The Archaeological Potential of Medicinal Advertisements

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Throughout the course of the nineteenth century, the high expense of professional medical care resulted in a heavy reliance upon alternative sources of medicine. The sheer number of patent and proprietary medicines, as well as their wide range of prices, meant that many of the population turned to these as a source of succour. To date, historical archaeologists have largely overlooked patent medicine bottles. This study examines advertisements placed in Melbourne's The Argus *between 1850 and 1900 for patent medicines, and aims at assisting archaeologists in seeing the potential medicine bottles have for providing information about the inhabitants of a site, as well as demonstrating the possibility of medicine bottles as a dating tool for archaeological deposits, through the establishment of a* terminus post quem.

INTRODUCTION

Archaeologists working on historic sites in Australia recover patent and proprietary medicine bottles on a regular basis. However, very little is known about the products these once contained in terms of their manufacturers, distribution, origins, costs, containers and date ranges. In this investigation, newspaper advertisements placed in *The Argus* – founded in 1848 – between 1850 and 1900 were studied to obtain a clearer illustration of the numbers of these products being advertised, and gather relevant information about medications that may ultimately prove useful to historical archaeologists recovering patent or proprietary medicine bottles in the field.

Though nineteenth-century medicine bottles are commonly recovered from archaeological sites both within Victoria and around the world, they are often overlooked, and their presence merely recorded within glass analysis. In doing this, archaeologists are ignoring a potentially valuable resource for uncovering information about their site. Medicine bottles may provide not only a potential date for the deposit, but significant information regarding import origins, healthcare in the area, and an insight into the health of the specific individuals inhabiting the site. This study aims to assist archaeologists in recognising the potential medicine bottles hold for providing information about a site, and in establishing a *terminus post quem* for archaeological deposits. Product names and the diseases they claim to cure can even assist in identifying the presence of specific groups at a site. To date, advertisements have scarcely been studied, with Matthews (1971:94) stating that 'Amongst the more neglected pharmaceutical antiques are the bottles, labels and advertisements of proprietary medicines of the nineteenth century'.

The timeframe examined, 1850 to 1900, covers a period demonstrating a dramatic increase in popularity of these types of medication in Melbourne. Throughout the sample period, the first issue of *The Argus* from each month was examined. In total, 612 newspapers were studied, and details of the medicinal advertisements recorded. The newspapers yielded 7721 individual advertisements, representing a total of 814 different medicinal products. However, not all medicinal advertisements were recorded, as this study focused specifically on patent and proprietary medicines, those promoting the services of medical practitioners, artificial teeth, and veterinary products were ignored.

PATENT VERSUS PROPRIETARY MEDICINES

Frequently, studies regarding medicine bottles refer to patent and proprietary medicines without explaining the difference between the two. While it is extremely difficult to determine which category a specific product belongs to, understanding the terms involved provides a knowledge of the nature of nineteenth-century manufacturing. Patent medicines are commonly identified as those which have the contents registered with some government body or patent-issuing authority. Therefore, a list of the contents would have been available to the general public or other manufacturers upon request. In contrast, proprietary medicines had a copyright placed upon the packaging. These were by far the most common, as there was great fear of another manufacturer producing identical packaging and using the product name to reap the profits for themselves. Armstrong and Armstrong (1991:160) state that 'Legally, 'patent' medicines were in fact 'proprietary' drugs. For the medicine men and women were far more interested in protecting, through copyright, their trademarks…than their formulas'. Haggar (1979:171) demonstrates that this differentiation was also present in the Australian market: 'most patent medicines advertised were in fact proprietary nostrums – medicines whose compositions were known only to the maker'.

PREVIOUS STUDIES

To date, there have been few archaeological studies undertaken regarding nineteenth-century medicine bottles, as site-specific enquiries tend to group medicine bottles with other glass, or simply not discuss them. Peter Davies' (2001) study of Henry's Mill is a rare exception. Of the products identified at Henry's Mill, advertisements were found in *The Argus* for over half. Davies identified 35 patent medicine bottles, including Kruse's Magnesia and Bosisto's Eucalyptus Oil (Fig 1, 2), and several other products recorded in the course of this study, and the 'Nostrums recovered from the site were those typically marketed as providing relief from upper respiratory illness, and assisting with infants' and children's

Fig. 1: Kruse's Fluid Magnesia bottle. Embossing reads 'Kruse's Prize Medal Magnesia' on the face to the camera, and 'Felton, Grimwade & Co Melbourne' on the other. Photo M. Knehans.

