February.

**Habitat**—Cool temperate rainforest in mountains usually above 600 m where rainfall is high and mists are common.

**Distribution**—Common in the mountains at the headwaters of the Barrington, Hastings, Macleay and Bellingen Rivers and on the Tweed and McPherson Ranges. From Barrington Tops, N.S.W. to Mt Mistake, S. Queensland. Recorded in N.S.W. from — Barrington Tops, Comboyne, Mt Boss S.F., Mt Banda Banda, Styx River S.F., Pt Lookout, Hernani, Deervale, Never Never S.F., Dome Mt, Tucker's Knob, Wild Cattle Creek S.F., Donaldson S.F., Wiangaree S.F., Mebbin S.F., Mt Merino, Mt Wagawn and Mt Hobwee.

**Timber and Uses**—Pink, soft, fine and even-textured durable wood. Used for cabinet work and soft turnery. Weight 750 kg per cubic metre.

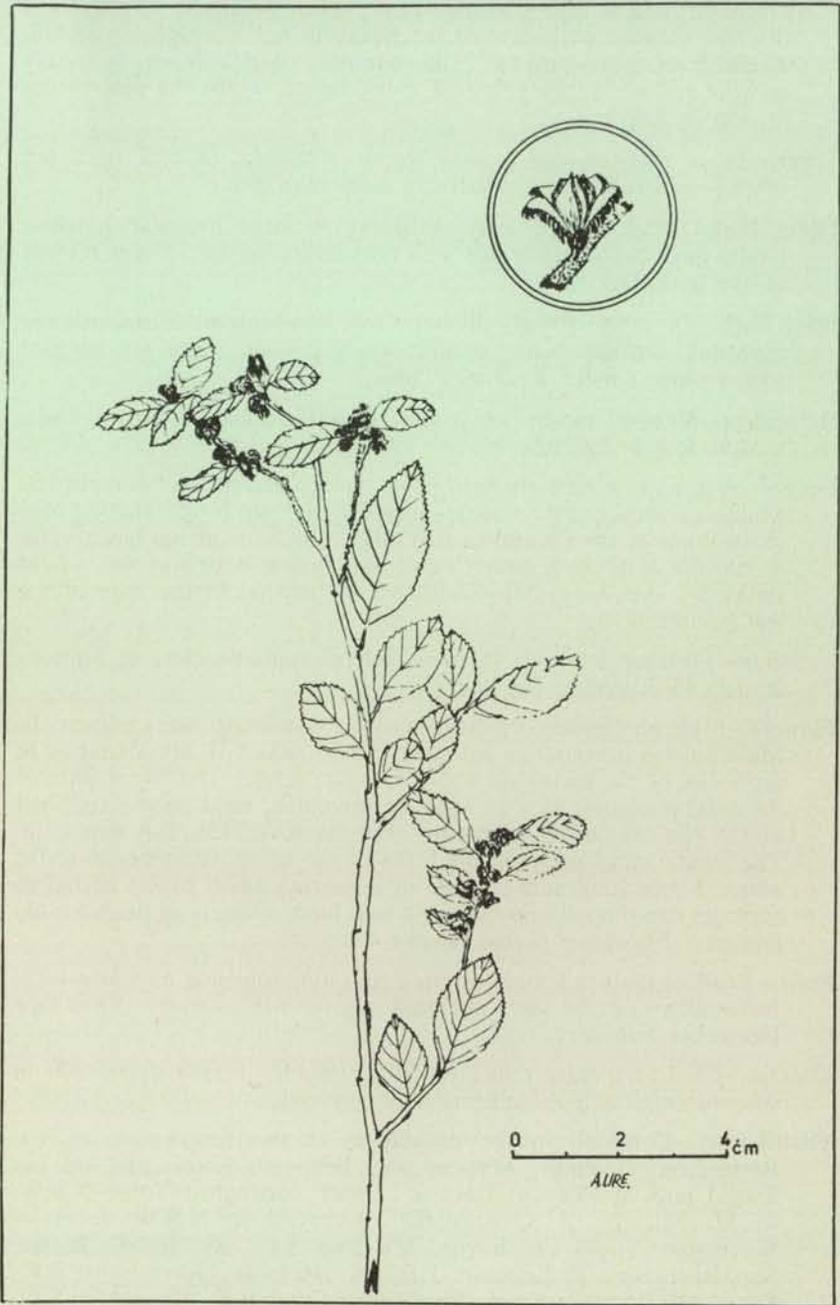


Plate No. 4

*Nothofagus moorei* (F. Muell.) Krasser

# FAMILY *ULMACEAE*

## CHARACTERISTICS OF THE FAMILY IN N.S.W.

Small to medium trees up to 25 m tall and 90 cm diameter, represented in N.S.W. by three genera each of a single species (*Aphananthe philippinensis*, *Celtis paniculata* and *Trema aspera*).

**Trunk**—Prominently buttressed and fluted in *Aphananthe* or only shortly buttressed in *Celtis*.

**Outer Bark**—Scaly dark brown (*Aphananthe*) or smooth (brown in *Celtis* and grey in *Trema*).

**Inner Bark**—Pale pink (sapwood boundary turning yellow-brown in *Aphananthe*, whereas in *Trema* the whole blaze turns bright reddish-brown) or brown and white speckled (*Celtis*).

**Branchlets**—Bark tough.

**Leaves**—Alternate, simple, entire (*Celtis*) or toothed (*Aphananthe*, *Trema*). Surface smooth (*Celtis*) or rough (*Aphananthe*, *Trema*). Three prominent veins at the base (*Celtis*, *Trema*). Stipules small and quickly shed as the leaves expand.

**Flowers**—Small, sexes usually in separate flowers but sometimes bisexual (*Trema*). Sepals four or five. Petals absent. Stamens four or five opposite the sepals. Styles two but joined at their bases.

**Fruit**—A drupe, egg-shaped, somewhat thinly fleshy (*Celtis*, *Trema*) or dry (*Aphananthe*) containing a single seed. Styles shed (*Celtis*) or persisting on the fruit (*Aphananthe*, *Trema*).

**Habitat**—In the drier types of rainforest. *Aphananthe* also favours riverine rainforest, *Celtis* is common also in littoral rainforest and *Trema* in rainforest openings.

**Distribution**—All the N.S.W. species occur beyond the Australian mainland, possibly due to dissemination by birds. *Celtis* is on Norfolk Island, *Aphananthe* in the Philippines and *Trema* as far north as Indonesia and west to the MacDonnell Ranges (Central Australia).

# KEY TO THE RAIN FOREST TREE SPECIES OF ULMACEAE IN N.S.W.

## A. USING LEAVES AND BRANCHLETS ONLY.

1. Leaves not toothed, surface smooth ..... *Celtis paniculata*  
(Endl.) Planch.
1. Leaves toothed, surface rough ..... 2
  2. Teeth irregular due to major lateral veins terminating in a sharp point ..... *Aphananthe philippinensis* Planch.
  2. Leaf margin finely and regularly toothed ..... *Trema aspera*  
(Brongn.) Blume

## B. USING BARK ONLY.

1. Bark scaly, dark brown ..... *Aphananthe philippinensis* Planch.
1. Bark smooth, grey or brown ..... 2
  2. Bark, brown, blaze speckled brown and white .....  
*Celtis paniculata* (Endl.) Planch.
  2. Bark grey, blaze pale pink ..... *Trema aspera* (Brongn.) Blume

## APHANANTHE PHILIPPINENSIS Planch.

**Reference**—Annales des Sciences Naturelles, ser. iii, x. 337.

**Derivation**—Aphananthe from Greek “aphanes” invisible, “anthos” a blossom in reference to the insignificant flowers; philippinensis referring to the species being first found in the Philippine Islands.

**Common Name**—Grey Handlewood, Native Elm, Axe-handle Wood, Rough-leaved Hickory, Asbestos Tree.

**Standard Trade Name**—Grey Handlewood.

A medium sized tree with a shapely crown of dark green leaves, occasionally attaining a height of 25 m and a stem diameter of 60 cm but often much smaller.

**Trunk**—Buttressed at the base, the *bole* is usually *irregular* in shape and *deeply fluted*.

**Outer Bark**—*Dark brown, scaly*, with numerous pustules, shedding in irregular patches. Underbark fawn. Outer surface of live bark green and pinkish-brown.

**Inner Bark**—On a tree 40 cm diameter, *pale pink*, becoming paler towards the sapwood, the layer next to the sapwood changing to yellow-brown on exposure. Slightly astringent taste. No smell, 4 mm thick.

**Branchlets**—Grey, roughened with minute longitudinal cracks in the bark.

**Leaves**—Alternate, simple, with *sharply toothed margins*, each *lateral vein terminating in a sharp thornlike point*, lanceolate to elliptic lanceolate, 4–6 cm long, terminating in a sharp point at the tip. *Stiff and brittle, clothed in short stiff hairs*, which are like sandpaper to the touch and green on both surfaces, slightly darker above. Leaf stalk green, 1.5 mm long. *Sucker leaves often like holly leaves*, much smaller with larger and sharper teeth than adult leaves.

**Venation**—Midrib, lateral veins and net veins visible on both surfaces; midrib sunken above, midrib and lateral veins prominently raised and light coloured underneath.

**Flowers**—Male and female flowers separate. Male flowers in cymes much shorter than the leaves; in the forks of the leaves or springing from the scars of fallen leaves. Individual male flowers about 5 mm diameter consisting of four or five narrow perianth segments, on the innerside of which are four or five stamens, each stamen about as long as and opposite each perianth segment. Female flowers single or rarely two together, situated on a stalk 5 mm long which springs from the forks of the leaves; and resemble the male except for the single ovary. Flowering period September–November.

**Fruit**—*Fleshy drupe, black, egg-shaped*, surmounted by a *hairy forked style*, over 6 mm long and containing one cell with a single seed. Fruit ripe February and March.

**Habitat**—*A tree of the watercourses*, favouring moist alluvial flats but also occurring on drier rainforest sites.

**Distribution**—Fairly common, scattered throughout the rainforests from the Manning River, N.S.W., to Evelyn, near Herberton, Queensland and extending as far west as the Bunya Mountains. Also in the Philippine Islands. Recorded in N.S.W. from Wingham, Taree, Upper Hastings, Bellangry S.F., Port Macquarie, Macleay River, Woolgoolga Creek, Madmans Creek F.R., Kangaroo River S.F., Hortons Creek, Glenugie S.F., Susan Island, Ramornie, Mt Pikapene S.F., Cherry Tree S.F., Victoria Park N.R., Toonumbar S.F., Unumgar S.F., Rivertree, Yabbra S.F., Acacia Creek S.F., Moore Park, Boatharbour, Whian Whian S.F., Broken Head, Brunswick Heads, Murwillumbah, Stotts Island, Cudgen, and Tweed Heads.

**Timber and Uses**—Creamy-white, hard, close-grained, tough, elastic, non-durable, moderately heavy and is suitable for axe-handles, hammer handles, mallets, baseball bats, linings and ceilings. Weight 750 kg per cubic metre. The timber is rarely utilized due to the small size and poor form of the tree.

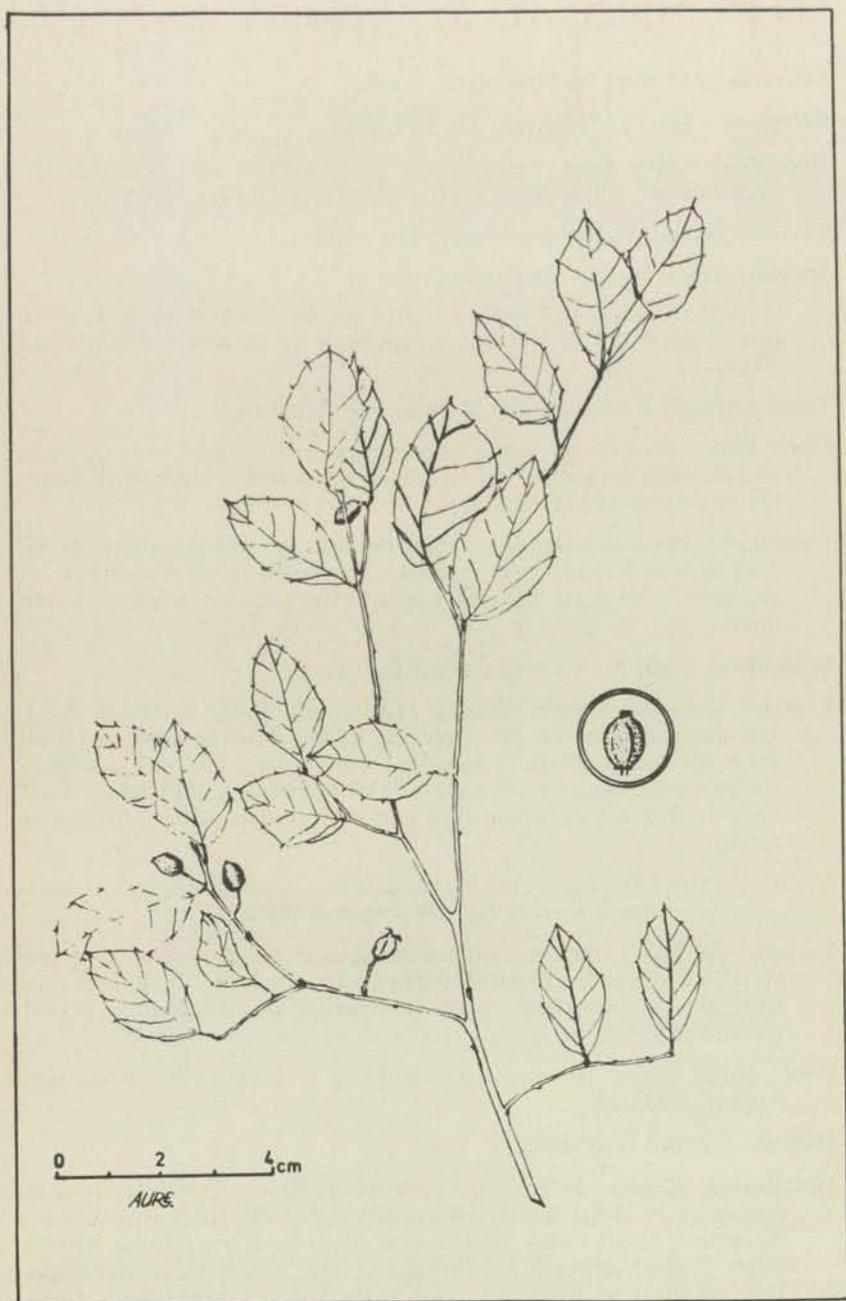


Plate No. 5

*Aphananthe philippinensis* Planch.

## CELTIS PANICULATA (Endl.) Planch.

**Synonym**—*Solenostigma paniculatum* Endl.

**Reference**—Ann. Sci. Nat. ser. 3 x. 305, 1848.

**Derivation**—Celtis from Latin "celtis", an African tree with berries; "paniculata", tufted referring to the branched flower heads.

**Common Name**—Native Hackberry, Silky Keltis.

**Standard Trade Name**—Silky Celtis.

A medium sized tree with a rather compact crown of dark green leaves, occasionally reaching a height of 25 m and a diameter of 90 cm.

