

APPENDIX VIII

A SAMPLE OF NINETEENTH CENTURY USES FOR CERTAIN N.S.W.
PLANTS INDICATING THE DIVERSE WAYS IN WHICH THE
SETTLERS USED THE BUSH TO SUPPLY SOME BASIC NEEDS.

"...on entering upon this subject, I must premise that it will be quite impossible, and indeed out of the pale, and beyond the object of this work, to do more than briefly notice the more common, useful, and remarkable vegetable productions of the colony."

John Henderson, 1851.¹

"The great genus Eucalyptus alone furnishes an inexhaustible supply of material for the erection of dwellings, the building of ships, the formation of railways and bridges, the construction of machinery, the purposes of paling, fencing, and burning, and a thousand objects too numerous to mention."

Rev. William Woolls, 1878.²

-
- 1 J. Henderson: Excursions and Adventures in New South Wales...Lond., 1851, II, p.211.
2 W. Woolls: Lectures on the Vegetable Kingdom...Syd., 1879, p.179.

APPENDIX VIII

A SAMPLE OF NINETEENTH CENTURY USES FOR CERTAIN N.S.W.
PLANTS INDICATING THE DIVERSE WAYS IN WHICH THE SETTLERS
USED THE BUSH TO SUPPLY SOME BASIC NEEDS.

	<u>Page</u>
1. BUILDING MATERIALS:	
(a) Domestic	49
(b) Transport and Communication	
i) Road Vehicle Construction.	71
ii) Road, Bridge and Wharf Construction.....	79
iii) Boat and Ship Building.	82
iv) Railway Construction.	87
v) Telegraph and Telephone Line Construction...	90
2. HUMAN FOODS AND BEVERAGES.	92
3. MEDICINAL PREPARATIONS.	101
4. PASTORAL, AGRICULTURAL, COMMERCIAL AND INDUSTRIAL USES....	114
5. ORNAMENTAL PLANTS (with some commercial implications).....	163
6. MISCELLANEOUS USES (including some minor domestic and commercial uses not mentioned elsewhere.)	168

This sample of plant uses has been compiled from reminiscences, scientific and semi-scientific journals, newspapers, published travels and memoirs, diaries, and from information supplied in response to a survey made through N.S.W. Historical Societies in 1967. Some of the published sources post-date 1880, but clearly refer to earlier times when the media for publicising certain uses were not available. The chief problems have been to ascertain vernacular names, past and present, and to equate these with current botanical names. An essential part of this thesis is the submission of those botanical determinations which appear most probable on botanical, ecological and geographical grounds.

Much of what is included here has not been verified by scientific means. For example, the chemical or medical bases for some of the 'bush' remedies have not necessarily been established. It is clear that some plant uses are more in the realm of bush lore, than of scientific fact, but this does not affect the history of the matter. The important thing from the historical viewpoint is to consolidate at least some of the information which is either unrecorded, or recorded in obscure places. No plant is listed unless there is definite evidence, on someone's authority that it was in fact used. Thus plants which exude a gum, or have some other property, are not listed on these grounds alone; the plant or plant product must have had some authenticated application. The debt to J. H. Maiden's numerous

papers, and to his Useful Plants (1889) in particular, will be obvious, but it became very clear during the work that various authors repeated earlier statements often without changing the words or acknowledging the original observer. Clearly the pioneer work of such men as William Macarthur, Charles Moore and William Woolls deserves recognition. Efforts have been made to quote the earliest authorities, but doubtless there remain many statements attributed to those who repeated or published the statements of others.

Where the authority is an author and date (e.g. R. Mudie, 1829; Maiden, 1889) the actual work can be ascertained from the Bibliography. References to unlisted works, to learned journals, and to correspondents, are given in full. The dates refer to the time a statement was originally made, or published, or received in the course of an interview or correspondence.

The aim here is to emphasise a variety of uses for plants, rather than a variety of species. The emphasis is therefore upon the human aspects arising from life in the bush, rather than upon botanical taxonomy. Thus the plants are listed, sometimes repetitively, under various uses, and not according to botanical affinity. The uses themselves range from the timber suitable for slabbing a well to a plant infusion for a 'hangover'. The list of plants given for each particular human use is by no means exhaustive; just as the needs are but samples of contingencies arising from bush life, so are the lists of plants employed for meeting those needs. The point is to emphasise the remarkable adaptability and ingenuity of the settlers. Many of these plant uses were very localized or transitory, or both, thereby making it more desirable historically that they should be recorded.

When we ask, "Why did they try this plant or that, for a certain purpose?" it seems that there are six possible answers:

- i) Sometimes, rarely in fact, the settlers followed the lead of the aborigines.
- ii) Sometimes a cosmopolitan species was known to have a certain use in England, or in India or the East Indies, and such a use was adopted.
- iii) Sometimes an endemic species bore some real or superficial resemblance to a plant which had a definite use in the country from which the settlers came. There was often a transfer of vernacular name in such cases.
- iv) There may have been an accidental discovery.
- v) There may have been an intentional discovery based upon previous knowledge and experience.
- vi) The discovery may have been due to trial and error or to random experiment.

1. BUILDING MATERIALS.

(a) DOMESTIC PURPOSES.

GENERAL BUILDING PURPOSES.

Blackbutt, Blackbutted Gum, Flintwood. <u>Eucalyptus pilularis</u>	"Much used in house-building." (Atkinson, 1826); "One of the best hardwoods we have" (Maiden); "There is a fine specimen...growing on the Bulli Mountain, not far from the road, a little below the 'Elbow,' which is perhaps the largest tree in New South Wales." (Nilson, 1884).
Tallow-wood; Mahogany. <u>E. microcorys</u>	"After ironbark, tallow-wood is the most valuable of our hardwoods" (Maiden); "Very useful for building purposes" (Nilson). Greasy nature of wood made it difficult for the splitting wedge to 'draw'. Very large trees often hollow.
Grey, White, or Red Ironbark; She Ironbark <u>E. paniculata</u>	Very hard and tough; long-lasting in ground. Mainly on coast and ranges. Generally acclaimed.
Grey, Red, Narrow-leaved Ironbark <u>E. crebra</u>	Hard, tough timber; widely distributed being found in drier areas as well as on coast.
Ironbark, Mugga; Red, Red-flowering or Black Ironbark <u>E. sideroxylon</u>	Generally on poorer soil; not as good as other ironbarks, but useful for some building purposes. (See for example, J. V. de Coque, <u>Proc. Roy. Soc. NSW</u> , 1894, p.201).
White or Broad-leaved Stringybark <u>E. eugenioides</u>	Mainly coastal; splits well. "Very much used in building." (Atkinson, 1826); "One of the most prized of the colonial hardwoods for house carpentry." (Wm. Macarthur, 1855).
Red or Mountain Stringybark <u>E. macrorhyncha</u>	Durable reddish timber, most useful for building. Inland rather than coastal.
Brown, Red, Coast Stringy- bark <u>E. capitellata</u>	"Excellent for house-carpentry" (Nilson, 1884). Highly durable building timber.
Messmate, Stringybark. <u>E. obliqua</u>	"Excellent for house-carpentry" (Nilson, 1884). Now imported as Tasmanian Oak, but NSW trees have tended to fall from favour.
White Mahogany <u>E. acmenioides</u>	Mainly coastal. Exhibited at London Exhibition, 1862 as "a good building timber." "...useful for general building purposes" (Maiden). Also Wm. Woolls, <u>Proc. Linn. Soc. NSW</u> , 1880.

- Swamp Mahogany
E.robusta "Fine timber, much used in house carpentry."
(Wm. Macarthur, 1855).
- Box, Grey Box, White or
Gum-topped Box, White
Gum
E.moluccana "Very useful in constructing huts and
temporary buildings." (Atkinson, 1826).
"...first-rate quality, obtainable in large
scantlings, white, and generally very hard,
tough and durable, but liable to suffer from
'dry rot' and...the 'white ant.' (Nilson,
1884).
- Spotted Gum
E.maculata Very common on some poorer soils of south
coast especially, but found also on table-
lands; wide use as hardwood building
material.
- Red or Forest Mahogany
E.resinifera "For general building purposes...often sold
as jarrah." (Maiden). Also Atkinson, 1826.
- Flooded, Blue or White
Gum, Sydney Blue Gum
E.saligna "...extensively used for building" (Maiden).
In favour from the earliest days of the
Colony.
- Red, Forest Red, Grey or
Blue Gum, Bastard Box
E.tereticornis For rough buildings (Woolles, 1880).
- Sydney Peppermint; White
Stringybark; Redwood;
Blackbutt
E.piperita "House building...and...for rough indoor
housework." (Maiden, 1889).
- Yellow Box
E.melliadora Ground plate supporting verandah sound after
being in use 1849-1892 (Clive Armstrong,
Rylstone, Ag.Gaz.NSW, 1896, p.131).
- Apple, Smooth-barked
Apple.
Angophora costata "...for boards and building purposes"
(Breton, 1833).
- Turpentine
Syncarpia glomulifera "Frequently used in building" (Atkinson
1826).
- Dogwood; Mountain Ash;
Yellow Ash; Bonewood
Emmenosperma alphitonioides Coastal rainforests. "Esteemed for general
building purposes." (Maiden, 1889).
- Rosewood
Dysoxylum fraserianum Durable and almost termite-proof. Used in
Macleay district as blocks for barns.
(Maiden, Ag.Gaz.NSW, 1895, p.606).
- White Cypress Pine
Callitris hugelii Structural timber for houses and sheds.
(Various authorities, including Mr. G. W.
Althofer, from grandfather, Henry Althofer,
b. 1836, came to Wellington District c.
1863).

Black or Red Cypress
Pine
C.endlicheri

Frequently used as above, but not as favoured for outdoor work. (Same source).

Red Cedar
Toona australis

Various records and reports of cedar being used generally for building houses and outhouses. R. B. Fry's "little farm house is built almost entirely of cedar," near Minnamurra R., Mawarra. (Abraham Lincoln: Aust. Sketches, c.1840, M.S., Mitch. Lib.)

Moreton Bay Fig
Ficus macrophylla

"the gigantic 'Figtree'...frequently 8 feet in diameter, and 200 ft. high...the lateral roots or spurs sometimes run...15 to 18 yds. on all sides of the parent tree...and, close to the trunk they form complete walls 4 to 5 feet high - the spaces between...with simple roofs, are often converted into useful sheds." (Abraham Lincoln: Aust. Sketches, c.1840, M.S. Mitch.Lib.) The timber itself is of little value.

Teak, Crow's Ash
Flindersia australis

North coast rainforests. "Used for house building." (C. Moore, 1862).

Cabbage Tree Palm
Livistona australis

Figtree Farm, Jamberoo, Illawarra. "The Granary...is built Yankee fashion at the base, being raised with logs of 'Palm tree' cut in lengths and dove-tail'd at ends." (Abraham Lincoln: Aust. Sketches, c.1840, M.S., Mitch. Lib.)

WATTLE-AND-DAUB.

Silver Wattle
Acacia dealbata

Small saplings of these species were used for wattling in the wattle-and-daub houses of the Wellington district. (Mr. G. W. Althofer, Wellington, from father G. F. Althofer, b.1871, Wellington).

Green Wattle
Acacia irrorata

Black Wattle
Acacia decurrens group

Commonly used around Sydney according to various early reports.

Black Wattle
Callicoma serratifolia

Coastal creeks and gullies. Not a true "Wattle," but apparently used for wattle-and-daub in early days of Colony. Young saplings split easily into long pliable strips. "Blackwattle Swamp", Wentworth Park, was named from this plant. (Maiden: Forest Flora NSW, VI, p.162 (1917)).

WALL SLABS (Houses, sheds, barns, etc.)

Various Ironbarks (as previously listed)

Various reports - widely used.

E.paniculata
E.crebra
E.sideroxylon

Various Stringybarks (as previously listed)	Various reports - widely used.
<u>E.eugenioides</u>	
<u>E.macrorhyncha</u>	
<u>E.capitellata</u>	
Red, River, or Murray Red Gum	Western river districts, Riverina. (W. W. Fielder, Albury, 1967).
<u>E.camaldulensis</u>	
Blackbutt, Blackbutted Gum, Flintwood	Coastal areas. "esteemed for...readily splitting into slabs." (Henderson, 1851); Also Mrs. H. M. D. Mudford, b. 1890 from Miss S. Hope, 1967; Alex. Harris, at Illawarra, c. 1828; <u>Ag.Gaz.NSW</u> , 1894.
<u>E.pilularis</u>	
Scribbly, Spotted, White or Blue Gum; Blackbutt, Mountain Ash	Eastern hardwood forests. "Used for slabs..." in Candelo district. (Maiden, <u>Proc.Roy.Soc.NSW</u> , 1887).
<u>E.haemastoma</u>	
Yellow Box, Yellow Jacket	Tablelands and western slopes. "much utilized for...slabs..." (Maiden, 1889).
<u>E.melliodora</u>	
Bloodwood	Western species—not greatly favoured but often the only large tree available for slabs. (Maiden, 1889).
<u>E.terminalis</u>	
Mountain or Black Ash; Cabbage Gum	Chiefly on eastern slopes of central and southern tablelands. Best all-round timber, Walcha District—slabs used in early fifties still sound 40 years later. (R. A. Crawford, Walcha, <u>Ag.Gaz.NSW</u> , 1896, p.492.
<u>E.sieberi</u>	
Tallow-wood	North coast hardwood forests. Slabs in hut built c.1876 still sound in 1894 (Forester Devereall, Glen Innes, <u>Ag.Gaz.NSW</u> , 1894, p.291).
<u>E.microcorys</u>	
Peppermint; Broad-leaved Peppermint; Messmate	Orange District. (W. E. Giles, Springside, b.1901).
<u>E dives</u>	
Broad-leaved Ribbon, Black, White or Mountain Gum	Orange District. (W. E. Giles, Springside, b. 1901).
<u>E.dalrympleana</u>	
Red or Forest Mahogany	Tweed District (F. E. Wilson, Banora Point, 1967, from grandfather F. D. Wilson, b.1854, selector, Terranora, 1878). Also Hastings District (Mrs. E. M. Mooney, Telegraph Point, b.1876, from Miss D. Mooney, 1967).
<u>E.resinifera</u>	

Red, Swamp, Cabbage Gum
E. amplifolia

Not usually noted for durability, but apparently a slab of this species was exhibited by A. R. Crawford, Walcha, after being "in a building for thirty-three years." (Syd. Exhib., 1879).

Flooded or Rose Gum
E. grandis

Around and just within North Coast rainforests. "...more easily cut into billets, and split into slabs than any of the other kinds." (Henderson, 1851, speaking of Macleay district). This species was long considered the same as E. saligna found near Sydney.

Cabbage Palm
Livistona australis

Coastal gullies and rainforests. "...used for slabs in temporary buildings. (Back-house, 1836). Also Maiden, 1889.

Bangalow Palm, Piccabeen
Archontophoenix
cunninghamiana

Coastal rainforests. Sometimes split and used for rural dwellings (Nilson, 1884).

Colonial, Hoop, Moreton
Bay Pine
Araucaria cunninghamii

Northern rainforests. Best from higher altitudes (Maiden); also W. O'Keefe, b. 1902 from Mr. Brian O'Keefe, 1965. Better for lining and other 'inside' work.

Red Cedar, Cedar
Toona australis

Coastal rainforests: 'king of the softwoods' in Australia. In early days of settlement when still plentiful, this timber was used for wall slabs, and even for barns and fences. (W. O'Keefe, b. 1902 from Mr. Brian O'Keefe, 1965); E. Saville's Reminiscences, RRHS; "Red Cedar was pit sawn into slabs for the better class homes & lasts a life-time. Our homestead at Kunderang was large, & wholly of beautiful cedar." (Mrs. Crawford (née Fitzgerald) from Miss Alice Norton, Walcha, 1968). This house still stands. See Chapter III, p. 304.

Cudgerie, Bumpy Mountain
Ash, Flindosy Beech,
Flindosa, Stavewood
Flindersia schottiana

Northern rainforests. "...used by selectors for...slabs..." (Francis); "Best for split timber," E. D. Moehead: "In the Big Scrub", RRHS. MSS.

Smooth Barked Apple;
Rusty Gum
Angophora costata

Coast and ranges. "Strong and heavy, and used for...slabs, rough buildings..." (Maiden).

Bolly Gum, She Beech.
Litsea reticulata

Rainforests. Pitsawn slabs, 8" x 1½" and 10" x 1¼" used for walls, Tweed District. (J. E. Gray, Tweed Heads South, b. 1888, from Miss E. Richardson, 1967). More generally recommended for indoor work, linings etc.

White and Black Cypress
Pine

Callitris hugelii
C.endlicheri

Western districts. Slab hut on Liverpool Plains, 1839, "the pine, a yellowish and soft wood which splits easily, being chiefly used." (J. Henderson, 1851).

WEATHERBOARDS.

Blackbutt
E.pilularis

Widely used on the coast. Also on tablelands. See Ag.Gaz.NSW, 1894, p.684.

Yellow Stringybark
E.muellerana

South coast. Maiden: Forest Flora NSW, III, p.175 (1908).

Red or Forest
Mahogany
E.resinifera

"Liked for weatherboards, because it shrinks little, resists white ant,...does not discolour paint..." (Maiden in Ag.Gaz.NSW, 1895, p.609.)

Flooded or Rose Gum
E.grandis

North Coast. Maiden: Ag.Gaz.NSW, 1894, p.745.

Stringybark
E.eugenioides

Woolfs, Proc.Linn.Soc.NSW, 1880, p.491.

Mountain or Alpine Ash
E.delegatensis

Southern tablelands. House sound after 34 years. (Forester T. H. Williams, Tumbarumba, 1912 in Maiden: Forest Flora NSW, VI, 6, (1917)).

Sassafras
Doryphora sassafras

In old Nivison homestead at Yarrowitch for 40 years, and in the 'new' for 10 years by 1898. Rafters and flooring of same timber. (Maiden in Ag.Gaz.NSW, 1898, p.599).

White Cypress,
Murrumbidgee or Lachlan
Pine
Callitris hugelii

Western districts. Syd.Exhib., 1879.

HOUSE BLOCKS.

Teak, Crow's Ash
Flindersia australis

Northern rainforests. House stumps, Tweed district. (F. E. Wilson, Banora Point, 1967, from grandfather, F. D. Wilson, b. 1854, selector, Terranora, 1878).

Rosewood
Dysoxylum fraserianum

Rainforests. Often used by settlers for house-blocks as it resists damp and termites. (Maiden: Forest Flora NSW, III, p.32 (1908).

White Cypress Pine
Callitris hugelii

Termite-resistant, durable in ground, but highly inflammable. "Used to an enormous extent a couple of hundred miles or more back from the coast for house-blocks..." (Maiden, 1917 and earlier).

Bloodwood
E.gummifera

Lasts well in ground, thus "better adapted than any other timber for the sleepers of houses." (Henderson, 1851).

Murray or River Red Gum
E.camaldulensis

"Largely resistant" to termites, hence useful for house-blocks. (Maiden in Ag. Gaz.NSW, 1894, p.51).

Woollybutt
E.longifolia

"Used for house blocks, as white ants do not like it nor is it liable to dry rot." (Maiden: Forest Flora NSW, I, p.36 (1904)).

Western Beefwood
Grevillea striata

Western districts. "Have used it for house-blocks," lasts well in ground, not easily burnt. (R. J. Dalton, Wanaaring in Maiden: Forest Flora NSW, V, p.22 (1913)).

ROOF THATCHING.

Cabbage Tree Palm
Livistona australis

Records of leaves being used for roof thatching go back to 1788 (e.g. White's account). "...leaves form excellent thatch" (R. Mudie, 1829); also Alexander Harris, c.1825, Backhouse, 1836, and A. Lincolne: Aust.Sketches, c.1840, ML: "From the leaves we obtain the best material for thatching." Cedar planks were protected by palm leaves before being sent to market. (A. Harris, c.1825).

Bangalow Palm
Archonotphoenix
cunninghamiana

Illawarra dairy farmers used leaves to make thatch. (Field, 1822).

Blady Grass
Imperata cylindrica, var.
major.

Used very early—e.g. George Caley, 1803, referred to this grass being used for thatching though "very troublesome to get." As indicated in Thesis I, probably other grasses and rushes were similarly used—e.g. Reed-grass or Thatch Reed, Phragmites communis, Common Reed or Bulrush, Typha angustifolia, and salt-tolerant plants such as Juncus maritimus, var. australiensis, Scirpus nodosus, and Cladium junceum. Certainly Grass-tree or Blackboy leaves (Xanthorrhoea spp.) were used—the "grass of the gum-rush" as Collins put it (1798). Of Blady Grass, P. Cunningham stated "...its broad strong leaf makes excellent thatch" (1827); The first house at Wyrallah, Richmond River, built by Wm. Lane in 1863 was a slab hut "thatched with 'blady' grass, sewn together in bundles and then to the rafters." (Wyrallah Jubilee Souvenir Booklet, 1939, p.4). In 1832, George Bennett referred to 'sedge-grass' being "used for thatching as well as beds for sheep during shear-time, after they have been washed." As he was referring to swampy country west of the Blue Mts., the plant may well have been the Tall Sedge, Carex appressa.