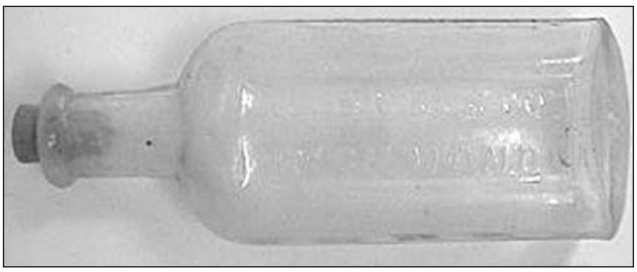

Fig. 2: Bosisto's Eucalyptus Oil bottle. Embossing reads 'J Bosisto Richmond'. Photo M. Knehans.

ailments' (Davies 2001:70). In contrast, Bonasera and Rayner's paper (2001) examines patent medicine bottles recovered from the urban slum of Five Points in New York. This study is especially significant as, once excavation was completed, newspaper advertisements were used to create a list of the diseases various products claimed to cure in an attempt to understand health problems at the site (Bonasera and Rayner 2001:50–51). Very few of the products identified at Five Points were found advertised in *The Argus*, most likely due to a relatively small number of American products achieving popularity in the Melbourne market.

While archaeological studies have been extremely limited to date, patent and proprietary medicines have been more extensively studied within other disciplines. Numerous books exist aimed at bottle collectors, such as Ken Arnold's work (1988) and Richard Fike's (1987) detailed study, which includes numerous details of manufacturers and their locations. Studies regarding the uses of the products have been undertaken by historians, such as Lynette Finch's (1998, 1999) examination of patent medicines used on infants, and Brown's paper (1976) on medicines advertised in eighteenth-century Bath newspapers. Bill Hunt's Index (1995) is useful in terms of identifying embossed bottles, combining details from thirty-eight publications and creating a searchable on-line source.

NINETEENTH-CENTURY MELBOURNE

Disease was rife in nineteenth-century Melbourne, thanks to open sewers, bad drinking water, and a constantly increasing population: 'When gold was discovered in 1851, the total population of Melbourne was only twenty-nine thousand; in 1852, almost a hundred thousand immigrants arrived. Considerable sanitary problems quickly developed' (Lewis 2003:55). Clean water was finally supplied through the completion of the Yan Yean scheme in 1857 (Dingle and Doyle 2003), but Melbourne remained without a sewerage system until 1897, resulting in high deaths from 'filth diseases' and the continued use of cesspits (Lewis and Macleod 1987). Despite an increasing knowledge of disease causation, Melbourne suffered numerous epidemics of smallpox, influenza, measles, scarlet fever, cholera, typhoid and diphtheria. Hospital conditions were appalling, and patients with infectious diseases were 'quickly sent home so that they would not infect other inmates' (Swain 1985:94). Doctors were a luxury few could afford. Friendly Societies would cover this, but were an added expense that only the well paid among the working classes could afford (Pensabene 1980). Thus, alternative medical care – the chemist, unlicensed practitioners, or patent medicines – was heavily utilised.

The discovery of gold in Victoria resulted in rising wages as employers attempted to keep staff in Melbourne. Anthony Trollope stated in 1872 that 'In Melbourne the wages of artisans and mechanics generally are 10*s.* a day … Gardeners receive from 50*s*. to 60*s*. a week, and common labourers about 36*s*. a week' (Trollope 1967:387). Australia's prosperity, maintained by gold, wool and meat sales (Jackson 1977), was to continue until the depression of 1891 when benevolent societies, such as St Vincent de Paul and the Salvation Army, were overwhelmed by the numbers of people seeking assistance (Swain 1985:91–2). Despite the depression, the number of advertisements for medicinal products increased dramatically. This growth in advertising was possibly caused by continuing levels of disease, and the knowledge that fewer people were able to afford a doctor, relying instead upon the 'cheapest and simplest form of medical care' (Pensabene 1980:13) – patent and proprietary medicines.

