

5.01 *The Timber Trade*

early New South Wales
the south-east
Queensland
native pine
Western Australia
classification
intercolonial trade
foreign imports
markings

early New South Wales

The first timber was felled and pit sawn by Europeans in 1788 at Point Sutherland, Botany Bay,¹ before Phillip moved his colony to the present location in Port Jackson. Captain Cook had written that there were only two or three sorts of tree 'that can be call'd Timber', and identified two of them as the gum tree, which grew all over the country, and something resembling an English pine but with wood resembling American Live Oak, which he saw in perfection only at Botany Bay.² In his first despatch Governor Phillip complained of the 'large gum tree' which 'splits and warps'.³ In the same year William Bradley stated that the gum tree, though it grew large, was short in the grain and 'neither strong nor durable',⁴ while Major Ross wrote home that 'not one bit of timber have we yet found that is fit for any other purpose than to make the pot boil.'⁵ John White commented similarly:⁶

... the timber of the country is very unfit for the purpose of building. Nor do I know any one purpose for which it will answer except for fire-wood; and for that it is excellent: but in all other respects it is the worst wood that any country or climate ever produced.

The cabbage palm [*Livistona australis*] plastered with clay, which was used in 1788 for the cottage of Richard Johnson, the Chaplain,⁷ and generally for infilling the walls of buildings in Sydney, entirely merited these comments. Governor Phillip recognised this as being only a temporary expedient, because the wood was so perishable, and all the

¹ John Vader, *Red Cedar, the Tree of Australia's History* (French's Forest [New South Wales]1988), p 11. This irritating book is unreferenced, and information from it must therefore be treated with suspicion.

² Philip Cox & J M Freeland, *Rude Timber Buildings of Australia* (London 1969), p 10, n 2, quoting James Cook.

³ *** *Historical Records of New South Wales*, I, part II, p 128.

⁴ William Bradley, *A Voyage to New South Wales* (Sydney 1969), p 144, entry for October 1788, quoted in Helen Proudfoot, 'Fixing the Settlement', in Graeme Aplin [ed], *A Difficult Infant: Sydney before Macquarie* (Kensington [NSW] 1988), p 59.

⁵ J Copley, *Sydney Cove: Australia's First Five Years* (Sydney 1980), I, p 254, quoted in Ian Evans, *The Australian Home* (Sydney 1983), p 48.

⁶ John White, *Journal of a Voyage to New South Wales*, p 118, quoted in Alfred Barbara, *Terra Cotta in Sydney Architecture 1788-1914* (2 vols, BArch, University of New South Wales [1978]), I, p 3.

⁷ Copley, *Sydney Cove*, I, p 254, quoted in Evans, *The Australian Home*, p 48.

more so as it was being used green.⁸ David Collins spoke generally of the timber available as being 'shaky and rotten',⁹ though the she-oak [*Casuarina*], which Collins called 'the pine of this country' (and was the same pine-like timber mentioned by Captain Cook), was pit sawn for posts and plates,¹⁰ and was rather better. She-oak was also used for shingles, and it has been claimed - almost certainly incorrectly - that it provided bark for roofing and cladding.¹¹ Overall:¹²

The timber that had been cut down proved in general very unfit for the purpose of building, the trees being for the most part decayed; and when cut down they were immediately warped and split by the heat of the sun. A species of pine appeared to be the best, and was chiefly used in the framework of houses, and in covering the roofs, the wood splitting easily into shingles.

Only one in forty trees of the Sydney redgum [*Angophora costata*] were wholly sound, and fewer than one in twelve were usable at all: it was found to be so twisted in the grain or riven by gum veins as to be unworkable, and the timber obtained from it warped and split almost immediately.¹³

Cedar was first discovered in December 1789, and in February 1790 Phillip wrote to Lord Sydney of these as yet unnamed trees, which were similar to and about the size of a large walnut, and gave a light timber.¹⁴ By 1791 *Cedrela australis*, which Bradley described as 'mahogany' was being used for doors, windows and skirtings, and by 1795 it was called cedar and was in common use, even being exported to India.¹⁵ The Australian cedar was not the same as the Lebanese, or the deodar of India, but there was a genuine resemblance. Frances Perry said in 1848 that it had 'no scent like our [*sic*] cedar, but is a pretty-looking wood. Having no scent it does not keep away insects as ours does; so that boxes of it are not of the same use and value.'¹⁶ Cedar cutting had begun on the Hawkesbury, but by 1801 there was cedar camp at Maitland, in 1820 gangs were working up the Hunter River, by about 1816-17 at Port Stephens, and soon up to 160 km inland from the port: and by the later 1820s at Clarence Town, on the Williams River north of Newcastle. South of Sydney it was cut at Shoalhaven by 1811, and soon as far as Ulladulla, the traditional southern limit of its growth. Further north the timber was being cut by 1823 at Port Macquarie and by 1826 the Manning River, by 1830 in the vicinity of Brisbane Water, about 1836 the Macleay River, by 1841 on the Clarence River, 1842 the Nambucca, and soon after the Bellinger, extending by the 1850s as far inland as the Dorrigo district.¹⁷

⁸ Arthur Phillip, *The Voyage of Governor Phillip to Botany Bay* (London 1789) p 145.

⁹ David Collins [ed Maria Collins, James Collier], *An Account of the English Colony in New South Wales* (Christchurch 1910 (1798 & 1802; 1804), p 22.

¹⁰ Collins, *An Account of the English Colony*, p 23.

¹¹ *Australian Antiques: First Fleet to Federation* (Sydney 1977), p 25, quoted in Evans, *The Australian Home*, p 48.

¹² Collins, *An Account of the English Colony*, p 28.

¹³ Philip Cox & J M Freeland, *Rude Timber Buildings of Australia* (London 1969), p 17, ms 22, 23, 24.

¹⁴ Vader, *Red Cedar*, p 18.

¹⁵ Earnshaw, *Early Sydney Cabinetmakers*, pp 14-15, quoted in Evans, *The Australian Home*.

¹⁶ Frances Perry, 24 January 1848, in Frances Perry [ed A de Q Robin], *Australian Sketches. The Journals and Letters of Frances Perry* (Carlton [Victoria] 1984), p 69.

¹⁷ Vader, *Red Cedar*, passim.

In the 1790s the boat builder Daniel Paine is said to have had an Aboriginal in his timber-getting party, and this has been taken to indicate that Aboriginals showed the European settlers species suited to their requirements - in this case boat building.¹⁸ This is putting too strong a construction on it. Aboriginals did not have saws or woodworking tools, they did not build boats or houses in the European sense, and they could have known little of the properties of native timbers. But they could and did help locate stands of species once the settlers had decided which were to be sought. Paine described the main timbers (again, from a boat building perspective) as red, white and blue gum, amongst which the blue gum provided some good timber; stringybark, which was often sound; turpentine, which was good but liable to shrinkage; and 'mahogany' [our cedar], more durable but less attractive than that of America.¹⁹ By 1792, according to Irving, some use had also been made in Sydney of the wattle [*Acacia*].²⁰

Governor King's report of the Sydney timber in 1807 is markedly favourable, by contrast with earlier accounts.²¹

The iron- and stringy-barks are straight, from 40 to 80 feet [12-24 m] high, and 18 to 20 inches [450-510 mm] diameter, generally sound throughout without much crooked or compass timber. It is heavy, but the latter not much more than oak. Both are well adapted to the different purposes of keels, beams, uprights and floor timbers of large scantling, and many other purposes where straight and durable timber is required. ...