**Trunk**—Shortly buttressed and more or less cylindrical.

**Outer Bark**—Brown, thin, smooth, patterned with vertical lines of corky pustules and occasional raised transverse ridges. Underbark fawn. Outer surface of live bark green with cream streaks.

**Inner Bark**—Blaze on a tree 60 cm diameter whitish, dotted with numerous dark brown flecks (*pepper and salt*), darkening to purplish-brown on exposure. No taste but gritty with an unpleasant smell. 15 mm thick.

**Branchlets**—Light brown with distinct leaf scars.

**Leaves**—Alternate, simple, margins entire, elliptical, 6–10 cm long, acuminate at the tip, often oblique at the base, smooth and dull green on both surfaces. Numerous translucent glands are visible in the leaves, particularly when viewed through the upper surface. Leaf stalk 6–10 mm long, channelled and slightly flattened on the upper surface.

**Venation**—More distinct on the lower surface. A prominent pair of basal veins traversing a third to half the length of the leaf.

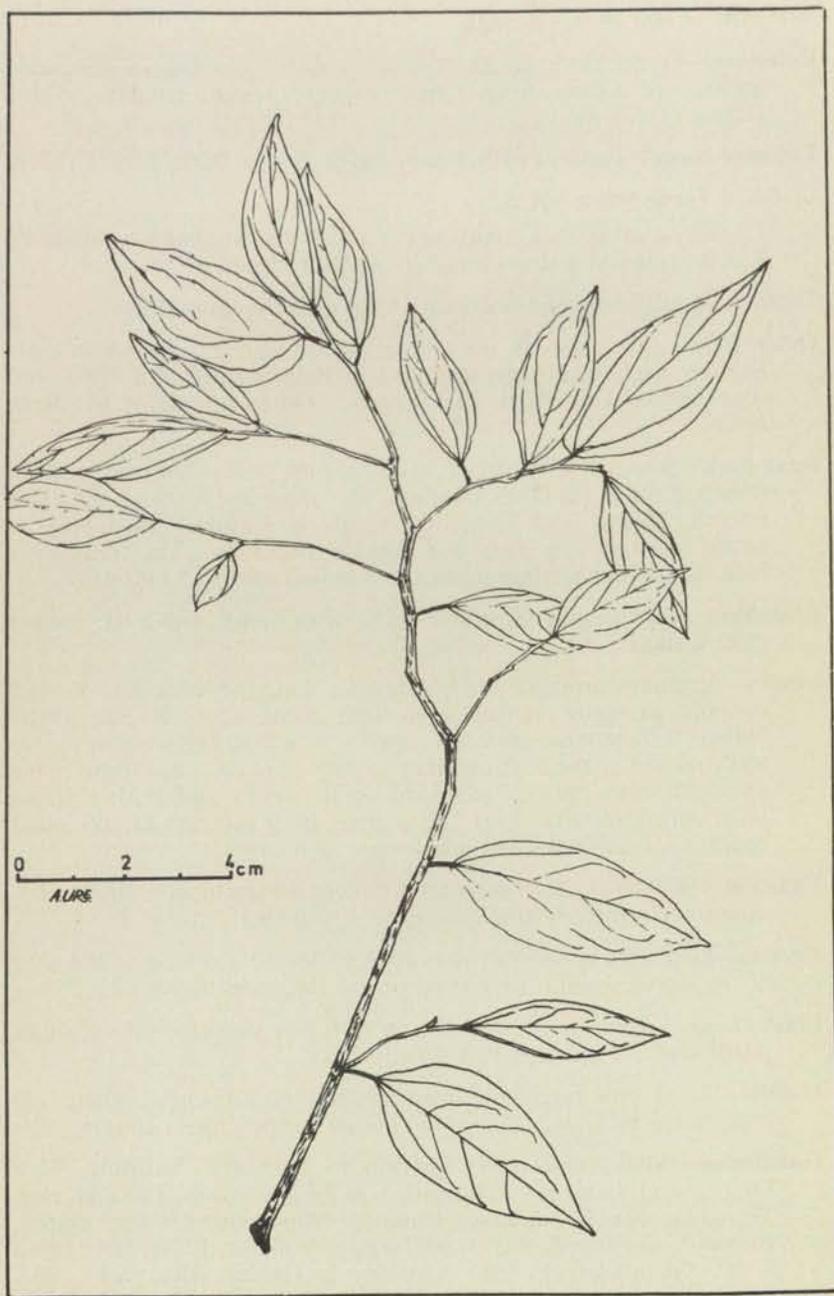
**Flowers**—Axillary cymes, sometimes dense and few flowered, or loose and 2.5 cm broad. Perianth segments four to five. Style branches truncate or two-lobed, often unequally so. Flowering period December and January.

**Fruit**—Ovoid, black, 10 mm long containing a single seed. Fruit ripe August to March.

**Habitat**—Coastal rainforests.

**Distribution**—Kiama, N.S.W. to Endeavour River, Queensland—also occurs on Norfolk Island. Recorded in N.S.W. from Royal N.P., Narabeen, Myall Lakes, Seal Rocks, Allambie Island, Taree, Smoky Cape, Yarrahapinni S.F., Bellingen, Pine Creek S.F., Bundagen F.R., Kangaroo River S.F., Glenugie F.R., Susan Island, Iluka N.R., Mt Pikapene S.F., Cherry Tree S.F., Casino, Rous, Ballina, Victoria Park N.R., Lismore, Toonumbar S.F., Kyogle, Lennox Head, Broken Head, Unumgar S.F., Stotts Island N.R., Cudgen and Terranora.

**Timber and Uses**—White, soft, pliable and non-durable. Has been used for cases.



**Plate No. 6**  
*Celtis paniculata* (Endl.) Planch.

## TREMA ASPERA (Brongn.) Blume

**Synonym**—*Celtis aspera* Brongn.

**Reference**—Trema from Greek "trema" a hole, referring to the pitted seed coat; aspera from Latin "aspera" rough, alluding to the texture of the leaf.

**Common Name**—Poison Peach, Peach-leaved Poison Bush, Native Peach.

**Standard Trade Name**—None.

Usually a shrub but sometimes a small tree attaining a height of 6 m or over and a stem diameter of about 15 cm.

**Trunk**—Usually short and branching from near the ground.

**Outer Bark**—Grey, smooth the whole surface dotted with minute pale lenticels which are often arranged in both vertical and horizontal short rows. Underbark dark brown. Outer surface of live bark green.

**Inner Bark**—Blaze on a tree 10 cm diameter pink with a few paler vertical stripes, paler at the inner margin, a thin green line marking the outer margin, fibrous and somewhat tough in texture. Darkening to bright reddish-brown after five minutes exposure. The freshly cut bark has a faint astringent taste and iodine smell. 5 mm thick.

**Branchlets**—Grey to greyish-brown, hairy, often dotted with a few minute paler lenticels.

**Leaves**—Alternate, arranged in opposite rows along the branchlets, simple, margins generally uniformly toothed, ovate-lanceolate or ovate-oblong, 4-9 cm long, gradually tapering to a long fine point at the tip and rounded at the base or rarely slightly cordate. Sandpapery, the principal veins on the underside usually hairy and both surfaces often sprinkled with short hairs, green both surfaces usually paler beneath. Leaf stalk 6-12 mm long.

**Venation**—Distinct on both surfaces but more conspicuous on the underside, three-veined, lateral veins obliquely angled.

**Flowers**—Greenish, in short cymes, often under 2.5 cm long in the axils of the leaves, small. Flowering period December to March.

**Fruit**—Drupe, shiny black, globular, up to 6 mm diameter with a single pitted seed. Fruit ripe February to May.

**Habitat**—Rainforest regrowth, open patches of rainforest, along old logging tracks or in sheltered situations in open forest country.

**Distribution**—Mallacoota Inlet, Victoria to Northern Australia, New Guinea and Indonesia. Recorded in N.S.W. from Twofold Bay, Wolumla, Mt Dromedary, Conjola, Minnamurra Falls, Dapto, Kogarah, Guildford, Raymond Terrace, Williams River, Barrington Tops, Gloucester, Coneac, Comboyne, Doyles River S.F., Port Macquarie, Bruxner Park F.R., Wedding Bells S.F., Madmans Creek F.R., Bagawa S.F., Wild Cattle Creek S.F., Moonpar S.F., Clouds Creek S.F., Glenugie F.R., Copmanhurst, Iluka, Victoria Park N.R.,

Toonumbar S.F., Beaury S.F., Moore Park, Wiangaree S.F., Whian Whian S.F., Byron Bay and Cudgen. Also further inland at Goulburn, Bungonia and Jenolan Caves, Springbrook, Glenbrook, Manilla, Boggabri and Moree.

**Timber and Uses**—White, medium hard, light and close-grained, but has no known uses.

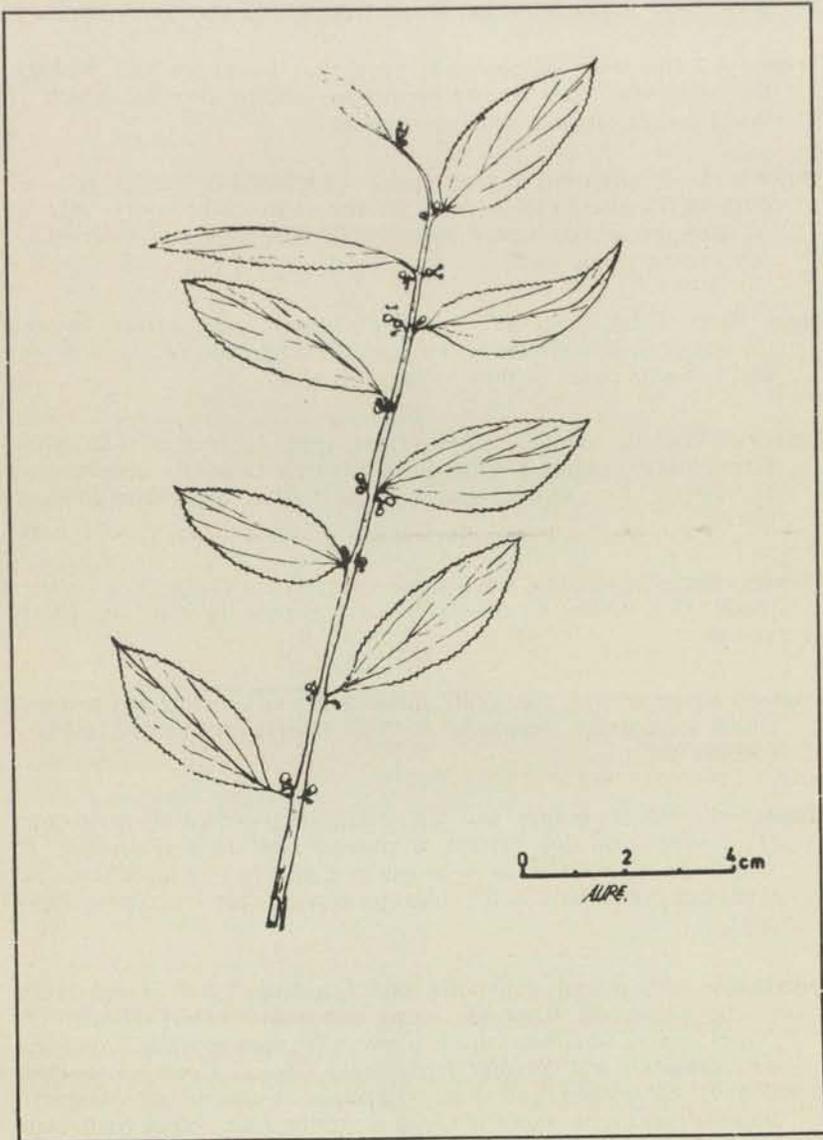


Plate No. 7

*Trema aspera* (Brongn.) Blume

# FAMILY MORACEAE

## CHARACTERISTICS OF THE FAMILY IN N.S.W.

Ranging from huge trees overtopping all others and commencing life as epiphytes (*Ficus macrophylla*, *F. obliqua*, *F. virens* var *sublanceolata*, *F. watkinsiana*) to medium and small trees (*Ficus coronata*, *Streblus*).

**Trunk**—All the large species have prominent buttresses and flutings, the remainder have smaller buttresses except *Streblus* which is fluted and *F. coronata* which is cylindrical.

**Outer Bark**—Smooth but in some species roughened by vertical rows of pustules (*F. superba* var *henniana*). Brown to red brown (*F. superba* var *henniana*, *F. coronata*, *F. macrophylla*, *F. rubiginosa* and *Streblus*), otherwise grey-brown.

**Inner Bark**—Blaze white (*F. coronata*), cream with brown streaks (*Streblus*), yellow-brown (*F. rubiginosa*), bright red (*F. macrophylla* and *F. watkinsiana*) or pink in the remainder.

**Leaves**—Alternate, simple, entire (*Ficus* spp) or toothed (*Streblus*). Green stems exuding a milky juice or rarely clear (*F. coronata* and *F. fraseri*). Two stipules sheathing the leaf bud and falling to leave a scar.

**Flowers**—Sexes in separate small flowers in spikes (*Streblus*) or on the inside of a hollow receptacle (*Ficus*). Sepals three to six, petals absent.

**Fruit**—A drupe or nut, succulent, one-seeded. Often clustered and enclosed in a fleshy receptacle or "fig" (*Ficus*) or free and solitary (*Streblus*).

**Habitat**—In N.S.W. mainly in lowland rainforest where along streams (*F. coronata*), in dry, littoral or riverine rainforests (*F. fraseri*, *F. rubiginosa*, *F. superba* var *henniana* and *Streblus*) or throughout all types but particularly in the subtropical rainforests (remaining *Ficus* spp).

**Distribution**—All extend well north into Queensland but extend south to the Richmond River (*F. virens* var *sublanceolata*), Hunter (*F. fraseri* and *F. watkinsiana*), Shoalhaven (*F. macrophylla*, *F. superba* var *henniana*, and *Streblus brunonianus*), South Coast (*F. obliqua* and *F. rubiginosa*) and East Gippsland Victoria (*F. coronata*). Because they are an important food source for many birds, particularly pigeons which disperse the small seeds, they are a major component of many rainforests. One species (*F. rubiginosa*) extends as far west as the Warrumbungles.

