

## 2.03 Splitting Timber

- a. tools and species
- b. the splitting process
- c. uses

### a. tools and species

The use of split timber for slabs, shingles, palings, weatherboards, laths and conventional framing, is a characteristic of early Australian building, but it is one that derives directly from British tradition and Irish traditions. Radially split oak planks in Ireland have been radiocarbon dated to more than 3,000 BC,<sup>1</sup> and the fact that tradition was a living one is clear from James Atkinson's book of 1826, *Agriculture and Grazing in New South Wales*. Atkinson lists amongst the items an emigrant should bring to the colony 'Two sets of cleaving wedges, with iron rings for mauls' and 'Cleaving axes or knives for splitting palings, shingles, and laths.' He recommends seven wedges<sup>2</sup>. He clearly regarded these as items which would be understood by his reader, and would be readily obtainable at home. Peter Cunningham describes the wedges as being long and thin 'with an irregular indented groove up the middle, to make them draw, and be retained better, from the hold the irregularities of the groove give'.

'The trees for splitting,' according to Cunningham, were 'singled out by the straightness of their stem, its freedom from notches, and the smooth, straight-grained nature of the bark, the swirly bark always denoting a swirly fibre in the wood.'<sup>3</sup> Alexander Harris describes splitting blackbutt in the 1820s, so sawn that it scarcely be distinguished from sawn stuff, and with hardly a splinter.<sup>4</sup> Atkinson distinguished bluegum as a timber which would split well, except that grown in the County of Argyle which was smaller in size, while the 'black-butted gum' (blackbutt) and forest or water gum were, by implication, similar in properties. Ironbark was identified as a timber that would split easily, and made excellent shingles and fence rails, while stringybark, and by implication turpentine, were readily split for building timbers, fencing and palings. Forest oak (known in England as Botany Bay wood or beef wood), and the rather similar swamp oak, were both used for shingles, the former splitting from heart to bark.<sup>5</sup>

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<sup>1</sup> Alan Gailey, *Rural Houses of the North of Ireland* (Edinburgh 1984), p 15, referring to an early Neolithic rectangular house at Ballynagilly, East Tyrone: Michael Herity & George Eogan, *Ireland in Prehistory* (London 1977), pp 44-50.

<sup>2</sup> James Atkinson, *An Account of the State of Agriculture and Grazing in New South Wales* (London 1826), p 127, 92.

<sup>3</sup> Peter Cunningham, *Two Years in New South Wales* (2 vols, London 1827), II, p 165.

<sup>4</sup> [Alexander Harris], *Settlers and Convicts* (Melbourne 1953 [London 1847]), p 29.

<sup>5</sup> Atkinson, *Agriculture and Grazing in New South Wales*, pp 14-16.

It appears that in Sydney she-oak was at first preferred to stringybark, a prejudice which was challenged in a letter to the *Sydney Gazette* in 1803. Its sesquipedalian style suggests that it was written as a filler by the staff, but it nevertheless gives an impression of current fencing practice:

Amongst the number of erroneous persuasions that have long subsisted, I beg to take notice of the preference given to She oak for paling and fencing, and the total exclusion of the Stringybark for either of those purposes, perhaps because it has been but partially made trial of.

From the incessant labour and expence incurred by the present customary mode of fencing and paling with she-oak, which, although valuable for other purposes, I by no means think fit for such uses, I was induced to direct a quantity of pales to be split from the Stringy-bark, but as much as possible to avoid saplings. A fence of this kind was erected round my ground two years since, inclosing 50 acres, earthed several inches; the buried part of which, instead of mouldering and incorporating with the earth, as is the case with She-oak, appears to have rather increased in its firmness. The sort of paling generally in used is of so light a substance as nearer to resemble a feathered splinter than a lasting barrier; and the mode of putting up so aptly corresponding, they yield to every gust of wind, and grounds lay consequently open and unsheltered, whilst with a trifling difference of labour, a fence may be erected of an almost incredible duration from the Stringybark. Having made use of no wood less than 14 or 15 inches [350-375 mm] diameter, it was certainly somewhat more difficult to split, but this, while it occasioned a difference of 200 paling in the complement of two men's labour for a whole week, yet was amply recompensed in the size of the cuts, which may be made nearly of an equal thickness at each edge, and thereby brought to resemble weatherboarding.<sup>6</sup>

Although the same name does not imply precisely the same timber, it is relevant that she-oak was used for shingles in Western Australia. But it is surprising that George Russell described the men's huts he built in 1836, on the Clyde Company's run in the Port Phillip District, as being of she-oak.<sup>7</sup> It also been claimed, and also surprisigly, that palings were cut from blackwood at Narre Warren east of Melbourne.<sup>8</sup> The usual timbers in Victoria were stringybark, box, and occasionally ironbark.

Gunpowder has been used in Australia to remove stumps and to split logs, but it is unlikely to have been found suitable for extracting building timber.

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<sup>6</sup> *Sydney Gazette*, 3 July 1803, p 2.