The box is a very fine timber and grows in great abundance about Parramatta, quite straight, from sixty to a hundred feet [18-30 m] high, and from eighteen to twenty-six inches [450-510 mm] in diameter, tapering but little. The crooked wood, being the branches, are of small size; but this timber answers every purpose of the foregoing species, except that growing so very straight it might not answer so well for floor timbers; but for every kind of straight work, gun-carriages, etc., it is equal to any wood in the world. ...

The blue and black butted blue gum are in New South Wales esteemed good woods, and some vessels which answer extremely well have been built principally of these woods from their affording good crooked timber and cutting well into planks ...

In 1820 Patrick Riley, a carpenter at Newcastle, reported that most types of wood were better there than at Sydney, except for the stringybark. He recommended cedar for 'fittings', pine for flooring, 'gum tree' for roofing, and beefwood [she-oak] for shingles.²² The range of timber used in Sydney had expanded by 1831 to include blackbutt [*E. pillularis*], logs of which were floated down the Lane Cove River to provide the flooring for Elizabeth Bay House.²³

¹⁸ Daniel Paine [ed R J B Knight & Alan Frost], *The Journal of Daniel Paine 1794-1797* (Sydney 1983), p xx.

¹⁹ Paine, *Journal*, p 28.

²⁰ Robert Irving, 'The First Australian Architecture' (MArch, University of New South Wales, 1975), p 153.

²¹ King to the Commissioners of the Board of Revision, quoted Cox and Freeland, *Rude Timber Buildings*, pp 30-1, n 42.

²² Evidence of Patrick Riley, undated, c January 1820, in John Ritchie [ed], *The Evidence of the Bigge Reports* (2 vols, Melbourne 1971), I, p 112.

²³ Barrie Dyster, *Servant and Master* (Kensington [NSW] 1989), p 131.

Though at first seemingly limitless, cedar was cut so rapidly that as early as 1795, and again in 1802, Hunter issued regulations to control its cutting on the Hawkesbury.²⁴ and in 1819 Macquarie attempted to restrain illegal cedar-getting in the Illawarra district, though more for the protection of government revenue than as a conservation measure.²⁵ At Coal River [Newcastle], W C Wentworth reported in 1819 that cedar and rosewood were obtained, but the cedar had been so depleted near the coast that it was necessary to go 240 kilometres upstream, where there were still large quantities. The cut logs were formed into rafts and floated down.²⁶ In 1848 the Rev J R Wollaston, in Western Australia, sent to get New South Wales cedar from Adelaide, where it was plentiful on the market, and cheap.²⁷ However, the timber was scarce by the end of the century, and even in 1889 it was reported that 'the magnificent Cedar forests of the Richmond and Clarence districts are practically cut.'²⁸ One of the later uses of cedar on a substantial scale was in the mansion 'Oma', Toorak, of 1889, where the vestibule, cortile, staircase, gallery, and principal rooms, were all finished in french polished cedar, 'harmoniously blended with choice exotic woods'.²⁹

the south-east

At first things seemed more promising in what is now Victoria. James Grant found a forest 'of stately trees' at Westernport Bay in 1801: 'these were slender and light wood, seeming to me very fit for the scantling of houses'.³⁰ Next year his successor, John Murray, entered Port Phillip, and made an excursion with his carpenter to investigate the timbers: 'None, however, were found of Use, the Trees being almost invariably Oak [that is, *Casuarina*], and other Wood Quiet [*sic*] common at Sydney'.³¹ A few weeks later Matthew Flinders and Grimes were at Port Phillip, where Flinders noted the *Casuarina* and eucalyptus as the commonest timbers, to which Grimes added the banksia and mimosa - 'but the timber,' said Flinders, 'is rarely sound, and is not large'.³²

This adverse judgement probably reached England too late to deter the British authorities from a plan to establish a settlement at Port Phillip. They needed timber for ship-building, and they would have received optimistic accounts of New South Wales timbers generally, though not those of Port Phillip in particular. A nexus was being established in which convicts were to be sent out twice a year and timber freighted back in the same vessels.³³ Captain Hunter supported the plan, and wrote favourably of the box as a straight and sound timber, the crooked limbs of gum trees generally as suitable

²⁴ Vader, *Red Cedar*, pp 18, 19.

²⁵ Vader, *Red Cedar*, p 36.

²⁶ W C Wentworth, *Statistical, Historical, and Political Description of the Colony of New South Wales, &c* (London 1819 [facsimile, Adelaide 1978]), p 57.

²⁷ J R Wollaston [eds C A Burton & P U Henn], *Wollaston's Albany Journals (1848-1856)*, (Perth 1954), p 61.

²⁸ Centennial International Exhibition 1888-1889, *Official Record* (Melbourne 1890), p 769.

²⁹ *Argus*, 26 April 1890, p 3.

³⁰ James Grant, *The Narrative of a Voyage of Discovery Performed in His Majesty's Vessel the Lady Nelson* (London 1803), p 135.

³¹ Murray, in the log of the *Lady Nelson* for 16 and 20 February 1802, quoted by F P Labillière, *Early History of the Colony of Victoria* (2 vols, London 1878), I, pp 88, 92.

³² Matthew Flinders, *A Voyage to Terra Australis* (3 vols, London 1814), I, p 219.

³³ See the correspondence reproduced in Paine, *Journal*, pp 77-94.

for ship's ribs, of the cedar, and of the she-oak as an ornamental wood.³⁴ Naturally when Lieutenant Governor David Collins reached Port Phillip with his party, the search for timber was a major concern of Captain Woodriff. It was unsuccessful, for he wrote back in November 1803 that the timber around Port Phillip was very defective and that 'sufficient sound timber' could not be got 'to construct one line of Battle Ship'. The soil was too sandy, water too scarce, and most serious of all, the Aborigines regularly burnt the whole countryside.³⁵

G P Harris, who was with Collins's party at Port Phillip, and then at Hobart, noted the contrast in 1804:³⁶

... beside the most beautiful and romantic Country I ever beheld, it is not merely fine to the eye only, as was the case at Port Phillip, the soil in general is excellent - plenty of fresh water and forests of astonishing large Trees fit for every purpose consisting of the Red and Blue Gum, Stringy Bark, Mahogany, Oak, Honeysuckle & Pine ...

Tasmania developed a timber export trade in the 1830s, especially in split shingles, palings and laths,³⁷ and in 1837 it was reported that the greater part of Melbourne was built of Van Diemen's Land timber.³⁸ 'Hobart Town palings' were exported even to timber-rich Brisbane in the early years,³⁹ and Tasmanian timber - by now probably from Circular Head rather than Hobart - swamped the Victorian market.