# KEY TO THE RAIN FOREST TREE SPECIES OF MORACEAE IN N.S.W.

## A. USING LEAVES AND BRANCHLETS ONLY

1. Leaves toothed ..... *Streblus brunonianus* (Endl.) F. Muell.
1. Leaves entire..... 2
  2. Leaves rough and sandpapery ..... 3
    3. Leaf-bearing stem hairy towards the tip only. Basal pair of lateral veins extended for about half the length .....  
*Ficus fraseri* Miq.
    3. Leaf-bearing stem hairy throughout. Basal pair of lateral veins not extended ..... *Ficus coronata* Spin.
  2. Leaves smooth ..... 4
    4. Leaves brown or velvety beneath ..... 5
      5. Leaf blades mostly over 10 cm long. Leaf bud stipule over 10 cm long ..... *Ficus macrophylla* Desf.
      5. Leaf blades mostly under 10 cm long. Leaf bud stipule under 5 cm long ..... *Ficus rubiginosa* Desf. ex Vent.
    4. Leaves green and smooth beneath ..... 6
      6. Young shoots distinctly velvety .....  
*Ficus rubiginosa* Desf. ex Vent.
      6. Young shoots smooth ..... 7
        7. Leaf blades mostly over 12 cm long, not jointed where attached to the leaf stalk. Leaf bud stipules mostly over 8 cm long ..... *Ficus watkinsiana* Bail.
        7. Leaf blades mostly under 6 cm long, not jointed. Leaf bud stipules 3-4 cm long.....  
*Ficus obliqua* Forst. f.
        7. Leaf blades mostly 6-12 cm long, jointed. Leaf bud stipules .5-1 cm long ..... 8
          8. Deciduous. Leaves confined to the new shoots and appearing tufted. Leaf tip narrowed to a short point under .5 cm long .....  
*Ficus superba* Miq. var. *henneana* (Miq.) Corner
          8. Evergreen. Leaves scattered along branchlets. Leaf tip narrowed into a point .5-1 cm long ....  
*Ficus virens* Ait. var. *sublanceolata* (Miq.) Corner

## B. USING FRUITS ONLY

1. Fruit densely hairy, black ..... *Ficus coronata* Spin. 2
1. Fruit not hairy nor black ..... 2
  2. Young fruits with a crown of bracts, sap watery ..... *Ficus fraseri* Miq. 3
  2. Young fruits not crowned by bracts, sap milky ..... 3
    3. Fruits under 12 mm diameter, stalk very short ..... 4
    4. Fruit yellow turning orange when ripe..... *Ficus obliqua* Forst. f.
    4. Fruit white or pinkish brown when ripe .. *Ficus virens* Ait. var. *sublanceolata* (Miq.) Corner
    3. Fruit over 12 mm diameter, stalk 4–25 mm long ..... 5
    5. Fruit with a nipple ..... 6
    6. Fruit over 2 cm diameter, purple when ripe ..... *Ficus watkinsiana* Bail.
    6. Fruit under 2 cm diameter, yellow to red when ripe *Ficus rubiginosa* Desf. ex Vent.
    5. Fruit without a nipple pink to purple when ripe..... 7
      7. Fruit stalk 2–2.5 cm long ..... *Ficus macrophylla* Desf.
      7. Fruit stalk less than 1 cm long ..... *Ficus superba* Miq. var. *henneana* (Miq.) Corner

## C. USING BARK ONLY

1. Bark dark brown to red-brown ..... 2
1. Bark grey to grey-brown ..... 6
  2. Sap watery, blaze white ..... *Ficus coronata* Spin. 3
  2. Sap milky, blaze darker ..... 3
    3. Blaze cream with brown streaks .. *Streblus brunonianus* (Endl.) F. Muell. 4
    3. Blaze yellow-brown, pink or red ..... 4
      4. Blaze yellow-brown .... *Ficus rubiginosa* Desf. ex Vent.
      4. Blaze with pink or red tints ..... 5
        5. Blaze bright red ..... *Ficus macrophylla* Desf.
        5. Blaze pink-brown with paler stripes .. *Ficus superba* Miq. var. *henneana* (Miq.) Corner
  6. Sap watery ..... *Ficus fraseri* Miq.
  6. Sap milky ..... 7
    7. Blaze rosy red towards the outer margin .... *Ficus watkinsiana* Bail. 8
    7. Blaze pink towards the outer margin ..... 8
      8. Blaze pink streaked in pale yellow and white ..... *Ficus obliqua* Forst. f.
      8. Blaze pink with pink and red veinings .... *Ficus virens* Ait. var. *sublanceolata* (Miq.) Corner

## FICUS CORONATA Spin

**Synonym**—*Ficus stephanocarpa* Warb

**Reference**—Cat H. St. Sebast. (1818) 29.

**Derivation**—Ficus from Latin "ficus" a fig; coronata from Latin "coronatus" crowned, in reference to the crown of bristles at the tip of the fruit.

**Common Name**—Creek Sandpaper Fig. Creek Fig.

**Standard Trade Name**—Sandpaper Fig.

A bushy tree attaining a height of 15 m and a stem diameter of 20 cm.

**Trunk**—Cylindrical, not buttressed.

**Outer Bark**—Dark brown, smooth except for horizontal raised stipular scars and often densely covered with minute lenticels. Outer surface of live bark green.

**Inner Bark**—Blaze on a tree 15 cm diameter streaky white. Pale yellow at the inner surface. Clear watery sap. No rapid change in colour. No distinct taste or smell. 3 mm thick.

**Branchlets**—Brown, densely hairy and rough.

**Leaves**—Alternate, simple, margins sometimes toothed or indistinctly wavy, elliptic, 5–13 cm long, sometimes oblique at the base. Upper surface rough and is moderately effective as a substitute for sandpaper. Used by the aborigines for smoothing weapons. Undersurface less rough. Leaf stalk 3–10 mm long.

**Venation**—Lateral veins usually visible on the upper surface but net veins sometimes indistinct. Raised and distinct on the underside.

**Fruit**—Succulent receptacle, purple-black when ripe, oval, 2 cm long, densely hairy, sweet and edible if the rigid hairs are avoided. Fruit ripe January to June.

**Habitat**—Along the banks of streams both in rainforest and open country.

**Distribution**—From East Gippsland, Victoria to Mackay, Queensland. Recorded from most rainforest areas in coastal N.S.W.

**Timber and Uses**—Yellow, soft, coarse grained, brittle, spongy and perishable.

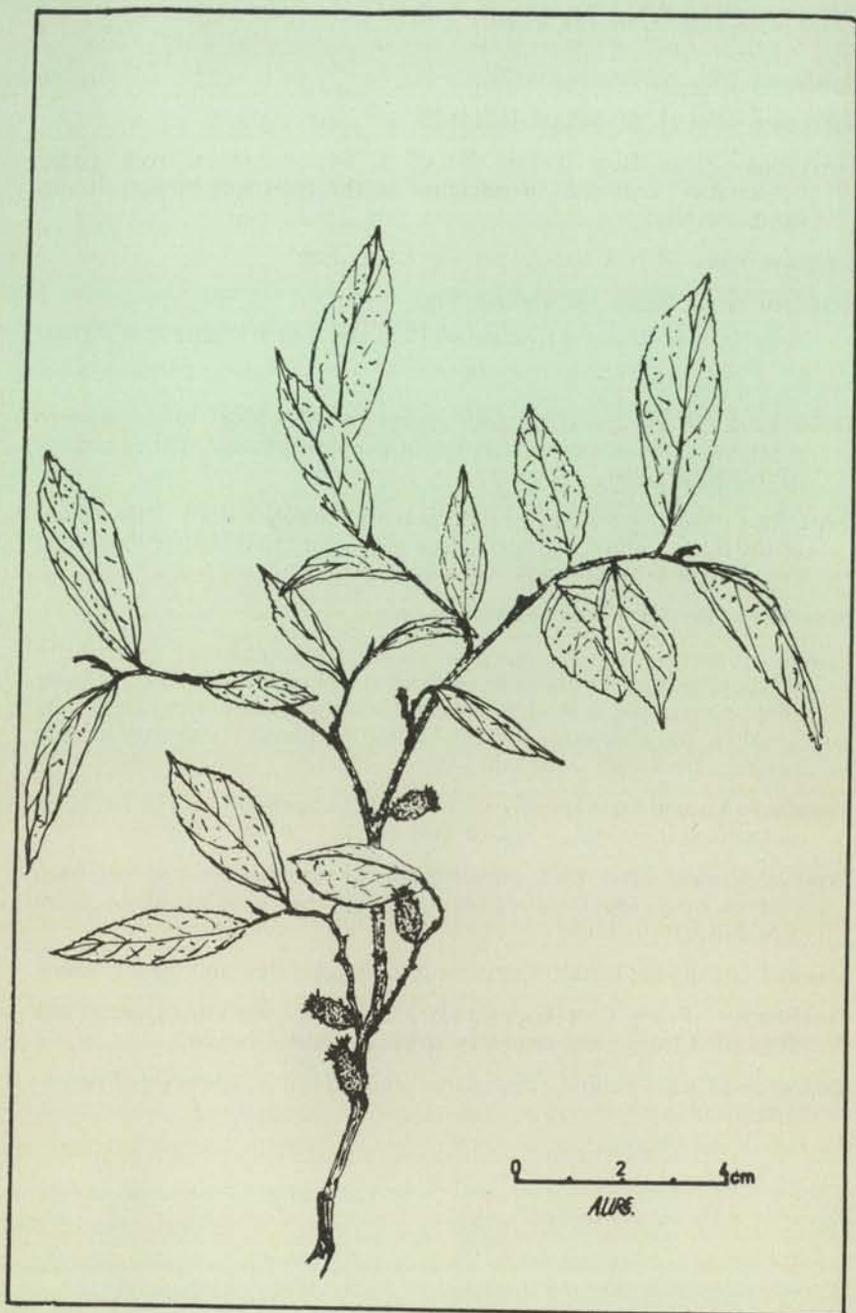


Plate No. 8

*Ficus coronata* Sp.

## FICUS FRASERI Miq.

**Synonym**—*Ficus stenocarpa* F. Muell.

**Reference**—Lond. Jour. Bot. 7, 235, 1848.

**Derivation**—Fraseri after Charles Fraser, a collector in Oxley's party.

**Common Name**—Sandpaper Fig, Watery Fig.

**Standard Trade Name**—Sandpaper Fig.

A tree attaining a height of 18 m and a stem diameter of 60 cm.

**Trunk**—Large trees generally slightly buttressed.

**Outer Bark**—Grey to grey-brown, smooth, marked by numerous very small darker pustules elongated vertically and horizontal raised scars. Surface of the live bark mottled green and yellow drying out to a uniform yellow.

**Inner Bark**—Blaze on a tree 50 cm diameter pale pinkish-brown, gritty, with numerous white vertical thread-like lines on the inner margin. Outer margin consists of an outer thin brown band and an inside green one. Clear watery, slightly viscid sap. No change in colour on exposure. No distinct taste or smell. 5 mm thick.

**Branchlets**—Brown, often longitudinally ribbed and wrinkled. Smooth becoming rough and scabrous towards the ends.

**Leaves**—Alternate, simple, entire, obovate, elliptic or often lobed on young growth, 5–9 cm long, mostly with a short blunt point or sometimes rounded at the tip. Green both surfaces, paler beneath. Usually rough on both surfaces with a short rigid down. Leaf stalk slender, 5–12 mm long.

**Venation**—Midrib distinct and raised equally on both surfaces with a basal vein on each side extending about half the length of the margin. Lateral veins often more prominently raised on the upper surface. Veins usually paler on the under surface and often conspicuously yellow.

**Fruit**—Fleshy receptacle, yellow turning orange-red when ripe, ovoid 12–16 mm long, hairless. Eaten by fig birds. Fruit ripe May to February.

**Habitat**—Dry, semi-dry, littoral and riverine rainforest. It is found scattered through the forest and not mainly along streams as is *F. coronata*.

**Distribution**—From the Hunter River, N.S.W. to Atherton, North Queensland. Recorded in N.S.W. from New Lambton, Seal Rocks, Forster, Port Macquarie, Smoky Cape, Yarrahapinni S.F., Pine Creek S.F., Bundagen F.R., Kangaroo River S.F., Station Creek, Glenugie F.R., Susan Island, Brooms Head, Iluka N.R., Mt Pikapene S.F., Ballina, Victoria Park N.R., Tintenbar, Alstonville, Lismore, Kyogle, Unumgar S.F., Boatharbour, Byron Bay, Murwillumbah, Stotts Island N.R. and Terranora.

**Timber and Uses**—Wood pale brown, somewhat soft, porous, light and free cutting when green, decays rapidly in the bush. Suitable for cases.

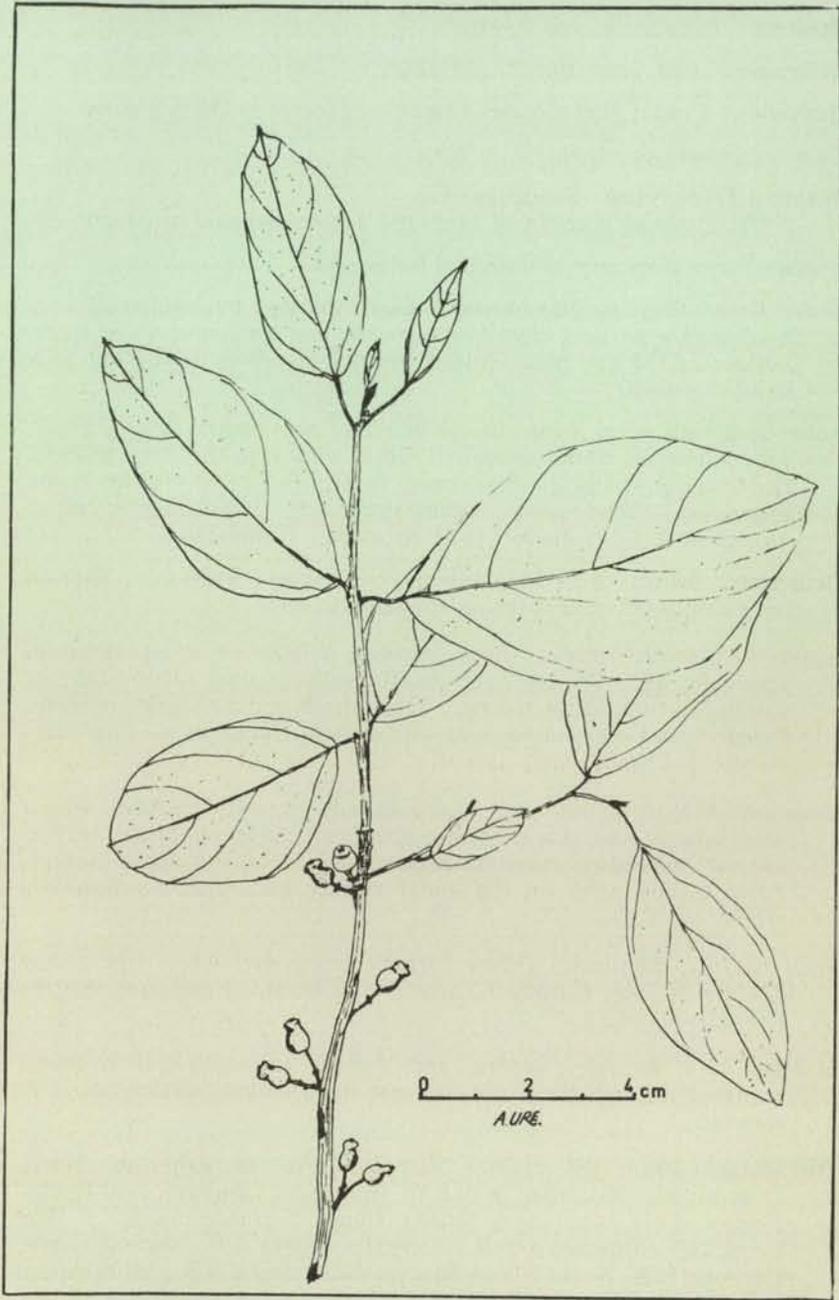


Plate No. 9  
*Ficus fraseri* Miq.