<sup>7</sup> P L Brown [ed], *The Narrative of George Russell of Golf Hill with Russelliana and Selected Papers* (OUP, London 1935), p 128.

<sup>8</sup> N E Beaumont, J F Curran & R H Hughes, *Early Days of Berwick and its Surrounding Districts: Beaconsfield, Upper Beaconsfield, Harkaway, Narre Warren and Narre Warren North* (Berwick-Pakenham Historical Society, Berwick [Victoria] 2005 [1948]), p 98.

Elsewhere, though, it was different, for William Dampier reported the use of gunpowder in the West Indies to extract timber for export to New England.<sup>9</sup>

### **b. the splitting process**

Splitting from heart to bark - that is radially - was the normal principle in Britain, but most Australian timbers were split tangentially. Cunningham nevertheless describes radial splitting as if it were normal in Australia: 'the block being burst, quartered, and then split up into rails, which is accomplished by splitting from the centre outwards, throwing the core away.'<sup>10</sup> This was the normal way of splitting messmate stringybark, at least in Victoria, where pieces up 0.75 x 1.5 m were obtained.<sup>11</sup>

Atkinson gives an account of tangential splitting for fences, using bluegum, ironbark, stringybark (*not* the messmate of Victoria and Tasmania) or box:

They ... select the straightest and freest grown trees, fell them with a cross-cut saw, cut them off to proper lengths, and billet them out into as many divisions as the size of the tree will admit; they are then split or run out with wedges into rails or posts; not from heart to bark as is practised in splitting woods in England, but across the silver grain.<sup>12</sup>

Harris describes splitting box and ironbark 'lengthwise with wedges and maul into quarters, then again into billets, and the billets into rails or posts or slabs'.<sup>13</sup> According to a settler of the 1850s some of the older trees required gunpowder for the first split, but the normal procedure was as follows:

First, it is requisite to seek for a tall, straight, stringy bark tree of a good size, and after cutting a small piece out to see how the grain runs, the next thing is to 'ring it,' as it is technically called; that is, to cut off a strip of bark all round the tree for about a foot in width, and applying a saw to that side on which the tree leans, cut it until the saw is jammed. At this point an axe is used to cut underneath the butt, in order to leave the end of the trunk square; after this the other side must be cut, and the tree will presently fall. Sometimes when the tree happens to stand very straight, it will need a wedge to be inserted in the cut made by the saw, and driven in until the tree falls.<sup>14</sup>

The length of the slabs might be as much as 4.3 metres, if we are to believe Robert Dawson's account of the construction of a store at Port Stephens, in 1826.<sup>15</sup> Cunningham speaks of cutting rails 2.1 metres long, and seldom

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<sup>9</sup> Diana Preston & Michael Preston, *A Pirate of Exquisite Mind: the Life of William Dampier: Explorer, Naturalist and Buccaneer* (Doubleday, London 2004), p 40.

<sup>10</sup> Cunningham, *Two Years in New South Wales*, II, p 165.

<sup>11</sup> C B Mayes, *The Australian Builders' Price-Book* (Melbourne 1862), p 49.

<sup>12</sup> Atkinson, *Agriculture and Grazing in New South Wales*, p 92

<sup>13</sup> [Alexander Harris], *Settlers and Convicts*, p 32.

<sup>14</sup> W T Pyke [ed], *Bush Tales by Old Travellers and Pioneers* (Melbourne 1893 [1888]), p 71.

<sup>15</sup> Robert Dawson, *The Present State of Australia* (London 1830), p 27.

getting more than three lengths to a tree, and an average of fifteen rails to a block.<sup>16</sup> Lighter splitting, as for shingles, was more commonly done with a froe, an iron blade fixed at right angles to the handle, with the cutting edge pointing away from the user.<sup>17</sup>

By the 1840s professional splitters were earning a minimum of twelve shillings a day, and sometimes much more.<sup>18</sup> Their work was in many cases seasonal, as will be discussed below in relation to palings. The best time for splitting or for felling was late autumn. Then, it was held, the new wood had reached maturity, but the sap was at the minimum. If the work was done in spring the grain would contract unevenly and the timber become more open, cracked and loose, would last less well, and would be more susceptible to rot, grubs and white ants.<sup>19</sup>

### c. uses

Shingles, palings and slabs were always of split timber, fenceposts and rails were usually. Post and rail fences were common from an early date in New South Wales and Van Diemen's Land, and probably in all the colonies where suitable timber was available. David Burn describes a sort of evolutionary hierarchy of rural fencing in Van Diemen's Land, beginning with that made from the limbs and branches of the trees felled during clearing. Then comes the more durable fence built from the larger limbs and butts. He then refers in what seems to be more a hypothetical manner to the wattle fence and ditch, and to the dry stone wall. Log fences - actually what are known as chock-and-log - were said to be 'in high repute', and finally, posts and rails 'made of the split gum or stringy bark [were] also general'. As a postscript he mentions the *cheveaux de frize* or American water fence as being little used, because if broken at any point it tended to tumble 'like a pack or cards' (dominoes might have been more apt), and the paling fence. used only in towns or around gardens.<sup>20</sup>

Atkinson describes the process of building a post and rail fence in New South Wales as follows:

The prices at which it is generally performed, are for four-railed 3s.6d.; for three-railed 2s.6d.; and for two-railed 1s.9d. per rod. ...