Cane or Bamboo Grass
Eragrostis australasica

Claypans and swampy areas. "We lived in tents while we were building the house of horizontals and mud and a thatch roof of cane grass." (Patrick Tully, speaking of Ray Creek, 500 m. N. of Wilcannia, 1874, in E. Pownall: Mary of Maranoa, Syd., 1959, p.177. Doubtless roofs in such areas as the Bulloo Overflow in N.W. of N.S.W. were similarly constructed. "It is largely used for thatching purposes, for which it is admirably adapted. Roofs twenty years old, made of this grass, are standing, and are water-proof still." Maiden: Grasses, p.187 (1898).

THATCH PEGS.

Black or Red Cypress Pine
Callitris endlicheri

"Young saplings used for thatch pegs" Mr. G. W. Althofer, from father, George F. Althofer, b.1871, Wellington, and W. Philipson, b.1901, Maryvale).

ROOF BARK.

Brown, Red, Coast
Stringybark
E.capitellata

"For thatching rural dwellings" (Nilson, 1884).

Red or Mountain Stringy-
bark
E.macrorhyncha

"Extensively used for roofing primitive huts, sheds and stables...it will last about twenty years." (Mueller, 1879).
"Employed for thatching" (Nilson, 1884).
Used in Wellington District by Henry Althofer after 1863 (from George W. Althofer, 1967). Also H. R. Carter, Quirindi, 1968.

Messmate, Stringybark
E.obliqua

"May be used for thatching" (Nilson, 1884)
"Largely used for covering sheds, huts, &c." (Syd.Exhib., 1879). Also Mueller in Eucalyptographia, 1879-1884.

Broad-leaved
Stringybark
E.caliginosa

New England species. See photograph on p.183.

Youman's Stringybark
E.youmani

New England species.

Silver-top Stringybark
E.laevopinea

New England species, extending to west.

White Box, Grey Box
E.albens

Used in central west, for walls and roofing of huts. (Henry Althofer, b. 1836, settled at Wellington, 1863—from G. W. Althofer, Wellington, 1967.)

- Bimble or Poplar Box
E. populnea Western plains and slopes. "Very much used by settlers to make not only the roofs but also the walls of huts." (Tenison-Woods, Proc.Linn.Soc.NSW, 1882.)
- White Mahogany
E. acmenioides Bark humpies, Tweed District (F. E. Wilson, from grandfather F. D. Wilson, b.1854, Tweed River).
- Stringybark, White or Broad-leaved Stringybark
E. eugenioides Bark "for covering rustic buildings" (Woolls, 1880). "Much used to construct huts and temporary buildings." (Atkinson, 1826).
- Box; Grey, White, or Gum-topped Box; White Gum.
E. moluccana "...for covering rustic buildings." (Woolls, in Proc.Linn.Soc.NSW, 1880); "Good roofs for cattle,...cart-sheds, and workmen's huts." (P. Cunningham, 1827).
- Box; Grey Box; Mallee Box
E. woollsiana Bark "used for roofing houses, huts, dairies, and sheds by the early settlers and miners." Central and south-western districts. (Mrs. F. E. Mitchell, West Wyalong, 1967).
- Turpentine
Syncarpia glomulifera Turpentine roofing bark was cut on the coast for 7/- per hundred in 1875. (George England, Coffs Harbour, July, 1960, from his grandfather's diary.) Surveyor Clement Hodgkinson used this for bush shelters during expedition to Bellinger R., in 1841. (Hodgkinson: Australia, p.36).
- Blackbutt
E. pilularis "Sometimes used for roofing pig-styes and calf pens, but does not last long when exposed" but "very useful for flooring hay-lofts, &c. becoming quite hard, and lasting a long time." (Forester Rotton, Picton, Ag.Gaz.NSW, 1894, p.683). Used for bush shelter by Hogkinson, 1841, op.cit., p.32.

As late as 1898, J. H. Maiden recorded, concerning Stringybark, that sheets of bark, once dried under weights, "preserve the flat shape, and are hence used in enormous quantities for roofing purposes in country districts. They afford a clean, durable, cool roof." (Ag.Gaz.NSW, 1898, p.35).

ROOF SHINGLES.

- Red or Mountain Stringybark
E. macrorhyncha Wellington District—(Henry Althofer, b. 1836, first went to Wellington Dist. 1863, from grandson, George W. Althofer, b.1903—Nindethana Nursery, Wellington, 1967). Orange District, e.g. Springside School, 1878 (W. E. Giles Orange, b.1901).

- Sydney Peppermint; White Stringybark; Redwood; Blackbutt
E.piperita
Coastal forests and western slopes. "...durable...used for...shingles" (Maiden, 1889).
- Mountain or Black Ash
E.sieberi
Chiefly on eastern slopes of central and southern tablelands, extending to coastal area. "I know an old building roofed with shingles of this wood, still in use; it was built early in the fifties. It is, of course, getting leaky, but at 35 years old or more the roof was quite sound." (R. A. Crawford, Moona Plains, Walcha, Ag.Gaz.NSW, 1896, p.492).
- Stringybark, White or Broad-leaved Stringybark
E.eugenioides
Common stringybark of Port Jackson-Blue Mts. "I have been told by practical men that ...shingles...last for 20 years." (Woolfs, 1880); Maiden, 1889.
- Broad-leaved or Red Ironbark
E.fibrosa
"Makes excellent shingles" (Atkinson, 1826).
- Tallow-wood
E.microcorys
Manning District (L. R. Weller, Nabiac).
- Blackbutt
E.pilularis
"Excellent for...shingles." (Forester Rudder, Booral, Ag.Gaz.NSW, 1894, p.683).
- Spotted Gum
E.maculata
"Splits well for...shingles." (Syd. Exhib., 1879).
- Messmate, Stringybark
E.obliqua
"Extensively split into...shingles." (Mueller: Eucalyptographia, 1879-1884).
- Alpine or Mountain Ash
E.delegatensis
Southern tablelands. Roof sound after 34 years. (Forester T. H. Williams, Tumbarumba, 1912 in Maiden: Forest Flora NSW, VI, p.6. (1917)).
- Red or Forest Mahogany
E.resinifera
Central and north coast. "It makes the best of shingles" (Maiden); "specially suitable for shingles, as it does not discolour or damage the water and lasts well." (Augustus Rudder, 1828-1904, forester). Mrs. M. H. Rose, b. Cedar Party Ck., 1885, from Miss Elaine Brooks, 1967. Also George England, Coffs Harbour, 1960 and L. R. Weller, Nabiac, 1969).
- White Mahogany
E.acmenioides
Some doubts about durability, but recommended by Maiden.
- Grey Gum, Leather Jacket, Slaty Gum
E.punctata
North and central coasts, inland to slopes of Tablelands. "I have seen it used for... shingles." (Maiden).

- Yellow Box, Yellow Jacket
E.melliodora
Grey, White, Red or Narrow-leaved Ironbark
E.crebra
Black or Erect She-oak, Shingle Oak
Casuarina littoralis
Forest Oak, Beefwood
C.torulosa
Swamp or Saltwater Swamp Oak
C.glauca
Drooping She-oak, Forest Swamp Oak, Black, Sour, Bull or Mountain Oak
C.stricta
River or White Oak
C.cunninghamiana
White Cedar
Melia azedarach
var. australasica
Cudgerie; Bumpy or Mountain Ash; Flindosa; Flindosy Beech; Stave-wood.
Flindersia schottiana
Sycamore, Scrub Bottle Tree; White Kurrajong
Brachychiton discolor
Bean Tree, Black Bean, Moreton Bay Chestnut.
Castanospermum australe
Red or Black Cypress Pine
Callitris endlicheri
Northern tablelands--Tamworth area: "splits well and truly" (Mr. Frank Ridd, b.c. 1880).
Used in Dungog District (Hist.Soc.). Manning District (L. R. Weller, Nabiac).
Long used, like other species of this genus, for shingles because of its clean-splitting and long-lasting qualities. "Much used for shingles," (Wm. Macarthur, 1855).
"Very superior shingles." (Maiden and various foresters). "Makes good shingles, splits in the Colonial phrase from heart to bark, but...not near so durable as iron bark, but...they may be nailed on without boring." (sic) (Atkinson, 1826). Breton, 1833.
"Strong and tough...used for...shingles." (Maiden). Atkinson, 1826; Breton, 1833.
"Strong, durable, and easily wrought; used for shingles..." (Nilson, 1884).
Plentiful along many freshwater rivers and creeks except in far west. Shingles strong, tough and light when dry. (Maiden).
Coastal rainforests. "Principally used for shingles...of an inferior kind." (C. Moore, 1862). "Used occasionally" (Nilson, 1884); Syd.Exhib., 1879.
Northern rainforests. Richmond R. district, Rebecca Rithworth's diary, 1875, 'Cudjare'. Miss Judy Crane, great-granddaughter; Maiden, 1889.
"Often used for shingles." (C. Moore, 1862); "Soft and perishable, but easily split; and sometimes used for shingles." (Nilson, 1884). "Makes good shingles" (Syd.Exhib., 1879.)
Northern rainforests. Tweed R. settlers. (F. D. Wilson, b.1854, selector at Terranora, 1878--from grandson, Mr. F. E. Wilson, 1967). Also John E. Johnson, b. 1882 nr. Woodburn.
Forbes District - (C. R. Hohnberg, Forbes, 1967).

White Cypress Pine
C. hugelii

Forbes District (C. R. Hohnberg, Forbes, 1967). Narrandera Dist. (M. Bailey, b. Narrandera 1880, from Miss Elaine Smith, 1965).

She, Yellow Plum, or
Brown Pine; Colonial
Deal
Podocarpus elatus

Coastal rainforests. Richmond R. area (W.A. Crawford, Alstonville, b.1881 from Miss Lois Gray, 1967).

Red Ash, Silky Oak
Orites excelsa

Northern rainforests. Nilson, 1884, knew nothing of its qualities; Maiden, 1889 mentions shingles; Baker, 1913, refers to its extensive use in cabinet work, and the demand for it by saddle-makers on account of its nail-holding qualities.

Red-fruited Olive Plum;
Blue Ash; White Cedar
Elaeodendron australe

Coastal rainforests. "Easily split, and very valuable for...shingles." (Syd. Exhib., 1879).

Bush Nut, Queensland Nut,
Nut Oak
Macadamia ternifolia

Northern rainforests. Maiden, 1889.

Beefwood, Scrub Beefw-
ood, Silky Oak
Stenocarpus salignus

"One of the few Proteaceae growing in the Cedar Brushes...hitherto used only for shingles of inferior quality." (Sir Wm. Macarthur, 1855).

Leopard Wood;
Leopard or Spotted Tree
Flindersia maculosa

Western districts. Maiden, ex Hill, 1889.

Colonial, Hoop, Richmond
River or Moreton Bay
Pine
Araucaria cunninghamii

"...pine logs to make shingles for the Temperance Hall..." (L. G. Snow to Wm. Clement, Lismore, 10/11/1870, RRHS, MS.688).

Silky Oak
Grevillea robusta

Used at Camboyne (L. R. Weller, Napiac, b. 1908). Also Maiden in Ag. Gaz. NSW, 1893, p.674.

Western Beefwood
Grevillea striata

Western districts. R. J. Dalton, Wanaaring in Maiden: Forest Flora NSW, V, p.22 (1913).

White Rosewood
Incense Wood
Pseudocarapa nitidula

Northern rainforests. This is a rather tentative determination since the term "White Rosewood" does not appear to be in current use. According to E. D. Moehead: In the Big Scrub, MS, RRHS, this "was the favourite wood for shingles." Moehead came to Alstonville in 1866. This tree has pale timber, scented like true Rosewood; the flowers are also similar.

ROOFING BOARDS.

Red or Forest Mahogany
Eucalyptus resinifera

Roofing boards (Maiden's 'weather-boards') are still sometimes seen covering sheds, etc. around old homesteads--they were, in effect, extended shingles. "It is useful for weather-boards (very few are now made because of galvanised iron)". (Maiden, c. 1900). The term 'weather-boards' is elsewhere restricted to the familiar overlapping horizontal wall boards.

JOISTS, RAFTERS, BEAMS, BEARERS, etc.

Red or Forest Mahogany
E.resinifera

Coastal hardwood forests. Rafters of old St. John's, Parramatta, erected 1798, found "in perfect condition" when removed in 1852. (Maiden). Part of rafter displayed in Paris Exhibition, (Sir Wm. Macarthur, 1855). Door lintels in Sydney Law Courts (1817) found to be sound on removal in 1921. (Aust. Forestry Journ. Apr. 1921).

Brown, Red, Coast
Stringybark and
other stringybarks

Coastal forests. "Largely used" (Nilson, 1884).

E.capitellata
E.eugenioides
E.macrorhyncha

Grey, White, Red, or
She Ironbark and
other ironbarks

Hardwood forests of coast and ranges. Especially for heavy beams. (Maiden in Ag.Gaz.NSW, 1893, p.752); the latter for "joists in house-building." (Atkinson, 1826.)

E.paniculata
E.crebra
E.sideroxylon
E.fibrosa

Blue, Sydney Blue,
Flooded or White Gum
E.saligna

"Used in house-building for beams..." (Atkinson, 1826). Wall-plates, Port Macquarie Asylum, c.1840, "perfectly sound" in 1893. (Forester G. R. Brown, Ag.Gaz.NSW, 1894, p.842).

Bloodwood
E.gummifera

Beams. (Woolls, 1880).

Blue Gum, Sydney
Peppermint
E.piperita

"...the colonists employ it for beams, both in houses and in ship building." (R. Mudie, 1829). It is likely that Mudie meant Sydney Blue Gum, E.saligna, although he referred to it both as Blue Gum and Peppermint.

Blackbutt
E.pilularis

Lintels in Sydney Law Courts (1817) found to be sound on removal in 1921. (Aust. Forestry Journ. Apr. 1921). Wall plates, Port Macquarie Asylum, c.1840, generally sound when building demolished 1893. (Forester G. R. Brown, Ag. Gaz. NSW, 1894, p.842). "The largest percentage of sawn timbers in these old buildings [i.e. c. 1845-1865] is blackbutt." G. H. Olding in Aust. Forestry Journ., 1918, p.29.

Red, Black, and White
Cypress Pine
Callitris endlicheri
C.hugelii

Round, roughly-trimmed rafters are still to be seen in old pisé houses in western districts. Sawn rafters, joists, etc. also widely used in interior. (Mrs. F. E. Mitchell, West Myalong, 1967, et al).

Red Cedar
Toona australis

Coastal rainforests. Sometimes used for heavy rafters, e.g. St. Thomas's Church, Port Macquarie, 1824-28; cedar roof-beams in Springside School near Orange, 1878 (W. E. Giles, Orange, b.1901). Very widely used.

Paperbark or Broad
leaved Tea-tree
Melaleuca quinquenervia

"Lasts...fifty or sixty years if the bark is taken off" (Latham in Ag.Gaz.NSW, 1893, p. 681).

Turpentine
Syncarpia glomulifera

Has useful property of tending to char rather than burn. (Maiden, Ag.Gaz.NSW, 1894, p.464).

FLOORING BOARDS.

Tallow-wood
E.microcorys

North coast hardwood forests. "...particularly for a ballroom floor" (Forester Brown, Port Macquarie, Ag.Gaz.NSW. 1894, p.291). Also for parquet floors. (J. V. de Coque, Proc.Roy.Soc.NSW, 1894, p.19).

Messmate, Stringybark
E.obliqua

Coastal hardwood forests. Nilson, 1884.

Brown, Red, Coast
Stringybark
E.capitellata

Coastal hardwood forests. Nilson, 1884.

Red or Mountain
Stringybark
E.macrorhyncha

"Much prized for flooring boards" (Wm. Macarthur, 1855). Also Nilson, 1884.

Monkey, Cumberland Blue,
Clarence Flooded, or
Mountain Gum
E.cypellocarpa

Coastal and tablelands forests. "One of the most valuable in the Colony; extensively used." (Nilson, 1884).

Blackbutt
E.pilularis

Chiefly used for flooring (R. Mudie, 1829).
"Next to the White IronBark E.paniculata
capable of enduring a greater crushing
strain strain than any other Eucalypt."
(Woolfs, 1880). Also Ag.Gaz.NSW, 1894,
p.683.

Smooth-barked Apple;
Rusty Gum
Angophora costata

Coast and ranges. "Strong and heavy, and
used for...flooring-boards" (Maiden).

Brush Box
Tristania conferta

Coastal rainforests. Lond.Exhib., 1862.

Brown, She or Plum
Pine, Colonial Deal,
Pencil Cedar
Podocarpus elatus

Flooring in Gloucester district. (Maiden in
Ag.Gaz.NSW, 1895, p.588). Also C. Moore in
Indust. Progress NSW Exhib. 1870, p.650).

White Mahogany
E.acmenioides

Woolfs, Proc.Linn.Soc.NSW, 1880.

Blue, Sydney Blue,
Flooded or White Gum
E.saligna

"Used in house-building for...flooring
boards" (Atkinson, 1826). Also Woolfs, 1880.

Red, River or Murray
Red Gum
E.camaldulensis

Western rivers districts, Riverina.
"Extensively used" (Maiden, 1889).

Stringybark, White or
Broad-leaved Stringy-
bark
E.eugenioides

Woolfs, Proc.Linn.Soc.NSW, 1880.

Beech, White Beech,
Native Beech
Gmelina leichhardtii

Coastal rainforests, Illawarra to Tweed.
Minimal warp and shrinkage. "Much prized
for...verandahs." (Maiden). Also Nilson,
1884; "Easily worked, durable" (A.
Cousins: "The Big Scrub," Northern Star,
14 Feb. 1953.) 6" x 1" boards used in floor
of Port Macquarie Asylum c.1840 still sound
1893 when building demolished. (Forester
G. R. Brown, Ag.Gaz.NSW, 1894, p.842.)

Teak, Crow's Ash,
Flindosa, Flintamend-
osa, Bulboro
Flindersia australis

Coastal rainforests. Nilson, 1884; Maiden.

Bennett's Ash, Crow's
Ash, Teak, Bogum-Bogum
Flindersia
bennettiana

One of main timbers used in Upper Richmond
area. (Maiden, 1895).

- Cedar, Red Cedar
Toona australis Coastal rainforests, Illawarra to Tweed. e.g. Old Davison home, Casino, built c.1856, Richmond River Express, 25 Feb. 1966. Also John Henderson's house on Macleay R., c.1840. (Henderson: Excursions, II, pp.25, 28).
- Hoop, Colonial, Moreton Bay, or Richmond R. Pine
Araucaria cunninghamii Northern rainforests. "That grown inland or on the mountains...the strongest" (Wilson, 1884). Extensively used for flooring". (Maiden in Ag.Gaz.NSW, 1895, p.380).
- Sassafras
Doryphora sassafras Coastal rainforests. Used for flooring at Booral, 1865, found to be damp-proof and termite resistant; Maiden: Forest Flora NSW, I, p.44. (1904). Also Breton, 1833.
- Red or Black Cypress Pine
Callitris endlicheri Long used in western districts; brittle, aromatic, termite resistant; still widely used. Not as frequently used as White Pine (Geo. F. Althofer, b.1871, Wellington).
- White Cypress Pine
C.hugelii Ditto. One of most useful timbers of western slopes and plains. Frequently used (Geo. F. Althofer, b.1871, Wellington—from Mr. G. W. Althofer, Wellington, 1967). Also Syd.Exhib., 1879.
- Lignum-vitae, White Beech, Satinwood, Yellow Hollywood
Vitex lignum-vitae Northern rainforests. "Said never to shrink in drying, and much used for...verandah floors." (Wilson, 1884).
- Pigeon-berry, Mountain, or Illawarra Ash; White Beech; Whitewood
Elaeocarpus kirtonii Coastal rainforests. "It is being used for flooring-boards." (Maiden).
- Silky Oak
Grevillea robusta "I know a house erected in 1852 floored with Silky Oak, whose floor is still (1893) perfectly sound." (Thomas Bawden, Grafton in Ag.Gaz.NSW, 1893, p.674.)
- Western Beefwood
Grevillea striata Western districts. For strong flooring. (R. J. Dalton, Wanaaring in Maiden: Forest Flora NSW, V, p.22 (1913)).

INTERIOR WORK, LININGS, MOULDINGS, PANELLING, etc.