By 1850 the 'importation of sawn stuff from Tasmania' was so immense that the Port Phillip sawyers and splitters came out on strike.⁴⁰ Local sawmills were all closed, and they stayed closed because of the gold rushes, so that nearly all the timber used in Victoria was imported from Europe, America and Tasmania, plus a little from Western Australia. But in 1853 seven mills opened or re-opened in Melbourne and Geelong, and a year later thirty-four were operating in different parts of Victoria.⁴¹ Meanwhile Adelaide timber merchants were indignant in July 1854 at the fact that Tasmanian timber was arriving short in measurement.⁴²

Because very much the same species were indigenous to the two colonies, the Tasmanian trade to Victoria dwindled to almost nothing by the 1870s, in the face of protectionism. By 1867 the volume of exports, which were mostly to the neighbouring colonies and especially to Victoria, had reduced to less than one half that of 1854. So

³⁴ Captain Hunter to the Under Secretary of State, 22 March 1802, Public Record Office, London, CO1/1, reproduced in Paine, *Journal*, p 82.

³⁵ Captain Woodriff to the Secretary of the Board of Admiralty, 15 November 1803, Public Record Office, London, ADM 1/2695, reproduced in Paine, *Journal*, pp 90-91.

³⁶ G P Harris [ed Barbara Hamilton-Arnold], *Letters of G P Harris 1803-1812* (Sorrento [Victoria] 1994), p 61.

³⁷ Miles Lewis, 'Tradition and Innovation in Victorian Building 1801-1865' (3 vols, PhD, University of Melbourne, 1972), I, pp 14-6.

³⁸ Thomas Winter to William Swainson, late 1837, in T F Bride [ed, re-edited Stuart Sayers], *Letters from Victorian Pioneers* (Melbourne 1969 [1898]), p 194

³⁹ Donald Watson, *The Queensland House* (ms, Brisbane 1981), p 4.3.

⁴⁰ *Argus*, 27 November 1850.

⁴¹ Lewis, 'Victorian Building', I, p 138.

⁴² *South Australian Register*, 19 July & 17 August 1854, cited in E & R Jensen, *Colonial Architecture in South Australia* (Adelaide 1980), p 107.

had the value per super foot, and for certain items to less than a quarter of the original level.

Tasmanian timber exports (in super feet)⁴³

	1854	1858	1863	1867
battens	no return	297,000	260,092	22,427
sawn	17,648,324	12,690,245	7,172,165	4,369,293
palings	7,214,983	7,079,293	5,805,592	7,602,448
laths & shingles	13,499,088	10,122,500	7,626,900	4,520,700
posts & rails	518,887	740,386	44,885	67,420
beams, spars & piles	2,759	no return	61	12,320
hewn	no return	no return	641,800	148,235
TOTAL	38,884,041	30,929,424	21,551,495	16,742,843
VALUE (£)	*£303,857	**£108,867	£69,856	£51,747

* includes other items worth £9,046 ** includes 'pieces' worth £460

The depletion of the more distinctive Tasmanian timbers was already apparent in the 1880s, and in 1887 new regulations prescribed the minimum girth of felling trees as 4 ft 6 ins [1.35 m] for 'Huon Macquarie pine', 3 ft 6 ins [1.05 m] for King William pine, and 3 ft 0 ins [0.9 m] for 'Celery-up' [presumably celery top] pine.⁴⁴

Of all the colonies, South Australia was, as it still is, notoriously short of timber. As G S Kingston said in 1837: 'Timber for building is what we are most deficient in. There are hundreds of acres without a tree.'⁴⁵ More generally, he described Australian timbers as 'very heavy, hard, and difficult to work', but 'excellent material for the heavier part of a house, such as roofing and flooring.' Softer timber could be used for windows and fittings.⁴⁶ But these remarks probably embraced the timbers of adjacent colonies rather than being confined to those of South Australia.

Queensland

The search for cedar quickly led from northern New South Wales into what is now Queensland, and revealed not only the cedar but the great Auricularian softwood scrubs. Thomas Pamphlett, John Finnegan, Richard Parsons and John Thompson sailed from Sydney on 21 March 1823 for the Five Islands or Allowrah [now Illawarra] to collect cedar, but were blown off course. Thompson died, but his companions reached Moreton Island, built a canoe to cross Moreton Bay, walked to the mouth of the Brisbane River, and travelled up it. It was on the basis of their information that John Oxley, Surveyor-

⁴³ J E Calder, *Tasmanian Industries* (Hobart 1869), p 60.

⁴⁴ *Australasian Builder & Contractor's News*, 29 October 1887, p 393.

⁴⁵ Donald Langmead, *Accidental Architect* (Sydney 1994), p 113, quoting G S Kingston to Rowland Hill, 12 February 1837.

⁴⁶ Langmead, *Accidental Architect*, p 114, quoting G S Kingston to G F Angas, 25 December 1837.

General of New South Wales, himself sailed up the river, and then in 1824 returned to form a convict settlement there.⁴⁷

Moreton Bay gave its name to the timber Moreton Bay Pine (otherwise Colonial Pine or Hoop Pine), of which Sir Thomas Brisbane commented in 1824:

There are endless quantities of these most beautiful trees, many of which I measured from nine to ten feet in circumference, and from eighty to one hundred feet in height, perfectly straight without knot or branch.⁴⁸

The *Sydney Gazette*, reporting on Brisbane's visit, also referred to the size and abundance of one species, doubtless the same.⁴⁹ By 1836 the price of timber had risen so high in Sydney that bluegum, cedar and stringybark were shipped from Moreton Bay for the construction of the powder magazine on Goat Island.⁵⁰ In 1840 a Sydney dealer was advised that the timbers available at Moreton Bay included ironbark, stringybark, box, forest oak, swamp oak, three types of 'yellow wood', tulip wood, rosewood and bluegum.⁵¹ But by 1859 the usable timber in the vicinity of Brisbane had all been cut out, and the sawyers and splitters had been obliged to move a considerable distance inland.⁵²

Brisbane was fortunate in having the hoop pine to provide the majority of building timber. The Leichardt trees which grew along the Fitzroy River yielded a soft and easily worked timber which was used for the early buildings of Rockhampton.⁵³ The woolshed at 'Jondaryan', a property well in from the Queensland coast, was built as late as 1859 with walls of local ironbark slabs, and pens and other components were of cedar. The source of the beams and rafters is unknown, but the story that they were imported from Britain, and were so long that they had to be strapped to the side of the ship that brought them, is without foundation.⁵⁴

native pine

The native pine, *Callitris*, includes about fourteen species endemic to Australia, and tends to be important in vernacular architecture, especially in the inland. The most important is the Murray pine or white cypress pine [*C hugelii*], which is found in all mainland states, grows to sixty metres or more, and is largely resistant to termite attack. *C columellaris* is a good straight tree found in Queensland and New South Wales, and

⁴⁷ Clem Lack, *Newstead House* (Brisbane, no date), pp 2-3.

⁴⁸ Quoted by Donald Watson, *The Queensland House* (typescript report, Brisbane 1981), p 2.2.

⁴⁹ *Sydney Gazette*, 21 December 1824, quoted in J G Steele, *Brisbane Town in Convict Days 1824-1842* (St Lucia [Queensland] 1977), p 20.

⁵⁰ Ian Evans et al, *The Queensland House: History and Conservation* (Mullumbimby [New South Wales] 2001), p 19, ref Colonial Architect to Colonial Secretary, 15 June 1836, and statement of timbers required for powder magazine, Goat Island, 27 June 1836, both in Colonial Secretary, Moreton Bay letters.

