SOME SOCIAL, HISTORICAL AND CHARACTERISTIC ASPECTS OF AUSTRALIA'S COLONIAL PERIOD CHINESE FISH CURING SITES

Abstract

As the remains of colonial period Chinese fish curing sites in Australia are few and difficult to identify, little is currently known about how they operated. This article establishes some site-defining features through an investigation of the activities required to procure and cure fish, and by examining the remains of the only Chinese fish curing site to be archaeologically identified. It demonstrates that a number of general utilitarian items as well as specific fish curing items can be integrated into a model to assist the identification of sites of this nature and distinguish them from the remains of other colonial period activities.

Introduction

This paper aims to give an understanding of how to identify and interpret the remains of colonial period Chinese fish curing sites in Australia. The information used here is based on archival research and archaeological excavation, originally conducted as part of an academic project in historical archaeology (Bowen 2007). Initially, the theme is placed in an historical archaeological context. Some background is then provided on the history of commercial fishing in Australia and how Chinese people became involved. This leads to an explanation of two different types of Chinese fish curing operations in Australia – 1) sites where only fish curing took place, and 2) combined fishing and fish curing sites – and the methods and equipment used to procure and cure fish at each site. The generic term ‘Chinese fish curing site’ is used throughout, except when referring to a particular site type. Evidence from an excavated Chinese fish curing site in Victoria’s Gippsland region is used to reveal the essential activities, equipment, and artefact types that assist to positively identify the remains of Chinese fish curing operations. Primary documentation is used where possible, mostly in the form of Parliamentary Votes and Proceedings (on colonial fishing industries), Royal Commissions (into the state of the colonial fishing industry) and newspaper articles.

No attempt has been made to answer already defined archaeological questions or address problem areas. What is important at this stage is to obtain a better understanding of Chinese fish curing activities in Australia and to equip researchers with the necessary knowledge to identify and interpret associated material remains.

Historical archaeological context

Early historical archaeological research on Chinese people in colonial Australia got off to a slow, narrowly-focused start and involved a good deal of generalisation (Cushman 1984). From the 1990s, research on a myriad of Chinese-related themes, such as lifestyle, customs, values, social and economic structures, Chinese literature sources, and individual Chinese people has proved more productive. The previously narrow perspectives have now broadened, and overseas Chinese people in colonial Australia have come to be recognised as ethnically, socially and economically diverse. The knowledge base continues to improve, but research still tends to revolve around a limited number of Chinese activities such as mining, market gardening and urban activities. Many potential research areas such as expressions of class divisions, demography, consumerism, social and technological development, acculturation, long distance movement of technologies, culture, social, and economic themes remain unexamined both archaeologically and historically. As put by Lydon (1999: 192) there still exists a “large gap in our knowledge of the Chinese experience in Australia”.

Colonial period Chinese fish curing sites in Australia were dynamic micro-societies involving complex social and economic systems, mutually beneficial inter-cultural relationships, and global trading networks. The fish cured there was essential in the daily lives of all overseas Chinese people, regardless of social position. The identification and investigation of colonial period Chinese fish curing sites in Australia represents an excellent opportunity to progress current research trends in historical archaeology and has the potential to enable a better understanding of the internal workings, culture, and lifestyle of migrant Chinese communities and the critical role they played in the development of Australia.

History of fishing in Australia

For many thousands of years, colonising groups have utilised marine environments to provide food. Australia’s shallow coastal waters carry large quantities of plankton, fish and mollusc larvae, crustaceans and other nutrients that stimulate a rich variety of marine species (Bennett 1974: 230; Hutchins & Swainston 1986: 7; Pownall 1979: 12). The earliest known commercial exploiters of marine resources in Australia were the Indonesian trepang fishermen from Makassar. By about A.D. 1700, they were working the shallow coastal waters of the Northern Territory for trepang (a type of sea slug also called beche de mer), which they cured through a process of boiling and sun drying (Cooke 1987: 7; MacKnight 1976: 1). As European settlers began arriving in Australia, fish was sold and bartered within settlements, creating the beginnings of a commercial fishing industry (Dunn 1991: 36). As fish is extremely perishable, and there was no refrigeration before 1860 in Sydney and 1880 in Melbourne (Gaha & Hearn 1994: 37), commercial fishing activities remained small and were forced to rely on local markets only. However, as Victoria’s 1850s gold rush gained momentum, and with the arrival of...
approximately 42,000 Chinese people (the estimated number in Victoria during the late 1850s, see Choi 1975: 20; Wang 1978: 275), the demand for fish grew. Surprisingly, there appears to have been no effort in colonial Australia to experiment with canned fish, despite a considerable market for canned fish products. The Statistical Register for New South Wales shows that from 1869 to 1897, £512,000 worth of canned sardines, ling and salmon was imported into Australia – approximately six times the value of fresh fish sold in New South Wales over the same period (VPNSWLA 1879-80a: 672).