- Cedar, Red Cedar
Toona australis Coastal rainforests; recognised since 1790s as a strong, durable easily-worked wood which readily takes a polish; often used for doors, window jambs and glazing bars; shutters, fanlights, skirting boards, panell-ed linings, ceilings, shop counters, fire-place surrounds, mantels, staircases, banisters, handrails etc. Widely used in many old homes, schools, churches, banks, courthouses and hotels; Elizabeth Farm, Parramatta, 1790s; Camden Park of Macarthurs, 1830s; Elizabeth Bay House of Macleays, 1830s, Shaw's Bay

- Hotel, once home of Fenwicks, Ballina, 1880s. "Excepting mahogany, we have no timber so handsome for inside work." (Mudie, 1829); "Almost universally used in New South Wales for the interiors of houses." (Wm. Macarthur, 1862). "It would be difficult to exaggerate the good qualities of this valuable timber." (Maiden, 1895). "...it is, without doubt, the most valuable timber produced in New South Wales, and it is in universal use." (Maiden, 1893). See Chapter IV.
- Rosewood,
Rose Mahogany
Dysoxylum fraserianum
- Rainforests, Illawarra to Tweed, but especially in the north. "Deep red...rose-scented...for all kinds of interior fittings..." (Nilson, 1884). Second to Cedar in early days of settlement of Hunter and Hastings.
- Colonial, Hoop, Moreton
Bay or Richmond River
Pine
Araucaria cunninghamii
- Northern rainforests. "...white, light, easily wrought, and durable; much used for...interior fittings..." (Nilson, 1884). "Extensively used for...lining boards." Roof lining of church at Armidale "fixed nearly forty years ago" still sound in 1895. (Maiden in Ag.Gaz.NSW, 1895, p.380).
- Red or Black Cypress
Pine
Callitris endlicheri
- Western districts. Used for house linings; brittle, aromatic, termite-resistant, often attractively figured because of prevalence of 'knots'. (Nilson, 1884.) Also G. W. Althofer, Wellington.
- White Cypress Pine
C.hugelii
- Western districts. More frequently used than above. (G. F. Althofer, b. 1871 from Mr. Geo. W. Althofer, Wellington, 1967).
- White or Native Beech
Gmelina leichhardtii
- Coastal rainforests, Illawarra to Tweed. "Commonly used for house-fittings" (Maiden, 1895). Window-frames, Port Macquarie Asylum, c.1840, still sound when building demolished, 1893. (Forester G. R. Brown, Ag.Gaz.NSW, 1894, p.842).
- Silky Oak
Grevillea robusta
- Coastal rainforests. "It is such in repute for...lining of houses." (Maiden, 1889).
- Sassafras
Doryphora sassafras
- Coastal rainforests. "Occasionally used for indoor work" (Nilson, 1884). Used for linings, South Coast (Forester Benson, Bega, Ag.Gaz.NSW, 1895, p.680).

- Ash, Blue-berry Ash,
Pigeon-berry tree, Grey
Carrobean
Elaeocarpus obovatus
Coastal rainforests. For linings (Maiden, 1895). Once common on Ash Island, Hunter River, hence the name.
- Bennett's Ash, Crow's
Ash, Bogum-Bogum, Native
Teak
Flindersia bennettiana
Coastal rainforests, especially in far north. "In the Upper Richmond River district it is the principal timber used for ceilings, flooring, and lining boards." (Maiden, 1895).
- Brown, She or Plum Pine
Podocarpus elatus
Ceiling boards, Gloucester district (Maiden in Ag.Gaz.NSW, 1895, p.588).
- Tulip-wood; Elm;
Rough-leaved Hickory
Axe-handle Wood
Aphananthe philippinensis
North Coast rainforests. Syd. Exhib., 1879.
- Bolly Gum, Brown or Bolly
Beech, Brown Bollywood,
She Beech
Litsaea reticulata
Rainforests north of the Hawkesbury; Sir Wm. Macarthur's "White Sycamore" from Brisbane Water; Inside work as substitute for pine (Maiden). Forester G. R. Brown, Port Macquarie, Ag.Gaz.NSW, 1894, p.826.
- Paperbark Tea-tree,
Belbowrie, Broad-leaved
Tea-tree, Swamp Tea-
tree
Melaleuca quinquenervia
Sheets of bark sometimes used for ceilings—
e.g. Luxford Farm, near St. Mary's, NSW—
visited 1966. See photograph, Chapter III,
p.283.
- Christmas Bush, Narrow-
leaved Whitewood,
Officer Plant
Ceratopetalum gummiferum
"Used for window sashes." (Mudie, 1829).
The other timber, "Large-leaved light wood,"
mentioned by Mudie as serving the same
purpose was probably Coachwood, Ceratopetalum apetalum.
- Rosewood, Scentless or
Bastard Rosewood
Synoum glandulosum
"It has long been highly valued...for the
inside lining of houses." (C. Moore, 1862).
- Tallow-wood
E.microcorys
"For turned and carved work such as verandah
posts, staircase handrailing, etc.,...
superior to all other hardwoods." (J. V.
de Coque, Proc.Roy.Soc.NSW, 1894, p.204).
- Red or Forest Mahogany
E.resinifera
"It looks very well as skirting boards and
banister rails, &c." (Maiden: Forest Flora
NSW, I, p.69 (1904)).
- Alpine or Mountain Ash
E.delegatensis
Southern tablelands. "Window-frames, sashes
and doors, hand-made over fifty years ago
are still in buildings here." (Forester
T. H. Williams, Tumberumba, 1912, in
Maiden: Forest Flora NSW, VI, p.7 (1917)).

BATTENS, LATHS FOR CEILINGS AND INTERIOR WALLS.

Brown, Red, Coast Stringybark <u>E.capitellata</u>	Battens (Nilson, 1884).
Red and Mountain Stringybark <u>E.macrorhyncha</u>	Battens (Nilson, 1884).
Monkey, Cumberland Blue, Clarence Flooded or Mountain Gum <u>E.cypellocarpa</u>	Extensively used...battens, etc. (Nilson, 1884).
Blue, Sydney Blue, or Flooded Gum <u>E.saligna</u>	Battens (Woolfs, 1880).
Red, River or Murray Red Gum <u>E.camaldulensis</u>	Western rivers districts, Riverina. "Extensively used for...scantling, battens..." (Maiden, 1889).
Blackbutt <u>E.pilularis</u>	Splits evenly; specially suitable for ceiling laths. (<u>Ag.Gaz.NSW</u> , 1894, p.684).
Native Plum, Black Apple, Brush Apple <u>Planchonella australis</u>	Coastal rainforests. Laths for ceiling and wall plastering (Nilson, 1884). Also Maiden: <u>Forest Flora NSW</u> , II, p.14 (1907).

FURNITURE, CABINET-WORK, TURNERY, etc.

Swamp Mahogany <u>E.robusta</u>	Rough bush furniture, Woolfs, 1880; Nilson, 1884; Maiden 1889.
Peppermint, Apple, Turpentine, Woolly- butt <u>E.stuartiana</u>	Tablelands and slopes. "Sometimes employed for rough kinds of furniture, as it takes the polish well." (Maiden, 1889).
Red or Forest Mahogany <u>E.resinifera</u>	"Wood is of a dark red colour, hard and heavy--much used...by turners, for bed posts and other articles of common household furniture." (Atkinson, 1826); "A grand furniture wood where its weight is not against it." (Maiden, 1895, 1917).
Blue, Sydney Blue, Flooded or White Gum <u>E.saligna</u>	"Used...by turners in common articles of furniture." (Atkinson, 1826).
Red Stringybark <u>E.macrorhyncha</u>	Bush furniture. (Mr. G. W. Althofer, Wellington, from grandfather, Henry Althofer, b.1836).

- Blackwood, Lightwood;
Black-hearted Wattle,
Native Ash
Acacia melanoxylon
- Currawang Spearwood;
Hickory
A.doratoxylon
- Native Willow, Cooba
A.salicina
- Myall or Boree
A.pendula
- Colonial, Hoop,
Richmond River, or
Moreton Bay Pine
Araucaria cunninghamii
- Onion-wood
Owenia cepiodora
- Tulipwood
Harpullia pendula
- White or Native Beech
Gmelina leichhardtii
- Satin-wood, Light Yellow-
wood, Socket-wood,
Canary Sassafras
Daphnandra micrantha
- Tablelands and slopes; "Most valuable...
for furniture." (Syd.Exhib., 1879);
"Celebrated for cabinet work" (Nilson, 1884);
"Considered by some people to be the most
valuable of all Australian timbers" (Maiden,
1889). "I know of a Braidwood tradesman who
has made, for many years, articles of the
local blackwood" - chests of drawers,
secretaires, plate-chests etc. (Maiden in
Ag.Gaz.NSW, 1894, p.132).
- Western slopes and plains. "One of the most
useful timber trees in the Lachlan
district." (Maiden ex G. S. Home, 1889).
- Western districts. "Tables, chairs and
other furniture" (Syd.Exhib., 1879);
"Chiffoniers, and other items of drawing-
room furniture, are commonly made from it
in Western New South Wales, as it takes such
a high polish." (Maiden ex G. S. Home,
1889).
- At least two presentations to the Duke of
Edinburgh in 1868 included caskets of
polished Myall. (J. Milner: The Cruise of
HMS Galatea, ... Lond., 1869, pp.369, 373).
- Northern rainforests. Nilson, 1884.
"Cheaper kinds of cabinet work" (Baker,
1913). Bed-room furniture, linen presses
(Maiden in Ag.Gaz.NSW, 1895, p.380).
- Mainly in Richmond and Tweed rainforests.
Similar to Red Cedar, but slightly heavier;
(Maiden, 1895; Baker, 1913).
- Northern rainforests. "...handsome, close-
grained, strong, and easily wrought,
highly coloured with different shades from
black to yellow, and taking a fine polish."
(Nilson, 1884). Henry Parkes sold, and
probably used, "Australian Tulipwood" in his
Hunter Street shop in 1848--see Wells's
Geographical Dictionary...Syd., 1848, ads.
p.12. An award-winning Tulip wood billiard
table was exhibited in Sydney at the
Exhibition of 1870.
- "All kinds of turnery" (Baker, 1913; Nilson,
1884).
- Northern rainforests. "...fragrant, quite
yellow when fresh, taking a fine polish...
very suitable for cabinet-making." (Nilson,
1884).

Silky Oak
Grevillea robusta

Northern rainforests. "Much in repute for cabinet work." (Maiden, 1889).

Cypress Pine
Camphor Wood
Callitris columellaris

"The root...is valued by cabinet-makers for veneering...largely employed in this way some years ago, but for some cause, not explained, it seems to have fallen into disuse." (C. Moore, 1862).

Port Jackson Pine
Callitris rhomboidea

"Makes very good furniture." (Syd.Exhib. 1879).

White Pine, Murrumbidgee
or Lachlan Pine
Callitris hugelii

"Tables, and all sorts of furniture." (Syd.Exhib., 1879).

Cedar, Red Cedar
Toona australis

Coastal rainforests. Used for furniture from early days of the colony (Atkinson, 1826, Breton, 1833) - soft, strong, durable, easily worked and readily polished. Tables, chairs, bookcases, chests of drawers, desks, kitchen safes, sideboards, beds, sofas, pews, school desks, forms and presses, shop counters, dressing tables, wash-stands, etc. Sometimes items made entirely of cedar, including backing of cedar boards; at other times cedar was saved by using pine for backing and for other parts not readily seen. "Fine red cedar...is excellent for cabinet-work, most of the colonial houses being fitted up with it." (Angas, 1855). "Almost the only kind used in joiners' and cabinet work amongst the colonists for the last fifty years." (Wm. Macarthur, 1855). Also used for veneer work, e.g. "a sideboard top made of veneers of root-pieces of this timber is of astonishing and perfect beauty, and resembles a rich marble." (Jurors of Lond.Inter.Exhib., 1862). Also Maiden, 1889.

Rosewood, Rose
Mahogany
Dysoxylum fraserianum

Coastal rainforests, especially in north; "A timber of the mahogany class...works splendidly" (Maiden, 1895). "Makes very excellent furniture." (Atkinson, 1826). Henry Woolley, Sydney, exhibited a rosewood bookcase, Paris Exhib., 1855.

Red Bean, Pencil
Cedar, Turnipwood
Dysoxylum muelleri

"Often sold in Sydney as cedar or bastard cedar...a good furniture wood." (Maiden, 1895). "Furniture, ornamental lining, and many of the uses of Spanish mahogany." (R. Dalrymple-Hay, Ag.Gaz.NSW, 1899, p.866).

Bean Tree, Black Bean,
Moreton Bay Chestnut
Castanospermum australe

Northern rainforests. "...the usual substitute for walnut in this Colony... increasingly coming into use for furniture..." (Maiden, 1895). "Scarcely inferior to walnut." (Maiden in Ag.Gaz.NSW, 1894, p.3).

Native Cherry
Exocarpos cupressiformis

Hardwood forests, coast and ranges. Turned pieces, e.g. cornice poles. (Nilson, 1884). Also Maiden, 1889.

Native Plum, Black Apple
Brush Apple
Planchonella australis

Coastal rainforests. Wood close-grained, firm, prettily veined, good for cabinet-work. (Maiden ex Wm. Macarthur; Nilson, 1884).

Coachwood, Lightwood,
Leather-jacket
Ceratopetalum apetalum

Coastal rainforests. Extensively used by joiners and cabinet-makers. (Nilson, 1884).

Brown, White, She, Yellow
or Plum Pine; Colonial
Deal; Pencil Cedar
Podocarpus elatus

Coastal rainforests. "Good for...cabinet work, some trees affording planks of great beauty" (Wm. Macarthur, 1855). "Soft but close-grained, easily wrought" (Nilson, 1884). Also C. Moore in Indust. Progress NSW Exhib., 1870, p.650.

Scrub Beefwood; Silky
Oak
Stenocarpus salignus

Coastal rainforests. Bar fittings, etc. of old Termeil Hotel, Milton, 1892. (Maiden); "one of the most beautiful woods in the Exhibition, and of the highest merit." (Lond. Exhib., 1862). Also R. Dalrymple-Hay, Ag.Gaz.NSW, 1899, p.867.

Rosewood; Scentless or
Bastard Rosewood
Synoum glandulosum

Coastal rainforests. "Used for cabinet purposes". (C. Moore, 1862). "A very handsome wood...used for furniture." (Syd.Exhib., 1879).

She-oak, Beefwood
Botany Bay Wood
Swamp Oak (Casuarina glauca)
Forest Oak (C.torulosa)
River Oak (C.cunninghamiana)

Exported from the earliest days of settlement. "The timber of all the species is very hard and heavy...is much used in the colony for furniture; and...in ornamental cabinet work." (Mudie, 1829).

Light Yellow-wood,
Tulip Satinwood
Rhodosphaera
rhodanthema

Rainforests. "Will take a fine polish, and is one of the most suitable timbers...for cabinet work." (C. Moore, 1862).

WELL SLABBING.

Native Teak, Crow's Ash,
Flindosa, Flintamendosa,
Bulboro
Flindersia australis

"It is the best timber for slabbing a well, as it does not turn the colour of the water like any of the other timbers." (Maiden: Forest Flora NSW, II, p.153 (1907)).

Yarran, Gidgee, Spear-wood <u>Acacia homalophylla</u>	Western districts. "Very durable, and is, therefore, used for the lining of wells, but then it is said to give the water a bad taste for several years." (!) (Maiden, 1889).
Red or Forest Mahogany <u>E.resinifera</u>	"As it does not affect the water, it should be used when slabbing for wells is required." (Forester Augustus Rudder, <u>Ag.Gaz.NSW</u> , 1896, p.15). Also L. R. Weller, <u>Nabiac</u> , b.1908.
Rose Apple, Durobby <u>Eugenia moorei</u>	Rainforests of Richmond and Tweed. "Used... for well-work, as it resists the action of water." (Maiden, 1889).
Western Beefwood <u>Grevillea striata</u>	Western districts. Used for well-slabs (R. J. Dalton, Wanaaring, in Maiden: <u>Forest Flora NSW</u> , V, p.22 (1913)).

1. BUILDING MATERIALS: (b) TRANSPORT AND COMMUNICATION.

(i) ROAD VEHICLE CONSTRUCTION.

By the end of 1869, there were over 80 coach and waggon factories registered in N.S.W. Of these, 27 were in Sydney, 12 in Maitland, and 5 in Parramatta. Others were scattered over the Colony from Kiama and Braidwood in the south to Raymond Terrace in the north. In the west, there were factories at Goulburn, Bathurst, Orange, Carcoar and Mudgee.

The principal timber used is cut to order specially for the trade, and consists of mountain-ash¹, beef-wood,² beech,³ light-wood,⁴ spotted-gum,⁵ blue-gum,⁶ iron-bark,⁷ cedar,⁸ and pine.⁹ All these are Colonial woods; but some American woods, such as hickory,¹⁰ &c., are imported to execute orders for persons who prefer these woods to the Colonial, though this is not often the case, our mountain-ash and beech having all the lightness and toughness of the best American woods. ¹¹

-
1. Mountain Ash, E.sieberi.
 2. Beef-wood, She-oak, Casuarina spp. or Scrub Beefwood, Stenocarpus salignus.
 3. Beech, White Beech, Gmelina leichardtii.
 4. Light-wood = Coachwood, Ceratopetalum apetalum.
 5. Spotted Gum, E.maculata.
 6. Blue Gum, E.saligna.
 7. Ironbark, various spp., especially E.paniculata.
 8. Red Cedar, Toona australis.
 9. Colonial or Richmond R. Pine, Araucaria cunninghamii.
 10. Hickory, Hicoria spp.
 11. The Industrial Progress of New South Wales; being a Report of the Intercolonial Exhibition of 1870, at Sydney...Syd., 1871, pp.459-460.

COACHBUILDING (Frames, poles, shafts, etc.)

- Blue, Sydney Blue, or
Flooded Gum
E.saligna
"It is bent into hoops for the tilts of
waggons and carts." (Atkinson, 1826).
- Narrow-leaved, Red or
White Ironbark
E.crebra
Waggon-building. (Maiden, 1889).
- Box; Grey, White or Gum-
topped Box; White Gum
E.moluccana
Heavy framing. (Maiden, 1889). Shafts,
dray-poles. (Maiden in Ag.Gaz.NSW, 1896,
p.563).
- Broad-leaved or Red
Ironbark
E.fibrosa
Dray poles (Maiden, 1889).
- Ash or Mountain Ash;
Cabbage Gum
E.sieberi
Shafts, swingle-trees. (Woolls, 1880;
Maiden et al., 1889). "Much valued for
shafts of gigs." (G. Bennett, 1834).
- Rose or Flooded Gum
E.grandis
North coast, often bordering rainforests.
"Used for carriage-building" (John
Breckenridge, Failford, Ag.Gaz.NSW, 1895,
p.610).
- Spotted Gum
E.maculata
"Always used for swingle-trees, shafts for
sulkies and buggies..." (W. J. Mann
(1885-1966 Nabiac, 1964). Similarly
Maiden in Ag.Gaz.NSW, 1894, p.551. "Largely
replacing American hickory in the coach
factories." (Ag.Gaz.NSW, 1896, p.197).
Dray poles (Tenison-Woods, 1882).
- Blackbudded Gum, Black-
butt
E.pilularis
Shafts (Woolls, 1880).
- Grey, White, Red or She
Ironbark
E.paniculata
Shafts (Woolls, 1880, from Sir Wm.
Macarthur).
- Smooth-barked Mountain
Ash
E.oreades
"Carriage work." (Breton, 1833).
- Murray or River Red Gum
E.camaldulensis
"River Gum was used by our coach and
waggon builders...seasoned in water for
at least six months." (L. A. Anderson,
Wellington, 1967).
- Red, Grey Blue or
Forest Red Gum, Bastard
Box
E.tereticornis
"For the poles and shafts of drays and
carts, and for the spokes of wheels, it is
supposed to have no equal." (Wm. Macarthur,
1855).

