

4. HYBRID TYPES

- 4.1 Wattle and Daub
- 4.2 Pole and Pug
- 4.3 Lehmwickel
- 4.4 Palisade and Pug
- 4.5 The Transformation of the Tent
- 4.6 Huts in General

In *Victorian Primitive* I discussed, under the heading of 'Half Timbering', a number of forms of construction in which unbaked earth materials were packed into a timber frame. The term was the correct one both in a literal sense, and in that it correctly implied that Australian techniques of this sort were derived from the long European tradition of half timbering. However it has had its drawbacks, firstly in that some readers took it to be a sufficiently precise term to define one or other of the various systems it embraced; secondly in that it ought in principle to have embraced some techniques like brick nogging, which were outside the scope of that book and of this chapter; and thirdly that it left no convenient place for the discussion of various other vernacular techniques of mixed type and origin.

The forms of construction discussed here are hybrid not merely in the obvious senses that they represent combinations of earth and wood, or of mass construction and framed construction, but also, commonly, in the sense that they fall into categories which are not clearly defined, or are of mixed origin. Wattle and daub and lehmwickel represent well established constructional traditions, and in practice it is often hard to distinguish the former from marginal forms like lath and plaster. Lath and plaster is generally a finish for interiors, but we find a reference to it as the material of Governor Phillip's first house at Parramatta:¹ whether this refers to true split or sawn laths is a matter for conjecture, as the first huts built there were described as being of 'wattles and plaster'. At later dates lath and plaster is by no means an uncommon form of construction, and seems generally to be a corruption of what I call pole and pug. However, this cannot be the whole story, for an example survives at Wilberforce (if it has been correctly described) from as early as the decade 1810-20.²

This is an area of confusing terminology, and it is regrettable that there are those determined to make it more so. Wattle and daub is one term known right across the English speaking world, and describes a form of construction

¹ Robert Irving, 'Georgian Australia', in Robert Irving [ed], *The History and design of the Australian House* (Melbourne 1985), p 40.

² This is 'Rose Cottage', Wilberforce: see R I Jack, *Exploring the Hawkesbury* (Kenthurst [NSW] 1990 [1986]), p 79.

which is even more widespread, and which was used in most or all of the Australian colonies. But surviving examples of it are not known in New South Wales, and my New South Welsh colleagues perversely apply the term to the form of construction to which I here refer (merely for want of anything better) as pole and pug. This is based upon a different structural principle, in which there is no wattling and in which the earth is a packing rather than daub. The only remote justification for calling this wattle and daub is that local people in the area in question, Hill End and Gulgong, have traditionally done so. This is equivalent to the way laypersons commonly confuse foundations and footings: if specialists follow their lead it can only cause the utmost confusion.

The most remarkable change since I wrote in 1977 is in our understanding of the 'Dutch biscuit', or what I now know as *lehmwickel*. The examples which I had cited in Victoria had seemed quite isolated phenomena, and I was very pleased to be able to identify a parallel form in - of all places - New Harmony, Indiana. It was from New Harmony that the term 'Dutch biscuit' derived, and it had never to my knowledge been used in Australia. It is therefore amusing to find Australian writers now using it freely, as if it were a well-known and accepted Australian tradition.³

What has happened in the intervening period, from my point of view, was first of all a crisis of confidence, when no German prototype had been found, and Allan Willingham produced a French example, mentioned below. I reported this in 1984 together with the disappointing fact that Gordon Young and his colleagues, working on German buildings in South Australia closely related to my Victorian examples, had found 'no trace of Dutch biscuits'.⁴ Since that time, however, Young has recanted and has found his German buildings riddled with Dutch biscuits; Ian Evans has referred me to evidence of their use in Queensland; Michael McCowage has shown me an example in Sydney, and I have no doubt that others will emerge.⁵

Overseas, Sabján Tibor has introduced me to a whole range of variations in Hungary, and Josef Hornley has drawn my attention to related forms of construction in Czechoslovakia, and I have obtained other references to Rumania and a number of locations in North America. Most of all, however, my French and German colleagues, J-C I Yarmola and Dr Hubert Krins, have identified for me examples from the sixteenth century in each country, and indications of more extended use of the technique. Professor Gwyn Meirion-

³ Robert Moore & Sheridan Burke, *Australian Cottages* (Port Melbourne [Victoria] 1989), p 44.

⁴ Miles Lewis, 'The Historical Traditions of Earth Building', *Owner Building and Earth Architecture Conference* (University of Melbourne 1984), p [3].