**Chinese involvement in Australia's fishing industry**

The history of Chinese people in Australia has certainly not been ignored; there is an abundance of literature regarding their colonial presence. Historical records show that during Australia's gold rush period (from 1851 to approximately the early 1880s), over 90 per cent of Chinese emigrants came from Guangdong (or Kwangtung) Province in southeastern China (Choi 1975: 78–79; see Figure 1).

Guangdong's large marine environment provides a dietary staple and fishing plays a major economic role in the region (Brienes 1983: 26; Choi 1975: 5). An old Chinese adage: “Salted fish and green vegetables is cause for contentment” attests to the importance of fish in Chinese culture (Kan & Leong 1963: 121).

Among the Chinese people who came to colonial Australia, some had knowledge of fishing. Instead of mining, they supplied fresh and cured fish (a cultural preference) to their fellow Chinese countrymen. Chinese cured fish lasts several months, effectively eliminating any problems of putrefaction before market and enabled huge quantities of fresh fish to be caught, cured, and sold at inland goldfields.

Any large influx of people into an area requires the establishment of basic infrastructure and supplies such as accommodation, food, clothing, and equipment. The aim of the Chinese fish curers in colonial Australia was to meet the enormous demand for fish that had been created by the Chinese gold miners. In doing so, they satisfied a culturally important component of the Chinese diet and helped their countrymen to maintain a self-sufficient existence.

The earliest known evidence for Chinese involvement in Australia's fishing industry (besides the trepang industry) comes from Victoria on 8 November 1856, when the *Bendigo Advertiser* reported, ‘It may not be generally known that several Chinese have established at St. Kilda a fishery and fish-curing establishment’. Three months later, on 5 January 1857, The *Advertiser* states: ‘The enterprise of the Chinese has of late displayed itself at St. Kilda, Geelong, and Schnapper Point in the establishment of curing-houses for the various fish found in the Bay’. Newspaper reports show Chinese people were active in Victoria's fishing industry by 1856 (ibid. November 8 1856). However, they were probably in the industry a year before that, with the mass arrival of Chinese gold miners in 1855, and their activities were certainly not limited to Victoria. Documentary evidence from New South Wales, the Northern Territory, South Australia and Tasmania indicates that Chinese fish curers were active in many Australian regions (see, respectively, *Sydney Morning Herald* 6 April 1861; *Bendigo Advertiser* 5 January 1857; *Northern Territory Times* 1 June 1878; *Argus* 28 May 1864; *Launceston Examiner* June 1872). This confirms the existence of 38 colonial period Chinese fish curing establishments in Australia, but the actual number is probably much greater. The boom period for Australia's Chinese fish curing establishments was from the late 1850s to the early 1870s (see Table 1). The date of the last working fish curing operation in Australia has yet to be established. However, in Victoria it was probably the Chinaman's Point site (discussed below), which was abandoned in the early 1900s.

![Figure 1 Map of Canton (Guangdong) and surrounding region in the 1800s (Canton is today called Guangzhou). The darker areas indicate major rivers and bodies of water (top), and map of China in relation to Australia (bottom). (Source: author).](image)

**Table 1** Indicating the beginning, boom and end period for Chinese fish curing establishments in Australia (based on data from colonial period Royal Commissions into the state of the colonial fishing industry, newspaper reports and shipping intelligence columns).
For European fishermen, the transport of fresh fish to market was a major factor in deciding where to fish. Often, whole catches of fish were condemned due to putrefaction before a market was reached. The Chinese practice of curing fish was important, as it enabled Chinese fishermen to establish themselves in remote coastal regions, where waters never before commercially exploited were teeming with fish. As noted by Lorimer (1984: 93), when colonial European fishermen began to seek new fishing grounds further from the metropolitan area, they often found large, already well-established Chinese fishing settlements.