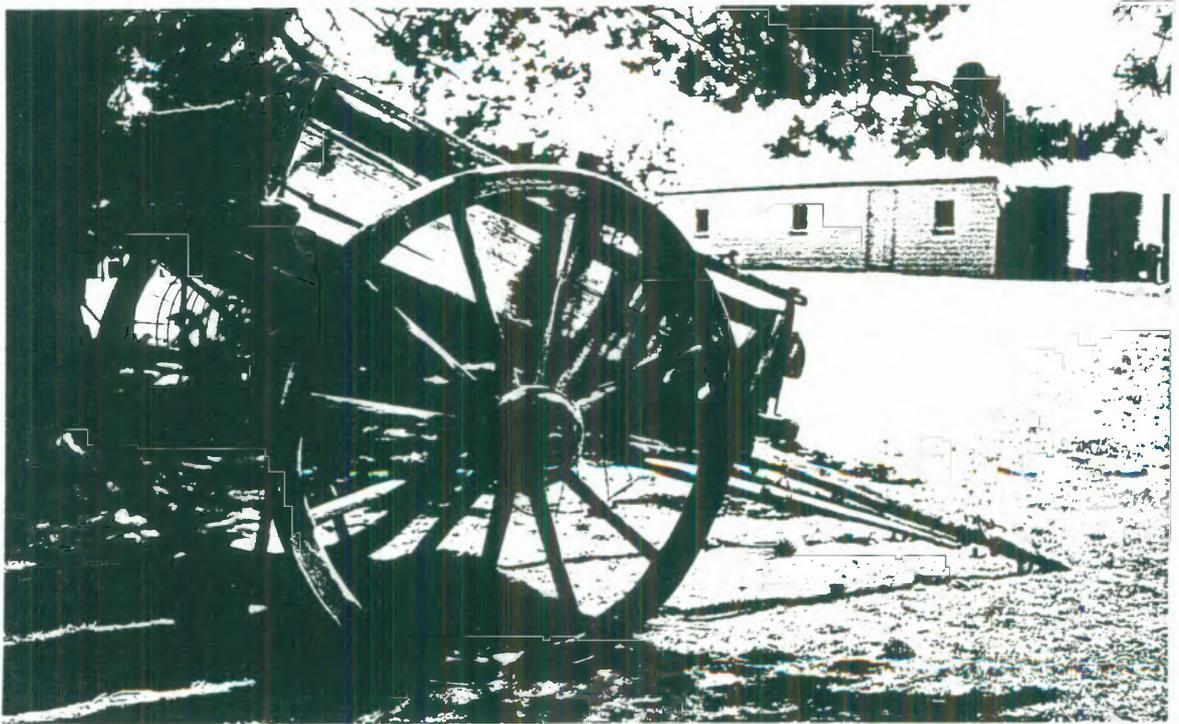
- Alpine or Mountain Ash
E.delegatensis Southern tablelands. Heavy waggons, light sulkies, and buggies. (Forester T. H. Williams, 1912, in Maiden: Forest Flora NSW, VI, p.7 (1917)).
- Red Ash, Cooper's Wood
Alphitonia excelsa "Excellent for coach-building." (Forester Augustus Rudder, Booral, c.1890 in Maiden: Forest Flora NSW, I, p.40 (1904)).
- Coachwood Lightwood
Leather Jacket
Ceratoptelum apetalum Coastal rainforests. "Much in request for coach building." (Wm. Macarthur, 1855 & 1862; Syd.Exhib., 1879). "Grandest Australian timber for coach-building," (Maiden, quoting "an eminent coach-builder," Ag.Gaz.NSW, 1894, p.550).
- Leopard Wood; Leopard
or Spotted Tree
Flindersia maculosa Western districts. "Very elastic, and... used for the poles and shafts of drays, buggies, etc." (Maiden, 1889). Local limited use for poles and shafts. (Ag. Gaz.NSW, 1894, p.552).
- Swamp Turpentine or
Mahogany; Bastard
Peppermint; Broad-
leaved Water Gum
Tristania suaveolens Swampy flats in northern areas. "For buggy and coach frames." (Maiden, 1889).
- Currawong, Spearwood,
Hickory
Acacia doratoxylon Western plains; Buggy-poles (Maiden, 1889). "...said to be the toughest timber in the Western bush...much in request for shafts of vehicles." (Syd.Exhib., 1879).
- Native Willow
Cooba
Acacia salicina Western plains. "Shafts of carts." (Maiden, 1889).
- Yarran; Spear-wood
Acacia homalophylla Swingle-bars. (W. Philipson, Wellington, b.1901--from G. W. Althofer, 1967).
- Blackwood, Lightwood,
Hickory, Mudgerabah
Acacia melanoxylon "Used by coachmakers...who speak very highly of it." (Von Weenen of Gunnedah, Ag.Gaz.NSW, 1894, p.131).
- Apple, Rough-barked
Apple
Angophora floribunda Shafts for drays and waggons. (G. E. Borthistle, Gunnedah, 1967).
- Red Cedar
Toona australis "...first and foremost amongst colonial timbers for carriage-building...Sydney cabs of excellent quality have been built of cedar alone, except the wheels and shafts." (Maiden in Ag.Gaz.NSW, 1894, p.550). Extensively used in railway carriage work.

- Plumwood, Stinkwood
Eucryphia moorei Extensively used around Braidwood for frames and bodies of "buggies, spring carts, &c." also "for shafts and poles." (Maiden in Ag.Gaz.NSW, 1894, p.551).
- Brown, Sho, Plum Pine, Colonial Deal, Pencil Cedar
Podocarpus elatus Rainforests. Dray floors, Gloucester district. (Maiden in Ag.Gaz.NSW, 1895, p.588).
- White Cherry, Crab Apple, Lightwood
Schizomeria ovata Rainforests. "Used for coach-building." (C. Moore in Indust. Progress NSW Exhib., 1870, p.651). Used for coachbuilding at Bellingen (E. H. Swain in Maiden: Forest Flora NSW, VI, p.77 (1917)).
- WHEELWRIGHT'S WORK (Naves, felloes, spokes, etc.)
- White or Broad-leaved Stringbark
E.eugenioides "Very much used in...wheelwright's work." (Atkinson, 1826).
- Box, Grey Box, White or Gum-topped Box, White Gum
E.moluccana "Much used for...wheelwright's work." (Atkinson, 1826). "Cart wheels" (Mudie, 1829), also Ercot, 1833, Spokes and felloes (Bennett, 1834); Naves (Maiden, 1889).
- Narrow-leaved, Grey or Red Ironbark
E.crebra Woolls, 1880. Spokes (Maiden, 1889).
- Ironbark; Mugga; Red, Red-flowering or Black Ironbark
E.sideroxyton Spokes (Vic.Exhib., 1861); Naves (Woolls, 1880); Felloes, spokes and hubs. Waggon-building at St. Mary's, Eric Kettle, Katoomba, 1967. Bark "used extensively" for heating and expanding steel tyres before being fitted and shrunk on to waggon and sully wheels. (Mrs. F. E. Mitchell, West Wyalong, from old residents, 1967).
- Grey, White, Red or She Ironbark
E.paniculata Spokes (Woolls, ex Sir Wm. Macarthur); Naves and Spokes (R. Dalrymple-Hay, Ag.Gaz.NSW, 1899, p.866).
- Bangalay; Bastard Mahogany
E.botryoides Felloes (Maiden ex Hill, 1889; Mueller, 1880).
- Monkey, Spotted, Grey, White or Blue Gum
E.cycallocarpa "Much esteemed by wheelwrights particularly for spokes." (Maiden, 1889).
- Woollybutt
E.longifolia "Much prized for felloes." (Sir Wm. Macarthur, 1855). Felloes, spokes (Maiden, 1889).

- Tallow-wood
E.microcorys "For naves, felloes and spokes." (Mueller: Eucalyptographia, 1880).
Grey, Red or Yellow
Gum; Leather Jacket
E.punctata Maiden et al. 1839.
- Yellow Box
E.meliadora "For the best of naves." (Mueller: Eucalyptographia, 1880).
- Woollybutt
E.longifolia "In very high repute for wheelwrights' work".
(Wm. Macarthur, 1862).
- Bosisto's Box
E.bosistoana "Good for wheelwrighting, shafts and all
frame work." (A. R. Crawford, Wingello in
Maiden: Forest Flora NSW, V, p.58).
- Blue, Sydney Blue or
Flooded Gum
E.saligna "Excellent for naves and felloes" (Woolfs,
1880). Also Forester Allan, Ag.Gaz.NSW,
1894, p.677, and R. Dalrymple-Hay, op.cit.
1899, p.866.
- Spotted or Mottled Gum
E.maculata "...for felloes...not as good as American
Hickory...but was considered the best of our
Australian woods..." (Wm. J. Mann, Nabiac
(1885-1966), 1964). Naves (Maiden, 1889).
Also R. Dalrymple-Hay, Ag.Gaz.NSW, 1899,
p.866.
- Black, Silver-top or
Mountain Ash
E.sieberi "Used...for spokes and naves." (Syd.Exhib.,
1879).
- Red Box; Lignum Vitae;
Poplar-leaved Gum;
Bastard Box
E.polyanthemos Naves and felloes (Syd. Exhib., 1879;
Woolfs, 1880; Maiden, 1889). Also Mueller:
Eucalyptographia, 1879-1884).
- Swamp or White Mahogany
E.robusta "Much valued for...wheelwrights' work."
(Maiden, 1889).
- Broad-leaved or Red
Ironbark
E.fibrosa "Preferred "over almost all other kinds of
wood" for spokes. (Maiden, 1889).
- Red, Forest Red, Grey
or Blue Gum, Bastard
Box
E.toreticornis "Excellent for naves and felloes" (Sir
Wm. Macarthur, 1855). Also Maiden, Ag.Gaz.
NSW, 1899, p.19.
- Murray or River Red
Gum
E.camaldulensis Solid wheels for log buggies (c.g. the log
buggy at Echuca, c.1870) and for timber
vehicles generally.
- Red Honeysuckle,
Banksia
Banksia serrata "Makes excellent naves for wheels."
(Atkinson, 1826).
- Apple, Rough-barked
Apple
Angophora floribunda Tableland and western forests. Felloes and
naves for waggons and drays (Pierce Farrell,
b. Holong c.1897 - from G. W. Althofer,
Wellington, 1967).

- Apple, Smooth-barked
Apple, Red or Rusty
Gum
A. costata
Coastal forests. Naves (G. Bennett, 1834, Maiden 1889).
- Apple, Broad-leaved
Apple
A. subvelutina
Coastal forests. Naves. (Maiden, 1889).
- River Oak
Casuarina cunninghamiana
"Only wood in the colony well adapted for making felloes of wheels." (J. C. Balfour, Bathurst, 1845).
- Drooping She-oak
Casuarina stricta
Spokes (Maiden, 1889).
- Dogwood; Mountain Ash;
Yellow Ash; Bonewood
Emmenosperma alphitonioides
Coastal rainforests. "Excellent for... wheelwrights' work." (Maiden, 1889).
- Native Cherry
Exocarpos cupressiformis
Forests of coast and tablelands. Spokes. (Maiden, 1889).
- Blackwood; Black Sally
Hickory
Acacia melanoxylon
"Much valued for...naves" (Maiden, 1889).
- Wilga
Geijera parviflora
Western districts. "Used to some extent for...naves." (Maiden, Ag. Gaz. NSW, 1894, p.552).
- BULLOCK YOKES.
- Apples (Various species, e.g. Smooth-barked, Broad-leaved, Rough-barked).
Angophora costata
A. subvelutina
A. floribunda
Widely advocated. Maiden, 1889; G. E. Borthistle, Gunnedah, 1968; George R. Hicks, Walcha, 1968.
- Mulga
Acacia aneura
Western districts. "Often used for bullock yokes." (Maiden in Ag. Gaz. NSW, 1897, p.520).
- Hickory, Two-veined
Hickory; Black Wattle
Acacia binervata
Coastal areas near rainforest, especially in Illawarra. "Prized for bullock yokes." (Sir Wm. Macarthur, 1862).
- Cooba; Native Willow
Acacia salicina
"Valued for bullock-yokes in Western New South Wales." (Maiden, 1889).
- Sydney Golden, Sallow
or Sally Wattle
Acacia longifolia
"Excellent for...bullock yokes." (Wm. Macarthur, 1862).
- White Honeysuckle,
Banksia, Beefwood
Banksia integrifolia
Coastal forests and heathlands and tablelands. "Tough...used for bullock-yokes." (Maiden, 1889).

7
WOODEN VEHICLES AND WOODEN ROADS

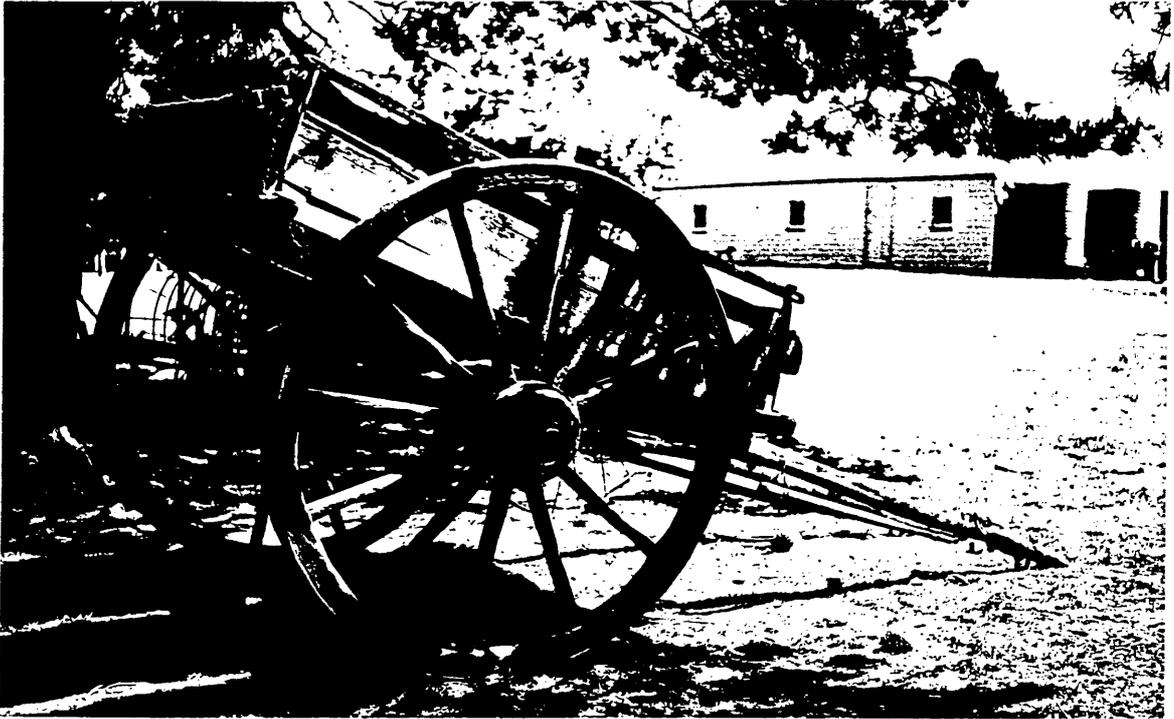


WAGON DRAW exhibiting a fine example of the wheelwright's craft.
Queensland, U.S.A., at Woodhouse's property, Mt. Butler, near Armidale, 22 Oct. 1968.



WOOD PAVING BLOCKS being laid in Martin Place, Sydney, 1892, soon after
the thoroughfare was established.

WOODEN VEHICLES AND WOODEN ROADS



FARM DRAY exhibiting a fine example of the wheelwright's craft.

Photo: L.G., at Strahle's property, Mt. Butler, near Armidale, 18 Oct.1968.



WOOD PAVING BLOCKS being laid in Martin Place, Sydney, 1892, soon after the thoroughfare was established.

Drooping She-oak
Casuarina stricta

Maiden, 1889.

River Oak
C.cunninghamiana

"Only wood in the colony well adapted for...yokes for oxen." (J. O. Balfour, Bathurst, 1845). "Seasoned under water, used for bullock yokes." (Owen Blattman, Camden, b.1913). Also Pierce Farrell, Wellington, b.1897 and Maiden, Ag.Gaz.NSW, 1898, p.593.

Brush Box
Tristania conferta

Wet sclerophyll forests and edge of rain-forests. "In my young days at Failford (Wallamba River), Brush Box was not accepted at the mill to cut timber for market, but they cut up one log occasionally especially...for bullock yokes, the reason being that this wood is very close grained and worked up smoother in the neck holes than any other wood..." (Wm. J. Mann (1885-1966) Nabiatic, 1964).

Mangrove, Grey or
White Mangrove
Avicennia marina var.
resinifera

Maiden, 1889.

Corkwood
Hakca lorea

Western districts. "...rather rare, but the timber is much prized for bullock yokes, being very strong and durable." (Maiden, 1889).

Bull Oak
Casuarina luehmannii

Western districts. "Sometimes used to make bullock yokes, but...not as good as those made of Kurrajong." (Mrs. F. E. Mitchell, West Wyalong from old residents, 1967).

Kurrajong
Brachychiton populneum

Western districts. "Splendid...for bullock yokes...one skilled man could make a yoke for two bullocks in two hours." (Mrs. F. E. Mitchell, from old residents, West Wyalong, 1967).

Quandong, Native Peach
Eucarya acuminata

Western districts. There is one story of a bullock driver once cutting down a tree to make a yoke, thereby infuriating the landholder's wife who used the tree as a source of fruit. (Mrs. F. E. Mitchell, from old residents, West Wyalong, 1967).

Western Beefwood
Grevillea striata

Western districts. "Extensively used," but "liable to split." (R. J. Dalton, Wanaaring in Maiden: Forest Flora NSW, V, p.22 (1913)).

(ii) ROAD, BRIDGE AND WHARF CONSTRUCTION

ROAD BRIDGES.

- | | |
|---|--|
| Grey, White, Red or She Ironbark
<u>E. paniculata</u> | When calling tenders for the erection of 10 bridges between Sydney and Parramatta (<u>Sydney Gazette</u> , 8 Sept., 1805) Garnham Blaxcell, Treasurer of the Road Committee, stipulated that the main bearers must number four "of at least a foot and half in diameter, either of ironbark, or blue gum..." Foundations of bridge at Stroud, built c.1845, of Grey Ironbark, <u>E. paniculata</u> and Red or Broad-leaved Ironbark, <u>E. fibrosa</u> still sound in 1895. (<u>Ag. Gaz. NSW</u> , 1895, p.505). |
| Blue, Sydney Blue, or Flooded Gum
<u>E. saligna</u> | |
| Grey, White, Red or She Ironbark and Ironbark generally
<u>E. paniculata</u>
et al.spp. | Victoria Bridge across the Nepean River, Penrith, opened 1 Jan. 1856: "It is composed almost entirely of the ironbark of the colony..." (<u>SMH</u> , 2 Jan. 1856). Still specified for bridge girders in 1924. (Percy Allan: "Highway Bridge Construction", <u>Industrial Australian and Mining Standard</u> , 14 Aug., 1924). Also used for bridge piles. |
| Tallow-wood
<u>E. microcorys</u> | Especially useful for bridge-decking, but also for girders, piles, etc. "Ranks next to ironbark". (J. V. de Coque, <u>Proc. Roy. Soc. NSW</u> , 1894, p.204). |
| Mugga, Black, Red, Pink-flowering Ironbark
<u>E. sideroxylon</u> | "Girders and piles for bridges", (<u>Syd. Exhib.</u> , 1879). |
| Mountain or Alpine Ash
<u>E. delegatensis</u> | Southern tablelands, "Girders and top structure of bridges", (Forester T. H. Williams, Tumbarumba, 1912 in Maiden: <u>For. Flora NSW</u> , VI, p.6). |
| Spotted Gum
<u>E. maculata</u> | Girders, decking and deck-guards for bridges. (Maiden). |
| Eurabbie
<u>E. biccostata</u> | Girders and decking, Tumbarumba district. (J. V. de Coque, <u>Proc. Roy. Soc. NSW</u> , 1894, p.212). |
| Blackbutt
<u>E. pilularis</u> | Bridge planking. (Maiden, 1895). |
| Red Box
<u>E. polyanthemus</u> | "Much used in bridge-building" when tall. (Mudgee district, A. G. Hamilton, <u>Proc. Linn. Soc. NSW</u> , 1886). |
| Red, River, or Murray Red Gum
<u>E. camaldulensis</u> | "An excellent girder-wood". (Maiden, 1895); Also Mr. G. W. Althofer, Wellington, 1967. |

TIMBER BRIDGE CONSTRUCTION



LIFTBRIDGE over the Barwon River at Brewarrina. Note the heavy trestle work in the high-level approaches to a bridge constructed to cope with river steamers and flood conditions.



EUMINBAH ROAD BRIDGE over the Barwon River near Walgett. Note the heavy timber trusses and supports.

Photos: I.G., 31 August 1968.

- Grey Gum
E.punctata All purposes. (Forester A. Rudder, after 60 years' experience of North Coast timbers, Ag. Gaz. NSW, 1896, p.18).
- Narrow-leaved Ironbark
E.crebra As above.
- Red or Forest Mahogany
E.resinifera Bridge decking. (A. Rudder, loc. cit.).
- Bosisto's Box
E.bosistoana Piles and girders (P.W.D. Engineer, Ag. Gaz. NSW, 1897, p.447).
- Brush Box
Tristania conferta Coastal rainforests, especially in north. Used for bridges "since it is not likely to be attacked by white ants". (Maiden, 1889).

Bridge decking. (Forester MacDonald, Kempsey, Ag. Gaz. NSW, 1896, p.6).
- Cabbage Tree Palm
Livistona australia Light, temporary footbridges. "A footbridge of cabbage-tree trunks over a creek on an abandoned farm (now part of the Water Board Reserve) at O'Erien's Gap in the Illawarra Range" - soft, and not durable. (W. G. McDonald, Wollongong, 1967). An early practice in Illawarra - see Harris: Settlers and Convicts, p.26.
- Black Bean, Moreton Bay Chestnut
Gastanospermum australe "Has been used for culverts", Tweed district. (Ag. Gaz. NSW, 1894, p.3).
- WHARF CONSTRUCTION.
- Turpentine
Syncarpia glomulifera "It is, perhaps, the best timber we have for piles, etc., for sea-water, as it is so resistant to the Teredo and other marine borers...piles are always driven with the bark on...known to remain sound, even for thirty years in sea-water." (Ag. Gaz. NSW, 1894, p.465).
- Prickly Tea-tree
Melaleuca styphelioides Wharf piles at Lauriston - Teredo resistant. (Maiden, Ag. Gaz. NSW, 1895, p.611).
- Swamp Tea-tree
Melaleuca linariifolia "Valuable for piles in swampy ground or in water, where it is almost imperishable." (Syd. Exhib., 1879).
- Blackbutt
E.pilularis "Excellent...for decking wharves." (Forester Bonson, Bega, Ag. Gaz. NSW, 1894, p.683).