⁵¹ Evans, *The Queensland House*, p 19, ref 'Description of the Undermentioned Timbers growing at Moreton Bay', 18 August 1840, New South Wales Archives Office.

⁵² *Moreton Bay Courier*, 12 March 1859, quoted in Watson, *The Queensland House*, p 2.7.

⁵³ *Sketches of Old Rockhampton* [extract only sighted, publication details unavailable, c 1980), p 23.

⁵⁴ Janet Hogan, *Building Queensland's Heritage* (Brisbane 1978), pp 79-80; Australian Heritage Commission, *The Heritage of Australia* (South Melbourne 1981), p 4/38.

C preissii, known in Western Australia as Rottneest Island pine, is a similar tree growing in all mainland states and giving a soft but durable timber.

Towards the end of the century cypress pine was increasingly in demand in Brisbane as a termite-resistant timber, and likewise on the settlement of Darwin in the early 1870s the discovery of a stand at Bynoe Harbour was important, as the local ironbark had proved too hard to work.⁵⁵ In reality, it appears, neither cypress pine nor any other timber is totally impervious to the termite, though it is true that the animal has a preference for other species, as well as for specific parts of the log.⁵⁶

Western Australia

Western Australia, despite its remoteness and general stagnation, managed to export some timber to the eastern colonies, and indeed further afield. After jarrah had been used successfully to repair the *Sulphur* in 1829 the British Admiralty sought and obtained two cargoes of the timber, in 1831 and 1837. By 1844 the Scott and Clifton families of Bunbury were exporting timber, and in 1848 Henry Prinsep attempted to export sleepers to India, failing only because the ship was wrecked.⁵⁷ Jarrah staging was used in the keeper's quarters of the Port Adelaide lighthouse in 1852-5,⁵⁸ and by 1853 some timber was being sent to Melbourne.⁵⁹ Although an average of a thousand loads of timber was exported annually between 1850 and 1870, these were mainly telegraph poles, piles and sleepers,⁶⁰ and the finer qualities of the local timbers had yet to be much appreciated elsewhere.

But in 1879 Baron von Mueller reported very favourably on the jarrah and the karri, and soon jarrah was again being sent to the east.⁶¹ Some logs which had been cut in 1845 by W Pearce Clifton, and left by the Bunbury jetty, were dug out in 1880 and sent to the Melbourne Exhibition, having proved to be in very good condition despite being variously buried and exposed to the elements and soaked at different times in fresh and salt water.⁶² Mills were established by the Jarrahdale Timber Company at the eponymous location, and in fifteen months from January 1880 extracted and exported over 12,000 tonnes of jarrah.⁶³ By 1889 the export drive had revived. The Jarrahdale Timber Mills had sent two cargoes to London, where a jarrah fence around Baron Knopp's mansion in Forest Hill attracted much attention.⁶⁴ The eastern colonies had not done so well. In 1887 R Kemp, a timber merchant of St Leonards, New South Wales,

⁵⁵ Harriet Daly, *Digging, Squatting and Pioneering in the Northern Territory of South Australia* (London 1887), pp 110-111.

⁵⁶ Peter Bell, *Timber and Iron* (St Lucia [Queensland] 1994), p 162.

⁵⁷ Jenny Mills, *The Timber People* (Perth 1986), pp 6-7.

⁵⁸ E & R Jensen, *Colonial Architecture in South Australia* (Adelaide 1980), p 336.

⁵⁹ In April 1853 Archdeacon J R Wollaston noted a ship at Bunbury taking on timber for the Melbourne market: J R Wollaston [ed C A Burton & P U Henn], *Wollaston's Albany Journals (1848-1856)* (Perth 1954), pp 154, 189.

⁶⁰ Mills, *The Timber People*, p 7.

⁶¹ Ferdinand von Mueller, *Report on the Forest Resources of Western Australia* (London 1879), quoted in Mills, *The Timber People*, pp 5-6.

⁶² Letter in the *West Australian*, quoted in the *Australian Building and Engineering News*, 2 August 1880, p 22.

⁶³ *Australian Building and Engineering News*, 1 May 1881, p 211.

⁶⁴ *Australasian Builder & Contractor's News*, 11 May 1889, p 448.

had sent a batch of timber, mostly blackbutt, to London on an experimental basis. Nothing more is heard of the venture, and it must be presumed to have failed.⁶⁵

Meanwhile sawmills had been established at Toodyay and Denmark in 1884, by the firm that was to become Millars' Timber and Trading Co. Limited.⁶⁶ Charles and Edwin Millar were sprigs of the family which operated the old established Scottish business of Robert Millar & Sons, Montrose. They had set up in business in Melbourne early in the 1880s, and in 1884 obtained the contract for the Southern Railway, or Albany to Beverley line, in Western Australia. The sawmills supplied timber for the construction of the line, and though they were closed at the end of the contract, they re-opened to fulfil an order from Melbourne for karri building timber, and then in 1889-90 one mill was dismantled and re-erected at Albany. During the 1890s, under the managership of Henry Teesdale Smith, the company expanded in various directions.⁶⁷ A large contract was obtained to supply the Melbourne harbour works, and this kept the company busy for three years, while its representatives promoted its karri timber in London and elsewhere in Europe. In 1894 John Coughlan was brought from Victoria to investigate the available resources of karri, and he influenced the company to begin sawmilling on a large scale and to focus its activities at Denmark.⁶⁸

In 1894 George W Shepherdson brought his mill and equipment from South Australia and set it up five kilometres south of Mundaring, opening in January 1895 as the Adelaide Timber Company.⁶⁹ His sons followed, and in 1896 he returned to South Australia and left them in charge. In 1898 the business became a limited company, and in 1899 operations were moved to a site ten kilometres east of Greenbushes, 240 kilometres south of Perth, which involved the transport of:

- 1 steam engine
- 8 saws
- 2 saw spindles
- 1 loco portable steam engine
- 1 vertical saw plant
- 1 ATCO patent road block cutting machine
- 1 log trolley
- 6 trucks
- 2 winches
- 1 trolley
- 1 dray
- 1 horse jinker
- 1 emery machine
- 5 horses and harness
- 10 bullocks and tackle

⁶⁵ *Australasian Builder & Contractor's News*, 13 August 1887, p 208.

⁶⁶ Ambrose Pratt [ed], *The National Handbook of Australian Industries* (Melbourne 1934), pp 562-4.

⁶⁷ A C Staples, *They Made Their Destiny* (Harvey [Western Australia], 1979), pp 311-327, quoting a number of sources, including articles in the *Bunbury Herald*, and W C Thomas, 'Outlines of the Western Australian Timber Industry', *Journal of the Royal Western Australian Historical Society*, I, part V (1929).

⁶⁸ Pratt, *National Handbook of Australian Industries*, pp 562-4.

⁶⁹ David Mack, *The Shepherdsons: Timber Milling in Australia 1849-1984* (Camden Park [South Australia] 1986), pp 5-6.