Chinese fish curing establishments

The documentary evidence indicates that two types of Chinese fish curing establishments existed in colonial Australia. At the first type, Chinese people purchased fresh fish from European fishermen and then cured the fish themselves. A European traveller in Victoria, Wheelwright (1861: 248) noted, ‘on every [European] fishing station along the coast Chinamen are camped, who buy the fish from the boat, and salt them on the spot’. Similarly, the Gippslander (10 November 1865) reported: ‘A party of Chinese last week started a fish-curing establishment on the beach at Hastings, and on Wednesday last no less than two and a half tons of fish were taken there to be cured’.1

At the other type of Chinese fish curing establishment, Chinese people caught the fish themselves – they also purchased fish from European fishermen if they could. This is apparent from an 1879-80 Royal Commission into the state and prospect of the NSW colonial fishing industry. When Chinese fish merchant Chin Ateak is questioned about his past involvement with Chinese fish curing operations and how he obtained fish for curing he answers that he ‘had at some places Chinese fishermen, and at some places the Europeans’ but notes that he ‘gave them up, oh, long ago – nearly eight years ago’ (VPNSWLA 1879-80b: 1224–1226).

A reporter from the Australian Town and Country Journal (9 July 1870) gave similar evidence when he visited a Chinese fish curing camp at Lake Macquarie:

> arrived at the house of Mr. Ah Tie the principal boss of the whole concern […] From the lips of Ah Tie I learnt that altogether there are about seventeen Chinamen engaged in the work of catching and curing fish on the lake.2

For site-type identification purposes, it is useful to have an indication of the number of Chinese people required to work each site type. Primary documentation sources provide some clues. For example, at Mount Eliza in Victoria, the (Bendigo Advertiser 5 January 1857) reported, ‘four Chinese established themselves in the neighbourhood as fish salters and curers’. At Schnapper Point, Victoria, in 1857 there were ‘forty men (all European or Americans) engaged in catching schnapper and selling them to the two Chinesemen who reside there’ (Bendigo Advertiser 5 January 1857). The Argus (28 May 1864) describes seven Chinese people working at Semaphore Jetty in South Australia, where they fished, cured fish and purchased fish from European fishermen. When a reporter for the Illustrated Australian News visited the Chinese fishing and curing establishment at St Kilda beach on 4 December 1873 he noted: ‘The [Chinese] fishermen number about 16’. At Lake Macquarie in 1870, Ah Tie had seventeen Chinese workers fishing and curing fish (Australian Town and Country Journal 9 July 1870). From this information, it appears that at sites where Chinese people only cured fish, two to four Chinese people were sufficient, but for operations that fished and cured fish, up to sixteen Chinese workers could be employed.

Chinese fishing/fish curing methods

It has now been established that two types of Chinese fish curing establishments existed: curing-only operations run by a small number of people, and larger enterprises that fished and cured. The next step in identifying sites archaeologically is to determine the processes and equipment that Chinese people in colonial Australia used to catch and cure fish.

Fishing methods

As far as can be ascertained, Chinese people (in New South Wales and Victoria) mainly purchased from European fishermen fish caught by line and hook, especially snapper. The Chinese curers caught other fish types by using nets in a similar fashion to their European counterparts. This can be seen through the answers of European fisherman when giving evidence at the Royal Commission into the prospects of the colonial fishing industry. For example, Thomas Curtis was asked:

> Q: Can you give us an idea of what line fish you could have got in the early times, or even now for the Chinamen?
> A: I did very well with the Chinamen there. Some days eighteen or twenty-five dozen of schnapper. It always paid.

> Q: If ten boats could have fished there the Chinamen would have all the fish that were caught?
> A: Yes. (VPNSWLA 1879-80b: 1181).

Fisherman George Newton gave a similar story:

> Q: Have you ever been engaged in the services of Chinamen?
> A: Yes.

> Q: What fish did you catch for the Chinamen?
> A: Schnapper principally.

> Q: How many fishermen were engaged in that occupation?
> A: I have known as many as about twenty boats to be engaged by the Chinese [in Broken Bay, NSW] (VPNSWLA 1879-80b: 1200).