Advertising was a growth industry in the nineteenth century, no doubt assisted by rising literacy rates. Newspapers relied upon it for their income, and many – including *The Argus* – appear to have contained more pages of advertisements than news. A multitude of techniques were used to promote products: poetic works about the product, advertisement repetition, and artificial news. In this last case, simulated headlines were used, and it was only once the bulk of the advertisement was read that it could be recognised as anything other than news. Carroll (1975:9) notes several examples of this technique, including "A Beautiful Young Girl Strangled' would be followed in small print by 'a cry of admiration when she saw our new blouses". To assist the consumer, newspapers divided the advertisements into categories. *The Argus* had a wide range of specific columns, including sales by auction, employment, dress and fashion, shipping informa-tion, entertainment, new publications, mining information, livestock, and, of course, medicines. The cost of advertisements varied by the number of issues the information was to appear in and the number of words in the advertisement, as demonstrated in Table 1.

Table 1: Cost of advertising in *The Argus* between 1895 and 1900. Source: *The Argus*.

	1 insertion	6 insertions (1 week)	26 insertions (1 month)
16 words	1*s.*	5*s.*	£1
24 words	2*s.*	10*s.*	£ 16*s.* 6*d.*
1/2 inch (40 words)	3*s.*	16*s.*	£2 18*s.*
1 inch (80 words)	5*s.*	£1 7*s.*	£4 17*s.* 6*d.*
2 inches	10*s.*	£2 14*s.*	£9 15*s.*

QUANTIFICATION OF MATERIAL

Within the 7721 advertisements recorded during this study, approximately 814 individual products were identified. The actual number of products is difficult to calculate due to slight alterations in product names over time. The vast majority of products were advertised in fewer than ten of the newspaper issues examined, with 328 products advertised only once. Overall, 667 products – 82.5 per cent of the total – were advertised fewer than ten times. However, this only accounts for eight per cent of recorded advertisements, indicating that the majority of advertisements promoted a fairly small number of products. 44.25 per cent of advertisements were for a mere seventeen products, each of which was advertised over 100 times. Many of these were popular worldwide, with fifteen imported from Great Britain, and the remaining two manufactured locally. Eleven of these were advertised in 1900, indicating that their popularity likely continued into the twentieth century. Several were recorded in *Secret Remedies and More Secret Remedies* (Mullett 1919) and Beale's report

Table 2: The seventeen most advertised medicinal products from the sample newspapers.

Product	Date first advertised	Date last advertised	Total advertisements	Place of origin
Arnold's Balsam of Horehound	1 September 1873	1 November 1900	127	Melbourne
Beecham's Pills	1 January 1885	1 October 1900	417	St Helen's, Lancaster
Clarke's B41 Pills	1 June 1891	1 December 1900	109	Lincoln
Clarke's World Famed Blood Mixture	1 July 1873	1 November 1900	178	Lincoln
Cockle's Antibilious Pills	1 November 1865	1 April 1885	708	London
Dinneford's Fluid Magnesia	1 August 1861	1 December 1883	139	London
Floriline	1 November 1871	1 June 1900	107	London
Freeman's Chlorodyne	1 May 1866	1 October 1900	257	London
Hearne's Bronchitis Cure	1 August 1892	1 December 1900	104	Geelong
Holloway's Pills and Ointment	1 January 1850	1 November 1900	277	London
Lockyer's Sulphur Hair Restorer	1 March 1884	1 December 1899	137	London
Mexican Hair Renewer	1 August 1873	1 November 1900	152	London
Norton's Camomile Pills	1 January 1864	1 February 1896	148	England
Powell's Balsam of Aniseed	1 May 1860	1 August 1900	209	London
Sulpholine Lotion	1 January 1881	1 November 1899	138	London
Mrs Winslow's Soothing Syrup	1 February 1871	1 December 1900	107	London and New York
Page Woodcock's Wind Pills	1 November 1877	1 December 1885	103	St Faith's, Norwich

to the Royal Commission (1907), corroborating this. These products are listed in Table 2.