2¹/₂ cwt of iron
 quantity of coal and wire coils
 270 empty bags
 20 ft of 8 in belting
 2 screw jacks
 2 tons galvanised iron
 10 gallons oil
 112 ft steel piping
 32 steel rails
 2 belts
 1 barrow
 11 axes
 2 hammers and wedges
 1 large water pump
 1 small water pump
 2 band saw
 1 sawdust elevator
 blacksmithing tools
 14 tools and various sundries
 stores, new iron, 2 tanks
 1 set of bellows
 1 saddle and bridle⁷⁰

Operations were again shifted in 1907 to North Greenbushes or Padbury Hill, and then in 1908 to Wilga, or Wilgie Springs, where the company continued to operate until 1984.⁷¹

In 1897 the Millar business was floated on the London market as Millars Karri and Jarrah Forests Company Limited, but in 1899 to 1900 there was a slump in the timber trade, in response to which seven other operators merged with Millars to become Millars Karri and Jarrah Company, the biggest timber enterprise in Australia during the first quarter of the twentieth century.⁷² By the 1930s it controlled fourteen sawmills, exported more hardwood than all the export firms in the other states put together, and was thought to be possibly the largest hardwood company in the world.⁷³ The only other major firms now remaining in Western Australia were Bunning Brothers and Whittaker Brothers.⁷⁴ Between the wars black bean, jarrah and karri became recognised on the British market, along with New Zealand kauri.⁷⁵

classification

An attempt to collect and classify Australian timbers in a systematic manner had been made in New South Wales by Sir William MacArthur and Charles Moore in 1854 with

⁷⁰ Mack, *The Shepherdsons*, p 8.

⁷¹ Mack, *The Shepherdsons*, pp 10-11.

⁷² Staples, *They Made Their Destiny*, pp 311-327.

⁷³ Pratt, *National Handbook of Australian Industries*, pp 562-4.

⁷⁴ Staples, *They Made Their Destiny*, pp 311-327.

⁷⁵ B H & R G Knight, *Builders' Materials* (London 1948 [1939]), pp 55, 59, 63.

the object of providing specimens for the Paris Exhibition of 1855. Moore commented:⁷⁶

The most experienced among the sawyers have no names for a great number [of species], and can give little information to be relied upon with regard to the qualities of the timber. They have been in the habit of confounding together numerous species under the general designation of brush trees. It requires careful and laborious investigation on the part of a stranger in these brushes to distinguish trees, even of very different families. The foliage is often so far overhead, and so intermingled with that of neighbouring trees and climbers, their trunks are so covered with epiphytes and the light is so imperfect that the tree often requires to be cut down before it can be identified.

The unravelling of this confusion is far too long a story to pursue here, but stringybark should be mentioned as one timber which, though important in building, and important as an article of intercolonial trade, continued to defy precise definition well into the twentieth century. In 1860 the Philosophical Institute of Victoria described half a dozen species of timber which had come into use for building purposes, including 'stringybark' or *Eucalyptus fabrorum*, a tall, straight, fissile timber, abundant in mountain areas. It was readily split into shingles, palings and rails, but decayed when used for fence posts.⁷⁷ The *Official Record* of the Intercolonial Exhibition of 1866-7 identified stringybark as *E obliqua*, a hard, straight-grained timber resembling the blue and white gums. It was of an inferior class and notorious for warping, twisting and dry rot, but was used for a variety of building purposes, and readily split for posts, rails, palings and shingles. The *Official Record* also described messmate, *E fissilis*, which again had many of the characteristics of white gum, was hard and straight-grained, and was readily split for the same purposes as the stringybark.⁷⁸ In fact these three timbers were one and the same, *E obliqua*, subsequently known as messmate stringybark in contradistinction to the stringybarks of the other colonies.

R T Baker's *Hardwoods of Australia*⁷⁹ in 1919 marked a watershed in the description and promotion of Australian timber, in that it was a lavish volume copiously illustrated with colour plates showing the detailed appearance and grain of each species. Though biased towards New South Wales it was surprisingly national in character, and comparable with the same author's *Building and Ornamental Stones*. There was to be no further work on this scale, but from the late 1920s the Council for Scientific and Industrial Research produced a multitude of small publications on all aspects of the properties of Australian timbers, their seasoning, their shrinkage, the effectiveness of preservative treatments, and other topics. In the 1930s the CSIR Forest Products Division began to publish in instalments its work upon the first comprehensive key to the identification of eucalyptus timbers.⁸⁰

⁷⁶ W H Warren, *Australian Timbers* (Sydney 1892) p 1.

⁷⁷ 'Report on the Resources of the Colony of Victoria', in *Transactions of the Philosophical Institute of Victoria*, IV, part II (September-December 1860), pp 21-4.

⁷⁸ Intercolonial Exhibition of Australasia, 1866-67, *Official Record* (Melbourne 1867), pp 215-6.

⁷⁹ R T Baker, *The Hardwoods of Australia and their Economics* (Sydney 1919).

⁸⁰ H E Dadswell & Maisie Burnell, *Methods for the Identification of the Coloured Woods of the Genus Eucalyptus* [CSIR Division of Forest Products technical paper no 5] (Melbourne 1932); H E Dadswell et al, *Methods for the Identification of the Light-Coloured Woods of the Genus Eucalyptus* [CSIR Division of Forest Products technical paper no 12] (Melbourne 1935).

intercolonial trade

The reliance of the colonies upon timber imported from Europe, from America, or from each other, varied enormously. In broad terms, New South Wales, Tasmania, Western Australia and Queensland had a good range of building timbers. So did Victoria, but the colony was prosperous, and much of the time the local cost of labour was so high as to make importation pay. South Australian timber was very limited, but adequate during the early years, when native pine was cut in 'the Pine Forest' which is now the Adelaide suburb of Nailsworth.⁸¹ Local joinery timber was virtually confined to the cedar of New South Wales and Queensland until local hardwoods became fashionable after the 1890s, and therefore the other colonies imported either the cedar or other timbers from overseas.

New Zealand timber began to reach Port Phillip in quantity in the 1830s. Some kauri was imported from New Zealand at least by 1836,⁸² and in 1838 J P Fawkner was advertising New Zealand pine logs and flooring boards for sale in Melbourne.⁸³ The source may well have been Gilbert Mair of Wahapu, who exported kauri to the United States at about this time.⁸⁴ In 1847 G S Brodie was advertising 'Superior Cowrie Plank' brought by the *Teazer* from Auckland, in one to two inch [25-51 mm] thicknesses.⁸⁵ Later in the century much of the New Zealand timber trade was controlled from Melbourne, and only in a technical sense was the timber obtained from it an overseas import. The Kauri Timber Company was formed in Melbourne in about 1888 to take over a large number of New Zealand timber companies and their extensive estates, both freehold and leasehold.⁸⁶ The second ordinary general meeting in May 1889 was told that there were 124 million super feet of logs and sawn timber in stock, promising responses were coming from London and Glasgow, and a local board of directors had been established in Auckland to mind the company's interests.⁸⁷ Soon the *Blenda* was despatched to Glasgow with a cargo of very carefully selected kauri flitches, to test the market.⁸⁸

Kauri and Rimu pine came from New Zealand in large logs; jarrah from Western Australia; cedar from New South Wales and Queensland⁸⁹ (the Tweed, Bellingen, Nambucca and Richmond Rivers); pine from the Richmond; and hardwoods including ironbark, blackbutt, blue gum, flooded gum, spotted gum, tallow wood, and turpentine, from Port Stephens, Brisbane Water and elsewhere.⁹⁰ By the 1880s Victorian imports from the neighbouring colonies were running annually at about seven million super feet [650,000 m²] of kauri, two million [186,000 m²] of cedar, and four hundred thousand

⁸¹ J W Bull, *Early Experiences of Life in South Australia* (2nd ed, London 1844), p 131.