It has often been noted that in regions other than China, Chinese people commonly used local labour for manually intensive tasks (see, for example, Firth 1946: 13, 14; Inglis 1975: 71; Omohundro 1977: 115). Perhaps the time-consuming nature of line and hook fishing made it more economical to use local fishermen.3

That Chinese people were using nets to fish is also evident through the historical literature. A report in the Illustrated Australian News (4 December 1873) on Chinese fishermen at St Kilda states that, ‘net fishing is what they are engaged in at the moment – a style of fishing in which our Mongolian immigrants appear to be most at home’. This report also shows a rare wood engraving of Chinese fishermen hauling a net onto the beach at St Kilda (see Figure 2).

More evidence of Chinese net fishermen came from Richard Seymour, Sydney’s Inspector in Charge of the Eastern Fish Market. When he was asked by the Royal Commission how
Chinese fishermen in New South Wales fished, he answered: 'With nets'. ‘Have you heard that they fish with six nets together?’ asked the Commission. ‘I have heard so’, Seymour replied.

When a reporter from *The Australian Town and Country Journal* (9 July 1870) visited Ah Tie at Lake Macquarie, he noted that ‘attached to the fisheries are four long-boats of about eighteen feet keel, and any number of nets’. *The Argus* (28 May 1864) also reported the Chinese fish curers at Semaphore, South Australia had ‘a boat and a remarkably long seine [net]’.

The evidence leaves no doubt that Chinese fish curers in South Australia, New South Wales and Victoria were using boats and nets to catch fish themselves. Therefore, equipment associated with boat and net use, and maintenance of these, would also be found where Chinese people fished and cured fish.

**Fish curing methods**

There were two main methods – based on fish type – which Chinese people in Australia used to cure fish. Each required specific equipment that is recognisable in the archaeological record. During the Royal Commission, Chin Ateak gave insight into the types of fish Chinese curers preferred for curing and their methods of curing.

Q: Was it any particular kind of fish?
A: Yes, some schnapper and net fish.

Q: And those were salted and dried I suppose?
A: Salted and dried; some dried, and some they call pickled fish, put in a cask or barrel.

Q: For the use of your countrymen I suppose?
A: My countrymen – Yes … only smoked fish Europeans use. (VPNSWLA 1879-80b: 1224–1226).

At a fish curing establishment in South Australia, ‘herrings, garfish, mullet, whiting, ruffs, flounder, salmon, cuttlefish, squid, silverfish were indiscriminately cast into casks of brine, and when a couple of days were past, they were stowed in casks fit for exportation’ (*Argus* 28 May 1864). Snapper was processed differently:

the internal arrangement of the fish is partially removed, leaving the liver and roe attached, being cleverly split from the back. They are then thrown into a brine-cask and left for a few days, after which they are dried on the rushes. (*Argus* 28 May 1864).

The *Australian* (9 July 1870) describes a similar curing process, where ‘the smaller varieties – such as perch, tailor, garnet, soles, herrings, &c, – are mostly converted into a kind of semi-liquid preserve’. Larger fish such as snapper were:

taken in baskets to the splitting-table: and after being there opened, headed, and the back bone removed, they are passed on to another part of the establishment for salting … until at length it is laid on slabs or sheets of bark, to be dried by the sun. (*Town and Country Journal* 9 July 1870)

The Chinese curers also processed squid, shellfish, lobsters, and prawns. Chin Ateak suggests that Chinese people considered squid (*Sepioteuthis Australis*) and the ‘mutton-fish, with a big shell’ – the Australian abalone (*Haliotis naevosa*) – to be the best eating fish, that lobster was dried just like fish, and that prawns were pickled to make a paste (VPNSWLA 1879-80b: 1224–1226). Ateak also describes how Chinese people in Australia cooked cured fish, ‘only with rice – on top of rice. Not boil it, only steam it, rice at the bottom and fish at the top; the steam comes up and cooks the fish, and makes the rice to be done, and the fish to be done too’ (VPNSWLA 1879-80b: 1224-1226).
The methods described confirm there were two types of product made by the Chinese fish curers in Australia: pickle cured fish which were stored wet in timber casks and salted sun-dried fish that was packed dry in bags. While slight variations in fish curing methods are apparent at different fish curing operations, the end product was always either pickled or salted sun-dried fish.\(^4\)

**Essential equipment**

A consideration of the equipment used to catch, cure, and pickle fish will assist an understanding of what these sites may have looked like in operation, and how they can be identified and interpreted archaeologically. Since a site where Chinese people fished and cured fish would have all of the components of a site where fish was only cured, discussion will focus on sites where it can be determined that both activities were performed. Evidence from an archaeologically excavated 1860s Chinese fishing and fish curing site at Chinaman’s Point, near Port Albert in Victoria’s south Gippsland region (see Figure 3), will be used as a descriptive base. Although a Chinese shrimp curing site was excavated in California by Schulz and Lortie (1985), the Chinaman’s Point site represents the only known archaeologically excavated site of its type in the world.