A much larger number of products were recorded than were expected, due to the emphasis in previous studies on the significance of repeat advertising. However, the results from *The Argus* largely contradict this, with the vast majority of products advertised fewer than ten times. It must be recognised that newspapers were by no means the only form of advertising in nineteenth-century Australia. Posters, bill-boards, almanacs, and handbills, in addition to Melbourne's numerous newspapers, were no doubt employed in Australia as effectively as overseas. Due to these other mediums, it cannot be unequivocally stated that products disappeared from the market following their final advertisement in *The Argus*.

AILMENTS

To better understand the ailments and illnesses the advertised products were claiming to cure, a total of thirty-four categories were created. Products claiming to cure illnesses from a number of categories were classed as cure-alls, while those that gave no information as to their medical properties were classed 'unknown', as demonstrated in Table 3.

Table 3: Ailment categories and the number of products within each category.

Category	Products	Category	Products
Blood purifier	19	Headache	6
Cancers	7	Infants and children	19
Chilblains	5	Joints and muscles	37
Chiropodic	1	Liver	10
Chronic diseases	29	Male complaints	2
Coughs and colds	24	Nerve problems	17
Cure-alls	92	Nervous problems	20
Deafness	2	Ophthalmological	15
Dental	26	Pain killers	4
Diabetes	8	Respiratory	64
Disinfectant	6	Restorative	4
Drunkenness	6	Skin diseases	15
Female complaints	26	Snake bite	6
Food	16	Urinary/kidney	7
Gastrointestinal	92	Weight problems	9
Haemorrhoids	8	Wounds, sores etc	11
Hair and beauty	102	Unknown	66

The individual category featuring the most products was hair and beauty, which included products claiming to grow, remove or style hair, and remove blemishes, freckles, and insect bites. A large number of products intended for gastro-intestinal ailments were also recorded, claiming to cure such problems as dysentery, cholera, diarrhoea, indigestion, and biliousness. Though cure-alls featured a similar number of products, the number of advertisements placed was far higher. One third of all advertisements were for cure-alls, compared to 12.5 per cent of advertisements for hair and beauty products, and 11.5 per cent for gastro-intestinal products. Ninety-one products were recorded claiming to cure coughs, colds, and respiratory ailments. This large number is to be expected given the prevalence of mining in Victoria, and Melbourne's high consumptive population, constantly replenished by immigrants 'sent out for a cure' (Swain 1985:93–4). Many cure-alls also claimed to cure respiratory ailments, thus illustrating the prevalence of such problems in nineteenth-century Melbourne.

Several other categories contain small numbers of products, considering the prevalence of such ailments at the time. Those promoting joint and muscular problems such as rheumatism, female complaints, dental problems such as toothache, and chronic diseases all contained between twenty-six and thirty-seven products, relatively low numbers considering sanitary conditions in nineteenth-century Melbourne, working conditions, and the poor gynaecological care available. However, as advertisements for dental practitioners and artificial teeth were not recorded in this investigation, the number of products intended for use with dental problems is likely to appear significantly lower than it truly was at the time.

Medications specifically related to female complaints, and infants and children can be of particular use to archaeologists. The recovery of containers for products such as Mrs Winslow's Soothing Syrup clearly indicates the presence of children at a site, given their intended use on infants with teething problems, often with tragic results – as discussed by Finch (1999). Similarly, the recovery of such products as Widow Welch's Female Pills illustrates the presence of women at sites. The large number of products intended for use by specific groups within the nineteenth-century population can potentially assist archaeologists in not only determining the medical health of a site's inhabitants, but in recognising the presence of these groups at the site.

A number of influences – including improving medical advances, prevalent diseases, and epidemics at the time of advertising – had an impact on the types of ailments

medications claimed they could cure. One example of this occurred during the 1880s. Pasteur and colleagues first postulated germ theory in 1878–1879 (Porter 1997), and the 'germ revolution' gradually occurred through the 1880s. The first recorded product advertising assistance in killing germs and bacteria – Germicide – was advertised in May 1880, an apparently hasty creation and promotion. Radam's Microbe Killer, a Texas-based company with a Melbourne branch, also played on public fears of germs and bacteria. Similar events occurred in 1900, following the outbreak of bubonic plague in Australia – products such as Quibell's Disinfectants and Little's Phenyle Disinfectants emerged, claiming to cure plague and kill the germs that caused it.