In cutting out the mortices, a very singular tool, called a morticing axe, is used; it has a short handle, large eye, head about a foot deep or long, and with an edge about an inch and a half [4 cm] wide; some use them double headed, shaped like an adze on one side, and an axe on the

<sup>16</sup> Cunningham, *Two Years in New South Wales*, II, p 165.

<sup>17</sup> For an illustration, see H A Salaman, *Dictionary of Woodworking Tools* (Mendham [New Jersey] 1997 [1989 (1975)]) p 198.

<sup>18</sup> F Lancelott, *Australia as it Is* (2 vols, London 1852), II, p 115.

<sup>19</sup> R W E MacIvor, in Jonathan Periam [adapted R W E MacIvor], *The Pictorial Home and Farm Manual* (Sydney 1885), p 662.

<sup>20</sup> David Burn, *A Picture of Van Diemen's Land* (Hobart 1973 [1840-1]), pp 181-2.

other; and this perhaps is the best construction. In setting up, a common spade, and a post-hole spade, are requisites for digging the holes; and if there are many stones, a small crow-bar or pick-axe will be useful in loosing them; an adze or broad axe are used for trimming and fitting rails for the mortice. ...

Posts are cut five feet six inches [1.7 m] and rails nine feet [2.7 m] long. The mortices are cut quite through the posts, about four inches long, and two inches wide; the ends of the rails are sometimes placed over one another in the mortice, and sometimes one by the side of the other; which is much the neatest plan. The ends are trimmed away so as to overlap each other, and project through the mortice on both sides; two panels are invariably put up to a rod, and the posts are always sunk two feet in the ground, which allows the fence to be three feet six inches [3.1 m] high.<sup>21</sup>

A Victorian source of the 1850s gives nine feet for rails and 6 ft 6 ins [1.95 m] for posts.<sup>22</sup> A specification for a three rail fence on the Mount Sturgeon run in 1859 has slightly shorter panels, and even higher posts, and is more specific about the details:

One hundred and Sixty rood (160) more or less of three rail fencing, the post to be of gum seven foot long not less than three inches thick at top and nine inches wide 2 foot in ground, the rails to be three inches thick + eight inches wide, Eight foot six inches long and to lap two + half inches threew [sic] each post. The paddock to have two slip panels posts to be mortised 5 inches long 3 wide.<sup>23</sup>

The most common uses of split timber were for slabs, palings and shingles, all of which are discussed separately below. In rural areas split timber was sometimes used even in place of sawn for work such as stud frames, a notable example being the milking shed/stables at Lawless Country', Driffield, Victoria, possibly dating from about 1880.<sup>24</sup> Well split palings might differ little from sawn boards, and James Fenton wrote of a batch of palings near Devenport that 'When stacked by the splitters in layers, each five palings looked like a solid billet, the marks of the knife which divided it into thin boards being really imperceptible.'<sup>25</sup>

The use of puncheons for flooring was probably more common than is generally recognised, and the term 'puncheon' itself has not been recorded in Australia (and in Britain has an entirely different meaning, in relation to timber framing). An American description of them is 'thick slabs split out of logs,

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<sup>21</sup> Atkinson, *Agriculture and Grazing in New South Wales*, pp 92-3.

<sup>22</sup> Pyke, *Bush Tales*, p 71.

<sup>23</sup> MS tender notice, Mt Sturgeon, 14 March 1859, National Trust of Australia (Victoria) file no 2453.

<sup>24</sup> Miles Lewis, *West and South Gippsland: Best Old or Renovated Farm Building* ([Melbourne] 1985), p 3.

<sup>25</sup> James Fenton, *Bush Life in Tasmania Fifty Years Ago* (C L Richmond, Devonport [Tasmania] 1964 [Hazell, Watson & Viney, London 1894]), p 162.

hewn on the face and edges and cut to a level beneath'.<sup>26</sup> A puncheon is really a sub-species of slab, less defined by its form than by its use to construct solid timber floors. Clear archaeological evidence of such flooring has been found in the excavations of the government house at short-lived settlement at Corinella, Westernport Bay, in 1826-7. The building was burnt when the settlers departed, but the profile of the puncheon floor was preserved in the soil below, and exposed by the careful use of a dustpan and a brush.<sup>27</sup>

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<sup>26</sup> D A Hutslar, *Log Construction in the Ohio Country, 1750-1850* (Athens [Ohio] 1992), p 39, quoting W L Howells, *Recollections of Life in Ohio* (Cincinnati [Ohio] 1895), p 118.

<sup>27</sup> P J F Coutts, *Report on Archaeological Investigations at the 1826 Settlement Site - Corinella* [Records of the Victorian Archaeological Survey Number 18 December 1985] (no place [Melbourne] 1985); passim