⁸² J B Cooper, *Victorian Commerce 1834-1934* (Melbourne 1934), p 11.

⁸³ *Melbourne Advertiser*, 8 January 1838, quoted in Robert Moshel & John Witorz, 'Building Material imported into Victoria from the first Settlement until 1856' (BArch, University of Melbourne, 1971), p 46.

⁸⁴ William Toomath, *Built in New Zealand* (Auckland 1996), p 18.

⁸⁵ *Port Phillip Herald*, 12 May 1847, p 3, quoted in Moshel & Witorz, loc cit.

⁸⁶ Andrew Lemon, *The Young Man from Home* (Melbourne 1982), p 91.

⁸⁷ *Australasian Builder & Contractor's News*, 1 May 1889, p 449.

⁸⁸ *Australasian Builder & Contractor's News*, 1 June 1889, p 508.

⁸⁹ Victorian Intercolonial Exhibition, *Official Catalogue*, pp 26-7.

⁹⁰ *Sydney Mail*, 21 November 1874, quoted in Bobbie Hardy, *Their Work was Australian* (Sydney 1974), p 16.

[37,000 m²] of white pine. From the United States amounts of sawn oregon varying from about three to nearly seventeen million feet were imported, together with substantial quantities of sawn pitch pine, clear pine, white pine shelving, and Californian redwood. Up to 52 million running feet [1.5 million linear metres] of floorboards were imported from the United Kingdom and the Baltic, anything from twenty to nearly a hundred thousand red deals from the United Kingdom, and about seventy thousand deals from the Baltic.⁹¹

Although Western Australia was a timber exporter the surge in the demand for building timber was met in 1885 by importation from the eastern colonies. Indeed much of the timber worked by Bunnings was from further afield: New Zealand kauri, white pine, Californian redwood and cedar, American doors and shelving, and so on.⁹² This is not quite as surprising as it might sound given that even local timber would have to be shipped by sea to many Western Australian destinations, thus substantially reducing the price differential between the local and the imported product. In Queensland up to World War I, according to Watson, only the stumps, floor joists and studs of a house were of hardwood: after the war the external walls, roof framing and flooring might be as well.

foreign imports

Hardwoods were not much favoured for building purposes in the nineteenth century, and in the coastal cities a large proportion of building was done with imported timbers such as Baltic pine, and later oregon from America. Peter Bell reports on an incomplete sampling from a wooden cottage at Burra, South Australia, of 1849. The weatherboards and skirtings are of spruce [*Picea* sp], which is common to both Europe and North America; the studs of yellow pine [*Pinus strobus*] from the eastern seaboard of North America; and the braces of Baltic pine [*Pinus silvestris*].⁹³ Such a mixture would appear to be the rule rather than the exception.

The issue of overseas imported timber, and especially low-priced American joinery, was an important one. James Robinson of Geelong was an exception when he advertised in 1858 that he could produce sashes and doors to compete with the imports in both workmanship and price,⁹⁴ but in 1860 a Melbourne carpenter complained about the imports to the Select Committee on the Tariff:

Doors, windows, mouldings of every description, sawn and plain boards, interfere with us. The Boards are planed ready for making shelves, so that there is the least possible labour of the carpenter required.⁹⁵

⁹¹ *Lord & Hughes's Monthly Circular* (Melbourne, 2 June 1884), passim.

⁹² Ingrid van Bremen, 'The New Architecture of the Gold Boom' (PhD, University of Western Australia, 1990), pp 139, 141.

⁹³ Peter Bell, 'An Early Timber Cottage at Burra' [typescript], p 11.

⁹⁴ John Tanner, *The Geelong Directory for 1858* (Geelong 1858), p 267.

⁹⁵ Victoria. *Votes & Proceedings of the Legislative Assembly, 1859-60, II, 237, D 26: Progress Report from the Select Committee on the Tariff, p 82, evidence of Henry Scott.*

The development of protectionist policies in Victoria, as distinct from New South Wales and the other colonies, was probably what fostered the numerous joinery and moulding works of subsequent decades, but the raw timber for such work was almost all imported until the 1890s.

The importations tended to be sawn timbers from Britain and America and 'deals', or large pieces which still required to be sawn up, from Baltic ports: these would often be broken up into boards by mills near the wharves in the various colonies. Regardless of botanical distinctions, any red or white timber from the Baltic might be referred to as 'fir' (or Scotch fir if sawn in Scotland), any red or yellow timber from America was called 'pine', and any white timber from either place was called 'spruce'. 'Scotch flooring' was Baltic red or white deal which had been sawn by mills in Scotland, and weatherboards sawn in Britain were similarly imported.⁹⁶

At Nugent and Gosling's hotel at Queenscliff, Victoria, an advanced building in the Queen Anne style by Reed, Henderson & Smart, the ceilings were reportedly panelled in 'polished Russian pine',⁹⁷ but as Baltic timbers are not usually identified by their particular countries of origin, this may refer to something more distinctive than common deal - perhaps larch. However one of the most puzzling references comes as late as 1939 when a house overlooking Wattle Park, Melbourne, was reported to be the first to use Baltic pine boards on the exterior.⁹⁸ Whether this may have been a reference to some new form or profile is unclear, for the material was a very traditional one.

As milling operations developed in the north of the state, California, so recently an importer of timber from Australia, by 1853 became an exporter. The first large shipment from San Francisco, which reached Melbourne at the end of 1853, consisted of six hundred cubic metres of timber and 100,000 laths.⁹⁹ A year later two ships carrying 613 cubic metres reached Sydney,¹⁰⁰ and soon Sydney's importations came to exceed Melbourne's. With the development of circular sawmills in California these quantities increased further. By the mid-1850s 'Sacramento cedar' was being advertised in Sydney, but later much of the imported timber was described as 'oregon', a term embracing various species, but principally douglas fir [*Pinus douglassii*], which came especially from Puget Sound.¹⁰¹ One ship reached Sydney in 1860 with a cargo of 2055 cubic metres. Exports from Puget sound continued into the twentieth century, and shipments of redwood in excess of two thousand cubic metres were common. Even larger quantities arrived from San Francisco, and others from Eureka, California; Chemainus, British Columbia; and Vancouver.¹⁰²

'Clear pine', pine shelving, tongued and grooved lumber, laths and pickets were imported from the United States; pine shelving, tongued and grooved timber, spruce flooring, laths and pickets came from Canada. Oregon came in sections up to 600 mm square

⁹⁶ Victorian Intercolonial Exhibition, *Official Catalogue of Exhibits* (Melbourne 1875), pp 26-7.

⁹⁷ *Australasian Builder & Contractor's News*, 22 October 1887, p 380.

⁹⁸ *Herald*, 26 July 1939.

⁹⁹ *Argus*, 12 December 1853, p 4, quoted in Peter Barrett, 'Building through the Golden Gate: Architectural Influences from Trans-Pacific Trade and Migration between Australia and California 1849-1914' (Master of Planning & Design, University of Melbourne, 2001), p 57.

¹⁰⁰ *Sydney Morning Herald*, 15 & 20 December 1854, p 4, quoted in Barrett, 'Building through the Golden Gate', p 57.