Clearly, there was some change over time in regards to the ailments medications claimed to cure. Diseases were added as they became prevalent within the community and around the world. Gastro-intestinal products were common, as were those dealing with hair and beauty, thereby dealing directly with the vanities, as well as the diseases, of the Victorian age. Cure-alls were common, and it appears that nineteenth-century Melbournians wanted a single medication at hand to cure almost any health problem that might occur.

COST

The cost of patent medicines advertised in *The Argus* is significant, as this can provide archaeologists with an impression of the amount a site's inhabitants were willing to spend on medication. Cost was not always advertised, with only 39.35 per cent of advertisements listing a price. Prices varied dramatically, ranging from one penny for a packet of Up to Date Hairwash, to £10 for a case of The Invigorator. On average, prices were reasonable, and appear to have generally ranged between 1*s.* 1½*d.* and 2*s.* 9*d.*, with prices rising according to the size of the container purchased. There does not appear to have been any significant distinction between locally made and imported products, whether from overseas or other Australasian colonies. The prices of the products recorded are listed in Table 4. Given the average weekly wage in Melbourne during the 1870s, as stated by Anthony Trollope, the cost of many medicines would likely have been relatively insignificant. These high wage levels are corroborated by P.G. Macarthy, who states that 'In the 'seventies and 'eighties, railway workers, itinerant pastoral workers and miners were paid 7*s*. or 8*s*. a day, and strong 'pack and shovel men' probably even more … nearly twice as much as…in Britain' (Macarthy 1970:57). However, this did not last, with the 1890s depression causing unemployment of 28.3 per cent in Victoria in 1893 (Macarthy 1970).

The cost of patent and proprietary medications in Australia appears to have been fairly low, considering that large numbers of products were imported. A number of advertisements stated that the product sold for the same price in England and Australia, and many prices appear to be similar to those of later eighteenth-century Britain (Brown 1976). Product price may have been affected by how the product was imported – patent medicines may have been imported into Australia already in bottles with paper labels affixed, but it seems far more likely that many products arrived in vats or kegs and were decanted into bottles. Phillips (1978:78) corroborates this: 'Many of these remedies came from the United States. They were imported in drums, and bottled in Australia'.

During the examinations of patent and proprietary medicines undertaken during the early twentieth century, one concern appears to have been the cost of medications compared to the cost of their ingredients, and thus the profit being made by manufacturers. Kearsley's Widow Welch's

Table 4: Number of products sold at each advertised cost level.

Amount	Number of products	Amount	Number of products
1*d*.	1	8*s*.	1
6*d*.	10	9*s*.	2
9*d*.	2	10*s*.	9
1*s*.	50	10*s*. 6*d*.	11
1*s*. 1½*d*.	35	11*s*.	19
1*s*. 3*d*.	4	12*s*.	2
1*s*. 6*d*.	36	12*s*. 6*d*.	3
1*s*. 9*d*.	3	14*s*. 6*d*.	1
2*s*.	38	15*s*.	2
2*s*. 3*d*.	4	15*s*. 3*d*.	2
2*s*. 4*d*.	1	15*s*. 6*d*.	1
2*s*. 6*d*.	100	18*s*.	1
2*s*. 7*d*.	1	20*s*. (£1)	4
2*s*. 9*d*.	40	21*s*. (£1 1*s*., 1 guinea)	4
3*s*.	21	22*s*. (£1 2*s*.)	3
3*s*. 6*d*.	48	23*s*. 6d (£1 3*s*. 6*d*.)	1
3*s*. 9*d*.	1	25*s*. (£1 5*s*.)	1
4*s*.	16	27*s*. 6d (£1 7*s*. 6*d*.)	1
4*s*. 6*d*.	49	30*s*. (£1 10*s*.)	2
5*s*.	41	33*s*. (£1 13*s*.)	2
5*s*. 6*d*.	7	35*s*. (£1 15*s*.)	1
5*s*. 10*d*.	1	36*s*. (£1 16*s*.)	6
6*s*.	11	42*s*. (£2 2*s*., 2 guineas)	2
6*s*. 6*d*.	4	£4 4*s*. (4 guineas)	1
7*s*.	2	£5	2
7*s*. 6*d*.	5	£10	1