Domestic artefacts from Chinaman’s Point were found to be consistent with Australian colonial period urban and rural overseas Chinese sites (see Lydon 1999; Muir 2003, 2007) and therefore need not be discussed here, other than noting that they provide positive evidence of a Chinese site occupation. However, with no similar body of material remains for the industrial components of Chinese fish curing sites, and until more of these sites are archaeologically examined, the industrial artefacts from Chinaman’s Point will be considered as a standard collection of material for an Australian colonial Chinese fish curing site.

Other than net tanning equipment, the remains of each of the above were recovered from the Chinaman’s Point site. Two essential components, however, set the remains of Chinese fish curing sites apart: the salting and sun drying of fish.

**Fish curing equipment**

Since metal tubs would quickly rust and possibly taint fish flesh, pickling fish required salty brine and watertight timber casks. Large Chinese ceramic jars could be used, but no evidence of these was recovered from the excavated site. Salting and sun drying fish involved covering the fish in dry salt (or placed in salty brine) then placing in the sun to dry. At Chinaman’s Point, the material evidence for these activities includes the remains of cask containers and timber post fish drying racks.

**Casks**

‘Cask’ is a generic term used to describe eight sizes of cylindrical wooden storage containers: the 745 litre Leager, 500 litre Butt, 372 litre Puncheon, 245 litre Hogshead, 164 litre Barrel, 123 litre Half, 82 litre Kilderkin, and the 41 litre Firkin (Stevens 1894: 104). During the nineteenth century, casks were the most common container used to store and transport bulk items (see Figure 4). Casks with wooden hoops held dry or semi-liquid products and iron hooped casks held liquids (Staniforth 1987: 21). Sources such as the Argus (28 May 1864), The Bendigo Advertiser (January 5 1857), and VPNSWLA (1879-80b: 1224–1226) attest to the Chinese use of timber casks for brining fish.

Casks were represented at the Chinaman’s Point site through the recovery (mostly from one localised area) of 11,825 pieces (weighing 42,780g) of small, flat, thin, corroded metal fragments that display a uniform width – 38mm, 32mm and 25mm – and curvature. These match the nineteenth century standard regulation widths for the top, middle, and base hoops of wooden cask containers (Hughes 1926: 20). A number of
metal rivets were found in association with the metal hoop-iron, again consistent with the type of rivet used for securing the end pieces of cask hooping.

Timber casks could have been used to pickle, dry salt, or brine fish. They were likely fitted with tight lids to reduce evaporation or dilution of contents through rain water and could be reused over long periods. At a suspected Chinese fish curing site, therefore, the recovery of a localised deposit of cask remains likely represents an area where fish were brined or salted.

Whaling and sealing would also have required the use of casks for oil storage. However, unless a cask was broken and discarded, casks would be filled with oil and then taken off-site as soon as possible, leaving little or no evidence of their use. Brining or dry salt casks would remain on-site until they were no longer usable and were discarded.

**Fish drying racks**

As noted, some varieties of fish were dried in the sun. Newspaper articles suggest these were ‘dried on the rushes’ (Argus 28 May 1864), ‘laid on slabs or sheets of bark’ (Australian Town and Country Journal 9 July 1870), or on ‘long tables on trestles’ (Gippsland Standard 7 July 1944). Fish drying racks were represented at Chinaman’s Point through the recovery of 131 timber posts remains spaced over a 146 square metre area. Post circumferences ranged from 50mm to 150mm and in most cases appeared as vertical, circular tubes of dark humic matter encased in tan coloured clay. Some posts had survived intact, providing evidence they were made of tea tree and that the posts were cut by axe without a point, placed in a pre-dug hole and backfilled with clay from lower stratigraphic layers. Cross sections dug through three of the post remains (from different parts of the feature) reveal the posts were placed deep into the ground, the shallowest at 500mm and the deepest at over one metre (see Figure 5).