- Bloodwood
E.gummifera Old wharf at Port Macquarie, c.1855, "laid without piles, with bloodwood stringers and bloodwood bod... perfectly sound" in 1895. (Maiden, Ag. Gaz. NSW, 1895, p.608).
- White or Grey Ironbark
E.paniculata Piles, "where there is no cobra" (Forester Augustus Rudder, after 60 years' experience of North Coast timbers, Ag. Gaz. NSW, 1896, p.13).
- Murray or River Red Gum
E.camaldulensis River wharves, e.g. on the Murray, and general wharf construction, especially piles. (Maiden, Ag. Gaz. NSW, 1894, p.51).
- Brush Box
Tristania conferta Wharf decking. (F. E. Wilson, Banora Point, 1967, from grandfather, F. D. Wilson, b.1854, selector, Terranora, 1878).
- Plum, She or Brown Pine
Podocarpus elatus Wharf piles - somewhat resistant to Teredo marine borer. (Maiden: For. Flora NSW, I, p.87).

(iii) BOAT AND SHIP BUILDING.

- Ironbark
E. paniculata and/or
E. sideroxylon "It has been stated in New South Wales, that a vessel built of Iron-Bark, Box, Banksia, and Tea-tree timber, and planked and lined with Flooded Gum, Blue Gum or Black Butt, and tree-nailed with Iron-Bark, will attain the highest class given at Lloyd's. All these trees are found within twenty miles' range of Sydney." (George Bennett, 1860).
- Box
E.meluccana and/or
E.quadrangulata and/or
E.bosistoana
- Banksia
Banksia serrata
- Tea Tree
Molaleuca quinquenervia
- Blue Gum
Flooded Gum
E.saligna
(Blue and Flooded Gum were not clearly distinguished until the recognition of E.grandis which however, being a North Coast tree, is not found within 20 miles of Sydney.) See also below. Flooded Gum (of one species or the other, perhaps both) was used extensively in the William the Fourth built at Clarence Town 1830-31. Outer planking of the 80' hull was 1" Flooded Gum. The Ceres, launched on the Williams River 1835, was also built largely of Flooded Gum. The vessel was still in service 60 years later. (J. H. M. Abbott: The Newcastle Packets and the Hunter Valley, Syd., 1943, Chap. VII).

Blackbutt
E. pilularis

"Excellent for...ship-building...There is a fine specimen...growing on the Bulli Mountain, not far from the road, a little below the 'Elbow'... perhaps the largest tree in New South Wales." (Nilson, 1884).

Bloodwood
E. gummifera

The Royal Tar (593 tons) a barque was built largely of Bloodwood and Blue Gum at Nambucca Heads in 1876. William Lane took this vessel to Paraguay on his New Australia expedition of 1893. (Nambucca Hist. Soc. records).

Blue, Sydney Blue,
Flooded or White Gum
E. saligna

"In great plenty at Lane Cove up the Parramatta River...and is also found at Middle Harbour, and generally throughout the Colony...is preferred to any other for the building of colonial vessels, for timbers and plank." (R. Hart, Purveyor of Navy Board, in Field, 1825); General purposes; "Extensively used in the Colony in ship and boat-building, and has been found very lasting and durable...The smaller sticks make good lower masts, yards and booms, being extremely tough." (Atkinson, 1826); "the finest timber for ship-building." (Wm. Macarthur, 1855); Also Woolls, 1880. Planking (Bennett, 1860); Planking above water line and decking of log punts (W. J. Mann (1885-1966), Nabiac, 1964). Also Ag. Gaz. NSW, 1894, p.745, and Proc. Roy. Soc. NSW, 1894, p.198.

Bangalay; Bastard
Mahogany
E. botryoides

"Much valued for knees and crooked timbers of coasting vessels." (Wm. Macarthur, 1862). "First quality for ship and boat building." (Syd. Exhib., 1879).

Swamp Mahogany
E. robusta

General shipwrights' work. (Woolls, 1880).

Red or Forest Mahogany
E. resinifera

General shipwrights' work. (Woolls, 1880)
Ships' knees (Maiden, Ag. Gaz. NSW, 1895, p.3).

Spotted Gum
E. maculata

"Excellent for ship-building" (Wm. Macarthur, 1885). Sample from hull of William the Fourth exhibited in London, 1862, "with the exception of some slight charring...in the immediate vicinity of the boilers, the entire fabric...is as substantial and sound as when she was built in...1850." (Edyo Manning, Lond. Exhib., 1862, p.34). General purposes. (Woolls, 1880); Ribs or timbers, "one of our best bonding hardwoods" (W. J. Mann, (1885-1966), Nabiac, 1964).

Ironbark
(probably Grey, and/or
Pink-flowering Ironbark,
or Mugga)
E.paniculata
E.sideroxylon

"Not very difficult to be obtained and brought down the river from Liverpool" -- used for ships' pumps "two of which are at this time on board the 'Dromedary'" (R. Mart, Navy Purveyor, 1821, in Field, 1825). General shipbuilding purposes (Bennett, 1860); For keels and keelsons (W. J. Mann (1885-1966), Nabiac, 1964).

Cumberland Blue, Monkey,
Clarence Flooded Gum
E.cypselocarpa

Ships' planks. "One of the most valuable in the colony" (Nilson, 1884).

Red, River or Murray
Red Gum
E.camaldulensis

General building purposes, inland river steamers (W. W. Fielder, Albury; W. Cameron, Bourke, 1967). Also from captain of P. S. Canberra, Echuca, 1967. "Used in...ship-building for heavy deck-framing, beams and knees, planking, &c." (Nilson, 1884). P. S. Adelaide (1866) preserved at Echuca has 3" Red Gum planking. At the end of 1839 there was at Albury, "a boat belonging to the public-house, made out of an immense hollow tree" pulled by a greenhide rope across the Murray. "The boat would hold thirty sheep packed close together". (Denarr: Adventures, (1893), p.69).

Rose or Flooded Gum
E.grandis

Masts and spars. (F. E. Wilson, from grandfather, F. D. Wilson, b.1854, Tweed River.)
Ship's planking, (Forester A. Rudder, Ag. Gaz. NSW, 1896, p.15). See also under Blue Gum, above.

Red Ash, Cooper's Wood
Alphitonia excelsa

"I have seen it used for ribs." (Forester Augustus Rudder, Booral, c.1890, in Maiden: For. Flora NSW, I, p.40).

Red Cedar
Toona australis

From Hunter River and Five Islands-- "is generally allowed to be the most valuable wood for inside work of ships and houses, of any found in New South Wales..." (R. Mart, Navy Purveyor, 1821, in Field, 1825).
Whole logs, hollowed with adzes, used as boats on Macleay R., c.1840 (J. Henderson, 1851).
Planking of small craft, but not favoured by some, e.g. "cedar got what we called 'nail sick'--it used to go black and deteriorate round the nails in time." (W. J. Mann, (1885-1966), Nabiac, 1964).
Interior work (Nilson, 1884).

White Beech
Gmelina leichhardtii

"Much prized for the decks of coasting vessels" (Wm. Macarthur, 1855); "The decking in the early days as far as I can ascertain was always soft wood, principally beech in this area (i.e. Manning-Wallamba district). Also used for planking for small craft. (W. J. Mann (1885-1966), NABIAC, 1964); Banera Pt., Tweed River, from grandfather F. D. Wilson, b.1854, selector on Tweed, 1878). "Best... in the Colony for ships' decks...much in use." (J. V. de Ooque, Proc. Roy. Soc. NSW, 1894, p.198).

Rosewood
Dysoxylum fraserianum

Interior work. (Wilson, 1884).

Turpentine
Syncarpia glomulifera

Boat-building, general purposes (Breton, 1853), Planking below the waterline because of borer-resisting qualities (W. J. Mann (1885-1966), NABIAC, 1964). Bottoms of log-punts (Ag. Gaz. NSW, 1895, pp.736-738).

She, Brown or Bolly
Beech; Bolly Gum
Litsea reticulata

Small craft, river boats (F. E. Wilson, from his grandfather, F. D. Wilson, b.1854, Tweed River).

Cotton tree
Hibiscus tiliaceus

Boat knees (F. E. Wilson, Tweed River).

White Cedar
Melia azedarach, var.
australasica

Rainforests. "...for boards and boat-building." (Breton, 1853).

Red Honey-suckle, Banksia
Banksia serrata

"Much used for timbers of small vessels." (Atkinson, 1826; Wilson, 1834). "Boats' knees and stems," (John Breckenridge, (1845-1917) Fairford, Ag. Gaz. NSW, 1895, p.611).

White Honey-suckle,
Banksia
Banksia integrifolia

"Used for knees" (Syd. Exhib., 1879).

Broad-leaved, Paperbark
Toa-tree; Bellbowrie
Melaleuca quinquenervia

Knees, stems, sternposts (W. J. Mann, (1885-1966), NABIAC, 1964).

Prickly Toa-tree
Melaleuca styphelioides

Knees, Gundlotown and Laurieton, (Ag. Gaz. NSW, 1895, p.611).

Brush Box
Tristania conferta

"Perfectly sound, after being nearly thirty years as ribs of vessels" (O. Moore, 1862). In 1840's, "chosen of all others by a firm of ship builders" for ship's planking (Forrester Augustus Rudder, Ag. Gaz. NSW, 1896, p.17).

Water Gum
Tristania laurina

"Valuable for boat-building." (Wm. Macarthur, 1855); Knees and ribs. (Wilson, 1884).

Weeping Myrtle,
Large-leaved Water Gum
Syzygium floribundum

"Used for boat-building". (C. Moore in Indust. Progress NSW Exhib., 1870, p.646).

Hoop, Colonial, Morston
Bay or Richmond R. Pine
Araucaria cunninghamii

Punt bottoms, spars. (Ag. Gaz. NSW, 1895, p.300).

Brown, White, Sho, Yellow
Plum or Hunter R. Pine
Pedocarpus elatus

Decking, e.g. the William the Fourth, built at Clarence Town, 1830-1831, had "dock planking...of colonial pine, 2 $\frac{1}{2}$ inches thick." (J. H. M. Abbott: The Newcastle Packets and the Hunter Valley, Syd., 1943, p.62).

BOAT CAULKING

Prickly-leaved Tea-tree
Melaleuca styphelioides

Bark "is used for...caulking boats" (Maiden, Ag. Gaz. NSW, 1902, p.175). Doubtless other paper-barks were similarly used.

CAULKING MALLETS

River Oak
Casuarina cunninghamiana

Used for mallet heads about 12" to 15" long, 2 $\frac{1}{2}$ " to 3 $\frac{1}{4}$ " diam. fitted with small iron rings. Boat-building yards at Tuncurry and Failford. (J. W. Breckenridge, (1878-1968), Failford).

Swamp Oak
C. glauca

OARS

Alpine or Mountain Ash
E. delegatensis

Southern tablelands. "Best oars made at Lauriel, up to 28 feet long, have a world-wide reputation." (Forester T. H. Williams, Tumbarumba, 1912 in Maiden: For. Flora NSW, VI, p.7).

Blueberry Ash,
Pigeonberry Tree
Elaeocarpus obovatus

Coastal forests.
"Extensively used for oars" (Wilson, 1884).

Blue Fig, Cooloon, Brush
or Silver Quandong
Elaeocarpus grandis

Coastal forests.
"Paddles and oars" (F. E. Wilson, Banora Pt., Tweed River, from grandfather, F. D. Wilson, b.1854, Terranora).

Pigeon Berry, Illawarra
or Mountain Ash;
Whitewood
Elaeocarpus kirtonii

Coastal forests.
"Much used for oars" (Wm. Macarthur, 1855).

ANCHOR ROPES

Lawyer Cane
Calamus muelleri

Rainforests.
"Anchor ropes for small craft", Tweed River.
(F. E. Wilson, Banca Point, 1967, from grandfather,
F. D. Wilson, b.1854, Terranora.)

(iv) RAILWAY CONSTRUCTION

RAILWAY SLEEPERS

By the beginning of the 20th century, engineers of the N.S.W. Department of Railways knew enough about native timbers and the stresses to which they would be subjected in railway work, to make very definite specifications about sleepers:

- "6. The sleepers must be of ironbark, box, grey-gum, red-gum or blackbutt timber. They must be sawn or hewn from large trees, free from rotten heart, large knots, and shakes.
7. Any sleeper cut on the quarter will be liable to rejection
8. Sleepers must not be less than 3 feet in length, and not less than 9 inches in width. They may be round on top.
9. They must show at least $3\frac{1}{2}$ inches in depth of redwood or heartwood on the sides; and...there must be sufficient redwood or heartwood timber to give, when adzed, a minimum thickness of 4 inches under the rail, and with that thickness a bearing for the rail on the lower side of not less than 5 inches in length.
10. The bottom of the sleepers must be hewn or sawn straight and cut of winding, so as to give them a proper bearing on the ballast.
11. The minimum thickness of any sleeper, including sapwood, must not exceed $5\frac{1}{2}$ inches." (quoted by Maiden, 1904).

A preference was long held for hewn sleepers only. Acceptance of sawn sleepers came very slowly.

Grey Gum, Leather
Jacket, Hickory
E.punctata

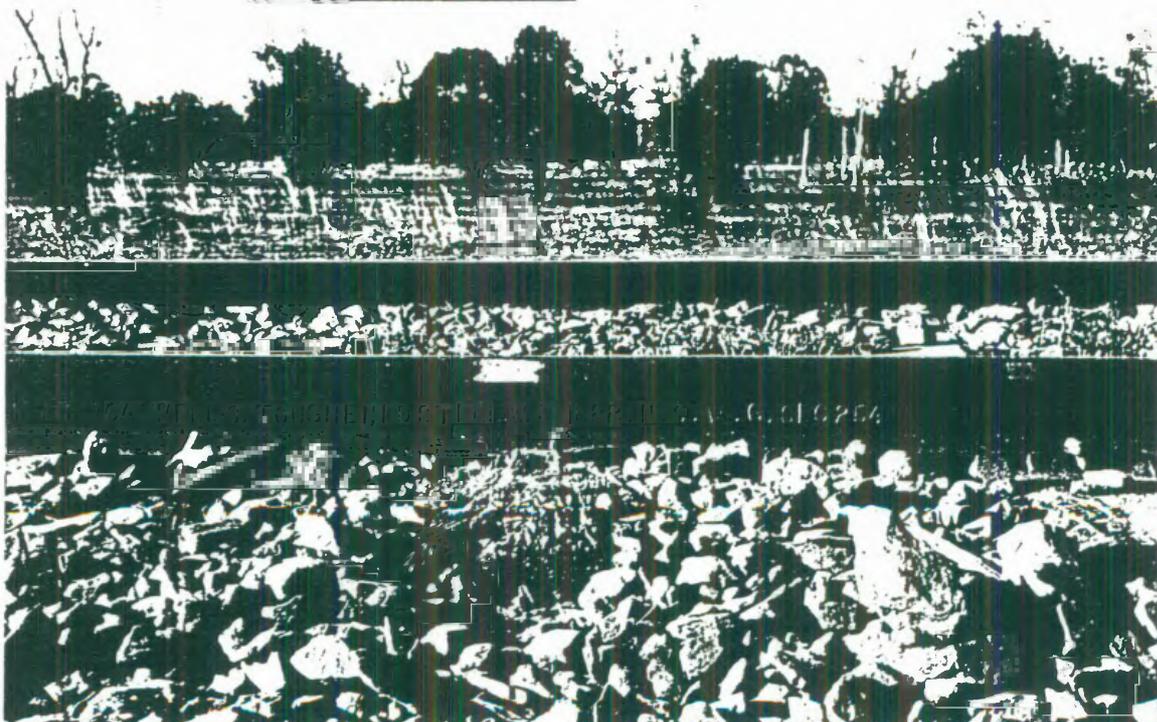
"Makes excellent sleepers". (Syd. Exhib., 1879).
"One of the most useful...for railway sleepers".
(Woolls, Proc. Linn. Soc. NSW, 1880).

Mugga, Red Ironbark
E.sideroxylen

Syd. Exhib., 1879.

Blackbudded Gum,
Blackbutt
E.pilularis

"Next to the White Iron Bark (E.siderophloia) capable of enduring a greater crushing strain than any other Eucalypt." (Woolls, 1880)
(E.siderophloia = E.fibrosa) "Used on the Goulburn-Bungendore extension" (Maiden, Ag. Gaz. NSW, 1894, p.632).



OLD WOODEN SLEEPERS on the Nyngan-Cobar line. Note the date, 1888, on the rails.

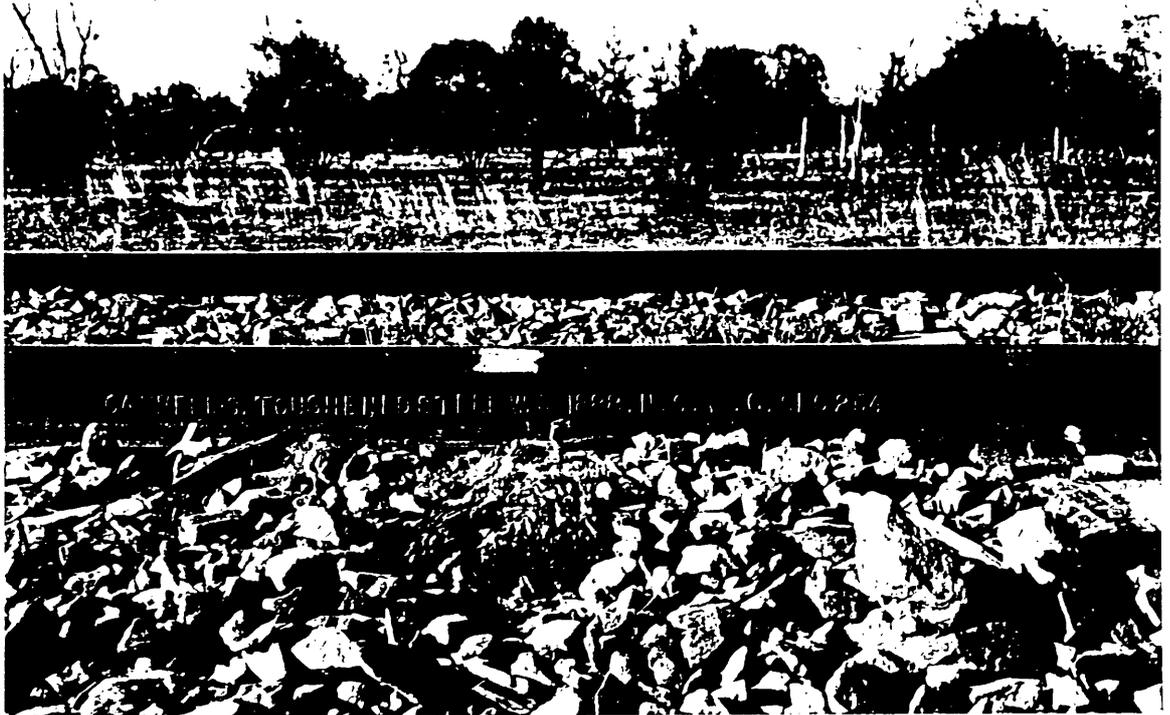
Photo: I.O., 50 m. from Cobar, 25 August 1968.



RAILWAY STATION with elevated approaches, near Walgett.

Photo: I.O., 31 August 1968.

RAILWAY CONSTRUCTION



OLD ROUND-BACK SLEEPERS on the Nyngan-Cobar line. Note the date, 1888, on the rails.

Photo: L.G., 50 m. from Cobar, 25 August 1968.



RAILWAY BRIDGE with elevated approaches, near Walgett.

Photo: L.G., 31 August 1968.

- Red or Broad-leaved
Ironbark
E.fibrosa Used on the original Sydney-Parramatta railway, 1855. Much came from the Potts property between Homebush and Rookwood. (F. H. Potts to J. H. Maiden, Ag. Gaz. NSW, 1893, p.752). "Fairly good" for sleepers (Forester Augustus Rudder, Ag. Gaz. NSW, 1896, p.13).
- Narrow-leaved Ironbark
E.crobra "Railway cross-ties". (Maiden, Ag. Gaz. NSW, 1893, p.757). Also Forester Augustus Rudder, Ag. Gaz. NSW, 1896, p.14).
- White or Grey Ironbark
E.paniculata "May be justly considered to rank first, more especially...as...railway sleepers". (Forester Augustus Rudder, after 60 years' experience of North Coast timbers, Ag. Gaz. NSW, 1896, p.13). Also Maiden, Ag. Gaz. NSW, 1893, p.752.
- Small-fruited Grey Gum
E.propinqua North Coast. Sleepers. (R. Dalrymple - Hay, Ag. Gaz. NSW, 1899, p.866).
- Grey Box
E.moluccana South coast. Sleepers. (R. Dalrymple - Hay, 1899, loc. cit.).
- Murray or River Red Gum
E.camaldulensis "About Wagga Wagga...extensively used as railway sleepers" (Syd. Exhib., 1879).