Pills, sold at 1*s*. 1½*d*. for twenty pills, contained mostly sulphate of iron, and cost one-twentieth of a penny per box to make. Mexican Hair Renewer sold at 3*s*. 6*d*. for eight fluid ounces, but cost only tuppence to manufacture, being 80 per cent rose water (Mullett 1919). Addictive contents were also a concern. Beale found that Ayer's Sarsaparilla was 'white spirits flavoured with a non-medicinal herb' (Beale 1907: 177). Likewise, Jameson (1961: 193) states that Hostetter's Stomach Bitters contained between 25 and 37 per cent alcohol, and was served in saloons in Alaska – then a dry state. Many patent medicines contained opium, chlorodyne, or cocaine, and most cures for drunkenness consisted largely of alcohol. Hodgson (2001) recorded over 300 containing opium, though this is likely to be enormously short due to loss of records, data, and so on.

The price of medications appears to have been generally low, and fairly comparable with prices in eighteenth-century

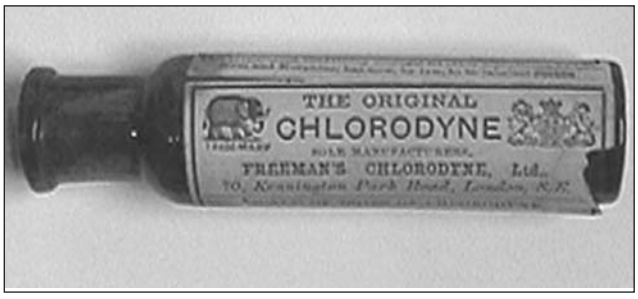

Fig. 3: Freeman's Original Chlorodyne. Green glass, roughly 9.2cm in length, with paper label. Embossed elephant on base, as pictured on label. Photo M. Knehans.

England (Brown 1976). While product cost does provide archaeologists with an idea of the amount the nineteenth-century inhabitants of a site were willing or able to spend on medication, it can be problematic when package size is not indicated. *The Argus*' advertisements reflect this – 2*s*. *6d*. could buy 30 Copaiba capsules, a quart of Towl's Phosphorised Quinine Wine, half a gallon of Hop Bitters Powder, one gross of Aperient Pearl Coated Pills, or half a pint of Dr de Jongh's Light Brown Cod Liver Oil.

DATE RANGES

Within the data accumulated in the course of this investigation, several types of date ranges appear to be present. Some products were advertised over lengthy periods, but with a small number of advertisements, such as Ayer's Cathartic Pills – advertised only eight times between February 1861 and July 1886. Other products had a long range and were advertised frequently, such as Cockle's Antibilious Pills, advertised 708 times between November 1865 and April 1885. In contrast, some products had a short range within the sample period and were advertised a small number of times, such as those advertised only once. Others appear to have had a short range and a high number of advertisements, such as Dr Allen's Mexican Walnut Hair Stain, advertised 88 times in less than two years.

Those products advertised over a long period of time were clearly popular, but it does not follow that those products advertised a small number of times were short lived. They may have been more extensively advertised in other newspapers, or the manufacturers may have utilised other advertising techniques as a means of promoting their product. While the date ranges obtained through this study must not be taken as the dates when a product first and last appeared on the Melbourne market, they can be used to establish a *terminus post quem* for the deposit in which the artefact was recovered. To date, it does not appear that medicine bottles have been seen as a tool for dating archaeological deposits, despite their potential.

ORIGINS

Patent and proprietary medicines advertised in *The Argus* were imported to Melbourne from companies based in Europe, North America, and Australasia. Interestingly, it appears that only products manufactured in the eastern colonies of Australia were advertised in *The Argus*. Products were imported to Melbourne from various parts of Victoria, New South Wales, Queensland, and Tasmania, with no indication of products from South Australia or Western Australia. In addition, one product was imported from New Zealand. 2867 advertisements listed a country of origin, just over 37 per cent of the total. Of these, 842 were for products with an Australian-based manufacturer.