## FICUS MACROPHYLLA Desf.

**Reference**—Cat. Pl. Hort. Paris, 209, 1804.

**Derivation**—Macrophylla from Greek "macro" large; "phyllon" a leaf, alluding to the large leaves.

**Common Name**—Moreton Bay Fig.

**Standard Trade Name**—Moreton Bay Fig.

A large tree attaining a height of 50 m and a stem diameter of 240 cm or more. Crown usually wide. Commonly planted for shade and ornamental purposes. Although this species will grow directly from the soil, most of the trees growing in luxuriant rainforest began life on some other tree trunk which was gradually enmeshed and eventually died.

**Trunk**—Large trees are usually *flanged, irregular and widely buttressed*, sometimes divided into two or more parts.

**Outer Bark**—*Dark greyish-brown* smooth marked by *numerous pustules*, scattered small scales, and *horizontal narrow ridges*. Underbark brown. Outer surface of live bark lime green.

**Inner Bark**—Blaze on a tree 180 cm diameter *mottled bright red*. *Copious milky sap* which has a faint but distinctive smell. 20 mm thick.

**Branchlets**—Thick, brown, becoming green towards the ends, marked by the ring-like scars of fallen stipules, leaf scars distinct. The young bud is enveloped and protected by *creamy-brown stipules*, up to 10–17 cm in length.

**Leaves**—Alternate, simple, entire, elliptic, oval-elliptic or elliptic-oblong, 10–23 cm long, protracted into a short blunt point at the apex, rounded at the base. Leathery in texture, glossy, quite smooth, upper surface dark green, *under side usually brown* when mature. Leaf stalk 1–9 cm long.

**Venation**—Visible on both surfaces but more conspicuous and yellow-green on the under side. Numerous oblique parallel lateral veins with the principal ones some distance apart and more prominent than the intermediate fine ones, all joining to form an intramarginal vein 2–3 mm from the edge of the leaf.

**Fruit**—Fleshy receptacle, *orange turning purple, dotted with white* when ripe, *globular, about 2.5 cm diameter, borne singly on thick stalks* 20–25 mm long in the axils of the leaves. Edible when fully ripe, but rather dry. Fruit ripe in any month.

**Habitat**—Coastal rainforest of all types.

**Distribution**—From the Shoalhaven River, N.S.W. to Rockingham Bay, North Queensland. Recorded in N.S.W. from Unanderra, Kiama, Allambie Island, Wingham Brush, Doyles River S.F., Macleay River Flats, Smoky Cape, Grassy Head, Oakes S.F., Bellingen River, Kangaroo River S.F., Glenugie Peak F.R., Ramornie, Susan Island, Mt Pikapene S.F., Victoria Park N.R., Moore Park, Wian-garee S.F., Boatharbour, Mt Warning, Murwillumbah, Stotts Island N.R. and Cudgen Lake.

**Timber and Uses**—Brown, coarse-grained, with a beautiful wavy figure, fairly soft and light. Sometimes used for cases. The durable fibres were used by aborigines for scoop fishing nets.



Plate No. 10  
*Ficus macrophylla* Desf.

## FICUS OBLIQUA Forst. f.

**Synonym**—*F. eugenioides* (Miq.) F. Muell.

**Reference**—Gard. Bull. Singapore XVII, 402, 1960.

**Derivation**—From Latin "obliquus", oblique but the significance is obscure.

**Common Name**—Small-leaved Fig.

**Standard Trade Name**—Small-leaved Fig.

A large tree attaining its best development in luxuriant rainforest where it may reach a height of 50 m and a stem diameter of 300 cm.

**Trunk**—Buttressed, often enclosing the remains of the tree around which it formed and grew.

**Outer Bark**—Grey or greyish-brown, very thin, almost smooth with horizontally elongated lines of paler lenticels. Outer surface of live bark green with pink patches.

**Inner Bark**—Blaze on a tree 240 cm diameter pink, streaked in pale yellow and white, becoming pale at the inner margin. Copious cream milky sap. Freshly cut bark has a faint characteristic taste and smell. 12 mm thick.

**Branchlets**—Grey or brown, smooth, often marked with numerous pale lenticels. Stipules sheathing the leaf buds, yellow-brown, 3–4 cm long.

**Leaves**—Alternate, simple, entire, elliptic or elliptic-oblong, 5–6 cm long, shortly and bluntly pointed at the tip, tapering at the base, smooth. Leaf stalk 10–20 mm long, somewhat flattened.

**Venation**—Visible on both surfaces but raised and more distinct on the underside, often with two basal veins which loop into the lateral veins to form an intramarginal vein.

**Flowers**—Enclosed in a hollow, globular, egg or pear-shaped receptacle, (which is the fruit or fig), minute, unisexual.

**Fruit**—Fleshy receptacle, yellow turning orange with a few dark spots, globular, 6–8 mm diameter, arranged in pairs in the axils of the leaves on short thick stalks. Fruit ripe April to June.

**Habitat**—Rainforest of various types.

**Distribution**—Mt Dromedary, N.S.W. to N.W. Island of Carpicorn Group, North Queensland. Recorded in N.S.W. from Central Tilba, Batemans Bay, Clyde Mountain, Berry Mountain, Minnamurra Falls, Jamberoo, Shell Harbour, Bulli, Scarborough, Seal Rocks, Allyn and Upper Williams River, Myall River, Forster, Allambie Island, Comboyne, Port Macquarie, Macleay R. flats, Smoky Cape, Way Way S.F., Oakes S.F., Bellinger R., Bundagen F.R., Pine Creek S.F., Dorrigo N.P., McCauleys Headland, Kangaroo River S.F., Hortons Creek, Iluka, Lismore, Boatharbour, Clunes, Beaury S.F., Murwillumbah and Stotts Island N.R.

**Timber and Uses**—Light colour, somewhat coarse-grained, perishable in the weather, fairly light and easily worked. Could be used for cases.

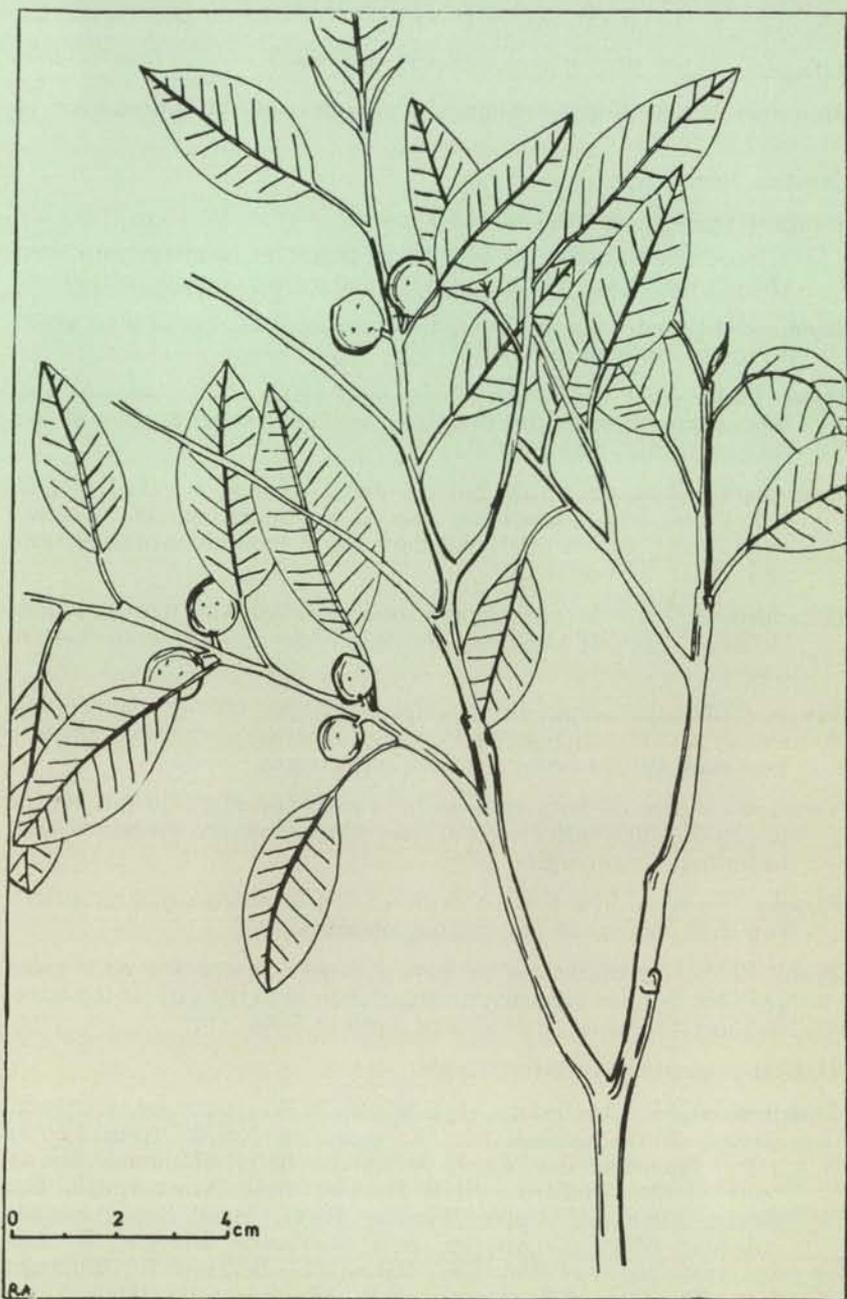


Plate No. 11

*Ficus obliqua* Forst. f.

## FICUS RUBIGINOSA Desf. ex Vent.

Reference—Jard. Malm. t. 114.

**Derivation**—From Latin “*rubiginosus*” rusty, referring to the commonly rusty underside of the leaves.

**Common Name**—Rusty Fig, Illawarra Fig, Port Jackson Fig.

**Standard Trade Name**—Port Jackson Fig.

A large tree attaining over 30 m in height and a stem diameter of 150 cm, but commonly low and spreading on steep rocky slopes.

**Trunk**—Buttressed.

**Outer Bark**—*Brown or yellowish-brown* with numerous pustules and often with scattered thin, hard and firm scales. Surface of live bark green mottled yellow.

**Inner Bark**—Blaze on a tree 50 cm diameter *yellowish-brown* with a thin green band at the outer margin which is joined on the inner side by a mottled purplish area with a few vertical yellowish stripes extending to about halfway through the blaze. Paler at the inner margin. Moderate exudation of a *dull white viscous sap*. No rapid change in colour. Taste indistinct and a faint smell. 8 mm thick.

**Branchlets**—Thick, brown, *usually finely hairy towards the ends*. Scars left by the fallen leaves and stipules are prominent. Often dotted with small pale lenticels. Leaf stipules 2.5–4 cm long.

**Leaves**—Alternate, simple, margins entire, ovate or elliptical, 6–11 cm long, rounded or shortly and bluntly pointed at the tip. Upper surface sometimes hairy, green, *underside usually densely downy and often rust coloured*. (A form with narrower and velvety leaves is found on Glenugie Peak and Maria River, spreading over rocks and only 3.5 m high). Occasionally smooth, in which case the *young shoots are velvety*. Leaf stalks mostly downy 1–5 cm long.

**Venation**—Raised and distinct on the underside. Midrib and lateral nerves visible on the upper surface, but net veins sometimes indistinct.

**Fruit**—Fleshy receptacles *yellow turning red, warted or dotted*, globose or oval often with an apical nipple, *mostly in pairs*, 12–20 mm diameter. Stalks broad and short, 2–5 mm long. Fruit ripe February to July.

**Habitat**—Usually found on dry hills in open forest country, but good specimens found in dry rainforest.

**Distribution**—From Bega, N.S.W. to Southern Queensland. Recorded in N.S.W. from Tathra, Central Tilba, Milton, Minnamurra Falls, Shell Harbour, Lower Blue Mountains, Royal N.P., Hawkesbury River, Milbrodale, Paterson River, Seal Rocks, Bulahdelah Mountain, Gloucester, Coneac, Bulga S.F., Black Creek F.R., Port Macquarie, Crescent Head, Lower Creek, Macleay River, Urunga, Bundagen Beach, Coffs Harbour, Sapphire Beach, Horton's Creek, Sherwood N.R., Guy Fawkes N.P., Glenugie Peak F.R., Ramornie, Broome's Head, Copmanhurst, Woodford Island, Busby's Flat, Boonoo Boonoo Falls, Casino, Rivertree, Kyogle, Goonengerry,

Acacia Creek, Tweed Heads. Also found further inland from Upper Cudgegong River to Wombeyan Caves, Upper Hunter, Moonbi, Warrumbungle Range and Goulburn River Valley.

**Timber and Uses**—Wood pale, soft, spongy, brittle, coarse-grained, very liable to attack by borer. Suitable for cases, toys, light in weight. Weight about 580 kg per cubic metre.

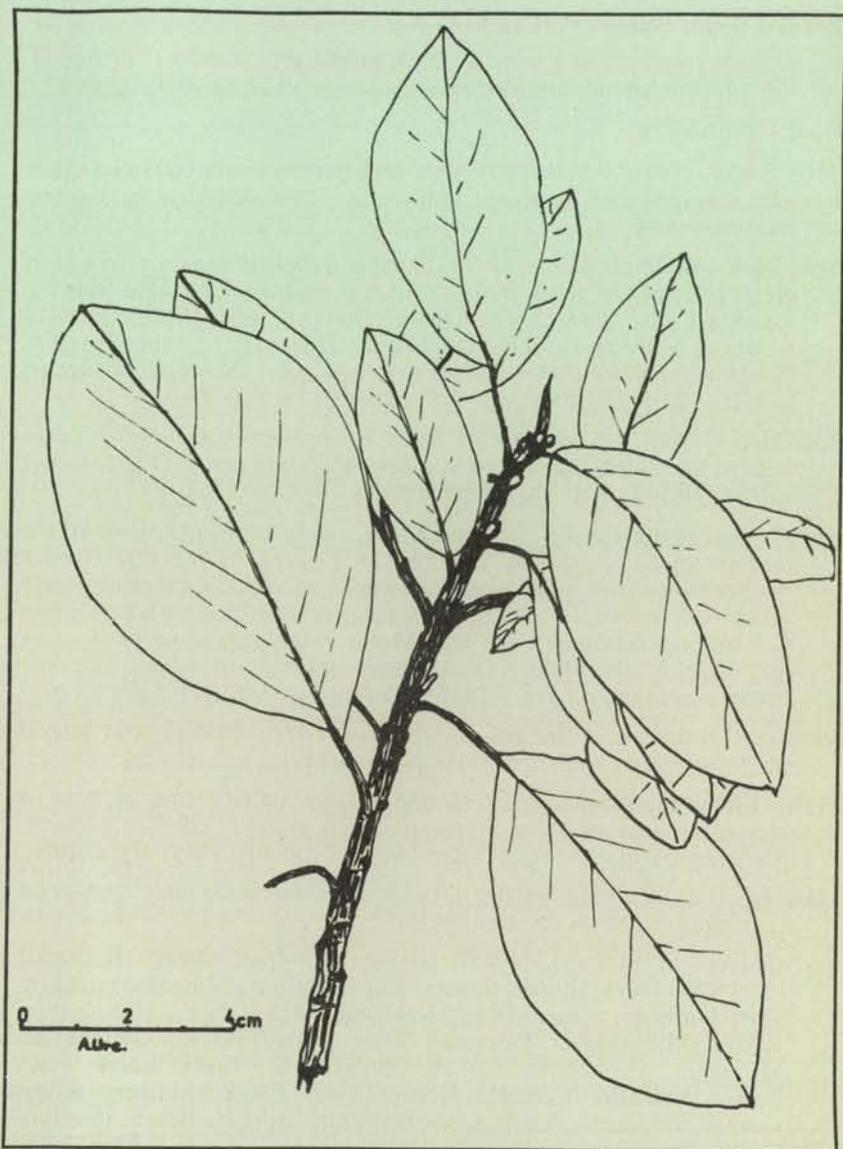


Plate No. 12

*Ficus rubiginosa* Desf. ex Vent.