RAILWAY KEYS

- Red Cedar
Teona australis Rainforests. In 1893, the Railway Commissioners accepted a tender for 200,000 cedar railway keys at £4.15.0 per thousand. (SMH, 7 June, 1893; Ag. Gaz. NSW, 1893, p.602).
- Toak, Crow's Ash
Flindersia schottiana Rainforests. "A recent special use is for railway keys". (Maiden: For. Flora NSW, II, p.157).

RAILWAY BRIDGEWORK

- Blackbutt
E.pilularis Piles for railway bridges, Gosford district. (Forester Martin, Gosford, Ag. Gaz. NSW, 1894, p.635), and culverts on Illawarra line (Forester Retton, Picton, ibid.).
- Spotted Gum
E.maculata Upper parts of railway bridges. (Woolls, Proc. Linn. Sec. NSW, 1880)
- Toak
Flindersia australis One of the most durable of the rainforest timbers. Girders 18" x 12" were cut for the Lismore-Murwillumbah railway, 1894. (A. Cousins in The Northern Star, 14 Feb. 1953).

RAILWAY ROLLING STOCK

Grey Box <u>E.meluccana</u>	"Rail carriage frames". (R. Dalrymple - Hay, <u>Ag. Gaz. NSW</u> , 1899, p.867).
Blackbutt <u>E.pilularis</u>	Railway waggons (R. Dalrymple - Hay, 1899, op. cit. p.866). Used for open goods waggons in 1875. (R. T. Baker: <u>The Hardwoods of Australia</u> , 1919, Photo, p.442).
Red Mahogany <u>E.resinifera</u>	Open goods waggons, 1881. (Baker, loc. cit.).
Tallow Wood <u>E.microcorys</u>	Open goods waggons, 1879. (Baker, loc. cit.).
Grey Ironbark <u>E.paniculata</u>	Open goods waggons, 1872. (Baker, loc. cit.).
Blue Gum <u>E.saligna</u>	Sheep vans, 1875. (Baker, loc. cit.).
Spotted Gum <u>E.maculata</u>	Open goods waggons, 1886. (Baker, loc. cit.).
Blackwood <u>Acacia melanoxylon</u>	Interiors of carriages. (R. Dalrymple - Hay, <u>Ag. Gaz. NSW</u> , 1899, p.867).
Red Cedar <u>Toona australis</u>	Interiors of carriages - still seen in many old NSW sleeping cars.

TRAM RAILS

Brush Box <u>Tristania conferta</u>	"Uniformly chosen in the northern districts" for rails "as it is elastic and is not cut by the tram-wheels". Near Cooperook in 1895, one such timber tramway was horse-powered up grades of 1 in 6, to convey Tallow-wood, Blackbutt and Brush Box logs to a river wharf. (Maidon, <u>Ag. Gaz. NSW</u> , 1895, p.598). Also considered "best for hewn trolley wheels". (Forester Macdonald, op. cit., p.611).
Spotted Gum <u>E.maculata</u>	Tram-rails to convey logs to mills, South Coast forests. (Maidon, <u>Ag. Gaz. NSW</u> , 1895, p.826).

(v) TELEGRAPH AND TELEPHONE LINE CONSTRUCTION. (Compiled largely from P.M.G. Records, by courtesy of Mr. F. C. Barnes, former Public Relations Officer, G.P.O., Sydney).

POLES

Box, Grey, White, or Gum-topped Box, White Gum <u>E.meluccana</u>	Used on the Liverpool-Albury line, 1858-59. Poles: 25ft. long; 9" square at base; 5"-8" diam. at top. The two earlier NSW lines were Sydney-South Head
---	--

Grey, White, Red or Sho
Ironbark
E. paniculata

Brown, Red, Coast,
Stringybark
E. capitellata

Grey, White, Red, or
Sho Ironbark
E. paniculata

Blackbutt
E. pilularis

Grey, White, Red, or
Sho Ironbark
E. paniculata

Blackbutt
E. pilularis

Brown, Red, Coast
Stringybark
E. capitellata

Box, Grey, White or
Gum-topped Box; White
Gum
E. moluccana

Bloodwood
E. gummifera

Red, or Forest Red Gum;
Grey or Blue Gum; Eastard
Box
E. tereticornis

Woollybutt
E. longifolia

Red or Forest Mahogany
E. resinifera

White Cypress Pine
Callitris hugelii

and Sydney-Liverpool, both opened 26 Jan. 1858. Maiden (1904) makes reference to stringybark (E. capitellata): "Young saplings are highly prized for telegraph poles..." The first telegraph line in Australia, Melbourne-Williamstown, 1854, was strung on poles of blue gum, red gum, white gum, stringybark, ironbark (probably E. globulus; E. tereticornis and E. paniculata). The bases were thoroughly charred, and tarred for the length (5ft.) they were fixed in the ground -- 30 poles to the mile were used; by 1857, the renewal procedure was to cut off any decayed part and re-erect the poles at lesser depth.

Most early poles erected in the Sydney metropolitan area were of these timbers; many of the larger poles were finely dressed, being octagonal for some 7ft. above ground level, then rounded and tapered; some were painted black or white for some distance. Timber obtained from higher land if possible.

Various timbers were used for poles in country districts, depending on local supplies and transport facilities, but always with regard for the most enduring timber. In the western districts White Cypress Pine was used very extensively; in some areas it was the only timber available within reasonable distance; it was termite-resistant, and durable -- many old poles are still to be seen in western New South Wales. In 1890, line contractors were advised that poles would be inspected to confirm that they were no less than 10" diameter at 5ft. from the base, and 5" at the top; they were to be placed 70 yards apart, or 25 to the mile. Doubtless these specifications were for main lines only.

Grey, White, Red or
She Ironbark
E. paniculata

Early trunk lines to Newcastle (1898), Katoomba
(1899) and Bathurst (1899) were strung on 30ft.
Ironbark poles, 30 to the mile (abt. 176ft. apart).

Yellow Box
E. mollicera

Used for telegraph poles. (Mueller, 1880).

CROSS-ARMS

Tallow-wood
E. microcarys

The tender of 2ft. Tallow-wood cross-arms @ 38/-
per 100 was accepted for the trunk line to
Bathurst, 1898.

2. HUMAN FOODS AND BEVERAGES

Generally, the various succulent fruits (e.g. of such plants as Rubus, Styphalia, Persoonia, etc.) and "greens" (e.g. Collins's "wild celery, spinach and parsley" and Phillip's "samphose" or samphire, (Salicornia australis), all treated in Thesis I, will not be dealt with again unless there is evidence to indicate that these were used well after the first settlement. It is interesting to note that some enthusiasm for certain indigenous plant products as food persisted well into the nineteenth century.

'GREEN VEGETABLES'

Cabbage Tree; Cabbage
(Tree) Palm
Livistona australis

"...the heart, or cabbage, or the young, unexpanded leaves, is eaten either raw or cooked." "I had become hungry, and looked longingly to the tops of the majestic palms..." (Backhouse, 1836); "...we would eat the white heart of its crown with salt we had brought with us. Fancy cutting down that fine column of a cabbage-palm for the sake of its heart! What a splendour of waste!" (Henrietta Heatherone: Pictures of Aust. Life, 1843-4).
Of. "...the tree did...hence the term 'Millionaire's Salad' for the heart of the tree" (Eric Kettle, Katoomba, 1967, from his grandfather); "Our housekeepers use the 'heart' of the palm heads both in its raw state, when it eats something like cecoa, and also as a pickle." (Abraham Lincoln: Aust. Sketches, c.1840, ML.) "Often eaten by the whites as well as by the Aborigines." (Hodgkinson, 1845). "It bears in its top a sort of cabbage which is occasionally eaten." (Henderson, 1851). "The cabbage-tree palm, is eatable in the white part of the undeveloped leaves." (Woolles, 1878). "Eatable in the tender parts", (Woolles, 1881).

Bangalow Palm
Archontophoenix
cunninghamiana

Young leaves eaten raw or boiled. "White..., sweet, and pleasant." (Henderson, 1851).

Wild, Warrigal or
New Zealand Spinach
Tetragonia tetragonioides

"...found on the sandy shores, and which, though eagerly sought for there would not be much esteemed in any other country." (R. Mudie, 1829). Introduced to England from N.Z. by Banks, 1772, and "in the hands of a skilful cook may be made an excellent vegetable dish, although inferior to spinach." (W. B. Booth in Lindley & Moore: Treasury of Botany, 1876). A.A.Co. settlers at Port Stephens in 1826 boiled the plant twice and "found it to be superior to the common English plant of that name." (R. Dawson, 1830).

Old Man Saltbush
Atriplex nummularia

Used by explorers, and still being recommended in 1894: "also known as 'Cabbage Salt-bush, as it is often employed as a substitute...for spinach or cabbage. This fact should be more widely known." (Maiden, Ag. Gaz. NSW, 1894, pp.209-210).

Dock
Rumex spp.

Difficult to determine whether indigenous or exotic species were used, but the plant was widely used as rhubarb. (George Monson, b.1897, Orara, from David Shephard, 1964).

Fat Hen
Chenopodium spp.

Very widely used as green vegetable, but whether from introduced Fat Hen, C.album, or such native species as Boggabri, C.carinatum, is difficult to say. Generally reported, e.g. "This fat hen is a weed which is sometimes used as a vegetable by settlers, and tastes very much like spinach. The tops...only are pulled, and it is really excellent..." (Henderson, 1851). In 1842 Fat Hen was described as "the first sign of civilization...an English weed...which spreads very fast and makes good spinach." (Marsh: Overland, p.76).

Kurrajong
Brachychiton populneum

"Leaves were sometimes cooked as vegetables. The better the climber, the better the 'vegetable', as the tenderer leaves were at the top of the tree." (Mrs. F. E. Mitchell, West Wyalong, 1967, from old residents).

Pigweed, Furslane
Warrego Cabbage
Portulaca oleracea

"Used as a vegetable". (Mudgee district, A. G. Hamilton, Proc. Linn. Soc. NSW, 1886). Chief food in Warrego area in 1866 was beef and pigweed, "more politely termed Warrego cabbage." SMH, 7 Sept., 1866.

Nettles
Urtica spp.

Widely reported as a green vegetable. "The men boiled a potful of nettles..." Lower Macleay, 1839 (Henderson, 1851). Perhaps the Native or Scrub Nettle, U.incisa, or one of the exotic species, U.urens or U.dioica. Quite likely the native species was used, especially in the earlier part of the century.

Variable Plantain
Plantago varia

"...known in the Macquarie marsh country as Wild Sage...there used by a few of the settlers as a substitute for sage, both in puddings, and...by merely adding boiling water and sugar...found it very palatable." (W. N. Thomas, surveyor, Ag. Gaz. NSW, 1898, p.355).

FRUITS AND SEEDS

Australian or Native
Cranberry
Lissanthe sapida

"The Australian cranberry...is a beautiful fruited shrub...crimson berries, upon which...there is not a great deal of pulp. The taste resembles that of the Siberian crab. It seems highly probable that the epacridae generally produces edible berries." (R. Macle, 1829). In 1865 Louisa Atkinson sent the Sydney Horticultural Society a jar of jam made from this fruit with a note: "A small shrub of the Epacridae family, bearing a crimson fruit, enveloping a single stone; a good bearer, crop lasts about two months or more, coming in in November. To make jelly--boil the drupes, adding a few spoonfuls of water; when soft strain the juice off, add one pound white sugar to a pint, and boil to jelly. The fruit makes an excellent tart." (Horticultural Magazine, 1865, p.29). Also A. Smith in Lindley & Moore: Treasury of Botany, 1876.

Tamarind
Diploglottis australis

Coastal rainforests. "Fruit used for preserves by the colonists." (Wm. Macarthur, 1855). "Valued by the settlers on account of its sub-acid fruit... of which a very good preserve is made." (C. Moore, 1862). Yellow "pleasant sub-acid fruit...used for preserves." (Maiden, Ag. Gaz. NSW, 1899, p.129). "Fruit makes an excellent preserve." (Nilson, 1834).

Morston Bay Chestnut
Castanospermum australe

Coastal rainforest, far north coast. "...eaten by the natives of the Brisbane River, and by the convicts...as substitutes for our Spanish Chestnuts." (C. Fraser, 1828, in Hooker: Bot. Miscellany, 1830); Occur when roasting "is agreeable...The flavour, though not so sweet, is nearly as grateful as that of the Spanish Chestnut." (R. Macle, 1829). A more realistic view came later: "Extended experience shows that very few stomachs can tolerate them." (Maiden, Ag. Gaz. NSW, 1894, p.2).

Colane, Native Peach,
Sour Plum, Etau Apple,
Moolay Apple
Owenia acidula

Western districts. "...sub-acid fruit...relieves thirst, enabling travellers to endure...want of water for many hours...eaten both by colonists and aborigines." (Maiden, Ag. Gaz. NSW, 1899, p.128). Also Mitchell: Three Expeditions, I, p.82, where noted and figured.

Native Currant,
Acid Borry
Leptomeria acida

Used by First Fleeters and earliest settlers as an antiscorbutic. (Thesis I, pp.38-39). Fruits "make an uncommonly fine jelly" (D. D. Mann, 1811); Flavour "not disagreeable; but...so extremely tart" that for "preserves" and "for sharpening liquors" the fruits must be mixed with some "milder fruit". Usually prepared with raspberries, the result being "much relished at Sydney during the dry and burning months." (R. Mudie, 1829). Fruits "make an excellent preserve when mixed with the raspberry" (P. Cunningham, 1826); "...makes a very agreeable preserve with plenty of sugar" (Atkinson, 1826); cultivation of this "valuable fruit" has been "too much neglected" - used for preserves, "to mix occasionally with other fruits", for tarts - "much liked by many persons." (Thomas Shepherd: Lectures on the Horticulture of N.S.W., Syd., 1835, pp.74-75); four samples of "native currant jolly" were sent to London Exhibition, 1862, by Miss L. Jacques, Balmain. Fruit "seen in great quantities in Sydney markets...in a green state...used in making tarts." (John Morison, 1867). Jelly "used a good deal with roast mutton." (W. S. Campbell in JRAHS, 1919, p.280).

Wild Raspberry
Rubus parvifolius
R.rosifolius
R.hillii

"...we possess raspberries equal in flavour and not otherwise distinguishable from the English." (P. Cunningham, 1826); Wild raspberries "used by the settlers in making preserves." (John Morison, 1867); Of R.rosifolius Forester G. R. Brown of Port Macquarie, wrote: "Fruit eaten in bush; also made into pies and jam." (Ag. Gaz. NSW, 1895, p.672); R.parvifolius "used to some extent for jams and pies." (W. E. Giles, b.1901, Orange).

Goobung, Jibbong
Persoonia lanceolata
P.pinifolia, et al.spp.

"The jibbong is another tasteless fruit...much relished by children." (P. Cunningham, 1826).

Five-corners
Styphelia triflora
et al.spp.

"...five-corners, much relished by children." (P. Cunningham, 1826).

Blackberry Nightshade
Solanum nigrum

A cosmopolitan species. In the Richmond River district fruits called "Native Currants" and "used for making jam in the locality." (Proc. Linn. Soc. NSW, 1890).

Brown or Plum Pine
Podocarpus elatus

Fleshy receptacles sought by "small boys...fond of the 'damsons'...they rank amongst the best of the indigenous fruits." (Maiden, Ag. Gaz. NSW, 1899, p.735).

Native Plum
Podocarpus spinulosus

Fleshy receptacle "mixed with the jam of the native currant (Leptomeria acida), ...makes a very good pudding." (Woolfs, Ag. Gaz. NSW, 1899, p.755).

Quandong
Eucarya acuminata

Western plains. "Fruits...were used for jams, sauces, tart fillings, etc." (Mrs. F. E. Mitchell, West Wyalong, from old residents, 1967). "Fruit used as a conserve" (W. W. Fielder, Albury, 1967). "Made into jam" (C. R. Hohnberg, Forbes, 1967). Fruit, stoned and dried, c.1900. (S. Daniell in Walkabout, 1 Aug. 1953).

Lillypilly
Acmena smithii

Rainforests. "Clusters of fruit, very acid, but wholesome and eatable." (Sir Wm. Macarthur, 1855).

Native Millet, Umbrella
or Barley Grass
Panicum decompositum

Chiefly in western districts. Prolific seeder. "...afforded us an excellent substitute for flour, as the seeds...when well bruised and worked into dough, make very passable bread." Perhaps followed aboriginal practice. (Eldershaw: Australia (1854), pp.165-6).

Burrawang
Macrocramia communis

"Mr. Henry Moss, of Shoalhaven, has been for some time...engaged in manufacturing an edible starch from the nuts and tuber." After pounding, soaking, straining and drying, a starchy substance was produced "as fine as any commercial arrowroot." "An infant child in the Shoalhaven district was reared upon it and nothing else..." Moss "deserves the thanks of the community for thus inaugurating a valuable article of food...perfectly new, nutritious, and palatable..." (Dr. F. Milford, Proc. Roy. Soc. NSW, 1876, pp.295-297). Moss's arrowroot was highly commended as being "of excellent quality" at the Sydney International Exhibition, 1879 (Syd. Exhib., 1879, p.855), but both before and after this, the plant was renowned more for its poisonous qualities. Moss apparently took a lead from the aborigines in preparing his arrowroot.

Queensland or Bush Nut
Macadamia tetraphylla

"This tree bears an edible nut of excellent flavour, relished both by aborigines and Europeans." Being a source of aboriginal food, "timber-getters are not allowed to fell these trees." (Maiden: For. Flora NSW, I, p.217). The nuts of this tree are still highly valued - one of the very few native trees commercially exploited for its fruit.

GUMS

Various Wattles
Acacia spp.

"...from their trunks and branches, clear transparent beads of the purest Arabian gum are seen suspended in the dry spring weather, which our young currency bantlings eagerly search and regale themselves with." (P. Cunningham, 1826). Cf. Rev. James S. Hassall's reminiscences of the late 1830s when at Rev. Thomas Makinson's school at Mulga: "Every evening we...who were boarders... used to satisfy our hunger by gathering wattle-gum...and eating at least a couple of pounds each at a time. It never did us any harm. I do not know what the boys would have done without it." Hassall referred to a time of drought, probably 1835 or 1838. (Hassall: Old Australia, p.34). "Used as toffee by children" (W. W. Fielder, Albury, 1967, from old residents).

TUBERS, BULBS, ETC.

Big-leaf Vine
Sarcopetalum harveyanum

Tubers may be eaten raw, but are "improved by roasting or boiling." Suggested as one way of compensating for "the failure of so many esculent vegetables of late years." ("L.A.", i.e. Louisa Atkinson of "Fernhurst", Kurrajong, in Horticultural Magazine, 1864, pp.47-48).

Sweet-scented Doubah
Marsdenia suaveolens

Kurrajong
Brachychiton populneum

Edible roots "extremely pleasant in flavour...can be eaten uncooked or roasted." Louisa Atkinson, op. cit., 1864, p.97.

Native Hyacinth,
Hyacinth Orchid
Dipodium punctatum

Tubers or "boyams" "an article of food among the aborigines; they are also sought after by the colonial children, who are fond of collecting and eating them; the little creatures would readily recognize their favourite 'boyams' among the specimens I had collected." (G. Bennett, 1834, referring to vicinity of Hannibal Macarthur's "Vineyard" at Rydalmere). Tubers and pseudobulbs of various orchids were eaten. For a recent article, see L. J. Lawler and M. Slaytor: "Uses of Australian Orchids by Aborigines and Early Settlers" in The Medical Journal of Australia, 26 Dec. 1970, pp.1259-1261.

Darling Lily
Crinum flaccidum

Arrowroot from bulbs "in Wilcannia on one occasion, when flour was almost unobtainable...met with a ready sale." (Maiden: Ag. Gaz. NSW, 1898, p.354).

GALLS

Mulga "apples"
Acacia ancura

Western districts. Large galls, succulent and edible, "very welcome to the thirsty traveller". (Maiden: Ag. Gaz. NSW, 1897, p.520).

BEVERAGES

Tea Tree
Leptospermum laevigatum

"...the leaves...were made use of, occasionally,... when the genuine tea was almost unprocurable. The shrub pointed out to me, time after time, by 'old hands' who knew..." Possible that other species (e.g. Captain Cook's Tea Tree, L. scoparium) were similarly used. (W. S. Campbell in JRAHS, 1919, p.260). Timber splitters in the Victoria Range, west of Ararat, Vic. used Kennedya prostrata for tea. (Carl Wilhelmi in letter to Melbourne Argus, April 1857).

Bitter Vine
Piptocalyx moorei

By 1892, leaves from this vine were being collected by the dray-load around Guy Fawkes, New England and sent to Kempsey for export to England and Germany. Collectors believed the leaves were used for dyeing, but they were apparently employed in brewing. Strangely the plant was used overseas before its possible value was appreciated locally. (Maiden et al., Ag. Gaz. NSW, 1894, pp.545 et seq.).