⁵ The problem remains that those who find German buildings in Australia are not habituated to these forms of construction, and do not recognise or accurately report them. A cottage discovered at Collinsvale, Tasmania (the former Bismarck), built by a German settler, Peter Voss, has been described as being of a 'sort of medieval' construction using 'hand hewn timbers and mud plaster infill', which tells us almost nothing. *Mercury* [Hobart], 25 May 1995, p 5, reporting the comments of Sarah Waight, Glenorchy Council heritage officer, and Martin Richardson, planning officer.

Jones has told me that he believes it to be absolutely normal medieval construction in Brittany and elsewhere. Suddenly we have a picture of the origin and widespread use lehmwickel, rather than an isolated glimpse of its inexplicable appearance in Western Victoria. Most pleasing of all is that this has arisen from a process of cooperative scholarship.

Half timbering comes to us principally from Britain, but lehmwickel is linked with the German tradition of *fachwerk*, which has some quite distinctive characteristics, and there are other less well defined half timber traditions such as the *columbage* of Normandy, reflections of which have not so far been found in Australia, though they have in the United States.⁶ Whilst the European tradition of half timbering remains at the heart of Australian developments, I am now rather more impressed with the way that tradition in turn derives from earlier roots, such as Hittite building in Anatolia, and on the other hand with how it was still being created anew in the nineteenth century in places not so different from Australia. In California a redwood frame was introduced into traditional adobe construction by the United States consul, Thomas Larkin, in the house which he built in 1834-5. Framing was a revolutionary idea in the California of the day, and the combination of frame and adobe is seen by Kidder Smith as the generating factor behind the Monterey Style, of which Larkin's house is the first example.⁷ The influence of California here being what it was at mid-century, it is not impossible that this newly reinvented form of half-timbering contributed to developments in Australia.

There is indeed no limit either in Australia or in Europe to the number of permutations of half-timbered construction - that is, of timber frames with the panels filled with mud and other materials. An English system which seems to have been fairly widespread early in the nineteenth century, and may have been influential in Australia, consists of daub on straw:

... a few uprights and braces, with a plate of fir at top and bottom, will be sufficient, and the vacancies filled in with thatching stuff placed close together, having three or four pieces at equal distances, nailed horizontally to keep them firm, will be ready to receive the clay, with which a good quantity of cut straw should be incorporated, to make it adhere better.⁸

The 'cab-dab' of the west of England was essentially similar, except that the studs were round timber spaced vertically about 150-175 mm, then filled with mud and straw.⁹

⁶ Eric Arthur & Dudley Witney, *The Barn* (New York 1988 [1972]), p 126.

⁷ G E K Smith, *The Architecture of the United States. 3. The Plains States and Far West* (New York 1981), pp 126-7.

⁸ Robert Lugar, *The Country Gentleman's Architect* (London 1807), p 2.

⁹ A Crocker & Son, 'On Cottages', in *Communications to the Board of Agriculture on Subjects Relative to the Husbandry and Internal Improvement of the Country*, vol I (2nd edition, Board of Agriculture, London 1804 [1797]), p 174.

In the United States, the Whipple house at Ipswich, Massachusetts, of 1677, had square posts carrying clapboard on the outside and horizontal split laths on the inside, the space between substantially filled with mud, and the inner surface finished smooth over the laths. The Fairbanks house at Dedham, of 1637-41, had horizontal timber bars sprung into grooves in the studs, supporting vertical sticks of split oak, which were filled around with whitish clay.¹⁰

At Maldon, Victoria, are squared scantling frames variously packed with clay, rubble or brick, and sheathed in weatherboard. The local version of pisé placed between round timber posts is also found with twigs or thin saplings nailed over the surface as a key for a coat of plaster or daub - deceptively resembling pole and pug construction, though really based on a quite different principle. In New Zealand, similarly, there is a report of cob packed between studs at St Anne's Church, Geraldine,¹¹ while there are other buildings of slabs lined with cob,¹² and of slabs with lath and daub,¹³ of which the latter is one of the common variants of slab construction in Australia.

¹⁰ Hugh Morrison, *Early American Architecture from the First Colonial Settlements to the National Period* (New York 1952), p 43, citing Norman M Isham, *Early American Houses* (Boston 1928). The Fairbanks house is illustrated in Morrison, p 53, the Whipple house, p 55.

¹¹ John Wilson, *AA Book of New Zealand Historic Places* (Auckland 1984), p 190.

¹² Wilson, *New Zealand Historic Places*, p 191.

¹³ Wilson, *New Zealand Historic Places*, p 194.