The posts were placed in four distinct rows, each approximately 1.5 metres wide and 15 metres long (see Figures 6 and 7). The solid timber foundations had been designed to support a great deal of weight, but are unlikely to represent house supports as no floor horizon was visible in the soil matrix, no hearth was evident, and there was a very poor representation of domestic artefacts.

The layout of the uncovered post remains, in conjunction with several written accounts of Chinese fish curing methods (see, for example, Gippsland Standard 7 July 1944; Oliver 1871: 785; Australian Town and Country Journal 9 July 1870; Bendigo Advertiser 5 January 1870 leave little doubt that the feature represents the remains of a very sturdy fish drying rack that was built to take several tons of weight.

The size of the drying rack suggests fish were cured on an industrial scale and that curing was done in the open air (as yet no evidence indicates the racks were enclosed or roofed). As few nails or fastening equipment were recovered from the drying rack area, the fish curers may have used traditional building techniques of mortice joints and lashing timbers together (Dumarcay 1991: 61). No fish scales and very few fish bones were recovered from the drying rack area, suggesting that fish were scaled before drying and, if displaced from the rack, were considered valuable enough to be picked up and not left to rot on the ground. Some evidence also exists to suggest that Chinese fish curers in Victoria and Tasmania salted fish in purposely dug ground trenches. This research has been inconclusive, but further details may be followed up through Bowen (2007: 96).

**Other evidence**

Historical records show that during the colonial period, the Chinese curers paid per ton for the fresh fish they purchased from European fishermen (Gippsland Guardian 26 June 1866; Votes and Proceedings of the Victorian Legislative Council 1892). The Chinese would have required some method of weighing and recording fresh fish they purchased or batches
sold cured. A set of weighing scales (and slate writing materials) was recovered from the Chinaman’s Point site. A Chinese headman, who may have spoken some English, was probably required to tally fish quantities, make payments to European fishermen, and keep transaction records.

It is known that European market agents purchased fresh fish from European fishermen by standard basket or box size (Clements and Richmond 1968: 132; Loney 1982: 51; Votes and Proceedings of the Victorian Legislative Council 1892). Therefore weighing scales would not have been a necessary component of European fishing sites or been required at whaling and sealing sites.

**Discussion**

There is no doubt that Chinese people were heavily involved in Australia’s colonial fishing industry. As the industry employed relatively few men, generally attracted little European attention, took up only a small space in marginal areas, and has not been in existence for over one hundred years, the remains of Chinese fish curing sites can be elusive. The condition of the remains at Chinaman’s Point is testament to this, with only a fraction of the site’s original features remaining for archaeological interpretation.

To make locating a Chinese fish curing site even more difficult, much of the evidence for their activities in Australia has been destroyed through environmental changes, the development of new industries, land subdivisions, marina developments, and tourism. Rigorous fieldwork along Victoria’s east coast has identified only one Chinese fish curing site (Chinaman’s Point) out of sixteen historically documented Victorian establishments.

Nevertheless, unrecorded physical evidence of Chinese fish curing activities almost certainly still exists. The most likely areas are where archaeologically damaging developments have not yet occurred. For example, in remote coastal regions or – as is the case with the Chinaman’s Point site – in marginal swampy lands not considered by Europeans to be suitable for occupation. Also, as the fish curers often established themselves close to existing European fishing stations (to facilitate the easy purchase of fish), the surroundings of these sites could be investigated for evidence of a Chinese presence. Chinese fish curing sites (perhaps even eel curing sites) may also exist around Australia’s inland waterways, but have not yet been investigated.

The identification of distinctly Chinese artefacts such as Chinese ceramics – a standard feature at overseas Chinese sites – and other Chinese material culture (or specific fish curing site items such as weighing scales) will facilitate accurate site identification (for an indication of colonial period Chinese ceramics, see Muir 2003; for signs of Chinese ethnicity, see Smith 1998: 13). Site location may also be a defining feature. For example, a colonial period site with evidence of a Chinese presence positioned on the bank of a salt-water estuary or tidal lake is likely to be the remains of a Chinese fish curing camp. Chinese fish curing sites can also potentially be distinguished from other colonial period sites through evidence of concentrated areas of timber cask use (indicating fish brining areas) and the remains of fish drying racks. Primary documentation – especially Parliamentary Votes and Proceedings (on colonial fishing industries), Royal Commissions (into the state of the colonial fishing industry), and local newspaper articles, are also useful sources of information (including location) about Australia’s Chinese fish curers.