**FICUS SUPERBA** Miq. var. **HENNEANA** (Miq.) Corner

**Synonym**—*Ficus henneana* Miq.

**Reference**—Gard. Bull. Singapore XVII, pt 111 (1960), 376.

**Derivation**—*Superba* from Latin "superbus" outstanding, *henneana* after Henne, who first collected this variety at Booby Island, Torres Straits.

**Common Name**—Deciduous Fig, Cedar Fig.

**Standard Trade Name**—None.

May be a tall strangler up to 35 m high on good sites, or a spreading tree only 12 m high on steep rocky hillsides. More or less deciduous.

**Trunk**—Usually buttressed.

**Outer Bark**—Rough, red-brown, numerous fine cracks, wrinkles and often with scattered scales. Vertical rows of reddish-brown lenticels. Surface of live bark uneven and pimpled with pink and purplish vertical stripes.

**Inner Bark**—Blaze on a tree 75 cm diameter pinkish brown with paler vertical stripes, pale pink at the inner margin with a few growth rings visible on the inner half. Usually there is a copious exudation of a viscous milky sap immediately after cutting, no change in colour. The freshly cut bark has the same characteristic smell as some other members of the family but somewhat faint. 12 mm thick.

**Branchlets**—Brown, green towards the ends, smooth marked by leaf scars. Stipules small, 5–7 mm long. Leaves on new growth only.

**Leaves**—Alternate, simple, entire, oval-elliptic, 8–12 cm long, mostly shortly and bluntly pointed at the tip, rounded or heart-shaped at the base. Green both surfaces, paler beneath. Leaf stalk 2–5 cm long with a joint where attached to the leaf blade.

**Venation**—Visible both surfaces but more distinct on the underside. Midrib slightly sunken above, raised and prominent beneath.

**Fruit**—Fleshy receptacle translucent yellow turning purple, spotted with pale pink dots, globular, 12–25 mm diameter. Solitary in the axils on stalks 10 mm long. Fruit ripe January to July.

**Habitat**—Dry, riverine and littoral rainforests. Commonly on dry steep stony slopes.

**Distribution**—Illawarra N.S.W. to Queensland and Northern Territory. Recorded in N.S.W. from Nowra, Minnamurra Falls, Shell Harbour, Port Hacking, Cronulla, Merewether, Hunter River, Ravensworth, Allambie Island, Comboyne, Port Macquarie, Taylors Arm, Valla, Bellingen Island, Dorrigo N.P., Hortons Creek, Ebor Gorge, River-tree, Glenugie Peak, Sandiland Ranges, Iluka, Cherry Tree S.F., Ballina, Victoria Park N.R., Pierces Creek, Alstonville, Wollongbar, Lismore, Stotts Island N.R. and Terranora.

**Timber and Uses**—Pale, medium soft and light, open grained. Very liable to attack by borers. Could be used for cases and toys. Weight about 580 kg per cubic metre.

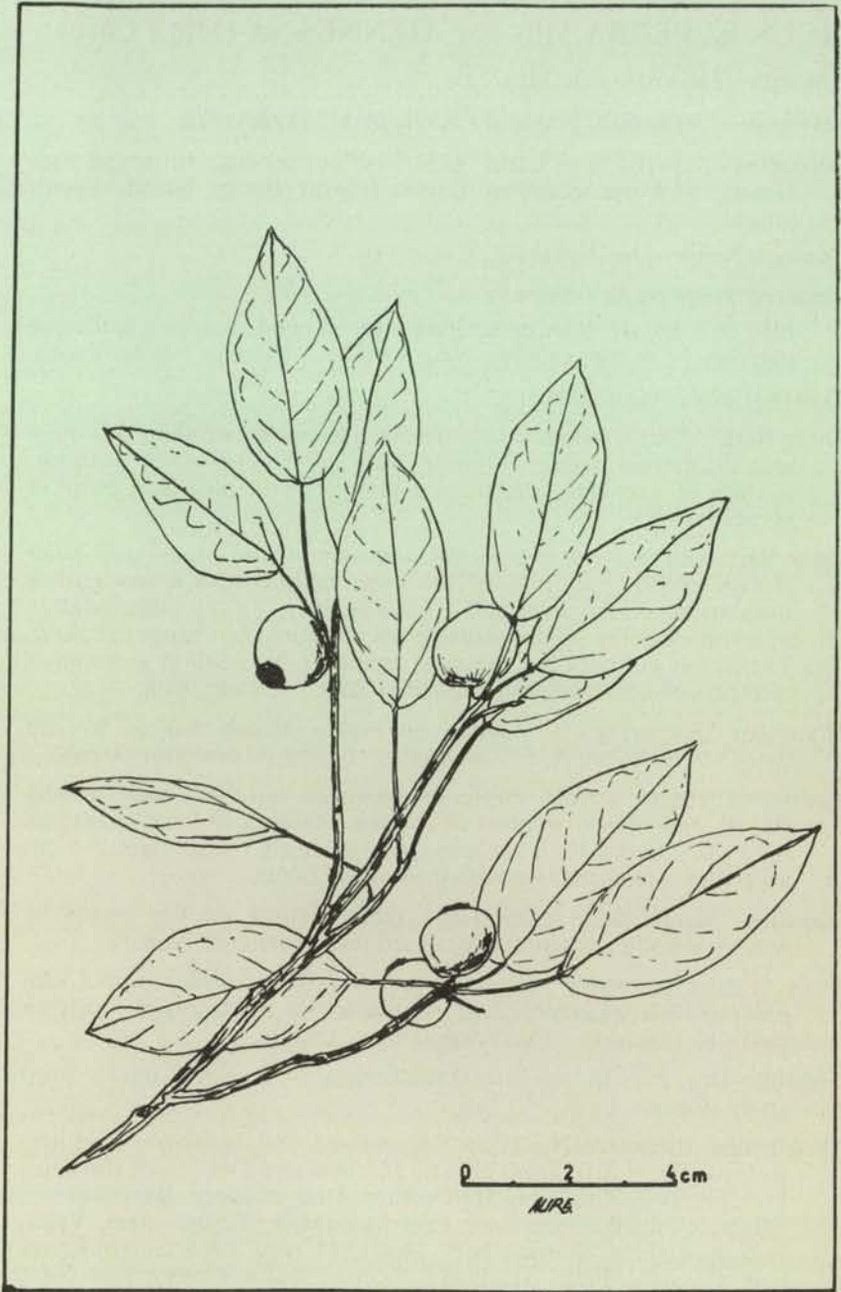


Plate No. 13

*Ficus superba* Miq. var. *henneana* (Miq.) Corner

**FICUS VIRENS** Ait. var. **SUBLANCEOLATA** (Miq.)  
Corner

**Synonym**—*Ficus infectoria* Roxb., *F. cunninghamii* Miq., *F. Lacor* Ham.

**Reference**—Gard. Bull. Singapore 17.377 (1960).

**Derivation**—*Virens* from Latin "virens" green, referring to the bright green leaves, *sublanceolata* from Latin "sublanceolatus" imperfectly lance-leaved as a distinction from the more ovate leaves of var. *virens*.

**Common Name**—White Fig, Sour Fig.

**Standard Trade Name**—None.

A large tree up to 30 m high and 180 cm diameter commonly along river banks.

**Trunk**—Buttressed. Commonly strangling the host tree.

**Outer Bark**—Grey, smooth, the surface often dotted with numerous lenticels of various shapes. Outer surface of live bark green.

**Inner Bark**—On a tree 120 cm diameter from pink to cream in colour with pink and red scattered veinings and blotches. No change in colour with exposure. Copious milky sap, which has, as well as the blaze, the typical "fig" smell. 20 mm thick.

**Branchlets**—Light brown or grey, smooth, with prominent leaf and stipular scars. *Stipules* deciduous 12 mm long, broad at the base and tapering to a point at the apex.

**Leaves**—Alternate, simple, entire, ovate lanceolate, 4–14 cm long, abruptly tapering into a short point. Rounded but scarcely cordate at the base. Leaves shining above, dull beneath, smooth, bright green of rather thin texture. Leaf stalk 2–5 cm long.

**Venation**—Lateral and fine veins very prominent. Eight to ten parallel lateral veins arising at about 60° to the midrib. All veins raised on both surfaces.

**Fruit**—Fleshy receptacle, pinkish brown or white with red spots, globular, 10 mm diameter. Sessile, solitary or usually in pairs in the axils. Three round flat bracts about 3 mm diameter at the base of each fruit. Fruit ripe June to August.

**Habitat**—In riverine rainforest on alluvial soil.

**Distribution**—From the Richmond River, N.S.W. to North Queensland. Recorded in N.S.W. from Rous, Ballina, Tyalgum, Stotts Island, Tweed Heads and Terranora Creek.

**Timber and Uses**—At first pale but darkens in colour during seasoning. Soft, coarse and porous. Perishable in the weather and of no particular use.

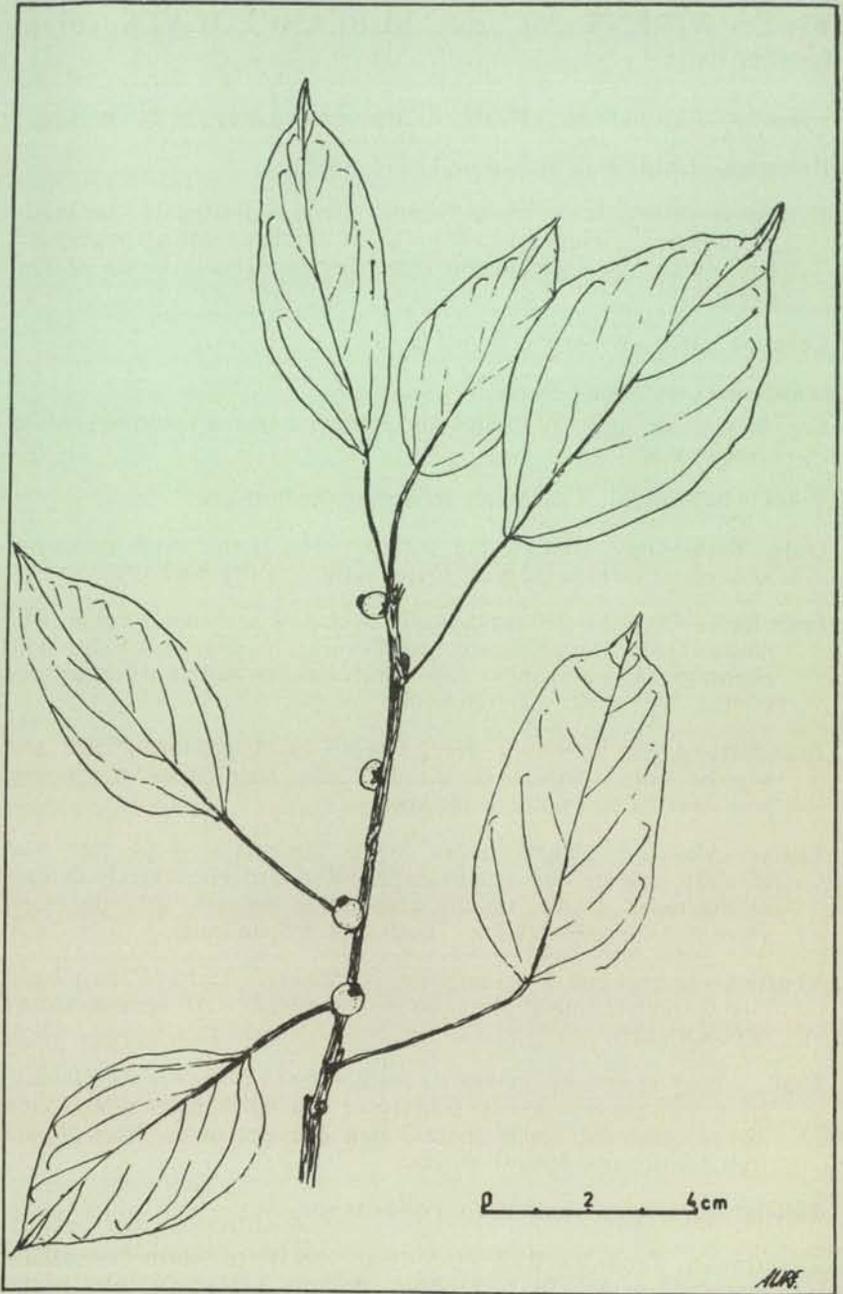


Plate No. 14

*Ficus virens* Ait. var. *sublanceolata* (Miq.) Corner

## FICUS WATKINSIANA Bail.

**Synonym**—*Ficus bellingeri* C. Moore.

**Reference**—Bail. Bot. Bull. 2.

**Derivation**—Watkinsiana after George Watkins, one time President of the Queensland Pharmaceutical Soc. and a keen collector of Queensland plants.

**Common Name**—Strangler Fig, Green-leaved Moreton Bay Fig, Figwood, Watkins Fig.

**Standard Trade Name**—Green-leaved Moreton Bay Fig.

A large tree attaining 45 m in height and a stem diameter of 210 cm.

**Trunk**—*Widely buttressed* and usually surrounding the bole or the remains of one which had supported the fig tree. A common strangler.

**Outer Bark**—Grey, smooth or slightly rough and marked by pustules. Underbark brown. Outer surface of live bark green with rose-red and white streaks.

**Inner Bark**—Blaze on a tree 150 cm diameter rosy-red towards the outer margin with a net-like pattern of pale brown lines and numerous red and brown flecks; paler towards the inner margin. Outer half of the bark somewhat granular; inner half leathery and tough. Copious milky sap, which has a smell similar to that of *F. macrophylla*. 15 mm thick.

**Branchlets**—Thick, mixture of brown and green becoming bright green 5–8 cm from the ends. Leaf scars and the ring-like scars of the fallen stipules prominent and extending to the branches. The leaf bud is enclosed in *purplish-red stipules 5–13 cm long*.

**Leaves**—Alternate, simple, entire, *elliptical*, 10–23 cm long, bluntly pointed at the tip, tapering at the base. Green and shiny on both surfaces, paler on the underside. Leaf stalks 4–7 cm long.

**Venation**—Yellowish-green midrib, channelled above, prominently raised on the underside. The oblique lateral veins also raised, the finer intermediate veins distinct and all joining to form an intramarginal vein about 3 mm inside the margin.