Hop Bush
Dodonaea attenuata
et al.spp.

Used for beverages (E. T. Dally, East Gosford, 1967). "In the early days...the fruits...were extensively used, ...beer of excellent quality being prepared from them. They are still so used to a small extent. D.attenuata A. Cunn. ...was largely used in the Western District." (Maiden, 1889). Exotics, such as Horshound, Marrubium vulgare, were similarly used. (Miss Mary Bestwick, Wellington, 1967 and Mr. G. W. Althofer, Wellington, from his late grandmother Mrs. Frances McDowell). Fruits "used in the interior in raising yeast for bread making. Some years since I ascertained this on the Castlereagh, and I am told that it is still used on some of the remote stations for the same purpose." (Woolfs, Proc. Linn. Soc. NSW, 1890, p.764). "The wild hop made yeast" (Gilmore: Old Days, p.36). South of the Murray, bushworkers used Acacia myrtifolia and Daviosia latifolia as successful substitutes for hops. (Carl Wilhelmi in letter to Melbourne Argus, April, 1857).

Sassafras
Doryphora sassafras

Decoction of bark "occasionally used as a substitute for tea". (Henderson, 1851). "Tea is commonly made from its bark at the present day (c.1905) in the coastal districts...not unpleasant, although it requires practice to really like it." (Maiden: For. Flora NSW, I, p.43).

Kurrajong
Brachychiton populneum

Seeds roasted and ground as coffee substitute. (G. W. Althofer, Wellington, from W. Philipson, b.1901, Maryvale, also W. W. Fielder, Albury, 1967, from old residents). Also Louisa Atkinson in SMH, 8 Aug. 1862. Roots used for water supply even "in the driest of seasons." (Turner, 1891).

Native Pennyroyal,
Wild Mint
Mentha satureioides
M. diemenica
M. australis

Various explorers referred to these plants, and to the use of "mint tea". Alexander Harris recorded that shepherds were "so fond of" Pennyroyal tea, which they sweetened with manna. (Harris: Settlers and Convicts, p.136). Many years ago an old man who lived "comfortably in a bark gunyah" in the Gunnedah district, used Wild Sarsaparilla and Pennyroyal for his drinks. (George A. Berthistle, Gunnedah, 1967).

Mallee (various kinds)
E. socialis
E. oleosa
et al.spp.

Roots often "run...considerable distances... retaining a copious supply of fresh water,... sometimes a great boon to the aborigines and travellers." (Nilson, 1884).

Native Apple
Angophora floribunda
et al.spp.

"...a draught from the native apple-tree, the sap of which jets out abundantly when tapped, and yields a wholesome, slightly invigorating, and not unpalatable beverage." (Eldershaw: Australia (1954) p.165). About 1842, near Tenterfield, an "old hand" known as "John the shepherd" showed James Demarr a native apple, probably A. floribunda: "After a hole has been cut in the trunk...clear watery fluid oozes out, which tastes very like cider and is drinkable, another instance of the strange freaks in which Nature indulges in Australia; an apple tree...instead of producing apples, it produces cider." (Demarr: Adventures, p.189).

Wild Grape, Water Vine,
Liana
Cissus hypoglauca

Coastal rainforests. Stems tapped for "clear, palatable, though slightly astringent, water... This is well known to all timber getters, and many of them, when thirsty, use this water instead of going to the creek." A. G. Hamilton in Sydney Quarterly Mag., Mar. 1890, pp.27-28. John Carne Bidwill (1815-1853) one-time Director of the Sydney Botanic Gardens, once used water from this vine in an emergency. (Bennett, 1860). Also Maiden: For. Flora NSW, VI, p.14.

Grass Trees
Xanthorrhoea australis
X. johnsonii

On Northern Tablelands, Dec. 1842, James Demarr and a companion were out of water when they "found great numbers of...the grass tree...in full flower...large drops of honey hanging to each floweret. We stayed a considerable time...collecting it, by running our hands up the stems, and then drinking it. This greatly refreshed us..." (Demarr: Adventures, p.198).

Needle-wood, Needle-
bush, Water Tree
Hakea leucoptera

Western districts. Fleshy roots yield "really excellent water". (Lockhart Morton in Proc. Roy. Soc. Vic., 1860, p.132). For Morton, see also Appendix I.

FOOD FLAVOURING

Gum and Apple Leaves
Eucalyptus spp.
Angophora spp.

Instead of using Rosemary as a culinary herb to flavour stews, "some of our eucalypti are equally useful...leaves of the apple-trees (Angophora) of the Hawkesbury district and lemon-scented gum, possessing pleasant flavouring properties." (E.citriodora is a Queensland species). Use only about 5 young leaves, and put them not into the stew, but on top of it, otherwise "a bitter taste will be imparted." (L. F. Woolrych, Cocma, Ag. Gaz. NSW, 1899, p.567).

Alpine Sosely,
Anise Plant
Seseli harveyanum

"Used in the **Snowy** River district as a substitute for caraway-seed." (Maiden: Ag. Gaz. NSW, 1901, p.1532).

Native Pennyroyal,
Wild Mint
Mentha saturoioides
M.diemonica
M.australis

"Used as a seasoning." (W. W. Fielder, Albury, 1967, from old residents).

Myall or Boree
Acacia pendula

"The abundant saline ash...is often used by bushmen in the preparation of damper." (Miss Ada Wythos, Tomingley, in J. H. Maiden: Forestry Handbook, Syd., 1917, II, p.95).

Saltbush
Atriplex spp. et al.

"I have known instances where, on the failure of the supply of ordinary salt, shepherds have been prevented from suffering any great inconvenience by...simply eating the leaves of the salt bush with their meat." (Ferguson: Bush Life, p.31, allegedly speaking of Darling district c.1853).

Cypress Pine
Callitris spp.

"...sometimes went as a flavouring into the home-made treacle beer. ...you had to know how little of it to use or you spoiled your brew." Pine splinters were also tried, apparently unsuccessfully, as a substitute for juniper, in flavouring meat. (Gilmore: Old Days, pp.35-36).

NOTE: See J. H. Maiden: "Australian Human Foods and Food-Adjuncts" in Proc. Linn. Soc. NSW, 1888 for the earliest comprehensive survey of edible native plants.

3. MEDICINAL PREPARATIONS -- A "BUSH MATERIA MEDICA".

"I have not alluded to pharmaceutical plants: such may exist, and multitudes of the woods, seeds, and roots of Australia will no doubt enjoy a more or less substantial reputation for drugs, for a period, and then be consigned to oblivion. This is the pharmaceutical history of the plants of all countries that have been long inhabited by civilized man, and Australia will form no exception to them."

J. D. Hooker: Introductory Essay (1859),
p.cx.

THE USE OF EUCALYPTUS

Various species
Eucalyptus spp.

For the early use of the essential oil distilled from the leaves of the Sydney Peppermint, E.piperita for "removing all cholicky complaints", see Thesis I, pp.42 et seq. A rediscovery of the medicinal properties of eucalyptus oil was apparently made in 1830 when Charles Fraser, Colonial Botanist, distilled some oil and used it as an embrocation to relieve rheumatism with reported success. (Syd. Gaz., 18 Aug. 1830). Fraser's leaves were from "Eucalyptus globulifera", i.e. E.globulus, or a tree believed to have been such. Eucalyptus oil appears to be the only early medicinal preparation still in use, although as J. H. Maiden indicated in 1892, its purpose has long since changed: "...these days...everybody is sniffing Eucalyptus oil for the influenza -- either as a preventative or a cure..." (SMH, 23 July 1892). In 1892, E.piperita was still used as one source, but after the promotive and experimental work of Ferdinand Mueller and Joseph Bosisto in Victoria during the 1850s, more highly-yielding species were found, e.g. Broad-leaved Peppermint, E dives; Narrow-leaved Peppermint, E.radiata; Bundy Apple or Monkey Gum, E.cypsellocarpa; Mugga or Red Ironbark, E.sideroxylicum; Yellow Gum or White Ironbark, E.leuceoxylicum. In 1885, eucalyptus oil was said to be distilled "from the leaves of Eucalyptus amygdalina as well as E.globulus and probably other species." (Martindale & Westcott: Pharmacopoeia, p.176). The former species, with its varieties, has been subsequently revised, so that E dives and E.radiata now stand as separate species. E.globulus, known as Tasmanian Blue Gum, is not now recognised as a N.S.W. species, although the Rev. Robert Collie, F.L.S. (1839-1892), Presbyterian minister of Newtown, was credited with the discovery of this tree in N.S.W. about 1860. (See Nilson: Timber Trees, p.63). Collie's tree was almost surely Eurabbie, E.bicostata. The

health-giving qualities of E.globulus became the subject of a debate in the N.S.W. Legislative Assembly in 1873 (SMH, 19 Feb. 1873) and by the 1880s, powdered dry leaves said to be from E.globulus were administered in powders and cigarettes for ague, asthma and bronchitis. Eucalyptus oil (either in emulsion or mixed with olive oil) was used as an inhalant, for antiseptic dressings and sprays, and as a rubefacient for rheumatism (Martindale & Westcott: op.cit., pp.176-178). Even at the turn of the century, Eucalyptus leaves were still considered a panacea for all manner of ills: "It may not be generally known that the chewed up leaves of the young red shoots of the gum will often stop obstinate bleeding. For a child feverish through teething or any other infantile disorder nothing is better than a hot bath in which young gum (eucalyptus) leaves have been soaked or boiled. The best way is to fill bags of mosquito net with the tender shoots and leaves, and pour the boiling water over them. I have tried this over and over again with my own children, and never found it to fail. Living in the Bush, many miles from a medical man, and with a young family...I found eucalyptus leaves a sort of universal remedy. I have used it even as a poultice for wounds and gatherings, and for sore throat the steam from an infusion of young leaves always gave relief, and I believe if it was used in cases of low and colonial fever as I have described for children -- viz., the bath in water the leaves have been soaked in -- a cure would be effected much sooner than is usual with ordinary remedies used..." The eucalyptus extract is not successful, "the leaves must be used." The writer was "finely laughed at" for her faith in them. "The blacks first taught me their value, but I believe I was the first white woman who used a eucalyptus bath to reduce fever." (Mina Rawson: The Antipodean Cookery Book and Kitchen Companion, 5th ed., Melb., 1907, pp.55-56). At the turn of the century, Blue Mallee, E.fruticetorum, was used for eucalyptus distillation in the West Wyalong district. (Mrs. F. E. Mitchell, from old residents, 1967). E.dives was used in the Wellington district (G. W. Althofer, from old residents, 1967). The tender leaves of various species were "chewed for the prevention or relief of colds" (C. R. Hohnberg, Forbes, 1967). Freshly boiled gumleaves were sometimes placed on nosebags "for relief of strangles" in horses (Owen Blattman, Camden, 1967).

Precisely the same treatment was advocated for headaches in humans! (Mr. & Mrs. H. Doyle, Armidale, from Miss K. Donovan, 1964). A "decoction of -umleaves" was also used to bathe blight-affected eyes. (W. W. Fielder, Albury, from old residents, 1967).

In December 1871, Dr. Isaac Aaron, Sydney, stated that after he arrived early in 1839, he went to the country where he administered Eucalyptus kino, sometimes in a common chalk mixture, for diarrhoea. "I was thoroughly satisfied of its efficacy." At the same time, Dr. Andrew Ross, Molong, stated his belief that "in cases of wounds, ulcers, burns, gonorrhoea, uterine affections, and, perhaps, some types of fever, &c." the therapeutic efficacy of eucalyptus "will yet be found invaluable and incontrovertible." He felt that "gum, yellow-box, red-gum, and stringy-bark" were the most likely sources of such remedies. Ross also claimed the Eucalyptus leaves purified ground water which was accordingly "the best water by far for domestic purposes" -- i.e. better than, presumably, tank or spring water. (NSW Med. Gaz., I, 1870-1871, p.264, and II, 1871-1872, pp.118, 149-152). Mueller drew attention to another report of Dr. Ross, who in December 1864, "in a case of an aboriginal observed the marvellous success following the treatment of a gaping abdominal spearwound, from which the bowels protruded, ichorous serum oozed out and much swelling arose." The native's wife steeped young foliage of River Red Gum, E.camaldulensis and Yellow Box, E.melliadora in hot water and after six days of frequent application of this foliage, "the wound closed." (Mueller: Eucalyptographia, under E.calophylla). Mueller also referred to the application by Professor Gimbert in 1870 of "fresh crushed Eucalyptus-leaves" to "contused wounds... gangrenous complications...(and) gunshot wounds" with remarkable results. (Mueller: op.cit., under E.eugenioides). Note also: "the eucalyptus (...native teaching) made vapour in pits, or in bed, for chills and pains." (Gilmore: Old Days, p.36).

White Stringybark
E.globocidea

Inner bark close to sapwood boiled to make a "tea" for diarrhoea. (J. W. Breckenridge (1878-1968) Failford).

Yellow Box
E.melliadora

Sap boiled in water and strained "for treatment of dysentery". (Mr. G. W. Althofer, Wellington, from Pierce Farrell, b.1897, Molong).

Bloodwood
E.gummifera

"Lotion made by boiling the bark is used for curing pimples, &c." Port Macquarie district. (Forster G. R. Brown, Ag. Gaz. NSW, 1893, p.631). Kino taken in tea for diarrhoea. (L. R. Weller, b.1906, Nabiac).

Spotted Gum
E.maculata

"It is said...that a pillow of the dried leaves is a remedy for fever and ague." (Tenison-Woods, Proc. Linn. Soc. NSW, 1892). Kino "a good astringent, ...occasionally used in medicine." (Henderson, 1851). Sap boiled as preparation for haemorrhoids. (J. W. Breckenridge, 1873-1968, Failford).

Mugga, Red-flowering
Ironbark
E.sideroxylon

Kino "is used medicinally in cases of dysentery." (Woolls, Proc. Linn. Soc. NSW, 1886).

Broad-leaved Ironbark
E.fibrosa

"The Rev. Dr. Woolls observes, that the Botany-Bay Kino is more extensively obtained from E.sidero-phloia (i.e. E.fibrosa) than from E.resinifera, which...is generally regarded as the main or even sole source of that drug." (Mueller: Eucalypto-graphia). Used for dysentery.

Murray or River Red Gum
E.camaldulensis

Inspissated secretion (kino) from these, "and probably other species" may be "made into pills with mucilage of acacia and a trace of glycerine", or mixed with distilled water. Found "useful in diarrhoea, relaxed throats, and given with success to check the purging of mercurial pill administered for syphilis"; used as a gargle, and as an astringent for haemorrhages. (Martindale and Westcott: op.cit., pp.178-180). "In the Deniliquin district at least, fishermen and others chop a few chips in the bark of the red gum and extract the liquid kino... This...is sent to Melbourne in jars...it yields about 8d. per lb..." (Maiden, Ag. Gaz. NSW, 1894, p.50).

Corkwood
Duboisia myoporoides

Coastal areas, near rainforest and in open hardwood forests. "As a hydiatic is much stronger than atrophine". (Lancet, II, 1879, p.441). A "useful calmative in Maniacal delirium", sedative ointment for eyes and used to relieve exophthalmic goitre. (Martindale & Westcott: Pharmacopocia (1885) pp.166-167). Also Maiden, 1869, who referred to Woolls's report of aborigines using the plant as a narcotic and as a means of drugging fish. Woolls apparently drew attention to this plant in 1861 (F. M. Bailey in Proc. Linn. Soc. NSW, 1880, p.17).

Native Sarsaparilla,
Sweet Tea,
Wild Liquorice
Smilax glycyphylla

Leaves of this coastal climber were used in the early days of settlement as an antiscorbutic and general beverage. (Thesis I, p.36 & Appendix XI). Dr. Richard Greenup (1803-1866) of Parramatta "used to recommend this as an alterative and tonic." (Woolls, 1867). In 1859, Woolls stated that this plant was "new introduced into the Pharmacopoeia, and recommended as a tonic and antiscorbutic...a wholesome and agreeable beverage. ...employed as a substitute for the imported sarsaparilla." (Woolls, 1867). Robert Dawson, A.A.Co., noted 1825-1828, that the natives of Port Stephens when ill "sometimes chew the leaf of a creeping liquorice plant", (Dawson, 1830). "Leaves soaked and boiled, liquid to drink in measured doses, for blood cleanser." (Stella M. Ivin, Rouse Hill, 1967). "My mother used...sarsaparilla as a cure for boils and pimples." (Eric Kettle, Katoomba, 1967). "Sarsaparilla made naughty little boys good by clearing their 'over-crowded' blood". (Gilmore: Old Days, p.36). Still "a common article of trade amongst Sydney herbalists" at the end of the century, (Ag. Gaz. NSW, 1899, p.140), but by then often confused with False Sarsaparilla, Hardenbergia violacea, which was commonly hawked around Sydney in the spring by vendors "with large bundles...on their shoulders, doubtless under the impression that they have the leaves of Smilax glycyphylla." (sic) (Maiden, 1889). Hardenbergia roots were "sometimes used by bushmen as a substitute for the true sarsaparilla (Smilax), but its virtues are purely imaginary". (Maiden, 1889). Also F. M. Bailey, Proc. Linn. Soc. NSW, 1880. Hardenbergia in Mudgee district "usually called 'Sarsaparilla', and used in the same way as a bitter, Smilax the true Sarsaparilla not extending to this district". (A. G. Hamilton, Proc. Linn. Soc. NSW, 1886). "For many years past poor people have been accustomed to use infusions of the leaves, as draughts to relieve colds, and to counteract debility, and amongst them is a general belief that its effects are beneficial." The leaves were boiled "in water until a kind of thin syrup is formed, which is then bottled and put away for use as wanted. We have seen decoctions of it hawked about in black bottles for sale amongst the humbler classes." After the goldrushes, the old name "sweet tea" was largely replaced by "native sarsaparilla". Hardenbergia was mistakenly gathered for Smilax and used as such. (T. W. Shepherd in NSW Med. Gaz.: II, 1871-1872, p.72).

Bitter-bark,
Fever-bark,
Quinine Bush
Alstonia constricta

Western plains, chiefly in N.W. "At present a marketable commodity in Europe...a bitter bark with tonic properties superior to almost any in use and perfectly safe." (Tonison-Woods, Proc. Linn. Soc. NSW, 1880, pp.482-3); "A decoction of the bark is sometimes sold as bitters" (Nilson, 1884); "Bark is used in Australia as a febrifuge" Martindale & Westcott: Pharmacopoeia (1885), p.337; "Regularly quoted in London drug lists...used by some English brewers of pale ale for export...It tastes remarkably like Cinchona bark..." (Maiden, 1889).

Sassafras, Kalang
Doryphora sassafras

Coastal rainforests. "...the bark...has a spicy aromatic taste, and is much esteemed in the Colony as a stomachic and purifier of the blood." (Atkinson, 1826); Also Wm. Macarthur, MSS., 1854; A. A. Black in Lindley & Moore: Treasury of Botany, 1876; Maiden, 1889, and Ag. Gaz. NSW, 1899, p.132. "Bark mostly infused in teapot with tea." (Owen Blattman, Camden, 1967). Also Maiden: For. Flora NSW, I, pp.46-47.

Sassafras,
Black Sassafras
Atherosperma moschatum

Coastal rainforests. "The bark contains an agreeable bitter, of much repute as a tonic among sawyers." (Maiden, 1889).

Socket Wood
Daphnandra micrantha

Coastal rainforests. "I have for some years... occasionally used a tincture of the bark...in the treatment of heart cases, apparently with good results." (Dr. T. L. Bancroft, 1890, in Ag. Gaz. NSW, 1899, p.131).

Turpentine
Syncarpia glomulifera

Wet schorophyll forests. Sap applied to cuts and sores. (Wm. Smith, b.1888, Nubiak).

Grass Trees, Yellow Gum
Tree, Blackboy
Xanthorrhoea hostile
et al.spp.

Resin "has been used in dyspeptic, dysenteric, and other cases; but not with such success as to cause it to be admitted into our materia medica." (G. Bennett, 1834); "a chemist and druggist in a northern town uses grass-tree gum in cases of diarrhoea and dysentery. He powders the resin and gives from a half to a teaspoonful of the powder, mixed with mucilage (gum tragacanth) several times a day." (Maiden, Ag. Gaz. NSW, 1894, p.751).

Indian Pennywort
Centella asiatica

In Richmond River District, "credited locally as valuable when applied to wounds or sores in the form of a salve or poultice." (G. M. McKewen, Expt. Farm, Wollongbar, Ag. Gaz. NSW, 1894, p.307). Long used in India - probably Indian uses were adopted locally.

Brook Lime
Gratiola peruviana

"Used medicinally by many residents in the Moruya district for years for all manner of complaints, but principally for costiveness, dizziness, and loss of appetite." Laxative effect. Boiled liquor taken, or green plant chewed. (Forester Allan, Batman's Bay, Ag. Gaz. NSW, 1894, p.595).

Native Flax
Linum marginale

Seeds used for poultices (G. W. Althofer, Wellington, from Mrs. George Johnson).