¹⁰¹ Barrett, 'Building through the Golden Gate', p 58.

¹⁰² Barrett, 'Building through the Golden Gate', p 85.

and lengths up to twenty-seven metres.¹⁰³ In the 1870s Hudson Brothers of Sydney stocked American pine, Quebec oak, and oak planking, in addition to the local timbers.¹⁰⁴ At the luxury end of the market, American walnut was used instead of deal for the bulk of the interior work at the Melbourne headquarters of the E S & A Bank, at the insistence of the client, Sir George Verdon.¹⁰⁵

In 1883 a Melbourne firm was offering at auction a number of Elford's Patent Portable Houses. They were said to consist of three rooms, measuring in all 20 by 24 feet (6 x 7.2 m), made mainly of Californian redwood, and with the pieces numbered so that they could be built by unskilled labour.¹⁰⁶ In 1884 John Ryrie bought from George King & Co of Sydney an American-made redwood building which is identified in his correspondence as an Elford house, at a cost of £100. He put it up in March-April 1884,¹⁰⁷ and it still stands at his property at Maffra, via Dalgety. Although nothing more is heard in Australia of the Elford houses or of other identifiable American makers, in about 1895 another house made of redwood was imported to Western Australia and put up at 11 Saladin Street, Swanbourne.¹⁰⁸

The rebuilding of San Francisco after the earthquake and fires of 1906, together with a building boom in Los Angeles, Pasadena and elsewhere in southern California, absorbed the greater part of the oregon and redwood production of the west coast until about 1913.¹⁰⁹ In 1916 the Master Builders Association of New South Wales claimed that the cost of building in imported timber was close to that of brick and concrete, which now accounted for about 75% of the market.¹¹⁰ But as the local demand in California eased the pressure to export revived. From this phase is an imported bungalow at 161 The Esplanade, Brighton, South Australia, which seems to have been built in 1913, when the site was bought, or soon afterwards. Though it is rumoured to be Canadian it seems more likely to be Californian, for it has redwood cladding on an oregon frame.¹¹¹ Two or three years later a very interesting example arrived: a Pasadena style bungalow called 'Redwood', made completely of Californian redwood including its stained weatherboard cladding and its shingle roof. It was brought to Sydney in 1915 and erected the next year by the Redwood Export Co and built as a demonstration model near the Rosebery Racecourse. It was then promoted by Stanton & Son Ltd (the Sydney real estate agent

¹⁰³ Victorian Intercolonial Exhibition, *Official Catalogue of Exhibits* (Melbourne 1875), pp 26-7.

¹⁰⁴ *Sydney Mail*, 21 November 1874, quoted in Bobbie Hardy, *Their Work was Australian* (Sydney 1974), p 16.

¹⁰⁵ Robyn Riddett, 'A Building "Worthy of the City"', in U M de Jong [ed], *W W Wardell: the Architect and his Era* (Geelong [Victoria] 2000), p 116, citing W W Wardell to Verdon, 17 August 1886, William Wardell letterbook, ff 602-9.

¹⁰⁶ *Argus*, 15 September 1883, p 2.

¹⁰⁷ First identified by Suzannah Plowman of Berridale, referring to King's letters and diaries held by the owner, Mrs Betty Osborne.

¹⁰⁸ Ian Kelly, 'The Development of Housing in Perth (1890-1915)' (MARCH, University of Western Australia, 1991).

¹⁰⁹ Barrett, 'Building through the Golden Gate', p 117, ref J S Ross, 'A Pioneer Lumberman's Story' (unpublished ms held by the Mendocino County Historical Society [1972]), p 30; *Sydney Morning Herald*, 27 July 1907, p 2.

¹¹⁰ Barrett, 'Building through the Golden Gate', p 17, ref *Sydney Morning Herald*, 25 December 1915, p 4.

¹¹¹ Information from Peter Malatt, March 2000, and data sheet from McDougall & Vines, Brighton Heritage Review (1998). Andrew Hapek, the current owner, advises that oral tradition, through a former owner, dates the house to the 1890s. This is possible in the sense that the land was already at that time held freehold, in eighty acre [32 ha] lots, prior to close subdivision: however the style and form support the later date.

Richard Stanton), as agents for the Town Planning Co's model suburb in the area.¹¹² It was demolished in 1968.¹¹³

More exotic imported timbers are harder to trace, because both of inadequacies in the statistics available, and of inconsistencies in the naming of them. In the 1840s and 1850s, however, considerable numbers of buildings were imported from Singapore, usually made of what was described as cedar, and/or of teak, which generally meant meranti or dedaru, though rengas, a superior timber, is also found in some surviving examples. Meranti is has been identified in both prefabricated and other buildings of the 1850s.¹¹⁴ In 1853-4, when the importation of Singapore houses was at its peak, some separate consignments of timber appear as well, as in February 1853 when William Tennent & Co of Melbourne offered by auction:

2253 planks of 16 ft [4.8 m] 10 x 1 [250 x 25 mm] Singapore cedar
 5514 do of 11 ft [3.3 m] 10 x 1 do, the whole planed and edged
 100 posts of 7 ft [2.1 m] 6 x 3¹/₂ [150 x 85 mm] ditto
 300 rails of 9¹/₂ [2.1 m] 6 x ditto
 All morticed and ready for use. Terms at sale.¹¹⁵

In August another auctioneer offered 60,000 feet [1,700 m³] of timber from Singapore, consisting of boards, planks, scantling etc.¹¹⁶ An advertisement in January 1854 offered Singapore cedar boards in fairly small quantities, but also deals of 12 x 3 inches [300 x 75 mm], 10 x 3 [250 x 75], and 9 x 3 [225 x 75],¹¹⁷ which is significant, as it meant that they would be broken down into scantling or boards by local mills, and that the resultant sizes would reflect local rather than Singapore practice. Early in the twentieth century Millar's Timber & Trading Co were selling Philippine mahogany and Pacific maple, mainly for panelling, joinery and furniture.¹¹⁸

markings

The markings on timber are often a source of great confusion, but they usually fit into one of three broad categories: they are to do either with the production, the shipping, or the assemblage of the material. Production markings include those of the timber mill or the prefabricator, like 'Skillings and Flint, Boston'. There are also marks of quality and origin, which have been little reported in Australia. The most elaborate series of markings were those for red deals, which had different codes according to whether they were from:

¹¹² *Building*, October 1916, reproduced in Graeme Butler, *The Californian Bungalow*, p 30. See also J M Freeland, *Architecture in Australia: a History* (Melbourne 1968), pp 228-9.

¹¹³ Max Kelly et al, *Demolished for the Public Good* (Glebe [New South Wales] 1988), p 74.

¹¹⁴ The weatherboards of a house of the 1850s at 370 Malvern Road, Prahran, Victoria, have been identified by Dr J Ilic of the CSIRO as L R Meranti (*Shorea sp.*). Meranti has also been found in a Singapore-made house, now at 136 Sackville Street, Collingwood, and in the lining boards of the house 'Seafield', Port Fairy, Victoria. Miles Lewis, *370 Malvern Road, Prahran* (mimeograph report, Melbourne 1989), p 12.

¹¹⁵ *Melbourne Auction Mart*, 7 February 1853, p 5 [Townsend Index].