Much of the historical literature also suggests that residential accommodation (for the fish curers) was located either at or in close proximity to fish curing establishments (see Gippsland Guardian 1 July 1867; Bendigo Advertiser 5 January 1857; Sydney Morning Herald 6 April 1861; Wells 2001: 60). There is good evidence to suggest that at some sites Chinese fish curers may have used prefabricated timber dwellings produced in China. The American colonial period literature holds numerous accounts of Chinese miners using prefabricated houses imported from China (Borthwick 1857: 75; Bowles 1866: 248–254; Frost 1853: 100; Soule 1855: 387). In Syme’s (1897: 207, 232, 246) compilation of Victoria’s shipping arrivals and departures during 1854 and 1855, there are several entries of ‘houses’ and ‘wooden houses’ among the cargoes exported from Hong Kong and Singapore to Melbourne.

For clarity, site activities and the expected material remains at Chinese fish curing establishments are shown in chart form (see Table 2). The chart comprises three components: ‘Activities’, which represents the essential activities performed; ‘Equipment’, which represents the items required for each activity; and ‘Archaeological Evidence’, which shows what

![Table 2](image)

**Table 2** Theoretical model showing activities conducted, a representation of the equipment required and a sample of the archaeological evidence recoverable from Chinese fish curing sites.

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The physical remains of Chinese fish curing activities may be left for interpretation. This model forms a useful tool for identifying and studying Chinese fish curing sites. As more fish curing sites are excavated, the model can be tested and refined, particularly for any regional and temporal variations arising from innovation, cultural exchange, and local conditions. (A visual interpretation of the Chinaman’s Point fish curing site can be seen in Figure 8.)

Chinese fish curing sites are poorly documented yet they have great potential to provide information for some key areas of research. For instance, fish bones from salmon (Arripis trutta) have been excavated from one colonial period Chinese site (Butcher’s Gully, Victoria, see Stanin 2004). Due to the site’s location approximately 150km inland from Melbourne, this almost certainly represents cured fish and evidence of a trade network. The discovery of fish bones from future archaeological excavations at colonial period Chinese or European sites (or sites occupied by Muslims, as fish was also an important component in the Islamic diet, as discussed by Parkes 2009: 91) will help to answer questions about fish distribution and colonial period transport and social networks. Since Australia’s Chinese fish curers were financially motivated and were reliant on both Chinese and European networks for the supply, sale, and distribution of their product, these Chinese groups are an important medium for studying the dynamic nature of intercultural encounters and social and economic activities in colonial Australia.

**Conclusion**

This consideration of colonial period Chinese fish curing activities has expanded current knowledge of Australian history. Through the use of archival research and evidence from an excavated 1860s Chinese fish curing site, this paper progressed from identifying an historical context for the subject, to outlining the history of commercial fishing in Australia, how Chinese people came to be involved, details of two separate types of Chinese fish curing operations, and the methods and equipment Chinese people used to procure and cure fish. This information was then used to produce a model to help researchers identify the remains of such activities.

The remains of Chinese fish curing activities are not easily recognisable. With only one Chinese fish curing site so far archaeologically investigated world-wide, Australia holds good potential for more such sites to be located and investigated. This would bring a greater depth of historical information not only to this largely forgotten and insufficiently documented slice of Australian history, but also to Chinese history in Australia more generally.

**End Notes**

1. For the interested researcher, further references to curing sites include: Bendigo Advertiser (5 January 1857, 7 March 1857), Gippsland Standard (9 May 1884), Oliver (1871: 788), Sydney Morning Herald (6 April 1861), and VPNSWLA (1879-80 Vol. 3: 1200).
2. Further references to Chinese people curing fish they had caught themselves include: Gippsland Guardian (19 January 1866), Argus (May 28 1864), Examiner (June 1872), Illustrated Australian News (24 January 1870, 4 December 1873), and Wells (2001: 60).
3. For the interested researcher, further reference to Chinese people employing European line and hook fishermen in Australia includes: Oliver (1871: 788); Argus (28 May 1864), Bendigo Advertiser (5 January 1857).
Further reference to the methods Chinese people used to cure fish include: Firth (1946: 219 – 220), Gippsland Standard (7 July 1944), Argus (28 May 1954), Bendigo Advertiser (5 January 1857), and Yu (1977: 55 – 57).

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