**Fruit**—Fleshy receptacle, *deep purple with paler spots* when ripe, slightly *oblong or almost egg-shaped with a distinct nipple* or point at the tip, 1–4 cm long. In *axillary pairs on broad thick stalks up to 6 mm long*. Fruit ripe September to April.

**Habitat**—Low altitude rainforest of all types.

**Distribution**—From the Williams River, N.S.W. to Gympie, Queensland. Recorded in N.S.W. from Williams River, Allambie Island, Taree, Black Creek F.R., Port Macquarie, Bellangry S.F., Smoky Cape, Yarrahapinni S.F., Way Way S.F., Bellingen, Bundagen F.R., Pine Creek S.F., Never Never S.F., Dorrigo N.P., Tuckers Knob, Boambee Creek, Orara, Bruxner Park F.R., Mt Coramba, Guy Fawkes N.P., Woolgoolga, Madmans Creek F.R., Kangaroo River S.F., Hortons Creek, Boundary Creek S.F., Susan Island, Gibraltar Range S.F.,

Ewingar S.F., Iluka N.R., Mt Pikapene, Ballina, Victoria Park N.R.,  
Lismore, Beaury S.F., Tooloom, Lynch's Creek, Wiangaree S.F.,  
Whian Whian S.F., Broken Head N.R., Brunswick Heads N.R.,  
Mt Warning N.P., and Murwillumbah.

**Timber and Uses**—Wood fairly soft, easily worked, useful for cases; light  
in weight.



Plate No. 15  
*Ficus watkinsiana* Bail.

## STREBLUS BRUNONIANUS (Endl.) F. Muell.

**Synonym**—*Pseudomorus brunoniana* Bur.

**Reference**—F. Muell. *Fragm.* VI, 192.

**Derivation**—*Streblus* from Greek “streblos” crooked, probably referring to the crooked branchlets of *S. aspera* the first species described; *brunoniana* after Robert Brown, the famous naturalist on Capt Flinders’ *Investigator*.

**Common Name**—White Handlewood, Whalebone Tree, Axe-handle Wood, Grey Handlewood, Prickly Fig.

**Standard Trade Name**—White Handlewood.

A small tree occasionally attaining a height of 12–15 m and a diameter of 30–40 cm, usually much smaller. When open grown it forms a fairly symmetrical dense head of foliage; in the rainforest the branches tend to be pendulous giving the tree a willow-like appearance.

**Trunk**—Symmetrical or flanged.

**Outer Bark**—Dark brown, smooth, patterned with longitudinal rows or lines of grey brown corky pustules. Underbark green.

**Inner Bark**—Blaze on a tree 23 cm diameter streaked cream and brown, white, next to the sapwood, brittle, exuding a milky sap. No colour change on exposure. No taste or smell. 4 mm thick.

**Branchlets**—Grey, with scattered brown lenticels and raised transverse ridges left by the fallen leaves. Exuding a milky sap when broken. *Aphananthe philippinensis* resembles this species but does not have a milky sap.

**Leaves**—Alternate, simple, usually but not always with finely toothed margins, elliptical, drawn out into a long point at the tip, 5–8 cm long, smooth and glossy on the upper surface, undersurface clothed in fine rigid hairs which gives the leaf a sandpapery feel, green, paler on the undersurface. Leaf stalks 6 mm long. *A. philippinensis* has a rough upper leaf surface and fewer teeth which are the extremities of lateral veins.

**Venation**—Midrib, lateral and net veins visible on both surfaces but raised and more prominent on the undersurface. Lateral veins do not consistently terminate in teeth.

**Flowers**—Male flowers in dense spikes 1–5 cm long, in the forks of the leaves, each flower stalkless, 2 mm diameter, perianth of four concave boat-shaped segments about 1 mm long enclosing four stamens about 2 mm long. Female flowers in small clusters or short spikes of two to four flowers in the forks of the leaves or at the scars of fallen leaves; each flower stalkless, perianth of four broad segments, about 1 mm diameter surrounding a hairless, egg-shaped ovary surmounted by a style divided to the base into two curved lobes. Flowering period September to May.

**Fruit**—*One-seeded berry, yellow, egg-shaped, 5 mm long, crownèd by the minute forked style.* Fruit ripe January to April.

**Habitat**—Fairly common, scattered throughout the various types of rainforest particularly along watercourses, favouring moist alluvial flats but also on drier rainforest sites.

**Distribution**—From the Illawarra District, N.S.W. to North Queensland and extending as far west as the Bunya Mountains. Also recorded from the Pacific Islands and New Guinea. Recorded in N.S.W. from Milton northwards in most dry or riverine rainforests.

**Timber and Uses**—Light brown, hard, close-grained, tough, oak-like figure, elastic but not durable. Suitable for axe and other handles and mallets. Moderately heavy, 750 kg per cubic metre. Rarely used because of its small size.

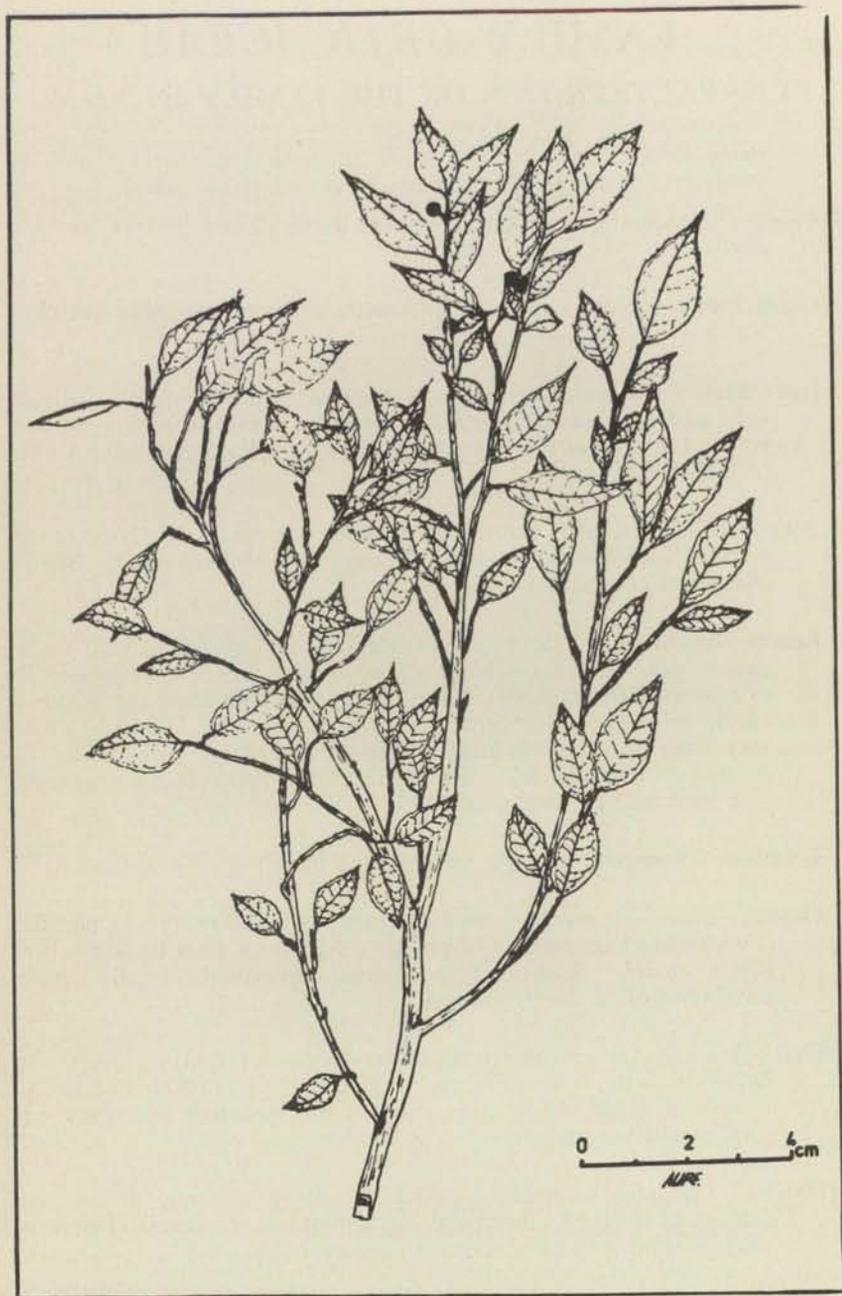


Plate No. 16

*Streblus brunonianus* (Endl.) F. Muell.

# FAMILY URTICACEAE

## CHARACTERISTICS OF THE FAMILY IN N.S.W.

Huge trees (*Dendrocnide excelsa*), medium (*D. photinophylla*) or small trees or shrubs (*Pipturus argenteus* and *D. moroides*).

**Trunk**—Prominently buttressed or fluted in *D. excelsa* and *D. photinophylla*.

**Outer Bark**—Smooth, cream to grey with scales or vertically arranged lenticels.

**Inner Bark**—Pale pink with darker vertical stripes (*D. excelsa*—without taste and *D. photinophylla*—astringent), or cream oxidizing to dark brown (*D. moroides*) or to orange brown on the inner margin only (*P. argenteus*).

**Branchlets**—Green with numerous stinging hairs (*D. excelsa* and *D. moroides*) or few to no stinging hairs (*D. photinophylla*). Brown with short grey hairs in *P. argenteus*.

**Leaves**—Alternate, simple, toothed (except *D. photinophylla*) with transparent stinging hairs (except *P. argenteus*). Dull grey-green (*D. excelsa* and *D. moroides*), shiny dark green both sides (*D. photinophylla*) or felty white beneath (*Pipturus argenteus*). Juvenile leaves very large up to 30 cm long and heart shaped (*D. excelsa* and *D. moroides*) or smaller and elliptic with a short point (*D. photinophylla*) or a long tail (*Pipturus argenteus*).

**Venation**—Three to five major veins arising from the base of the leaf.

**Flowers**—Sexes in separate small creamy-green flowers in panicle (*Dendrocnide*) or clusters (*Pipturus*). Sepals as four to five lobes. Petals absent. Stamens four to five opposite the sepals. Style simple but often deeply divided.

**Fruit**—A small nut or slightly succulent drupe not splitting open. In *Dendrocnide* the fruit stalks are swollen, fleshy and edible resembling a mass of grubs, whereas in *Pipturus* the succulent fruit mass resembles a white mulberry.

**Habitat**—Typically secondary species following clearing or cyclone damage of lowland subtropical, dry or littoral rainforest (*Dendrocnide*) or subtropical and riverine rainforest (*Pipturus*).

**Distribution**—All species occur in Queensland but *Pipturus* and *D. moroides* extend south to the Richmond River, *D. photinophylla* to the Hunter River and *D. excelsa* to Bega.

**Timber and Uses**—All are very soft and non-durable with no current use.

# KEY TO THE RAIN FOREST TREE SPECIES OF URTICACEAE IN N.S.W.

## A. USING LEAVES AND BRANCHLETS ONLY

- 1. Leaves distinctly white beneath ..... *Pipturus argenteus*  
(Forst. f.) Wedd. 2
- 1. Leaves green beneath ..... 2
  - 2. Leaves shiny, dark green above, elliptical .....  
*Dendrocnide photinophylla* (Wedd.) Chew
  - 2. Leaves dull, grey-green above, heart-shaped ..... 3
  - 3. Leaf stalk often attached inside the leaf edge, leaf surface  
hairy on top ..... *Dendrocnide moroides* (Wedd.) Chew
  - 3. Leaf stalk always attached to the leaf edge, leaf surface  
smooth on top except for scattered stinging hairs .....  
*Dendrocnide excelsa* (Wedd.) Chew

## B. USING BARK ONLY

- 1. Blaze pink ..... 2
- 1. Blaze cream ..... 3
  - 2. Live bark very astringent ..... *Dendrocnide photinophylla*  
(Wedd.) Chew
  - 2. Live bark not astringent .... *Dendrocnide excelsa* (Wedd.) Chew
  - 3. Whole blaze turning dark brown in 30 secs .....  
*Dendrocnide moroides* (Wedd.) Chew
  - 3. Inner margin only turning orange brown .....  
*Pipturus argenteus* (Forst. f.) Wedd.

## DENDROCNIDE EXCELSA (Wedd.) Chew

**Synonym**—*Laportea gigas* Wedd.

**Reference**—Chew in Gard. Bull. Singapore, vol. 21, 203, 1965.

**Derivation**—Dendrocniide from Greek “dendros” a tree and “cnid” a nettle, literally tree nettle; excelsa from Latin “excelsa” tall.

**Common Name**—Giant Stinging Tree, Fibrewood.

**Standard Trade Name**—Giant Stinging Tree.

A large tree attaining a height of 40 m and a stem diameter of 200 cm.

**Trunk**—*Fluted, buttressed*, moderately or widely flanged, sometimes the flanges extending the full length of the stem.

**Outer Bark**—*Creamy grey, smooth on young trees*, but on large trees rough with soft corky markings and scales as well as other small sappy protuberances formed by the live bark, which is green (when cut), with pink markings.

**Inner Bark**—Blaze on a tree 60 cm diameter *pale pink with darker pink vertical stripes* which form a vertical row outside the pale inner margin and extending towards the outer green margin where several may unite and taper into a fine point. The inner part of the bark is very fibrous and aborigines were said to have made fishing lines and nets from it. The blaze does not change colour very rapidly, but may appear slightly darker after eight minutes exposure. The freshly cut bark has a faint but distinctive liniment smell but no taste. 12 mm thick.

**Branchlets**—Green, covered with *rigid stinging hairs*, young shoots enclosed in a deciduous stipule about 2.5 cm long.

**Leaves**—Alternate, simple, *distinctly toothed* but on older trees the leaves are less regularly toothed. *Heart-shaped*, may exceed 30 cm in length or only 10 cm on mature trees, tapering into a blunt point at the tip. Lower surface downy, more or less smooth above, *both surfaces sprinkled with rigid stinging hairs* which become fewer or disappear from the leaves of large trees. *Dull grey green*. Stalks variable in length from under 2.5 to 15 cm.

**Venation**—Visible both surfaces but more distinct on the underside.

**Flowers**—Male and female flowers on separate trees, yellowish-green. In short panicles in the forks of the leaves, often not exceeding the leaf stalks in length. Flowering period November to April.

**Fruit**—*Nut, black, round, flattened about 2.5 mm broad* attached to the enlarged juicy stalk. These numerous *swollen pedicels form a fleshy whitish mass turning pink with age*. Although edible, the scattered stinging hairs make this inadvisable. Fruit ripe April to August.

**Habitat**—In sub-tropical, dry and littoral rainforests particularly in areas disturbed by cyclone or clearing.

**Distribution**—Coastal scrubs from Tathra near Bega N.S.W. to Imbil, Queensland. Recorded in N.S.W. from most coastal rainforests on fertile soils, particularly where derived from basalt or alluvial.

**Timber and Uses**—Dries to brownish colour, soft and heavy when green, but is very light in weight when dry. Of no particular use, except to the aborigines who made nets and lines from the fibres.