¹¹⁶ *Melbourne Auction Mart*, 26 August 1853, p 1 [Townsend Index].

¹¹⁷ *Argus*, 6 January 1854, p 7 [Townsend Index].

¹¹⁸ *Australian Home Beautiful*, 1 December 1928, p 84.

Christiana [Oslo], Norway
 Drammen, Norway
 Fredericstadt, Norway
 Laurvig, Norway
 Skien Porsgrund, Kragero, and Thronbjem [Trondheim], Norway
 Gothenburg, Sweden
 Gefle, Sweden
 Soderham, Sweden
 Hudiksvall, Norkoping, Sundswall, Stockholm, Lojune and Mo, Sweden
 Uleaborg, St Petersburg and Bjorneborg, Russia
 Dantzig [Dantzig], Prussia.

Many of these ports supplied timber in five grades of quality, one to four, plus one and two mixed. There were up to nineteen letter / numeral combinations used within a single grade from a single port. Deals from Russia and Finland were branded with the blow of a hammer, but those from Sweden had stencil markings in red paint.¹¹⁹ Even in the early twentieth century idiosyncratic distinctions persisted - for example Riga timber was marked with a triangle, meaning 'best middling', a cross formed of double lines for 'good middling', or the same cross in a circle for 'common middling'. There were other codes for Dantzig timber, and there were also codes which combined the identity of the shipper and the quality, such as 'P.B.2' for St Petersburg timber of Peter Belaieff's second quality.¹²⁰

A house in South Australia has one or more weatherboards stencilled 'www' on the rear, which would suggest that the timber was 'sixths' or the lowest grade, from the Wifsta Warfs Bolag, a sawmill in the Sundswall district of Sweden.¹²¹ In this case, however, there is a problem, as the boards are believed to be of redwood and the house to have been imported from America in about 1913.¹²² The markings may therefore be those of a sawmill in America, or simply the initials of the consignee - the person to whom it was sent. For the range of makings goes well beyond those of the timber producer.

Shipping marks might include the name of the shipper or the ship, stowage instructions, the symbol or initials of the consignee, and finally identification marks for each bundle. Gromoff Petersburg deals were marked 'C. and Co.' for the shippers, Clark & Company.¹²³ The name of the ship was usually stencilled, as 'VORWARTS'; stowage instructions like 'stow aft' may be painted or stencilled. The consignee might be indicated by a triangle, oval or other shape containing initials of a company, as in 'C T & Co' (for Caldwell, Train & Co), or a private person such as 'E de C' for Edward de Carle or 'J A G' for J A Gregory. Edmund Bowman, in Adelaide, wrote to his father in Van Diemen's Land:¹²⁴

dear Father, if you should happen to send any goods be sure to put a mark on the bags so they will be known. Like this, E.B. You will need three bills of lading,

¹¹⁹ P B Eassie, *Wood and Its Uses* (Gloucester 1874), pp 5-8.

¹²⁰ P N Hasluck [ed], *Cassell's Carpentry and Joinery* (Philadelphia 1912), pp 43-6. See also Henry Adams, *Cassell's Building Construction* (London, no date), pp 7-8.

¹²¹ Hasluck, *Carpentry and Joinery*, p 52.

¹²² The house is 161 The Esplanade, Brighton, South Australia.

¹²³ Hasluck, *Cassell's Carpentry and Joinery*, p 45.

¹²⁴ Elizabeth Warburton, *Martindale Hall* (Adelaide 1979), p 20.

one for the Captain to keep, one must come to me in a letter, and the other you must keep.

This is really only the most elementary level of identification, because usually the consignee's initials will be augmented by combinations of letters, numbers, symbols and shapes, which would appear on the package or the outermost board or piece in the bundle, and would match an entry made in the margin of the bill of lading, allowing the consignment to be checked.

It is interesting to compare two prefabricated buildings imported to Melbourne from Robertson and Lister of Glasgow in about 1853. The timber lining of 399 Coventry Street, South Melbourne, has markings such as a diamond containing the letters 'RAP' followed by a dollar sign with angled slashes, then a numeral. RAP are the initials of the consignee, Robert A Patterson. The Brown Brothers store at Geelong has a diamond, a 'g', a similar dollar sign, and a numeral. The diamond contains a symbol consisting of two Bs, one reversed so that they share a common vertical, and presumably standing for Brown Brothers. The 'g' may refer to Geelong. In this case a similar code appears on the corrugated iron sheets, confirming that it is to do with the identification of the consignment rather than being anything specific to the timber trade.

Carpenters framing a building traditionally identified each piece with Roman numerals, originally introduced in medieval times before the introduction of Arabic numerals, and continued into the nineteenth century because they could be cut with a chisel. The number of strokes was economised by eliding figures, so that XV might become a V with an extra slash through the left arm,¹²⁵ and XX, became two parallel strokes in one direction intersected by a single stroke in the other. Numerals like IX and XI, which could be mistaken for each other when seen upside down, were replaced by other versions, like VIII. Because V was often inscribed upside down, even IV and VI would be confusing, so four became III.¹²⁶ Substantially the same markings are used in German-built houses such as 'The Heights' at Geelong and 'The Chalet', Sydney, in each case beautifully cut.¹²⁷ They appear also in buildings of local construction, especially in principal members such as those of roof trusses.

These marks need not be confused with the sometimes similar versions of Roman numerals used on logs to indicate cubic content,¹²⁸ for the latter are not chiselled but in chalk. In prefabricated buildings lettering is often painted on: for example, each joint is assigned a number, and that number is hand painted (rather than stencilled) onto every member where it runs into that joint. Sometimes the members rather than the joints are numbered sequentially, and for this purpose stencilling may be used. Sometimes the labels were more descriptive, like 'bottom plate' or 'window head'.

Similar questions arise in relation to the prefabricated Chinese houses brought to Australia in the 1840s and 1850s. Some have Chinese or other characters on the timber, and one in particular has been as fully researched as possible. This is a house built in

¹²⁵ Huddle reports this at 'The Heights', Geelong, together with V//, XI and V. Lorraine Huddle, *The Heights* (Belmont [Victoria] 1985), p 48.

¹²⁶ Trudy West, *The Timber-Frame House in England* (Newton Abbot [Devonshire]. no date), pp 60-61.

¹²⁷ Huddle, *The Heights*, figs 42, 49, 50.

¹²⁸ Hasluck, *Cassell's Carpentry and Joinery*, p 49; Adams, *Building Construction*, p 9.

East Melbourne in 1853, moved to Mentone in 1899, and from there moved in recent years to its temporary accommodation in Collingwood. Almost every original member carries markings of two sorts. The first is a stencilled letter 'A' accompanied by a sort of star consisting of four slender leaf-like shapes at right angles. The star may have been the brand of a particular manufacturer or carpenter, and the A reference to identify the timbers for this house in particular, but the reverse is also possible. The second is a Chinese character. Most of the characters are not otherwise helpful, as they translate into words like 'gold', 'birth', 'beauty', 'water', and 'road', but there are some which might be construed as instructions, such as 'double', 'connection', 'secure', and 'fixed' and there is one proper name, 'Lee'. In some cases the characters of adjoining members match at the junction, suggesting that they were intended as a guide to assembly, though as the match is in other cases not found, the instructions cannot have been closely adhered to.