Cymbidium
Cymbidium suave

The pseudo-bulbs of this epiphytic orchid were once used in the Port Macquarie district "as a remedy for dysentery." (Forester G. R. Brown, Ag. Gaz. NSW, 1895, p.604).

Sneezewood
Centipeda minuta

Referred in 1886 by Rev. S. G. Fielding of Wellington to Rev. Wm. Woolls of Richmond, as a remedy for blight. Woolls gave the plant to Dr. Louis C. Jockel (of Richmond) who used an infusion to give relief to a drover with purulent ophthalmia. He was "relieved at once of the intense smarting." (Ag. Gaz. NSW, 1893, pp.1126-7). "Infusion (1 oz. to a pint of water)". (A. G. Hamilton, Proc. Linn. Soc. NSW, 1886).

Faddy's Lucerne
Queensland Hemp
Sida rhombifolia

Indigenous, but cosmopolitan. Leaves boiled to make decoction for rheumatism in Dungeg district and probably elsewhere (Miss M. Dowling, Bandon Grove, 1967).

Sour-bush
Chorotrum candollei

"...eaten by stockmen for curing cold, or, rather, stopping cough." (E. W. Whereat, Tenterfield, Ag. Gaz. NSW, 1900, p.202).

Gunjevoi, Spoon Lily
Alocasia macrorrhizos

In and around rainforest. Leaf juice "said to be of use for curing ulcers." (Henderson, 1851). Leaves applied to sores for healing (upper, glossy side) and to boils and infections for 'drawing' (lower, dull side). (J. W. Breckenridge, 1873-1968, Failford). "Excellent as a dressing on burns and cuts, scalded and applied as a soft dressing." (Mrs. Crawford, née Fitzgerald, Moona Plains, from Miss Alice Norton, Walcha, 1968). A liniment was made from the crushed rhizomes, but "maker refused to divulge method. Result was a deep strong-tea coloured liniment very efficient in the easing of sprains or strains...had a warming effect but was not hot." (Mrs. L. R. Weller, Nabisac, 1967). Leaf juice was the traditional bush antidote for the sting of Stinging Trees, Dendrocnide spp.

Bitter Bark
Tabernaemontana orientalis
var. angustisepala

"A decoction of the bark is sold by some publicans for bitters." Sometimes substituted for quinine. (C. Moore, 1862).

Wattle
Acacia spp

Wattle bark. Made into "a tan lotion for unbroken burns and scalds", - learned from aborigines (Gilmore: Old Days, p.36).

Wattle gum. "It possesses all the good properties of the gum from Arabia, and is used successfully in this colony, in thin mucilage, as a drink in affections of the urinary organs and dysentery." (P. Cunningham, 1826); "...used by country folks in diarrhoea and piles, and in veterinary practices.." (Maiden, 1839). "An old remedy used against fly bite, the dry gum is powdered and dusted on the wound of man or beast." (C. R. Hohnberg, Forbes, 1967). "Dissolved in boiling milk, is now frequently used by many...settlers in the interior for dysentery and diarrhoea; and, it is said, with very good results." (Dr. Andrew Ross, Molong, in NSW Med. Gaz., II, 1871-1872, p.152).

Leopard Tree
Flindersia maculosa

Western districts. Gum "forms a very common bushman's remedy in diarrhoea." (Maiden, 1839).

Boggabri or
Kocled Gocsefoet
Chenopodium carinatum

Boggabri and Fat Hen, (probably the exotic, C.album) "boiled and taken for the blood." (Thomas Diamond, b.1835, from Miss Joan Diamond, Joogla, 1966).

Forest Oak
Casuarina terulosa

Lotion for pimples prepared by boiling bark. Port Macquarie district. (Forester G. R. Brown, Ag. Gaz. NSW, 1893, p.680).

Native Currant,
Acid Berry
Leptomeria acida

This was widely used as an antiscorbutic in the earliest days of settlement. (See Thesis I). It is especially interesting that a Mr. Cornell who "died at Eru Plains, 1961, aged 101" should have told Mr. Eric Kettle, Katoomba, of a "sour berried plant, fairly common on the Blue Mts., used as an antiscorbutic by early settlers." (E. Kettle, 1967).

Supplejack
Flagellaria indica

Rainforest climber. "Leaves are said to be astringent and vulnerary." (F. K. Bailey, Proc. Linn. Soc. NSW, 1830).

Native Pennyroyal,
Wild Mint
Mentha saturoioides
M.dionenica

Hume & Hovell, and other explorers recorded such "peppermint" plants. Resembling the English Pennyroyal, M.pulegium, its vernacular name was applied. Alexander Harris mentions that manna was "most palatable in tea made of the penny-royal, which shepherds are so fond of." (Harris: Settlers and Convicts, p.156). "Mr. Bauerlen points out that these plants "are used in the southern districts of New South Wales, at least, by females in irregularities of the menses, with most

satisfactory results. Either infusion or decoction is used." (Maiden, 1889). Maiden warned that "perhaps greater care should be exercised," than with European species "used for a similar purpose." It is interesting to note in the reminiscences of Mrs. Crawford (née Fitzgerald, late of Kunderang and Moona Plains) that there was an "aboriginal trick" to induce abortion involving the Pennyroyal, which "was very effective." Similarly, Mr. G. W. Althofer, Wellington, gained the impression that Australian Pennyroyal "seems to have been fairly widely used for abortion." He did not stipulate whether among aborigines or Europeans or both. All species of *Mentha* in the Mudgee district were "alike known as 'Pennyroyal'". (A. G. Hamilton, Proc. Linn. Soc. NSW, 1886). *M. satureioides* "has long been used for medicinal purposes by bushmen." (Ag. Gaz. NSW, 1891, p.180). *M. satureioides* "is administered to old and young in the shape of 'tea'... Strong infusions of the fresh or dried leaves and stems are prepared by boiling in water fifteen minutes...after straining, the 'tea' is sweetened with sugar, and taken warm at bed time...It is supposed to be a specific for colds, catarrhs, coughs, and a host of other aches and ills peculiar to both our first and second childhood. It is also esteemed by domestic physicians as a useful alterative, a blood purifier, and an invigorator of the whole system." (T. W. Shephard in NSW Mod. Gaz., II, 1871-1872, p.129).

Nettles
Urtica incisa
U. urens

It is difficult to determine whether bushmen used the former (indigenous) species or the latter (introduced, almost cosmopolitan) species, or both, but Nettles figure prominently in bush remedies, and as emergency green vegetables. "Nettles were boiled and the liquid and the green leaves were all consumed. It was a sure cure for goitre." Informant's aunt (about 80) "mentioned an old lady whose huge goitre was completely reduced after a diet of nettles every day." (Mrs. L. R. Weller, Nabiac, 1967). An infusion of dry nettle leaves made "nettle tea for colds." (Mrs. Peake, South West Rocks, from Mrs. Betty Crowley, Cobbadah, 1967). Also used as blood tonic (Gilmore: Old Days, p.36), and as a poultice (E. T. Dally, E. Gosford, 1967).

Banksia, Honeysuckle
Banksia spp.

Flower spike "soaked in soft water yielded syrup for sore throats and colds." (Gilmore: Old Days, p.36).

Whiteroot
Pratia purpurascens

Damp places and wet sclerophyll forests. In July 1889, specimens were sent to J. H. Maiden from Port Macquarie as "a newly discovered antidote to snakebites." The plant was found to contain "the oily alkaloid Lobeline." (Proc. Linn. Soc. NSW, 1890). Reported from Macleay R. that natives used a decoction of this plant as snake-bite antidote. Confirmation from Hastings, Bellinger and elsewhere. (Maiden: Ag. Gaz. NSW, 1894, p.473).

Wild Hops
Dodonaea spp.

"Stated to be an infallible specific for dysentery." (Franklyn: Glance at Australia (1880) p.27).

Hairy Willow-herb
Epilobium junceum

"An infusion is made, and given to persons suffering from the effects of strong drink." (Ag. Gaz. NSW, 1891, p.177).

Smooth Willow-herb
Epilobium glabellum

"Used in rustic medicine in certain urinary disorders." (Woolls, Ag. Gaz. NSW, 1898, p.1123).

Wilga
Geijera parviflora

"Make an infusion of leaves only. Either apply as lotion or take inwardly. Has good results in alleviating pain. A leaf chewed into a pulp and placed in hollow tooth will stop ache." (A former forester at Dubbo, in Maiden: For. Flora NSW, VII, p.161).

Bracken Fern
Pteridium esculentum

Rhizomes boiled and liquid taken for intestinal worms. (J. W. Brockenridge (1873-1968) Failford).

Native Elder
Sambucus australasica

In and around rainforests. Both leaves and fruits used for decoctions given as "heart medicine." (J. W. Brockenridge, (1873-1968), Failford).

Wild Raspberry
Rubus rosifolius
et al. spp.

Leaves boiled - decoction drunk for colds. (J. W. Brockenridge, (1873-1968), Failford).

Centauray Plant
Centaurium spicatum
C. pulchellum

These "are great favourites with those...who knew the value of them...they have proved highly efficacious in certain stages of dysentery." C. spicatum "is the more powerful...A learned physician, not a hundred miles from Parramatta, was so impressed...from noticing the use of it amongst certain old women...that he was not too proud to adopt their remedy and recommended it to his patients." (Woolls, 1867). Centaurium (perhaps including the exotic C. minus) was also used "for indigestion. This was all they had when they camped out on their selections." (Miss Alice Norton, Walcha, from her father).

Yellow Centauray
Sebasa ovata

"Leaves and lesser branchlets...boiled in water... used as blood medicine." (G. W. Althofer, Wellington, from Mrs. Elizabeth Bailey, b.1866, Bathurst). "Pink weed (i.e. Centaureium) was used for indigestion - boiled and tea drunk." (Mrs. M. Handley, "Brockley", Lindendale, b.1879, from Miss Judy Crane, 1966). "Wood with pink flower boiled for stomach upset." (Thomas Diamond, b.1885, Jeogla, from Miss Joan Diamond, 1966). Centaury "tea" given to child with scarlet fever as a febrifuge. (Wm. Smith, b.1888, Nabisac). Centaureium spp. "contain a bitter principle, and are sometimes used in cases of diarrhoea and dysentery." (Mudgoe district, A. G. Hamilton, Proc. Linn. Soc. NSW, 1886). See also Hamilton in Syd. Quarterly Mag., Dec. 1889, p.359. C.spicatum "is collected by the colonists, who consider it valuable in...dysentery and diarrhoea...also useful as a tonic and stomachic...should be gathered in the spring..." (Bennett, 1860). When McKinnon of Coocanong sent C.spicatum to the Dept. of Agriculture in 1891, he was informed: "One of the best bitters can be made from it...Put a handful of the plant into 3 pints of hot water, then allow to cool and strain off the liquid. A wineglassful taken half-an-hour before each meal will, after a few doses, create a ravenous appetite." Also for dyspepsia, and "one of the best medicines to give to children...with worms." (Ag. Gaz. NSW, 1891, p.16). C.pulchellum "a sure cure for 'Barcco Rot' otherwise scurvy. Plants were gathered...in flower, tied in bundles, hung until dry, then boiled and the juice drunk...very bitter, worse...than quinine." (E. T. Dally, East Gosford, 1967.)

Emu Bush
Eremophila bignoniiflora

Western districts. This shrub or small tree was already becoming scarce in some areas by 1891 because of its use as a fodder plant. (Turner, 1891). It is included here however on account of its alleged antibiotic qualities. As recently as 1966, a man with a gashed hand in a septic condition was treated near Collarenebri by an aborigine who applied the boiled leaves. The sepsis which had been apparent for 2-3 weeks was reduced within 3 days of the treatment. (Tony Downton, Rugby Str., Collarenebri, from J. D. Spencer, Armidale, 1970). The fruits of the plant have a purgative effect. (J. D. Spencer, Armidale).

Marshmallow, Ink Weed,
Horchound, and other
exotics

Malva parviflora,
Phytolacca octandra,
Rarrubium vulgare
et al.spp.

Marshmallow constantly recurs in bush lore associated with cures and treatments. It seems that the exotic Malva parviflora was the plant generally used. The leaves were boiled "for 15 or 20 minutes, the syrup was drawn off and bottled... used for a chill on the kidney, mostly by blacksmiths who were quite frequently suffering from this malady." (Eric Stubbs, Windsor, 1967, E. T. Dally, E. Gosford, 1967, George Paterson, Nahiaco, 1968). Leaves "boiled in olive oil," some beeswax added, used as ointment for cuts. (George A. Borthistle, Gunnedah, 1967, from his mother). Leaves boiled in water until liquid half evaporated, used for relief of asthma (Mrs. Poake, South West Rocks, from Mrs. Betty Crowley, Cobbadah, 1967). "Settler's Ointment" in the Big Scrub area of the North Coast, comprised "lard, marshmallow, cunjevoy and bluestone all boiled down together then strained." (E. D. McKehead, Lismore, 1922, MS. RRHS). The latter two ingredients were Alcoasia macrorrhizas and copper sulphate.

Marshmallow ointment was also made from "the marrow from three or four bullock shins," water added, then "a good handful of Marshmallow leaves" and a good double-handful" of young red gum-tips. After boiling, the mixture was strained and "poured into pots. It set to a butter consistency...pale green in colour, and smelled faintly of eucalyptus... excellent for cuts, sores and grazes, but had a tendency to go rancid in hot weather." A second cooking dealt with such rancidity. (Made by late Mrs. Elsie Richardson, "Mulconda", Kimbriki, Manning district, from a recipe of her mother, Mrs. T. B. Cox, who obtained it from a Dungog chemist. From Mrs. Richardson's daughter, Mrs. L. R. Weller, Nahiaco, 1967). A similar ointment using M. parviflora extract in a base which contains beeswax (but no gum-leaves) is still (Jan. 1969) prepared by Mrs. Matilda Burke, Armidale, (b.10 April 1881, Basin Creek, near Abington). Her maternal grandmother, Mrs. Ellen McCusker, Hillgrove, used the same extract in a lard base. Mrs. Burke's preparation was actually registered in 1930 under the trade name of Wizard. (Aust. Official Journal, Trade Marks, Vol. 25, No. 21, 6.6.1930, p.450).

Marshmallow was apparently an early introduction. It has long been investigated for causing locomotory disturbances in stock. (Hirst: Poison Plants, pp.266 et seq.) The Marshmallow of herbalists was Althaea officinalis (Ag. Gaz. NSW, 1892, p.975).

Ink Weed or Dye Wood, Phytolacca octandra was another exotic adopted into the "Lush Materia Medica". Used for poultices (E. T. Dally, E. Gosford, 1967). Berries eaten for rheumatoid arthritis (Stuart Gordon, 1895-1965, Nahiak). Leaves or berries applied as poultice to sores. Juice of berries applied as an antiseptic (Clyde Bussey, 1878-1958, Nahiak).

Horshound, Marrubium vulgare, another exotic, was allegedly "splendid for coughs, colds and lung troubles." (Mrs. Lorna Dean, Windsor, 1967, used to collect the plant for Mrs. Walter Holman, Windsor, for this purpose.)

Another exotic, Dandelion, Taraxacum officinale, was used to make a "tea" or otherwise taken "for either liver or bowel difficulties" (Mrs. Lorna Dean, Windsor, also G. W. Althofer, Wellington, from Joseph Philipson, b.1901, Maryvale.) For other remedies prepared from exotic plants see, for example, John Broadbent: The Australian Botanic Guide, Being a Family Hand-Book of Botanic Treatment, Melb., 1889. Broadbent was a "practical medical herbalist". There was an earlier edition of his book in 1887, but despite the title, no attention was apparently paid to native plants.

VETERINARY PREPARATIONS

Centaury Wood
Centaureum spicatum
(and probably
C. pulchellum and the
exotic C. minus as well).

Picked when flowering, dried, and infusion given as drench for scours in calves.
(L. R. Weller, b.1908, Nahiak).

Marshmallow
Malva parviflora
(exotic)

Leaves boiled until soft, placed in sock and applied as poultice to horse ulcers. (George Paterson, Nahiak, 1963). See also its use in treatment of humans.

Ink Weed
Phytolacca octandra
(exotic)

Applied to saddle-sores, etc. of horses in same way as for human sores. (Clyde Bussey, 1878-1958, Nahiak).

Various Eucalypts
Eucalyptus spp.

Freshly boiled gumleaves were placed in horses' noses "for relief of strangles". (Owen Blattman, Camden, 1967). The kino "is often used as medicine for sick fowls." (L. F. Woolrych, Cooma, in Ag. Gaz. NSW, 1899, p.1166).

Purple Coral Pea,
False Sarsaparilla
Hardenbergia violacea

Known as "woodbine" this was used "by some of the shepherds...who use a decoction of its leaves as a lotion for scabby sheep." Some declared it a cure, others declared it useless. (Bennett, 1834). This plant was often confused with Native Sarsaparilla, Smilax glycyphylla, q.v. above.

NOTE: For a recent very brief notice (in a rather unexpected place) of a few such "relics of a bygone therapy", see "Woodery" in Medical Journal of Australia, 26th December 1970, pp.1217-1218.

4. PASTORAL, AGRICULTURAL, COMMERCIAL AND INDUSTRIAL USES

STOCK FODDER

(a) GRASSES

Robert Brown recorded 80 species of grasses from New South Wales (i.e. from Port Jackson, Hunter River and its tributaries) in his Prodromus, 1810¹. In 1882, the Rev. William Woolls believed that there were exactly twice as many native species in N.S.W.² By the end of the century, Joseph Henry Maiden had put the number at 196³.

To-day, it is agreed that some 370 species of grasses are indigenous to N.S.W.⁴ Nearly half of those (about 170 species) belong to eight genera: Danthonia (Wallaby Grasses); Aristida (Wire Grasses); Eragrostis (Love Grasses); Deyouxia (Bent Grasses); Digitaria (Umbrella Grasses); Stipa (Spear Grasses); Panicum (Panic Grasses); and Agrostis (Bent Grasses).

Quite early, when the grazing potential of the Colony was being assessed, "Oat Grass" was considered the most valuable by such authorities as Gregory Blaxland, whose cattle interests led him to take particular interest in natural pasturage. This was almost certainly Kangaroo Grass, Themeda australis and/or T.avenacea. The disappearance of this grass, noted by Blaxland in 1800⁵, was still being lamented 60 years later by Woolls, who recorded that Themeda australis was "in particular...one of those grasses which are found capable of supporting horses and cattle when travelling from the interior better than any other native forage."⁵

The advent of The Agricultural Gazette of N.S.W. in 1890 enabled J. H. Maiden and Frederick Turner, for the remainder of the century, to

-
1. Brown: Prodromus, pp.163-211.
 2. W. Woolls: "Forage Plants Indigenous in N.S.W.", Proc. Linn. Soc. NSW, 1882-3, p.313.
 3. Maiden: Grasses, p.iii.
 4. J. W. Vickery: "A Census of the Native Gramineae of N.S.W.", Contrib. Nat. Herb. NSW, Vol. 2, No. 1, 1953.
 5. Woolls: op.cit. p.313.

bring to the notice of pastoralists the good qualities of certain grasses, but for a summary of such knowledge at the end of the period actually under review here, we cannot do better than consult William Woolls's paper of 1882. Woolls appreciated that

in some cases, it is difficult to determine whether certain species are indigenous or not, seeing that they have taken possession of extensive areas, and, if really of foreign origin, have long since become naturalized among us.

Of such plants, he considered Couch Grass, Cynodon dactylon, "the most remarkable...affording excellent pasture and...capable of resisting extreme drought."⁷ As Woolls was aware, Robert Brown collected this grass from the vicinity of Port Jackson and described it in his Prodromus in 1810,⁸ but the indigenoueness of this species is still in doubt.⁹

Certainly there were early introductions of pasture grasses, as W. C. Wentworth pointed out:

English grasses, too, particularly the eye-grass¹⁰ (sic), rib-grass¹¹, cocksfoot¹², and meadow-fescue¹³, are beginning to be introduced pretty generally.¹⁴

However, as stated in the Introduction, exotic plants do not come within the field of this survey. The history of the introduction of exotics would indeed make an interesting study in itself.

Woolls divided his fodder grasses as follows:

1. Grasses of the Coastal Districts, east of the Dividing Range.
 - (a) Bush-Grasses ("valuable..and decidedly nutritious").
 - (b) Grasses growing in or near water. ("Not equal to those enumerated" but "nevertheless relished by horses and cattle").
2. Grasses of the Interior, west of the Great Dividing Range.

Woolls's names are given here as he listed them, but revised names and vernacular names have been added, with comments where appropriate.

-
6. Woolls: op.cit., p.510.
 7. ibid
 8. Brown: Prodromus, p.187.
 9. See for example, J. W. Vickery: op.cit., p.85; Beadle et al.: Handbook Vascular Plants, p.542; J. H. Willis: A handbook to Plants in Victoria, Melb., 1962, p.165.
 10. Presumably Rye Grass, Lolium perenne.
 11. Most likely not a grass at all, but the Plantain, Plantago lanceolata.
 12. Dactylis glomerata.
 13. Festuca pratensis.
 14. Wentworth: Statistical Account, I, p.439.