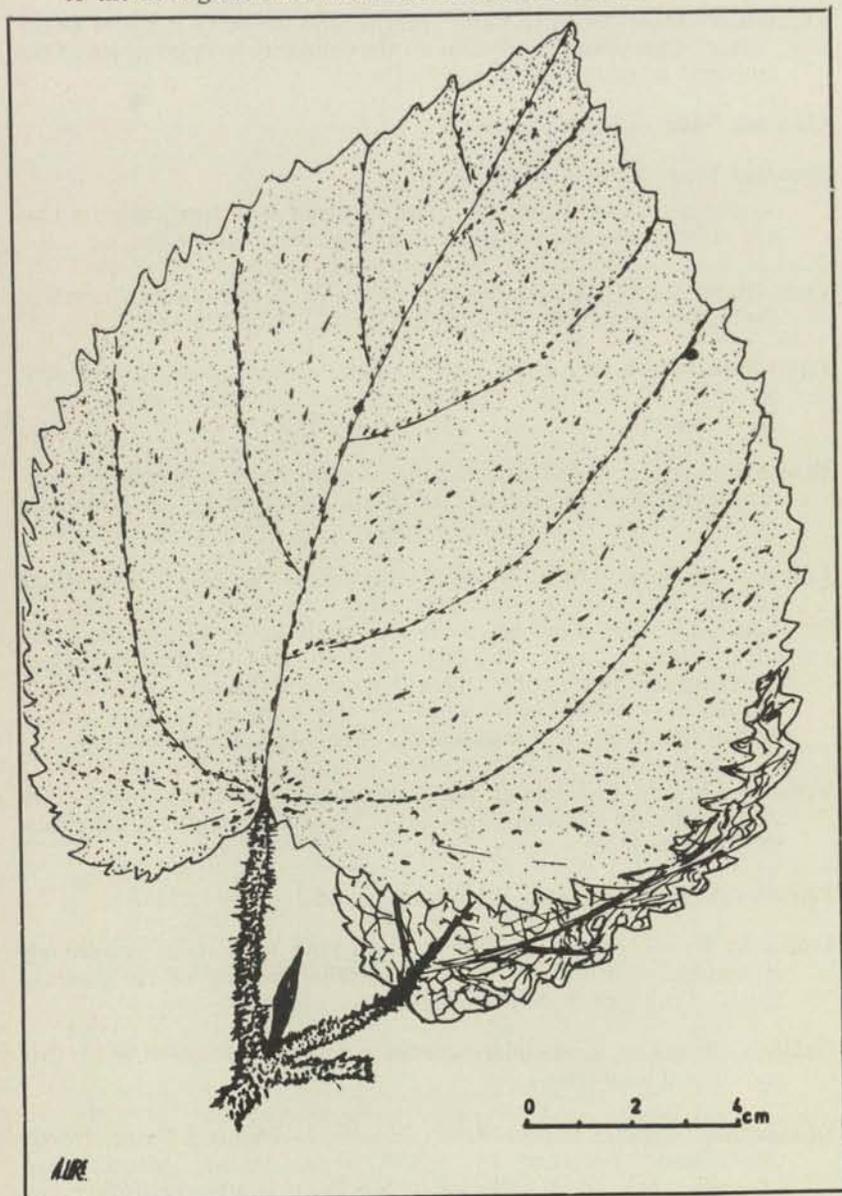


Plate No. 17

*Dendrocnide excelsa* (Wedd.) Chew

## DENDROCNIDE MOROIDES (Wedd.) Chew

**Synonym**—*Laportea moroides* Wedd., *Urtica moroides* A. Cunn.

**Reference**—Gard. Bull. Singapore, vol. 21, 204, 1965.

**Derivation**—Moroides from Latin "morus" the mulberry tree and Greek "eidos" resembling, in allusion to the similarity in appearance of the fruit and leaves to that of the mulberry.

**Common Name**—Gympie Stinger.

**Standard Trade Name**—None.

A shrub, up to 4 m tall and 3 cm diameter with stinging hairs that are more severe and persistent than the other two species.

**Outer Bark**—Light grey, smooth with vertically elongated raised lenticels. Dead bark paper thin. Outer surface of live bark green.

**Inner Bark**—Blaze on a stem 3 cm diameter creamy-green, turning dark brown in 30 seconds. Taste not known but has a musty smell. 2 mm thick.

**Branchlets**—Green, sprinkled with long, stinging hairs, leaf scars prominent, lenticels inconspicuous, leaf buds protected by an acuminate bract.

**Leaves**—Alternate, simple, regularly saw-toothed, broadly ovate, 10–20 cm long or longer if juvenile, tapering to a short point at the tip. Leaf stalk often attached to the leaf blade up to 12 mm from the edge (*peltate*). Leaves dull green on both sides and densely clothed with stinging hairs. Differs from *D. excelsa* in the more conspicuously and regularly toothed leaves which are also hairy on the upper surface and in the *peltate* leaf attachment. Leaf stalk 10–35 cm long.

**Venation**—Midrib and lateral veins conspicuous on both sides. Net veins visible on the lower side only. Veins sunken above, raised on the lower surface.

**Flowers**—As for *D. excelsa*. Flowering period January to March.

**Fruit**—As for *D. excelsa*. White to deep pink fruit stalks resembling mulberries. Edible but not recommended because of the stinging hairs. Fruit ripe June to September.

**Habitat**—Occurs as a secondary species on disturbed sub-tropical, dry and littoral rainforest.

**Distribution**—Upper Clarence River, N.S.W. to Daintree River, North Queensland. Recorded in N.S.W. from Drake, Nimbin and Murwillumbah. Last collected in N.S.W. at Nimbin in 1925.

**Timber and Uses**—Too small to be used.

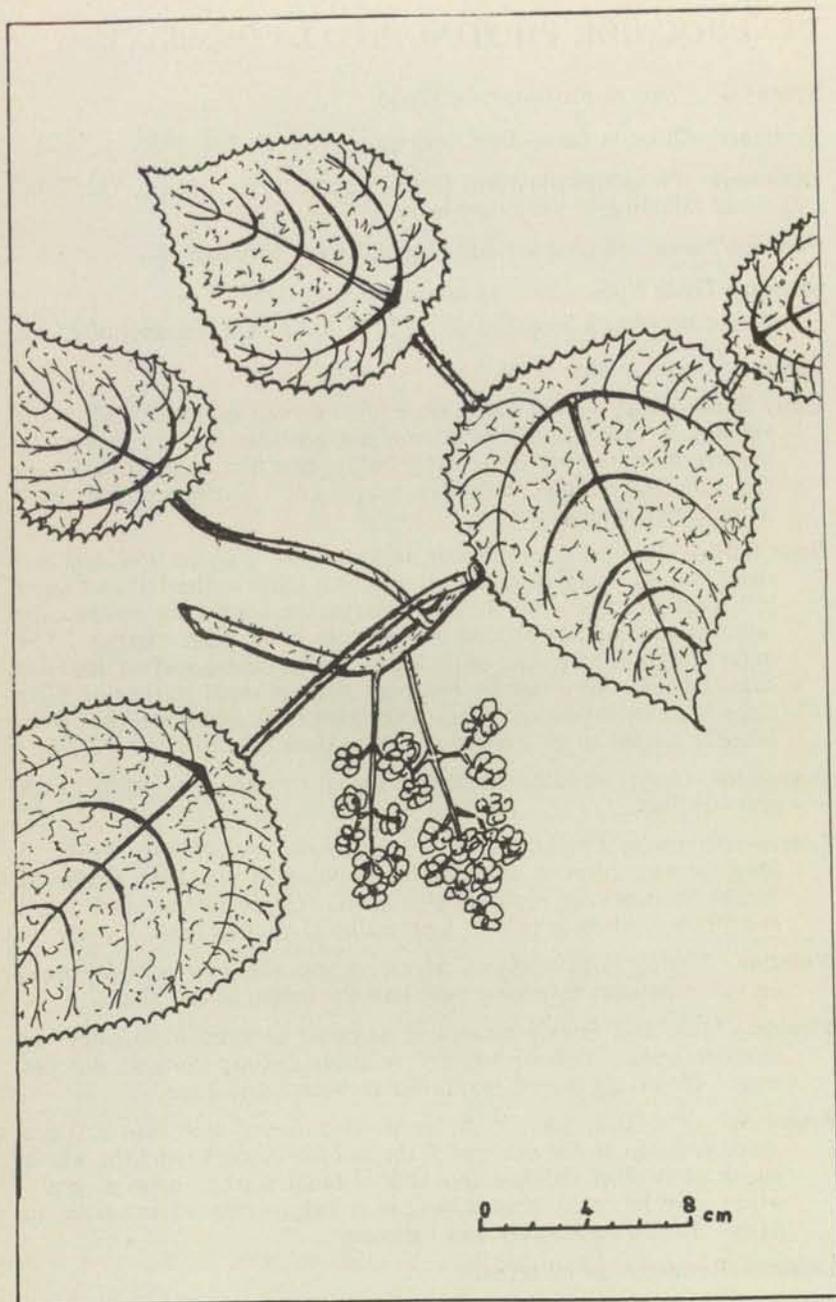


Plate No. 18

*Dendrocnide moroides* (Wedd.) Chew.

## DENDROCNIDE PHOTINOPHYLLA (Wedd.) Chew

**Synonym**—*Laportea photinophylla* Wedd.

**Reference**—Chew in Gard. Bull. Singapore, vol. 21, 205, 1965.

**Derivation**—Photinophylla from Greek "photeinos", shining, "phyllon" a leaf (alluding to the glossy leaves).

**Common Name**—Shining-leaved Stinging Tree. Fibrewood.

**Standard Trade Name**—Shining-leaved Stinging Tree.

A tree attaining a height of about 30 m and a stem diameter of 75 cm.

**Trunk**—*Flanged or buttressed.*

**Outer Bark**—Grey, smooth, the surface often uneven with small ridges and pimples of various sizes which are not pustular but are formed by the live bark and are covered by only a fine film of dead bark. A few soft corky scales may also be present. Surface of live bark mottled pink and green.

**Inner Bark**—Blaze on a tree 30 cm diameter pink with vertical dark red stripes on the inner half, several of which unite at the top and taper into a fine point towards the outer margin but spread out and become more or less equally spaced towards the inner paler margin. The outer margin is a mixture of pink and green. Blaze surface does not change colour very rapidly but may show a slight darkening after eight minutes exposure. Very astringent taste and cane-like smell. Blaze is similar to *D. excelsa*. 10 mm thick.

**Branchlets**—Grey, smooth, becoming green towards the ends. Leaf scars distinct.

**Leaves**—Alternate, simple, entire or sinuate-toothed, elliptic, 6–13 cm long, protracted into a short blunt point at the tip. Glabrous except for scattered rigid stinging hairs. Upper surface dark green and glossy, underside paler. Leaf stalks 15–55 mm long.

**Venation**—Visible both surfaces, three nerved, the two outside basal nerves sometimes extending only half the length of the blade.

**Flowers**—Male and female flowers in separate inflorescences often on separate trees. Yellowish-green, in short axillary panicles 4–5 cm long. Flowering period November to March and June.

**Fruit**—Nut or achene, whitish, flattened, disc-shaped, less than 2.5 mm diameter borne on the enlarged fleshy and juicy stalklet and the whole bunch of swollen stalklets appear as a tangled white mass of grubs which may be eaten after tossing in a bag to remove any stinging hairs. Fruit ripe January and February.

**Habitat**—Rainforest of all types.

**Distribution**—Coastal scrubs from Gloucester, N.S.W. to Atherton-North Queensland. Recorded in N.S.W. from Seal Rocks, Williams River, Gloucester, Coneac, Nabiac, Wingham, Lorne S.F., Bellangry S.F., Smoky Cape, Yarrhapinni S.F., Way Way S.F., Pine Creek S.F., Bundagen F.R., Orara East S.F., Woolgoolga Creek F.R.,

Madman's Creek F.R., Waihou F.R., Bagawa S.F., Kangaroo River S.F., Horton's Creek, Boundary Creek S.F., Susan Island, Iluka N.R., Woodenbong, Mt Pikapene S.F., Lismore, Victoria Park N.R., Yabbra S.F., Rivertree, Tooloom S.F., Beaury S.F., Toonumbar S.F., Unumgar S.F., Lynchs Creek, Acacia Creek, Nimbin, Terania Creek, Whian Whian S.F., Brunswick Heads, Mt Warning N.P., Murwillumbah, Cudgen and Stotts Island N.R.

**Timber and Uses**—Brownish colour, very soft when green and heavy owing to the large moisture content but dries out extremely light in weight. Of no particular use, except that the aborigines used the fibre for cordage, fishing nets and dilly bags.

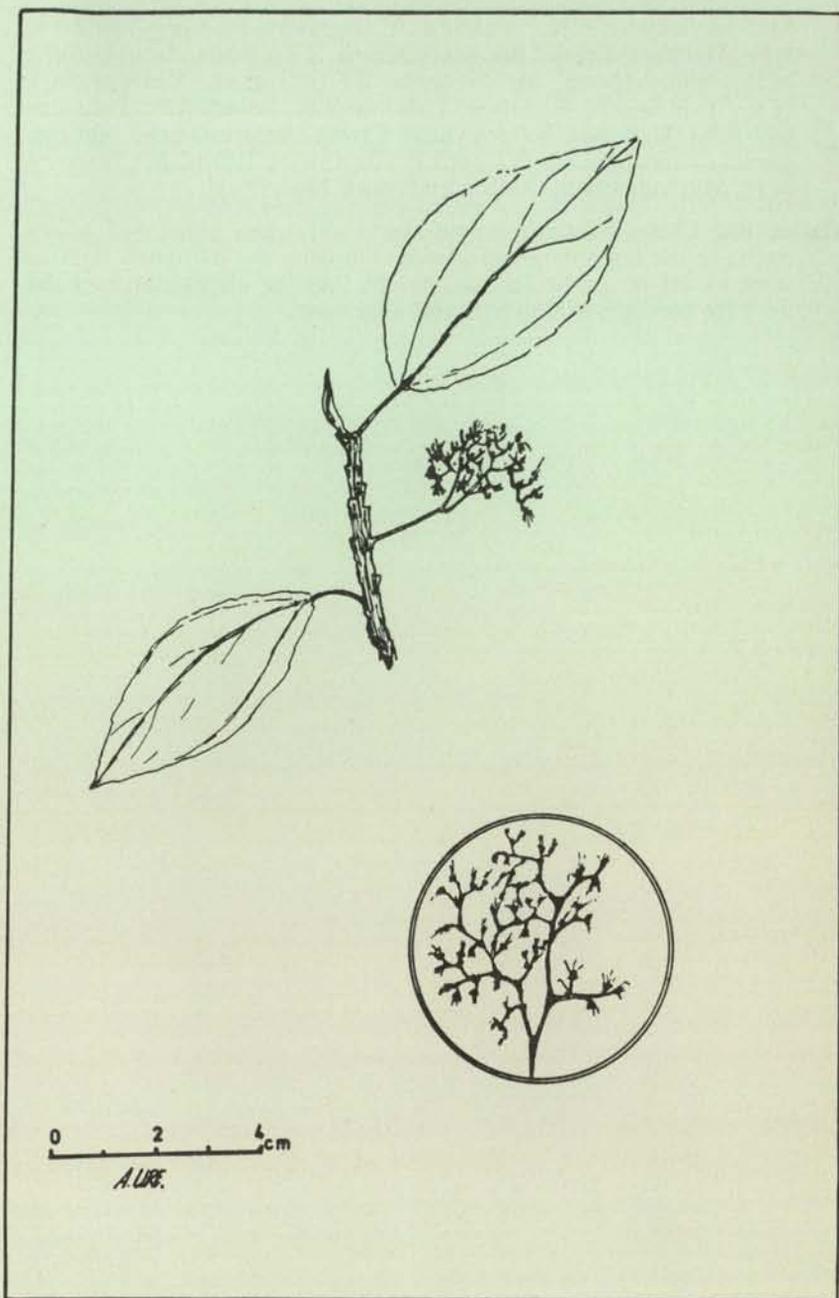


Plate No. 19

*Dendrocnide photinophylla* (Wedd.) Chew

## PIPTURUS ARGENTEUS (Forst. f.) Wedd.

**Synonym**—*Pipturus propinquus* Wedd.

**Reference**—DC. Prod. XVI, 1, 235.

**Derivation**—*Pipturus* from Latin "pipto" to fall and "ures" a tail, in reference to the hairy tail-like stigma which is rapidly shed; *argenteus* from Latin "argenteus" silver, alluding to the silvery under-surface of the leaves.