The overwhelming majority of imported products were British. Many companies were based in London, though there were some significant products imported from the Midlands and the North, as well as one from Scotland. Elsewhere in Europe, products were imported from France, Germany, Norway, and Switzerland. Several significant medicines were manufactured in the United States, specifically Jayne's products, Ayer's products, and Hostetter's Stomach Bitters. The majority of American imports were manufactured on the Atlantic coast, in New York, Boston, Philadelphia, and Lowell, Massachusetts. A limited number of products were imported from elsewhere in the United States, including Chicago, Austin and San Francisco. One product was imported from Trinidad in the Caribbean. Somewhat surprisingly, few products appear to have come from other British colonies. A mere 14 products were from Australian colonies other than Victoria, and only one product was listed with a New Zealand origin. However, it is plausible that products were imported from other colonies such as Canada, South Africa, the South Pacific, and India, but that their place of origin could not be identified.

Within Australia, medicines were imported from the major Eastern cities – Sydney, Brisbane, Launceston, and Hobart. A number of products came from regional centres, including Geelong, Ballarat, Cobden, and Gladstone in Queensland. It is likely that medicinal products were imported to Melbourne from numerous other Australian locations, as 63.25 per cent of the advertisements recorded did not list a manufacturer or place of origin. While a larger number of advertisements including a place of origin were for internationally manufactured products, more products overall were manufactured in Australia, and specifically in Melbourne. This apparent prevalence of locally-made products may prove useful to archaeologists. Given that, based on the advertisements, Melbourne products were dominant, the recovery of a deposit containing only containers from imported medications may indicate that a new migrant population was present at the site – one that did not know the local products, and instead relied upon what they had known prior to migration.

A number of products may have deceptive origins, as some international companies would sell the bottles and product formulation to local manufacturers. The product would then be manufactured in Australia, and sold in the bottles supplied. Haines (1988:107) states that 'Many proprietors advertised their remedies, cautioned against counterfeits – not genuine without the signature on the wrapping or label – then sold the wrappings and labels to chemists who themselves prepared the compound'. The information in *The Argus* indicates that this was happening in Melbourne, with products such as Baron von Liebig's Food stating that they were manufactured in Melbourne on behalf of the proprietor. Some nostrums, such as Radam's Microbe Killer and Warner's Safe Cure, were created in America with company divisions in Melbourne manufacturing local stock. The Melbourne branch of Warner's Safe Cure was active from 1887 until 1915 (Fike 1987:107). Locally manufactured products were also sold overseas. Fike (1987) recorded several products with Australian origins, including Kruse's Fluid Magnesia and Bosisto's Eucalyptus Oil (see Figures 1 and 2).

Overall, a place of origin was identified for 426 of the products recorded. Interestingly, given the international nature of the patent medicine industry, 207 of these products were manufactured in Melbourne, 48.5 per cent of the products with a determined location. This seems to indicate that local products were of vast importance in nineteenth-century Melbourne, possibly because they were more consistently available. Given the emphasis placed on British and American products in previous studies of patent and proprietary medicines, it was wholly unexpected to find that almost 55 per cent of those products for which a place of origin could be established were from Australia and New Zealand.

Many more products than anticipated appear to have originated locally, whether manufactured by locally based companies, or Melbourne divisions of international brands. As discussed previously, studies of advertisements in other Australasian colonies may help to determine whether Melbourne-based products were popular in general, or whether there was simply market domination by local products. Given the high proportion of products for which a place of origin could not be established, it is possible that

many more products were imported, but this cannot be seen due to the advertisement not listing the manufacturer's details.

LACK OF ARCHAEOLOGICAL EVIDENCE

Given the number of products recorded during this investigation, and the number of advertisements present in nineteenth-century newspapers, evidence for these products archaeologically to date seems scant, though the large number of artefacts recovered at Henry's Mill (Davies 2001, 2002) would seem to indicate that many bottles did enter the archaeological record. Thousands of patent medicines existed, and were in common use worldwide throughout the nineteenth and early twentieth centuries, and yet most of these products are not present in the archaeological record. One significant reason for this is the removal of intact bottles by fossickers and collectors, though the collections may still be viewed by archaeologists (Bagshaw 2001). This removal of intact specimens leaves archaeologists with broken bottles and fragments, which are far more difficult to connect to a specific product.