**Common Name**—White Nettle, Native Mulberry.

**Standard Trade Name**—None.

A spreading shrub or small tree up to 8 m tall and 20 cm diameter.

**Outer Bark**—Grey or greyish-brown, smooth with numerous raised pustules which are often arranged in vertical rows. Dead bark paper thin, fawn. Outer surface of live bark green.

**Inner Bark**—Blaze on a tree 20 cm diameter cream, sometimes with creamy-fawn vertical stripes extending from the outer margin to the centre. Very soft. Creamy-white at the inner margin which alone turns orange-brown on exposure. The surface of the blaze sometimes becomes sticky a few minutes after cutting. Slimy taste but no smell. 10 mm thick.

**Branchlets**—Brown but clothed with short grey hairs.

**Leaves**—Alternate, simple, margins toothed irregularly or sometimes very regularly saw-toothed, broad lanceolate to elliptic 8–13 cm long, tapering to a fine point at the tip, rounded or scarcely heart-shaped at the base. Dark green and smooth on the upper surface, underside hoary or white with a close felt. Leaf stalks, 2–5 cm.

**Venation**—Mostly three, but sometimes with five prominent basal longitudinal veins. Midrib, basal and lateral veins visible on the upper surface and very distinct on the underside, including the fine net veins.

**Flowers**—Male and female flowers on separate trees. White, in small globular clusters, distant along the stem of single axillary spikes up to 6 cm long. Flowering period January.

**Fruit**—Succulent syncarp, white, globular, 4–6 mm diameter. Resembling a small mulberry fruit. Sweet and juicy to eat. Fruit ripe July.

**Habitat**—On the borders of subtropical and riverine rainforests, often appearing in regrowth in felled scrub areas.

**Distribution**—From Richmond River, N.S.W. to North Queensland, Pacific Islands. Recorded in N.S.W. from Lismore, Toonumbar S.F., Wiangaree S.F., Moonanbah, Byron Bay, Uki, North Tumbul-gum, Mt Warning N.P. and Limpinwood N.R.

**Timber and Uses**—Wood brown, soft, close grained, but of no particular use. The bark yields good fibre which was used by the natives of some of the Pacific Islands for making fishing nets. A brown dye was obtained from the bark by the aborigines.

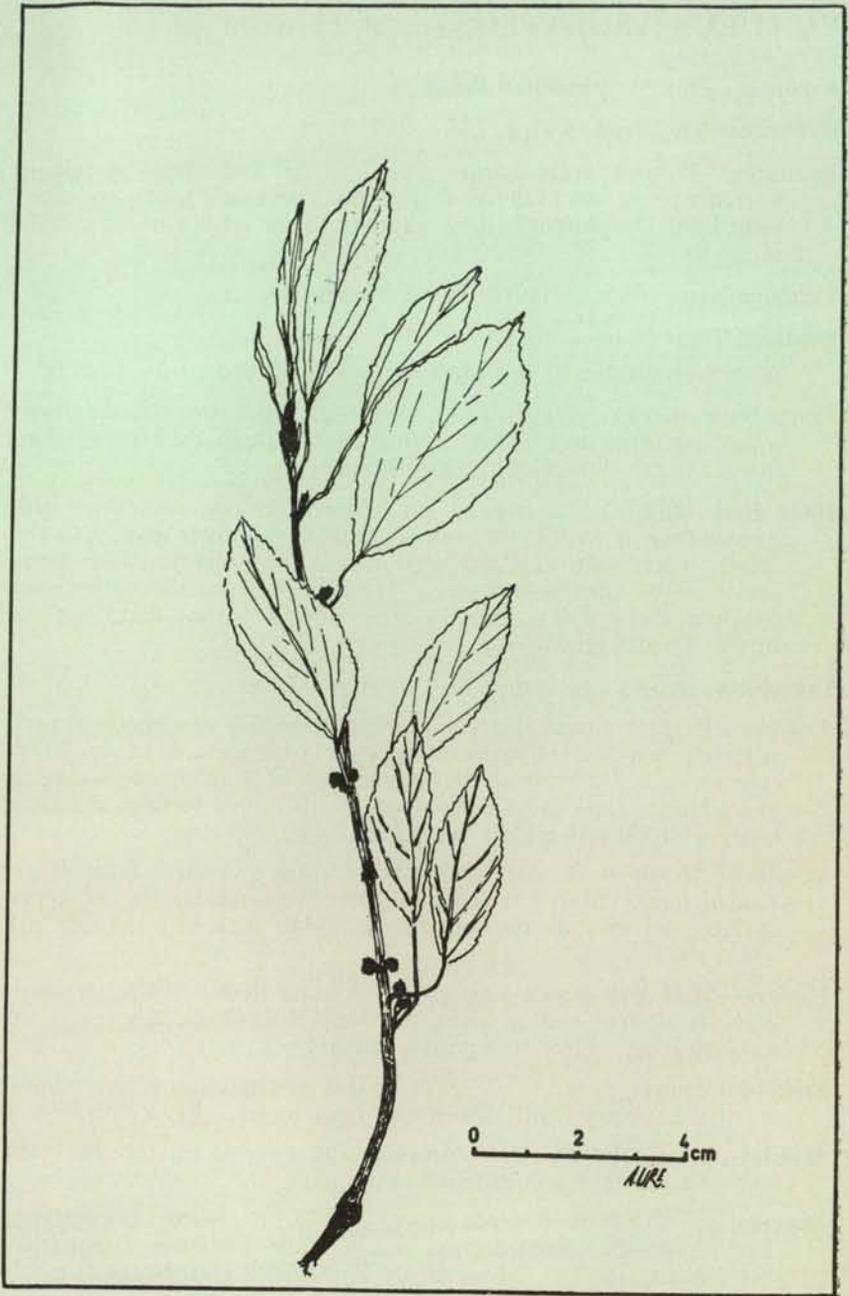


Plate No. 20

*Pipturus argenteus* (Forst. f.) Wedd.

APPENDIX

LIST OF LOCATIONS OF STATE FORESTS, FLORA RESERVES  
(INCLUDING FOREST PRESERVES), NATIONAL PARKS AND  
NATURE RESERVES

Forest	No.	Location
Acacia Ck and Koreelah S.F.	1	19 km NW of Urbenville.
Bagawa S.F.	30	23 km NW of Coffs Harbour.
Banda Banda F.R.	..	40 km WSW of Kempsey.
Barcoongere S.F.	826	35 km SE of Grafton.
Barrington Tops N.P.	..	35 km NW of Dungog.
Bellangry S.F.	524	27 km NW of Wauchope.
Bellinger River S.F.	651	13 km SSW of Dorrigo.
Bielsdown S.F.	490	4 km N of Dorrigo.
Big Fella Gum Tree F.R.	..	8 km SSW of Kendall.
Black Ck F.R.	..	15 km SW of Wauchope.
Boambee S.F.	611	6 km SW of Coffs Harbour.
Bodalla S.F.	606	8 km NW of Narooma.
Boonoo Boonoo S.F.	119	15 km NNW of Tenterfield.
Boundary Ck S.F.	627	40 km NNW of Dorrigo.
Boyne S.F.	832	8 km N of Batemans Bay.
Bril Bril S.F.	158	24 km NW of Wauchope.
Broken Bago S.F.	184	3 km SW of Wauchope.
Bruxner Pk F.R.	..	6 km NW of Coffs Harbour.
Buckra Bendinni S.F.	471	27 km WNW of Macksville.
Bulga S.F.	285	37 km NW of Taree.
Bundagen F.R.	..	7 km S of Sawtell.
Cangi S.F.	354	48 km W of Grafton.
Carrai S.F.	909	52 km W of Kempsey.
Chapman's Plain F.R.	..	20 km NNW of Dorrigo.
Cherry Tree S.F.	168	30 km SW of Casino.
Chichester S.F.	292	53 km WNW of Bulahdelah.
Clouds Ck S.F.	111	24 km NNW of Dorrigo.
Comboyne S.F.	698	15 km WSW of Kendall.
Conglomerate S.F.	349	21 km NNW of Coffs Harbour.
Dingo S.F.	779	30 km NW of Taree.
Donaldson S.F.	121	16 km N of Urbenville.
Dorrigo N.P.	..	3 km SE of Dorrigo.
Doyles River S.F.	911	58 km W of Wauchope.
Edinburgh Castle S.F.	541	10 km E. of Urbenville.
Ellis S.F.	831	29 km NW of Dorrigo.
Ewingar S.F.	845	42 km E of Tenterfield.
Forestland S.F.	529	15 km SW of Tenterfield.
Gibraltar Range S.F.	352	47 km NE of Glen Innes.
Girard S.F.	303	32 km NE of Tenterfield.
Gladstone S.F.	163	8 km SW of Bellingen.
Glenugie S.F. and F.R.	26	19 km SE of Grafton.
Goonimbar S.F.	344	7 km NNE of Nimbin.
Guy Fawkes N.P.	..	45 km NW of Dorrigo.
Hyland S.F.	659	31 km WNW of Dorrigo.
Ingalba S.F.	527	18 km SW of Macksville.
Kangaroo River S.F.	21	34 km NW of Coffs Harbour.
Killungoondie S.F.	849	13 km NE of Dorrigo.
Kiwarrak S.F.	298	5 km S of Taree.
Levers Plateau F.R.	..	35 km NNW of Kyogle.
Limpinwood N.R.	..	5 km NW of Tyalgum.
Lower Bucca S.F.	29	14 km NNW of Coffs Harbour.
Madman's Ck F.R.	..	10 km NW of Woolgoolga.
Mandle & Beaury S.F.	2	19 km SW of Urbenville.
Marengo S.F.	318	34 km NW of Dorrigo.

Forest	No.	Location
Massey's Ck S.F. .. .. .	886	89 km WNW of Bulahdelah.
Mebbin S.F. .. .. .	626	24 km NNE of Kyogle.
Minnamurra N.P. .. .. .	..	15 km SW of Moss Vale.
Mistake S.F. .. .. .	525	23 km W of Macksville.
Mobong Ck F.R. .. .. .	..	16 km NNE of Dorrigo.
Mooball S.F. .. .. .	342	8 km SE of Murwillumbah.
Moonpar S.F. .. .. .	489	16 km NNW of Dorrigo.
Mt Belmore S.F. .. .. .	361	42 km SW of Casino.
Mt Boss S.F. .. .. .	910	48 km NW of Wauchope.
Mt Lindsay S.F. .. .. .	542	19 km NE of Urbenville.
Mt Pikapene S.F. .. .. .	170	39 km SW of Casino.
Mt Warning N.P. .. .. .	..	10 km SW of Murwillumbah.
Nambucca S.F. .. .. .	543	10 km NNE of Macksville.
Never Never S.F. .. .. .	613	11 km E of Dorrigo.
Newry S.F. .. .. .	487	19 km N of Macksville.
Norfolk Falls F.R. .. .. .	..	25 km NE of Coolah.
Nulla Five-Day S.F. .. .. .	601	48 km NW of Kempsey.
Nullum S.F. .. .. .	356	16 km WSW of Mullumbimby.
Oakes S.F. .. .. .	609	40 km NW of Macksville.
Olney, S.F. .. .. .	124	24 km NW of Wyong.
Orara East S.F. .. .. .	536	10 km NW of Coffs Harbour.
Orara West S.F. .. .. .	535	18 km W of Coffs Harbour.
Pine Brush S.F. .. .. .	661	24 km NE of Grafton.
Pine Ck S.F. .. .. .	537	16 km SSW of Coffs Harbour.
Rowley's Ck F.R. .. .. .	..	32 km NW of Wingham.
Red Cedar F.R. .. .. .	..	18 km NNW of Dorrigo.
Riamukka S.F. .. .. .	992	25 km SSE of Walcha.
Richmond Range S.F. .. .. .	610	35 km NW of Casino.
Roseberry S.F. .. .. .	608	32 km NNW of Kyogle.
Roses Ck S.F. .. .. .	829	25 km SW of Bellingen.
Royal N.P. .. .. .	..	5 km SSW of Sutherland.
Sea Acres Reserve. .. .. .	..	Port Macquarie.
Shea's Nob S.F. .. .. .	803	34 km NNW of Dorrigo.
Sherwood N.R. .. .. .	..	20 km NW of Woolgoolga.
Stott's Island N.R. .. .. .	..	12 km NE of Murwillumbah.
Strickland S.F. .. .. .	289	64 km SSW of Newcastle.
Styx River S.F. .. .. .	339	53 km E of Armidale.
Toooloom S.F. .. .. .	2B	19 km SW of Urbenville.
Toonumbar S.F. .. .. .	343	23 km WNW of Kyogle.
Tuckers Nob .. .. .	612	13 km SW of Coffs Harbour.
Unumgar S.F. .. .. .	540	14 km NE of Urbenville.
Victoria Pk N.R. .. .. .	..	15 km SE of Lismore.
Waihou F.R. .. .. .	..	18 km WNW of Woolgoolga.
Warung S.F. .. .. .	457	25 km NE of Coolah.
Washpool S.F. .. .. .	355	72 km NNW of Grafton.
Way Way S.F. .. .. .	470	10 km SE of Macksville.
Wedding Bells S.F. .. .. .	360	19 km N of Coffs Harbour.
Whian Whian S.F. .. .. .	173	16 km SW of Mullumbimby.
Wiangaree S.F. .. .. .	358	24 km N of Kyogle.
Wild Cattle Ck S.F. .. .. .	488	32 km W of Coffs Harbour.
Wilson River F.R. .. .. .	..	37 km SW of Kempsey.
Woodburn S.F. .. .. .	755	42 km NNE of Batemans Bay.
Woolgoolga Ck F.R. .. .. .	..	5 km W of Woolgoolga.
Yarrhapinni S.F. .. .. .	32	5 km SE of Macksville.

F.C. of N.S.W. Photofile  
Plate I—SC 3436; II—3432; III—3421; IV—3433; V—3437; VI—3434; VII—3430; VIII—3428  
IX—3440; X—3429; XI—3422; XII—3426; XIII—3431; XIV—3423; XV—3427; XVI—3438; XVII—3425  
XVIII—3435; XIX—3439; XX—3424.

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