Packaging is a major contributor to the apparent lack of archaeological evidence. Many products were not sold in bottles, but tins, boxes, jars, and packets. Many of these were made of cardboard or paper and are unlikely to have survived, accounting for a large proportion of the products not recovered archaeologically. Even if bottles are recovered, identifying the original product can be difficult. Many products were identified by paper labels, in fairly plain bottles with little to distinguish them from similar medications. While the bottles may still be present in the archaeological record, the labels are unlikely to have survived. Similarly, while specific types of bottles may have been used for a particular type of medication, this does not allow archaeologists to identify the actual product and, therefore, potentially establish a *terminus post quem* for the deposit.

As with all examinations of historical glass, reuse must be considered. Some manufacturers specified that the bottle remained company property and was to be returned. This may have been especially common during early years of settlement, as bottles were relatively scarce in Australia, and manufacturers would have been eager to maintain stock levels. Thus, bottles may have been removed from the site before entering the archaeological record. Bottles may also have been reused by the site's inhabitants, and altered from their original form, thus resulting in incorrect artefact classification. Similarly, recovered bottles may be wrongly classified during archaeological analysis. Some, such as Freeman's Chlorodyne (see Figure 3), may be classified as perfume bottles based on their size and colour. In the case of Freeman's Chlorodyne, the manufacturer's trademark – an elephant – is imprinted on the base of the bottle. The identification of trademarks for patent and proprietary medicines may assist in the correct classification of these bottles on a more regular basis.

Other less plausible reasons exist for an apparent archaeological absence of patent medicine bottles. It is possible that products were too expensive for the site's inhabitants, were not available locally, not discarded at the site, or that the deposit was not fully examined during excavation. All these explanations are unlikely given the regularity with which medicine bottles are recovered, in at least small quantities, the relatively low cost of these products, the frequency with which other types of bottles were discarded, and the prevalence of mail-order catalogues and newspapers (Norris 1990; Haines 1994), combined with a lack of medical practitioners in rural areas.

FUTURE WORK

Clearly, a great deal of work remains to be undertaken regarding historic medicine bottles. Most publications to date are not archaeological, but intended for bottle collectors and often provide information of little use to archaeologists, such as the modern selling prices of bottles. The creation of a database of manufacturer's trademarks could assist in the identification of bottles with paper labels. Studies could also be undertaken in other Australian cities to determine whether local products were dominant elsewhere, or whether Melbourne products were foremost nationwide. Studies of other Melbourne newspapers could be undertaken to obtain a clearer picture of products available, and to determine whether some were more readily advertised in other publications. Other types of periodicals, such as journals and magazines, could also be examined, as medicinal products were often advertised in such publications. Further examination of other newspapers and historical resources will likely help to establish more clearly dates of product manufacture, thus allowing a more conclusive *terminus post quem* to be determined.

CONCLUSION

To date, it appears that patent and proprietary medicines have been largely overlooked by the archaeological community, despite their potential as a dating tool and a resource to provide information about the inhabitants of the site. The majority of products with an established location were locally made, indicating that many inhabitants of nineteenth-century Melbourne may have preferred locally-manufactured medications, perhaps due to a steadier supply, ready availability, or lower costs.

Archaeologically, this study provides a benchmark for the potential dating of recovered artefacts. The products originally held in medicine bottles can often be identified, whether by the embossing or a distinctive bottle shape. As a result, this investigation may allow a date range to be established for deposits, thus helping archaeologists to establish a *terminus post quem*, and obtain a clearer picture of the occupation of the site. This study may also assist archaeologists in gaining a more thorough perspective of a site's inhabitants, by identifying the amounts spent on medication, potential illnesses of the occupants, and the presence of specific groups, such as women, children, and new migrants. While production periods and advertising dates are not necessarily identical, this study can still provide details of periods during which specific products were available, something that can likely be more thoroughly clarified through further studies in this field.

It is hoped that this work will prove useful to historical archaeologists working in Victoria, and elsewhere in Australia, providing them with a new way, perhaps, of dating archaeological deposits to at least a specific date range. Patent and proprietary medicine bottles have the potential to be of enormous use in providing information about the past, and appear to have been generally overlooked thus far. Information can be obtained regarding the inhabitants of the site, the illnesses they may have suffered, and the amount people were willing to spend on these medications, all of which can provide a human face for archaeological sites.

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